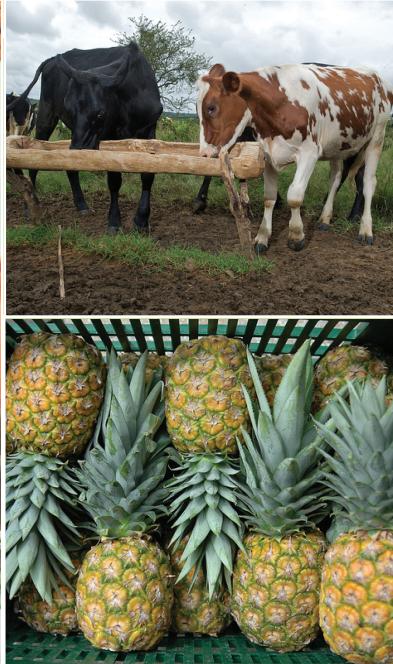


ECONOMIC AND SECTOR WORK



MAKING THE GRADE:
Smallholder Farmers, Emerging
Standards, and Development
Assistance Programs in Africa
A Research Program Synthesis

JUNE 2011

Steven Jaffee
Spencer Henson
Luz Diaz Rios



THE WORLD BANK

REPORT NUMBER 62324-AFR

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Report No. 62324-AFR

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TASK TEAM AND ACKNOWLEDGMENTS

This paper provides a synthesis of the framework and major findings from a collaborative research program involving the World Bank (WB), the University of Guelph, the University of Ghana, the University of Makerere, the University of Nairobi, the University of Zambia, and the Institute of Development Studies. The research program was supported by grant financing from the Government of the Netherlands (through the Bank-Netherlands Partnership Program [BNPP] Trust Fund Trade Window) and the Government of Canada (through the IDRC).

The research program was coordinated by Steven Jaffee (WB) and Spencer Henson (University of Guelph), who together with Luz Diaz Rios (Agricultural and Rural Development [ARD]/WB) are the lead co-authors of this synthesis report. Other members of the team have included the following:

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- Institute for Development Studies: John Humphrey
- African Universities: Ramatu M. Al-Hassan, Henry Anim-Somuah, and George Kwadzo (University of Ghana); Gabriel Elepu and Johnny Mugisha (University of Makerere); Gelson Tembo (University of Zambia); and Julius Okello (University of Nairobi)
- Others: John Keyser (Consultant), Annu Ratta (Consultant), and Matthew Edwardsen (U.S. Forest Service)

The research team acknowledges the support and facilitation provided by WB country offices, the time and insights provided by numerous development partners and practitioners, and the cooperation provided by government staff, hundreds of African companies, and nearly 2,000 farmers in interviews and responses to the research team's surveys. The team wishes to specifically acknowledge the following individuals for their insights on the broad themes and specific cases underpinning this research: Alistair Taylor, Clive Drew, Tiku Shah, Kevin Billing, David Knapp, Guy Stinglhamber, Andrew Sergeant, Wolf-Martin Maier, Todd Thompson, Bagie Sherchand, Steffen Kaeser, Morag Webb, Edward Heinemann, Ronaldt Thoen, Peter Gibbon, Stefan Ouma, Ulrich Hoffman, Daniele Giovannucci, David Gibson, Anne Sophie Poisot, Pascal Liu, Jason Potts, Gretchen Stanton, Sasha Courville, Paul Sigombe, Bo Van Elzakker, Jean Michel Voisard, Dagmar Mithofer, Ruth Nyagah, Umran Kaggwa, Irwin Foreman, Joe Carvalho, Moses Nyabila, David Harvey, and Martin Ndjovu.

During the concept review stage for this synthesis, valuable comments and suggestions were provided by Stephen Mink (WB), Patrick Labaste (WB), and Doris Gunther (Deutsche Gesellschaft für Technische Zusammenarbeit [GTZ]—currently known as GIZ). Peer reviewers for the final document were Iain Shuker (WB), Vikas Choudhary (WB), Paul Guenette (ACDI/VOCA), and Steven Schonberger (International Fund for Agricultural Development [IFAD]).

The team wishes to acknowledge the valuable support and guidance provided by Juergen Voegele, Mark Cackler, John Panzer, Marc Sadler, Karen Brooks, and Sushma Ganguly.

OTHER OUTPUTS FROM THIS RESEARCH PROGRAM

This document provides a synthesis of major themes from the research program. A series of other publications have or will be prepared related to specific themes, case studies, or surveys. Other publications emerging from this work include the following:

Diaz Rios, L., and Jaffee, S. 2008. "Barrier, Catalyst or Distraction? Standards, Competitiveness and Africa's Groundnut Exports to Europe." Agriculture and Rural Development Discussion Paper 39, World Bank, Washington, DC.

Diaz Rios, L., Jaffee, S., Henson, S., and Mugisha, J. 2009. "Not Quite Up to Standard: The Legacy of Two Decades of Government and Donor Assistance to Uganda's Horticultural Export Sector." Agriculture and Rural Development Discussion Paper, World Bank, Washington, DC.

Field, S. 2009. "Examining the Determinants and Impact of Asian Vegetable Production: A Case Study on the Livelihoods of Ghanaian Smallholders." Dissertation MSc. in Agricultural Economics, University of Guelph.

Field, S., Masakure, O., and Henson, S. 2010. "Rethinking Localization—a Low-Income Country Perspective: The Case of Asian Vegetables in Ghana." *Cambridge Journal of Regions, Economy and Society* 3: 261–77.

Henson, S., and Jaffee, S. 2008. "Understanding Developing Country Strategic Responses to the Enhancement of Food Safety Standards." *World Economy* 31 (4): 548–68.

Henson, S., Jaffee, S., Cranfield, J., Blandon, J., and Siegel, P. 2009. "Linking African Smallholders to High-Value Markets: Practitioner Perspectives on Benefits, Constraints, and Interventions." Policy Research Working Paper, WPS4573, World Bank, Washington, DC.

Henson, S., Jaffee, S., Masakure, O., and Cranfield, J. Forthcoming. "Do Fresh Produce Exporters in Sub-Saharan Africa Benefit from GLOBALG.A.P Certification?" *World Development*.

Henson, S., Jensen, M., Jaffee, S., and Diaz-Rios, L. 2010. "Assessing the Demand for Trade-Related Food Safety and Quality Interventions in Agri-Food Chains." International Trade Department, World Bank.

Henson, S., Masakure, O., and Blandon, J. 2010. "The Dynamic Process of Smallholders' Vanilla Adoption in Uganda." Department of Food, Agricultural and Resource Economics, University of Guelph.

Henson, S., Masakure, O., and Blandon, J. 2010. "The Impact of Smallholder Participation in High-Value Agricultural Markets: The Case of Vanilla in Uganda." Department of Food, Agricultural and Resource Economics, University of Guelph.

Keyser, J. Forthcoming. "Competitive Dairy Development and Challenges of Quality Upgrading in East and Southern Africa." World Bank Discussion Paper, World Bank, Washington, DC.

TABLE OF CONTENTS

List of Figures	vii
List of Tables	ix
List of Boxes	xi
Abbreviations and Acronyms	xii
List of Standard Units	xvi
Executive Summary	xvii
Chapter 1—Introduction	1
Research Program Overview	2
This Synthesis Report	4
Chapter 2—The Evolution of Regulatory and Market Requirements in HVAF Markets	7
Drivers of Change in the Governance of Food Safety and Quality	7
Evolution of Food Safety, Quality, and Socioenvironmental Governance	10
Chapter 3—Conceptualizing the Impact of Standards Compliance on Smallholder Participation in Agri-Food Value Chains	17
Introduction	17
Nature of Agri-Food Value Chains and the Role of “Assured Compliance”	17
Conceptual Framework	20
Hypotheses	34
Chapter 4—Development Assistance, Standards Compliance, and African Smallholder Farmers	37
Introduction	37
Antecedents: NTAEs, “Lead” Firms, and Supply-Chain Partnerships	38
Broader Parallel Initiatives: Renewal of Agricultural Investment and Linking Farmers to Markets	42
Development Assistance and Support for Agri-Food Standards Management in Africa	46
Development Program Interventions Focused on Facilitating Smallholder Compliance with Standards	51
Private Voluntary Standards as an Opportunity for Sustainability and Poverty Reduction	58

Chapter 5: Private “Buyer” Perspectives on Alternative Sources of Supply: Evidence from a Survey of African Fruit and Vegetable Exporters	65
Introduction	65
Strategic and Tactical Options and Procurement Choices in the Face of Rising Standards.....	66
Methods and Respondents.....	67
Selection Criteria of Surveyed Fresh Produce Exporters.....	69
Changing Procurement Patterns of Fresh Produce Exporters.....	71
Conclusions	78
Chapter 6—Case Studies: Upgrading for the Domestic Market and for Traditional Export Commodities	79
Introduction	79
Case 1: “Let the Sun Shine In”: Quality Upgrading and Improved Market Linkages in Uganda’s Sunflower Sub-sector	79
Case 2: “Milking Opportunities” in Informal and Formal Dairy Value Chains	83
Case 3: Brewing Up Productivity and Income Gains Linked to Sorghum	91
Case 4: Africa’s Groundnut Trade and EU Mycotoxin Standards	93
Case 5: Rwanda—Gaining a Place in the “Specialty” Coffee Market	100
Chapter 7—Case Studies: Upgrading of Higher- Value ‘Non-Traditional’ Export Products	107
Case 1: “Saving” Kenya’s Horticultural Exports, Preventing “Smallholder Exclusion” and Other Illusions	107
Case 2: Many Donors, Yet Few Certified Farmers: The Elusive Quest for a Zambian “Smallholder” Horticulture	116
Case 3: Servicing Europe’s Ethnic Food Markets: Tales from Kenya, Uganda, and Ghana	119
Case 4: Shifting Market Preferences Partially Derails Ghana’s Pineapple Industry.....	126
Case 5: Intrigued by the Buzz; Stung by the Results: Adventures with Ugandan Honey	130
Case 6: Overcoming Competitive Challenges via Organics Certification—Uganda’s “Success”.....	135
Chapter 8: Conclusions	143
References	147

LIST OF FIGURES

Spectrum of Regulatory and Market Requirements in Agri-Food Systemsxx
Figure 2.1 Change in the Value Composition of SSA Exports of Food and Agriculture (%).....	8
Figure 2.2 Using Food Safety as a Carrier for Sustainability Criteria.....	11
Figure 2.3 Evolution of Standards Systems	13
Regional Distribution of Coffee Supply by System	14
Figure 3.1 Upgrading Steps and Stringency of Buyer Specifications in Agri-Food Value Chains	19
Figure 3.2 Buyer Costs of Procurement from Alternative Supply Chains	22
Figure 3.3 Conceptual Framework for Buyer Choice between Alternative Suppliers.....	23
Figure 3.4 Hypothetical Comparison of Capacity of Alternative Suppliers to Achieve Assured Compliance with Buyer Specifications	25
Figure 3.5 Hypothetical Production and Transaction Cost Profile in Alternative Value Chains for Small-Scale, Large-Scale, and Integrated Producers	28
Figure 3.6 Hypothetical Marginal Supply Costs over Time Augmented by Transaction Risks in Supply Chains to Type 2 and Type 5 Value Chains.....	29
Figure 3.7 Impacts of interventions Aimed at Facilitating the Participation of Small-Scale Producers in Value Chains to Higher-Value Markets.....	33
Figure 4.1 Entry Points for Development Agencies' Support for Compliance with Standards	38
Figure 4.2 Associated Factors Influencing Pessimistic Views on the "Future of Small-Scale Farmers" in SSA	45
Figure 4.3 Hierarchy of Trade-Related SPS Management Functions	49
Figure 5.1 Composition of Survey Respondents by Value of Exports, 2007 (US\$).....	68
Figure 5.2 Performance Criteria Scores for Alternative Supply Chains	69
Figure 5.3 Percentage of Supply of Main Product from Alternative Supply Chains by Size of Exporter	73
Figure 5.4 Decile Distribution of Average Number of Small-Scale Producers of Less than Five Acres From Which Source Main Product Directly or Indirectly	75

Figure 5.5 Expectations of Future Changes in Volume of Leading Product Export by Firm Size.....	76
Figure 5.6 Expectations of Future Changes in Volume of Leading Product Export by Whether Customers Required Compliance with Private Food Safety Standards	77
Figure 5.7 Expected Change in Volumes of Main Product Exports Sourced Through Alternative Supply Chains	77
Figure 6.1 Uganda Sunflower Production and Yields	82
Figure 6.2 Uganda Sorghum Production, 1985–2009	91
Figure 6.3 Percent Distribution of NBL Payment	92
Figure 6.4 Evolution of EU Market Requirements and Associated Conformity Assessment Systems for Groundnuts and Groundnut Products	95
Figure 6.5 Production and Exports of Coffee in Rwanda.....	103
Figure 7.1 Kenya Export Volume Trends (Tons)	114
Figure 7.2 Framework of Recent Interventions in the Uganda Horticulture Sector	124
Figure 7.3 Framework of Recent Interventions in Ghana Horticultural Sector	129
Figure 7.4 Honey Value Chain in Uganda	132

LIST OF TABLES

Table 1.1 Country and Commodity Case Studies	3
Table 2.1 Erosion of Consumer Confidence in Food Systems: Examples of Well-Published Food Outbreaks	9
Table 2.2 Reasons for Noncompliance among EU Notifications on Products Imported from SSA (2006–09)	9
Table 2.3 Share of SSA Exports to Low- and Middle-Income Economies (as percentage of region's total exports of each product category)	13
Table 3.1 Examples of Supplier Requirements Influencing Production and Transaction Costs of Producers and Associated Functions	25
Table 3.2 Generalized Strengths and Weaknesses of Small-Scale versus Large-Scale Producers	27
Table 3.3 Resource-Market Matrix for Smallholder Assured Compliance—Illustrative Examples	27
Table 3.4 Factors Influencing Costs of Procuring from Small-Scale Producers	31
Table 4.1 Main Components of WB Market-Led Projects Implemented in the Mid-1990s to Early 2000s	39
Table 4.2 Evolution of the Emphasis on Support to Agriculture and Agribusiness in SSA	45
Table 4.3 Donor-Funded Programs Using Hybrid Approaches to Support Compliance with Regulatory Requirements	50
Table 4.4 Recent SSA Stand-Alone Initiatives Related to Private Voluntary Standards or Labels	51
Table 5.1 Firm Strategic Responses in the Face of Rising Standards	66
Table 5.2 Performance of Alternative Suppliers According to Clustered Criteria	70
Table 5.3 Importance of Factors in Choosing Small-Scale Producers as Supply Source for Main Product	70
Table 5.4 Clustered Criteria Factors Influencing Choice of Small-Scale Producers of Main Export Product by Exporter Size (Mean Scores)	71

Table 5.5 Clustered Criteria Factors Influencing Choice of Small-Scale Producers of Main Export Product by Customer Requirements for Compliance with Private Food Safety Standards (Mean Scores)	71
Table 5.6 Availability and Use of Supply Chains for Main Product.	71
Table 5.7 Mean Percentage of Supply of Main Product Sourced Through Alternative Supply Chains Currently and Five Years Ago.	72
Table 5.8 Mean Percentage of French Beans and Pineapples Currently Sourced Through Alternative Supply Chains (Weighted by Relative Export Volume)	72
Table 5.9 Mean Proportion of Main Product Procured Through Alternative Chains by Whether Major Customers Require Compliance with Private Food Safety Standards	73
Table 5.10 Number of Smallholder Farmers Reportedly Involved Directly or Indirectly in the Sourcing Arrangements of Difference Size Companies, 2007 and 2002.	74
Table 5.11 Number of Smallholder Farmers Reportedly Involved Directly or Indirectly in the Sourcing Arrangements of Companies Whose Customers Do and Do Not Enforce Food Safety Standards, 2007 and 2002	74
Table 5.12 Proportion of Suppliers in Alternative Supply Chains for Main Product that Typically Have to Be Dropped or Voluntary Drop Out Year-on-Year.	75
Table 5.13 Proportion of Smallholder Outgrowers for Main Product that Typically Have to Be Dropped or Voluntary Drop Out Year-on-Year by Exporter Size	75
Table 5.14 Proportion of Smallholder Outgrowers for Main Product that Typically Have to Be Dropped or Voluntary Drop Out Year-on-Year by Whether Customers Require Compliance with Private Food Safety Standards	76
Table 6.1 Continuum of Market Requirements and Associated Conformity Systems in Milk and Milk Products	84
Table 6.2 Costs and Returns of Smallholder Dairy Upgrades in Selected Countries	85
Table 6.3 Summary of Achievements of the Rwanda Coffee Industry in Recent Years	102
Table 7.1 Donor Projects (Re-) Directed towards EurepGAP	111
Table 7.2 Broad Themes of Assistance Provided by PIP Program	124
Table 7.3 Participation of Farmers in Different Schemes Supported by EPOPA	140

LIST OF **BOXES**

Box 2.1 Examples of Sustainability Initiatives in Coffee	14
Box 2.2 Penetration of Stricter Demands for Quality and Safety in SSA HVAF Domestic Markets	15
Box 3.1 Transaction Cost Economics and the Market Participation of Small-Scale Producers	21
Box 4.1 Expanding Focus: From Support for Private-Led Initiatives to Wider Public-Private Partnerships ..	41
Box 4.2 Linking Farmers to Markets as Part of Donors' Strategic Objectives	43
Box 4.3 Perceptions of "Practitioners": Survey Findings.....	46
Box 4.4 Working through PMOs to Supply Certified French Beans—Opportunities and Limitations	55
Box 4.5 Reducing the Costs of Certification for Small-Scale Producers.....	56
Box 4.6 GTZ—Mainstreaming Social and Environmental Compliance at the Farm Level	62
Box 6.1 Formalizing Milk Supply in Kenya: The Market-Oriented Dairy Enterprise Approach.....	88
Box 6.2 Attempts to Develop Fair Trade Nut Exports to Europe	99
Box 6.3 Weak Cooperatives as a Bottleneck to Improved Export Performance in Quality Coffee Markets...	104
Box 7.1 Hot Stuff: A Cooperative-based Approach to Supply Upgrading in Kasese, Uganda	125
Box 7.2 Farmapine—A Nice Concept Yet Unsustainable Results	128
Box 7.3 Reasons Why Many Certified Farmers Don't Deliver under the Organics Schemes	140

ABBREVIATIONS AND ACRONYMS

ACI	Agrifood Consulting International
ACDI-VOCA	Agricultural Cooperative Development International and Volunteers in Overseas Cooperative Assistance
ACP	African Caribbean Pacific Group of States
ADAR	Agribusiness Development Assistance to Rwanda
ADB	African Development Bank
ADF	African Development Foundation
ADHEK	Association of Developing Horticulture Exporters in Kenya
ADP	Agricultural Diversification Project
AFD	Agence Française de Développement
AFSS	Agriflora Small Scale
AGOA	African Growth and Opportunity Act
AGSSIP	Agricultural Services Subsector Investment Project
AI	artificial insemination
ANEPP	Agriculture Non-Traditional Export Promotion Project
APDF	Africa Project Development Facility
APEP	Agriculture Productivity Enhancement Project
AQSIQ	General Administration of Quality and Supervision, Inspection and Quarantine (China)
ARD	Agricultural and Rural Development (World Bank)
B2B	business to business
B2C	business to consumer
BLCD	Business Linkages Challenge Fund
BNP	Bee Natural Products (Uganda)
BNPP	Bank-Netherlands Partnership Program
BoD	board of directors
BRIC	British Retail Consortium
BSD	Business Service Development
BSE	bovine spongiform encephalopathy
BSMDP	Business Service Market Development Program
CAADP	Comprehensive Africa Agriculture Development Program
CBI	Centre for the Promotion of Imports from Developing Countries
CBTF	Capacity Building Task Force on Trade, Environment and Development
CIAT	International Center for Tropical Agriculture
CI	Conservation International
CIF	cost, insurance, and freight
CIRAD	Centre de Coopération Internationale en Recherche Agronomique pour le Développement
CLUSA	The Cooperative League of the United States of America
CmiA	Cotton Made in Africa
COLEACP	Liaison Committee Europe-Africa-Caribbean-Pacific
COMESA	Common Market for Eastern and Southern Africa

COMTRADE	Commodity Trade Statistics Database
CSN	Coffee Support Network
CSPA	Certified Sustainable Products Alliance
CSR	corporate social responsibility
CWS	coffee washing station
DANIDA	Danish International Development Agency
DC	Dairy Corporation
DDT	Dichlorodiphenyltrichloroethane
DEC	Development Economics
DED	German Development Service
DEG	Deutsche Investitions und Entwicklungsgesellschaft mbH
DFID	Department for International Development
DIIS	Danish Institute of International Studies
EADD	East Africa Dairy Development Project
EC	European Commission
EMPRENDA	Empowering Private Enterprise in the Development of Agriculture
EMQAP	Export Marketing and Quality Awareness Program
EPADU	Export Policy Analysis and Development Unit
EPOPA	Export Promotion of Organic Products from Africa
EPV	Export Promotion Village
ETI	Ethical Trade Initiative
ETP	Ethical Tea Partnership
EU	European Union
EUREP	Euro-Retailer Produce Working Group
FAO	Food and Agriculture Organization of the United Nations
FDA	Food and Drug Administration
FGL	Farmapine Ghana Limited
FLO	Fairtrade Labelling Organizations International
FOB	free on board
FPEAK	Kenya's Fresh Produce Exporters Association
FRICH	Food Retail Industry Challenge Fund
FSAP	Japan's Financial Sector Assessment Program
FSMA	Food Safety Modernization Act
FT	fair trade
FTF	Fair Trade Foundation
GAP	good agricultural practice
GDA	Global Development Alliance
GFAR	Global Forum on Agricultural Research
GHP	good hygienic practices
GHPPP	Ghana Horticultural Public-Private Partnership
GMP	good manufacturing practices
GoG	Government of Ghana
GoR	Government of Rwanda
GoU	Government of Uganda
GRASP	good, risk-based agricultural social practice
GSB	Growing Sustainable Business program (UNEP)
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (currently known as Deutsche Gesellschaft für Internationale Zusammenarbeit—GIZ)
HACCP	Hazard Analysis and Critical Control Points

HCDA	Horticultural Crop Development Authority
HEII	Horticulture Export Industry Initiative
HIVOS	Humanistisch Instituut voor Ontwikkelingssamernwerking (Dutch: Humanistic Institute for Development Cooperation)
HMF	Hydroxymethylfurfural
HORTEXA	Horticultural Export Association
HVAF	higher-value or differentiated agricultural and food products
IARC	International Agency for Research on Cancer
IBDR	International Bank for Development and Reconstruction
ICCO	Inter-Church Organization for Development Cooperation
ICIPE	The International Centre of Insect Physiology and Ecology
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
ICS	Internal Control System
IDA	International Development Association
IDEA	Investment in Developing Export Agriculture project
IDRC	International Development Research Centre
IEHA	Initiative to End Hunger in Africa
IFAD	International Fund for Agricultural Development
IFC	International Financial Corporation
IFOAM	International Federation of Organic Agriculture Movements
IFPRI	International Food Policy Research Institute
IFS	International Food Standard
IITA	International Institute of Tropical Agriculture
ILO	International Labor Organization
ILRI	International Livestock Research Institute
IPM	integrated pest management
IQAM	Improving Quality Assurance in Milk Markets
ISEAL	International Social and Environmental Accreditation and Labelling Alliance
ISO	International Organization for Standardization
ITC	International Trade Center
JECFA	Joint Expert Committee in Food Additives and Contaminants
JICA	Japan International Cooperation Agency
KBSDP	Kenya Business Service Development Project
KDDP	Kenya Dairy Development Program
KDSCP	Kenya Dairy Sector Competitiveness Program
KEPHIS	Kenya Plant Health Inspectorate Services
KHDP	Kenya Horticultural Development Program
KSIIP	Kasese Smallholder Income and Investment Program
KTB	Kenya Top Bar Hives
LACCU	Lubulima Agricultural and Commercial Cooperative Union
LEAD	Livelihoods and Enterprises for Agricultural Development
MAAIF	Ministry of Agriculture, Animal Industries, and Fisheries (Uganda)
MAAR	Ministry of Agriculture and Animal Resources (Rwanda)
MATEP	Market Access, Trade and Enabling Policies Project (Zambia)
MFEP	Ministry of Finance and Economic Planning
MKIS	Market Knowledge Information System
MLFD	Ministry of Livestock and Fisheries Development (Kenya)
MOA	Ministry of Agriculture
MoU	Memorandum of Understanding

MRLs	maximum residue levels
NAADS	National Agriculture Advisory Services
NaCRRI	National Crops Resources Research Institute (Uganda)
NAPU	Natural Pride of Uganda
NARO	National Agriculture Research Organization (Uganda)
NaSARRI	National Semi-Arid Resources Research Institute (Uganda)
NASFAM	National Smallholder Farmers Association of Malawi
NBL	Nile Breweries Limited
NEMA	National Environmental Agency
NEPAD	New Partnership for African's Development
NES	Uganda National Export Strategy
NGO	nongovernmental organization
NIE	new institutional economics
NOGAMU	National Organic Agriculture Movement of Uganda
NORAD	Norwegian Agency for Development Cooperation
NRI	Natual Resources Institute
NTAE	nontraditional agricultural exports
ODA	Overseas Development Agency
OECD	Organisation for Economic Cooperation and Development
OPV	open-pollinated variety
PCRSP	Peanut Collaborative Research Support Program
PDCRE	Smallholder Cash and Export Crop Development Project
PEARL	Partnership for Enhancing Agriculture in Rwanda through Linkages
PIP	Pesticide Initiatives Programme
PMA	Plan for Modernization of Agriculture (Uganda)
PMO	Product/Produce Marketing Organization
PRMTR	Trade Department, in the Poverty Reduction and Economic Management Unit
PROFIT	Production Finance and Technology Project (Zambia)
PSFU	Private Sector Foundation Uganda
PSD	Private Sector Development
PPP	Public Private Partnerships
PSI	Private Sector Investment program (Dutch)
PSOM	Programme for Cooperation with Emerging Markets
QMS	quality management system
RA	Rainforest Alliance
RASFF	Rapid Alert System for Food and Feed (EU)
RATES	Regional Agriculture and Trade Expansion
REAP	Rural Enterprise and Agri-business Production Project
RFCA	Rwanda Fine Coffee Association
REC	Regional Economic Community
RNCS	Rwanda National Coffee Strategy
RSP	Regional Standards Programme
RWASHOSCCO	Rwanda Smallholder Specialty Coffee Company
SAARI	Serere Agricultural and Animal Production Research Institute (Uganda)
SAB	South African Breweries
SCOPE	Strengthening the Competitiveness of Private Enterprise (Uganda)
SDC	Swiss Agency for Development and Cooperation
SECO	Swiss State Secretariat for Economic Affairs
SENASA	National Service for Health and Quality of Agri-Foodstuffs (Argentina)

SEP	Strategic Export Programme
SFP	Safe Fishery Program
SIDA	Swedish International Development Cooperation Agency
SITE	Strengthening Informal Sector Training and Enterprise
SMEs	small- and medium-sized enterprises
SPEG	Sea-freight Pineapple Exporters of Ghana
SPREAD	Sustaining Partnerships to Enhance Rural Enterprise and Agribusiness Development Project
SQF	Safe Quality Food
SPS	Sanitary and Phytosanitary
SSA	sub-Saharan Africa
SSI	State of Sustainability Initiatives
STDF	Standards and Trade Development Facility
TIP	Trade and Investment Project (Ghana)
TIPCEE	Trade and Investment Program for a Competitive Export Economy project (Ghana)
TIRP	Trade and Investment Reform Program (Ghana)
TSPN	Trade Standards Practitioners Network
TUNADO	The Uganda National Apiculture Development Organization (Uganda)
UEPB	Uganda Export Promotion Board
UEMOA	Union Économique et Monétaire Ouest-Africaine
UgoCert	Uganda Organic Certification Ltd.
UHA	Uganda Honey Association
UHB	Uganda Honey Beekeepers
UIA	Ugandan Investment Authority
UNADA	Uganda National Agro Input Dealer's Association
UNBS	Uganda National Bureau of Standards
UNCTAD	United Nations Conference on Trade & Development
UNDP	United Nations Development Program
UNEP	United Nations Environmental Program
UNIDO	United Nations Industrial Development Organization
UOEXI	Uganda Organic Export Initiative
UOSPA	Uganda Oilseeds Producers and Processors Association
USAID	US Agency for International Development
USDA	U.S. Department of Agriculture
USADF	U.S. African Development Foundation
VODP	Vegetable Oil Development Project
WHO	World Health Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
ZATAC	Zambia Agribusiness Technical Assistance Center

LIST OF STANDARD UNITS

MT	metric tons
Kg	kilogram
US\$	international dollar
Ha	hectare
€	euro

EXECUTIVE SUMMARY

BACKGROUND: STANDARDS AS THREATS AND OPPORTUNITIES FOR SMALLHOLDER FARMERS

Market access has been identified as one of the foremost factors influencing the performance of small-scale producers in developing countries, and in particular least-developed countries. Smallholder access to markets for higher-value or differentiated agricultural and food products (hereafter HVAF) is recognized as a vital opportunity to enhance and diversify the livelihoods of lower-income farm households and reduce rural poverty more generally ([World Bank 2007a](#)).

Smallholder participation in HVAF markets is typically constrained by inadequate farm-level resources, farm-to-market logistical bottlenecks, and more general transaction costs in matching and aggregating dispersed supplies to meet buyer and consumer demand. These traditional constraints have been amplified and, in some cases, surpassed by a new set of challenges associated with compliance with product and process standards—set and enforced by governments as well as private supply-chain leaders.

The tightening, broadening, and proliferation of pertinent quality, food safety, and other standards have been the product of various factors that have been previously analyzed ([World Bank 2005](#)).¹ A vibrant debate has emerged over the extent to which emerging standards pose barriers for developing countries' trade rather than catalysts for production and downstream upgrades, thereby improving welfare and competitiveness. There is ample evidence to support both contentions because different circumstances have yielded diverse outcomes.

A subset of this debate relates to the smallholder farmers' position and room for maneuvering, especially in sub-Saharan Africa (SSA). There is considerable concern that the opportunities provided by HVAF markets will go unrealized by smallholders because of either their technical inability to meet emerging regulatory and private standards or the high compliance and certification costs involved. That is, whatever productivity or production cost advantages small-scale farmers might have would be outweighed by the burgeoning transaction costs associated with facilitating, monitoring, and certifying smallholder compliance with standards.

The *cause célèbre* of this policy debate has been compliance with the fruit and vegetable standard for good agricultural practices, GLOBALG.A.P. (formerly known as EurepGAP). A wave of empirical studies has sought to examine patterns of smallholder adoption of GLOBALG.A.P., the associated compliance costs, and evidence of financial and other benefits. Claims and counterclaims have been made as to whether GLOBALG.A.P. requirements—in and of themselves—have served to exclude smallholder farmers from potentially remunerative export-oriented supply chains, especially those serving western Europe.

As if this threat were not enough, other observers have highlighted the pace of change in food retailing within developing countries, documenting the rise of the supermarkets and the opportunities and challenges that modern retailing poses for local farmers and small- and medium-sized (SME) food companies. The spectre of smallholder market “exclusion” thus rises again, this time on domestic turf, as smallholders (and their groups) may be unable to meet the volume or quality and food safety requirements of these end markets, or face high costs in having such compliance certified.

Against these ominous scenarios are more optimistic perspectives. Rather than losing their competitiveness in a web of standards, some have argued, smallholders in fact benefit by having their supplies differentiated by social, environmental,

¹ Food Safety and Agricultural Health Standards: Challenges and Opportunities for Developing Country Exports,” Report 31207, Washington, DC, The World Bank, Poverty Reduction and Economic Management Trade Unit.

and other “voluntary” standards in otherwise crowded commodity markets. These arguments also highlight broader benefits of standards in terms of safer work conditions, positive spillover effects in local communities, and their role in catalyzing the modernization of export and domestic food supply chains.

In the face of emerging challenges and opportunities associated with standards and serving HVAF markets, many development agencies, nongovernmental organizations (NGOs), government agencies, and private companies have implemented measures to level the playing field, strengthen specific technical or institutional capacities, or otherwise act to facilitate smallholder compliance with standards and continued or increased participation in HVAF supply chains. Such investment, cost-sharing, capacity-building, or capacity-bridging activities have expanded considerably in recent years, especially in SSA.

These initiatives have taken varied forms and involved various entry points. Many initiatives have been bottom-up, focusing on smallholder (group) capacities for production, collective action, standards compliance, and so forth; others have been top-down, seeking to better link farmers to remunerative markets through the efforts and enhanced capacities of lead firms; and others have opted for intermediary models, with donors and NGOs assuming critical supply-chain functions. Still other interventions have focused outside of specific value chains, seeking to strengthen the overall enabling environment and support services for HVAF more generally.

Relatively little of this expanding field of development assistance has been formally evaluated to consider its cost-effectiveness and impacts. Nevertheless, there are evident signs of learning and adjustment within the development community regarding the strengths, limitations, and pitfalls of various approaches and, relatively recently, some efforts to begin to share these lessons and to better coordinate development assistance in this field.

RESEARCH PROGRAM OVERVIEW

Although there is a growing body of research analyzing the constraints facing African smallholder farmer participation in HVAF markets and the importance of standards therein, there has been a lack of comparative analysis of the modalities and efficacy of public and private interventions designed to address these constraints, particularly in the context of compliance with market requirements. With growing interest and resource commitments in this field, there was an evident need to take stock of past and ongoing public and donor interventions, to consider the interplay between these interventions and private-sector strategies, and to broaden the observed terrain beyond the GLOBALG.A.P—fruit and vegetables—European Union (EU) supermarket nexus.

A research program was thus implemented to better inform ongoing policy discussions about smallholder market access and standards and to contribute to evolving rethinking within the development community regarding areas of focus, specific approaches, and entry points for supporting smallholder compliance with emerging standards. The research program was not designed to evaluate any specific project, and, in this report, the authors have specifically refrained from examining the details and evident impact of any single project or donor program. Instead, a broader, medium-term perspective is provided that cuts across various types of standards and commodities and across industries of varying degrees of size and maturity.

A range of methods were used, including literature reviews; surveys of farmers, exporters, and development practitioners; and a series of in-depth country and industry case studies (in Kenya, Uganda, Zambia, and Ghana) examining the relative importance of standards and other factors in facilitating or constraining growth and smallholder participation, the interplay between private-sector strategies and development interventions, and how all that activity relates to broader economic development objectives. This report provides a synthesis of the framework used and the major findings from this research program.

The research program addressed a range of issues, falling under the following headings:

- **Smallholders, comparative (dis-)advantage, and compliance with HVAF buyer or market standards:** What are the critical constraints that hamper the sustained participation of small-scale producers in supply chains to high-value markets? Which of these are specifically related to the challenge of “assured compliance” with downstream buyer (or regulatory) requirements? In which contexts are these constraints most apparent?

- **Private-sector perceptions and approaches:** What are the perceptions of key HVAF buyers (e.g., exporters, processors) regarding the role and pitfalls of sourcing products from smallholder farmers in an era of evolving standards? What strategic and tactical approaches do they adopt to manage evident sourcing problems and risks? What changes have or might occur in the ways they include smallholder supplies into their overall procurement arrangements? What assistance—from governments, development agencies, or industry organizations—has or could help them to overcome the problems and costs of sourcing from smallholders?
- **Development agency and practitioner responses and approaches:** What are the perceptions of development practitioners regarding the constraints and opportunities facing smallholders when participating in HVAF markets? In practice, how and why have development assistance approaches to linking small-scale producers to HVAF markets changed over time? What patterns can be observed in the interplay between private-sector product sourcing strategies and development assistance measures in this field? What evidence is there that the development community is learning from past experiences and adjusting core approaches, beneficiary targeting, and so forth?
- **Understanding impacts:** How is the success of interventions aimed at linking small-scale producers to high-value markets normally defined and assessed? How might these measures be refined and improved? Based on available evidence, what can be said about the efficacy of past and ongoing interventions to facilitate smallholder compliance with emerging HVAF requirements? Based on this evidence, what can be said about the impacts of adopting or not adopting standards for smallholder market participation, incomes, and nonfinancial effects?
- **Overall lessons learned and operational implications:** What types of interventions, focused on “assured compliance,” seem to be most effective at achieving the sustained participation of smallholders in HVAF markets? What does the available evidence suggest about program foci and beneficiary targeting, intervention entry points, the sequencing of activities, and realistic time frames to achieve and maintain results?

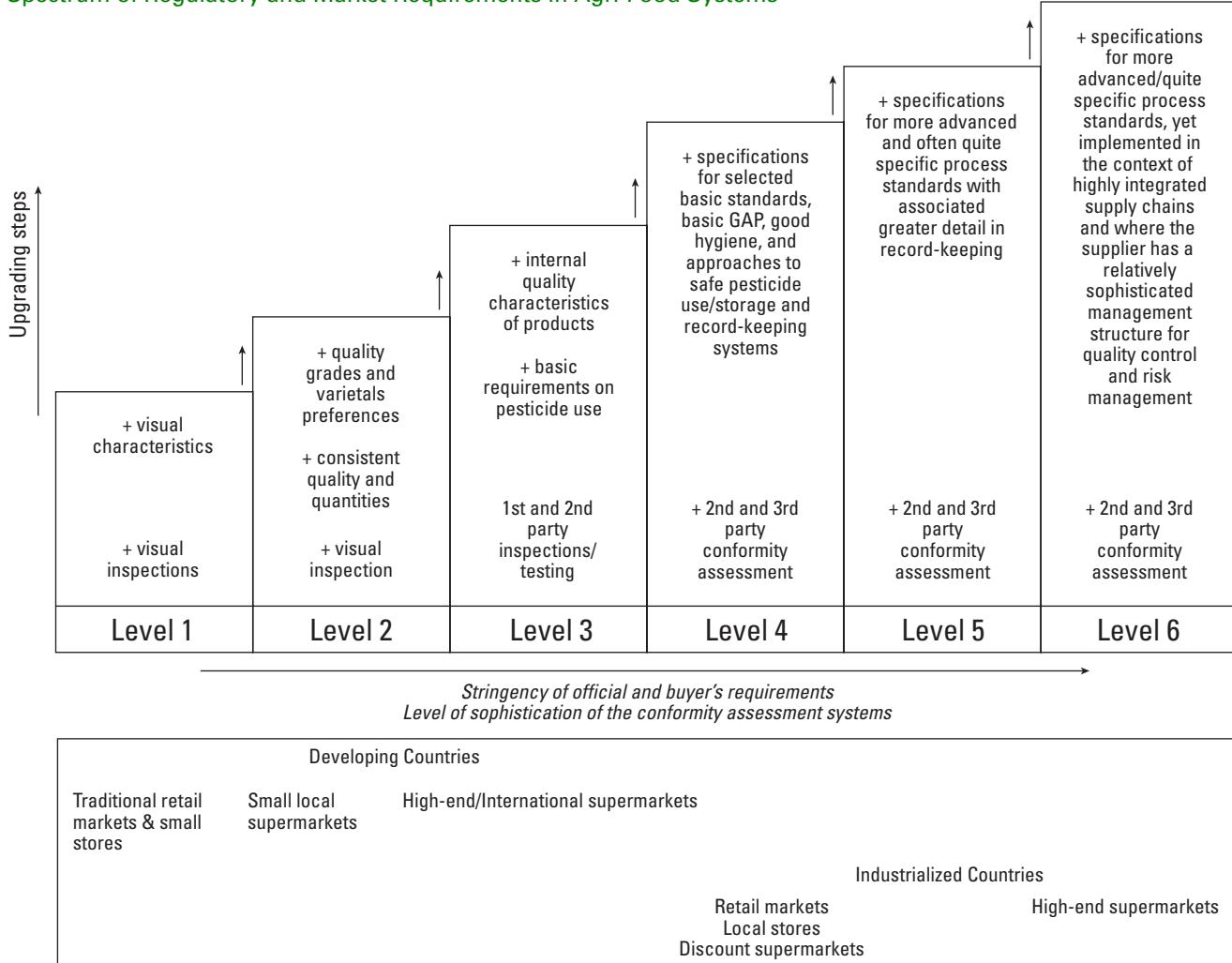
ANALYTICAL FRAMEWORK: A SPECTRUM OF MARKETS, YET “BUYERS” ARE THE GATEKEEPERS

Stringent standards are being primarily associated with high-value markets for agri-food products. *Yet the implied dichotomy between low- and high-value markets presents an unduly simplistic picture of the market choices available to small-scale producers. In reality, there is a wide spectrum of alternative market options, depending on the nature, foci, and stringency of sourcing requirements.*

The accompanying figure exemplifies different levels of upgrading, which can be broadly associated with particular “types” of markets or value chains. These levels of upgrading are frequently incremental, starting with basic visual quality parameters, preferred varieties, grades, and packing materials and progressively incorporating a wider range of compliance parameters related to production and process practices, record keeping, traceability along the supply chain, and risk and quality management structures. Compliance is assessed through first- and second-party inspection in the less demanding segments or markets (levels 1 to 3) and through third-party conformity assessment and certification at the higher end. Moving across from level 1 to level 6, one can visualize a move away from localized traditional markets toward increasingly higher-value domestic and international value chains. This change is accompanied by progressively stricter food safety, quality, and other requirements.

The various types of markets available to small-scale producers described above represent alternative marketing choices and supply response strategies. *This variety implies a need for the potential returns from achieving assured compliance to be compared with the associated challenges and costs of undertaking the required functions.* Recognition must be given to the producer’s starting point when contemplating upgrades and shifts to different market foci. For example, a producer already participating in a value chain of level 3 is presumably better placed to achieve assured compliance than a competing producer that is currently engaged in a value chain of level 1. This situation suggests the logic of an iterative strategy toward capacity building, with producers moving step-by-step from lower- to higher-value markets. However, the highest-value (and most exacting) markets represent simply one end of a continuum; value chains toward the middle of this spectrum may be more appropriate for smallholders in that the costs of achieving assured compliance are arguably more achievable, while targeting the highest-value markets does not necessarily translate into higher incomes for smallholder producers.

Spectrum of Regulatory and Market Requirements in Agri-Food Systems



Source: The Authors.

Therefore, the targeted segment and the specific product or process define the challenges associated with compliance, while the starting point of the firm, farmer, or industry defines the degree of individual or collective effort and investment required to achieve compliance in the targeted market. A clear assessment of the gap to be bridged is therefore a necessary first step in the process of supporting upgrades in smallholder production processes and market links.

In the context of HVAF markets, it is often the case that value chains are buyer-driven, such that the participation of small-scale producers is more a function of the procurement decisions of buyers than the market choices of small-scale producers. A complex set of factors impact the structure of supply chains, the "make or buy" decisions by buyers (including processors, exporters, etc.) of higher-value products, and the decisions on whether and how to involve smallholder farmers. Challenges and costs associated with standards compliance and its assurance are among the pertinent factors, although these rarely dominate other factors. Many interventions by governments and the development community are designed to tilt or level the playing field so that prominent "buyers" choose to procure commodities and raw materials from smallholder farmers.

HIGH-VALUE HORTICULTURAL EXPORTS AND SMALLHOLDER EXCLUSION: SURVEY AND OTHER EVIDENCE

Much of the prevailing literature has viewed standards and smallholders through the very narrow lens of the experience with horticulture and with the GLOBALG.A.P standard. This limited focus has contributed to a rather sterile debate about whether or not standards (in and of themselves) exclude small farmers from markets.

The evidence in that sterile debate remains inconclusive—in part because of the multiplicity of factors driving entry and exit into and from supply chains. Results from a large survey of African fruit and vegetable exporters, conducted under this study program, sheds light on the changing structure of fresh produce procurement arrangements and the underlying factors driving “make or buy” and “from whom to buy” decisions.

The results of the survey provide supportive evidence for both the optimists and pessimists regarding the prospects for continued smallholder participation in Africa’s fresh produce export trade. For the optimists, there is evidence that many exporters see the benefits of continuing to work with smallholders. For example, many exporters have developed and refined a procurement system built on a combination of “make” AND “buy,” with direct (and sometimes indirect) sourcing from smallholders being a critical part of the “buy” portfolio, especially for labor-intensive crops. *Exporters are well aware of the strengths and limitations of sourcing from smallholders—yet also understand the constraints and risk involved in sourcing large quantities of produce from their own farms and from those of larger outgrowers.*

Large companies, in particular, have continued to substantially draw upon smallholder supplies and then to implement bimodal procurement systems combining their own farm-integrated supplies and those sourced from smallholders via contractual or other routinized arrangements. These companies account for the bulk of Africa’s fresh produce exports. To the extent that these companies continue to see the strategic advantages of smallholder sourcing—and have the capability to cost-effectively procure from this source and ensure that supplies meet their downstream requirements—there are likely to be ample opportunities for remunerative involvement by smallholders. *Indeed, a majority of respondent firms, including companies who supply standards-stringent markets, expect to either maintain or increase the volumes of supply that they obtain from smallholders in the future.*

For the pessimists, who believe that standards have and will continue to marginalize the role played by smallholders in this sector, certain supportive evidence can also be drawn from the survey. For example, the overall numbers of smallholders reported to be supplying the main product to the respondent firms did decline from 2002 to 2007, with significant proportional declines in the procurement arrangements for SMEs. Noncompliance (or rising costs associated) with emerging standards may have played some role in this decline, although other factors were certainly also involved. More than half of the decline in reported smallholder numbers is attributable to companies which indicate that either none or a minority of their customers enforce food safety standards. As an illustration, a substantial reduction has occurred in the role of smallholders in Ghana’s fresh pineapple export trade. Issues with (non-)compliance with food safety requirements have not been a factor in this trend. Instead, the shift to a dominant large farm structure has been driven by a change in the main pineapple variety sought by the European market and the higher investments in irrigation and other facilities needed in Ghana.

Very high levels of turnover of smallholders involved in the procurement for all size categories of companies were reported. This finding does not suggest a stable structure in which both producers and firms develop trust and promote the upgrading of productivity and the application of good agricultural practices. *There appears to be much fluidity in smallholder participation, with considerable entries, exits, and shifts in involvement between one firm or another.* Export-oriented horticultural production entails quite a bit of production and commercial risk. If a large proportion of smallholders are engaged in this activity only periodically or as “free agents,” not immersed in the management systems of leading or long-standing companies, then the prospects for remunerative and sustainable participation are not strong.

The consequences of this possible trajectory need to be put in proper perspective. The survey respondents reportedly accounted for some 88 percent of SSA’s fresh horticultural trade (outside of South Africa) in 2007. The total number of smallholders supplying—either directly or through intermediaries—the lead export product to these companies was just under 48,000. Across the sample, the lead product accounted for just under 70 percent of these companies’ exports. Hence, we would roughly estimate that these companies source from 55,000 smallholders. Some 55 percent of these farmers supply companies which report that either none or a minority of their customers enforce food safety standards.

Even if the total number of regular suppliers to this trade were facing more difficult challenges ahead, the implications for broader rural development patterns are not so clear. To put those numbers in perspective, in Kenya alone it is variously estimated that the number of smallholder households supplying horticultural produce to the domestic market exceeds 500,000 while the number of people employed on export-oriented commercial farms or pack houses for horticultural and floricultural products has exceeded 200,000 in some years. In contrast, the number of smallholders regularly supplying Kenya’s fresh

vegetable export trade is approximately 11,500. In other case study countries, the number of people employed in various capacities in the export horticultural supply chain is similarly a very large multiple of the number of smallholder households supplying produce to this trade. For example, in Zambia the number of smallholders participating in the export horticultural trade peaked at about 450, while some 5,000 to 7,000 people have variously been employed in the larger, integrated vegetable operations. *Thus an argument could readily be made that the largest welfare benefits from export-oriented horticulture relate to employment rather than to direct smallholder produce supply and that the largest opportunities for future welfare gains from smallholder engagement in markets relate to the development of domestic and regional value chains involving much larger numbers of producers, with consequent benefits also accruing to domestic consumers.*

As mentioned before, the analytical concentration on GLOBALG.A.P helped to steer the donor community down the path of programs to subsidize smallholder GLOBALG.A.P compliance and certification. Yet, while there have been some limited success stories—generally amid already successful and dynamic industries—this path of assistance has proven to be a cul-de-sac, impacting relatively few beneficiaries in relation to the much larger number of African smallholders engaged in horticultural crop production. Donor programs to facilitate GLOBALG.A.P compliance may have had some minor impact on African trade flows, yet their impact on broader rural development patterns and poverty reduction appears to have been rather marginal. After several years of experimentation, *there is a palpable sense of frustration within the development community regarding the impacts achieved and the sustainability of these gains in an ever-changing commercial environment.*

Thus, the challenges of GLOBALG.A.P compliance represent something of an outlier, pertinent for only a small segment of African smallholders and larger export-oriented horticultural companies. The vast majority of African horticultural producers are (and should be) oriented to servicing different markets for which the standards requirements are readily achievable and which offer opportunities for differentiation and price advantage. The same applies for most SME trading companies whose success rate in supplying and sustaining business relations with high-end international supermarkets is very low. Programs pushing SMEs in this direction may well be diverting them away from more remunerative and sustainable commercial strategies and therefore accelerating their demise.

While the numbers of “excluded” producers may go up or down with each new academic study, the development community seems to have moved on to other concerns, recognizing that the scope for sustainable smallholder participation in certain markets relates to many factors, and also recognizing that there is little prospect for large numbers of African smallholders to participate in GLOBALG.A.P-certified markets. These realizations have led to several shifts in the direction and emphasis of development assistance in this area. One is from a strong emphasis on supply-side constraints (working at the firm or farmer level) toward more emphasis on standards-related enabling factors (e.g., providing generic training and training materials, improving associated services to reduce costs and improve outreach, enhancing policy frameworks, etc.). A second shift is in devoting more attention to standards-based markets that appear to be more accommodating and suitable for smallholder farmers—thus fulfilling a vision of large numbers of African smallholders actually benefiting from improved standards.

OPERATIONAL LESSONS FROM DEVELOPMENT PROGRAM INTERVENTIONS

The evidence found on the cost-effectiveness and impacts of development programs in this field is decidedly mixed, with many initiatives perceived as “failures” and others as “successes.” Quotation marks are used because sometimes “failures” resulted in valuable learning, subsequently applied, while some “successes” involved missteps along the way or benefited from highly fortuitous circumstances (i.e., price spikes for focal commodities). In addition, we still know very little about the sustainability of impacts and institutional capacity. This is a relatively young field of development assistance.

Looking across the broad range of projects and case studies that were examined in this research, the leading, if not dominant, “success factor”—in explaining achievements in enabling smallholders to comply with standards and remain participating in remunerative supply chains—was the prior strength and capabilities of so-called lead firms. Where these were well managed and amply resourced and had a competitive position within domestic or specific international markets, various support schemes were able to get reasonable traction on the sustained upgrading of smallholder production.

In contrast, fragmented and weak industries have generally not effectively used and absorbed standards-related technical assistance. There must be at least a subset of leaders who can provide a local demonstration effect. It is the lead firms that have tended to drive improved standards adoption by smallholder farmers—through the requirements they set and, typically, through their outreach and procurement oversight systems. Programs that initially ignored the lead firms or somehow sought to bypass them with project staff acting to link farmers to markets have generally had either modest or poor results. Efforts to link African smallholders to high-value markets via emerging SMEs have frequently encountered problems in attaining and especially sustaining significant upgrades.

In circumstances where lead firms themselves apply low standards, we observe that efforts to independently promote improved product and production standards by smallholders have generally failed or obtained little leverage. If the focal market is not calling for or rewarding a change, it simply is not going to happen even in the presence of enlightened advisers. Bottom-up standards initiatives—that is, involving the improvement of farmers’ products and systems and the assumption that enthusiastic buyers will come charging—seem to rarely work in practice, in large part because such initiatives do not typically achieve a consistency of standards and supply and a large enough volume to command the market power that is being sought. Not all bottom-up market initiatives have this fate, although those whose centerpiece is standards compliance (rather than basic produce assembly, logistics, etc.) do not appear to have a good track record.

Thus, experience shows that development interventions in this field work best when they complement the commercial strategies being pursued by “lead” and other companies. And they should be consistent with those strategies. While it has been beneficial to encourage firms to be proactive and to anticipate requirements and opportunities emerging in their focal markets, there has been some tendency, especially in programs supporting SMEs, to reorient firms down the path of a specific standard or protocol, sometimes exposing them to a level of financial risk and technical challenge that they cannot manage without the intensive resources provided under the donor program. When the program ends, some such companies find themselves caught in the middle, having adopted certain investments and other changes, having raised their cost structure, yet still not able to fully comply with the focal standard or meet the other (including volume) requirements of buyers. *Thus, the structure and maturity of an industry should strongly influence the design of standards-related and complementary interventions.*

Looking across the range of experiences, *a second critical success factor appears to be the targeted market and the “proximity” of the improved standards with the prevailing practices and capabilities of farmers, service providers, and commodity buyers.* For smallholder agriculture, incremental upgrades involving technical learning, institutional coordination, and increased record keeping can progress well over time, yet radical shifts, entailing costly investments, are rarely successful or appropriate. Thus, for the most part, great leaps forward are neither necessary nor practical.

Despite the impression given by some of the prevailing literature and commentary, our observation is that African smallholders—or at least those with some commercial orientation—only rarely encounter situations where there are significant technical barriers for them to meet quality and other market requirements. There may certainly be financial constraints or inadequate economic incentives to meet this or that requirement. *Generally, however, there still remains a spectrum of market segments with improved standards representing an opportunity space for farmers or farmer groups to differentiate their supply from the norm.*

In fact, one could argue that the broadest opportunities for development impact in lower-income countries—that is, where the chances of success are highest, where more people are impacted, and where gains are more readily sustained after interventions—lie across levels 1, 2, and 3 in the analytical framework presented earlier. Evidence for this argument was provided by case studies on sunflower, coffee, sorghum, dairy products, and groundnuts. For most countries of SSA, there are very ample opportunities to upgrade smallholder productivity and make very basic improvements in product quality, presentation, and assembly—to service domestic and regional, and less demanding, export markets.

Thus, while well meaning and underpinned by a growing academic literature, a sizable proportion of donor activity in this space seems to have centered on the “wrong” end of the standards spectrum. The foci of attention have been on standards and market segments that are most familiar to Western market actors and technical professionals. That is, greater

understanding has existed about the standards required by European and North American (upper-end) supermarkets and those associated with social movements in the West, including movements related to organics and fair trade. Meeting high-end supermarket standards was deemed to be “necessary” for African smallholders to remain engaged in export-oriented production, while adopting one or another social or sustainability standard has been cast as an opportunity to reposition smallholders in global supply chains, to their benefit. Both streams have required an elaborate apparatus of paperwork, advisers, and auditors. The shortcomings of this approach and areas of emphasis have been recently recognized and have led to shifts in some programs.

Still, comparatively fewer donors have been active and less emphasis has been placed on the early and middle levels in the standards spectrum, those levels that are associated with nearer or more mainstream markets and more incremental and less visible upgrades, that are amenable to local solutions and South-South technical advice, that yield benefits for local consumers, and that have greater potential for long-term sustainability. Unless this imbalance is addressed, standards-related initiatives will remain marginal to the broader challenges of promoting agricultural commercialization and rural development in SSA. During the past few years there is an encouraging trend toward a better balance of activity, with increased attention being given to support for upgrading domestic and regional value chains.

Along these lines, a growing number of donors have come to understand the limitations of focusing attention on achieving farmer and product certification under some specific international standard. The point of departure of some earlier support for smallholder certification was that fundamental upgrades had already been made and that the remaining gaps can be easily narrowed. In many cases, this assumption was incorrect, with the need to ‘go back to basics’—in farmer organization, applied research and advisory services, business development services, and logistics improvements—frequently emerging as ‘lessons learned’ from these experiences.

Thus, it has become increasingly evident that the strategy to use certified production as a tool for smallholder market integration needs to be based on a continuum of improvements, with the target being to provide tools for long-term competitiveness. When certification is applied as a replacement for undertaking the upgrades required for gradually achieving gains in terms of quality, consistency, and improved on-farm information, it is very unlikely to contribute to sustainable outcomes. In the end, international buyers will buy the product that fulfills their requirements. Social and environmental claims are not a substitute for quality and consistency.

In SSA, challenges of consistency in supply and quality remain major bottlenecks of small-scale farmers’ participation in markets. The need for farmer collective action and for strong group cohesion to aggregate volumes and facilitate small-scale farmers’ access to services remains an important bottleneck to be solved, both in certified and noncertified markets. Therefore, the emphasis on the achievement of certification by farmers and farmer groups should not detract from the critical role of development efforts in supporting continuous improvements to achieve quality and productivity gains, promote smallholder organization and empowerment, and so forth.

Overall, this field seems to be struggling to identify and apply “exit strategies” for development programs. In comparatively weak institutional environments, many donors have opted for capacity-bridging rather than capacity-building approaches, with project-hired staff providing the core technical assistance and brokerage services. In some cases, efforts have been made to “localize” the technical assistance units, yet these entities have commonly struggled and have remained dependent on subsequent donor programs to sustain their operations.

Programs designed to support local “business development services” have tended to initially oversubsidize these services and then prematurely withdraw the support (in line with short project cycles), all too often leaving behind a distorted market for technical, advisory, and auditing services and relatively few examples of viable service providers able to withstand any significant production or market shock. And, while in the sanitary and phytosanitary field some significant attention has been given to strengthening public-sector capacities, especially among “competent authorities” responsible for company licensing and product clearance for selected export products, little attention has been given to public-sector capacities pertinent to the support of improved social and environmental standards. After all, such standards are widely regarded as both “private” and “voluntary.”

Thus, while there have certainly been important advances over the past decade, much of the enhanced capacity for standards management has been embedded in a range of processing and exporting companies with comparatively little broader institutional capacity put or sustained in place. The pool of local advisers, quality managers, and standards certifiers has certainly grown, but not nearly in proportion with the investments that the development community has made in this area.

The results of this research work have highlighted the need to balance attention to both the old and new sets of constraints and solutions associated with remunerative smallholder participation in agri-food markets. This does not mean that efforts to promote smallholder participation in niche and very exacting markets are not without potential or merit. Rather, these efforts appear to be more difficult, to involve comparatively higher costs per direct beneficiary, and to likely entail longer time frames to demonstrate sustainable results, particularly when “great leaps forward” are promoted. Therefore, the broader debate on whether supporting high-value agriculture or rather focusing on less exacting markets is the way forward to ensuring large development gains might still be needed. However, in the specific case of smallholders, the evidence strongly suggests that the best approach is to support incremental upgrades along the broader spectrum of market opportunities.

There are clearly no shortcuts to progress. In many contexts, there remains unfinished business in addressing the old constraints to remunerative smallholder participation in markets—those constraints related to basic infrastructure, farmer organizations, access to finance, and so forth. These constraints have not disappeared as the new realities of stricter standards have set in. For governments, private companies, and development partners, the challenge of smallholder integration to markets still lies in supporting gradual upgrades, helping farmers to move progressively along a continuum of improvements, and being linked to value chains for which they can meet downstream and consumer requirements, on a remunerative basis and with a manageable degree of risk.

Chapter 1: INTRODUCTION

Market access has been identified as one of the foremost factors influencing the performance of small-scale producers in developing countries, and in particular least-developed countries. Smallholder access to markets for higher-value or differentiated agricultural and food products (hereafter HVAF) is recognized as a vital opportunity to enhance and diversify the livelihoods of lower-income farm households and reduce rural poverty more generally ([World Bank 2007](#)).

Smallholder participation in HVAF markets is typically constrained by inadequate farm-level resources, farm-to-market logistical bottlenecks, and more general transaction costs in matching and aggregating dispersed supplies to meet buyer and consumer demand. These traditional constraints have been amplified and, in some cases, surpassed by a new set of challenges associated with compliance with product and process standards—set and enforced by governments as well as private supply-chain leaders. The tightening, broadening, and proliferation of pertinent food safety, environmental, and other standards have been the product of various factors that have been previously analyzed ([World Bank 2005](#)). A vibrant debate has emerged over the extent to which emerging standards pose barriers for developing countries’ trade rather than catalysts for production and downstream upgrades, thereby improving welfare and competitiveness. There is ample evidence to support both contentions because different circumstances have yielded diverse outcomes.

A subset of this debate relates to the smallholder farmers’ position and room for maneuvering. There is considerable concern that the opportunities provided by HVAF markets will go unrealized by smallholders because of either their technical inability to meet emerging regulatory and private standards or the high compliance and certification costs involved. That is, whatever productivity or production cost advantages small-scale might have would be outweighed by the burgeoning transaction costs associated with facilitating, monitoring, and certifying smallholder compliance with standards.²

The *cause célèbre* in this policy dialogue has been compliance with the fruit and vegetable protocol under the

GLOBALG.A.P standard (formerly known as EurepGAP). A wave of empirical studies has sought to examine patterns of smallholder adoption of GLOBALG.A.P, the associated compliance costs, and evidence of financial and other benefits. Claims and counterclaims have been made as to whether GLOBALG.A.P requirements—in and of themselves—have served to exclude smallholder farmers from potentially remunerative export-oriented supply chains, especially those serving western Europe. As if this threat were not enough, other observers have highlighted the pace of change in food retailing within developing countries, documenting the “rise of the supermarkets” and the opportunities and challenges that modern retailing poses for local farmers and small- and medium-sized (SME) food companies ([Weatherspoon and Reardon 2003](#)). The specter of smallholder market exclusion is thus raised again, this time on domestic turf, as smallholders and their groups may be unable to meet the volume and quality or food safety requirements of these end markets, or face high costs in having such compliance assured or certified.

In the face of emerging opportunities and challenges associated with servicing HVAF markets, many development agencies, nongovernmental organizations (NGOs), government agencies, and private companies have implemented a growing array of measures to level the playing field, strengthen specific technical or institutional capacities, or otherwise act to facilitate smallholder compliance with emerging standards and continued or increased participation in HVAF supply chains. Such investment, cost-sharing, capacity-building, or capacity-bridging activities have expanded considerably in

² The following example serves to illustrate this point. Sixty percent of nearly 100 African practitioners that responded to an electronic survey, within the context of an e-learning course on standards and trade organized by the World Bank (WB) in 2007, agreed with the following statement: “Compliance with standards has emerged as the single most important constraint on African small-farmer/small-enterprise participation in export supply chains for higher value products.” Yet the same percentage of the respondents agreed that important “spillover” benefits can arise from compliance.

recent years, especially in sub-Saharan Africa (SSA). They have taken varied forms and involved various entry points. Many initiatives have been bottom-up, focusing on smallholder (or smallholder group) capacities for production, collective action, standards compliance, and so forth; others have been top-down, seeking to better link farmers to remunerative markets through the efforts and enhanced capacities of lead firms. Still other interventions have focused outside of specific value chains, seeking to strengthen the overall enabling environment and support services for HVAF more generally.

For some organizations, these efforts to facilitate small farmer compliance with standards have been a core line of activity; for others, such efforts have been included in broader value chain or other rural development initiatives. Most of the World Bank's (WB) support in this area has been of the latter variety, focusing on strengthening the broader enabling environment of policies, regulations, public institutions, and infrastructure, yet with some forays into training and technical assistance at company and farm group levels. Other development partners have had a deeper, although still relatively short, experience working to support compliance with specific regulatory requirements or private voluntary standards.

RESEARCH PROGRAM OVERVIEW

While there is a growing body of research analyzing the constraints facing African smallholder farmer participation in HVAF markets, as well as the importance of standards therein, there is a lack of comparative analysis of the modalities and efficacy of public and private interventions designed to address these constraints, particularly in the context of compliance with market requirements. With growing interest and resource commitments in this field, there was an evident need to take stock of past and ongoing public and donor interventions, to consider the interplay between these interventions and private-sector strategies, and to broaden the observed terrain beyond the GLOBALG.A.P—fruit and vegetables—European Union (EU) supermarket nexus.

With assistance from the Bank-Netherlands Partnership Program (BNPP) (Trade Window) and the Canadian International Development Research Centre (IDRC), a research program was implemented to inform better ongoing policy discussions about smallholder market access and standards and to contribute to evolving rethinking within the development community regarding areas of focus, specific approaches, and entry points for supporting smallholder compliance with emerging standards. A parallel objective

was to strengthen the capacities of African researchers for policy-oriented work in this field.^{3,4}

The research program has involved a partnership between the WB, the University of Guelph, and African researchers located in Kenya, Uganda, Zambia, and Ghana. In addition to a broad literature review and the development of a program-specific conceptual framework, the research program involved the following:

- A review and characterization of donor and NGO evolving approaches to value chain development and smallholder and SME standards compliance, based on institutional documentation and correspondence with key personnel.
- A survey of practitioners (development agency, NGO, and technical organization representatives) eliciting perceptions of opportunities and constraints facing small-scale producers in the context of HVAF markets, the roles of different entities in “leveling the playing field,” and the ways in which the efficacy of such interventions are and should be assessed.
- A workshop bringing together a range of international practitioner entities to highlight and draw lessons from specific programs whose primary or secondary objective was to upgrade production and supply-chain standards and management practices in selected commodity subsectors in SSA.
- A survey of 172 horticultural exporting companies in SSA to gauge their attitudes toward procuring product from alternative sources, to map current patterns of sourcing and changes over time, and to delineate the

³ A more ambitious objective of highlighting “best practices” and providing “guiding principles” to improve the effectiveness and poverty reduction impacts of project interventions was also identified, yet the available evidence remains both insufficient and inconclusive, largely because of the short time frame of many recent interventions, to presently draw such generalizations across quite diverse experience. Work in this latter area, with the more systematic sharing of implementation experiences and results, needs to continue in order to raise the overall standard of development assistance in this field.

⁴ A Trade Standards Practitioners Network (TSPN) has been formed, a major objective of which is shared learning and the characterization and identification of good or better practices in standards-related technical assistance programs. The TSPN focuses on interventions to improve developing country responses to emerging environmental, social, and private food safety standards. The Standards and Trade Development Facility (STDF), whose secretariat is based at the World Trade Organization (WTO), is working to better coordinate technical assistance for compliance with official food safety and agricultural health regulations, and also to share experiences among organizations involved in delivering and receiving such technical assistance.

significance of standards requirements in driving these procurement decisions and patterns. A key focus here has been the decision to source from smallholders versus other available sources of supply.

- A series of in-depth country and industry case studies examining the relative importance of emerging standards in facilitating or constraining growth and participation, the interplay between private-sector strategies and developmental interventions in ensuring standards compliance, and how all this activity relates to broader economic development objectives. Industry case studies were selected to represent some diversity of operating contexts, including differences in product and market characteristics and differences in the size and maturity of industries. It was hypothesized that these factors (e.g., techno-economic characteristics of production and products; farmer and firm past experience; industry maturity and leadership, etc.) would have a profound effect on the needed resource commitments to level the playing field in favor of smallholders and the likelihood of success (see [table 1.1](#)).⁵
- A series of smallholder farm household surveys examining crop and standards adoption patterns, economic and other impacts, reported good agricultural practices (GAPs), and explanatory factors contributing to these

TABLE 1.1: Country and Commodity Case Studies

COMMODITY	COUNTRY
Horticulture	Kenya, Ghana, Uganda, Zambia
Honey	Ghana, Uganda, Zambia
Vanilla and other spices	Uganda
Dairy	Kenya, Uganda, Zambia
Organic coffee, cotton, and industrial raw materials	Uganda, Rwanda

⁵ Although the focus of attention has been on export-oriented supply chains and the challenges and strategies associated with smallholder participation, in some cases attention was given to the interface between exports, standards compliance, and the domestic or regional market (as in the case of dairy). In most cases, the primary sources of information have been interviews with a representative range of processors and exporters, public officials, producer organizations, and donor or support organizations. Drawing from the information and data collected from these sources, a qualitative assessment of the efficacy of the project or intervention, in terms of achieving the sustainable participation of small-scale producers in supply chains to high-value markets for agricultural and food products, was undertaken.

outcomes. Such surveys also highlight the reported impact of various government, donor, and NGO interventions. Relatively large surveys were conducted among Kenyan green bean farmers, Ugandan vanilla growers, and Ghanaian pineapple and vegetable producers. Both descriptive and econometric analyses are being undertaken.

The research program addressed a range of issues, falling under the following headings:

- **Smallholders, comparative (dis-)advantage, and compliance with HVAF buyer or market standards:** How adversely tilted is the playing field against smallholders? How might emerging standards create new opportunities or exacerbate underlying constraints facing smallholder farmers? What are the critical constraints that hamper the sustained participation of small-scale producers in supply chains to high-value markets? Which of these constraints are specifically related to the challenge of assured compliance with downstream buyer and regulatory requirements? In which contexts are these constraints most apparent? Conceptually, how might different types of interventions by governments and development agencies adjust the playing field, in the short or longer terms?
- **Private-sector perceptions and approaches:** What are the perceptions of key HVAF buyers (e.g., exporters, processors) regarding the role and pitfalls of sourcing products from smallholder farmers in an era of evolving standards? What strategic and tactical approaches do they adopt to manage evident sourcing problems and risks? What changes have or might occur in the ways they include smallholder supplies into their overall procurement arrangements? What assistance—from governments, development agencies, or industry organizations—has or could help them to overcome the problems and costs of sourcing from smallholders?
- **Development agency and practitioner responses and approaches:** What are the perceptions of development practitioners regarding the constraints and opportunities facing smallholders when participating in HVAF markets? In practice, how and why have development assistance approaches to linking small-scale producers to HVAF markets changed over time? What are the predominant approaches at the current time? How and why have approaches that address the specific challenges of standards compliance changed over time? What patterns can be observed in the interplay

between private-sector product sourcing strategies and development assistance measures geared toward tilting the playing field in favor of smallholders? What evidence is there that the development community is learning from past experiences and adjusting core approaches, beneficiary targeting, and so forth?

- **Smallholder farmer perspectives:** How do farmers perceive the relative significance between traditional constraints (i.e., access to land, water, and labor; logistics) and new constraints (i.e., production process standards; certification costs; product traceability) in accessing and maintaining access to remunerative agri-food supply chains? What tangible and intangible benefits have been associated with movement toward (and support for) higher product and production process standards?
- **Understanding impacts:** How is the success of interventions aimed at linking small-scale producers to high-value markets normally defined and assessed? What role does sustainability (of outcomes, institutional capacities, etc.) play in these assessments? How might these measures be refined and improved? Based on available evidence, what can be said about the efficacy of past and ongoing interventions to facilitate smallholder compliance with emerging HVAF requirements? Based on this evidence, what can be said about the impacts of standards adoption or nonadoption for smallholder market participation, incomes, and nonpecuniary effects? How representative or generalizable is this evidence?
- **Overall lessons learned and operational implications:** What types of interventions, focused on assured compliance, seem to be most effective at achieving the sustained participation of smallholders in supply chains to HVAF markets? What does the available evidence suggest about program foci and beneficiary targeting, intervention entry points, the sequencing of activities, and realistic time frames to achieve and maintain results?

THIS SYNTHESIS REPORT

This synthesis report provides a condensed and readily accessible discussion of the main themes, findings, conclusions, and “empirical greatest hits” from the broader research program; it also integrates core insights from the parallel, expanding research and advocacy work in this field.⁶

The broad purpose of this synthesis report is to provide a stronger bridge between analyses of constraints facing

smallholders in participating and complying with standards in HVAF markets and supply chains, on the one hand, and the scope for effective government and development agency interventions in this area, on the other. In so doing, this work will help to enhance the strategies, prioritization, and approaches taken by development practitioners in this field.

A complementary objective is to provide, in readily accessible form, various insights, perspectives, and empirical evidence related to the challenges and opportunities facing African smallholders and supply-chain entities in HVAF markets, especially in relation to compliance with pertinent standards. This review seeks to “tone down the heat” in ongoing policy discussions of standards as barriers versus catalysts, providing, as best as possible, an objective assessment of the patterns and representativeness of available evidence, including that generated from the present research program.

While coverage of GLOBALG.A.P-related issues is unavoidable, the review and analysis will extend well beyond this coverage to demonstrate the diversity of settings, opportunities, and approaches to enabling smallholders to participate in standards-based markets. In much of SSA, domestic or international supermarket chain market penetration remains very limited, and so little attention will be directed here to smallholder-supermarket links (or lack thereof). Other research programs have been focusing on that issue. The paper highlights both the opportunities and challenges associated with accessing markets characterized by varying specificity and stringency of standards. In so doing, it inquires into whether donor and government support efforts should devote considerable attention and resources to aid smallholder participation in the more exacting markets, or whether less exacting markets potentially provide an appreciable return (and far less risk) to larger numbers of farmers. Rather than an either/or question, this may be simply one of getting the balance of attention right.

The paper is structured as follows. [Chapter 2](#) summarizes the evolution of regulatory and market requirements in HVAF markets. It highlights the key elements in the evolving structure of regulatory requirements and private standards governing access to and participation in higher-value product markets. [Chapter 3](#) provides a conceptual framework that helps to explain the sets of factors influencing the inclusion or exclusion

⁶ Not all of the above themes and issues are fully addressed in this synthesis report. For example, smallholder farmer perspectives emerged from the program’s farmer surveys, the quantitative findings from which are reported elsewhere.

of smallholder farmers in higher-value supply chains, how the challenges of assured compliance with standards fit into this overall picture, and the roles that development assistance programs can and do play to influence the playing field and the ways in which smallholders are impacted—positively or negatively—by emerging product and production process standards.

[Chapter 4](#) provides an overview of the patterns of development assistance pertinent to this field, tracing this assistance to 1980s and 1990s antecedent programs related to nontraditional export development and supply-chain partnerships, as well as to subsequent initiatives to “link smallholder farmers to markets” and address broad-capacity needs related to agri-food standards management. A summary is then provided of the past decade’s interventions centered on facilitating smallholder compliance with standards, including some

lessons emerging from these efforts. [Chapter 5](#) provides a commercial buyer’s perspective on the sourcing of high-value products and raw materials from smallholders and alternative sources. It combines results from a large-scale survey involving African fresh produce exporters with insights into strategic and tactical considerations derived from selected research case studies.

[Chapters 6](#) and [7](#) provide summary findings from a range of the research program’s case studies and field surveys. These cases illustrate a diversity of experiences, with both easy and more challenging processes of smallholder adoption of improved standards and both successful and decidedly less effective development community interventions, including various lessons that have or could be gleaned. [Chapter 8](#) offers some conclusions.

Chapter 2: THE EVOLUTION OF REGULATORY AND MARKET REQUIREMENTS IN HVAF MARKETS

In order to understand the opportunities and challenges faced by smallholders in the face of emerging and expanding supply chains for higher-value or differentiated agricultural and food products (HVAFs), it is necessary to examine the changes that are occurring in the regulatory requirements and private standards governing these chains and the related compliance processes. There is ample evidence that smallholders can gain substantively from participation in HVAF supply chains (see, for example, McCulloch and Ota 2002; Maertens and Swinnen 2009), even in the face of stricter food safety and quality requirements. At the same time, there are concerns that the adjustment processes associated with compliance, in terms of production practices and management systems, as well as the related costs, may be prohibitive, especially for smaller or poorer farmers (see Dolan and Humphrey 2000; Jaffee 2003; Okello 2005; Jensen 2004; OECD 2006). Hence, as discussed below, interventions directed at smallholder participation in HVAF supply chains have tended to focus on overcoming these compliance challenges, alongside and sometimes instead of the traditional preoccupation with farm-level productivity, supply-chain bottlenecks, and so forth. This refocusing reflects both a recognition of the benefits to be gained from linking smallholders into HVAF supply chains and also a general view that compliance challenges more generally are increasingly the norm and are unavoidable.

This chapter aims to provide a broader context to the challenges associated with the assured compliance faced by smallholders attempting to gain access to HVAF supply chains. In particular, it examines two key questions. First, what broad changes are taking place in HVAF supply chains, notably as they relate to regulatory requirements and private standards governing food safety and quality? Second, what factors are driving these changes in the governance of food safety and quality? Given that the predominant focus of the research program was on HVAF exports from sub-Saharan Africa (SSA), primary attention is given here to ongoing changes in European markets. While the evolving regulatory requirements and private standards in Europe are certainly not universal to industrialized country agri-food markets as a

whole, they are indicative of the broad thrust of changes in the governance of food safety and quality in global markets.⁷

DRIVERS OF CHANGE IN THE GOVERNANCE OF FOOD SAFETY AND QUALITY

According to Henson and Humphrey (2010), there are three main drivers of the evolution of regulatory requirements and private standards in agri-food markets:

1. Heightened interest and changing conceptions of food safety and quality among consumers
2. Restructuring and progressive globalization of agri-food supply chains
3. Broader trends toward the “privatization” of market governance

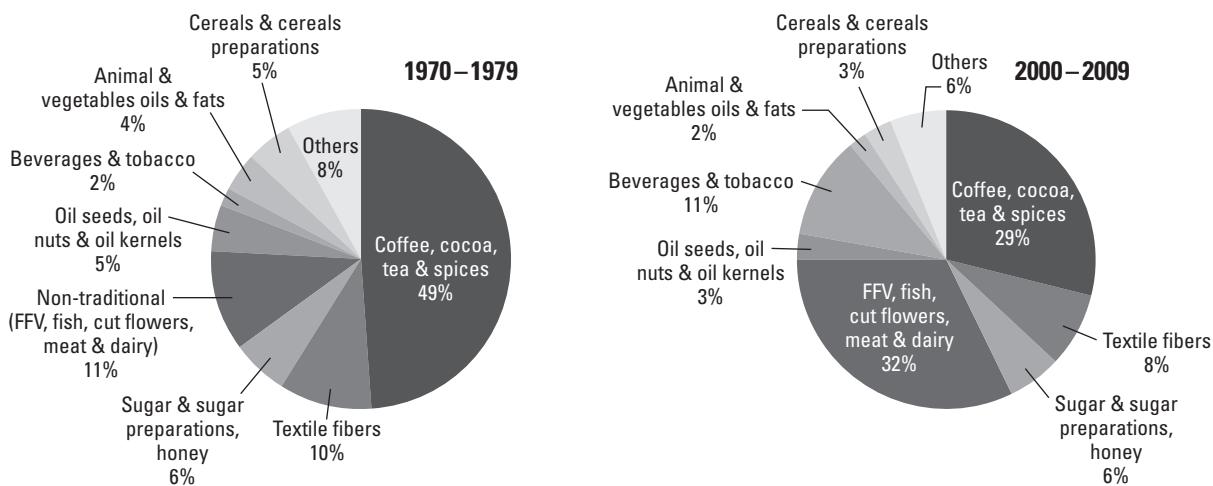
As will be seen below, these drivers have stimulated reforms in food safety and quality regulatory systems, which themselves have been a major driver of private standards and related processes of conformity assessment. This fact suggests a complex and nonlinear process of restructuring and regovernance of agri-food supply chains, which is seen most profoundly with HVAF products but increasingly within the global agri-food economy as a whole.

Consumer Demand and Conceptions of Food Safety and Quality

In the markets of industrialized countries, attitudes toward food and related demand patterns for higher-value food products have evolved with demographic and socioeconomic trends. In all industrialized countries, the share of

⁷ In the United States, for example, the Food Safety Modernization Act (FSMA), passed by Congress in December 2010, significantly expands the powers of the Food and Drug Administration (FDA) with respect to food. It includes provisions for traceability requirements and Hazard Analysis and Critical Control Point (HACCP) implementation. Specific provisions on imports include the Foreign Supplier Verification Program, the Voluntary Qualified Importer Program, and FDA authorization to require import certificates. The law also authorizes the agency to create a system for recognition of bodies that accredit third-party auditors to certify eligible foreign facilities.

FIGURE 2.1: Change in the Value Composition of SSA Exports of Food and Agriculture (%)



Source: Calculations based on the United Nations Commodity Trade Statistics Database (COMTRADE).

income spent on food has fallen dramatically over time. While consumers now spend a smaller proportion of what they earn on food, they have shifted consumption toward higher-value products, including fresh fruits and vegetables, fish, nuts, and spices. This shift in consumption patterns has had tremendous implications for developing country exports. With about 40 percent of the trade in agriculture, fisheries, and forestry occurring between developing and developed countries, the former have experienced a tremendous transformation of their agri-food export portfolio in recent decades. For example, for SSA, the aggregate average share of traditional exports—coffee, cocoa, tea, and spices—out of total agri-food exports decreased from 49 percent during the period 1970–79 to only 29 percent during 2000–2009, while the share of nontraditional exports (including fresh fruits and vegetables, fish, cut flowers, etc.) increased from 11 percent during the period 1970–79 to 32 percent for the period 2000–2009 (figure 2.1).

In many cases, consumers in industrialized countries have been tempted to try an increasingly wide array of “exotic” foods to which they are exposed through foreign travel, immigration, television, and other forms of media. More broadly, foods are increasingly purchased partially or fully prepared, with cooking increasingly relegated by many consumers to a leisure pursuit. There is a progressive mismatch between the interests of consumers in food and the amount of time they are willing to spend preparing the food they eat, as their lifestyle puts an increasing strain on their time.

Shifts in food consumption patterns in industrialized countries, and also increasingly among the middle- and high-

income populations of developing countries, are associated with a rising prevalence of obesity and an array of diet-related diseases. In part, such trends reflect the progressive ageing of the population, but also a mismatch between the nutrient composition of the diet and the dietary needs of consumers. Thus, there is an increasing interest in foods perceived to be healthy and food products that incorporate ingredients that are purported to be health-promoting.

Alongside concerns about the longer-term health effects of food, and despite major advances in scientific knowledge and technology, food safety remains a considerable source of anxiety to consumers in industrialized countries.⁸ Indeed, an ongoing series of food safety failures related to recognized hazards in foods (for example, *Salmonella* in eggs or *E. coli* in salad greens), and the emergence of new hazards with real or plausible links to food (for example, bovine spongiform encephalopathy [BSE]), have served to shake consumer confidence (Henson and Caswell 1999; Henson and Jaffee 2008) (table 2.1). As a result, consumers have looked to foods that are perceived to be safer (for example, organic) and to food producers, processors, and distributors that are seen as employing more rigorous food safety controls.

⁸ According to a survey among U.S. consumers carried out by the Food Marketing Institute in 2007, the percentage of consumers “completely” or “somewhat confident” in the safety of supermarket food declined from 82 percent in 2006 to 66 percent in 2007, with 68 percent of respondents reporting to be more concerned about the safety of imported food than two or three years prior (FMI Consumer Trends 2007).

TABLE 2.1: Erosion of Consumer Confidence in Food Systems: Examples of Well-Published Food Outbreaks

1980s	1990s	2000s
DEVELOPED COUNTRIES		
Beef hormones (European Union) <i>Salmonella</i> in eggs and chicken (U.K.) Alarín apples (U.S.)	<i>E. coli</i> in hamburgers (U.S.) BSE* (U.K.) <i>Cyclospora</i> in raspberries (U.S., Canada) Dioxins in animal feed (Belgium)	Contaminated olive oil (Spain) <i>Staphylococcus</i> in milk (Japan) <i>E. coli</i> in spinach, carrot juice (U.S.) <i>Listeria</i> in ready-to-eat meat (Canada) <i>Salmonella</i> in peanut butter (U.S.)
DEVELOPING COUNTRIES		
Hepatitis A, raw oyster, 300,000 cases (Shanghai, China)	<i>Salmonella typhimurium</i> , more than 1,000 cases, meat products (Ningxia, China)	<i>E. coli</i> O157:H7, various animal foods, 20,000 cases, 177 deaths (Jiangsu and Anhui provinces in China) Melamine in milk (China) Maize contaminated with aflatoxins (Kenya)

*Bovine spongiform encephalopathy.

Source: Compiled by the Authors.

At the same time, the safety concerns of consumers span a wide range of potential hazards that are microbiological, chemical, or physical in nature and that increasingly require system- and management-based approaches to minimize the attendant real or perceived risk. Table 2.2 illustrates the causes of noncompliance associated with nearly 500 European Union (EU) notifications on products imported from SSA during the period 2006–09.

TABLE 2.2: Reasons for Noncompliance among EU Notifications on Products Imported from SSA (2006–09)

REASONS FOR NONCOMPLIANCE	PERCENT
Aflatoxins	41.3
Mercury	6.6
<i>Salmonella</i>	4.6
Bad hygiene, bad state of preservation, bad temperature control, etc.	9.2
Benzo(a)pyrene	7.6
Spoilage	1.6
Too high content of color E 124—Ponceau 4R, sulphite, benzoic acid, etc.	6.2
Unauthorized colors (e.g., Sudan)	7.0
Undeclared sulphites	1.0
Histamine	1.4
Unsuitable organoleptic characteristics/transport	0.6
Package damage	0.4
Parasitic infestation	0.8
Ochratoxin	1.6
Altered organoleptic characteristics	1.2
Others	8.8

Source: Calculations based on Rapid Alert System for Food and Feed (RASFF) data.

While food quality has long been almost synonymous with food safety, consumers in industrialized countries have increasingly focused on a wider range of quality attributes that may be intrinsic (for example, authenticity) or extrinsic (for example, animal welfare, impact on the environment, and concepts of social welfare) to the food itself. Thus, questions are asked about where food is from and how it is produced, the impact of methods of food production and processing methods on the wider world, and so forth. This trend puts the focus not only on foods per se but also on the performance of the broader agri-food complex. Given that many of the associated quality attributes cannot be verified by examining or consuming the food itself, the focus of consumers has progressively turned to reliable information and assurance about the nature of the food they are eating (Jaffee and Henson 2004).

The sum effect of these trends is increasing consumer expectations of food across a wider spectrum of safety and quality attributes. Some such attributes relate to the food itself; that is, does it contain pesticides? Other attributes relate to "how it got to what and where it is" and whether it is good or bad for the wider social and environmental world. For food producers, such concerns are potentially a double-edged sword. On the one hand, they imply greater controls and oversight of food throughout the supply chain. On the other hand, they present potentially valuable opportunities for value addition; if consumers are concerned about particular attributes of food, presumably some may be willing to pay more for foods that have such attributes.

Restructuring and Globalization of Agri-Food Supply Chains

The structure and *modus operandi* of agri-food marketing systems across the world, especially in industrialized countries,

have changed profoundly over recent decades. Key trends include the following (World Bank 2005):

- The consolidation of food retailing such that a relatively small number of firms command a large proportion of retail food sales, first nationally but also increasingly globally. Thus, in many industrialized countries, and especially in Europe, the largest five food retailers have a market share of greater than 50 percent.
- The declining importance or more specialized roles of wholesale or terminal markets as food retailers increasingly source direct from food producers and manufacturers. Thus, in many industrialized countries, wholesale markets have been relegated to serving as a residual market for lower-quality and surplus products, or have evolved to supply more specialist markets, such as "ethnic" foods.
- The rapid growth of the food service sector, first in the United States and Canada and more recently in other industrialized countries. This trend has ridden on the back of consumer demand for eating outside the home and for ready-to-eat foods for consumption in the home. As with the food retail sector, the food service industry has consolidated, so that a small number of large (and increasingly global) firms account for an increasing market share.

As a consequence, agri-food supply chains are increasingly buyer-driven (Humphrey and Schmitz 2001), with a diminishing number of key economic players having power over national and, increasingly, global agricultural and food markets. Thus, large food retail and food service firms are increasingly sourcing direct from preferred suppliers along supply chains that are being rationalized to facilitate greater integration and oversight.

Increasingly, agri-food supply chains are extending beyond national and regional boundaries, driven in part by consumer demand for year-round availability of an increasingly broad array of indigenous and nonindigenous foods. In turn, global procurement has been facilitated by new food, communications, and transportation technologies that have been implemented within a policy environment that encourages more liberal international trade (Henson 2007). Thus, these dominant food retailers and food service firms increasingly have a global influence, employing comparable systems of procurement and quality management, almost regardless of what and where they are sourcing.

The ways in which dominant firms in the agri-food sector compete is also changing, with increased emphasis on product safety and quality attributes (of the types discussed

above) (Raikes et al. 2000) as a means of "decommodifying" products. Indeed, it is argued that the very ways in which agricultural and food markets are both structured and operate are defined by quality-based competition; at the same time, the associated institutional arrangements are crucial to the legitimacy of the quality attributes embedded in agri-food products (Busch and Bain 2004).

"Privatization" of Market Governance

Across many product and service markets, including financial services, accountancy, and product safety, there has been a trend toward increased private governance of markets (Henson and Humphrey 2010). This trend is seen through the evolution of new rule-setting, conformity assessment, and enforcement institutions, including standards-setting bodies, auditors, and certification agencies (NRC 1995; Hatanaka et al. 2005). In part, this evolution reflects recognition that governments lack the resources or expertise to regulate effectively the private sector in areas that are increasingly technological or administratively complex. In areas such as food safety, furthermore, management-based controls that are employed increasingly along the entire supply chain are seen as more effective than traditional end-product and process-based controls. Thus, requiring the private sector to be proactive in ensuring safety of the end product is seen as a logical transition in the way the agri-food sector is regulated.

In many product lines, the private sector has long played a key role in the development and adoption of product standards that act to codify information, manage interface complexities and reduce transaction costs (Henson and Humphrey 2010). Examples include standardized color descriptions for textiles and electrical standards designed to facilitate modular designs and product interfaces. While product standards do exist in the agri-food sector, more often public standards perform this function, while private standards tend to concentrate on process attributes. Henson and Humphrey (2010) argue that this difference reflects the frequency and intimacy with which consumers interact with food and the importance of established norms of consumption, such that the safety and healthiness of food products and the wider social and ethical implications of agri-food systems take on great importance.

EVOLUTION OF FOOD SAFETY, QUALITY, AND SOCIOENVIRONMENTAL GOVERNANCE

Governments and the private sector have responded to developments in agri-food markets through institutional reforms that have yielded a new paradigm in food safety and quality governance. The public sector has implemented

new or revised regulations alongside significant institutional changes in the oversight of food safety (Jaffee and Henson 2004). In many cases, food safety regulations have been tightened for foods that have long raised safety concerns (for example, *Salmonella* and *Campylobacter* in meat and poultry and pesticide residues in fresh fruit and vegetables), while new regulations have been implemented for emerging hazards and in areas that were previously less regulated (for example, mycotoxins). With respect to food quality, public regulations and/or standards have been implemented to ensure fair competition and to prevent consumers from being misled (for example, organic products), and to otherwise promote quality-based competition on a level playing field. At the same time, product liability has come to play a more prominent role, both through tort liability standards (Buzby et al. 2001) and the “duty of care” required of food sellers with respect to their legal food safety obligations, most notably the concept of “due diligence” (Henson and Northen 1998).

In parallel with the evolution of public controls on food safety and quality have been moves by the private sector to address consumer concerns across a broad spectrum of safety and quality attributes and to harness these concerns as a means to differentiate their products and to compete in quality-defined markets. Much of the motivation behind this trend has been the mitigation of reputational or commercial risks associated with the safety of food products, related in part to the level and nature of public regulatory requirements, alongside quality-based modes of product differentiation (figure 2.2). More broadly, a wide range of market- and firm-level factors motivate the implementation of enhanced food safety and quality controls (Henson 2007). Thus, there has been a rapidly increasing plethora of private “codes of practice,” standards, and other forms of supply-chain governance (Jaffee and Henson 2004). These efforts have been especially prominent among large food retailers, food processors, and food service firms, reflecting both their considerable market power and competitive strategies based on private brands that tie a firm’s reputation and performance to the safety and quality performance of its products (Bergès-sennou and Réquillart 2004). Initially, firms tended to develop and adopt their own standards (for example, Tesco’s Nature’s Choice), but increasingly collective private standards have

come to the fore: for example, the British Retail Consortium (BRC) Global Standard for Food Safety, the International Food Standard (IFS), and GLOBALG.A.P standard.

Both reflecting and supporting the development and adoption of private food safety and quality standards has been the development of quality metasystems (Caswell et al. 1998) such as Hazard Analysis and Critical Control Point (HACCP) system, good manufacturing practice (GMP), good agricultural practice (GAP), and traceability. Some of these quality metasystems are embedded in voluntary public standards at the national or international levels (for example, the food safety management system ISO 22000 standard, developed by the International Organization for Standardization [ISO]) and may not be specific to agricultural and food products (for example, ISO 9000), while others are propriety private standards developed by standards bodies (for example, SQF (Safe Quality Food) 2000) or by individual food firms (for example, Tesco’s Nature’s Choice). Such metasystems can be viewed as codes of conduct for the agri-food system in achieving both a particular bundle of food safety or quality attributes and the processes by which safety and quality are achieved. Private food safety and quality standards are increasingly enwrapped in a broader system of conformity assessment and management. Such so-called private schemes have been both stimulated and facilitated by the development of a multitiered system of conformity assessment based around third-party certification and accreditation (NRC 1995).

While the predominant focus of management-based food safety controls has been on food processing, the increasing importance of traceability and the management of food safety from “farm to fork” has served to draw increasing attention to the integrity of the entire supply chain (Humphrey 2008; Henson and Humphrey 2010). Thus, while food safety requirements have traditionally been passed down the supply chain through the requirements of buyers, now explicit technology, performance, and management standards are being applied at various levels of the chain. For example, Regulation (EC) No 178/2002 of the European Parliament and of the Council, which established the European Food Safety Authority, raises the issue of traceability and controls along the value chain, stating that “in order to ensure the safety of food, it is necessary to consider all aspects of the food production chain as a continuum from and including primary production and production of animal feed up to and including sale or supply of food to the consumer because each element may have a potential impact on food safety” (CEC 2002).

Not surprisingly, the GLOBALG.A.P standard, which encompasses large elements of attendant EU law and provides a

FIGURE 2.2: Using Food Safety as a Carrier for Sustainability Criteria



Source: Homer 2010.

roadmap to regulatory compliance in primary production, is now widely required by major food retailers and food service firms when procuring fresh fruit and vegetables.

The net effect of the above transformations is that contemporary agri-food systems are increasingly governed not only by public regulations and private standards, but also by public and private modes of enforcement. While many of these metasystems started out as voluntary codes of good practice, they are increasingly pervading public regulations (for example, through the inclusion of HACCP-based requirements in food safety regulations). At the same time, regulators are increasingly putting the onus on the private sector for ensuring food safety. For example, the preamble to the European Union's General Food Law legislation states that "a food business operator is best placed to devise a safe system for supplying food and ensuring that the food it supplies is safe; thus, it should have primary legal responsibility for ensuring food safety" (CEC 2002).

While this legislation provides firms with considerable latitude in designing systems of control aimed at ensuring food safety, there is an evident compulsion for such controls to be implemented (Henson and Humphrey 2010). The task of firms is to provide a defense against the legal liability they face in supplying food. The adoption of private standards such as the BRC Global Standard, IFS, and GLOBALG.A.P is designed to provide such a defense. Furthermore, these private food safety standards are not all created equal. Versions of these standards are promulgated to reflect specific regulatory concerns in the intended market or specific demands from leading market players. For example, distinct versions of so-called global standards, specifically targeting the North American market, have been released in recent years.

Concerns about the proliferation of private food safety standards, their prescriptive nature, their legitimacy and transparency, and their potential to undermine public food safety, as well as their potential economic development impacts, have transformed into an intense debate.⁹ In recent years, perhaps a more intense dynamic has emerged around initiatives dealing with social, environmental, and sustainability concerns—pushed by international agreements¹⁰ and civil society pressures—giving rise to a complex and evolving landscape of voluntary standard initiatives in agricultural and agri-food markets.

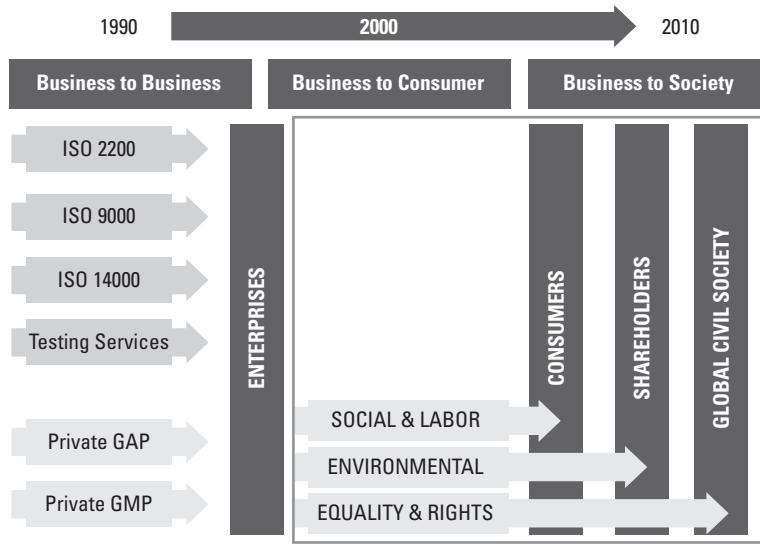
⁹ A detailed discussion of private food safety standards, in terms of their purpose, relation to official standards, and their implications, can be found in the discussion paper prepared for the 33rd Session of the Codex Alimentarius Commission, held in Geneva, Switzerland, July 5–9, 2010, and in Henson and Humphrey (2009).

This complexity is reflected in the wide variation between schemes. For example, Liu (2009) and others categorize different voluntary systems according to different criteria: their *target dimension*, or whether the standard targets the mass market (mainstream standard, e.g., 4C) or a niche market (e.g., organic labeling); their *expected outcomes and functions* (social, worker safety, quality, environmental, etc.); their *key drivers* (businesses, nongovernmental organizations [NGOs], coalitions of public and private actors, etc.); their *geographic coverage* (national, regional, international); their *final use or immediate objectives* (e.g., protecting the environment, promoting sustainable agriculture, advancing social goals, responding to cultural demands, etc.); and their *targeted clients*: either corporate clients (business to business [B2B] schemes) or final consumers (business to consumer [B2C] schemes). Most of the food safety, traceability, and good agricultural practice standards are B2B. On the other hand, product quality and ethical and sustainability standards usually, but not always, belong in the B2C category (see figure 2.3). They signal the specific qualities of the product to consumers through the use of a label to be attached to the product. Some of them target both corporate clients and final consumers (e.g., Rainforest Alliance [RA]). In recent years, there has been an evident proliferation of such social and environmental standards (see box 2.1 on p. 14), with discussions intensifying about the scope for harmonization and collaboration and the need for a better understanding of their intended impacts in the ground.

The landscape of standards initiatives is rapidly changing and is characterized by increasing overlap of standards, which are more and more becoming de facto mandatory and used as a tool for managing risks (e.g., food safety, social issues), differentiating products and cobranding, and communicating with consumers or business partners.

However, the picture painted above, of increasingly integrated global agri-food supply chains that are driven by dominant buyers and that govern their supply chains through private

¹⁰ For example, the Rio Declaration in 1992 set a foundation for not only governmental action but for all stakeholders to integrate sustainable development consequences within their consumption and production decisions (Rio Declaration, Principle 8). Other agreements include the issue of the Kyoto protocol in 1997 and the World Summit on Sustainable Development in Johannesburg, 2002. According to SSI (2008), the most immediate outcome of the Rio Earth Summit process was the launch of a concerted effort to develop and promote a series of national "eco-labeling initiatives." By 2000, there were more than 30 national eco-labeling initiatives around the world. These governmental efforts were simultaneously complemented by a rapid growth in the adoption of corporate codes of conduct, corporate social responsibility (CSR) programs, and social reporting activities by the private sector.

FIGURE 2.3: Evolution of Standards Systems

Source: Homer 2010.

standards, though it has become increasingly common, is certainly not universal (see [box 2.2 on p.15](#)). There remain markets (for example, smaller supermarket chains and food service firms) and products (for example, fish) for which less elaborate systems of regulations or private standards exist, even in the more exacting European countries. There are also countries (for example, the United States and Canada) where private standards still play a lesser role. Prevailing regulatory systems, as well as related liability norms and systems of conformity assessment and enforcement, play a role in explaining such variation, as do modes of competition and the structure and modus operandi of agri-food markets.

In most SSA countries, the bulk of the population still relies on traditional market channels for purchases of staple foods and on so-called wet markets for fresh produce, fish, and livestock products. Thus, while concerns about food safety are growing, cost and very basic quality attributes remain the dominant concerns of most SSA consumers. While

niche domestic markets are certainly emerging, attention to the safety and particularly social and environmental dimensions of food production is far from mainstreamed in African countries.

Along with domestic markets, the importance of other regions—beyond the EU and other Organisation for Economic Cooperation and Development (OECD) economies—has been growing as destinations for SSA exports in recent decades. For example, increasing volumes of traditional exports from the region are now targeting low- and middle-income economies ([table 2.3](#)). African exports to Asia are growing rapidly for oil, minerals, and timber, but also for tea, cotton, tobacco, and other agricultural raw materials. Low- and middle-income economies in East and South Asia accounted for some 28 and 43 percent, respectively, of SSA exports of tea and cotton over the 2000–09 period.

Therefore, while linking producers to local, regional, or less strict international markets has not traditionally been the most attractive proposition within development circles due to several factors, consensus is growing on the potential of these markets to offer major opportunities for adding value to smallholder production.¹¹

TABLE 2.3: Share of SSA Exports to Low- and Middle-Income Economies (as percentage of region's total exports of each product category)

PRODUCT CATEGORY	1970–79	1980–89	1990–99	2000–09
Fruit & vegetables	7	7	16	26
Coffee, tea, cocoa, and spices	5	9	16	23
Oil seeds, oil nuts & oil kernels	12	24	41	57
Tobacco & tobacco manufactures	21	20	28	52
Textiles	18	19	49	60

Source: Calculations based on COMTRADE data.

¹¹ Recent studies in Ghana among Asian vegetable producers suggest that growing Asian vegetables instead of local vegetables or staples may not necessarily lead to higher smallholder incomes (Henson et al. forthcoming). Similarly, studies in horticulture domestic value chains in Zambia (wholesale markets supplying tomatoes and watermelons) demonstrate that farmers exhibit healthy returns on their participation in these value chains—returns reach US\$1.94 a day for tomato production and nearly US\$6 a day in watermelon production ([World Bank 2009](#)).

BOX 2.1: Examples of Sustainability Initiatives in Coffee

Coffee sold under sustainability schemes designed by NGOs or individual companies, with or without third-party monitoring and verification, has shown tremendous growth in recent years. According to data presented by the State of Sustainability Initiatives report ([SSI 2010](#)), sustainable coffee sales have grown by 433 percent during the last five years and, at 457,756 metric tons, accounted for 8 percent of global exports in 2009.

[Agritrade \(2009\)](#) estimated the gross total purchases of certified “sustainable coffee” for 2007 in about almost 6 million bags. Examples of sustainability schemes in coffee include the following:

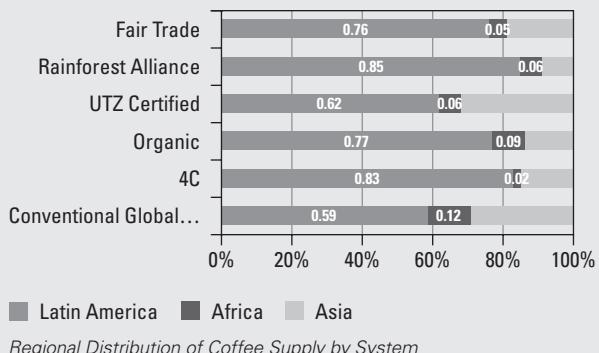
Rainforest Alliance (RA) certified coffee—This certification focuses on sustainable farm management, including social, labor, and environmental responsibility. The label also guarantees that the coffee beans have been shade-grown under the rainforest canopy, minimizing soil erosion and preserving the biodiversity and natural ecosystem of the area. Once the coffee farm is inspected by RA, an independent team evaluates the report to determine qualification. Child labor is strictly prohibited.

UTZ Certified “Good Inside”—Coffee farmers who are “UTZ Certified” must comply with the program’s Code of Conduct, which outlines standards for socially and environmentally responsible practices, improved farm management, and product traceability. Annual third-party audits are conducted to ensure compliance.

4C Association—Supported by several European-based donors, 4C Association aims to achieve sustainability along the entire coffee value chain. The initiative emphasizes the setting of baseline standards that allow as many producers as possible to begin a stepwise approach to sustainable practices.

C.A.F.E. Practices (Coffee and Farmer Equity) program of Starbucks—The program’s primary focus is

on coffee quality but has evolved to incorporate social, economic, and environmental criteria as well. The program was developed in consultation with Conservation International, an independent third-party organization. Suppliers are scored based on their practices, and those with high scores receive preferential buying status with Starbucks.



“Bird Friendly” coffee—This certification is provided by the Smithsonian Migratory Bird Center of the National Zoo and ensures that the coffee has been shade-grown under a canopy of trees, thus preventing habitat destruction for select migratory birds and minimizing soil erosion.

However, penetration of these schemes has been low in Africa in comparison with other regions, where coffee is more developed (see accompanying figure). Colombia, Brazil, Peru, and Vietnam account for 77 percent of total sustainable coffee production. The supply of sustainable coffee is set to increase significantly in the coming years due to various buyer initiatives: Kraft, Nestlé, and Sara Lee all have made commitments to increase sustainable supply in the near future.

Source: [SSI 2010](#); [Agritrade 2009](#).

BOX 2.2: Penetration of Stricter Demands for Quality and Safety in SSA HVAF Domestic Markets

Late in the 1990s and early 2000s, several studies began to highlight the emerging and expected growing influence of the global agri-food restructuring trends—the so-called global food retail revolution—in developing and emerging economies, including SSA economies. According to these studies, there were parallel trends in the domestic food markets within Africa, with a growing involvement of modern supermarket chains and increased application of stringent private standards (Reardon et al. 2003; Louw et al. 2008). Indeed, in several African countries, modern food distribution and food service channels are expanding, and a growing number of consumers are asking for and willing to pay for product attributes beyond basic visual and sensory quality attributes. Nevertheless, outside of South Africa, the penetration of supermarket chains beyond leading cities and upper-middle-income consumer segments is still limited.

A number of recent studies are contributing to an increased understanding of the influence that modern agri-food systems (particularly supermarkets) might have on SSA economies (Tschorley 2010; Tschorley et al. 2010; Tschorley et al. 2004). Clearly, while the influence of modern retailer systems in SSA is growing, supermarket shares of the regional and local market are

much lower than expected, particularly in the fruit and vegetables sector. In Nairobi, for example, supermarket chains held only about 4 percent of Nairobi's fresh produce market in late 2003, with less than 1 percent of all fresh produce sold within Kenya passing through supermarket preferred supplier programs; it is very unlikely that this situation has changed since then, resulting in the low growth of supermarket shares in Nairobi (Tschorley 2010). This pattern of low supermarket penetration has been observed by others in other SSA countries (Reardon and Timmer 2006; Minten 2008).

The studies concluded that the influence of supermarkets—and consequently the penetration of safety and quality requirements—are expected to grow as a result of continued growth in per capita income and urbanization. Yet the growth rate will be much lower than previously expected, particularly for fresh produce, where higher gains were expected from the forthcoming supermarket revolution. In nearly the entire continent, the so-called traditional marketing sector—open air markets, dispersed informal vendors, and traditional shops—is expected to continue to play a dominant role in fresh produce marketing for several decades to come.

Source: Compiled by the Authors.

Chapter 3: CONCEPTUALIZING THE IMPACT OF STANDARDS COMPLIANCE ON SMALLHOLDER PARTICIPATION IN AGRI-FOOD VALUE CHAINS

INTRODUCTION

As already discussed, while the ongoing transformation of agri-food value chains presents potentially valuable opportunities for the enhancement of rural livelihoods, significant challenges are faced in facilitating the participation of small-scale producers. Thus, a wide range of interventions have been employed to overcome the inherent difficulties faced by smallholders, including the long-standing and pervasive problems associated with production and logistics and the newer issues related to achieving compliance with food safety and quality standards. Such interventions have applied a wide range of instruments and blends of top-down and bottom-up approaches. It is worrying, however, that our understanding of which of these approaches works best in particular contexts remains surprisingly weak. Evidently, the development community is still on the steep part of the learning curve in drawing lessons from past experiences and then acting upon those lessons.

This chapter provides a conceptual framework that highlights the fundamental processes through which small-scale producers are included or excluded from agri-food value chains and notably those processes where standards compliance is a predominant driver. It is assumed that such value chains are mostly buyer-driven (Humphrey 2005) and that these buyers act as gatekeepers that strongly influence the extent and forms of smallholder participation. While recognizing the importance of a wider set of constraints on smallholder production and physical market access, it is also assumed that a critical constraint facing smallholders is their ability to establish and maintain “assured compliance” with standards and specifications set by dominant buyers—for example, as a response to regulatory challenges and changes in consumer demands or as a way to differentiate products. Thus, the framework outlines the critical resources required for such assured compliance and the associated production and transaction costs that determine the procurement decisions of buyers.

NATURE OF AGRI-FOOD VALUE CHAINS AND THE ROLE OF “ASSURED COMPLIANCE”

Chapter 2 has highlighted how standards have emerged as an increasingly dominant mechanism through which food safety and quality attributes are governed in global agri-food value chains. The concern here is the ability of small-scale producers in developing countries to gain access to agri-food value chains and to compete in the longer term in the context of such standards. Although a great deal of attention has been given to the challenges for developing countries posed by compliance with food safety and quality standards (see, for example, World Bank 2005), and although the specter has been raised of small-scale producer exclusion (see, for example, Dolan and Humphrey 2001; Minot and Ngigi 2004; Graffham et al. 2007; de Battisti et al. 2009), there is a lack of systematic analysis of the associated processes of inclusion and exclusion. Indeed, much of the analysis to date of smallholder marketing challenges focuses on well-established concerns relating, for example, to economies of scale in production (see, for example, Eastwood et al. 2009). The framework proposed here contends that, in the context of contemporary high-value agri-food markets that are buyer-driven, a critical issue for small-scale producers is achieving and maintaining assured compliance.

“Assured compliance” is defined here as the collection of functions required to meet the various specifications of a producer’s immediate buyer and to demonstrate compliance through established systems of conformity assessment while preserving inclusion in value chains of interest. Success from the viewpoint of international development requires that compliance be achieved in a manner that does not place the small-scale producer at an undue disadvantage relative to competing suppliers, while not imposing an inordinate burden on the buyer. Assured compliance requires access to resources that are critical to performing the functions needed to meet the buyer’s standards and other requirements in a competitive manner.

The process of assured compliance involves the dynamic sequencing of the actions through which the needs of the buyer are identified, achieved, recorded, verified, and communicated, and then adjusted as these specifications change over time. Here, the critical actor for small-scale producers is taken to be their aggregator, whether an exporter, wholesaler, processor, or other market intermediary. The specifications of downstream actors in the value chain are assumed to be reflected in the first receiver's own specifications.¹² These specifications can be subdivided into three categories:

- **Product attributes:** Physical characteristics of the product, including size, shape, degree of damage, maturity, variety, and so forth, as well as less visible attributes such as tolerance levels of decay, pathogens, filth, heavy metals, pesticide residues, and so forth.
- **Process attributes:** Characteristics of the process by which the product is grown, processed, and marketed. These attributes can encompass practices that have a direct impact on the product's physical characteristics (for example, agronomic practices, producer hygiene) as well as wider concerns (for example, impacts on the environment, worker welfare, etc.).
- **Transaction attributes:** Characteristics of the physical delivery of the product, flow of information, payment schedules, contracting, and so forth. Examples may include the physical volume flow (according to some plan) and the identification of the origin and source on the packaging.

The level and blend of these attributes will have a direct influence on the functions required to achieve assured compliance and the related production and transaction costs.

Assured compliance is a necessary but not sufficient condition for smallholder participation in high-value supply chains. Access to production resources and physical infrastructure, for example, may be major constraints that impede market access. The assertion here, however, is that the ability to achieve assured compliance in a cost-effective manner is increasingly a critical issue for small-scale producers in markets for high-value products and plays a predominant role in processes of inclusion and exclusion in the context of value chains that are buyer-driven. Indeed, the blends of production and transaction costs associated with assured

¹² For example, supermarkets in target markets have certain specifications for the fresh produce they purchase. These are conveyed to their buyers, some of whom act as "category managers." Those buyers pass on and interpret those specifications for prospective domestic and international suppliers (including African exporters) that develop their own specifications and communications vis-à-vis domestic producers.

compliance represent particular challenges for small-scale producers (Poulton et al. 2006), making these a critical issue in future interventions aimed at facilitating the participation of small-scale producers, most notably in higher-value agri-food value chains.

Food safety and quality standards are seen as being primarily associated with high-value markets for agri-food products, such as supermarkets in industrialized countries (see, for example, de Battisti et al. 2009). It should be noted that the implied dichotomy between low- and high-value markets, however, presents an unduly simplistic image of the market choices available to small-scale producers. In reality, there is a continuum of alternative supply systems, which can be subdivided into six "levels" according to the nature, foci, and stringency of sourcing requirements:

- **Level 1:** Application of informal standards that relate to basic search characteristics¹³ (for example color, blemishes, etc.). Verification is through visual inspection.
- **Level 2:** Official grades and standards that are pre-specified and cover observable physical characteristics of the product (for example, variety, size, ripeness, damage, etc.). Verification is through visual inspection.
- **Level 3:** Product-based grades and standards corresponding to experience characteristics¹⁴ of the product (for example, levels of microbiological or chemical contamination, sugar levels, fat content, etc.) or on simple process parameters (for example, use of pesticides). Verification is by testing or inspection by the producer or the self-assessment of the seller.
- **Level 4:** System or process-based standards governing credence characteristics¹⁵ that are assessed through self-assessment by the producer and second- or third-party processes of conformity assessment. Examples include the application of good agricultural practice (GAP) and Hazard Analysis and Critical Control Point (HACCP) systems, as well as associated systems of record keeping.

¹³ Search characteristics are product attributes that can be verified by the buyer prior to purchase, such as through visual inspection.

¹⁴ Experience characteristics are product attributes that, while not verifiable prior to product purchase, can be validated following consumption.

¹⁵ Credence characteristics are attributes predominantly associated with the processes involved in the supply of the product, which are not verifiable even following consumption. They require that verifiable information accompanies the product on which of these attributes is or is not present.

- **Level 5:** A broader range of (and more detailed norms for) system- or process-based standards governing credence characteristics, as well as associated record-keeping systems, that are assessed through certification or other third-party processes of conformity assessment and use of electronic data interchange.
- **Level 6:** Implementation of broadly the same standards as level 5, but in the context of highly integrated supply chains such that relatively sophisticated management structures are required for quality control and risk management. This level is generally associated with standards schemes such as GLOBALG.A.P., the British Retail Consortium (BRC) Global Standard for Food Safety, the International Food Standard (IFS), and so forth.

These different levels are frequently incremental. That is, a level 3 system would already embody the use of more formal grades and standards for physical product attributes and add to these standards for not easily observable characteristics. A level 5 system would build upon and extend specifications associated with the prior levels. A level 6 system would integrate standards compliance within a broader and more sophisticated management system along the value chain. Hence, movement from one level to the next (or leaping across multiple levels) necessitates certain upgrades to production processes, postharvest handling, or conformity assessment procedures and systems (figure 3.1). The different levels can be broadly associated with particular types of markets or value chains; hence reference is made to (for example) type 3 or type 6 markets.

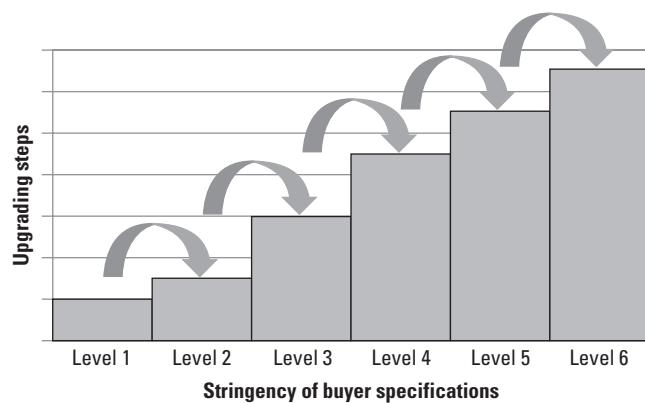
Moving across the spectrum from level 1 to level 6, there is a progressive change in the relative importance from "search"

to "experience" to "credence" characteristics. The progression also matches movement away from localized traditional markets toward increasingly higher-value domestic and international value chains. This upgrading process is accompanied by progressively stricter food safety, quality, and other requirements and associated processes of conformity assessment, and thus by increasingly challenging processes of achieving assured compliance. The associated production and transaction costs, both in total and relative to one another, associated with this process also change. For example, the transaction costs incurred by both the buyer and seller increase as one moves from value chains of type 1 to type 4. This point will be illustrated in the following text.

The various types of markets available to small-scale producers described above represent alternative marketing choices and supply response strategies. This fact implies that potential returns from achieving assured compliance should be compared with the associated challenges and costs of undertaking the required functions. Recognition must be given to the producer's starting point when contemplating upgrades and shifts to different market foci. For example, a producer already participating in a value chain of type 3 is presumably better placed to achieve assured compliance than a competing producer that is currently engaged in a value chain of type 1. This fact suggests the logic of an iterative strategy toward capacity building, with producers moving step-by-step from lower- to higher-value markets. However, the highest-value (and most exacting) markets represent simply one end of a continuum; value chains toward the middle of this spectrum may be more appropriate for smallholders, in that the costs of achieving assured compliance are arguably more achievable, while targeting the highest-value markets does not necessarily translate into higher incomes for smallholder producers.

The extent to which small-scale producers face barriers to entry (or exit) as they try to upgrade from value chains of type 1 to those directed at higher-value markets depends on the existence or absence of competing suppliers and the degree to which there are economies of scale in assured compliance that can or cannot be altered over time. At one extreme, there may be little or no large-scale production and only limited economies of scale in compliance, so that buyers have little choice but to source from smallholders; the binding constraint here will be the costs of procuring from small-scale producers compared with the situation facing firms with whom the buyer competes. In such contexts, the buyer is likely to be highly committed to sourcing from small-scale producers and has the greatest propensity to take actions that facilitate smallholder participation in the value chain.

FIGURE 3.1: Upgrading Steps and Stringency of Buyer Specifications in Agri-Food Value Chains



Source: The Authors.

At the other extreme, there may be significant large-scale production and economies of scale in compliance such that small-scale producers face an uphill battle in competing. Alternatively, smallholders may have a comparative advantage (i.e., lower unit production costs) and can compete, provided that the playing field relative to larger suppliers is level. Under both of these scenarios there may be little or no commitment on the part of the buyer to source from small-scale producers, which, as a consequence, will need to compete head-to-head with large-scale competitors. The likely success of interventions aimed at facilitating the participation of small-scale producers in value chains to higher-value markets, and the complications of the task at hand, are quite different across these contexts.

The focus on assured compliance points to the dynamic nature of processes of inclusion and exclusion of small-scale producers in the context of agri-food value chains directed at higher-value markets, which are increasingly governed by standards. Attention should not be devoted only to achieving assured compliance in the short term, but rather to the ability of small-scale producers to maintain compliance and competitiveness as standards and other market requirements evolve over time. This statement highlights the need to establish the capacity required to achieve and maintain compliance, rather than simply achieving compliance per se. Unless the capacities are put in place that enable small-scale producers to upgrade their products and procedures over time, once any intervention ends the eventual exclusion is almost a foregone conclusion. This longer-term perspective on the success and sustainability of interventions is a key element of the conceptual framework outlined below.

CONCEPTUAL FRAMEWORK

Using transaction cost economics (box 3.1) as the underlying theoretical paradigm, a conceptual framework is developed that permits analysis of the processes of inclusion and exclusion of small-scale producers in value chains for high-value products, with a particular focus on assured compliance. In turn, this framework is employed to assess the role of alternative interventions aimed at facilitating the inclusion of small-scale producers in such value chains, highlighting the critical constraints that need to be alleviated to bring about participation on a sustainable basis.

Basic Framework

The approach adopted here positions small-scale producers within value chains for agri-food products, which contrasts

to the “farming systems perspective” that is frequently employed in analysis of the commercialization of subsistence and semisubsistence producers (see, for example, Dorward et al. 2003). In the context of markets for higher-value or differentiated agricultural and food (HVAF) products, it is assumed that value chains are buyer-driven, such that the participation of small-scale producers will largely be a function of the procurement decisions of buyers rather than the market choices of small-scale producers per se. This assumption contrasts with many previous studies of the market participation of small-scale producers, which typically examine market choices in terms of decision variables entering a household production or utility function (see, for example, Holloway et al. 2000; Winters et al. 2005). It is assumed here that value chains directed at higher-value markets are perceived as an attractive proposition to small-scale producers; they yield at least the same returns as alternative markets, taking account of differences in the costs or risks of entering and supplying higher-value and alternative markets.¹⁶ Higher-value markets that are not perceived by small-scale producers to yield a net economic benefit are not explored here.

The conceptual framework employed in this study is based on the assumption that the ultimate decision on whether small-scale producers are included in value chains to high-value markets lies with the immediate receiver in the supply chain, whether a trader or other intermediary, such as a local processor, local exporter, or importer in a foreign market. This agent may itself be part of a multilayered value chain and subject to the specifications of downstream customers; the specifications of downstream buyers (for example, an industrialized country supermarket) are assumed to be reflected in the specifications of the immediate buyer (for example, a developing country exporter). Such specifications, and the associated functions that need to be performed, will influence the propensity of the buyer to source from small-scale producers.¹⁷

¹⁶ The realism of this assumption varies from setting to setting. There are certainly circumstances where the perceived or actual costs and risks associated with smallholder participation in value chains of types 3, 4, or 5 can outweigh the real or perceived benefits accruing to those farmers.

¹⁷ Thus, supermarkets in an industrialized country, for example, are assumed not to determine directly whether small-scale producers participate in the value chains in which they participate. Rather, such decisions are made by their upstream suppliers, who may or may not source from small-scale producers depending on the associated relative costs compared with alternative sources of supply, in the context of the supermarket's specifications.

BOX 3.1: Transaction Cost Economics and the Market Participation of Small-Scale Producers

Transaction cost economics, which forms part of new institutional economics (NIE), has become an attractive framework in which to analyze market transactions in general (Williamson 2000) and agricultural markets in particular (see, for example, Jaffee 1991; Jaffee and Morton 1995; Fafchamp and Hill 2003; Fafchamp 2004). Transaction costs are associated with the process of exchange of goods, services, information, and money, as well as the transfer of property rights associated with these assets.

Transaction costs result because of the existence of asymmetric information, bounded rationality, and the prospects for opportunistic behavior (Williamson 1985). Economic transactions usually face problems of asymmetric information, which may lead to bounded rationality or opportunism by one of the parties. Contractual relations can provide guidelines for relaxing these problems (Ménard 2005); however, it is practically impossible to write "complete" contracts (Williamson 2000). The common principal-agent problem that may result in *moral hazard* and *adverse selection* is typical in the context of asymmetric information (Miller 2005). In the world of value chains to higher-value agri-food markets, problems of asymmetric information become more pertinent (and potentially more serious) the greater the importance of credence and experience attributes of products and production practices.

In the context of agri-food value chains, transaction costs can be associated with different stages or phases of the trading relationship between actors. Search and screening costs are incurred to determine potential buyers and suppliers and to gauge their ability and willingness to transact, bargaining costs are incurred to determine the terms of trade (and the overall relationship), transfer costs are incurred when shifting physical possession and ownership, and monitoring and enforcement costs are incurred to determine whether the agreed-upon terms were actually complied with. These costs can take various tangible forms, including staff time, travel and communications, licensing fees, product inspection and audit fees, system management costs, insurance premiums, investments in measurement devices, storage and handling costs, legal fees, and so forth (Jaffee

and Morton 1995).^{*} Transaction costs can be fixed or variable. Fixed transaction costs are "the specific investment made in setting up institutional arrangements" (Furubotn and Richter 2005, p. 51), while variable transaction costs depend on the number or volume of transactions. Identifying and distinguishing between fixed and variable transaction costs is important, since fixed costs represent the minimum costs to start a market arrangement. Once the arrangement is made, variable transaction costs will depend on the volume of transactions (Key et al. 2000).

A critical issue in transaction costs economics is the so-called "make or buy" decision (Klein 2004). In the context of value chains to HVAF markets, this issue relates to the decision of buyers to source from independent producers or to establish their own production facilities on land that they own or lease. Between these two extremes there are a myriad of governance mechanisms (Peterson et al. 2001; Ménard 2004). Transaction cost economics has become the dominant paradigm for analyzing alternative sourcing arrangements and marketing institutional issues (Ghosh and John 1999, p. 131).

Most studies of smallholder participation in HVAF markets have focused on the analysis of transaction costs faced by producers, assuming that these costs determine their participation in alternative supply chains (see, for example, Staal et al. 1997; Holloway et al. 2000; Winters et al. 2005). This leaves a gap in our knowledge relating to how buyers select their suppliers in the context of buyer-led value chains. According to transaction cost economics, the buyer will choose a contractual relationship that minimizes their total procurement costs, of which transaction costs are an important element.

* An additional market transaction cost that has received less attention, however, relates to investments in social relations (Furubotn and Richter 2005, pp. 52–54), which acknowledges the importance of the social structure of markets and the role of social capital. Forms of social capital, such as cooperation, reputation, and trust, have, however, been recognized as factors that can influence the costs of exchange (see, for example, Wilson and Kennedy 1999; Wilson 2000; Chambers and King 2002) and influence the various transaction costs described above.

Source: Compiled by the Authors.

According to this transaction costs-based model, the participation of any individual or group of small-scale producer(s) in supply chains to high-value markets will consist of three critical factors:

- The ability of the small-scale producer (as an individual or part of a group) to meet the standards and other supply terms stipulated by their immediate receiver in a consistent manner. This ability will likely reflect both the regulatory grades and standards that those buyers or sales agents face and their own private specifications.
- The ability of these smallholder farmers to gain and maintain the trust of buyers or sales agents to meet other conditions of supply, including its timing, continuity, and volume, and related reliable communications.
- The selection of the given individual or group of small-scale producer(s) by their immediate buyer from among the alternative supply options in its choice set.

Thus, we assume that the procurer's choice set only includes producers that are perceived to be able to meet its specifications. Small-scale producers, for example, that do not possess or cannot acquire these basic capacities will not be considered. For example, producers that cannot gain access to the basic resources required for production, including land, access to water, and so forth, will be excluded from the outset.

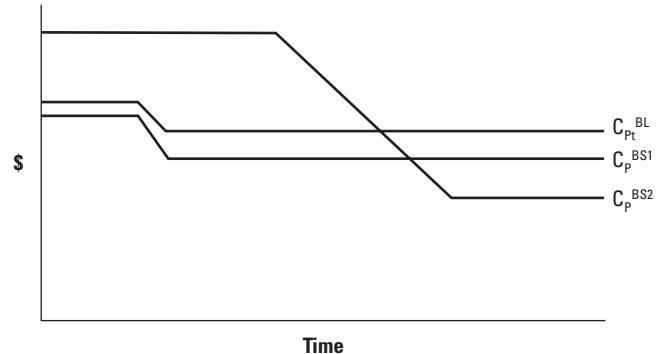
For simplicity, this decision-making process is outlined in the context of a two-stage supply chain; for example, sourcing of products by an exporter direct from producers. Thus, the focus here is on the decision-making process of the buyer that determines which producers are sourced from. This framework is, however, applicable and can be generalized to situations with multiple-stage supply chains, for example, where an exporter sources from producers through an intermediary agent or to include all levels of a global value chain.

Assuming that there is no implicit preference for sourcing from a particular type of producer, buyers will select from among the available set of producers that are able to meet their specifications on the basis of the associated total cost of procurement. The cost of procurement borne by the buyer will be determined by the purchase price, which will embody the production and transaction costs faced by the producer in supplying the buyer and the buyer's own supplier-specific transaction costs.¹⁸ In turn, these individual cost elements are assumed to vary with firm-, market-, and industry-specific determinants. This fact suggests that an individual or

group of small-scale producer(s) will only be chosen if their selling price plus the total transaction costs for the buyer are lower than those associated with competing producers, for example, medium- or large-scale outgrowers.

This selection process is depicted in figure 3.2, which further acknowledges that costs of procurement will change over time as production and transaction costs for the seller and transaction costs for the buyer evolve. For example, due to learning processes on the part of both the buyer and seller, the costs could decline over time. In figure 3.2, the buyer would purchase from small-scale producers if the associated costs of procurement were C_p^{BS1} , large-scale out-growers and/or producing themselves (C_p^{BL}). However, instead assuming costs of procurement C_p^{S2} , small-scale producers only compete in the longer term. This situation might reflect, for example, significant processes of capacity building and learning through which either the seller's or buyer's costs were eroded over time, perhaps as a result of a successful development program intervention. It is possible, however, for these costs to increase over time, perhaps as a result of a policy change, the deterioration of some important infrastructure, or evident opportunistic behavior on the part of farmers or farmer groups.

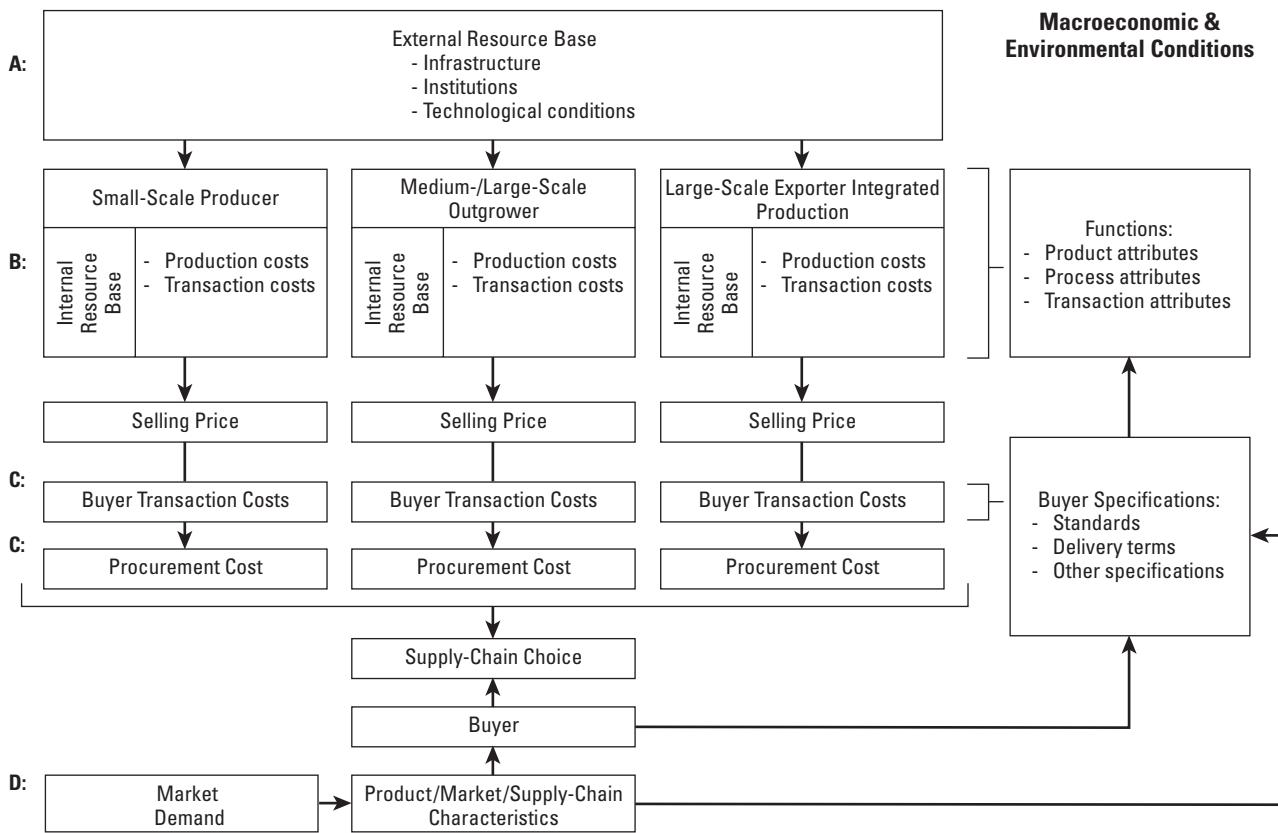
FIGURE 3.2: Buyer Costs of Procurement from Alternative Supply Chains



Note: C_p^{BL} represents buyer costs of procurement over time from large-scale outgrowers or integrated own production; C_p^{BS1} represents buyer costs of procurement over time from small-scale producers—scenario 1; C_p^{BS2} represents buyer costs of procurement over time from small-scale producers—scenario 2.

Source: The Authors.

¹⁸ Note that the transaction costs borne by the buyer will embody, among other things, the risks it faces in procuring from a particular producer and the procedures it has to implement in order to manage these risks. Such risks might include those associated with production (for example, due to weather and pests), logistics (for example, later delivery), or standards compliance.

FIGURE 3.3: Conceptual Framework for Buyer Choice between Alternative Suppliers

Source: The Authors.

Determinants of Small-Scale Producer Participation

The framework suggests that small-scale producers must be able to comply with buyer specifications in value chains directed at HVAF markets in a manner that the total procurement cost borne by the buyer is no more than for competing supply sources, whether integrated production by the buyer itself or medium- and large-scale outgrowers.¹⁹ Where there

is a price premium associated with sourcing from small-scale producers, the buyer's costs of procurement can exceed those for other available supply sources. However, these additional procurement costs can be no greater than the price premium associated with smallholder sourcing.

Figure 3.3 provides an overview of the conceptual framework, which outlines the factors influencing the nature and magnitude of the production and transaction costs that drive the choice between alternative producers. Much traditional analysis of small-scale producer marketing of agricultural commodities focuses on the supply side, examining fixed and variable costs of production under various scenarios (see, for example, Key et al. 2000; Vakis et al. 2003). Such analyses attempt to measure the efficiency of production, including the existence and magnitude of economies of scale that might disadvantage small-scale producers. The conceptual framework presented graphically in figure 3.3 recognizes the importance of production costs as one, but not the only, element influencing the participation of small-scale producers in

¹⁹ There may potentially be incentives for buyers to source from small-scale producers even where the associated procurement costs are higher than in competing supply chains. For example, there may be a market or political premium derived by sourcing from small-scale producers, whether because consumers value the support given to small farmers (for example, with fair trade products) or because policy makers and donors grant concessions or provide subsidies to buyers that work with small-scale producers (for example, through access to lower-cost working capital). In other cases, the use of an atomistic supply base of small-scale producers may act to mitigate supply risks, for example, due to pests or weather.

value chains to higher-value markets. Broadly, fixed production costs, which will be discounted by the producer over some time horizon, will reflect the costs of achieving access to the value chain, that is, acquiring the required capacity to be included in the buyer's choice set. These fixed costs will include investments in equipment (for example, a pesticide applicator), physical infrastructure (for example, storage areas, acquisition of the required skills, etc.), and human capital (for example, training, skills development, etc). Variable costs of production will reflect the associated costs of participating in the supply chain, including labor, agricultural inputs, fuel for irrigation pumps, and so forth.

The framework presented here focuses on the demand or buyer side. In the context of buyer-driven supply chains, where the participation of small-scale producers is considered to be more a function of selection by buyers than the participation decisions of producers, the transaction costs of both buyers and sellers are relevant, the latter being reflected in the selling price of the product. As described in [box 3.1](#), a distinction can be made between fixed and variable transaction costs. Fixed transaction costs are independent of the volume of transactions and are broadly associated with the inclusion of the producer(s) in the buyer's choice set, their selection by the buyer, and the establishment of a credible supply relation. Variable transaction costs are associated with the flow of transactions over time following the inclusion of the producer(s) in the buyer's procurement system.

A further distinction is often made between observable and unobservable transaction costs ([Staal et al. 1997](#)). Observable transaction costs are most generally associated with the physical transaction (for example, transportation, storage, etc.) and frequently involve financial outlays that make them relatively easy to quantify. Unobservable transaction costs are associated with the collection of information, administration of transactions, and so forth and may or may not involve discernable financial outlays.

There is evidence that small-scale producers may have lower production costs and that the economies of scale for many higher-value crops are often limited (see, for example, [Eastwood et al. 2009; World Bank 2009](#)), while they are often more competitive in the production of "high-care" fruits and vegetables that require a significant input of labor (see, for example, [Dolan and Humphrey 2001; Henson et al. 2005; Poulton et al. 2006](#)). Small-scale producers can also have a comparative advantage over large-scale competitors with respect to the transaction costs of accessing and supervising family labor and access to local knowledge ([Poulton et al. 2005, 2006](#)). However, the transaction costs associated

with most nonlabor transactions, including input supplies, finance and capital, and certification, are typically greater for smallholders ([Lipton 1993; Dorward 1999](#)).

The production and transaction costs associated with the inclusion of small-scale producers in HVAF markets will reflect the product, process, and transaction attributes that are required to achieve assured compliance. These are determined by the specific requirements of buyers or other receivers as well as official grades and standards imposed by regulatory authorities in markets where they operate. The requirements of buyers may encompass product quality and safety, supply and logistical factors, social and ethical issues associated with production, and so forth ([table 3.1](#)). In turn, these may impact on input use, methods of production, methods of postharvest handling, and so forth.

The production and transaction costs associated with sourcing from smallholders may also be associated with differing mechanisms to demonstrate conformity and to minimize the risk for buyers of purchasing products that are not in compliance, for example, certification of production systems, product testing, ex post review of suppliers, record keeping, auditing, and so forth. To some extent, these mechanisms aim to reduce the transaction costs, in some cases for both buyers and sellers, associated with managing risks in the value chain, but at the same time they may transfer transaction costs from the buyer to the seller.

The range and stringency of standards, delivery terms, and other supply requirements vary across agri-food products and markets, such that the production and transaction costs associated with procurement from smallholders also varies. As a general rule, however, buyer specifications as a whole tend to be more stringent in HVAF markets than for traditional agricultural commodities ([Henson 2007](#)). Therefore, everything else being equal, the production and transaction costs associated with the value chains for higher-value products are likely to be greater.²⁰

The capacity of small-scale producers to achieve assured compliance with buyer specifications can be represented diagrammatically ([figure 3.4](#)). This type of depiction is generally referred to as critical success factor analysis (see, for example, [Schmitz and Knorringa 2000; Humphrey 2005](#)). Comparison of the capacity to achieve assured compliance across the full range of requirements identifies areas of

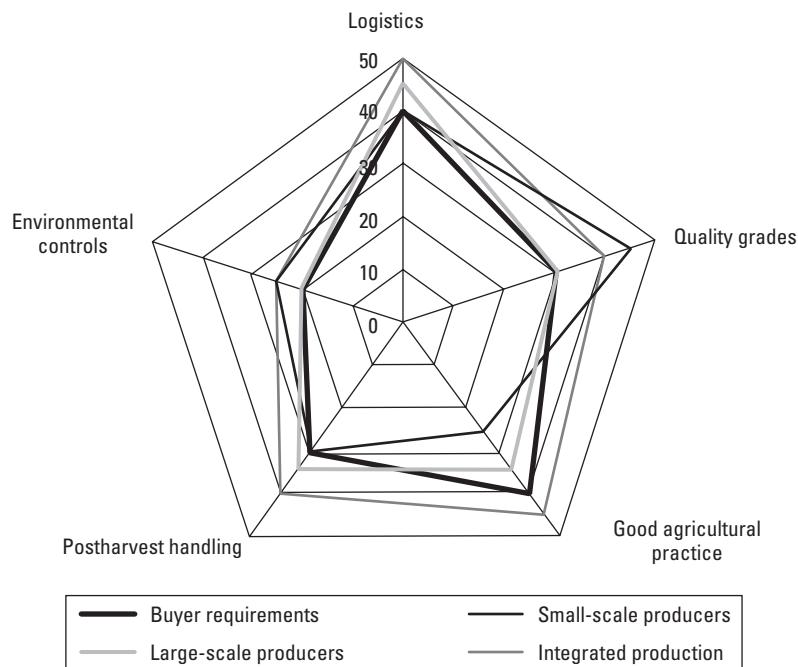
²⁰ See [Jaffee and Morton \(1995\)](#) for a broader discussion of product, production, and other factors impacting on transaction costs.

TABLE 3.1: Examples of Supplier Requirements Influencing Production and Transaction Costs of Producers and Associated Functions

REQUIREMENT	EXAMPLE	ATTRIBUTES		
		PRODUCT	PROCESS	TRANSACTION
Phytosanitary standards	Plant health controls	–	Pest surveillance	Certification
Good agricultural practice standards	GLOBALG.A.P	–	Food safety and environmental controls	Certification
Food safety standards	Maximum residue levels for pesticides	Pesticide residue limits	Integrated pest management systems, record keeping on chemical usage	Product testing
	Maximum residue levels of toxins and other product contaminants	Limits on toxins and contaminants	Application of process controls	Product testing
Quality management systems	SQF (Safe Quality Food) 1000	–	Process controls, supplier specifications, traceability, etc.	Certification
Supply and logistics	Volume and minimum quantity requirements; traceability	Varieties or species grown	Production systems	Contracted quantities of product Manual or electronic systems in place to trace products
Social and ethical standards	Labor codes	–	Minimum wage rates Child labor	Certification

Source: *The Authors.*

FIGURE 3.4: Hypothetical Comparison of Capacity of Alternative Suppliers to Achieve Assured Compliance with Buyer Specifications



Source: *The Authors.*

noncompliance relative to buyer specifications. Conceivably, noncompliances might act as absolute barriers to procurement from small-scale producers, such that they do not even enter the buyer's choice set. These requirements are termed noncompensatory requirements. Alternatively, noncompliance with respect to certain requirements may be offset by overcompliance with respect to others. These requirements are termed compensatory requirements. The relative ability of small- and large-scale producers, and of integrated production, to achieve assured compliance with buyer specifications can also be compared. Such a perspective highlights critical areas of competitive advantage and disadvantage of small-scale producers, using assured compliance with the portfolio of buyer specifications as the metric.

As described above, small-scale producers face a continuum of alternative value chains in terms of the buyer specifications with which they must demonstrate assured compliance, from local "spot" markets that are supply-driven and governed by informal basic grades and standards, to distinctive export markets requiring third-party certification for system- or process-based standards. The move from type 1 to type 6 value chains in figure 3.1 represents a progressive shift from search to credence characteristics and the imposition of more formal and stricter standards and conformity assessment regimes. Thus, the challenges associated with achieving assured compliance increase. In turn, this shift influences the profile of production and transaction costs faced by competing suppliers; while the total costs of supply are likely to increase, the relative importance of production and transaction costs will change. At the same time, the balance between fixed and variable costs will shift, for example, with more up-front investments acting as a barrier to initial market entry.

An alternative way of looking at figure 3.1 is the contrast between the "old" and "new" worlds of integrating small-scale producers into markets. Thus, in the "past," small-scale producers typically faced problems with meeting scale or logistics requirements, while their total cost of supply was predominantly driven by costs of production. In this context, the high labor costs associated with production of "high-care" crops driven by quality grades were seen as a critical means of small-scale competitiveness. This situation corresponds with value chains of type 1 and (maybe) type.²¹ In the contemporary context, however, the cost of supply for

small-scale producers is predominantly driven by transaction costs that largely reflect the challenge of assured compliance with buyer specifications that encompass food safety and quality standards, exacting logistics requirements, and so forth, such that the scope for lower production costs for "high-care" crops is "drowned out"—that is, in value chains of type 3 through type 6.

The production and transaction costs incurred by producers in undertaking the functions required to enter and maintain participation in value chains will vary across producers, buyers, commodities, and locations (Pingali et al. 2005). In turn, these costs will reflect the resources of producers and their access to support services, and the more general advantages and disadvantages that small-scale producers face vis-à-vis their larger counterparts (see table 3.2 for a summary). These resources include capacities internal to the producers (for example, their skills and experiences), access to natural resources and endowments of physical and social capital, and external capacities (for example, national certification capacity). Some of these resources are general to all activities (for example, the quality of extension services), while others are function-specific (for example, certification).

Although the production and transaction costs associated with attaining assured compliance are the ultimate arbiters of smallholder inclusion in HVAF markets, the ability to perform the underlying functions reflects the level of access to internal and external resources. Hence, the level of these resources is the primary focus of the framework; indeed, as will be seen below, the primary focus of interventions aimed at facilitating smallholder participation is on addressing weaknesses in the resource base, whether internal or external to small-scale producers themselves. Everything else being equal, enhancement of the resources available to small-scale producers will augment their ability both to comply with the specifications of buyers (that is, move out along the axes of figure 3.4) and to achieve compliance in a manner that achieves or maintains competitiveness. In some cases, enhancement of the resource base of producers will increase overall efficiency in achieving or maintaining assured compliance. The development of entrepreneurial abilities might be one example. In other cases, particular resources may be required to overcome weaknesses in specific functional capacities. For example, access to certification services might be critical to achieving assured compliance (on a cost-competitive basis) with respect to the buyer's requirements for good agricultural practice (GAP).

To the extent that resources are function-specific, their importance and criticality to assured compliance will differ

²¹ See the "older" literature on contract farming and smallholders, including Williams and Karen (1985); Minot (1986); and Glover and Kusterer (1990).

TABLE 3.2: Generalized Strengths and Weaknesses of Small-Scale vs. Large-Scale Producers

SMALL-SCALE PRODUCERS	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> Comparative advantage in managing labor-intensive production activities Self-supervision, motivation, etc. Local knowledge 	<ul style="list-style-type: none"> Small-sized holdings, lacking economies of scale Diversified production in small areas as a risk management strategy; yet, this strategy limits their possibilities to commercialize surplus production Nonproximity to the market Education standards that are often low Reluctant to introduce new technology Difficulty in obtaining information, capital, and support Weak in negotiation, often lacking confidence, especially when dealing with traders and companies Adverse to risk (rightly) Need income stability and cannot afford losses Often on inferior land, without access to irrigation
LARGE-SCALE PRODUCERS	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> Skilled labor Market knowledge Technical knowledge Inputs purchase Finance and capital Land Output markets Product traceability and quality and safety assurance Risk management 	<ul style="list-style-type: none"> High overhead cost Poor at motivating and instilling a sense of ownership for large numbers of laborers Poor at servicing small and niche markets

Source: Poulton et al. 2005; TecnoServe 2004.

between value chains. The importance of particular resources in specific value chain contexts can be represented through a resource-market matrix (table 3.3). Thus, in type 2 value chains, only basic grading skills may be important; enhancement of any of the other types of resources will have little or no impact on assured compliance. Conversely, skills in basic grading may be a relatively minor resource requirement in value chains of type 4 through type 6; here much of

the grading function might be undertaken by the buyer. The underlying issue is that, while small-scale producers may operate in a world that is generally resource-constrained, not all of these resources are binding in terms of assured compliance given the value chains in which they participate. At the same time, switching to value chains directed at new (presumably higher-value) markets may result in additional (or at least different) resources becoming critical constraints.

TABLE 3.3: Resource-Market Matrix for Smallholder Assured Compliance—Illustrative Examples

MARKET	RESOURCE				
	SKILLS IN BASIC QUALITY GRADING	MEMBERSHIP OF FARMER GROUP	PESTICIDE APPLICATION EQUIPMENT	SKILLS IN GAP	CERTIFICATION CAPACITY
Type 1	X				
Type 2	XXX	X			
Type 3	XX	XX	XX		
Type 4	XX	XXX	XXX	XX	
Type 5	XX	XXX	XXX	XXX	XXX
Type 6	XX	XXXX	XX	XXXX	XXXX

Note: X: minor importance; XX: moderate importance; XXX: major importance.

Source: The Authors.

This is clearly an important issue in the analysis of processes of inclusion and exclusion of small-scale producers, as well as in establishing priorities for capacity building.

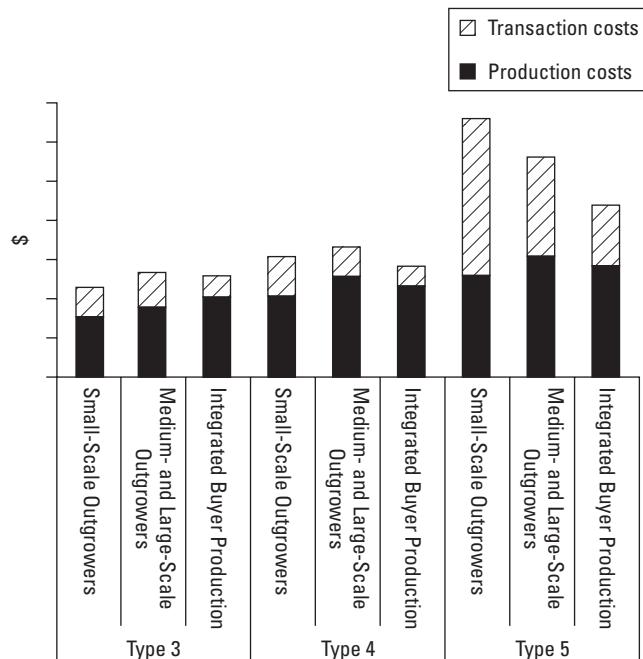
To some extent, internal and external resources may substitute for one another. For example, larger producers may internalize certain resources (such as laboratory testing capacity), while small-scale producers may be reliant on their availability externally, perhaps from a public body. As will be seen below, most interventions aimed at facilitating the participation of small-scale producers in HVAF markets aim to augment access to these resources by enhancing their supply, reducing their price, and so forth. This fact suggests that the development of external resources can possibly have a differential impact on the level of buyer procurement costs for small- versus large-scale producers, while reducing the costs of procuring from all supply chains (figure 3.5). At the same time, there may be some minimum level of external resource for small- or large-scale producers to participate in HVAF. Below this level, the procurement costs for buyers will, in effect, be infinite. The scope for vehicular access to prime production areas is an example.

The differential access of small-, medium-, and large-scale producers and of buyers to internal and external resources,

mediated by product and value chain characteristics, determines the production and transaction costs they face. Thus, while the magnitude and relative importance of production and transaction costs vary across value chains for particular subgroups of producers, within any one value chain the costs across subgroups also tend to differ. Thus, small-scale producers may be able to compete face-to-face with large-scale producers in some value chains (for example, type 3 in figure 3.5), either because they have access to the required resources or because economies of scale in achieving assured compliance are limited. However, in other value chains they face a competitive disadvantage because of excess production or (more likely) transaction costs. In such a context, it might be reasonable to expect larger-scale production to predominate in value chains of type 5 and type 6, except where there is no competing large-scale sector.

In the context of buyer-driven value chains, the transaction costs of the buyer also strongly influence procurement choices. It is generally assumed that procuring from a large base of small-scale producers involves higher transaction costs for the buyer than procurement from a small number of larger producers, for example, in terms of the (a) identification and selection of the base of suppliers (information costs); (b) negotiation and monitoring of contractual relationships with a large number of suppliers; (c) risk of noncompliance with standards (for example, quality certification) given that small-scale producers may lack specific assets (for example, irrigation, transportation, etc.); (d) risk of unreliable supply (for example, compliance with schedule, frequency, etc.); and (e) collection or receiving small volumes from a large number of sellers, which requires more buyer effort to ensure traceability and homogeneity of quality.

FIGURE 3.5: Hypothetical Production and Transaction Cost Profile in Alternative Value Chains for Small-Scale, Large-Scale, and Integrated Producers



Source: The Authors.

It is also assumed that, as producer scale increases, the number of transactions made by the buyer decreases; the number of individual suppliers from which it needs to procure declines. Further, the producer, location, and product-specific transaction costs associated with coordination and management along supply chains involving numerous small suppliers can be prohibitive, especially where there are significant risks of transactions failure due to opportunism, lack of coordination, or rent seeking (Poulton et al. 2005, 2006; Pingali and Rosegrant, 1995). These costs act as a motivation for the buyer to exclude small-scale suppliers, everything else being equal. Of course, the actual magnitude of the relative transaction costs faced by the buyer in procuring from small- and large-scale producers is an empirical question. Further, any offsetting gains derived when sourcing from small-scale producers are excluded, for example, in the form of enhanced product quality and so forth. Again, the extent

and magnitude of any offsetting benefits of procuring from smallholders in practice constitute an empirical question.

While the transaction costs of the buyer tend to decrease with producer scale, at some point these costs can begin to increase with scale. This fact suggests that procuring from very large-scale producers imposes higher transaction costs. For instance, the largest producers may enjoy high levels of bargaining and other market power that represent risks to the buyer. If a very large supplier fails, the buyer may not be able to find an alternative supplier in the immediate time period—and possibly lose an important downstream customer whose order cannot be fulfilled. Conversely, the supply from any one (or number of) small-scale producers may represent an insignificant supply volume for the buyer.

The transaction costs faced by buyers broadly reflect the risks they face in procurement, which in turn are influenced by the characteristics of suppliers, products, and so forth. In part, these risks reflect the investments required by buyers, in the form of fixed transaction costs, in establishing supply relations. Such investments are risky in that they are sunk; they are not recouped should transactions fail. Such risks relate to traditional uncertainties associated with production and supply (for example, due to weather, disease, etc.), but they have been enhanced significantly by the scope for nonconformity with food safety, quality, and other standards. The larger the sunk costs associated with establishing and maintaining the supply chain, the greater the risks of transactions failure. This is especially the case where there are interdependencies between the investments required in sourcing from value chain actors that require coordination of actions and actors and provide scope for opportunism and rent seeking (Poulton et al. 2006).

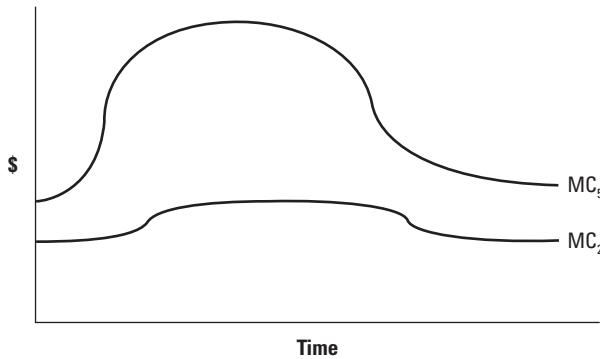
The existence of transaction risks has two impacts on the procurement costs of buyers. On the one hand, transaction costs (or at least perceived transaction costs) will reflect the level of risk and trust associated with alternative supply sources. For example, if buyers perceive small-scale producers to be more risky, the consequent risk-augmented transaction costs will be greater. In this case, the buyer will procure from other suppliers unless these higher transaction costs are offset by a lower supply price. On the other hand, the time profile of the transaction costs associated with alternative supply chains will reflect differences in the associated risks (Poulton et al. 2006). Thus, we might envisage that early in the establishment of supply relations there is significant scope for opportunism or rent seeking but that these diminish as trust and mutual dependencies are established over time and when systems of supply-chain

governance have been established. In the medium term, the predominant concern is likely to turn to the ability of suppliers to conform to buyer specifications on a consistent basis and to broader coordination of the supply chain.

The transaction and production costs faced by both suppliers and buyers can vary appreciably over time, while this time profile of costs will differ according to the type of market being supplied. On the one hand, fixed costs (which are presumably discounted over some finite time period) tend to enhance the up-front costs. On the other, processes of adjustment and learning mean that variable transaction costs will tend to decline over time. This fact suggests that the marginal cost profile, such as that faced by small-scale producers, will tend to have a "hump" around the time of value chain entry, which can potentially act as a barrier to entry. The scale of this "hump," as well as the overall level of supply costs over time, will tend to be enhanced as suppliers are required to achieve and maintain assured compliance with stricter buyer specifications; thus, one can see a transformation of the temporal distribution of costs as one moves progressively from "low" (say, type 2) (for example, MC₂ in figure 3.6) to "high" (say, type 5) (for example, MC₅ in figure 3.6) value chains. The predominant drivers of this shift in the cost profile are the marginal transaction costs associated with assured compliance; as described above, the relative contribution of transaction versus production costs to total producer supply costs increases with the progressive shift from type 1 to type 6 value chains.

The development of the required capacity to meet emerging standards itself consists of multiple stages, reflecting dynamic learning-curve effects (Henson et al. 2005). This

FIGURE 3.6: Hypothetical Marginal Supply Costs over Time Augmented by Transaction Risks in Supply Chains to Type 2 and Type 5 Value Chains



MC = marginal cost
Source: The Authors.

process influences the production and transaction costs associated with value chains to higher-value markets due to the enhancement of access to internal or external resources or the more efficient use of resources over time. However, individual producers will differ in their starting point in this process according to prevailing capacity, degree and nature of existing marketing chains, and so forth. For example, a small-scale producer who is currently supplying value chains for local spot markets (type 1) may first be required to undergo a shift in attitude with respect to his or her production and marketing practices. Conversely, another producer who already participates in more exacting value chains (for example, type 3) may understand the production and marketing challenges he or she faces in moving to a type 4 value chain but still needs to upgrade certain functional capacities. While some resource requirements may cut across all of these stages (for example, the level of education of the producer), many resources are likely to be stage- or market-specific (for example, development of certification capacity), highlighting again the need for prioritizing capacity enhancement. At the same time, the end point of capacity development may differ between markets due to differences in buyer requirements.

Processes of capacity building by small-scale producers, while acting to reduce the production or transaction costs associated with participation in higher markets, can also reduce the transaction costs borne by buyers. Thus, as the competence and experience of producers increase through processes of learning, buyers may be able to relax their controls and rely on an established record of supply as an indicator of future performance. The internal capacities of buyers for supply-chain management and standards compliance oversight may themselves be strengthened. Likewise, third-party certification may be accepted in lieu of the buyer itself visiting and inspecting its suppliers. Similar processes will take place for competing suppliers, and indeed buyer transaction costs might be expected to decline more quickly for medium- and large-scale outgrowers to the extent that trust is established more readily.

The foregoing discussion posits the buyers' choices as between (a) "make" or "buy" and (b) buying from smallholders versus medium or larger outgrowers. It is entirely possible that buyers will opt for a portfolio of suppliers. This would certainly be the case if the buyer (for example, a fresh produce exporter or a fruit and vegetable processor) needs to procure multiple commodities or raw materials. The relative strengths and weaknesses of different types of suppliers could vary substantially among this basket of commodities, warranting a mixed procurement strategy. In some contexts,

the scope for backward integration into primary production or sourcing from larger growers may be limited by the prevailing agrarian structure and the ability or cost of acquiring land on a significant scale in suitable growing areas. The buyer may then try to maximize its sourcing from its own farms or larger outgrowers, but it needs to supplement this supply with smallholder supplies (even at higher cost) to meet demand and perhaps expand the business.

The use of potentially more expensive smallholder supplies may assist the "buyer" not only in spreading production risks (i.e., related to weather or pests), but also in transferring commercial risks. Downstream demand might fluctuate. A buyer can grow part of its requirements and contract larger outgrowers for another substantial proportion of needs. It can then contract smallholders to supply certain quantities but adjust its actual purchases in order to prevent shortfalls or take advantage of favorable market conditions. Adjusting its own supply would be more expensive (i.e., plowing in a crop during a market downturn), and such opportunistic buying would not be tolerated by larger outgrowers.

The prevailing discussion highlights the need to examine efforts to integrate small-scale producers into particular agri-food value chains in the context of the stages and trajectories of an industry's development: from start-up and emergence through growth to maturity. On the one hand, the level of learning, attitudinal change, development of functions, and required internal and external resources will be closely aligned with the overall level of development of value chains for a particular product. Thus, a "mature" industry may be better able to manage the challenges of smallholder assured compliance than a newly emerging industry. Yet, in a nascent industry, buyers may face relatively high costs in establishing relations with all suppliers, both large and small. In such contexts, buyers may search out smallholders as sources of supply, if only on an experimental basis. In nascent industries, supplier failure may pose little risk as the industry's reputation and brand capital has not yet been developed.²²

Recognizing the various stages that producers may go through to participate in higher-value markets, and noting

²² An alternative perspective is that, in contemporary competitive markets, new entrants have little or no room for error. Mistakes or noncompliant supplies could doom efforts to gain an enlarged toehold in the marketplace in the presence of long-standing incumbent suppliers. Hence, new entrants will seek even tighter control over their suppliers. Of course, this outcome depends quite strongly on the segment of the market being targeted and the stringency of standards being applied.

that individuals or groups of producers are situated at different “starting points,” emphasizes the need to examine the nature and level of prevailing skills and capacities at the industry and producer levels. Where attempts are being made to integrate small-scale producers into a particular value chain alongside established suppliers, for example, middle- or large-scale outgrowers, many of the required external resources may exist (for example, certification capacity). The existence of such external resources will tend to diminish the scale of the tasks and associated investments involved in facilitating smallholder participation and may also reduce the cost of developing the internal resources of smallholders, for example, because of the existence of local expertise and experience. Prevailing external resources may substitute, at least in the short term, for weaknesses in the internal resource of small-scale producers.

In conclusion, the participation of small-scale producers in HVAF markets ultimately reflects the procurement choices of immediate buyers—except, perhaps, in those few cases where supply is so tight that suppliers have considerable leverage. In turn, such decisions will reflect the relative costs of procuring from alternative suppliers, which are determined by the transaction costs faced by the buyer and the supplier’s production and transaction costs as embodied in its selling price. Attention thus focuses on the nature and magnitude of these costs in value chains incorporating small-scale producers relative to those involving larger outgrowers and integrated production by buyers. Clearly, in examining mechanisms to facilitate the participation of small-scale producers in higher-value markets, one needs to focus on the factors that determine these production and transaction costs. The conceptual framework suggests that the key determinants of these costs are (1) product, market, and

value chain characteristics; (2) the production and marketing functions required to be performed by buyers in order to establish and maintain assured compliance with buyer specifications; (3) the internal resources of small-scale producers; and (4) the external resource base that is available to small-scale producers, within both the public and private sectors. **Table 3.4** provides a summary of these factors and illustrative examples. While some of these factors may be common to all suppliers (for example, the absolute level of food safety performance required of all suppliers), others may be specific to the value chain or supplier (for example, context-specific food safety process standards).

Impact of Development Program Interventions

Having provided a conceptual model of the process of inclusion of small-scale producers in value chains to higher-value agri-food markets, it is now possible to examine the potential impacts of development program interventions that are geared, at least in part, to improving the ability of small-scale producers to achieve and maintain assured compliance while maintaining competitiveness.

In terms of the conceptual framework, interventions can take four forms, corresponding to different levels of the conceptual framework in **figure 3.3**:

- **Form A:** Augment the external resource base available to small-scale producers or buyers, either by enhancing specific elements of this base or by facilitating small-scale producer access and thus reducing the production and transaction costs of small-scale producers or the transaction costs of buyers in sourcing from small-scale producers.

TABLE 3.4: Factors Influencing Costs of Procuring from Small-Scale Producers

PRODUCT AND MARKET CHARACTERISTICS	PRODUCTION AND MARKETING FUNCTIONS	INTERNAL RESOURCES	EXTERNAL RESOURCES
<ul style="list-style-type: none"> • Unit value • Perishability • Technical complexity of production • Stringency of standards • Size and dynamism of market • Competitiveness of local and international markets • Nature and rate of change in value chain structure and <i>modus operandi</i> 	<ul style="list-style-type: none"> • Supply of minimum volumes • Consistency, timing, and duration of supply • Adherence with basic quality grades • Application of prescribed production practices • Production process certification • Adherence with maximum residue levels for pesticides 	<ul style="list-style-type: none"> • Agro-climatic suitability of growing conditions • Quantity and quality of land • Irrigation capacity • Production tools and equipment • Communications equipment • Skills and expertise • Recording-keeping systems • Pesticide application equipment and facilities • Postharvest handling facilities 	<ul style="list-style-type: none"> • Roads infrastructure • Communications infrastructure • Airport and seaport capacity • Certification services for private standards • Laboratory testing services • Certification capacity • Regulations • Public and private standards • Surveillance systems

Source: The Authors.

- **Form B:** Augment the internal resource base of small-scale producers and thus reduce the production and transaction costs of small-scale producers or the transaction costs of buyers in sourcing from small-scale producers.
- **Form C:** Offset any additional production and transaction costs for small-scale producers and buyers sourcing from small-scale producers through a financial transfer or by providing support services or assurances.
- **Form D:** Enhance the market price received by buyers for products procured from small-scale producers through market creation and promotion, taxation policies, and so forth.

Thus, an intervention might boost the external or internal resource base (for example, by building laboratories, establishing certification services, training farmers, providing equipment to farmers, etc.) or act to overcome constraints that small-scale producers face in accessing existing resources (for example, through training of farmers, establishment of links, etc.). In some cases, external and internal resources will be complementary or mutually exclusive, while in others they will be substitutes. The degree to which such interventions are sustainable will reflect the degree to which dynamic capacity is developed—that is, the scope for resources to be maintained and enhanced over time.

Alternatively, interventions can offset the additional transaction and production costs faced by small-scale producers given prevailing weaknesses in internal or external resources. This aid can take the form of subsidies or cash transfers to permit access to required resources or services (i.e., certification services) or the direct provision of these resources or services. Finally, and most probably where the production and transaction costs for small-scale producers exceed those for competing supply chains, interventions may seek to promote offsetting price premiums by boosting consumer demand. Everything else being equal, interventions of type A and B are likely to be more sustainable in the medium to long term, in terms of smallholder participation in the target value chain(s), but interventions of type C will probably have a more rapid impact on the functional capabilities of beneficiaries.

Conceivably, the locus of these various forms of intervention—the immediate point at which it is applied—can be either internal or external to the value chain. Within the value chain, interventions can be applied to small-scale producers and buyers. External to the supply chains, interventions can

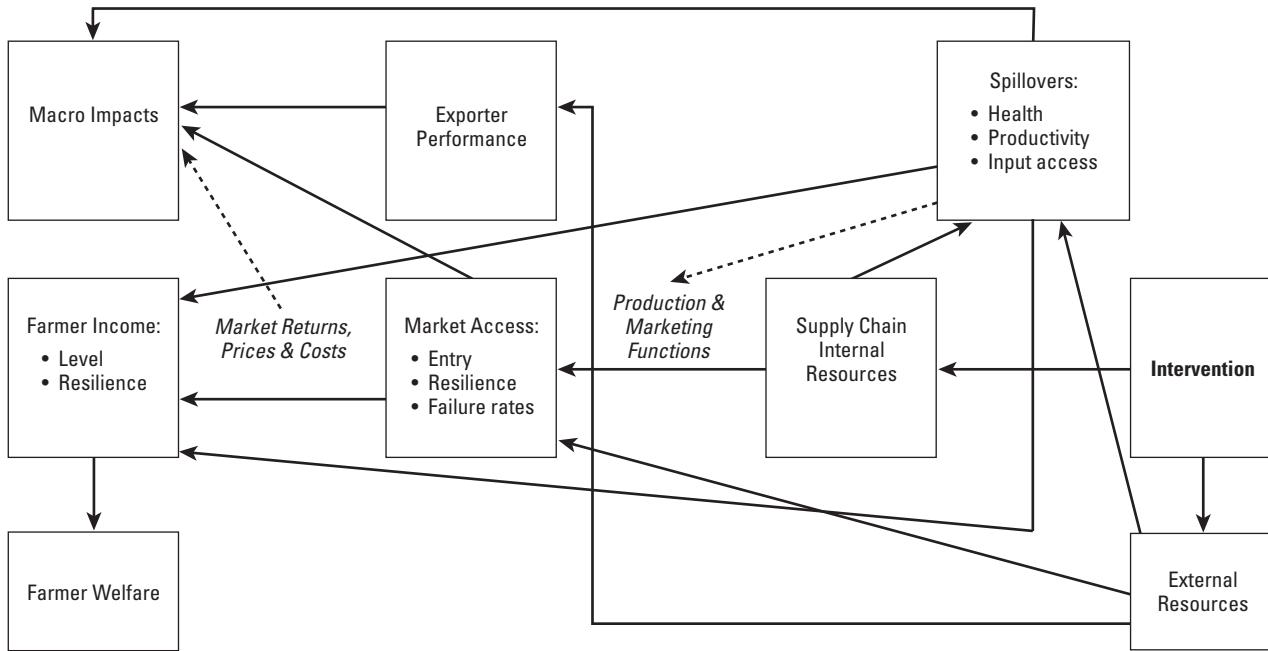
immediately target the public or private sectors. In many cases, the intervention is necessarily applied to the immediate point where resource constraints are being augmented or offset. For example, establishment of an official laboratory will generally involve interventions targeted at the public sector. In other cases, however, resources can be developed through interventions that differ in their direct locus. For example, the expertise of farmers can be enhanced through the provision of training directly to farmers, through the enhancement of the capacity of public extension agents to provide training to farmers, through the development of technical support functions within agribusiness buying companies, and so forth. The immediate locus of an intervention will influence the speed at which resource constraints are offset, and also the degree to which that intervention promotes capacity that is transferable to beneficiaries that are outside the immediate target group.

Finally, interventions differ in the nature of their funding. In some cases, they augment or offset resource constraints through actions that are fully funded by grants, such as those provided by government, bilateral, or multilateral donors or NGOs. In other cases, partial grants or loans are employed whereby beneficiaries have to cover at least some of the cost of the intervention themselves. The form of funding employed by an intervention is likely to influence the degree to which the offsetting of resource constraints can be sustained once the intervention comes to an end and can adjust to changes in buyer specifications.

The conceptual framework suggests that the impact or “success” of interventions aimed at small-scale producer participation in value chains to higher-value markets should be judged in terms of the time path of the procurement costs of buyers in sourcing from small-scale producers. Thus, a given intervention is effective if the costs of procurement for buyers in sourcing from a small-scale producer at any point in time are no greater than the costs of procuring from other suppliers in the buyer’s choice set. In turn, this scenario requires that critical functional capacity in terms of internal and external resources is put in place to enable small-scale producers to compete once the intervention comes to an end.

In the short term, small-scale participation can be achieved by bridging any gap in procurement costs, although such interventions will not be sustainable unless they simultaneously address the weaknesses in internal or external resources that are the cause of these higher costs, such that resources critical to assured compliance can be maintained. The time frame over which this is achieved is clearly an important

FIGURE 3.7: Impacts of Interventions Aimed at Facilitating the Participation of Small-Scale Producers in Value Chains to Higher-Value Markets



Source: The Authors.

variable and provides a measure of the performance of alternative interventions in terms of the time taken to achieve sustainability. Examining the time horizon of procurement costs allows a distinction to be drawn between “quick hit” interventions, for example, that aim to offset short-term excess procurement costs for buyers, and interventions that address structural “excess” procurement costs and require longer-term support to achieve sustainability. This time horizon also permits alternative withdrawal strategies to be compared and contrasted: for example, interventions whereby support is gradually wound down as opposed to projects that come to an abrupt end.

Assessing the “Success” of an Intervention

The conceptual framework represents the impact of interventions rather narrowly in terms of the procurement decisions of buyers and the constraining impact of internal and external resources on the ability to achieve assured compliance with buyer specifications in a manner that maintains competitiveness relative to alternative sources of supply. On the one hand, this framework suggests that the impact or success of an intervention can be assessed at a number of different levels, perhaps corresponding to the individual elements of the conceptual framework that are assumed to

be causally related to the ability of small-scale producers to achieve assured compliance and compete on the basis of the buyer’s procurement costs. On the other hand, there are undoubtedly further factors that might be considered in assessing the impact of an intervention, in particular impacts on producer income and poverty, as well as spillover effects on the wider community and economy (figure 3.7).

Taking figure 3.7 and the conceptual framework, a series of potential “success” measures, which are broadly iterative in nature, can be derived for interventions aimed at facilitating the participation of small-scale producers in HVAF markets. Thus, an intervention can be assessed in terms of its impacts at a variety of levels, perhaps depending on the degree to which each is measurable: (1) the amount of defined intervention inputs delivered; (2) the degree to which internal or external resource constraints are offset; (3) the degree to which assured compliance is achieved; (4) the degree to which participation in the target value chain is achieved in the short term; (5) the degree to which participation in the target value chain is maintained over time; (6) the impact on livelihoods of producers and agribusinesses; and (7) the impact on the wider society and economy. At each level, the impacts of the intervention need to be assessed in terms of clearly defined target groups and over a prespecified

time period in order to permit the effective comparison of interventions.

The impact of a particular intervention or set of interventions will both reflect and be influenced by the implementing agent, form, locus, and nature of funding, as well as a wider set of design and implementation variables, for example: (1) the number and nature of other interventions implemented simultaneously; (2) the sequencing of interventions and scheduling over time; (3) entry and exit strategies associated with intervention implementation; (4) intervention objectives; (5) the quality of technical assistance or other aspects of intervention management; (6) the level and modes of impact assessment and resultant impact on intervention delivery; and (7) the wider commercial and political environment. In analyzing interventions aimed at facilitating the participation of small-scale producers in HVAF markets, it is important to capture information on these variables in order to assist in interpreting differences in the assessed impact and in diagnosing which interventions work better than others in particular contexts.

A critical issue for practitioners in comparing and contrasting interventions aimed at facilitating the participation of small-scale producers in HVAF markets is cost-effectiveness, and thus replicability. Historically, this issue has tended to be assessed in terms of the amounts of assistance delivered for a given level of financial resource, or alternatively the cost per unit of assistance provided. Here, with the focus on the augmentation of internal and external resources, assured compliance, and sustainable participation in high-value markets, cost-effectiveness needs to be measured somewhat differently. Such measures might include the unit cost per producer achieving assured compliance with the specifications of its immediate buyer or per additional producer participating in the target value chain over a prescribed period of time.

HYPOTHESES

Through the development of the conceptual framework, a series of tentative hypotheses emerged that served to drive the direction of the research undertaken through this project and the related collection and analysis of data. The first set of hypotheses relate to the targeting of interventions aimed at facilitating the participation of small-scale producers in

value chains to higher-value markets and the ability to “pick winners”:

- It is likely to be more cost-effective and sustainable for small-scale producers that participate in value chains to lower-value markets (for example, type 1) to take small steps toward value chains directed at higher-value markets (for example, types 2 and 3) rather than wholesale shifts to value chains directed at the most exacting markets (types 5 and 6). That is, fostering “great leaps forward” is rarely a good idea.
- Efforts to achieve assured compliance among small-scale producers are more likely to be effective and less costly where there is an existing mature industry and thus more external resources. This is especially the case in relation to type 5 and type 6 markets. Attempts to develop a smallholder supply base for such markets in a nascent industry will likely have low rates of success.
- The movement of small-scale producers to value chains directed at type 5 and 6 markets is particularly difficult given the associated production and transaction costs relative to competing resources, while the additional benefits over participation in value chains to type 4 markets might be limited. This fact implies that efforts aimed at achieving assured compliance in value chains to type 3 and type 4 markets might be a more effective approach in the short to medium term.
- In circumstances where alternative supply arrangements face critical bottlenecks (i.e., official restrictions on landholding sizes or leases), there are higher prospects for cost sharing in interventions as buyers will be more motivated and dedicated to fostering a smallholder supply base. Conversely, where the policy environment leans toward larger-scale production (i.e., through favorable land-leasing arrangements, subsidies for mechanization, etc.), cost and capacity sharing for smallholder-oriented interventions are unlikely, as are the prospects for success.

The second set of hypotheses relate to the approaches adopted by interventions aimed at facilitating the participation of small-scale producers in value chains to higher-value markets, as well as their scalability and sustainability:

- Interventions of type A and type B that aim to augment available internal or external resources will tend to

- take longer to achieve the assured compliance of small-scale producers;
- take longer to achieve the initial participation of small-scale producers in target value chains;
- have lower rates of small-scale producers achieving successful assured compliance;
- have lower rates of failure among small-scale producers achieving assured compliance, relative to interventions of type C that aim to offset weaknesses in the prevailing internal or external resource base.
- Interventions of type A and type B that aim to augment available internal or external resources will tend to be more sustainable in the medium to long run in terms of maintaining access to critical resources as buyer requirements change, relative to type C interventions that aim to offset weaknesses in the prevailing internal or external resource base.
- Top-down interventions, such as through exporters, will tend to
 - take less time to achieve the initial assured compliance of small-scale producers;
 - have lower rates of failure among small-scale producers achieving assured compliance;
- be more scalable, in terms of the number of small-scale producers achieving assured compliance relative to bottom-up interventions, for example, through small-scale producer groups.
- Top-down (or vertical) interventions via lead firms will be most suitable in relation to type 5 and type 6 markets; bottom-up (or horizontal) interventions will be more suitable to type 2 and type 3 markets. This difference relates to differences in the specificity of skills and knowledge required and the differential risks of noncompliance.
- Interventions that augment or offset weaknesses in the internal and/or external resource base through local service providers will tend to be more sustainable in terms of longer-term processes of upgrading. However, because many development programs need to show immediate results and may have a short implementation period, the attention given to (and patience with) the development of local service provision will be less than optimal.
- Interventions that engage with the public sector in enhancing the external resource base will tend to be more scalable, in terms of the number of small-scale producers achieving assured compliance.

Chapter 4: DEVELOPMENT ASSISTANCE, STANDARDS COMPLIANCE, AND AFRICAN SMALLHOLDER FARMERS

INTRODUCTION

Over the past decade, multilateral development agencies, bilateral donors, and nongovernmental organizations (NGOs) have initiated or otherwise supported a flurry of initiatives geared toward facilitating African smallholder compliance with emerging regulatory and market agri-food standards. It is very difficult to quantify the scale of this assistance since many interventions with this focus have been embedded in broader trade, agriculture, or rural development programs and projects. However, a rough estimate is made here of \$350–\$450 million, meaning average expenditures of some \$35–\$40 million per year for technical assistance, training, certification costs, small equipment, and so forth. This does not include related investments in physical infrastructure—which are considerably larger.²³

Development assistance in this area has taken many different forms and has involved varied entry points. Some assistance has centered on the broader capacities for standards management at the national or sector levels, seeing this approach as a precursor to interventions targeting a specific beneficiary group (i.e., smallholder farmers); other assistance has focused on strengthening pertinent capacities at the level of specific industries, companies, or farmers (groups). Still other assistance has mostly just defrayed certain costs of participation in standards-based markets—that is, by paying

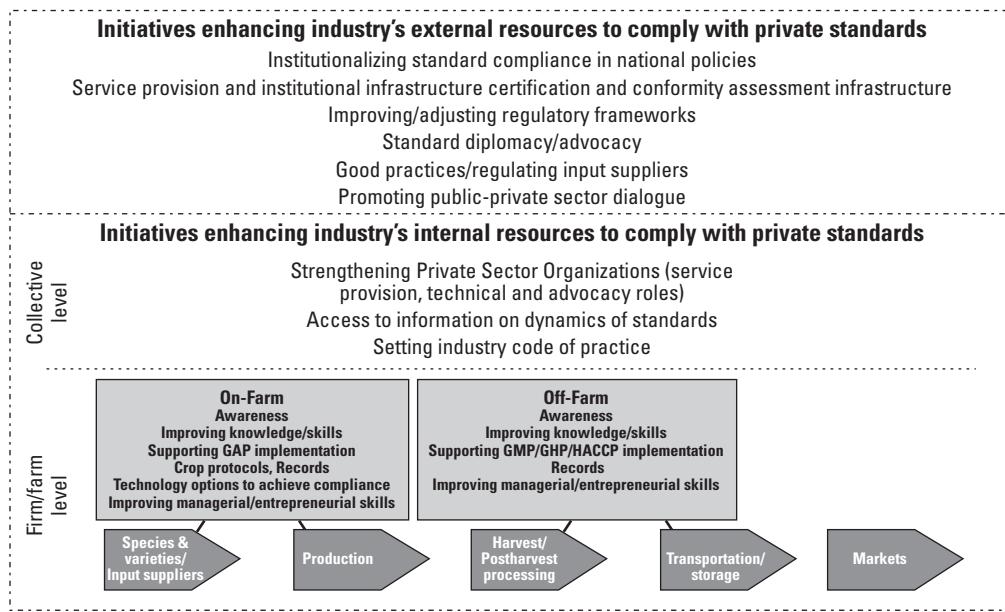
for certification costs. An increasing number of programs and projects are now employing a hybrid approach involving multiple entry points, both general and specific. Figure 4.1 depicts the varied entry points for development assistance in this field.

The recent development assistance efforts related to African smallholders and standards compliance have a mixed ancestry. One line of the family can be traced to the initiatives, beginning in the late 1980s and early 1990s, to promote “nontraditional” agricultural exports from Africa in response to growing pessimism about the prospects for traditional commodities and positive recognition of changing consumer tastes and rising demand for high-value food products. This ancestry featured a proliferation of “private-sector development” and “value chain” initiatives. A second line of the family can be traced to a revival in development assistance for agriculture in the early to mid-2000s, with an increasing emphasis on “linking farmers to markets.” A third line of the family derives not from traditional development assistance work but from the long-standing social and environment “movements” in higher-income countries that have, increasingly, found market-based applications.

This chapter provides a bird’s-eye view of development assistance in the nexus involving standards, higher-value markets, and smallholder farmers. Only limited details about specific projects and programs are noted here, and then only to illustrate broader trends. The review is contextualized by reference to two types of broader initiatives and the lessons that have been learned from these initiatives. The key elements of the antecedent programs to promote nontraditional agricultural exports and various supply-chain partnerships are highlighted first. Then, the more recent efforts to revitalize investment in African agriculture are considered. Recent development assistance efforts geared toward strengthening standards management capacity generally and the more specific interventions centered on smallholder compliance with emerging standards are then analyzed.

²³ In the larger picture of development assistance to African trade or agriculture, this is not a huge amount of money. For example, new World Bank loan commitments—including those from the International Financial Corporation (IFC), the International Development Association (IDA), and the International Bank for Development and Reconstruction (IBRD)—to African agriculture and rural development were US\$7.3 billion in 2009 alone, much higher than for the period 2006–08 (US\$4.1 billion per annum). However, while a large part of such a lending program goes for investments in physical infrastructure (i.e., rural roads; irrigation facilities; testing laboratories), most of the expenditure for supporting smallholder standards compliance has gone for technical assistance, training, farm and firm advisory services, study tours, and so forth..

FIGURE 4.1: Entry Points for Development Agencies' Support for Compliance with Standards



Source: The Authors.

GAP: good agricultural practice; GMP: good manufacturing practices; HACCP: Hazard Analysis and Critical Control Point system; GHP: good hygiene practices

ANTECEDENTS: NTAEs, "LEAD" FIRMS, AND SUPPLY-CHAIN PARTNERSHIPS

During the 1960s and 1970s development assistance to agricultural programs emphasized production improvements through support for agricultural research and extension, irrigation, and public-sector agriculture marketing and distribution systems. Yet the marketing reforms undertaken during the 1980s and 1990s gave rise to a new paradigm in which the roles of the government and private operators in the provision of services and marketing functions were being redefined, with the private sector expected to fulfill the vacuum left by the government in the provision of market and other services. Overall, during the late 1980s and 1990s, support to agriculture declined substantially.²⁴ Donor investment for agricultural marketing collapsed, with most attention in this area shifting to policy reform measures. What limited investment support was provided in this area was in relation to the diversification of agricultural trade beyond traditional commodities.

The attention to "nontraditional agricultural exports" in Africa initially placed a strong emphasis on private-sector

development policies, mainly in the form of establishing a favorable enabling environment—macroeconomic stabilization and privatization. For example, during the late 1980s and 1990s, most World Bank (WB) work in the area of sub-Saharan Africa (SSA) agricultural marketing and trade was carried out under the rubric of structural and sector adjustment loans, with very little focus on investment lending. Yet, some investment lending was made, with foci on agricultural export rehabilitation, diversification, and competitiveness. For example, the Ghana Diversification Project focused on the rehabilitation of coffee production, promoting outgrower schemes for rubber and oil palm and promoting international market penetration of Ghanaian pineapple. A series of, essentially, pilot projects were initiated during the 1990s in several West African countries to support nontraditional agricultural exports (NTAEs), especially for fruits and vegetables.

As illustrated in table 4.1, this promotion of NTAEs (in WB-supported projects) involved a blend of different interventions, including those that tested alternative crops, provided farmer advisory services, strengthened exporter and producer associations, and constructed "hard" infrastructure for transport and logistics (including roads, ports, etc.). In most of these projects, technical and financial services to private operators were primarily provided through public-sector entities (national research and extension, ministries of agri-

²⁴ According to the World Bank, bilateral and multilateral donor aid for development of African agriculture declined from \$1,921 million in 1981 to \$997 million in 2001 (World Bank 2007b).

TABLE 4.1: Main Components of WB Market-Led Projects Implemented in the Mid-1990s to Early 2000s

PROJECT	EXPORT PROMOTION AND DIVERSIFICATION PROJECT	NATIONAL AGRICULTURE EXPORT PROMOTION	AGRICULTURE DIVISIFICATION PROJECT	AGROPASTORAL EXPORT PROMOTION PROJECT	NATIONAL AGRICULTURE EXPORT PROMOTION	AGRICULTURAL TRADING AND PROCESSING PROMOTION PILOT PROJECT
Country	Cote D'Ivoire	Senegal	Ghana	Niger	Guinea	Mali
a. Market focus						
National/local		✓				✓
Regional techniques				✓	✓	✓
International Export Markets	✓	✓	✓	✓	✓	✓
b. Facilitating Access to finance	✓	✓		✓	✓	✓
c. Assessing agronomic viability of export crops						
Testing new crops	✓	✓			✓	✓
Develop packing materials	✓					
Production techniques	✓	✓	✓			✓
Improving quality	✓	✓				✓
d. Assessing export market feasibility						
Market trials, export missions, study tours, market studies	✓	✓			✓	✓
e. Collective actions						
Apex and professional organizations	✓	✓		✓	✓	✓
Collective action for POs	✓	✓		✓		✓
f. Public institutional capacities						
Public capacities for policy analysis, marketing information, trade negotiations, SPS, etc.				✓	✓	
g. Market-oriented infrastructure						
Feeder roads, etc	✓	✓	✓	✓	✓	
Upgrading port/airport export facilities	✓	✓		✓	✓	✓
Postharvest and other related infrastructure for overall industry				✓	✓	✓

Source: The Authors.

culture [MOAs], ministries of trade, public export promotion agencies, etc.).²⁵

During the same period, other initiatives were undertaken that specifically sought to strengthen SSA agro-enterprises as a means of generating sustained growth and reducing poverty. The U.S. Agency for International Development (USAID) was leading these efforts in the region. Most USAID agribusiness

programs focused on increasing high-value nontraditional agriculture exports. Early attempts focused on improving the institutional infrastructure for private agribusiness through assistance in policy analysis and reform and through support to industry associations, but such attempts concentrated later on facilitating the supply-side response through supporting firm-level investments, access to markets, and direct provision of services. The Agricultural Non-Traditional Export Promotion Project (ANEPP, 1988–95) in Uganda and the Trade and Investment Program (TIP, 1991–98) in Ghana are examples of such export diversification projects. Their successor projects—the Investment in Developing Export Agriculture

²⁵ In the case of Guinea, for example, the government's insistence on carrying out public provision of inputs, extension, and other services weakened the possibility of establishing sustainable private systems for services delivery (World Bank 2003a, Report 26075).

(IDEA, 1995–2004) in Uganda and the Trade and Investment Reform Program (TIRP, 1998–2004) in Ghana—had a stronger focus on enhancing private enterprise performance.

In contrast to the public-sector service delivery mechanisms commonly found in WB-supported projects, in the USAID-supported projects the technical and other forms of assistance were frequently channeled mainly through U.S.-based consulting firms or consortia. One type of instrument that was increasingly used by different donors in this type of project was matching grants—to private operators—for the upgrading of physical infrastructure, promotion of end-market links, conduct of field and market trials, and other pilot activities.²⁶

As pilot initiatives, these projects were characterized by a lot of experimentation and learning, but with rather mixed results in relation to their original objectives. Getting the balancing and sequencing right between policy and institutional reforms, enterprise level and collective infrastructure, promotion of end-market links, and the creation of an effective and reliable supply response proved to be challenging.²⁷

Evaluations of the USAID agribusiness programs highlighted the importance of setting strategies to support sectors based on a rigorous analysis of the constraints and opportunities along the chain and on the dialogue among government entities, the private sector, and other relevant stakeholders. The agency then started piloting frameworks that provided a better understanding of opportunities and constraints to export development, such as the “commodity-chain approach,” applied, for example, by the IDEA project in Uganda in the mid-1990s. Similar lessons were being learned in the WB-supported projects. The export promotion projects in Senegal and Mali both applied the concept of intervening at multiple points in the supply chain. Some experimentation in public- and private-sector partnerships also took place. The learning that took place through the implementation of these pilot initiatives would influence the approaches applied by donors during the subsequent decade in order to expand

export-oriented supply chains and better integrate smallholders into this process.

In the aftermath of these pioneering NTAE and agribusiness support projects, considerations were given to how to replicate and scale up successful experiences while improving the sustainability of the support services provided to firms and supply chains. While the ability of public agencies to effectively service very different types of enterprises and supply chains was questioned, the models based upon direct service provisioning by dedicated project (and, in some cases, international) staff often did not feature a viable exit strategy in which the capacity for continued service provisioning was transferred.^{28, 29}

One set of initiatives subsequently sought to promote business development services as a potentially more effective and sustainable model than direct project service provision. In these programs, support was provided for the establishment or strengthening of independent or specialized entities who would provide fee-based services to firms and industries. While applied more generally, especially in programs seeking to support African small- and medium-sized enterprises (SMEs), some business development programs were also designed to assist exports, including NTAEs.

For example, the Export Market Development Services for the SME project in Tanzania (established in 1994), funded by the Department for International Development (DFID), provided technical assistance and advisory services as well as end-market links. It was one of the early attempts to develop independent fee-based services to agri-food export sectors, targeting small firms but also small-scale producers. In the late 1990s, business service development initiatives addressing the specific concerns of smallholders within the context of high-value agri-food chains started to be piloted. The Zambia Agribusiness Technical Assistance Center (ZATAC), established in 1999 with USAID support, was

²⁶ Examples are WB-funded projects in Guinea and Niger, USAID’s TIRP and IDEA projects, and the support provided by the Netherlands through the activities implemented by the Centre for the Promotion of Imports from Developing Countries—CBI.

²⁷ The Niger project had limited results as attention concentrated on developing the production capacity among smallholder farmers, yet the linkages between them and the exporters who had the ability to access foreign markets were neglected ([World Bank 2006, Report 35833](#)). In contrast, the focus in the Guinea project was on end-market linkages, with inadequate resources devoted to stimulating the supply response ([World Bank 2003a, Report 26075](#)).

²⁸ For example, agribusiness development centers were set up by USAID in the mid-1990s under several projects in Africa, generally as an independent office staffed by a mix of expatriates and local professionals. This model has not generally been transferable once the project financing ends ([Lamb and Brower 2005](#)). Yet several recent USAID interventions, such as the Trade and Investment Program for a Competitive Export Economy (TIPCEE) project in Ghana, have continued the same pattern of implementation units providing support to enterprises. These too have faced the same problems of sustainability after the completion of the project.

²⁹ See, for example, [Diaz et al. \(2009\)](#) for a description of development efforts to build institutional support to export development in Uganda during the 1990s.

BOX 4.1: Expanding Focus: From Support for Private-Led Initiatives to Wider Public-Private Partnerships

Several development agencies have been channeling direct support to private actors through B2B and partnership programs. Initial efforts focused mainly on creating incentives for private investments in areas perceived as very risky or constrained by lack of information or other barriers. Yet, more recently, these efforts have explicitly included poverty reduction among their objectives. Examples of programs that have been specifically developed to provide direct support to enterprises in high-value export chains are the Dutch Private Sector Investment (PSI) program (formerly known as the Programme for Cooperation with Emerging Markets—PSOM), supporting Dutch companies willing to undertake an investment project together with a local business partner in an emerging economy. Grant amounts reached up to 50 percent of the investment costs, with a maximum contribution of 750,000. Investors are expected to observe a high standard of corporate social responsibility. Between 1998 and 2009 the program provided grants estimated at US\$200 million ([Jeune 2009](#)), and it has recently expanded the support to non-Dutch companies pursuing investments in specific countries, including several SSA countries (Benin, Burkina Faso, Cape Verde, Ethiopia, The Gambia, Ghana, Madagascar, Malawi, Mali, Mozambique, Rwanda, Senegal, South Africa, Sudan, Tanzania, Uganda, and Zambia).

DFID has also been providing direct support through its challenge funds—"matching grants" of up to 49 percent of the costs of commercial proposals that are selected on a competitive basis. Initiatives include the Business Linkages Challenge Fund (BLCF, 2000–2005), the Financial Deepening Challenge Fund (2000–2008), and a number of smaller, sector-specific and country-specific funds. New initiatives include the African Enterprise Challenge Fund, the Financial Inclusion Challenge Fund, and the development effects of supermarkets—the Food Retail Industry Challenge Fund (FRICH). The agency has also started challenge funds at the country level in Bangladesh and Vietnam. In Africa, examples of initiatives supported by the BLCF included support to tomato processing in Ghana, citrus exports from Ghana, and African honey exporters. FRICH targets specific investments in Africa and has been supporting a set of fair trade initiatives.

The Danish International Development Agency (DANIDA), the Swiss State Secretariat for Economic Affairs (SECO), the United Nations Environmental Program (UNEP), and other development agencies also implement B2B programs

to facilitate access of developing country enterprises to technology and know-how. On occasion, companies benefit from several of these investments as a way to replicate successful experiences. To illustrate, Unilever's effort to develop the Allanblackia value chain in Ghana benefited from support of PSOM, while in Tanzania the support came from the UNEP-Growing Sustainable Business (GSB) program. Similarly, several of the most recent agriculture and agribusiness projects supported by the WB and the International Fund for Agricultural Development (IFAD) at the country level have made use of matching grants to stimulate private investments or to support private actors (lead firms) in their role as integrators, thus facilitating the delivery of services to smallholders and their participation in profitable markets.

The partnership programs have evolved from the companies being direct recipients of the grant, to wider engagement of several actors to promote development objectives. The Global Development Alliance (GDA)-USAID, the World Summit on Sustainable Development (WSSD), and The Netherlands Partnership on Market Access for Food and Agricultural Products are examples of these types of partnerships. The GDA alliance mobilizes the ideas, efforts, and resources of governments, businesses, and civil society by forging public-private alliances; the program has evolved from a global focus toward a decentralized structure (country level). Examples of alliances in the agri-food sectors supported by GDA include the African Market Garden (Burkina Faso/Ghana, Horticulture); the Agribusiness in Sustainable Natural Plant Products (Ghana, Madagascar, South Africa, Zambia), the Alliance for Economic Diversification and Assistance in the Zambia Copperbelt, the Alliance for Sustainable Coffee, the Alliance for the Development of the Smallholder Rubber Subsector (Liberia), the East Africa Cashew Industry Alliance, the East African Fine Coffees Alliance, and so forth.

Under WSSD/Partnership, agreements have been established with the governments of Ghana, The Gambia, Zambia, Kenya, Uganda, and Tanzania to support the development of specific sectors. The initiatives are aiming at improving market access and increased global competitiveness of farmers, food processors, retailers, and traders in developing countries. Examples are the Partnerships and Horticulture Chain Management in East Africa and the Development of Commercial Field Vegetable Production, Distribution and Marketing for the East African Market

Source: Compiled by the Authors.

designed to provide technical assistance, information, and financial intermediation to smallholders and agribusinesses committed to working with small farmers, with a focus on high-value products (and later also expanding to include coffee). The difference between ZATAC and earlier initiatives of agribusiness centers supported by USAID in SSA was its focus on smallholders and the attempt to make of ZATAC a self-dependent entity for continued provision of technical assistance.³⁰

The mixed pattern of results also led to further considerations of suitable targets for support in export-oriented programs. In some cases, the greatest impact of scarce resources was expected to be seen through reducing coverage and emphasizing the support provided to a few firms—those with high potential to develop the intended sector and produce spillover effects on smallholders and local and national economies. For example, several of the USAID-funded projects formulated in the late 1990s targeted interventions through so-called lead firms—under the assumption that lead firms would be able to transfer knowledge and skills to their suppliers, including smallholder farmers.

Combining a “lead firm” focus and a quest for more sustainable support models, several donors in the late 1990s and on into the 2000s created business to business (B2B) or partnerships programs, seeking to especially link SSA exporters with European partners, facilitated by cost-sharing grants or challenge funds (see box 4.1 above). These programs have been seen as a suitable response to rising regulatory and market requirements and the consolidation of market structures for major commodities. Access to profitable markets, transfer of knowledge, and provision of embedded services (technical assistance, market signals, etc.) are some of the key benefits expected to confer upon SSA firms from strengthening their links with international buyers. With an increasing attention to poverty reduction, some of these partnership schemes have expanded their objectives beyond investment and trade promotion to also include achieving broader development objectives.

BROADER PARALLEL INITIATIVES: RENEWAL OF AGRICULTURAL INVESTMENT AND LINKING FARMERS TO MARKETS

Following upon important successes in the 1960s and 1970s, development assistance support for agriculture fell sharply over the subsequent two decades. According to the WB, bilateral and multilateral donor support for African agriculture fell from \$1,921 million in 1981 to \$997 million in 2001 (World Bank 2007b). In real terms, the WB’s lending to agriculture in

2001 was the lowest level recorded in the history of the institution (World Bank 2003b). This pattern was more common. A study examining the first generation of Poverty Reduction Strategy Papers noted the low and declining share given to agriculture in national budgets of low-income African countries (Oxford Policy Management 2007).

However, during the 2000s, the tide began to turn, with evidence of renewed interest by donors and governments in agriculture as a vehicle for poverty reduction and the achievement of the Millennium Development Goals. In 2003, through the Maputo Declaration, African nations committed their support to the Comprehensive Africa Agriculture Development Program (CAADP), under the New Partnership for Africa’s Development (NEPAD). For many donors, the mid-2000s brought increased attention to agriculture, first in strategic terms and later in resource allocations. Examples include the WB’s 2003 Rural Development Strategy, the 2004 USAID Agriculture Strategy: Linking Producers to Markets, and the 2005 DFID policy paper “Growth and Poverty Reduction: the Role of Agriculture.” The WB’s subsequent 2008 World Development Report on “Agriculture for Development” provided further momentum for development assistance in the sector. That year’s “food crisis” provided a further spur to development assistance (and foreign direct investment) in agriculture.

In this more recent embrace of agriculture, development agencies are devoting at least as much attention to marketing and supply-chain link dimensions as they are to strengthening farm-level assets and primary production. Efforts to link growth and poverty reduction objectives have yielded a plethora of programs centered on “linking smallholder farmers to markets,” or, in its variant, “making markets work for the poor.” Box 4.2 illustrates how this thrust has been incorporated into the strategic objectives of several organizations.

This focus on “market links” has not only been taken up by major multilateral and bilateral agencies. Similarly, NGOs and nonprofit organizations, traditionally working at the grassroots level, late in the 1990s started to give more emphasis to market-led approaches. For example, ACDI-VOCA, with roots in the cooperative movement and with an explicit objective of assisting cooperatives in developing countries, has

³⁰ ZATAC saw itself as the champion of smallholder commercialization using a “new” supply-chain approach that looked for multiple intervention points. The institution evolved as a limited company, ZATAC Ltd, becoming a kind of local development bank, provider of technical assistance, and implementer of several donor-funded projects.

BOX 4.2: Linking Farmers to Markets as Part of Donors' Strategic Objectives

USAID. Although the overriding goal of the agency's interventions supporting export and agribusiness development has been to promote economic growth, there has been a recent shift toward pro-poor growth, particularly as a result of the Presidential Initiative to End Hunger in Africa (IEHA) launched in 2002, which focuses on promoting agricultural growth, particularly in the context of small farmers. This focus is clearly stated in the agency's "Agriculture Strategy: Linking Producers to Markets" for the period 2004–09, which focuses on increasing agriculture productivity and smallholder participation in input and output markets. Commercialization of agriculture by improving smallholder links to profitable markets is seen as fundamental to capturing the benefits expected from improved productivity and overall competitiveness. The focus on poverty reduction is also stated by the USAID "Economic Growth Strategy: Securing the Future" launched in 2008; the strategy states the need to put in place inclusive interventions to truly achieve poverty reduction objectives ([USAID 2008](#)). The instruments used to achieve these objectives include strengthening industry, firm, and farmer capacities and improving environment and building institutions and good governance. In 2010, the agency embraced the U.S. government initiative "Feed the Future," which has a strong food security and poverty focus.

IFAD, an agency with a specific mandate of eradicating poverty, defined the increased access of rural poor people to markets (and financial services) as one of the agency's three pillars of its Strategic Framework 2002–06 "Enabling the Poor Rural to Overcome Their Poverty." This area of emphasis was also noted in a discussion paper published by the agency in 2003—"Promoting Market Access for the Rural Poor in Order to Achieve the Millennium Development Goals." In its strategic framework, IFAD highlights the importance of market-oriented production systems to enhance rural incomes, including the intensification of agriculture production systems, increased commercialization, and specialization in higher-value crops. The agency's approaches to facilitate market links focus on influencing the speed of market development, facilitating and broadening market access to rural producers, and assisting them to participate in those markets more equitably. As in the case of USAID, to achieve these objectives IFAD uses both public- and private-sector entry points. In the agency's framework 2007–12, facilitating access to transparent and competitive agricultural input and produce markets is also at the core of the strategic objectives.

The **World Bank** in its strategy for rural development "Reaching the Rural Poor: A Renewed Strategy for Rural Development" ([World Bank 2003b](#)), one of the strategic objectives is to refocus the agenda for agriculture, which included a shift in emphasis from local to global factors, staples to high-value crops (yet, continue priority for staple crops in low-income countries), primary production to the entire food chain, and public- to private-sector partnerships. The strategy noted that the bank will focus on strengthening farmer connections to markets through supply-chain management structures, improving product quality, establishing appropriate postharvest systems, and assisting clients in refining methods of product and certification and improving food safety. In its Agriculture Action Plan "Implementing Agriculture for Development" (2010–12), the WB makes the links of farmers to markets and the strengthening of value chains jointly one of the five critical areas of support to agriculture.

Other bilateral agencies, such as the Swedish International Development Cooperation Agency (SIDA), DFID, and the Swiss Agency for Development and Cooperation (SDC), plus NGOs such as CARE, have included in their strategic orientations a strong market focus for their development assistance and the importance of smallholders accessing those markets, which is framed in the Markets for the Poor Approach. The increasing importance of small-farmer links to markets to achieve poverty reduction objectives has not only been part of donor strategic policies and objectives, but also part of the strategies implemented by research and technical organizations. For example, the International Center for Tropical Agriculture (CIAT) has been working on a demand-driven research agenda called "Linking Farmers to Markets: Participatory Agro-enterprise Development Approach." It supports collective action, diversification, and added value as viable pathways out of poverty. Similarly, the Global Forum on Agricultural Research (GFAR) launched in 2003 its "Global Partnership Programme (GPP): Linking Farmers to Markets," as a global postharvest initiative to promote sustainable economic growth, alleviate poverty, and provide food security in developing countries through market-oriented approaches.

For other organizations, although not clearly explicit in their strategies or policies, the topic appears as one of the thematic areas of engagement, more from the perspective of knowledge sharing and learning. The Food

(Box continues on the next page)

BOX 4.2: Linking Farmers to Markets as Part of Donors' Strategic Objectives (*continued*)

and Agriculture Organization (FAO), for example, has been working on the development of knowledge and dissemination of experiences in this area through its agriculture marketing program, and it has synthesized

a series of case studies illustrating emerging business models.

Source: Compiled by the Authors.

more recently played a critical role in the development of the USAID's value chain framework and currently is one of the main USAID partners in knowledge generation, dissemination, and sharing in the value chain field. The focus of its work has expanded from cooperative development toward supporting different forms of farmer collective action required to participate in markets, including vertical integration chains,³¹ linking lower- with higher-performing associations, joint ventures, and partnerships between private and public actors.³²

CARE, from its broad experience in microfinance, has most recently engaged in support to smallholders under market-led approaches. CARE Canada launched in 2004 its strategy "Making Markets Work for the Poor: CARE Canada's Strategy for Helping the Poor through Enterprise," in which the agency sees its role in the support to smallholder enterprises as both broker and intermediary. In the former role, CARE facilitates market links, builds trust, and provides guarantees to help establish constructive private-sector relationships among farmers and buyers. However, the NGO also sees a role as intermediary when private-sector partners are unwilling or unable to meet smallholder needs. To perform its role as intermediary, CARE operates a venture capital fund and is actively investing in establishing companies that can link smallholders to value chains, with the objective of divesting once the companies are profitable and private stakeholders are available to take over.

TecnoServe, Inc., on the other hand, was created in 1968 with a business philosophy "private business can drive

economic growth and positive social change." Before the late 1990s, TecnoServe focused more on enterprise development at the community level, but it has shifted toward working with larger businesses within value chain frameworks. The organization has been promoting the enhancement of capacities among the poor by focusing on commodities that can have large outreach. TecnoServe has been leading initiatives related to coffee, banana, cashew, cocoa, and dairy subsectors with a clear focus on quality improvements and market links.³³

The emphasis on market-based interventions has also pushed for some level of coordination among NGOs. One example is the EMPRENDA Alliance—Empowering Private Enterprise in the Development of Agriculture—a partnership between ACDI-VOCA, TecnoServe, Inc., and the Cooperative League of the United States of America (CLUSA), in implementation in Mozambique. It looks to promote a wide set of sustainable extension services and solutions to enhance the performance of horticulture, confectionary nuts, and field crops and animal feeds to satisfy local and regional demands, with the strengthening of farmer organization at the core of the alliance's activities.

Table 4.2 summarizes the shift in approaches to support agriculture during the past two decades. Early attempts focused on deregulation and reduction of government involvement to stimulate private-sector responses. Today, agriculture and agribusiness sectors, particularly those targeting international markets, have seen themselves operating in an environment of increasing regulatory and private-sector demands for quality, consistency, safety, environmental, and other product and process attributes, with the consequent challenges for development assistance in finding effective ways to provide support to different actors, particularly small-scale farmers.

Clearly, development assistance has evolved to address the varied factors contributing to a growing sense of pessimism

³¹ An example is the "Ethiopia Smallholder Linkages Program," under which cooperatives provided services to horticulture producers and linked them to the exporters. The National Smallholder Farmers Association of Malawi (NASFAM) is also an example of vertical integration for the performance of specific value chain functions (e.g., aflatoxin testing of groundnuts to be exported to South Africa).

³² In Tanzania, ACDI-VOCA implemented a Smallholder Horticulture Outgrower Promotion (SHOP, 2007–09) that focused on enhancing productivity and market linkages, the latter through expanding export and domestic outgrower schemes to supply export and local supermarkets. A smallholder farmer commercial hub was established in collaboration with an association of commercial producers and a Kenya-based private company (ACDI-VOCA website, June 2009).

³³ Recently, TecnoServe's work on coffee and dairy has benefited from significant grants from the Gates Foundation to increase incomes of East African smallholders through investments in extension, processing, and market linkages.

TABLE 4.2: Evolution of the Emphasis on Support to Agriculture and Agribusiness in SSA

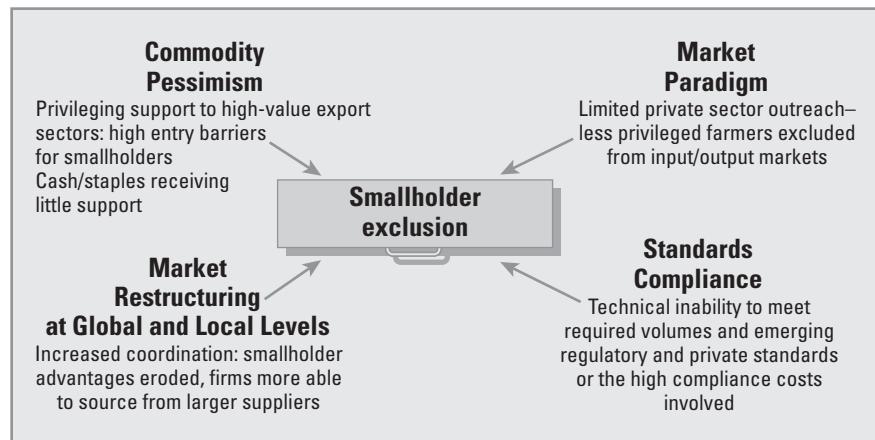
PERIOD	PUBLIC/PRIVATE SECTOR FOCUS	EMPHASIS ON SUPPORT TO AGRICULTURE
Immediate post-independence era Agriculture as a source of foreign exchange	Focus on expansion of production. Critical role of the government	Agriculture primarily as a source of industrialization. Production of cash crops was encouraged as a source of foreign exchange for development
1980-mid 1990s Structural reforms Declining support to the sector	Focus on privatization and enabling environment (macroaspects) to facilitate private sector investments and stimulate agriculture performance. Government as the entry point	Structural adjustment reforms aimed at increasing production by reducing domestic market distortions and by encouraging private traders to replace state marketing companies. Emphasis on exports and income expansion rather than on imports and demand contraction was expected to stimulate strong agriculture sector performance.
mid 1990s-early 2000s Government/donor support for developing NTAE sectors	Increasing importance of PSD approaches. Increasing support to private sector	Market interventions emphasized agriculture export growth and export diversification to supply higher-end value markets. Strong emphasis on approaches to PSD, including direct support to private actors, particularly lead firms.
early 2000s-to date Increasing attention to pro-poor growth and agriculture productivity	Private sector as partner for development. Increasing importance of PPP	Threat of smallholder exclusion from dynamic high-value markets. Support to compliance with market requirements. Attention to growth with equity and market inclusion. Renewed interest in agriculture as a vehicle for poverty reduction. Pro-poor focus and value chain-based interventions. Increasing importance of the potential of PPP to achieve poverty reduction objectives

Note: NTAE: nontraditional agricultural exports. PSD: private sector development. PPP: public private partnerships.

Source: *The Authors*.

about the future of SSA smallholders (see figure 4.2), and it has included increased interventions specifically geared toward ensuring smallholder inclusion in more dynamic agro-food markets. These interventions have included efforts to innovate support for input and output market integration, wider compliance with market requirements, and strengthened vertical and horizontal coordination. Some of this work has involved a distinct poverty reduction orientation; other work has had a greater focus on realizing the potential for subsector or trade growth.

Thus, the portfolio of recent development assistance projects is a clear reflection of the learning that has taken place over the past quarter century. Key features of the recent investments include a strong market orientation, a focus on selecting the most promising value chains to achieve growth and poverty reduction outcomes, hybrid approaches to improve the enabling environment and stimulate the supply-side response, interventions using different entry points to enhance the capacities of different actors to leverage impacts (lead

FIGURE 4.2: Associated Factors Influencing Pessimistic Views on the “Future of Small-Scale Farmers” in SSA

Source: *The Authors*.

firms, traders, smallholders, and different service providers), a growing importance of public-private partnerships, and so forth.

In the context of high-value agri-food chains, approaches to support smallholder integration have included a lot of experimentation with promising models that can be inclusive and sustainable. A critical factor in the search for these “models” has been the process of market restructuring and the associated stricter private and public standards with potential to further marginalize small players. Consequently, the present decade has witnessed the emergence of a wider set of donor or government and practitioner organization initiatives specifically addressing the challenge of linking farmers, particularly small-scale producers, to high-value markets by removing entry barriers and enhancing their capacities to comply with

emerging standards. The set of development responses to the challenges of compliance and the attempts to facilitate smallholder compliance are analyzed in the following section. **Box 4.3** presents practitioners’ perceptions of the challenges associated with smallholder integration to higher-value or differentiated agricultural and food (HVAF) markets.

DEVELOPMENT ASSISTANCE AND SUPPORT FOR AGRI-FOOD STANDARDS MANAGEMENT IN AFRICA

Within the development community, as well as among African policy makers and business leaders, there has been growing recognition of the challenges posed by standards for continued market access, yet also the opportunities presented by standards to differentiate African products—and thus

BOX 4.3: Perceptions of “Practitioners”: Survey Findings

As part of this research program, a survey was undertaken of development practitioners known to be active in the support of African agriculture and the development of higher-value agri-food value chains. Such practitioners included representatives from donor agencies, consultancy firms, technical and research institutes, NGOs, and others. Some 160 persons (50 percent of whom were then based in SSA) responded to the web-based questionnaire, providing rankings or elaborations on themes related to (1) the constraints inhibiting the participation of smallholders in HVAF supply chains; (2) the expected impacts from their participation in these markets; (3) the indicators used to measure the success of interventions aimed at linking small-scale producers to HVAF supply chains; (4) the factors affecting the success of project and policy interventions in this area; and (5) the appropriate roles for national governments, the private sector, and development assistance entities in facilitating smallholder gains in this area. Major findings from the survey included the following perspectives.

1. Constraints: balancing the “old” and the “new”—

Constraints were explored from two perspectives: the ability of smallholders to participate in HVAF markets, and the willingness of buyers to procure from smallholders. With the former, the emphasis was given to those factors related to efficient transaction making, with less relevance given to production-related constraints. When those factors are grouped—through principal components analysis—the most critical constraints were deemed to be lack of producer knowledge, particularly

about market opportunities and requirements and about effective and market-accepted production techniques, and weaknesses of support services and infrastructure. Secondary constraints were seen to be access to finance, risk management, and prevailing farming structure.

Efficient transaction-related factors were also critical for procurement from smallholders with logistics and supply-chain management, including specific constraints of weak or inadequate transport infrastructure, difficulty or high costs of product traceability, lack of scale among small-scale farmers, inability to enforce commercial contracts, and high transport cost for raw materials. When those factors are grouped, access and costs of infrastructure became the leading factor, followed by supply-chain management and food safety and quality control. Relatively downplayed factors included lack of irrigation capacity, lack of trust in market intermediaries, and weak farmer organizations.

2. Impacts of smallholder participation in HVAF markets—

The respondents were most positive about the “learning” benefits (e.g., acquisition of technical and business skills) arising from smallholder participation in HVAF markets. They were also positively inclined regarding income gains and other economic impacts. With regard to environmental and health impacts, there was greater ambivalence, with the sample as a whole having a neutral position, while a considerable minority noted potential adverse impacts. Relatively downplayed were the level of financial risks, health risks to farm workers,

(Box continues on the next page)

environmental sustainability of the wider community, and environmental sustainability of the farm enterprise.

3. Measuring the “success” of interventions—The responses highlighted the clear predicament faced by practitioners to demonstrate the results or impacts of their work within the context of sometimes unrealistic expectations, tight time frames, short budgets, and multiple priorities. As demonstrated above, interventions in support of smallholder participation into HVFA chains are typically implemented with a view to providing several tangible or intangible benefits to some or all supply-chain stakeholders. In both instances, however, the actual impacts of such initiatives on developing country stakeholders remains poorly understood, as demonstrated by the practitioner’s responses.

The measures currently used to assess the success of an intervention usually focus predominantly on “inputs,” less on economic, social, and environmental outcomes, and even less on indicators of the long-term capacity created and overall long-term impacts. That is, nearly all projects record the numbers of farmers involved, groups formed, people trained, farmers certified, and so forth. Some attempt to gauge changes in production volumes, productivity, farmer incomes, and so forth, asserting an attribution to the project intervention.

In contrast, indicators related to risk management (for example, “farm worker health,” “interannual variability of farmer incomes,” and “improved natural resource management”) are much less commonly considered. It is, therefore, not surprising that respondents remain ambiguous on matters of farmer or community risk exposure. Also, much less commonly measured are indicators of local capacity building, whether among public-sector organizations or private suppliers of technical and business advisory services. Given that the respondents also indicated that weak support services are among the leading constraints on the ability of smallholders to meet the requirements of higher value supply chains, the relative lack of attention to the impact of interventions on service capacities is somewhat surprising.

4. Factors affecting the “success” of interventions

Survey respondents asserted that project design and management features are the lead determinants of the success or failure of interventions in this field. They downplayed other factors, including prevailing commodity market and macroeconomic conditions, the prior experience of farmers, and the preexisting strength

of pertinent industry organizations. The sample, as a whole, substantially discounted the importance of a collaborative and effective direct role for local or national government agencies.

5. Roles of stakeholders, including the development practitioners as “honest brokers”—The responses outlined a division of public- and private-sector responsibilities consistent with the current “linking farmers to markets” paradigm. Thus, the roles of government are cast as providing the economic, political, and infrastructural conditions necessary for private investment. The private sector, in turn, is tasked with the responsibility for driving the integration of producers into higher-value markets via commercial relationships and associated provision of market information, technical advice, and logistical and other services. External development agencies and project implementers are tasked with supporting the efforts of governments and the private sector, while playing the potentially multifaceted role of “honest broker” between and among supply-chain participants and government entities. In the “emerging new agriculture,” intra supply-chain trust is critical, certain suppliers are deemed “preferred,” public-private partnerships are sought, and economizing on transaction costs is paramount. In such an environment, an effective “honest broker” can be a valuable player.

In conclusion, the results confirm a growing “consensus” about institutional roles, yet they suggest some vagueness regarding the impacts of smallholder participation in higher-value supply chains and the appropriateness of the indicators most commonly used to gauge such impacts. The results also suggest a need to strengthen knowledge about both the “old” and “new” sets of constraints (and solutions) related to remunerative smallholder inclusion, in the form of the rising role of standards alongside more long-standing concerns about infrastructure and logistical links to markets. With increasing concerns about the capacity of interventions in this field to demonstrate a “return on the investment” from a poverty reduction perspective, looking at development assistance to high-value supply-chain development strictly through the lens of benefits recurring to smallholders might offer a very narrow perspective on the potential welfare contributions of stakeholder engagement in these types of markets.

Source: Based on Henson et al., 2008.

potentially escape from the effects of volatile international prices for traditional agricultural commodities. On a general basis, interventions have sought to prevent official regulatory (sanitary and phytosanitary) requirements from becoming a barrier to trade, and to utilize so-called private voluntary standards as a vehicle to improve competitiveness and differentiate products. We turn to these broad approaches now before looking specifically at initiatives centered on ensuring African smallholder compliance with such standards.

Regulatory Compliance

Development agencies are supporting emerging country efforts to comply with their World Trade Organization (WTO) obligations by strengthening capacities to manage sanitary and phytosanitary risks. This has been done through a combination of global, regional, and bilateral programs. Following the hierarchy of functions proposed by the WB in 2005 ([figure 4.3](#)), many initial donor efforts in this area concentrated at the top of pyramid—essentially supporting country capacities to participate in the international standard-setting arena. However, the need for concrete assistance to industries and national agencies, to, respectively, comply with and verify compliance with Sanitary and Phytosanitary (SPS) requirements led to a shift in technical assistance and investment.

A significant part of donor assistance has been targeted at the organizational level—to create awareness and enhance staff and overall institutional capacities of government agencies, food inspectorates, food control laboratories, and so forth. In SSA, the European Union (EU) and the United States have been the main bilateral donors supporting initiatives at this level.³⁴ Among multilateral agencies, FAO and the United Nations Industrial Development Organization (UNIDO) have been heavily involved in supporting activities at the organizational and system level by strengthening national food control systems, enhancing laboratory and analysis capacities, and improving the ability of member countries to comply with new trade regulations. Support for compliance

with SPS requirements within a regional context is expected to grow in SSA as a result of growing donor emphasis on regional integration and the EU bilateral agreements. For example, processes of harmonization of standards are under way in the Common Market for Eastern and Southern Africa (COMESA) region (e.g., dairy and maize)—supported by USAID through its Regional Agriculture and Trade Expansion (RATES) program, as well as by several other donors.

In terms of the content of the assistance, clearly the emphasis has been on “soft” infrastructure development. For example, during the period 2001–06, SPS-related development assistance in East Africa focused on addressing gaps in legal frameworks, technical skills for inspection, diagnosis, and surveillance for food safety, and plant and animal health. Soft infrastructure projects accounted for 90 percent or more of the total number of projects in the period ([Brattiga 2007](#)). In the case of USAID, a large proportion of its SPS capacity-building activities—tied to efforts to implement the African Growth and Opportunity Act (AGOA)—have likewise been for “soft” infrastructure. UNIDO, with funds from European donors, has been one of the agencies supporting “hard” infrastructure. An example is the United Nations Industrial Development Organization (UNIDO)/European Union(EU)/Union Économique et Monétaire Ouest-Africaine (UEMOA) Program (€14 million, funded by the EU, 2001–05), which included a component to upgrade some 50 laboratories and implement a regional accreditation scheme. Activities implemented with support of SECO and the Norwegian Agency for Development Cooperation (NORAD) in East Africa have also had a strong component of “hard” infrastructure.

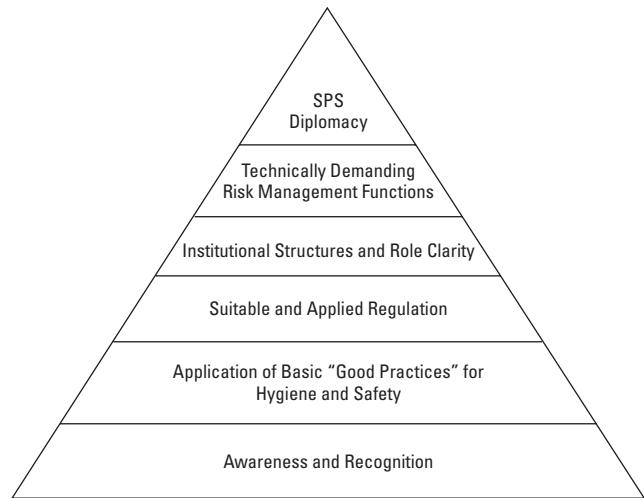
There is concern that the training and capacity-building activities to address SPS gaps in Africa have lacked an overarching strategic framework and have been implemented in a largely ad hoc and uncoordinated way. Some recent initiatives have sought a more structured and integrated approach. For example, the EU-supported “Strengthening Food Safety Systems through SPS Measures in ACP Member Countries” program, starting in 2007, has sought to raise stakeholder awareness, address identified system and institutional gaps, and support the strengthening of food safety inspection and conformity assessment systems. An interesting component relates to strengthening local capacity and expertise to provide training and advisory services in food safety and control systems, with an emphasis on services to small-scale producers, processors, and exporters. Similarly, the UNIDO program on “Industrial Upgrading for Trade Capacity Building for Regional Economic Communities (RECs)” is focusing on enterprise upgrading and service provision, along with the

³⁴ An inventory of the SPS-related assistance for the period (2001–06) carried out by Brattiga (2007) in Kenya, Tanzania, and Uganda, highlighted the importance of regional assistance, which was estimated to be considerably higher than the direct assistance provided to each country (US\$36 million vs. over US\$383 million on regional assistance). Of the total assistance at the regional level, the European Commission (EC) accounts for 74 percent. Taken together, the EC and its member states provided 97 percent of regional SPS-related assistance by value. For direct assistance to Kenya, Tanzania, and Uganda, the EC and its member states were also the most important assistance providers, accounting for 95 percent of all.

FIGURE 4.3: Hierarchy of Trade-Related SPS Management Functions

The foundation of any SPS management system is broad **awareness** among participating stakeholders about the relevance and importance of food safety and agricultural health to the competitiveness of their country, sector, or firm and recognition of their own role in this system. Another core set of building blocks that proceed from broad awareness is the application of basic and recognized risk and **quality management practices** at the farm and processing levels of supply chains, including good agricultural practices (GAP), good manufacturing practices (GMP), and the Hazard Analysis and Critical Control Points (HACCP) system and other management systems. Similarly, some agriculture and health risks are more systematic, thus requiring broader oversight or collective action, requiring basic research, **risk analysis surveillance systems**, and quarantine and emergency management systems and associated **scientific testing and verification systems**. Some of these functions need to be mandated by law in order to ensure that they are implemented appropriately. An effective **regulatory framework and transparent institutional structures** are therefore placed in the middle of the pyramid. At the top of the pyramid is so-called **SPS diplomacy**, which includes the international obligations of individual WTO members but also relates to engagement in the technical and political realm of official and private international standard setting and negotiations with bilateral trade partners and with regional integration partners.

Source: *World Bank 2005*.



strengthening of quality infrastructure and upgrading. Thus, while many of the activities in the SPS area have mainly been concerned with the creation of public capacities, an increasing area of engagement has been the support to awareness creation and implementation of food safety and quality assurance schemes among private actors, particularly in the context of SME and small farmers.

In a number of sectors, support for compliance with regulatory requirements in high-value export markets has featured a hybrid approach, combining support to enhance the institutional and supportive environment for compliance with supply-side interventions aimed at enhancing the capacities of firms and farmers to make necessary investments or undertake necessary adjustments in their production and management systems. Examples of SSA regional initiatives that have employed this hybrid support have included the EU sector-based programs targeting African Caribbean Pacific (ACP) fisheries and horticulture sectors—the Safe Fishery Program (SFP) and the Pesticide Initiatives Programme (PIP)—and the DFID-funded Regional Standards Programme (RSP) for southern Africa (table 4.3). These programs have had a combined cost of nearly US\$100 million. With the con-

tinued evolution of the standards landscape, changes have been made over time in the foci of these programs.³⁵

Although the SFP, PIP, and the RSP initiatives have addressed capacities of both public and private actors, the emphasis given to each component has varied, reflecting the differences in the set of commercial and official requirements faced by different sectors. For example, in the case of the SFP, the national competent authorities are the key target

³⁵ For example, PIP was established in 2001 to address the challenges faced by the horticulture industry in ACP countries as a result of developments in EU pesticide regulations. The initial problem evolved because of enactment of new official requirements, including new regulations dealing with food safety and traceability issues, and most importantly perhaps—from the perspective of the project implementers—the increasing prominence of commercial standards, imposing stricter standards with significant additional costs to exporters and producers. As a result of these developments, the project’s approach shifted from an emphasis on national quality control systems toward supporting the compliance of individual firms, which was believed to better respond to the regulatory requirements (based on the concept of due diligence of the operators) and to commercial requirements for certifications (PIP 2008).

TABLE 4.3: Donor-Funded Programs Using Hybrid Approaches to Support Compliance with Regulatory Requirements

	TIME FRAME/ BUDGET	AUGMENTING/ENHANCING INDUSTRY EXTERNAL CAPACITIES (ENABLING FACTORS)		AUGMENTING/ENHANCING INDUSTRY/FIRM INTERNAL CAPACITIES	
SAFE FISH PROGRAM	2001–2007 (US\$58.3 million)	Setting/ Strengthening regulatory framework	Setting up of legislation, environment monitoring plan	Assistance to exporting companies	Training in international requirements, HACCP system, preparing a budget and conducting feasibility studies for the investments related to sanitary matters, etc.
		Strengthening inspection system	Inspection manual for fishery products, code of practice, provision of equipment for inspectors	Assistance to small-scale fishing	Support to professional organizations; equipment, infrastructure for small-scale fishing relevant to health conditions for fishery products, training, credit
		Strengthening testing capabilities	Assistance to analytical laboratories, provision of equipment and services, assistance to technical institutes		
PESTICIDE INITIATIVE PROGRAM	2001–2008 (€33.8 million)	Regulatory component	i) Preparation of the Crop Protocols and import tolerance applications, ii) Support harmonization of authorization procedures for phytosanitary products	Good Company Component	Establishing traceability, training/TA to support good agricultural practice/HACCP implementation, and pre-audits and certification with private standards
		Capacity-building component	Training to service providers, lab staff, professional associations, establishing of task forces, etc.		
		Information/Communication component	Communication tools to facilitate flow of information among SSA Industries and EU buyers, standards, settles, etc.		
COMMERCIAL- REGIONAL STANDARD PROGRAM	2006–2010 (US\$8.3 million)	The Low Income Pilot: Supporting SADC Governments to Better Service Stakeholders	Support countries to improve their environment for compliance with standards (training of public staff, labs, etc.)	The Private Standards Innovation Fund	Financial support to producer associations, firms, agencies, industry associations, to provide support to firms to achieve compliance with private standards
		Improving the participation in International Standard Setting Bodies	Advocacy		

Source: Compiled by the Authors.

of assistance, reflecting the critical role of such entities in meeting EU requirements for fish and fish products being exported to the community; in horticulture, the EU support through PIP has had a stronger focus on enterprise performance—nearly 50 percent of total support provided by the program went to enhance capacities of individual enterprises.

Private Voluntary Standards and Market Access

Private voluntary standards have been developed and promoted by businesses and not-for-profit nongovernmental organizations (NGOs), and by coalitions of both, with the objective of regulating supply or differentiating products (Liu 2009). In agri-food chains, initiatives aimed at providing high levels of assurance with respect to regulatory compliance have basically been led by private companies individually or collectively (e.g., GLOBALG.A.P standard; Tesco Natural Choice), while NGOs had traditionally been the leading actors

in the promotion of sustainable or ethical business practices. At present, however, the commercial scenario is marked by a wide set of ethical and sustainability initiatives that seek to meet different or similar sets of social and environmental criteria set by NGOs and increasingly also by private businesses and companies.

Some donors have incorporated work on private voluntary standards, especially those addressing social and environmental concerns, as a core line of activity and as part of their strategy to promote sustainable development. Examples of some of the most prominent stand-alone initiatives in the support of compliance with private voluntary initiatives undertaken by donors in SSA are highlighted in table 4.4.

The foci of development efforts in this field have been quite diverse. For example, for German Cooperation, the promotion of voluntary social and ecological standards has been seen as a key instrument for the implementation of

TABLE 4.4: Recent SSA Stand-Alone Initiatives Related to Private Voluntary Standards or Labels

DEVELOPMENT AGENCY	PROGRAM/PROJECT	PRODUCTS
DFID-Regional/Sub-regional	Regional Standards Program	Several high-value chains
	Retail Challenge Funds	Several high-value chains
	Ethical Trading Initiative	Several high-value chains
GTZ	Programme on Social and Ecological Standards	Several high-value chains
EU	Pesticide Initiative Programme	Horticulture
UNCTAD/UNEP	International Task Force on Harmonization and Equivalence in Organic Agriculture	Several high-value chains
UNCTAD/FAO	Consultative Task Force on Environmental Requirements and Market Access for Developing Countries	Several high-value chains
UNEP	African Ecolabelling Mechanism	Several high-value chains
SIDA	Export Promotion of Organic Products from Africa-EPOPA	Several high-value chains
USAID- Regional	Alliance between USAID-Rainforest Alliance	Nontraditional commodities (coffee, cocoa)
	East African Fine Coffees Alliance	Coffee
	Sustainable Tree Crops Alliance	Coffee, cocoa, cashews
	Sustainable Forest Products Global Alliance	Forest (non agri-food)
USAID-Country-specific	Starbucks Alliance-Supply Chain Access for Farmers in Rwanda	Coffee
	Developing the Organic Cotton Industry in Uganda	Cotton (non agri-food)
	Cocoa Sustainability Alliance	Cocoa
SECO- In Country	Export Development of Specialty Coffee and Cashew Nuts (Mozambique)	Coffee, cashew nuts
DFID-In Country	Business Market Service Development Programme (Kenya)	Horticulture compliance with GLOBALG.A.P/Dairy quality improvements

GTZ: Deutsche Gesellschaft für Technische Zusammenarbeit (Currently Known as GIZ); UNCTAD: United Nations Conference on Trade & Development.

Source: Compiled by the Authors.

international agreements on human rights, environment, and sustainability. The agency has been implementing, for nearly a decade, a social and ecological standards program and has been championing initiatives aimed at mainstreaming social and environmental compliance along developing country value chains through multistakeholder initiatives and public-private partnerships.

DFID has been promoting social compliance through the Ethical Trading Initiative (ETI)³⁶ and has used its challenge funds as a key instrument to support compliance. Other development organizations have engaged in this field, with a focus on expanding opportunities in organic and other differentiated markets. SIDA, the United Nations Conference on Trade & Development/International Trade Center (UNCTAD/ITC), the Humanistic Institute for Development Cooperation (HIVOS), UNEP, and FAO have been strong supporters of organic production and have played a critical role in promoting

dialogue and consensus building around private voluntary standard initiatives. USAID has been particularly engaged in the promotion of sustainability schemes in tree crops (coffee, cocoa, tea) and other commodities through the Global Alliance mechanism as well as through bilateral projects. For many other development agencies, activities focusing on compliance with private standards are included in their broader portfolio of interventions related to the agri-food sector.

DEVELOPMENT PROGRAM INTERVENTIONS FOCUSED ON FACILITATING SMALLHOLDER COMPLIANCE WITH STANDARDS

A growing subset of initiatives has explicitly focused on facilitating (and certifying) African smallholder compliance with food safety, environmental, or other standards, thereby increasing their “inclusion” in some standards-based markets and preventing their “exclusion” from others. Here, we highlight some of the main domains of action, characterize the approaches being used, and highlight some lessons that have been emerging from this work.

³⁶ ETI was launched in 1998 seeking to identify and promote good practice in the implementation of International Labor Organization (ILO) core labor standards.

Preventing “Exclusion”: The Case of GLOBALG.A.P

In 2000, GLOBALG.A.P³⁷ conducted the first trials with a fresh fruit and vegetable (F&V) protocol (being developed since 1997), and in 2001 the first International Standardization Organization (ISO) 65 accreditation for the F&V standard took place.³⁸ By February 2009, GLOBALG.A.P reported that there were 94,000 certified producers worldwide.³⁹ In SSA, by April 2007, according to data reported by UNCTAD, there were 2,871 producers or producer groups holding the certification, of which 68 percent were located in South Africa and 26 percent in Kenya.

At the time of its introduction, GLOBALG.A.P was seen by many as a top-down approach, with little consideration of developing country perspectives. It was therefore perceived to be difficult to implement locally, inflexible, and often extremely costly (Busch and Sterns 2002). In contrast with other sustainable standard initiatives that promote a market opportunity, the adoption of GLOBALG.A.P among SSA horticulture export industries was encouraged out of concern about “exclusion” from higher-end markets, as deadlines for implementation of the protocol were set up by major retailers in Europe. The possibility of exclusion was linked to entire industries and, more specifically, to one set of stakeholders—smallholder farmers. Various approaches have been taken to facilitate industry or smallholder compliance with GLOBALG.A.P. These are highlighted below.

National Good Agricultural Practice (GAP) Programs

Since the late 1990s, export-oriented horticultural industries throughout the developing world have, in either a proactive or reactive mode, sought to align prevailing practices with the requirements of their overseas clients by establishing and implementing distinct industry protocols. The Liaison Committee Europe-Africa-Caribbean-Pacific (COLEACP) worked with several industry groups to develop (by 2000) a Harmonized Framework for Horticultural Exporters, laying out a set of minimum requirements that could be applied at a

national/industry level and, conceivably, be certified through annual audits. The Harmonized Framework was not intended to involve certification against any specific labeling scheme.

In 2001, COLEACP was charged by the EU with the implementation of its Pesticide Initiatives Programme (PIP). The organization’s initial approach to implementation of the program followed a national focus, based on the establishment of a national quality control system, supported by national task forces—the task forces were expected to play an intermediation role between the PIP and the program beneficiaries. Soon after the start of the program, there was a shift in approach, from an emphasis on national institutional capacity building to a focus on individual enterprise compliance. Under the new approach the role of the task forces was to serve as platforms for consensus building between public and private actors. Several of such national task forces were formed in Africa. For example, UNCTAD and FAO have worked with task forces to support national GAP programs as part of a stepwise strategy to yield continuous industry improvements. Experiences of national GAP schemes benchmarked to GLOBALG.A.P in other countries (ChileGAP, MexicoGAP, ChinaGAP, etc.) have provided the basis for exploring the potential opportunities of national GAP schemes in supporting compliance with market requirements while achieving public domestic objectives. In Africa, however, Kenya is presently the only country in which a national GAP program has gained any traction. Despite much consultation and dialogue, incipient efforts to create and promote SeneGAP, GhanaGAP, and UgandaGAP have had little tangible impact.

Negotiating with GLOBALG.A.P

Over the years, GLOBALG.A.P requirements have continued to evolve, shifting from a “protocol” structure—having a list of specific control points and compliance criteria—toward becoming a broader quality management system. More recently, attention has shifted from compliance for individual crops (or livestock products) to the implementation of a more integrated agriculture assurance system. This process has raised the complexity of compliance and certification to the standard. The basic driving forces behind the evolution of GLOBALG.A.P have largely come from concerns about practices in developed country agriculture. The applicability, or otherwise, of the evolving standard for developing country agriculture—and specifically smallholder agriculture—has been a tangential topic for GLOBALG.A.P, yet one increasingly raised by development agencies.

Recognizing the growing importance of the GLOBALG.A.P standard, some development agencies have sought to supplement the evolving developing country representation

³⁷ GLOBALG.A.P was formerly known as EurepGAP.

³⁸ The EurepGAP F&V standard was developed by the EurepGAP Technical Committee—Fruits and Vegetables, consisting of six retailers and five suppliers (from the EU and United States). A critical element of the response to the challenge of compliance by the affected industries was to enhance their participation in the standard-setting process; a Chilean representative from the industry joined the EurepGAP FV Technical Committee in 2004, and Kenya did so in 2005. In 2007 the Technical Committees were renamed as Sector Committees.

³⁹ In February 2010, GLOBALG.A.P reported that the number reaches almost 100,000 producers in 100 countries (GLOBALG.A.P website).

in GLOBALG.A.P internal discussions with additional inputs into the standard-setting and implementing deliberations. For example, DFID and the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) have been supporting the “GLOBALG.A.P Smallholder Diplomacy” by setting an Ambassador and Observer for Africa at GLOBALG.A.P since 2007, as a way to provide more opportunities for smallholder representation in the standard-setting process. Other activities supported by the agencies under the “Smallholder GLOBALG.A.P Support Project in Developing Countries” include the establishment of the Smallholder Task Force aimed at incorporating different stakeholder views and concerns related to GLOBALG.A.P implementation in smallholder agriculture worldwide and to consider options for the next revision of the standard in 2011.⁴⁰

Development agencies’ engagement at the level of the so-called “GLOBALG.A.P Smallholder Diplomacy” has been the result of the learning that has taken place in the field, quite often highlighting the need to reduce costs of certification resulting from both lack of affordable service provision and, particularly, from the inflexible requirements of the standard when applied to smallholder horticulture. Clearly, in most recent years GLOBALG.A.P has highlighted its commitment to understanding the differences in smallholder agriculture and in reflecting these understandings in the interpretation and application of the standard. This recognition is certainly a significant contribution of development efforts in this field.⁴¹

Embedded Services through Outgrower Schemes

Recognizing the key role played by leading exporters in integrating smallholders into horticulture export chains, some development efforts have concentrated on establishing

⁴⁰ Early in 2008, the Smallholder Task Force opened a call for proposals to improve certification for smallholders, and the set of suggestions were presented as discussed at the GLOBALG.A.P annual conference in October 2008. Critical issues arising from the early discussions included the importance of reaching a consensus on the definition of the term smallholder based perhaps on the managerial structure of the farm rather than on average farm size, and also the importance of identifying solutions that reflect both the needs of smallholders and legitimate concerns with the credibility of certification of farmers in groups (i.e., option 2 under the GLOBALG.A.P scheme) (GTZ et al. 2008).

⁴¹ Donors have also contributed to improving the contents of the GLOBALG.A.P standard from the perspective of social criteria. GTZ in collaboration with FoodPlus and Swiss partners implemented the Good, Risk-Based Agricultural Social Practice (GRASP) project, with two objectives: enhancing social compliance criteria in the GLOBALG.A.P—Integrated Farm Assurance Scheme and developing basic criteria of good social practice as the International Labor Organization (ILO) Core Labour Standards at farm level.

partnerships with lead firms who are engaged with smallholders through outgrower schemes or contractual relations. Thus, support has been provided either through grants or technical assistance to support the certification (and associated field upgrades) of smallholder groups. Examples of programs or projects applying this approach include the COLEACP’s Pesticides Initiative Programme, investments by Deutsche Investitions (DEG) in Kenya, the USAID Kenya Horticultural Development Project (KHD), and the efforts of several other donors elsewhere.

Grants and technical support have been provided to defray costs of training and other upgrades required, as well as certification costs. In the case of PIP, for example, the program mainly supported firms with the costs of technical assistance and training, as well as the establishment of a traceability system. The upgrade of physical infrastructure and other type of investments required were not part of the assistance provided by the program. Other development partners provided a more integrated package of services, including support to investments in on-farm standard-related infrastructure.

In the case of PIP, support to smallholder producers was mainly indirect and channeled via the exporting companies. Export company staff were trained, and they, in turn, were supposed to train crop suppliers, including smallholders. A set of companies were assisted specifically to support their outgrowers in the achievement of certification GLOBALG.A.P option 2. By April 2008, there were about 1,312 farmers under certification option 2, with the help of the PIP program. The number of producers estimated by the program that were certified under option 2 was 5,016—this is for the companies that obtained certification for part of their own production with the help of the program but that later extended support to their outgrowers (either alone or with support of other donors). It is difficult, however, to estimate the number of smallholders that were reached through training and assistance provided by the exporting companies, as records of these activities were not kept or monitored.

Other programs concentrated on supporting partnership programs, with the specific target of reaching smallholders through group certification. For example, in Kenya, German-DEG established a partnership with a Kenyan company that was initially working with the USAID-Kenya Business Service Development Project (KBSDP) in developing an outgrower scheme for avocado through the provision of spraying services. This experience did not succeed. In the case of French beans, the company was more successful in promoting upgrades for the achievement of GLOBALG.A.P certification.

The donor provided support for risk assessment, training of farmers and farm staff, soil and water analysis, facility development, pre-audit costs, certification costs, and the training of trainers. The company's contributions mainly targeted farmer group development and also training.

While PIP and several other programs were implemented in multiple countries, the efficacy of impact, at least in terms of GLOBALG.A.P certification, has been concentrated in only a few countries. For example, in April 2007, of the 730 producer groups certified under GLOBALG.A.P option 2, 80 percent were located in Kenya, 13 percent in South Africa, and 5 percent in Côte d'Ivoire. In several other industries—for example, those of Uganda, Ghana, and Senegal—much of the horticultural trade has been oriented toward either specialty ethnic markets and products or other segments in the European market for which certification under GLOBALG.A.P has not been required by buyers or the production is concentrated on large producers, which are certified under option 1 (see [chapter 7](#)).

Embedded Services for GLOBALG.A.P Compliance through Intermediary Organizations

An alternative approach to reaching smallholders via "lead" firm extension and procurement systems has been to strengthen the capacities and roles of selected intermediary brokers or service providers to support production upgrades and market links by smallholder farmers. For example, in Kenya, the Business Service Market Development Program (BSMDP) funded by DFID was formulated with a clear focus on service provision. In horticulture the approach was the development of GLOBALG.A.P-related services.⁴² In the view of the project implementers, the availability of services to industry stakeholders, including smallholders, would improve the enabling environment for compliance. Enhancing the capacities of an industry association, facilitating access to information through radio and other media, and strengthening training services and local certification capacity were

key areas promoted by the program. In the case of smallholders, the efforts concentrated on the support for the establishment and strengthening of Product marketing organizations (PMOs),⁴³ with several of the PMOs supported by the program, working around a single commodity—generally French beans or avocados. The roles expected to be played by these PMOs were basically market link and provision of services (including technical services, inputs and training, and support for certification) for which a fee (or commission) would be charged to the producers or the buyer. The project facilitated the development of PMOs by providing grants for developing training materials, training PMO staff, and generally enhancing their capacities to link producers to exporters.

Overall, the experiences in business service development, either through PMOs or market link firms,⁴⁴ have proven to be difficult. For the initiatives that have shown better results, sustainability and contract compliance have been serious issues. As the experience of one PMO, FreshLink, illustrates (see [box 4.4](#)), many challenges are faced in maintaining the loyalties of both farmer groups and exporters and in sustaining operations beyond the period of donor support.

Reducing the Costs of Certification

The costs of certification have been considered a persistent constraint on the recognition of smallholder compliance with GLOBALG.A.P. In Kenya and Ghana, one approach taken was the elaboration of a generic quality management system (QMS)—developed by GTZ/FoodPlus⁴⁵—with applications then made in the mango, pineapple, Asian vegetable, and other subsectors. The Kenyan experience is summarized in [box 4.5](#). In Ghana, the basic material was adapted to the conditions of small producers in pineapple and was used in the implementation of a pilot project for GLOBALG.A.P certification. As discussed in [chapter 7](#), the quest for smallholder GLOBALG.A.P certification in Ghana has been overtaken by a different, more difficult challenge. In some countries, donors have explored the scope for reducing smallholder certification costs by applying GLOBALG.A.P option 1 to established

⁴² In dairy the program also adopted an approach to implementation based on business service development (BSD).

⁴³ PMO (Product Marketing Organization or Produce Marketing Organization—as referred by [Humphrey, 2009](#)) is a commercial service provider that focuses on helping producers to intermediate the sale of their product to an exporter or other major consumer by guaranteeing the quality of their product to the buyer. The PMO generally assists the producers to increase the quality of their product, as well as to help the producers get a better price from the buyer. While never actually taking ownership of the product, the PMO receives payment in the form of commission from either the producers or the buyers ([Grant 2008](#)).

⁴⁴ Service provision through "producer marketing links" was the approach tested by two USAID-funded interventions in Kenya: the Kenya Business Service Development Project (KBSDP, 2003–08) and the Kenya Horticultural Development Project (KHDP, 2003–08). From the perspective of service provision, there was a perception of a limited supply and a nascent demand for services in this sector (tree fruits).

⁴⁵ FoodPlus acts as the Secretariat for GLOBALG.A.P. GTZ and the FoodPlus collaborated in the elaboration of a manual providing guidance on the establishment of QMSs. The manual was piloted in five countries.

BOX 4.4: Working through PMOs to Supply Certified French Beans—Opportunities and Limitations

FreshLink VMO (FVMO) Ltd's main activity, since its establishment in the late 1980s, was the provision of extension services and the marketing of farmers' output at an agreed fee per kilogram sold, through a relatively very loose agreement with an exporter (broker relation). As a result of the increasing demands for GLOBALG.A.P compliance, the intermediary organization decided to adjust its practices (at the company and farmer levels) to support compliance with the standard. With donor support, a project was established aimed at developing and implementing a business approach—an area-based service provision model—to facilitate smallholder compliance with the GLOBALG.A.P standard. This model involved more intensive oversight of production practices than would be possible by many (especially smaller) exporters. Therefore, FreshLink embarked on a mobilization campaign to formalize farmer groups in April 2004. The donor provided support (of about €100,000) to establish a centralized quality management system (QMS) to provide credit for building collective centers and shades and to develop FVMO's capacities for provision of required services to farmers, including market sourcing, establishing contracts with exporters, supporting farmer group formation and organization, communicating market requirement and information to farmers, arranging farm input supply at lower costs, and providing extension and spraying services.

The service provider worked with nine farmer groups, six of which became GLOBALG.A.P-certified in 2006 (with 182 farmers), thus having a multiplier effect, with over 300 farmers subsequently joining the groups linked to FreshLink. The service provider managed to establish contact with three leading exporters, and the experience was slowly making its way to be recognized as an additional model that could successfully integrate smallholder producers to exporters within the context of GLOBALG.A.P requirements. Under the model, the intermediary organization establishes contracts with producer groups, yet the relation with exporters was flexible—no contractual relationships established. Similarly, FVMO did not take ownership of the product.

This type of relatively loose relationship is seen by some as the main cause of the drawback experienced by the service provider in 2007. In that year, drought and floods disrupted vegetable operations, with the efforts undertaken by FVMO losing momentum and suffering

setbacks (Grant 2008). Kyengo (2008) reported that "drought and bad weather made contractual farming arrangements untenable. Virtually, all exporters turned to purchasing product by cash. . . . the prices offered under the contract could not match those being offered by 'other exporters,' making contractual farming arrangement impossible with most inputs already advanced failing to be repaid. It also became impossible to follow the quality management systems laid down by the procedures." This situation highlighted the weakness of the model, as it is subject to transaction and financial risks (Humphrey 2008): individual farmers were able to sell to various exporters, while the exporters were not tied specifically to the groups and therefore their commitment was very much depending of the supply-demand conditions. Similarly, the success of the model is very much dependent on the capacities of the service provider to monitor and control farmer groups and the capacity of the groups to exercise control over their members.

Thus, weak commercial contracts, the failure to recognize effective management through price incentives, and low growth of market size were seen by the FVMO management team as the main challenges faced by the service provider (Waweru 2007). Similarly, the buyer bias created by the standard has also contributed to weak contractual arrangements—buyers flock the scheme during periods of product shortage since some form of product quality and safety is assumed by the presence of the GLOBALG.A.P certificate.

According to the evaluation of the BSMDP undertaken in 2008, it is difficult to know how long it would take the market actors to recover from the problems encountered in 2007 and whether the gains made during the program would be recaptured. Some observers suggested that donor support was cut prematurely and that the model was not properly tested. An independent impact assessment of the FVMO experience was undertaken in 2008, providing some reflections on the type of issues that limited FVMO success: (a) "islands" of certified farmers among thousands of noncertified farmers make the efforts of the service providers an almost impossible mission; and (b) the aim should be to improve practices, product quality, and relations rather than focusing on compliance to a specific standard.

Source: Ouma (2007). GTZ et al (2008).

BOX 4.5: Reducing the Costs of Certification for Small-Scale Producers

GLOBALG.A.P option 1 for small producers: is it feasible?

NAK AGRO was a three-year project funded by the Netherland government. It started in March 2005 with a budget of €0.9 million. NAK AGRO was motivated by the need to introduce a cost-effective model for certification of smallholder farmers given the complexities associated with GLOBALG.A.P certification option 2. In Kenya, the project worked with three exporters and supported nine farmer groups, with a total of 582 farmers trained, audited, and GLOBALG.A.P-certified between August 2005 and May 2007. In Senegal, the company worked with one self-help group comprising about 200 smallholders. Apart from paying the training, audit, and certification costs, the project also paid for infrastructure costs on the basis of farmers' needs. The infrastructure paid for under the NAK AGRO project included personal protective equipment (overcoat, gloves, mask, and goggles), grading shed, pesticide storage unit, and fertilizer storage unit.

NAK AGRO developed an approach whereby the entire self-help group is registered as a farm. Thus, the need for a QMS is omitted and all members of the self-help group are stakeholders rather than individual farmers. However, for these farmers to be considered as a single farm, the whole unit has to be under a centralized management;

in addition, legal ownership of the product has to be held by the central management unit. The specifications of option 1 were seen as a gain in scope for maneuvering for smallholder producers regarding certification options (GTZ et al. 2008). However, the approach was not further pursued due to concerns about integrity issues.

Elaboration of a generic QMS for smallholder certification option 2

GTZ/Public Private Partnerships (PPP) and BSMDP joined efforts to pilot a generic QMS manual that GTZ had prepared in collaboration with FoodPlus, with the main objective of reducing the costs of certification and enabling standard training packages to be developed for field staff of exporters and for the groups themselves. Stakeholders were nine farmer groups in four districts in Kenya (a cooperative society, three self-help groups, and four groups working with a PMO). At the end of the project six of the groups achieved certification. Although the farmers' groups were certified, the lack of strong involvement of the exporters resulted in lack of ownership of the QMS among participating exporters since all of them had already developed their own QMS (Ouma 2007).

Source: Grant (2008). Kyengo (2008). Waweru (2007). Humphrey (2008).

outgrower schemes. Early experiences by NAK AGRO in Senegal and Kenya showed some promising results.⁴⁶

Efficacy of These Programs

After several years of experimentation, development agencies have come to realize that, although their efforts to facilitate inclusion of smallholders in higher-value horticulture export chains through bottom-up, top-down, and intermediary models have facilitated compliance for a nontrivial number of small-scale producers, the number of direct beneficiaries has still been small in relation to the much larger number of African smallholders engaged in horticultural crop production. *There is a palpable sense of frustration within the development community regarding the impacts achieved and the sustainability of these gains in an ever-changing commercial environment.*

Bottom-up approaches (producer models) have sometimes lacked attention to sustained buyer relationships, thereby (further) exposing farmers who make certain upgrades to continued market risks. Various training materials and guidelines have proven useful for numerous farmer groups, yet the revision of these materials and their reinforcement by buyers have often waned at the closure of projects. Some producer groups can, in fact, be well prepared for GLOBALG.A.P certification, but this is not an end in itself, especially where these groups are not well aligned with competitive exporters. And how sustainable is this approach in the face of recurrent costs—both for certification and for maintaining improved farmer group systems and infrastructure? A critical lesson learned has been the need to identify the “readiness” of a group to move toward certification. Weak group cohesion is a key determinant of the future sustainability of the efforts undertaken. Building strong links between farmers around common needs and opportunities takes time and requires significant development efforts. Yet many projects simply don't have an extended period of time.

⁴⁶ However, this approach was not further pursued by GlobalG.A.P due to concerns about integrity issues.

Top-down approaches, using lead firms as the entry point to integrate smallholders, have been seen by several development organizations as more promising—at least in terms of obtaining relatively quick and effective implementation of GLOBALG.A.P. Yet issues of smallholder dependence on the exporter (who generally owns the certification) arise, putting at risk the certification if the relationship between the exporter and the group ends. Additionally, an approach based on the capacities of firms to serve as integrators has also shown its limitations. In Uganda, for example, the experience of the PIP program demonstrated the limitation of the approach in industries composed largely of small exporting companies facing multiple constraints, including shortages of staff and lack of specialization in supply-chain functions.⁴⁷ *Intermediary models*, on the other hand, seem to face persistent sustainability challenges, particularly in environments characterized by poor trust and unreliable buyer-seller transactions.

Despite the mixed experiences, there exists a generalized perception about the positive outcomes of GLOBALG.A.P adoption,⁴⁸ with the associated “costs”—particularly the costs of certification and recurrent costs associated with maintaining certification—as the main barrier for smallholder integration. In this regard, some have pointed out that one of the most valuable contributions of development assistance in this field has been to demonstrate that compliance with GLOBALG.A.P is not a technical issue, but rather an economic one. The experiences have proven that smallholders, in spite of the difficulties faced in relation to some technical aspects of the standard, have been able to overcome these aspects to achieve and demonstrate compliance through certification. The main bottleneck remains the capacity of smallholders to overcome the costs associated with upgrading operations and particularly maintaining certification in a sustained manner.⁴⁹

Efforts to understand the implications of GLOBALG.A.P on smallholder exclusion from markets have also been made, yet with little consensus achieved among development practitioners. Some authors argue that in spite of the increasing

development assistance, the number of smallholders certified (and later recertified) remains small, while others have presumably been “excluded” from the market (IIED and NRI 2008). In fact, certification numbers may be a very poor indicator of what is happening, as large numbers of smallholders remain participating in export-oriented supply chains, despite either never being certified or their group not getting recertified. GLOBALG.A.P supermarket chains seem to realize that “certification isn’t everything” and that the strength and integrity of the underlying risk management measures used by their suppliers are more important. Where there is high confidence in these measures—and where they are periodically “tested” through buyer requests for this or that documented evidence—the absence of up-to-date certifications does not seem to be a barrier. Empirical confirmation of smallholder “exclusion” due to unmet GLOBALG.A.P requirements would require both historical or baseline information and an ability to separate out other contributing factors to smallholder participation or lack thereof. Research carried out under this study highlights very complex patterns, with relatively high rates of smallholder entry, exit, expansion, and contraction of export-oriented horticultural production during the era of GLOBALG.A.P.

While the numbers of “excluded” producers may go up or down with each new academic study, the development community seems to have moved on, recognizing that the scope for sustainable smallholder participation in certain markets relates to many factors, and also recognizing that there is little prospect for large numbers of African smallholders to participate in GLOBALG.A.P-certified markets. These realizations have led to several shifts in the direction and emphases of development assistance in this area. One is from a strong emphasis on supply-side constraints (working at the firm or farmer level) toward more emphasis on standards-related enabling factors (e.g., providing generic training and training materials, improving associated services to reduce costs and improve outreach, enhancing policy frameworks, etc.). A second shift is in devoting more attention to standards-based markets that appear to be more accommodating and suitable for smallholder farmers—thus fulfilling a vision of large numbers of African smallholders actually benefiting from improved standards. These latter initiatives are discussed below.

⁴⁷ The approach applied by the PIP program in SSA implied the training of company staff on the assumption that trained staff would later train the smallholders supplying product to the company. Yet, even in industries with the presence of strong lead firms, it is difficult to know how many smallholders were reached through the training provided by lead firms, as this indicator was not part of the direct activities undertaken by the program.

⁴⁸ Perceived benefits include improved health benefits from reduced use of pesticides and greater awareness of production costs and farm profitability.

⁴⁹ Efforts to quantify the “size” of the costs and benefits of GLOBALG.A.P adoption in the context of smallholders have been undermined by lack of methodological consensus, as well as the fact that the costs are very much influenced by the product, the starting point of the firm or farmer, and the prevailing set of support services.

PRIVATE VOLUNTARY STANDARDS AS AN OPPORTUNITY FOR SUSTAINABILITY AND POVERTY REDUCTION

The set of private sustainability standards in agricultural sectors is increasing, driven by pressures for corporate social responsibility and branding strategies, international agreements to pursue sustainable development, and the demands of civil society. Sustainability initiatives comprise, for example, Fair Trade (FT); certifications targeting consumers' awareness of sustainability issues (e.g., Rainforest Alliance [RA], UTZ Certified); industry-wise baseline sustainability standards and initiatives (e.g., Code for the Coffee Community, Commodity Round Tables—the Ethical Tea Partnership, Better Sugarcane Initiative Ltd., Cotton Made in Africa CmiA); global initiatives (e.g., Global Water Roundtable); and specific company labeling schemes supporting sustainability claims. Some of the approaches to support the differentiation of products through sustainability initiatives, in the context of smallholder producers, are discussed below.

Fair Trade: Using Consumer Demands to Restructure Global Trading Relationships

Within the range of sustainability initiatives, FT⁵⁰ has been developed with a specific poverty focus and has emerged as a market-based approach to smallholder development that attempts to use consumer demand as an incentive to restructure global trading relationships, with several donors recognizing FT as a tool for poverty reduction and sustainable development. Development assistance has contributed to the achievements of the FT movement, particularly by supporting the work of national FT organizations aimed at increasing local demand, introducing new FT products, and overall, enhancing the market share of FT products in

national markets. Consumer campaigns and public procurement policies have been critical in the increasing demands for FT products, particularly in Europe.⁵¹

Much of donor support to SSA smallholder participation in FT markets has been done through strengthening the work of the FT organizations, and generally on a demand-driven basis. Examples are the DFID's support for the work led by the FT company Twin Trading on cocoa in Ghana and nuts in Malawi and Mozambique—initiatives that led to the creation of the Day Chocolate Company in 1999 and the nut FT company Liberation Foods CIC in 2007. The IFAD "Smallholders Cash and Export Crops Development Project" (2003–11) in Rwanda supports nearly 28,000 producers to participate in FT coffee and tea markets; and the work of FAO in West Africa supports FT and organic-certified mango. DFID has also channeled support to private-led FT initiatives through the Business Links Challenge Fund (BLCF), and more recently through the Retail Industry Challenge Fund and the Private Standards Innovation Fund (under the Regional Standard Programme).

There have been, however, concerns about FT as a sustainable strategy for poverty reduction, with critics questioning the lack of price-competitiveness, the long-term effects of this type of approach on investments and productivity, the efficiency of FT channels, and the real benefits to small-scale farmers derived from the price premium—although few evaluations in this regard have been carried out ([World Bank 2007a](#)). Others argue that FT has a very limited market, as highlighted by the low capability of the market channels to accept the full production of their members. Arguments in favor of FT, on the other hand, highlight the tremendous growth in FT sales in recent years, with the main constraint to the expansion of FT being the limited capacity of the FT movement to scale up activities to meet growing demand and engage larger numbers of small-scale disadvantaged producers.

Some critics contend that although development assistance has provided funding for specific FT projects and initiatives, overall this support has been *ad hoc* and has lacked a long-term strategy, particularly for engaging the private sector. There have been questions about the numbers of smallholder farmers actually reached through these initiatives and whether the gains are reaching poorer farmers ([International Development Committee 2006](#)).⁵² Bananas

⁵⁰ "Fair trade is a trading partnership, based on dialogue, transparency and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers, especially in the South. Fair trade organizations (backed by consumers) are engaged actively in supporting producers, awareness raising and in campaigning for changes in the rules and practice of international trade." While *Fair Trade* focuses on the trading terms for producers, the emphasis of *Ethical Trade* is on the conditions of production.

⁵¹ Examples of EU bilateral support to the FT movement are a grant for €3.8 million from the French Ministry of Foreign Affairs in 2001 to support FT activities and €3.3 million provided by the German government in 2003 to support a marketing campaign. In the case of the EU, between 2007 and 2008, €19.466 million were allocated for various NGO-implemented and -cofinanced actions on FT and other sustainable trade-related activities. The majority of these actions were in the field of awareness rising within the EU ([European Commission 2009](#)).

⁵² Recommendations of the International Development Committee to the U.K. government in 2007 highlighted the need to include a pro-poor focus in future government funding for FT.

and sugar account for a significant share of FT product sales, the exports of which involve few smallholder farmers in Africa. According to Fair Labelling Organizations International (FLO), in 2008, there were 746 certified FT producer groups worldwide. In Africa, the number of certified FT groups increased from 42 in 2002 to 184 in 2007—yet 25 percent were located in South Africa and 19 percent in Kenya. There are very few certified producers in the poorest SSA countries.

Recent developments seem to suggest a higher commitment of some development partners in support of FT, yet with a clear *pro-poor focus*.⁵³ Additionally, the recent interest of some major retailers to use FT as a branding strategy for some product lines has opened opportunities for expansion of FT, and perhaps for stronger collaboration between leading private-sector players and development assistance partners. Still, FT commodity initiatives are hardly a magic bullet for African agricultural trade and rural development.

Organic Certification as a Strategy for Poverty Reduction

Within the set of “sustainability” certifications, organic certification has been sought by some donors as a key strategy to move forward the sustainability agenda while providing social, environmental, and economic benefits, trading opportunities, and opportunities for local development; most recently it is also seen as a mechanism to address climate change concerns. Organic agriculture and FT increasingly overlap with one another—organic agriculture certification programs are beginning to incorporate social criteria, while FT programs are placing stronger emphasis on the environment. According to the latest statistics on organic agriculture, 35 million hectares of agricultural land are certified according

⁵³ DFID’s White Paper, published in 2009, highlights that “fair and ethical trade is a powerful way to boost business standards, to ensure working conditions are decent [and] producers and workers are paid a fair price for their products and to allow millions of individual consumers in the UK and worldwide to make a daily contribution to development.” Through the White Paper, the U.K. government also commits to supporting FT through public procurement (DFID 2009). In February 2008, DFID committed a £1.2 million grant over two years to support the strategic development of FT through the international Fair Trade Labelling Organization (FTFO 2008); in October 2009, the U.K. government announced the expansion of this support to £12 million over a four-year period in order to scale up its work supporting farmers in developing countries to access better terms of trade in global markets (FTFO 2009). Other partners supporting the engagement of smallholders in FT markers included the Swiss State Secretariat for Economic Affairs (SECO), the U.K. Inter-Church Organization for Development Cooperation (ICCO) and Irish Aid, and Hivos.

to organic standards (data as at the end of 2008), involving about 1.4 million producers (IFOAM and FiBL 2010).

In SSA, development partners have been supporting organic initiatives since the late 1980s and early 1990s within the framework of individual company business strategies. International donor support has played a catalytic role in the consolidation of the sector, particularly in East Africa. Donors that have incorporated support to organic agriculture as a core activity include SIDA, UNCTAD, and UNEP. The work of UNCTAD/ITC and UNEP has focused on augmenting firm or farmer external resources (enabling environment), playing a critical advocacy role, supporting market expansion, fulfilling knowledge and information gaps, pushing for harmonization of standards, and creating platforms for consensus building and policy dialogue.⁵⁴ To illustrate, the development of a regional East African Organics Standard—EAOS (the first standard in the world developed in cooperation between voluntary organic movements and governmental national standards bodies) represents a significant achievement in terms of regional cooperation between several interested stakeholders.⁵⁵ UNCTAD and UNEP had advocated for the integrating of organic agriculture within national policy frameworks in East Africa, with several national initiatives in progress.⁵⁶

While these recent efforts have concentrated on building institutional capacities,⁵⁷ donors with a longer trajectory in support of organic agriculture in the region have applied a supply-side-oriented focus. SIDA engaged in support for organic agriculture in East Africa, since the mid-1990s, through the Export Promotion of Organic Products from Africa

⁵⁴ The International Task Force on Harmonization and Equivalence in Organic Agriculture and the UNCTAD-UNEP Capacity Building Task Force on Trade, Environment and Development (CBTF) are key instruments used by the agencies to provide support to organic agriculture, with a focus on East Africa.

⁵⁵ For the development of the regional standard, a Regional Standards Technical Working Group was established in 2005—as a multistakeholder public-private sector group charged with drafting the EAOS. The group was cochaired by IFOAM and the UNEP-UNCTAD CBTF and was supported with funds from the European Commission and the SIDA. The agencies have argued that this initiative has been able to influence national policy making in favor of organic agriculture in Tanzania, Uganda, Kenya, and Rwanda (UNCTAD 2009).

⁵⁶ For example, UNCTAD reported that Uganda was engaging in final consultations on its draft organic policy and Tanzania has developed a National Organic Agriculture Development Programme and mentioned organic agriculture for the first time in its overall agricultural policy. Both of these changes are very much in line with the recommendations in the Best Practices study coming from CBTF (UNCTAD 2009).

Program (EPOPA—1995–2008). The program was conceived as a Private Sector Development (PSD) intervention, with the lead firms or exporters as the entry point to capture the opportunities envisaged by organic agriculture. During the second phase of the project (2004–06), there was a shift in the project approach, from a supply-side intervention toward a hybrid approach encompassing both supply-chain support through lead firms and institutional capacity building. The latter was done through supporting the establishment of standard-related services, specifically local certification capacities, as a strategy to reduce costs and ensure the long-term viability of the sector. In spite of the change in the focus of the approach, the EPOPA program remained very much a supply-side intervention (66 percent of the total project budget supported export-led initiatives, and 23 percent institutional strengthening). Although the project implementation team considered that the use of lead firms to channel support was the most appropriate approach, given the early stages in the development of the industry, the program also reported some drawbacks of this approach.

The experience of the EPOPA program also highlights the kind of strategic decisions that development partners are confronted with: whether to support investments in sectors that will generate low-income gains for many or to direct support to those sectors that will provide substantially higher incomes for fewer beneficiaries. The initial approach of the program was to support commodities with scope to engage a large number of small-scale producers (coffee, cotton). Yet the program reports that while increases in income occurred, these increases were not sufficient to achieve significant poverty reduction outcomes. Therefore, in the second phase of the program, EPOPA extended its activities to cover other crops, particularly high-value crops, on which the gains from price premia were higher but had limitations in terms of outreach, with only hundreds (rather than thousands) of farmers able to benefit. A combination of systems was seen as an option to spread risks and certification costs, however, with the bottleneck being that building these systems takes time and needs significant external support.

⁵⁷ Other initiatives targeting institutional strengthening include Hivos and other NGO support for the consolidation of national organic movements in Kenya, Tanzania, and Uganda. In Uganda, contributions of Hivos have been crucial for the consolidation of the National Organic Agriculture Movement of Uganda (NOGAMU), established in 2001 through the initiative of a few companies as an umbrella organization to promote and coordinate organic agricultural development, networking, and marketing. Today members include private firms, processors, farmers, and NGOs promoting organic agriculture. Yet the organization still relies heavily on external support to carry out its activities.

Overall, in the SSA region, support for private-sector-led initiatives has played a critical role in scaling up organic agriculture and providing opportunities for smallholders. Estimates indicate that in Africa there are almost 100,000 farmers in third-party certification systems for organic production, almost all of them in group certification managed by an exporter (Rundgren 2007). UNCTAD (2008) has also highlighted that, for individual farmers or farmers' groups, the achievement of organic certification without external support is very unlikely.⁵⁸

Some donors and civil society organizations have been strong advocates of mainstreaming organic agriculture as a solution for poverty reduction, with the case of Uganda highlighted as a success story given the number of participating farmers there. Yet even that experience suggests caution about the scope for commercializing organic agriculture as well as the need for getting all the other "basics" right—as would apply in achieving competitiveness in conventional agriculture (see chapter 7 for more details). It would necessitate making the right choices and making the needed investments in research, advisory services, logistics, product quality, supply-chain management, risk management, and so forth. While there may be some quick gains available by pursuing "organics by default" (i.e., taking advantage of a situation where smallholders traditionally have used few synthetic purchased inputs), these gains are not sustainable without achieving productivity improvements and otherwise taking on existing and future competitors.

Promoting Other "Sustainability" Claims at the Farm Level

Although fair and organic trade has grown tremendously during recent years, the market for other "sustainability" schemes, which may or may not include a price incentive, is also expanding. In contrast with FT, these ethical or sustainability initiatives are not designed with a strong poverty reduction focus. Yet there is an underlying assumption that applying the criteria of these schemes will provide a supportive basis for sustainable development. In agriculture, sustainability initiatives implemented in some subsectors (i.e., coffee and horticulture) have provided some experiences and lessons learned that have subsequently been applied in other supply chains.⁵⁹

⁵⁸ Some attempts have been made to support smallholder engagement in organic-certified markets through bottom-up approaches. To illustrate, ITC and NOGAMU are implementing the Uganda Organic Export Initiative (UOEI) (2008–10). The project's approach is to support emerging companies, particularly producer-organized groups, to obtain organic certification, gain export expertise, and establish end-market links. The sustainability of these initiatives, outside donor support, remains to be seen.\

Many development partners have been providing support for the promotion and implementation of voluntary social and environmental standards, with some of them directly engaged in the establishment of specific schemes and in supporting their consolidation and implementation. For example, GTZ has been pushing for mainstreaming social and environmental compliance in developing country agri-food supply chains through strategic alliances—multistakeholder platforms and partnerships. Some of the most prominent efforts supported by German cooperation include the Common Code for the Coffee Community, the Good, Risk-Based Agricultural Social Practice (GRASP) project, and the support to sustainable round tables for specific commodities. In non-agri-food products, initiatives include, for example, the cotton made in Africa (CmiA) initiative (see box 4.6).

Most of the industry-wide initiatives are driven by social corporate pressures or social and environmental agendas and have a more multistakeholder focus; for others, quality and market drivers are more evident. It is apparent, however, that some multistakeholder initiatives are also following a more market-driven agenda. For example, the Ethical Tea Partnership (ETP) has recently partnered with UTZ Certified to promote the UTZ Tea Code of Practice. In contrast to other voluntary standard initiatives, GTZ-supported multistakeholder initiatives are designed to integrate compliance criteria with training and support for implementation and the achievement of continuous improvements.⁶⁰ For example, under the 4C, verification is free, and farmers benefit from training provided through trainer workshops and other activities implemented with the support of national and international organizations and members of the 4C Association. Yet all members must be registered and pay a fee in proportion to their size and position in the chain.

In the case of UTZ Certified, the scheme works in collaboration with the Coffee Support Network (CSN)—founded and supported by Dutch NGOs—to provide training to producers. Options have also included partnerships between CSN

and private foundations established by coffee roasters, which are aimed at enhancing capacities of small-scale producers to comply with the required criteria. In the case of the Rainforest Alliance (RA), training and capacity building are provided by NGO partners (Sustainable Agriculture Network), advisers trained by the program, often within the frame of partnerships with development partners or private enterprises (e.g., Unilever/RA in Kenya, and RA/USAID/GTZ and others in Côte d'Ivoire). In several of the sustainability initiatives (and PVS in general), the scheme includes the development and ownership of the code or standard, as well as of the system for auditing and certification, and quite often including responsibilities in training and advice.⁶¹

Efforts to scale up sustainability initiatives have faced tremendous challenges, particularly relating to the provision of standards-related services, to reduce costs and increase outreach. For example, the evaluation of the German support for private standards initiatives carried out in 2007 highlighted that the majority of the positive effects identified accrued to relatively small numbers of pilot groups.⁶² Initiatives such as 4C and UTZ Certified coffee are reaching mainly large producers, with huge efforts required to set local structures to provide training to several stakeholders (auditors, trainers, producers, etc.), but also local auditing and certification services. Therefore, the development of local standards-related infrastructure to allow self-sufficient provision of services seems to be the focus of future development efforts—as an exit strategy to ensure sustainability of the activities currently undertaken by donors and as a way to increase outreach.

Some of the latest recommendations of development agencies working in this field are pointing to the critical role that the government can play in enhancing infrastructure for conformity assessment and, overall, in enhancing the profile of sustainability initiatives in national policies. Thus, from a focus on “deregulation” in the late 1980s, what is beginning to emerge now is a growing recognition of the role of the government in catalyzing and facilitating the uptake of private standards initiatives. Lists of recommendations for what governments (and other actors) can do to promote

⁵⁹ Other initiatives targeting institutional strengthening include Hivos and other NGO support for the consolidation of national organic movements in Kenya, Tanzania, and Uganda. In Uganda, contributions of Hivos have been crucial for the consolidation of the National Organic Agriculture Movement of Uganda (NOGAMU), established in 2001 through the initiative of a few companies as an umbrella organization to promote and coordinate organic agricultural development, networking, and marketing. Today members include private firms, processors, farmers, and NGOs promoting organic agriculture. Yet the organization still relies heavily on external support to carry out its activities.

⁶⁰ GTZ has been supporting the implementation of the 4C code through in-country activities in Zambia, Uganda, Ethiopia, and Kenya. In Africa, 4C undertook pilot projects in Zambia and Kenya.

⁶¹ Under these types of management structures, conflicts of interest can arise due, for example, to the desire to get more clients certified—either for financial reasons or in order to achieve specific objectives—and this may lead to pressures to lower the standard or lower the interpretation used for certification. The International Social and Environmental Accreditation and Labelling (ISEAL) Alliance has developed guidance for its members to manage several types of possible conflicts of interest.

⁶² One exception is the CmiA in Zambia, with 80,000 farmers participating in the pilot phase.

BOX 4.6: GTZ—Mainstreaming Social and Environmental Compliance at the Farm Level

1. The Common Code for the Coffee Community (4C)

(4C)—4C aims at achieving sustainability along the entire coffee value chain, from production and processing through to the trade of green *mainstream* coffee. 4C considers itself to be an introductory standard and thus a supplement to existing standards such as Rainforest Alliance, UTZ Certification, and so forth. The initiative emerged through a partnership between the German Development Cooperation (GTZ), on behalf of the German government, and the German Coffee Association in 2002. Today, 4C is seen as an international strategic alliance for the sector involving trade and industry representatives, producer organizations, and international civil society organizations. Outcomes of the alliance include the formulation of a code for the sector, in compliance with International Labor Organization (ILO) regulations and good environmental practices and with multistakeholder participation, as well as the establishment of the 4C Association.

How do coffee producers benefit from compliance with the 4C standard?

The code aims to strengthen producer organizations, reduce the cost of coffee growing, improve product quality, and optimize operational flows along the value chain, thus enabling producers to increase their incomes. The 4C standard does not intend to integrate a price premium; instead producers are supposed to benefit from the standard implementation through efficiencies, quality improvements, and sustained access to mainstream world coffee markets. The 4C also offers support services through training and workshops for producers. In order to enter the 4C system, producers need to either establish a “4C unit” or join an existing one. A 4C unit can consist of any coffee-producing entity (farm, small-scale producer group, cooperative, plantation, mill, exporter, etc.) that is capable of producing at least one container of green coffee. Currently, many small-scale farmers are not yet sufficiently organized to comply with the quantity requirements. Therefore, one of the aims of the 4C is to support the formation of small-scale producer groups and to establish the support services required to achieve standard conformity, information, and advice. 4C does not use a consumer seal, and therefore compliance with the standard is not visible for consumers. The implementation of the code is based on a verification system relying on two pillars—the *system verification*

and the *local verification*. The latter refers to *third-party* auditors verifying the results of the self-assessment of the respective 4C unit. The task of the system verification is to make sure that the system as a whole is efficient. If they so wish, 4C members may also have a *Member Statement* printed on their packaging. The costs of verification of conformity are borne by the 4C Association, which is expected to be financed by membership fees.

Sustainability

Financial support to the initiative came initially from the German Coffee association and later from the European Coffee Federation, reaching 1 million during the period 2002–06. Contributions of the German government through GTZ reached 1 million for the same period, and contributions from SECO were about 500,000. In December 2006 the alliance established an independent non-profit membership association—the Common Code for the Coffee Community (4C) Association. As of 2007, 4C still relied on subsidies from the German development cooperation. However, the plan is for this intense support to gradually be reduced, so that the association would be financially independent.

2. The Good, Risk-Based Agricultural Social Practices—GRASP

—In an effort to bridge the gap between full social audits for a limited market and the agricultural mainstream production, GTZ, in cooperation with FoodPlus and Coop Swiss, implemented the GRASP project (2006–07) with two objectives: to enhance social compliance criteria in the GLOBALG.A.P Integrated Farm Assurance Scheme and to develop basic criteria of good social practice, as the ILO Core Labour Standards at farm level. The GRASP module presents a set of documentary requirements guiding the farmer and facilitating the implementation of a social management system on the farm.

3. Cotton Made in Africa Initiative (CmiA)

—This is another initiative in which the German government has been heavily involved to further mainstream social and environmental compliance at the farm level, yet with a specific focus on poverty reduction. In contrast with the 4C and the GRASP initiative, CmiA has a clear objective of improving the living conditions of very small-scale and small-scale cotton producers by means of

(Box continues on the next page)

capacity building. Expected benefits for farmers are derived from higher income and higher quality. CmiA has three main aims: the development of an attractive brand that stands for cotton production by African small farmers; the development of high standards for sustainable cotton cultivation; and the creation of a broad

demand alliance of international brands and retailers. Compliance with high social and environmental standards is ensured through a verification process that is currently being developed.

Source. Kuenkel et al. 2008; 4C Facts News, Edition 2, July 2009.

private voluntary initiatives have been prepared. Yet little analysis has been done to understand the incentives and mechanisms needed to support governments and other actors in playing a critical role in the promotion and adoption of private standards and in determining criteria for prioritization of the most suitable options to support compliance and on the type of standards and standards-related initiatives to be supported.

Providing Tools for Long-Term Competitiveness via “Certification” Programs

Multistakeholder initiatives or the establishment of partnerships with private actors to promote certified production has emerged as a promising instrument to promote sustainability of production by development partners. USAID, for example, through the Global Alliance mechanism, has been supporting initiatives aimed at achieving sustainability outcomes through certifications. In agri-food products, examples are the Certified Sustainable Products Alliance (CSPA) to certify agri-food products but also timber against RA certification, and the Conservation Coffee Alliance with Starbucks and Conservation International (CI) to support best practices under the Starbucks preferred supplier program. Although initially established with a focus on Latin America, alliances promoting sustainable outcomes are also emerging in SSA. For example, donor support to RA certification in Africa has included the Cocoa Sustainability Alliance, a partnership established between USAID, GTZ, Kraft, Armajaro, the Sustainable Tree Crop Program, and the government to promote sustainable certified cocoa in Côte d'Ivoire; and the USAID, Starbucks, and Rwandan government alliance to produce high-quality coffee to be sold under specific trademarks and sustainable labels.⁶³

The drivers of sustainable agendas at the farm level vary according to the product. In West Africa, low productivity of cocoa plantations and fears of significant reduction of production in the main countries supplying raw materials to the global industry have pushed for collaborative efforts to rehabilitate plantations and ensure the sustainability of the

supply. USAID has been supporting, since the late 1990s, the Sustainable Tree Program and a set of subsequent initiatives to improve production practices. Thus in cocoa, sustainable certifications have come to play a role to complement undergoing efforts to improve overall management practices.

For coffee, on the other hand, competitiveness pressures are the main driving forces, with the main strategies to remain competitive being to brand coffees under “specialty”⁶⁴ designations or to target specific certified markets under sustainability schemes. Overall, attempts to serve specialty markets have relied more on industry-wise approaches to promote quality upgrading, such as the investments initiated by USAID in Ethiopia and Rwanda (the latter most recently benefiting also from investments made by several other donors). Support to individual private-led initiatives to achieve certification under specific schemes has been more *ad hoc* and generally within the context of agriculture or agribusiness projects and matching grants or partnerships programs.⁶⁵

⁶³ The Sustainable Cocoa Enterprise Solutions for Smallholders (SUCCESS) Alliance aims to improve the livelihoods of smallholder farmers by promoting cocoa production and marketing in a way that is economically, environmentally, socially, and culturally sustainable. It does not focus on certifications but rather on improvements along the chain. It works as a partnership between USAID, the World Cocoa Foundation (WCF) and Mars Inc.; with Agricultural Cooperative Development International and Volunteers in Overseas Cooperative Assistance (ACDI/VOMA) as the implementing agency. In Africa the alliance is only active in Liberia.

⁶⁴ “Specialty” coffee has become a generic label covering a range of different coffees that either command a premium price over other coffees or are perceived by consumers as being different from the widely available mainstream brands of coffee. The term has become so broad that there is no universally accepted definition of what constitutes “specialty coffee,” and it frequently means different things to different people (ITC—The Coffee Guide www.thecoffeeeguide.org).

⁶⁵ Examples of the latter include: the USAID/IBERO alliance in Uganda for organic and UTZ Certified coffee production, and the USAID/Dunavant Uganda Ltd. alliance to promote certification of organic cotton; the WB’s support to coffee certification through matching grants in Kenya; the partnerships established by GTZ with different private companies in Ethiopia, Uganda, and Kenya to support the implementation of 4C Common Code and other certification programs.

Industry-wide support to upgrading processes based on quality differentiation to supply specialty coffee markets has involved considerable investments by donors. To illustrate, in Rwanda, USAID led several initiatives in support of cooperatives and private actors to improve quality and strengthen the industry links with international buyers, with the entry point for quality upgrading being the establishment of washing coffee stations and quality control capacity. Similarly, in Ethiopia and several other SSA countries, USAID has been supporting industry investments to access specialty differentiated markets. The experience has demonstrated that although, with specialty coffee markets, importers and roasters buy and sell a “story,” the most powerful marketing tool of the specialty coffee industry is the promise of consistency and excellent quality.⁶⁶ Still, significant challenges remain in improving farm management practices for smallholders (see chapter 6 for more details about Rwanda). More recently, other donors have joined USAID efforts, complementing the upgrading efforts with support for the achievement of FT and other certifications.

Hence, while the focus of many initiatives has been on certification, with the provision of training and other support required at the farm level expected to be provided by lead firms or by development agencies or NGOs, in many other programs, integrated approaches have been pursued, with quality improvements as the core element of the assistance, while opportunities for certification are complementing the efforts to enhance overall industry performance.

It is increasingly evident that the strategy to use certified production as a tool for smallholder market integration should be based on a continuum of improvements, with the target being to provide tools for long-term competitiveness. When certification is applied as a replacement for undertaking the upgrades required for gradually achieving gains in terms of

quality, consistency, and improved on-farm information, it is very unlikely to contribute to sustainable outcomes. In the end, international buyers will buy the product that fulfills their requirements. Social and environmental claims are a plus and may become a requirement in certain markets in the near future, but they will never be substitutes for quality and consistency.

In SSA, challenges of consistency in the supply and quality remain major bottlenecks of small-scale farmers’ participation in markets. The need for farmer collective action and strong group cohesion to aggregate volumes and facilitate small-scale farmer’s access to services remain important bottlenecks to be solved, both in certified and noncertified markets. Therefore, the recent emphasis on the achievement of certification by farmers or farmer groups should not detract from the critical role of development efforts in supporting continuous improvements to achieve quality and productivity gains, promote smallholders organization and empowerment, and so forth.

Several of the attempts to solve smallholders’ bottlenecks in participating in export markets through sustainability certifications have encountered the inconvenient truth that certification is part of the solution, but not the solution, when fundamental upgrades to ensure a reliable supply of quality product have not yet been made. The point of departure of much support for smallholder certification has been that fundamental upgrades have already been made and that the remaining gaps can be easily narrowed. In many cases, this assumption has been incorrect, with the need to go back to basics—in farmer organization, applied research and advisory services, business development services, and logistics improvements—frequently producing “lessons learned” from these experiences.

⁶⁶ In Ethiopia, differentiation has been based on the characteristics of the country as the birthplace of Arabic coffee, and therefore, protection of the genetic biodiversity is seen as fundamental.

Chapter 5: PRIVATE "BUYER" PERSPECTIVES ON ALTERNATIVE SOURCES OF SUPPLY

INTRODUCTION

As discussed in [Chapter 2](#), a major debate in the agricultural development literature in recent years has been the impact of ongoing changes in the structure and *modus operandi* of global agri-food systems on smallholders in developing countries (see, for example, [Reardon and Barrett 2000](#); [Weatherspoon et al. 2001](#); [Hazell 2005](#); [Pelupessy and van Kempen 2005](#); [Humphrey 2006](#)). In this context, a specific concern is the effect of agri-food standards, notably the food safety and quality standards adopted by major food retailers in Europe and elsewhere, such as GLOBALG.A.P ([Dolan and Humphrey 2001](#); [Jaffee 2003](#); [Henson and Humphrey 2009](#)). Key themes in this debate include whether smallholder market participation is compromised by the transformation of agri-food systems and, if they can participate, whether their involvement in high-value markets brings appreciable and sustainable benefits in terms of enhanced livelihoods. On these issues, the literature sends rather mixed messages.

Thus, while the existing literature presents a plethora of cases in which smallholders are or are not able to participate in high-value supply chains, less attention has been given to the process by which their participation is determined. Most pertinent studies focus on analysis of the transaction costs faced by farmers, assuming that these determine their participation in alternative supply chains (see, for example, [Staal et al. 1997](#); [Key et al. 2000](#); [Blandon et al. 2009](#)). Attempts have also been made to model the market choices of smallholders in terms of decision variables entering a household production or utility function (see, for example, [Goetz 1992](#); [Holloway et al. 2000, 2005](#); [Winters et al. 2005](#); [Neven et al. 2006](#); [Hernandez et al. 2007](#)).

However, in the context of buyer-driven supply chains, it is arguably more relevant to focus on the sourcing decisions of buyers rather than the market choices of smallholders. More relevant, therefore, is the literature examining the contracting decisions of buyers in agri-food supply chains (see, for example, [Dorward et al. 1998](#); [Key and Runsten 1999](#); [Swinnen and Vandeplas 2007](#)), which is taken here as the point of

departure. This literature tends to focus on the decision to contract out production rather than undertake own production (the "make or buy" decision that is key to "transaction costs economics") and/or the forms of contract used. It does not, however, probe the factors driving buyer choices among a range of alternative suppliers and the relative importance attached to each in overall procurement. It is these latter questions that are the focus of this chapter.

The specific context for this chapter is supply chains for fresh fruit and vegetable exports from sub-Saharan Africa (SSA). Among policy makers, development practitioners, and others there is considerable concern that evolving food safety and other standards could serve to erase past achievements in African fresh produce exports and the remunerative involvement of smallholders therein. Particular attention has been given to whether or not requirements for GLOBALG.A.P compliance are posing technical or financial barriers to smallholders, or turning African exporters (i.e., buyers) away from reliance on smallholder supplies. This concern has led to a plethora of initiatives—sponsored by governments, donors, and nongovernmental organizations (NGOs)—seeking to strengthen African horticultural supply chains generally and specifically to enhance the ability of smallholder farmers to comply with regulatory and/or commercial requirements (see [Chapters 4](#) and [7](#) for highlights of some of these interventions).

The fruit and vegetable export trade, particularly to Europe, has been among the few notable success stories in nontraditional agricultural export development in SSA. Excluding South Africa, the FOB value of this trade to Europe increased from US\$480 million in 2000 to US\$800 million in 2008. Four countries—Côte d'Ivoire, Cameroon, Kenya, and Ghana—accounted for a combined 85 percent of this trade in the latter year, although somewhat significant industries have also emerged in Ethiopia, Madagascar, Senegal, and several other countries. The biggest commodities in this trade include pineapples, bananas, green beans/peas, litchis, and mangoes. Production originates from a broad spectrum

of farm types, ranging from very limited smallholders to large plantations.

In order to gauge exporters' attitudes toward procuring product from alternative sources, including smallholders, and to delineate the significance of standards requirements in driving these procurement decisions and patterns, an online survey was undertaken among sub-Saharan exporters as part of this research work in 2008. A general conceptualization of the strategic and procurement choices faced by exporters, followed by a description of the survey's methodology, and an analysis of the results and main findings are presented in the following pages.

STRATEGIC AND TACTICAL OPTIONS AND PROCUREMENT CHOICES IN THE FACE OF RISING STANDARDS

In the face of evolving regulatory requirements and rising private sector product, production process, and other standards, African fruit and vegetable exporters must choose among or combine various strategic and tactical responses. At the strategic level, companies can choose to: (i) comply, via measures adopted within or beyond their own supply chain; (ii) not comply, and accept possible product rejections or quality claims as a cost of doing business; (iii) exit the fresh produce export business; or (iv) shift product and/or market foci in order to reduce the burden of rising standards (table 5.1). The strategic choices that individual companies make will be driven by their own circumstances—their history and past experience in the business; their degree of commitment to the business in the form of specialized investments and long-standing trade relations, etc.—and their perceptions

about future opportunities in this line of business, relative to others.

For those companies choosing to pursue compliance, a wide range of tactical options could be considered, covering business and supplier relations, the company's own management structure and capacities, the geography of procurement, and the distribution of costs and risks within the supply chain. A company's choice set and overall room for maneuvering will depend upon its own circumstances. Some examples of tactical measures include the following:

Negotiations with Downstream Buyers

- Ask buyers to allow more time to become fully compliant.
- Ask buyers to contribute to the technical measures or costs of achieving compliance.
- Lobby for changes in the standards themselves, tolerance levels for noncompliance, and means of conformity assessment.

Business Management Practices

- Increase the number/improve the qualifications of company field technical advisors.
- Improve company internal code of practice.
- Develop and apply quality management systems.
- Provide training in good agricultural practice (GAP) for internal staff.
- Strengthen quality management system (QMS)—e.g., by adding or upgrading staff, establishing or upgrading a company lab; upgrading documentation, instituting crop-specific protocols, and so forth.

TABLE 5.1: Firm Strategic Responses in the Face of Rising Standards

PURSUE COMPLIANCE	MAKE NO SPECIFIC CHANGES	REDUCE INVOLVEMENT OR EXIT THE FRESH PRODUCE EXPORT BUSINESS	SHIFT PRODUCT AND/OR MARKET ORIENTATION
<i>Within the company's supply chain:</i> (i) integrate forward to squeeze out middlemen costs, (ii) integrate backward to increase control and reduce risks, and/or (iii) use assured compliance to gain competitive advantage.	Notionally commit to making selected changes as requested or required by downstream buyers but do not implement them.	Disengage entirely from involvement in export/trade of the products.	Change product mix in favor of less demanding or less risky products, from a standards perspective.
External to the company's supply chain: (i) push for domestic regulatory changes to give teeth to compliance, (ii) push to strengthen capacity of competent authorities, (iii) engage/encourage the development/use of business service providers, and (iv) push for provision of services through APEX organizations.	Deliberately evade higher regulations/standards and accept product detentions and rejections as a business cost.	Reduce involvement in exports/trade of the products and switch to processed products to reduce burden of compliance.	Shift toward less demanding end markets and/or less demanding customers.

Source: The Authors.

Alter Procurement Arrangements and Relationships

- Reduce geographic scope to enable tighter control; focus procurement in geographical areas that are less prone to pests and diseases.
- Change relationships with procurement agents, necessitating certain practices or restricting from whom they can source.
- Eliminate sourcing from all outgrowers and concentrate on own farm production; or source from outgrowers only very low-risk commodities from the perspective of standards compliance.
- Change relationship with small-scale farmers (e.g., requiring involvement in groups, prior certification, etc.).
- Take steps to ensure the loyalty of certain outgrowers (e.g., provide inputs in-kind and/or advisory services, pay price premia, increase volume or extend procurement period for supply).
- Require outgrowers to undertake and fund selected investments and/or pre-certification.
- Change recommended practices for land preparation, irrigation, planting, spraying, record keeping, personal hygiene, and so forth.

This range of strategic and tactical options needs to be kept in mind. There is a common (mis-)perception that fresh produce exporters have little or no choice of strategy (i.e., "comply or die") and that the needed tactical steps are dictated to them by downstream buyers. These circumstances may apply to some firms, but not for the vast majority of companies.

This complexity of strategic and tactical choices is best understood when interviewing individual companies, with the choice set being closely related to a range of specific circumstances for those companies. A survey approach, utilizing a posted or mailed questionnaire, cannot effectively capture the complexity of business practices in this area, as each company's unique situation needs to be probed by follow-up questions, solicitation of examples, and hypothetical scenarios. Case studies are thus better instruments for probing the breadth of strategic and tactical approaches. For purposes of the exporter survey presented here, a much more limited choice set of approaches was considered.

As noted in [Chapter 3](#), the proposed conceptual framework first posits exporters making a broad "make or buy" decision. They can undertake their own production on leased, purchased, or inherited land ("make"), they can purchase from others ("buy"), or they can combine the two modalities. Within the "buy" category, there may be multiple choices as

between medium or larger outgrowers, smallholder farmers, or various types of intermediaries (traders, cooperatives, brokers). Exporters may combine supplies from multiple sources, differentiate their supplies by product or by season, or pursue some other arrangement.

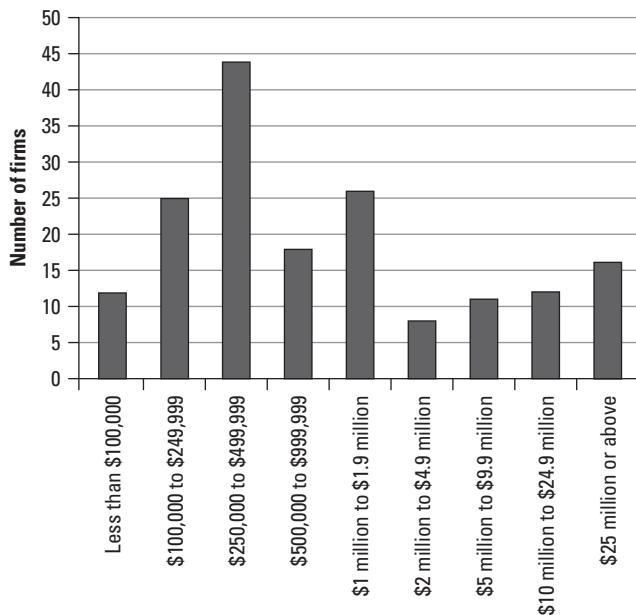
The production and transaction costs and the risks associated with different supply sources are affected by various factors, including geography, demographics, land tenure, the distribution of knowledge and skills, various techno-economic characteristics of the pertinent crops, and importantly, the product, process, and transaction attributes that are required by buyers and end markets. For at least some horticultural crops, smallholders are expected to have production cost advantages over other potential sources of supply—stemming from lower costs for accessing and supervising labor ([Poulton et al., 2005](#)). Yet, sourcing from smallholders is expected to involve considerably higher transaction costs, due to both structural factors (e.g., physical distance, aggregation logistics, poorer communication links) and to the facilitation, monitoring, and enforcement of product and process standards.

In circumstances in which exporters source produce from smallholders, the relationship may be indirect or direct, and the latter could take on various forms or degrees of intensity. Exporters may indirectly source from smallholders via various types of intermediaries—traders, brokers, agents, larger farmers—with whom the company may or may not have a regular, ongoing relationship. In the fresh produce business, these intermediaries tend to buy from smallholders, either on a cash-for-produce basis or as part of some longer-standing relationship. More direct links between exporters and smallholders (or their groups) can take various forms. One basic contractual arrangement involves mutual commitments to buy and sell, perhaps of a stated volume of produce, during certain time intervals, either at market or specified prices. A deeper relationship combines these elements with the provision of specified inputs, sometimes on credit. More intensive relationships go farther to involve some shared management functions, especially in relation to pest and disease management, farm record keeping, produce traceability, and product/farm certification.

METHODS AND RESPONDENTS

The analysis presented in the following pages derives from an Internet-based survey of fresh produce exporters in 18 countries of SSA undertaken over the period July to

FIGURE 5.1: Composition of Survey Respondents by Value of Exports, 2007 (US\$)



Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

September 2008.⁶⁷ A prospective list of respondent firms ($n = 326$) was compiled from various sources including the Pesticides Initiatives Programme (PIP), the World Bank, and a review of exporter directories.⁶⁸

A total of 172 fresh produce exporters provided fully completed questionnaires, representing a response rate of 52.8 percent. The respondents reported their total free on board (FOB) export value in 2007. This ranged from \$11,000 to \$145 million, with a mean of US\$7.42 million ($SD = \2.17 million). Figure 5.1 plots the distribution of firms according to the value of their exports and confirms that the sample was not dominated by larger exporters. Eighty-one (81) of the respondents were classified as “small” (i.e., with exports below \$500,000), 52 as “medium” (with exports between \$0.5 and 4.9 million), and 39 as large (with exports exceeding \$5 million). These respondents accounted for nearly 88 percent

of the total value of SSA fresh fruit and vegetable exports in that year, not counting South Africa.

The distribution of respondent firms is reflective of the overall structural patterns in the SSA fresh produce trade, where exporter numbers are considerably higher in some rather than other countries. Hence, the greatest number of respondents was from: Kenya (33.1 percent), Ghana (18.6 percent), Côte d’Ivoire (8.7 percent), Senegal (7.0 percent), Uganda (7.0 percent), and Burkina Faso (5.2 percent) while all other countries accounted for the remaining 20.4 percent. Only a few exporters in some countries (Tanzania, Zambia, Gambia, and Madagascar) account for the bulk of trade from their countries, and these were among the respondents. Given the large aggregate share, our respondent pool does not appear to have excluded many significant exporters and thus offers an excellent viewpoint on the procurement patterns in Africa’s fresh produce export trade circa 2007/2008.

Respondent firms export a wide range of fresh produce. On average, the companies export just over four products (4.12). The most common individual export commodities are French beans (52.3 percent of firms), mangoes (50.6 percent), okra (39.5 percent), pineapples (37.8 percent), peas (36.6 percent) chiles/hot peppers (31.4 percent), and passion fruit (30.2 percent).

Most questions in the survey asked respondents to focus on their main fresh export product, defined in terms of the volume procured and/or produced in 2007. The rationale for this approach is that procurement systems can vary significantly across products, in terms of the performance of, and the costs of procuring from, smallholders versus other sources of supply. Thus, the validity of asking respondents to focus instead on the procurement of all products they export is questionable. At the same time, there are concerns that focusing on an exporter’s main product in terms of volume procured/produced may miss a substantive part of their procurement system. Yet, given that the main product represented 69.4 percent of respondents’ exports on average ($SD = 20.56$), this would not appear to be a major concern. Across respondents as a whole, the lead or main export products were French beans (38.4 percent), pineapples (25.6 percent), chiles/hot peppers (11.0 percent), and mangoes (7.0 percent), collectively accounting for 82 percent of responses.

Most firms export to multiple markets. The key export markets for the respondent’s main product were the United Kingdom (70.3 percent) and the rest of Europe (77.3 percent). Only 21.5 percent export exclusively to the United Kingdom and only 29.7 percent export solely to continental

⁶⁷ The survey was designed and employed using guidelines on conducting Internet surveys (Couper 2000; Kraut et al. 2003; Lewis 2004).

⁶⁸ An invitation to participate in the survey was sent by e-mail, which included a link to the online questionnaire. Four weeks later a reminder e-mail was sent to all nonrespondents. The e-mails and questionnaire were in English or French, depending on the official language of the country in which exporters were based. Respondent firms were able to request a paper copy of the questionnaire if they so wished.

Europe. Almost half of the respondents exported to both the United Kingdom and the rest of Europe. Other outlets include markets in the Middle East (19.2 percent of firms) and other sub-Saharan African countries (16.9 percent). Few companies sell elsewhere. The external market buyers most frequently supplied were importers/distributors for (i) high-end supermarkets (51.2 percent), (ii) discount supermarkets (50.0 percent), (iii) small-scale grocers (48.2 percent), and "ethnic" food retailers (33.7 percent). Again, sales through multiple (types of) distribution channels are common.

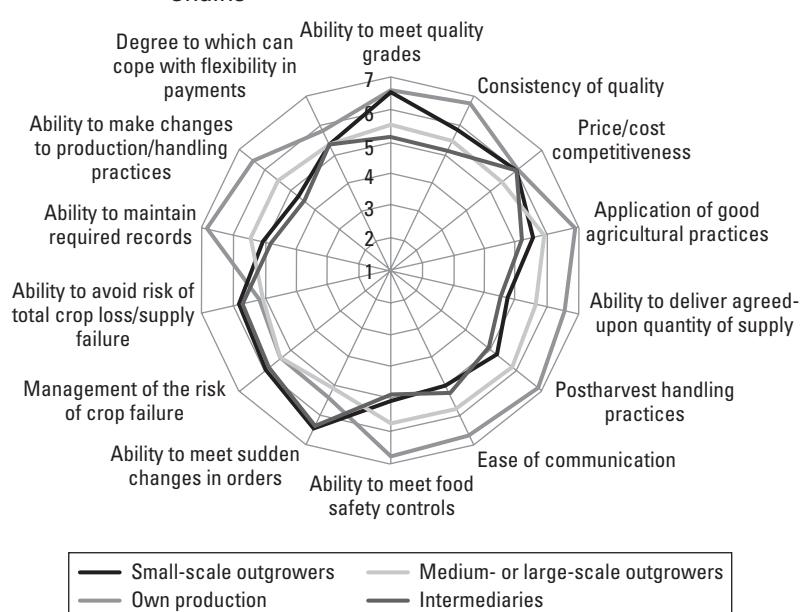
In addition to categorizing respondents according to their relative size, firms are also distinguished by the importance of private standards compliance in their overseas distribution channels. Firms were asked about the proportion of their overseas customers and their volume of trade for which compliance with food safety standards is a major focus and factor in business performance. Three categories of firms are represented among the respondents. Seventy-five companies (43.6 percent of respondents) reported that the majority of their customers require and enforce food safety standards. Thirty-four companies (19.8 percent) reported that a minority of customers are so focused. Sixty-three companies (29.6 percent) do not have customers that require and enforce stringent food safety standards. Of this latter group, only 12 reported having customers that had explicitly indicated that they would enforce food safety standards in the foreseeable future.

These categories are worth noting. In the stakeholder dialogue on this subject there is sometimes an assertion that GLOBALG.A.P or other standard certification has effectively become a required "license" to supply fresh produce to the European market. This applies for only a segment of the European market, and there is evidence to suggest that (continued) certification is not an enforced requirement by even the leading supermarkets applying the most stringent standards. In addition, there remains a very large fresh produce market for noncertified product/producers, especially in distribution channels servicing the so-called discount supermarkets, in countries where wholesale and open-air markets remain important, and within the distribution channels for so-called "ethnic" and specialty produce.

SELECTION CRITERIA OF SURVEYED FRESH PRODUCE EXPORTERS

The surveyed firms were asked to rate the importance of various criteria when considering how they structure their fresh produce procurement arrangements, including their "make or buy" decision and their decisions about whom to buy from. Each firm was then asked to score the performance of alternative supply chains according to these same criteria, as reported in figure 5.2.

FIGURE 5.2: Performance Criteria Scores for Alternative Supply Chains



Source: Calculations based on Data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

TABLE 5.2: Performance of Alternative Suppliers According to Clustered Criteria

SCALE	MEAN SCORE		
	SMALL-SCALE PRODUCERS	MEDIUM- AND LARGE-SCALE PRODUCERS	OWN PRODUCTION
Competitive supplier	5.58a	5.56a	6.57
Reliability, flexibility, and risk management	5.67b	5.30	5.68b
Food safety capacity	5.22	5.75	6.85

Note: Scores denoted by same letter are not significantly different at the 5 percent level.

Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

By applying Principle Components Analysis to the importance scores, three broad categories of criteria that are deemed important by fresh produce exporters can be discerned: (i) competitive supply, in terms of quality and price; (ii) reliability, flexibility, and risk management; and (iii) food safety compliance. The mean scores of alternative supply chains for each of these three broad criteria are reported in **table 5.2**.

Some interesting patterns emerge, highlighting the perceived trade-offs of utilizing different sources of supply. Smallholder farmers are seen as a valuable asset in terms of managing/spreading crop production risks and building flexibility into the procurement system. That is, spreading production among smallholders (perhaps in different geographical areas) helps to mitigate the supply shocks from certain weather events or outbreaks of pests and diseases. Contracting with smallholders also allows for some (rapid) adjustments in the quantities supplied/purchased. Smallholders are considered cost-effective suppliers and generally able to meet quality requirements. In contrast, smallholders are perceived to be weaker in terms of adjusting production practices, in record keeping, in communication, in matching specific quantity requirements, and in the consistent application of good agricultural practices. Each of the other potential produce sources has its own relative strengths and weaknesses.

Exporters were asked about the properties of smallholders that would lead them to be a favorable or acceptable supplier. Their responses are summarized in **table 5.3**, with ratings from low (1) to high (7). Applying Principal Components Analysis, these various factors can be clustered under four headings: (i) basic skills and resources (e.g., land, literacy, labor, access to water, finance, and main roads), (ii) past experience (with the crop, with export horticulture, or with the firm), (iii) organization (i.e., part of a farmer group or regular extension program), and (iv) food safety capacity.

Tables 5.4 and **5.5** contrast the weight of factors given by companies of different sizes and companies whose trade targets buyers with varied emphasis on food safety. Small- and

medium-scale companies are most interested in the past experience of farmers and in their involvement in organized extension or farmer marketing. Large companies are more focused on whether the farmers have access to basic factors of production and whether they can meet food safety requirements. Larger companies can presumably overcome limited experience and weak (prior) organization through

TABLE 5.3: Importance of Factors in Choosing Small-Scale Producers as Supply Source for Main Product

FACTOR	MEAN
Has been trained in good agricultural practice	6.14
Is able to access sufficient paid labor if needed	6.02 ^a
Is within 5 kilometers of a main road	6.01 ^a
Is certified to a food safety standard such as EUREPGAP/ GLOBALG.A.P or Nature's Choice	6.01 ^a
Has past experience growing your leading crop export	5.86 ^b
Has reliable year-round supply of water	5.85 ^b
Has past experience with producing export horticultural crops	5.60 ^c
Participates in a regular program of public extension services	5.58 ^c
Has past experience producing an export crop	5.57 ^c
Has basic literacy skills	5.46 ^d
Has minimum of two hectares of land	5.45 ^d
Has not failed in relations with an export company in the past	5.43 ^d
Has independent access to financial services/credit	5.34
Is member of a well-organized farmer club/group	5.23 ^e
Has past experience supplying large export companies	5.21 ^e
Is member of a well-organized farmer cooperative	5.04
Has multiple able-bodied family members working on the farm	4.89 ^f
Has past experience supplying your company	4.88 ^f
Is within 50 kilometers of your packing facility	4.46
Past/current elected officer of farmer organization	3.42

Note: Scores denoted by same letter are not significantly different at the 5 percent level

Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

TABLE 5.4: Clustered Criteria Factors Influencing Choice of Small-Scale Producers of Main Export Product by Exporter Size (Mean Scores)

SCALE	FIRM SIZE		
	SMALL	MEDIUM	LARGE
Basic skills and resources	5.07	5.92 ^a	5.98 ^a
Past experience	5.83	6.14	5.21
Organized	6.03	6.31	5.57
Food safety capacity	5.12	5.65	6.24

Note: Scores denoted by same letter are not significantly different at the 5 percent level.

Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

TABLE 5.5: Clustered Criteria Factors Influencing Choice of Small-Scale Producers of Main Export Product by Customer Requirements for Compliance with Private Food Safety Standards (Mean Scores)

SCALE	PRIVATE STANDARD COMPLIANCE		
	NO CUSTOMERS	MINORITY OF CUSTOMERS	MAJORITY OF CUSTOMERS
Basic skills and resources	5.16	5.68	5.89
Past experience	6.09	5.76	5.30
Organized	6.01	6.28	5.64
Food safety capacity	5.19	5.48	6.31

Note: Scores denoted by same letter are not significantly different at the 5 percent level.

Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

their own training, advisory, and organizational measures. Limited past experience and limited organizational involvement also appear to be of comparatively less concern among companies whose majority of customers enforce stringent food safety requirements. Some respondents implied that past experience actually poses problems, as certain "bad" practices need to be unlearned or adjusted from.

CHANGING PROCUREMENT PATTERNS OF FRESH PRODUCE EXPORTERS

In any local context, the range of alternative procurement strategies may be limited, either because of land tenure/land

access constraints, the prevailing agrarian structure, agro-ecological or geographical features, or other factors. Through their own efforts, firms may be unable to overcome broader structural constraints and thus need to either integrate backward to obtain needed produce or choose from a more constrained range of "buy" options.

The survey respondents generally do not appear to have been highly constrained in the range of options to pursue when designing/adjusting their procurement strategies (table 5.6). A large majority of firms have had the option to source from their own farms, from smallholder outgrowers, from larger outgrowers, and via intermediaries. The majority currently use three of the four of these sources (all but intermediaries).

Table 5.7 highlights changes in the structure of respondent firms' procurement arrangements for their main product between 2003 and 2008. Smallholders still account for the largest single share, although the share of these farmers has fallen from 39.2 percent to 36.4 percent. While this does not signal a wholesale exclusion of small farmers in an era of rising standards requirements, it does show that various factors are putting pressure on the competitive position of smallholders in this export trade. Sourcing of the main product from company owned/leased farms has increased in prominence during this decade. This is consistent with expectations, as there is an increased need to track and trace produce and maintain up-to-date production records—all elements that are easier to do on one's own farm. The role of medium and

TABLE 5.6: Availability and Use of Supply Chains for Main Product

SUPPLY CHAIN	NUMBER (%)		
	AVAILABLE	EVER USED	CURRENTLY USE
Traders, wholesalers, and other intermediaries	111 (64.5%)	72 (41.9%)	63 (36.6%)
Direct from small-scale growers of less than five acres	163 (94.8%)	149 (86.6%)	146 (84.9%)
Direct from medium- or large-scale producers	135 (78.5%)	100 (58.1%)	97 (56.4%)
Production on own/leased farm	141 (82.0%)	122 (70.9%)	127 (73.8%)
Other exporters	55 (32.0%)	38 (22.1%)	25 (14.5%)
Other	6 (3.5%)	6 (3.5%)	5 (2.9%)

Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

TABLE 5.7: Mean Percentage of Supply of Main Product Sourced Through Alternative Supply Chains Currently and Five Years Ago

SUPPLY CHAIN	MEAN %	
	CURRENTLY	FIVE YEARS AGO
Traders, wholesalers, and other intermediaries	9.4% (18.6)	14.9% (24.0)
Direct from small-scale growers of less than five acres	36.4% (29.0)	39.2% (30.8)
Direct from medium- or large-scale producers	17.0% (20.7)	15.4% (20.4)
Production on own/leased farm	34.4% (33.1)	27.9% (32.2)
Other exporters	0.9% (2.5)	0.9% (3.0)
Other	1.9% (12.8)	4.1% (19.8)

Note: Standard deviation in parentheses.

Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

larger-scale outgrowers appears to have increased modestly, while there has been a curtailment of procurement through intermediaries.⁶⁹

Table 5.8 contrasts the current procurement patterns for firms reporting that either French beans or pineapples are their main product. Smallholders remain the leading source of supply in the French bean trade, in large part due to the heavy labor requirements in production. For pineapple, company owned/leased farms and larger outgrowers are the predominant suppliers. The number of smallholders supplying pineapple to companies for which pineapple is the main product has actually declined sharply since the early 2000s. However, as the recent experience in Ghana illustrates, issues about (non-)compliance with food safety requirements have not been a factor in this trend. Instead, the key factor driving the shift from mixed smallholder/large farmer supply to a dominant large farm structure has been the shift over from traditional to the MD2 variety of pineapple, necessitating higher outlays on planting material and higher investment in irrigation and other facilities (see Chapter 7).

⁶⁹ The focus on the firms' main product introduces something of a bias in the picture here, especially the relative (growing) importance of company owned/leased farms. One would expect companies to devote more attention to their major export commodity on their own farm, as this commodity might represent their key entry point into the market. Companies would be more inclined to rely on others to supply secondary or tertiary parts of their product portfolio.

TABLE 5.8: Mean Percentage of French Beans and Pineapples Currently Sourced Through Alternative Supply Chains (Weighted by Relative Export Volume)

SUPPLY CHAIN	FRENCH BEANS	PINEAPPLES
Traders, wholesalers and other intermediaries	3.9%	7.3%
Direct from small-scale growers of less than five acres	45.5%	20.6%
Direct from medium- or large-scale producers	13.6%	29.9%
Production on own/leased farm	34.5%	40.5%
Other exporters	0.6%	0.6%
Other	1.9%	1.1%

Note: All respondents for which either French beans or pineapples is the main product.

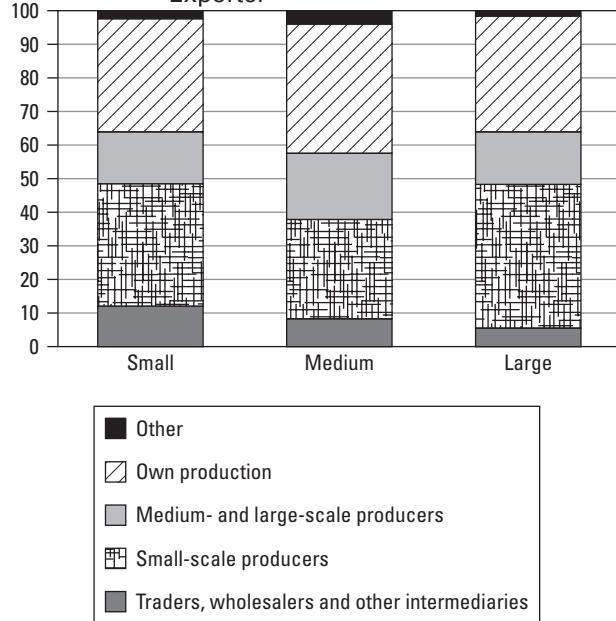
Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

Figure 5.3 contrasts the structure of procurement for small-, medium-, and large-scale fresh produce exporters. Small companies, on average, have a bimodal procurement system, with direct supplies from smallholder farmers and own production accounting for the bulk of supplies. Compared with larger companies, these firms rely less upon larger outgrowers (presumably due to bargaining problems and those farmers preferring to supply larger companies), and rely more on intermediaries. Large companies display an even greater bimodal structure, again with direct smallholder supply and own farm production predominating. Medium-scale companies rely somewhat more on medium-scale producers and somewhat less on smallholders than do the other categories of companies.

In an era of rising standards one would expect to find a pattern in which companies that serve less exacting markets would rely more heavily on smallholders than would be the case for companies primarily servicing high-end, food safety-stringent markets. The evidence on this is ambiguous, at least at the aggregate level. Table 5.9 suggests that it is medium/larger outgrowers and purchases through intermediaries that decline more in importance as companies serve a broader range of clients who are enforcing food safety requirements. For exporters whose majority of customers for their main product are food safety enforcers, smallholders are only slightly less important than own farm production in total supply.

Surveyed firms were asked about the number of smallholders from whom they source directly as well as the number of smallholders with whom they estimate they are sourcing when purchasing supplies through intermediaries. Figures

FIGURE 5.3: Percentage of Supply of Main Product from Alternative Supply Chains by Size of Exporter



Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

on the former should be reasonably reliable—given available records—although respondent over- or underreporting is possible. The scope for error is significantly higher for estimates of smallholders connected through intermediaries,

TABLE 5.9: Mean Proportion of Main Product Procured Through Alternative Chains by Whether Major Customers Require Compliance with Private Food Safety Standards

SUPPLY CHAIN	MEAN %		
	NO CUSTOMERS	MINORITY OF CUSTOMERS	MAJORITY OF CUSTOMERS
Traders, wholesalers, and other intermediaries	17.9% (25.9)	7.6% (12.8)	3.0% (7.9)
Direct from small-scale growers of less than 5 acres	27.0% (18.1)	44.6% (31.4)	39.7% (32.6)
Direct from medium- or large-scale producers	27.0% (22.6)	17.3% (23.7)	13.0% (14.3)
Production on own/leased farm	26.4% (24.9)	25.7% (28.9)	42.1% (38.1)
Other exporters	1.7% (2.4)	0.9% (2.9)	0.5% (1.9)
Other	0.0% (0.0)	5.9% (23.9)	1.7% (10.6)

Source : Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

although back-of-the-envelope estimates should not be too inaccurate based upon the volumes purchased and what is known about average smallholder plantings, yields, and crop rotations. Still, the possibility of estimation error for this indirect sourcing from smallholders is a caveat that should be considered in relation to some of the findings below.

For the survey respondents, the total number of smallholders estimated to be involved in the sourcing of their main product was 47,980 in 2007. This includes 23,830 farmers for whom produce was sourced directly (or through groups), and 24,150 farmers whose supplies came via intermediaries. Five years earlier, some 55,921 smallholders were involved in the supply of the main product for these companies. The decline in number of smallholder suppliers of pineapples accounts for the bulk of this decline.

Table 5.10 highlights changes in number of smallholders supplying, directly or indirectly, firms in different size categories. Several points can be made. First, large companies account for the largest share of smallholder participation in this industry, including a majority of smallholders who supply directly to exporters. The absolute number of smallholders supplying the larger companies seems to have declined only marginally between the early and late 2000s, with the number of such growers supplying these firms directly actually increasing. The dropoff in smallholder suppliers has been comparatively larger for small- and medium-size companies. For example, the number of smallholders directly supplying the main product to small companies has fallen by some 31 percent.

The role of standards (as an exclusionary force) in these trends is not so evident. **Table 5.11** summarizes changes in the number of smallholders supplying firms whose customers do and do not require/enforce food safety standards. Some 32 percent of the decline in reported smallholder supply numbers is attributable to companies for which no customers enforce food safety standards, while companies for whom only a minority of customers enforce food safety standards account for 23 percent. Not surprisingly, many other factors are at work here. In addition to the role of other technical factors—as in the case of the pineapple varietal shift in Ghana—the early to mid-2000s was a period in which many small- to medium-scale exporters struggled to survive in the business, dealing with issues of logistics, product quality management, buyer and supplier opportunism, financial management, and so forth. These difficulties led many firms to exit this business and others to contract or deliver a more variable volume of trade. The smallholder farmers loosely or more closely tied with these firms bore some of the consequences of the weakly competitive supply chains, and they too needed to either reduce or diversify their involvement.

TABLE 5.10: Number of Smallholder Farmers Reportedly Involved Directly or Indirectly in the Sourcing Arrangements of Difference Size Companies, 2007 and 2002

COMPANY SIZE CATEGORY	2007			2002		
	DIRECTLY	VIA INTERMEDIARIES	TOTAL	DIRECTLY	VIA INTERMEDIARIES	TOTAL
Small	7,218	5,160	12,378	9,450	6,427	15,877
Medium	4,778	9,870	14,648	6,985	11,550	18,535
Large	11,834	9,120	20,954	7,845	13,664	21,509

Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

Here and there, problems with more stringent standards requirements occurred, but this almost certainly was not the lead factor in the majority of cases. The experiences of Uganda (Diaz-Rios et al. 2009) and Ghana (see Chapter 7) well illustrate this.

Overall, the survey findings suggest a skewing pattern in which small- and medium-scale companies cut back on the number of smallholders from whom they procure—either directly or indirectly—while larger companies continue to strongly utilize smallholder farmers as part of a bimodal procurement system. This skewing is clearly evident from figure 5.4, showing that for all deciles up through the 90 percent decile, the number of smallholders supplying firms has declined while expanded smallholder numbers are involved with only the largest companies.

While the evidence presented here is not consistent with a dark picture of smallholder marginalization and exclusion in Africa's fresh produce trade, other findings from the current survey and other research point to a highly fluid situation with rather considerable patterns of smallholder "entry" and "exit" into/from this sector and relatively high rates of turnover in the procurement schemes of fresh produce exporters. This would not be expected (other than "exit") in

an environment in which certified compliance with standards is allegedly the required norm or "license" to supply. That is, one would expect to find relatively little new entry by smallholders given all the new requirements and compliance costs, and also to find farmers and companies going to great lengths to secure long-term relations in order to build up approaches and procedures (and associated detailed records) to achieve and signal to downstream buyers compliance with the standards.

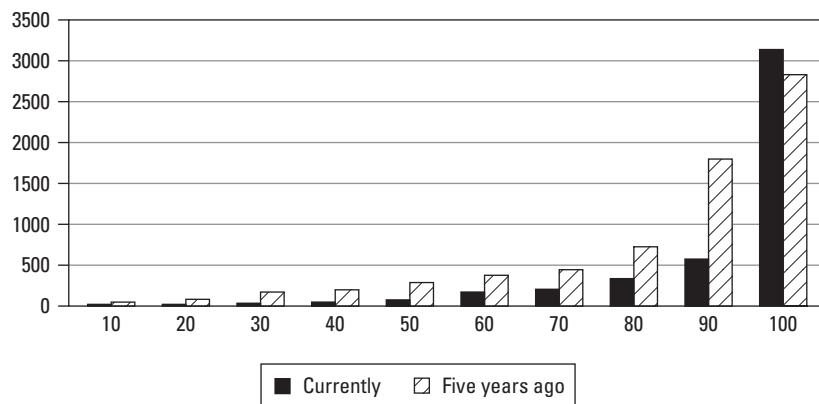
The reality seems rather different. For example, a multiyear survey of a panel of 770 farmers in Central Kenya confirms anecdotal observations of high levels of new entry, new exit, and individual farm contraction or expansion of vegetable production for export. Among the surveyed farmers, some 23 percent grew French beans for export both in the mid-2000s and in 2008/9, these being the *steady suppliers*. Some 20 percent haven't taken up this crop, these being the *non-participants*. Some 21 percent have dropped out (growing French beans in the mid-2000s but not more recently), these being the *existents*. Remarkably, some 37 percent of the same are new entrants, having grown French beans in 2008/09 but not in the mid-2000s. Hence, if exclusion is taking place, so is inclusion, perhaps on a slightly larger scale.

TABLE 5.11: Number of Smallholder Farmers Reportedly Involved Directly or Indirectly in the Sourcing Arrangements of Companies Whose Customers Do and Do Not Enforce Food Safety Standards, 2007 and 2002

SHARE OF COMPANY CUSTOMERS ENFORCING FOOD SAFETY STANDARDS	2007			2002		
	DIRECTLY	VIA INTERMEDIARIES	TOTAL	DIRECTLY	VIA INTERMEDIARIES	TOTAL
None	6,538	9,830	16,368	8,034	10,855	18,889
Minority	5,041	4,940	9,981	3,710	8,111	11,821
Majority	12,251	9,380	21,631	12,536	12,675	25,211

Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

FIGURE 5.4: Decile Distribution of Average Number of Small-Scale Producers of Less than Five Acres from Which Source Main Product Directly or Indirectly



Note: Data include all exporters.

Source: Data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

Tables 5.12, 5.13, and 5.14 draw upon our survey findings to depict the situation of relatively high turnover in exporter procurement arrangements and, most especially, in their sourcing from smallholders. Table 5.12 notes modest rates of exit or turnover in exporter relations with medium- or large-scale producers, yet relatively high proportions of intermediaries and of smallholders either being dropped by the company or voluntarily withdrawing from this relationship. The turnover on smallholders is just over 22 percent, meaning that one in five direct suppliers does not supply the company year after year.

Table 5.13 looks specifically at the turnover rates for smallholders supplying different size companies. These range from 16.5 percent for medium-sized companies to 27.9

percent for small companies. Similar proportions are dropped by companies of different sizes. The main difference is in the second column. A large number of smallholders voluntarily withdraw from the relationship with smaller companies. The reasons could be varied, including late/nonpayments, nonreliable purchases, logistical bottlenecks, weak or inappropriate technical advice, or, more positively, that the farmers have used these relationships as a learning platform upon which to move onto other things, perhaps even supplying more demanding clients.

Table 5.14 presents a more ominous picture, more consistent with the dark cloud view of existing or pending exclusion. Reported turnover rates are exceptionally high

TABLE 5.12: Proportion of Suppliers in Alternative Supply Chains for Main Product that Typically Have to Be Dropped or Voluntary Drop Out Year-on-Year

SUPPLY CHAIN	MEAN %	
	DROPPED	VOLUNTARILY DROP OUT
Traders, wholesalers, and other intermediaries	14.0% (12.4)	8.8% (5.4)
Direct from small-scale growers of less than 5 acres	12.2% (12.3)	9.9% (19.1)
Direct from medium- or large-scale producers	3.6% (3.2)	2.8% (4.3)
Other exporters	4.5% (4.1)	4.2% (3.3)

Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

TABLE 5.13: Proportion of Smallholder Outgrowers for Main Product that Typically Have to Be Dropped or Voluntary Drop Out Year-on-Year by Exporter Size

EXPORTER SIZE	MEAN %	
	DROPPED	VOLUNTARILY DROP OUT
Small	12.7% (11.2)	15.2% (27.0)
Medium	11.1% (12.5)	5.4% (3.2)
Large	12.4% (14.2)	5.8% (8.2)
Total	12.2% (12.3)	9.9% (19.1)

Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

TABLE 5.14: Proportion of Smallholder Outgrowers for Main Product that Typically Have to Be Dropped or Voluntarily Drop out Year-on-Year by Whether Customers Require Compliance with Private Food Safety Standards

COMPLIANCE REQUIREMENT	MEAN %	
	DROPPED	VOLUNTARILY DROP OUT
No customers	8.8% (6.5)	6.4% (4.8)
Minority of customers	7.9% (5.4)	4.5 (3.6)
Majority of customers	17.2 (16.4)	15.7% (28.2)
Total	12.2% (12.3)	9.9% (19.1)

Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

for companies whose major customers are enforcing food safety requirements. Nearly one in three smallholder farmers is either dropped by the company or voluntarily drops out of the relationship. Problems of noncompliance and tensions over the responsibilities for compliance and the bearing of requisite costs and risks undoubtedly are contributing to this phenomenon.

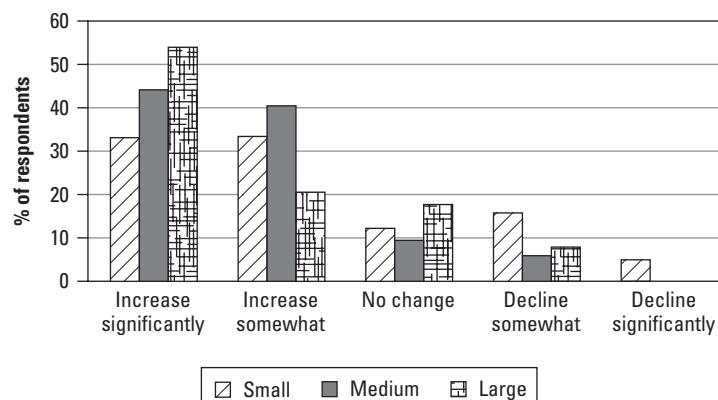
What are the surveyed firms' expectations for the future? The majority of firms are optimistic about the future growth of their business, including the trade in their leading export product. The degree of optimism seems to be correlated

with the size of the company. The majority of large companies expect to experience significant increases in their trade. For small companies, an equal proportion of respondents expect significant increases, moderate increases, and either no change or a decline in future trade (figure 5.5).

While the results may merely reinforce the "large firm optimism," figure 5.6 indicates that the highest level of optimism about future growth comes precisely from companies that are supplying higher-end markets for which food safety compliance is most emphasized. The majority of companies supplying nonstringent markets signal that they expect only moderate gains or no change in their future trade. Does this imply that certain markets are expected to experience little or no growth? Or, do these responses reflect a lack of confidence by these firms that they will be able to meet new requirements, should their current buyers require them? This question wasn't directly explored, although as noted earlier, only a small proportion of companies now serving customers who don't enforce food safety standards expect this situation to noticeably change in the near future.

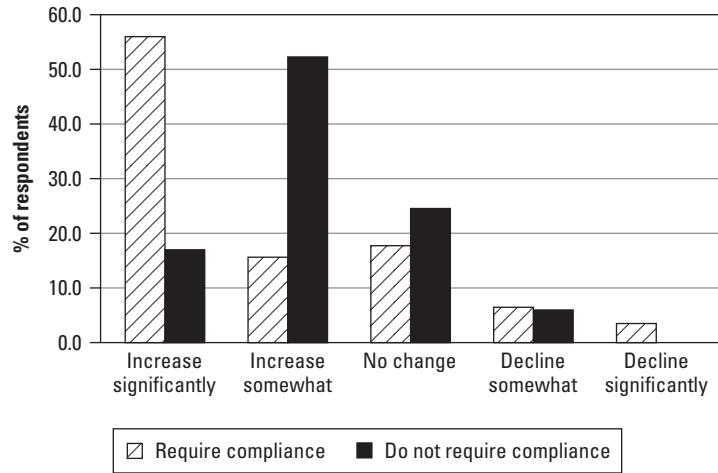
Expectations about future procurement arrangements vary by company. Overall, the picture painted by the respondent companies is not negative for smallholders. Some two-thirds of companies expect smallholders to directly provide the same or a larger volume of their main crop in the future (figure 5.7). However, if use of intermediary channels does in fact contract, then the overall level of smallholders involved in export supply channels may show little gain. Medium-scale outgrowers are expected to have a similar or increased role in the future, while company-owned production is generally expected to increase.

FIGURE 5.5: Expectations of Future Changes in Volume of Leading Product Export by Firm Size



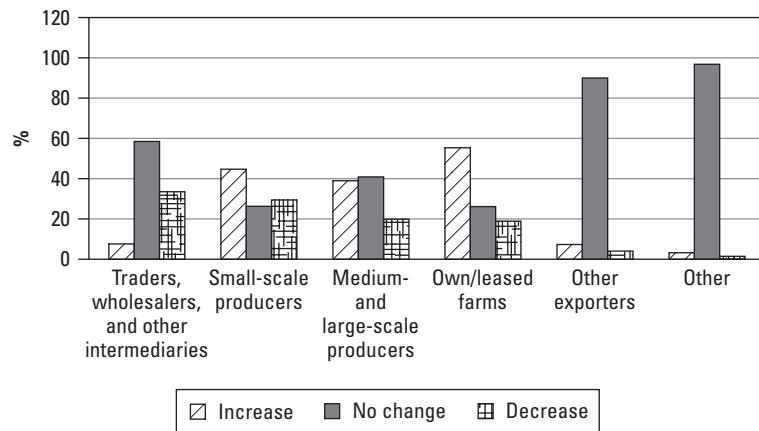
Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

FIGURE 5.6: Expectations of Future Changes in Volume of Leading Product Export by Whether Customers Required Compliance with Private Food Safety Standards



Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

FIGURE 5.7 Expected Change in Volumes of Main Product Exports Sourced Through Alternative Supply Chains



Source: Calculations based on data from Internet-based survey of fresh produce exporters in SSA—July to September 2008.

CONCLUSIONS

This chapter has reported results from a 2008 survey of African fruit and vegetable exporters, with an emphasis placed on the changing structure of their fresh produce procurement arrangements and the underlying factors driving the decisions to “make or buy” and from whom to buy. The firms responding to the survey had a reported export volume in 2007 accounting for some 88 percent of sub-Saharan Africa’s fresh produce exports, outside of South Africa. These firms and their procurement arrangements thus substantially reflect the aggregate picture for trends and perceptions in this industry.

The results of this survey provide supportive evidence both for the optimists and pessimists regarding the prospects for continued smallholder participation in Africa’s fresh produce export trade. For the optimists, there is evidence that many exporters see the benefits of continuing to work with smallholders. Most exporters have developed and refined a procurement system built on a combination of make and buy, with direct (and sometimes indirect) sourcing from smallholders being a critical part of the “buy” portfolio, especially for labor-intensive crops. Exporters are well aware of the strengths and limitations of sourcing from smallholders—yet also understand the constraints and risk involved in sourcing large quantities of produce from their own farmers and from those of larger outgrowers. Large companies, in particular, have continued to substantially draw upon smallholder supplies. These companies account for the bulk of Africa’s fresh produce exports. Region-wide, probably no more than 40 companies account for a large majority of Africa’s trade. To the extent to which these companies continue to see the strategic advantages of smallholder sourcing—and have the

capability to cost-effectively procure from this source and ensure that supplies meet their and downstream requirements—there are likely to be ample opportunities for remunerative involvement by smallholders. Indeed, a majority of respondent firms, including companies who supply standards stringent markets, expect to either maintain or increase the volumes of supply that they obtain from smallholders in the future.

For the smallholder pessimists, who believe that standards will continue to marginalize the role played by smallholders in this sector, certain supportive evidence can be found from this survey. For example, the overall numbers of smallholders reported to be supplying the main product to the respondent firms did decline from 2002 to 2007, with significant proportional declines in the procurement arrangements for both small- and medium-size companies. Noncompliance (or rising costs associated) with emerging standards may have played some role in this, although other factors were certainly also involved. Very high levels of turnover of smallholders involved in the procurement for all size categories of companies does not suggest a stable structure in which both producers and firms develop trust and promote the upgrading of productivity and the application of good agricultural practices. There appears to be much fluidity in smallholder participation, with a considerable level of entry, exit, and shifts in involvement between one firm or another. Export-oriented horticultural production entails quite a bit of production and commercial risk. If a large proportion of smallholders are engaged in this activity only periodically or as “free agents,” not immersed in the management systems of leading or long-standing companies, then the prospects for remunerative and sustainable participation are not strong.

Chapter 6: CASE STUDIES: UPGRADE FOR THE DOMESTIC MARKET AND FOR TRADITIONAL EXPORT COMMODITIES

INTRODUCTION

This chapter provides a series of short case studies addressing challenges and experiences of upgrading quality, food safety, and other standards in supply chains involving African smallholder farmers. The foci here are on supply chains for selected (agro-industrial) domestic markets and those involving upgrades of traditional (bulk) export commodities. The policy dialogue on standards and African agriculture (and trade) has often been dominated by attention to market access problems into some of the world's most discerning markets—including those for fresh fruits and vegetables and involving high-end (northern) European supermarkets—providing a very narrow and, frequently, negative picture of the role of standards, typically characterizing them as trade or market “barriers.” In that high-flying world, standards are typically cast as a constraint, a source of added costs and risks, and as a gatekeeper through which few African smallholders can pass.

This, of course, hardly represents the full spectrum of markets and “buyer requirements” that African smallholders do or could encounter. This chapter seeks to bring this dialogue a bit down to earth, highlighting a series of examples where the pertinent standards are within close reach of African smallholders and the market intermediaries with whom they trade. Not all the cases are success stories or ones where the sustainability of evident progress is assured. Most of these cases highlight attempts and challenges to upgrade production and postharvest systems from baselines resembling level 1 in our conceptual framework to a status resembling either level 2 or 3 in that framework. It is our contention that in relation to the large majority of African smallholders, this space is really “where the action is” or should be from a development assistance perspective given the potential to involve large numbers of farmers, the generally higher rates of success, and the potentially very large welfare gains associated with improving product quality and food safety in domestic markets. The cases presented here are the following:

Case 1: “Let the Sun Shine In”: Quality Upgrading and Improved Market Links in Uganda's Sunflower Subsector

Case 2: “Milking Opportunities” in Informal and Formal Dairy Value Chains

Case 3: Brewing Up Productivity and Income Gains Linked to Sorghum

Case 4: Africa's Groundnut Trade and European Union (EU) Mycotoxin Standards

Case 5: Rwanda—Gaining a Place in the “Specialty” Coffee Market

CASE 1: “LET THE SUN SHINE IN”: QUALITY UPGRADING AND IMPROVED MARKET LINKAGES IN UGANDA'S SUNFLOWER SUBSECTOR

Sunflower was introduced in Uganda in the 1920s. By the 1960s, it was widely grown throughout the country, with the crop variously being promoted by private, cooperative, and religious organizations. After a period of civil disorder, the Government of Uganda (GoU) led efforts to revitalize the sector in the late 1980s, including through the release of an improved open-pollinated variety—Sunfola—which had been developed by the National Agricultural Research Organization (NARO).

Sunflower is grown primarily in Uganda's northern and eastern regions, areas where the majority of Uganda's poor are located. Boosting sunflower production was therefore seen by the GoU and several donors as a prospective poverty-reduction tool. At the same time, domestic demand for vegetable oils was growing rapidly, with a high level of dependence on imported products. Increased sunflower production could thus contribute to import substitution.

Over the past decade, a number of development agencies have supported interventions in Uganda's sunflower sub-sector, sometimes in collaboration with GoU entities and

sometimes with more directed support to private-sector processors. The collective experience has generally been positive, with achievements in technology adoption, production expansion, farmer welfare gains, and import substitution. Upwards of 85,000 smallholder farmers have been incorporated into one or more coordinated supply chains. The sustained progress in this subsector contrasts sharply with the variable results and more volatile experiences of Ugandan farmers being supported for higher-value supply chains. The simple upgrades involved here—centered primarily upon the use of improved seed varieties and some modest tasks of quality screening—represent relatively easy steps that can be taken by most smallholder farmers. While the rewards for individual farmers are not exceptionally high, they have proven to be reliable, and the changes have not burdened farmers with added risks. Overall, the costs of achieving quality upgrades by these farmers have been very modest on a per beneficiary basis, especially when compared with many other recent schemes to raise standards in Ugandan agriculture and trade.

Selected Intervention Experiences

The International Fund for Agricultural Development (IFAD) has been supporting Uganda's sunflower subsector for an extended period. Its Vegetable Oil Development Project (VODP), implemented by the Ministry of Agriculture, Animal Industries, and Fisheries (MAAIF), provided support between 1998 and 2008. Major foci of the program included adaptive varietal research by NARO, planting seed multiplication and distribution and the mobilization of farmer groups (through the Uganda Oilseeds Producers and Processors Association—UOSPA), extension support through District Agricultural Offices, and the promotion of small-scale sunflower oil pressing. Considerable progress was achieved on the agronomic and group organization aspects, although the experience in promoting the ram oil press technology was more mixed, with many of the introduced machines being in disuse by the end of the program (IFAD 2010a). An alternative to the Sunfola variety did not emerge from the research. That variety had good production characteristics yet relatively low oil content and therefore was less attractive to large-scale vegetable oil processors.

Since the early 1990s, the leading company in the vegetable oil sector has been the Mukwano Group, which has used a combination of imported crude palm oil and domestic raw materials to produce a range of consumer products. For many years, Mukwano sourced local raw materials on a spot market basis and largely through intermediaries as it lacked a presence in rural areas or experience working directly with

farmers. Yet, by the early 2000s the company was facing difficulties procuring adequate local raw materials in competition with numerous small- and medium-scale processors. In addition, the company was dissatisfied with the quality characteristics of the Sunfola variety.

In 2003, Mukwano worked in collaboration with the Investment Development Export Agriculture project of the U.S. Agency for International Development (IDEA/USAID) and the Serere Agricultural and Animal Production Research Institute (SAARI)⁷⁰ to introduce a high-yielding, high-oil content sunflower hybrid from South Africa (PAN 7351). Based on the success of the initial efforts, the company established a partnership with the Agricultural Productivity Enhancement Program (APEP/USAID) and the National Agriculture Advisory Services (NAADS) in 2004, to expand the distribution of seed to outgrowers, and it set a coordinated company procurement model geared toward raising farmer productivity, imparting knowledge about better farmer practices and lowering the transaction costs in its procurement.

Mukwano relied on NARO to conduct the adaptability and verification tests of the new variety. Under the partnership with the institutions, the firm was in charge of the overall direction of the project, while the institutional support from APEP and NAADS focused on showing the benefits of both low- and high-technology input packages, training lead farmers and site coordinators to manage the process, and deliver messages to farmers on good agronomic practices through demonstration plots, and also via a weekly radio program (USAID 2008). APEP was implemented through a producer organization/lead farmer extension model, which was the basis for the support to sunflower production as well. By 2006, there were some 2,244 demonstration sites and 31,291 registered farmers in the scheme. Quite a few of the farmers had earlier been supported and organized into groups under the VDOP. The company entered into purchase contracts with the farmer groups, with predetermined prices. A team of purchasing agents was hired by the company to coordinate extension services, and purchase and store the crop. By 2009, the company was employing some 200 of its own extension workers.

The company procures all its local raw materials from smallholders, with farmers having an average growing area of 1.1 hectares (Elepu and Nalukenge 2007). The estimates on the number of contracted farmers vary, but the number is certainly significant. In the northern districts of Lira, Otuke,

⁷⁰ Currently known as National Semi-Arid Resources Research Institute (NaSARRI).

Oyam, Kole, and Alebtong, the company estimates the number at 52,000 and expanding.⁷¹ Another report estimates the number of outgrowers involved in various schemes at 75,000 to 85,000 (Elepu 2009). Most recently, Mukwano has been introducing maize and soybeans among its outgrowers as rotational crops, complementing cash crops with food crops, in order to address concerns on food security.

While the scheme has generally been successful, it has not been without problems. For example, in the early years, some farmers did not do a proper grading of their sunflower crop and included extraneous materials (e.g., dirt, stones) in their deliveries. A combination of incentives, penalties, and increased quality inspections at collection stations largely resolved this problem. Side-selling has been a persistent issue, as the demand for sunflower seed among various processors still substantially exceeds local production. Mukwano estimated that some 40 percent of its contracted supply in 2007 was sold to competing companies. Inadequate access to the higher-yielding seed has remained a bottleneck. The Pan 7351 hybrid variety continues to be imported, with Mukwano being the main importer. In 2007, the company entered into a partnership with the Uganda National Agro Input Dealer's Association (UNADA). Through the partnership, Mukwano agreed to make available imported hybrid seed to UNADA's regional distributors for sale to millers around the country. The Danish International Development Agency (DANIDA) provided guarantee for UNADA to purchase the hybrid seed from Mukwano.

Evidence of Impact

Interventions, both through institutional partnerships and through the lead firm, have provided opportunities for small-scale producers to engage in the production of sunflower. The increased supply of Sunfola seed to farmers, on which VODP played a critical role, had a clear effect on expanded cultivation. According to IFAD (2010a), the area planted with sunflower with VODP support rose from 2,102 ha in 1998/99 to 81,548 ha in 2007–08. The number of farmers reached with the program was estimated at about 206,943 in 2008, with investments in the sector (from the IFAD loan) reaching over US\$8 million, and a project cost per beneficiary of US\$37.

Mukwano has indicated that about 40,000 hectares are planted by its outgrowers, yielding some 40,000 to 50,000

tons of sunflower seed per year. Investments in the scheme, from APEP alone, through grant agreements with the company are estimated at US\$85,000 during the period 2004–07, to support nearly 1,600 demonstration sites.⁷² Support to SAARI reached about US\$12,000 for the evaluation, identification, and introduction of the high-yielding hybrid. In 2007, the project supported the efforts of a new investor, Sanyu Agro Industries Ltd., through a grant agreement (US\$18,300) to set a sunflower scheme for 3,000 outgrowers in 2007–08. APEP also supported A.K. Oils & Fats Limited from 2005 to 2007 through grants totaling nearly \$75,000 to develop 2,900 demonstration plots for high yielding hybrids. Those plots targeted over 30,000 outgrowers.

Overall, sunflower production in Uganda has increased dramatically since the early 1990s (figure 6.1). A major leap occurred in the early 1990s, which coincides with the efforts to upgrade production through the adoption of the improved variety Sunfora, resulting in significant increases in yields—in the late 1990s the national average yield doubled, increasing from 400 kg/ha to over 800 kg/ha. A second leap occurred almost a decade later as a result of the activities promoted by donors as mentioned above, including the efforts to upgrade production toward the higher-yielding variety. Domestic demand for vegetable oil continues to grow rapidly at some 9 percent per annum (IFAD 2010b).⁷³ Thus, there remains considerable scope for further expansion of outgrower arrangements since the processing sector is still operating at well below its capacity and must still rely upon imported raw materials to supplement local supplies to meet the growing demand. There are also broad opportunities to expand yields. For example, APEP reported that in spite of demonstrated yield enhancement and cost reduction associated with high-input production technologies, their adoption by farmers was very low—of the about 34,354 farmers exposed to the program, only 172 adopted high-input production technology, and about 30,919 adopted low-input technology.⁷⁴

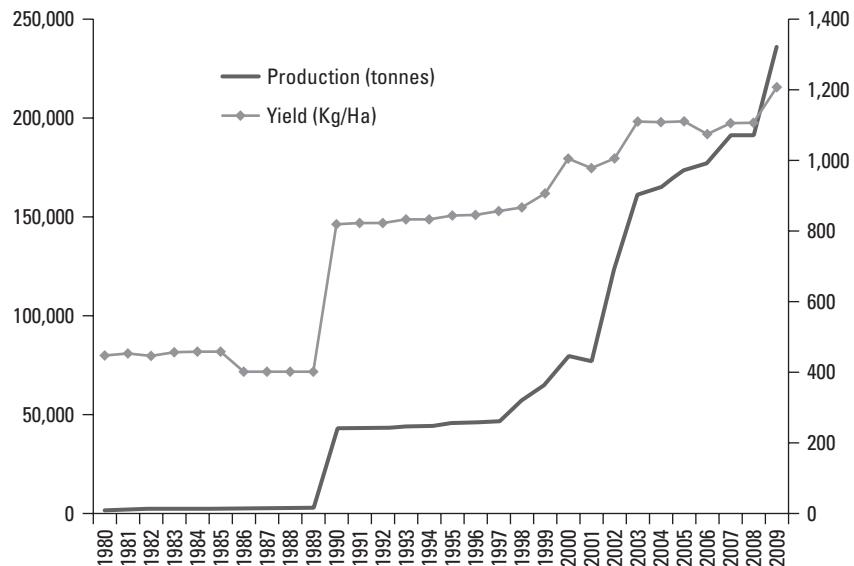
⁷² APEP estimated the company's matching contributions at about \$285,000.

⁷³ The sector has benefited from important recent investments. For example, in 2007 A.K. Oils & Fats (U) Ltd (affiliated with the Mukwano Group) constructed a new oil mill in Lira, with an investment of approximately US\$1.4 million, doubling the company's capacity, and also another plant in Tanzania. In 2009, a new sunflower oil processing plant opened in Uganda, mainly for production of sunflower cake, with a very large processing capacity (around 100,000 tons of sunflower cake annually).

⁷⁴ Low-input production technologies comprise basically the use of hybrid seeds, timing planning and weeding, correct plant density, and so forth, but relatively low or no use of fertilizer.

⁷¹ Northern Uganda's New Agricultural Chapter, July 2010. Mukwano's website http://www.mukwano.com/agriculture/agric_in_nothern_ug.php

FIGURE 6.1: Uganda Sunflower Production and Yields



Source: Calculations based on FAOSTAT data.

For farmers there have been evident benefits from participating in the sunflower outgrower schemes. A survey by Elepu and Nalukenge (2007) found participating farmers to have much better access to advisory services and reliable market outlets than did nonparticipants in similar locations. The incremental incomes from sunflower haven't been exceptionally high, but yields have been relatively reliable and prices are determined prior to plantings. Elepu and Nalukenge (2007) found reported gross profit per acre to be significantly higher among the farmers participating in the contract scheme than the noncontracted farmers growing sunflower (USh 20,456/acre vs. negative 7,775/acre).

APEP reported increased yields from adoption of hybrid seed (and low input technologies) from 250–350 kg/acre with the traditional variety to 575–600 kg/acre with the improved system during the 2006/07 season, and net incomes considerably higher among farmers adopting the hybrid. Similarly, the impact evaluation of VODP project carried out in 2008 reported the emergence of the contracting scheme as one of the factors affecting the performance of the project—the adoption of the new variety produced a higher yield and commanded a higher price than the open-pollinated variety (OPV) Sunfola being distributed by VODP and was thus more profitable for farmers.⁷⁵

Development agency and private sector efforts to promote smallholder sunflower production and upgrade quality

through improved seeds and farming practices have certainly paid off. Although there are many challenges ahead, including concerns about soil fertility, ensuring the sustainable distribution of hybrid seeds, and finding the right balance between cash and food crop production, there are certainly positive prospects for the sector and the engagement of more farmers. IFAD is planning a second phase VODP, and USAID's new investment in Uganda—the Livelihoods and Enterprises for Agricultural Development (LEAD) project that started in 2008—has continued its support to sunflower outgrower schemes.

This experience provides an excellent illustration of the opportunities for achieving both commercial and developmental benefits from interventions seeking to upgrade smallholder production from levels 1 to 2 in our conceptual spectrum of market requirements. The technical and organizational challenges were straightforward. The scale of financial investment by donors and the GoU—largely in research, demonstration plots, advisory services—was rather modest in relation to the number of farmer (and Ugandan consumer) beneficiaries and the scale of production gains achieved.

⁷⁵ The project also highlighted that as a result of the adoption of hybrid seed, both the market for sunflower seed and the supply of extension services became more diverse and the VODP-supported products became less attractive for farmers.

Farmers were required to make very modest adjustments. They were not asked to bear heavy financial or commercial risks. No third party was needed to certify products or production practices.

CASE 2: “MILKING OPPORTUNITIES” IN INFORMAL AND FORMAL DAIRY VALUE CHAINS⁷⁶

In recent decades, there has been a growing interest in the potential of smallholder dairy development to reduce poverty in developing countries via income and nutrition improvements. Even among the lower-end smallholders, holding just one dairy cow is acknowledged to have significant benefits in terms of household nutrition and supplemental income gains (IFAD 2005; Swanson 2009). Following the liberalization of the sector in much of sub-Saharan Africa (SSA) during the 1990s, smallholder dairy production has shown signs of considerable dynamism. Region-wide, smallholders are estimated to account for about 80 percent of raw milk production, the balance coming from medium- or large-scale commercial farms or integrated farming/processing operations.⁷⁷

During the past decade, there has been growing concern about the ability of African smallholders to sustain a remunerative position in national dairy value chains. One factor has been competition from imported milk powder, being widely used by processors due to logistical considerations (in contrast with procuring highly perishable raw milk). A second factor has related to standards, those laid down and enforced by both governments and the private sector. Governments have sought to protect consumers from the potential risks associated with improper milk production, handling, and adulteration. Elements of the private sector, including processors selling milk through modern supermarkets and companies producing higher value dairy products, have raised quality standards above the prevailing norm.

Addressing these challenges—and taking advantage of emerging market opportunities—has stimulated an array of donor-supported programs in dairy development within Africa, often implemented with close collaboration with the private sector. This mini case study highlights some recent

experiences with dairy sector interventions in Kenya, Uganda, and Zambia. It emphasizes that the traditional challenges in smallholder dairying—related to animal husbandry, farm productivity, and realizing economies of scale in milk bulking and sale—remain the prominent focus and that there is little evidence to suggest that smallholders have been excluded from formal markets due to quality-related concerns. In fact, processors have been unable to source enough smallholder raw milk—and therefore, continue to operate at below capacity—not because of quality mismatches but because the processors frequently cannot compete with informal market channels on the basis of price and the transaction costs associated with sales.

Challenges of Smallholder Dairy Development and the Importance of Quality and Safety Standards

Public standards, whether mandatory or voluntary, covering milk and milk products, have been driven by concerns over public health and by a conviction that ensuring the safety of dairy products is a fundamental role of the state.⁷⁸ But the pursuit of consumer protection objectives by encouraging the formalization of milk trade implies significant challenges, particularly as it relates to the implied required changes in production and handling practices to ensure quality milk. Additionally, other challenges include putting in place efficient and well-coordinated logistical arrangements along the chain to avoid quality deterioration and investments in infrastructure and technologies (including cooling systems). A failure in the process can easily compromise the quality of the pasteurized milk and related dairy products.

Dairy production is generally regarded as a very expensive activity. In the case of smallholder dairy development, a major challenge is the high farm-level start-up cost. The value of dairy livestock often accounts for 50 to 70 percent of total investment costs, which can be particularly difficult for small-scale farmers to afford without external support or access to artificial insemination services to upgrade existing animals through breeding. Once a smallholder has been able to engage in dairy activities, the level of upgrade required to participate in formal markets will be associated with the

⁷⁶ Detailed information on this case study is presented in Keyser, J. (forthcoming).

⁷⁷ Although smallholders involved in dairy production might not be the poorest, they are certainly both poor and disadvantaged. In Kenya, for example, the average dairy farm size is 2.6 ha and supports six people; a quarter of these households are female-headed. The mean number of cattle is only three, but for about half the farms dairying is a major source of income.

⁷⁸ Public approaches to provide consumer protection on the consumption of milk and milk products have included i) recommendations on the proper hygienic control of milk and milk products throughout the food chain, ii) the publication of specifications for the quality of milk, according to its intended use, including microbiological and other criteria, iii) procedures for testing and analysis, and iv) in several countries, specific provisions for the marketing of raw milk, including the banning of informal raw milk trade, particularly in urban centers.

TABLE 6.1: Continuum of Market Requirements and Associated Conformity Systems in Milk and Milk Products

	STRINGENCY OF OFFICIAL AND BUYER REQUIREMENTS LEVEL OF SOPHISTICATION OF THE CONFORMITY ASSESSMENT SYSTEMS				
	DAIRY LEVEL 1	DAIRY LEVEL 2	DAIRY LEVEL 3	DAIRY LEVEL 4	DAIRY LEVEL 4a
	Informal		Formal		
Market Outlets (increasing requirements for capital investment, inspection, and licensing as move from left to right on continuum)	Local sales by farmers or unlicensed vendors to customers in the farm area	Sales to urban and town markets by unlicensed traders, vendors, milk shop owners	Sales to urban and town markets by licensed traders, vendors, milk shop owners + licensed bulking centers	Processor (domestic, some current exports)	Processor (COMESA/EAC export ready)
Main Products (increasing standards for hygiene and freshness as move from left to right on continuum)	Raw milk	Raw milk	Raw milk + processed yoghurt, ghee, cheese, fermented milk Some batch pasteurized milk	Pasteurized milk (including fermented milk), yoghurt, butter, ghee, cheese, ice cream, cream, UHT, dry milk powder, etc.	UHT milk, dry milk powder, plus other long life, value-added products at COMESA/EAC export level
Quality Requirements	Fresh milk, quick delivery w/o chilling	Fresh milk, quick delivery w/o chilling	Fresh milk, some chilling to prolong life if needed Certification and licensing by national authority	Fresh milk, chilling to prolong life as required More advanced national level certification and licensing requirements that are variably based on ISO and HACCP guidelines for milk hygiene and timeliness of intake	Fresh milk, consistent chilling to prevent bacteria growth essential + detailed specifications for product, packaging, labeling, composition, and laboratory analysis using ISO methods
Quality Inspection	Sight and smell	Sight and smell + occasional platform tests	Sight and smell + wider range of routine platform tests + basic record keeping of milk intake and payments to farmers	3-4 routine platform tests at bulking center and other critical control points (ideal) + more detailed quality analysis at plant (ideal)	3-4 routine platform tests at bulking center and all other critical control points (needed) + very detailed quality analysis and record keeping at plant (required)

Source: Keyser, J. (forthcoming).

characteristics of the targeted market (as determined by the intended use of the raw milk—yogurt, cheese, UHT milk, etc.), as well as by the starting point of the farm in terms of knowledge and investments already made to improve dairy productivity and to ensure quality and safety.

Table 6.1 outlines five levels of upgrading in dairy development, applying the generic framework laid out earlier in Chapter 3. Buyer requirements for freshness, shelf life, physical quality attribute, and microbiological quality become increasingly stringent as one moves from informal to formal markets and as end uses relate more to value-added products. In local outlets, where raw milk is sold for direct consumption, the freshness of the milk and its quick delivery

are the essential requirements. At the other end of the spectrum, for supply chains in which the procured milk will be converted into milk powder or UHT milk, the range and stringency of quality criteria are considerable. Raw milk with a total bacteria count greater than 200,000 cfu/ml is unsuitable for UHT production. Similarly, the sophistication of conformity assessment systems varies across this spectrum of markets and users.

As farmers move from level 1 to level 2 value chains and then beyond, the costs associated with quality upgrading increase and can be difficult for farmers to afford in terms of up-front cash requirements as well as managing the depreciation of their assets. Data from the three focal countries

illustrate the higher production costs of moving toward "improved" and "advanced" dairy production, yet also clearly indicate a higher level of profitability for those farmers able to make the upgrades ([table 6.2](#)).

Off-farm upgrades become especially critical for farmers to supply levels 3, 4, and 4a value chains. Normally, there will be the need for investment in a raw milk bulker, except where farmers are in close proximity to a dairy plant or when their daily production is large enough to justify direct delivery. At such milk bulking sites quality assurance can be done through routine platform tests. In level 2 value chains for raw milk, the bulking function is typically carried out by small traders or bicycle vendors who buy direct from smallholder farmers and sell to final consumers or other intermediaries on a daily basis. These informal markets depend on quick turnover and are unlikely to involve milk chilling except when long delivery times are involved that would cause the milk to spoil.

Very often, the bulking function in formal dairy systems is carried out by farmer-owned cooperatives, although this may be performed by private entrepreneurs or even processors as part of a vertically integrated milk run in areas where there is large enough production and/or strong competition for raw milk to justify the investment. Bulking systems without chilling are more common in Kenya than in Uganda and Zambia due to the very large volumes of milk produced in Kenya and the proximity of farmers to a processing plant, particularly in the leading production regions. Where cooling does not take place, Kenyan dairies have developed ISO-certified systems to monitor the timeliness of delivery and record platform test results at each stage of the collection and delivery operation. In Uganda, nearly all milk that reaches a processing plant has been chilled and, in Zambia, chilling is absolutely essential because of the dispersed nature of production and time required to collect sufficient quantities to justify selling to a dairy processor.

TABLE 6.2: Costs and Returns of Smallholder Dairy Upgrades in Selected Countries

	TOTAL MILK AVAILABLE FOR SALE (LITERS/YR)	PRODUCTION COSTS (USD)			FARMER REVENUE (USD)		
		TOTAL COST PER HERD	COST PER COW	COST PER LITER SOLD	TOTAL NET PROFIT (CASH & IMPUTED)	NET PROFIT FROM MILK SALES (CASH ONLY)	TOTAL PROFIT PER COW (CASH & IMPUTED)
Kenya (3-cow)							
Typical	5,448	1,944	648	0.36	39	(148)	13
Basic	6,229	2,085	695	0.33	152	(56)	51
* Improved	9,060	2,945	982	0.33	944	441	315
* Advanced	14,269	4,026	1,342	0.28	1,564	874	521
Kenya (6-cow)							
Typical	7,533	2,385	398	0.32	463	255	77
Basic	9,015	2,545	424	0.28	734	505	122
* Improved	11,785	3,430	572	0.29	1,595	1,187	266
* Advanced	17,193	4,941	824	0.29	2,193	1,742	366
Uganda (3-cow)							
* Basic	4,177	1,131	377	0.27	321	(122)	107
* Improved	7,843	1,623	541	0.21	638	100	213
* Advanced	11,754	2,007	669	0.17	931	360	310
Zambia (1-cow)							
* Basic	617	394	394	0.64	586	(209)	586
* Recommended	1,932	649	649	0.34	926	(97)	926
* Advanced	3,037	902	902	0.30	1,099	52	1,099
Zambia (2-cow)							
Basic	1,564	657	328	0.42	1,214	(188)	607
Recommended	4,269	1,193	596	0.28	1,843	27	922
Advanced	6,509	1,678	839	0.26	2,213	368	1,106

Management assumptions

Kenya, zero-graze: breed improves at each level, switch from plastic to metal.

Uganda, zero-graze: breed improves from typical to improved (same for improved and advanced).

Zambia, semi-zero graze: high-quality breed throughout.

* Indicates metal dairy equipment

Source: [Keyser, 2003 \(Uganda\)](#), [Keyser, 2008 \(Zambia\)](#), [Parsons and Matiru, 2008 \(Kenya\)](#).

The costs of establishing an efficient milk bulking operation can be significant. Large investments in stainless steel dairy equipment, cooling tanks, quality test kits, insulated tankers, and new or upgraded buildings may be required.⁷⁹ Significant investments in business management training and quality control procedures may also be required. It is not unusual for milk bulking centers in East Africa to have an annual turnover greater than a million dollars, which imposes significant management demands. Operation of a competitive milk bulking system, in fact, creates a number of important management problems in terms of having to keep track of farmer payments, deciding where to market the milk to get the best price, how to organize the logistics of milk collection and delivery, quality assurance, and long-term financial planning to cover depreciation costs and future expansions.

For processing upgrades, there are several technological options for the preservation or processing of raw milk, from very basic small-scale systems—level 3-type technology, with little asset-specificity involved—to very complex processes and higher investments in facilities and equipment (e.g., the production and packaging of long-life UHT milk and evaporated milk powder for domestic markets and export require more sophisticated capital-intensive techniques and specialized skills, so are associated greater economies of scale and higher degrees of asset specificity (Jaffee, 1995)). Furthermore, specific quality requirements can be particularly challenging in some higher-end products.

Characteristics of Country Industries and the Relevance of Standards

Since economic liberalization and the privatization of state dairy-related functions, a vibrant small-scale sector has emerged in Kenya and Uganda. In Kenya, some 750,000 smallholders are involved; in Uganda, about 200,000. In both of these countries, most milk production has been traditionally sold through informal channels. In Kenya, for example, the International Livestock Research Institute (ILRI) estimates that informal milk markets account for approximately 86 percent of milk supplied to consumers, with supply chain actors including small-scale producers, mobile milk traders, milk bar operators and milk transporters. The high degree

of informality is the result of the proliferation of small-scale (and technically illegal) milk traders after liberalization, with these suppliers being able to provide milk more cheaply and more directly to large numbers of consumers. In Uganda, the formal sector is estimated to handle only 5 percent of the milk that is domestically marketed or consumed.

In both Kenya and Uganda the official government policy has been to restrict the activities of small-scale milk vendors, ostensibly to protect consumers. In Kenya, for example, such vendors cannot operate unless they are licensed, yet the existing regulations made no provisions for licensing or engaging them (Kaitibie et al. 2009). In Uganda, milk handlers have faced tight laws and licensing requirements since 2002 and the national authority is looking at legislation that would completely ban the sale of raw milk in urban areas. However, due to the high demand for cheap, raw milk, the informal sector has continued to flourish in both countries, making it almost impossible for the respective authorities to enforce the laws, given the size of the sector. In Kenya in particular, this situation gave rise to what was called the “milk war” between processors and the informal sector. This was a dispute that later resulted in a comprehensive policy shift toward small-scale milk vendors, as will be discussed later.

The evident dynamism of the informal milk trading sector represents a tremendous challenge for processors, who have made significant investments in plant and equipment yet are forced to compete with informal channels to gain enough supply of quality milk to expand their market presence, both at home and regionally. Most processors in both Kenya and Uganda operate at well below their installed capacity and have little scope to compete with small-scale traders on the basis of price because of the extra costs of their operations, including expensive packaging costs. As a result, they are rarely able to pay a significant premium for higher-quality milk, and this detracts from the incentives for farmers to supply the former sector.⁸⁰

Thus, from the standards perspective, clearly, in Uganda and Kenya, where a large informal sector exists, standards have not been a constraint for smallholder market access. The issue has not been exclusion due to standards, but rather a lack of incentives motivating farmers to make upgrades to supply formal markets, allowing processors to take advantage of growing demand for dairy products at home and in regional

⁷⁹ In Kenya, the capital equipment required for a typical bulking center with 4,000-liter daily capacity is estimated to be around US\$40,000 without chilling tanks or US\$80,000 with these (Keyser 2006). In Zambia, the cost of opening a new collection center with a small 1,500-liter cooling tank is around US\$30,000 (Keyser 2006a).

⁸⁰ There are 52 milk processors in Kenya, although in early 2009 only 34 were active. There were 7 large processors active in Uganda in 2009.

markets. In the context of informal markets, in Kenya for example, under the new provisions of the Dairy Act, the burden of compliance is passed on to traders who now need to be trained and certified and make small investments in testing equipment to be able to supply quality milk to the market. In Uganda, the fact that the formal sector has not been able to capture a significant share of the market due to constraints at milk collection and processing levels, has limited the opportunities to reduce milk waste and contribute to income stabilization, as fluctuations in prices between dry and rainy seasons can reach 60 percent or more.

In contrast to Kenya and Uganda, dairy production is much less developed in Zambia and is a comparatively new activity for smallholder farmers. It is estimated that about 1,700 smallholders sell into commercial supply chains. The entire smallholder output in 2008 was of a similar volume as the raw milk handled by many individual collection stations in Kenya and Uganda. In Zambia, dairy developed from large investments, both in production and processing capacity. The challenge of dairy development in this industry has been to scale-up domestic production to fulfill growing demand. Considerable amounts of powdered milk must be imported by the lead processors due to inadequate local availability of raw milk. From the perspective of smallholders, the challenge has been to achieve economies of scale—in production and bulking—and the quality required to become an attractive procurement option for the large-scale processors.

Development Agency Approaches to Smallholder Dairy Support and Associated Compliance Challenges

The challenge of smallholder dairy development has been seen by development agencies through two distinct lenses. One is a commercial lens, with the aim being to enable small-scale farmers to supply more discerning market channels (i.e., levels 3 to 4a) and, in so doing, contribute to higher levels of efficiency of the industry and increased regional trade. The second is a poverty reduction lens, with the aim being to support farmer participation in level 1 and 2 value chains, recognizing the incomes gained by producers as well as the benefits for poor consumers.

Kenya—In Kenya the dairy sector has been subject to considerable donor investments. Some US\$40–50 million has been committed by donors to support the sector since 1997, excluding recent commitments within regional projects. Approaches to commercial dairy in Kenya have evolved from farmer-based approaches in the 1990s toward market-oriented approaches in the early 2000s, with farm improvements focusing on improving the quality of cattle stock. For this

purpose, the access to artificial insemination (AI) services was considered critical. Product quality came as a specific project objective in the early 2000s, with approaches targeting farmers through cooperatives or other groups. These approaches extended to value-chain frameworks, targeting improvements along the chain, using different entry points to enhance the capacities of different actors and the overall performance of the chain.

Many of the more recent projects have been based on a Business Service Development (BSD) model in which farmers were provided improved understanding of and access to selected services (e.g., AI services) and quality inputs (e.g., feeds, veterinary drugs) and the capacities of service providers was strengthened. One example was the DFID-supported Business Service Market Development Program (BSMDP), which supported farmer links to both informal and formal supply chains. Several service hubs were established for milk bulking and chilling, regional AI stations were established, and support was given to agricultural input stockists.

USAID has supported the sector, most recently through its Kenya Dairy Development Program (KDDP) and the Kenya Dairy Sector Competitiveness Program (KDSCP). The latter emphasized the creation of sustainable local businesses, cooperatives, and enterprises to provide services for improvements in market expansion, cost competitiveness and productivity. Complementing this approach, several programs have focused on quality improvements, providing access to chilling equipment to reduce spoilage and increase milk supplies and incomes. For example, the KDDP developed the “Milk Quality System”—a kit containing six real-time cow-side technologies—as an alternative to centralized laboratories that use complex, nonportable, and expensive analytical equipment.

Lessons have been learned from these experiences and examples of good practice have been identified and replicated. For example, the experiences of Land O’Lakes with cooperative business services and TecnoServe with “service hubs” are now being replicated by other donors in Kenya and throughout the region. “Milking/service hubs” are places where milk can be bulked, cooled, and marketed. The centers link the farmers to processors and develop businesses that ensure a steady, cost-effective supply of goods and services to farmer groups. A key aspect is to link these chilling plants/business hubs to financial institutions to help the entities with their (substantial) financing needs. The service centers focus on creating incentives to small farmers and traders, to encourage them to invest in better production practices and improved technologies (including animals).

Thus, in Kenya, it is apparent that within the context of support to dairy development, collective action through “service hubs,” as the entry point for channeling support to smallholders and a practical donor exit strategy, is the predominant approach in current interventions, complemented by activities to strengthen the capacities of the business service providers to serve the needs of smallholders and other actors. The IFAD-funded project under implementation by the Ministry of Livestock and Fisheries Development (MLFD) follows a similar approach for the formalization of milk supply, using

BOX 6.1: Formalizing Milk Supply in Kenya: The Market-Oriented Dairy Enterprise Approach

Project interventions are targeted to support the progressive movement of groups or individuals through steps:

(a) **Step 1.** Here, there is increasing collective activity (for example, in the form of contact with input suppliers to purchase feed in bulk) and a clear increase in incomes. Evidence of consistent successful activity (measured at this low level in terms of volume or a slightly increased profit level) will indicate that the group can move on to the next level. The group or individual will decide when and how to take the next step.

(b) **Step 2.** Following a period of time and based on their broadened perspectives and understanding of market opportunities, the group may decide to build capacity to expand and assume a higher level of risk. The bulk of program resources will support technical training activities to help beneficiaries gain the knowledge to cope with risk.

(c) **Step 3.** Groups become organized as business entities and expand and consolidate their activities. They should also be able to demonstrate that they have sustained dairy-based activities generating a profit that provides regular incomes to their members. The entity (for example, a self-help group, women’s group, cooperative, or company) can then be considered to have progressed to maturity.

Gradual adoption of dairy product standards is encouraged through awareness-raising and capacity-building for milk producers, processors, traders and consumers. Investments in small dairy cooling/processing units are also supported.

Source: IFAD (2005).

“business groups” as the entry point for intervention, but, importantly, relies on a step-wise process to strengthen farmer groups, complemented by investments in training and quality-related infrastructure (*box 6.1*). In Kenya, development agencies have also played a very important role in supporting dairy sector policy reforms.⁸¹

Uganda—In the late 1980s and early 1990s donor agencies made considerable investments to help rehabilitate Uganda’s dairy industry. Investments were made in insulated road tankers, refrigerated distribution trucks, coolers, lab equipment, and upgrading of milk collection facilities in production areas—all within the domain of the parastatal Dairy Corporation (DC). With the support of DANIDA, the government initiated a process of reviewing the dairy policy. Yet, it was not until 2006 that the DC’s commercial arm was privatized.

Support to commercialization initiatives started in the mid-1990s with donor investments totaling around \$12 million. The foci of activity have been on on-farm improvements and farmers’ collective action as a way to link producers to formal markets. However, with the larger donor investments, value-chain interventions have dominated. Support for the establishment and development of industry service-based organizations has been quite prominent in Uganda. It is likely that the service/milk hubs approach will become the dominant method of intervention to reach smallholders, through, for example, the investments to be made by the East Africa Dairy Development Project (EADD).

In terms of quality upgrading, one of the most significant changes has been the support to policy action/regulatory intervention leading to the ban on the use of plastic containers to carry milk (2002), and the requirement of the use of chilling equipment and insulated tankers by traders except for local sales within the immediate farm area (2006). In Uganda, transport distances are larger than in Kenya, and, therefore, chilling is critical. As a consequence of this policy change, large parts of the so-called informal sector

⁸¹ The new dairy policy now clearly acknowledges the role of the informal market actors in the development of the sector. Donors have provided support to the implementation of the policy, which has implied support to the certification of trainers of traders; licensing of traders; training to traders, transporters, milk bars, and so forth; the creation of traders associations, and so forth. The Improving Quality Assurance in Milk Markets (IQAM) implemented by Strengthening Informal Sector Training and Enterprise (SITE), with funds of DANIDA and the Department for International Development (DFID), was formulated with the objective of supporting the policy implementation. Traders now appear as a key target group in recent projects.

in Uganda have become relatively sophisticated in which medium-size traders have their own collection networks and cooling tanks in farm areas, and bring raw milk for sale in insulated tankers. Estimates indicate that, as a result of this policy change, over 200,000 small-scale traders were pushed to exit the business during the transition period of policy implementation, and as a result of not being able to afford the required upgrades.

Zambia—Dairy investments have often been made within the context of broader programs and, therefore, it is difficult to estimate the size of the investments made. The support has needed to be significant since smallholder dairying was started nearly from scratch and substantial investments have included the high start-up costs of livestock. Although value chain approaches have been applied, the focus of the investments has been on on-farm productivity and aggregation of product to achieve economies of scale, the latter being an enormous challenge in Zambia.⁸²

Approaches have included working with two types of farmers. One group was better endowed smallholders who own relatively large numbers of cattle, but who were never engaged in trade. It was expected that these farmers were able to more easily absorb the training messages and make the transition to commercial dairy production. The other target group has been food-insecure households for whom dairying would be an entirely new activity.

Donors have tested several approaches to support the participation of the larger smallholder farmers in formal dairy markets. Commercial demand for fresh milk was on the rise, and it was perceived that this so-called “ready market” offered an ideal opportunity for smallholders to deliver their surplus milk and become part of the modern supply chain ([Mukumbuta and Sherchand 2006](#)). However, it quickly became apparent that the surplus milk model was not sufficient for long-term success. Given the low productivity of the traditional livestock, very often milk volume was too small to justify delivery. More integrated approaches have been implemented under value-chain frameworks, including providing intensive

types of support focused on the fundamentals of good dairy management and breed improvement, facilitating farmer access to high-yielding livestock, and facilitating investments in milk bulking.

Support to new dairy farmers has included intensive training in dairy production and milk hygiene, and the provision of a pregnant heifer with the understanding they must pass on the first female calf to another group member as a way to extend the program’s outreach and minimize costs per beneficiary. Some observers argue that the pass-on requirement can create significant risks to farmers and could undermine the long-term sustainability of new value chains developed with project assistance ([Keyser 2006, 2008](#)). Business service development approaches have been tested but have faced the challenge of enough demand for the services, given the relatively small number of small-scale producers and their dispersion over large geographic areas.

Evidence of Impacts and Learning

Dairy production has increased significantly in the region, in both formal and informal markets. In Kenya, for example, estimates indicate that the formal sector has nearly tripled in size since 2001, reaching about 420 million liters in 2007. The marketing of raw milk has also grown quite rapidly. From 2001 to 2007, the amounts being marketed through raw milk channels increased by 430 million liters ([Grant 2008](#)). Development support to the dairy sector has undoubtedly contributed to these gains, particularly in terms of ensuring that quality milk reaches formal channels.

From the review of different donor experiences, it is clear that the major constraints to smallholder dairying in East and Southern Africa have related to long-standing issues about on-farm productivity, animal husbandry, and the economics of milk bulking and marketing rather than the more recent focus on addressing the challenges of quality upgrading. Although standards-related requirements have played an important part in shaping donor and private investor strategies for channeling milk to the formal sector, there is little evidence that new quality requirements have kept small farmers from successful dairy marketing.

This is not to say that quality upgrading has not been important. In Kenya and Uganda, where farmers are used to selling in level 1- and level 2-type markets, the experiences have showed that farm-level upgrading to levels 4 and 4a can be particularly difficult without adequate price incentives being provided by processors. Dairy projects in this setting, therefore, have needed to focus on farmer training in cost-

⁸² Financial analyses have shown that a typical bulking center in Zambia requires a minimum throughput of 200,000 liters per year to break even. Many of the centers set up through donor projects have had an annual throughput of 60,000 liters or less. They will thus require several years of steady growth—or continued subsidization—in order to eventually achieve financial independence. Zambia’s thin production base is the main cause of this problem, although the situation has been compounded by donor priorities that have sometimes required project implementers to spread interventions over many locations for the sake of equity.

effective management improvements, helping producers to afford metal dairy equipment, and other types of investments that make trading with formal sector buyers more reliable and appealing. Thus in this type of market, the challenge has been the high costs of dairy development and finding the right balance in project activities to address the bottlenecks that matter most.

Some development partners have argued that although project activities have contributed to increasing the volume of milk produced and marketed by the targeted groups, quality issues through the whole value chain remain a problem, particularly in Kenya, and low milk quality has affected the ability of processors to diversify into higher-value products and take advantage of underserved regional markets. Unless these markets are exploited through improved quality, increased production will ultimately lead to low farm gate prices, a major disincentive to the smallholder dairy farmer (Land O'Lakes 2008).

In newly emerging dairy countries such as Zambia, where informal markets are less prevalent, more comprehensive kinds of assistance have been required to achieve the standards that commercial processors require. Despite the costs of this assistance, project directors say that the challenges of quality upgrading have actually been easier to address in Zambia than in East Africa, since new farmers can be trained and equipped to do things right from the very beginning.⁸³ Because of the focus on dairy development as a route to improved food security, however, another important risk arises in spreading the production base too thinly and, therefore, never achieving sufficient economies of scale in post-farm operations.

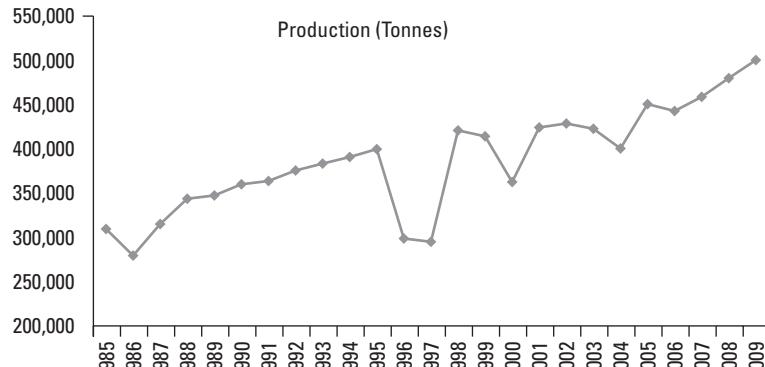
In terms of interventions to support quality improvements in informal markets, Kenya's experience of endorsing small-scale milk vendors and milk bar operators through a certification and licensing program demonstrates that investments can bring these markets to level 3-type standards, while helping to create a more level playing field for formal sector operators to compete and attract the kind of supplies they need for value-added processing. Studies have begun to quantify the specific impacts of this policy, which are demonstrating positive outcomes in terms of welfare effects, reduction of transaction costs, reduction of consumer prices, and changes in behavior among regulators—away from a policy of harassment and rent-seeking. They have also highlighted the need for a fairer way of assessing certification fees among producers and consumers (Kaitibie et al. 2009).

Similarly, considerable success has been achieved in Uganda by working with small-scale traders to improve the dependability of raw milk markets by investing in new dairy equipment and the training of operators in hygienic dairy handling. Even in Zambia where the outlets for raw milk are much smaller, counter sales have still been an important revenue stream at most bulking centers and often provide more value per liter compared to selling to a formal buyer once the costs of milk transportation are taken into account. As a strategy to help overcome the major problem in Zambia of achieving effective economies of scale, the importance of local outlets and potential for simple kinds of processing that add value to local production should be considered.

In terms of project approaches, there has been a lot of experimentation on ways to better serve the needs of smallholders and of the industry. The sequencing of donor interventions and the replication of effective approaches have been clearly observed. For example, many of the most sustainable business service models piloted by a project have then been supported and expanded by other programs. The BSD approaches for dairy support have benefited from the plentiful supply of trained veterinary staff and an increasing presence of suppliers of basic services (such as artificial insemination, clinical and agro-vet services, and so on), and from the existing technologies, financial infrastructure, and existing models of service hubs (cooperatives). Yet, sustainability of business service providers has frequently depended upon their ability to provide a diverse range of services.

The dairy sector offers considerable promise for smallholder participation despite the importance of quality standards and buyer demands in some market segments. Quality standards have not been the most important barrier to successful smallholder dairy, but attention to quality and investments

⁸³ Milk quality test results in smallholder collection centers have recorded higher total plate count results than commercial and emergent farmers, but have still been consistently within the B-grade range, which is entirely acceptable even for producing UHT milk. Compared with East Africa, where smallholder total plate counts often exceed 2 million cfu/ml, the results for Zambia are outstanding and well within the limits set out in the draft COMESA standards. From 2003 to 2007, 0.2 percent of smallholder milk was classified as A-grade, 88.8 percent was B-grade, and 11 percent was C-grade. Over the same period, 88 percent of commercial farmer milk was classified as A-grade, 12 percent was B-grade, and less than 1 percent was C-grade. Commercial farmers mostly use automatic milking machines and on-farm cooling tanks. Smallholder milk is sometimes regarded as superior to commercial farmer milk, particularly with regard to butterfat content from which dairy processors make most of their revenue. This is a result of many small farmers being provided with Jersey cows, which are hardier under local conditions and naturally produce milk with more fat content than the Friesian cows owned by most large commercial producers.

FIGURE 6.2: Uganda Sorghum Production, 1985–2009

Source: Calculations based on FAOSTAT data.]

in quality upgrading are important and can have significant impact on farmer revenues, trade competitiveness, and the total value added by the national industries.

CASE 3: BREWING UP PRODUCTIVITY AND INCOME GAINS LINKED TO SORGHUM

Upgrading Production and Marketing Arrangements

In SSA, sorghum is still largely a subsistence food crop. Its production is crucial to food security given its unique characteristics to resist drought and withstand periods of high temperature. It also grows well in subtropical Africa, characterized by intermittent rains and by brief periods of very high rainfall. In fact sorghum is not only drought-resistant, it can also withstand periods of water logging (Taylor 2010). In Uganda, the crop is mainly grown in drier areas in the eastern, northern, and southwestern regions, and is, together with maize and millet, one of the most important staple cereals in the country.

Over the past decades sorghum production has increased steadily in Uganda, from nearly 350,000 tons in the mid-1980s to almost half a million tons in 2009 (figure 6.2.). However, the increase in production has been a result of increasing area under cultivation rather than an improvement in yield. Sorghum is mainly used for food and brewing. In an attempt to improve food security and incomes among the rural poor households, SAARI has generated a number of technologies among which are Sekedo and Epuripur improved sorghum varieties released in 1995.

⁸⁴ Sekedo is a brown-seeded variety developed by SAARI, which has been developed to improve on household food security in dry areas of Uganda. It also has good brewing qualities and could be used in the beer brewing industry. It can yield up to 3,500 kg/ha under average management, or higher under good management.

The latter, Epuripur, is a white-seeded sorghum hybrid variety suitable for milling and baking, and was developed for improved processing and diversified utilization of sorghum in the food industry. It matures in about 110 days and yields between 2,500 and 3,000 kg/ha.⁸⁴ However, at the farmer level the yield ranges from 500–800 kg per acre, due to the use of low-input production technologies.

In the early 2000s, Epuripur was the basis for an attractive innovation in the commercialization of sorghum in Uganda, led by Nile Breweries Limited (NBL), a subsidiary of South African Breweries (SAB) Miller. In 2001, the company started its search for the local ingredient to reduce reliance on imported malt, and therefore make affordable nonmalt beer for Ugandan consumers. Low-cost raw materials would represent important cost reductions to the company that would then be passed on to the consumer in the form of a lower price. Epuripur sorghum was identified as a promising ingredient, and after undertaking pilot brewing in South Africa, it was found to have excellent brewing qualities for high-quality clear beer. This innovation gave origin to a new product “Eagle Lager,” which would become a few years later, the second largest brand for the company in Africa (SAB Miller 2008).

Based on its former experience of smallholder sourcing under contracts,⁸⁵ NBL decided to establish a partnership with the National Semi Arid Resources Research Institute, Serere (NaSARRI), for the multiplication of the hybrid seed for distribution among the farmers. During the second

⁸⁵ The company established in South Africa in the 1990s its first contract farming scheme to encourage local barley production to reduce reliance on imports.

season of 2002, the company provided 10 metric tons of seeds to farmers in four districts—Soroti, Kumi, Katakwi, and Kaberamaido—initiating the first contract farming scheme for sorghum production in Uganda.

The scheme has benefited from the engagement of other organizations, all playing critical roles. For example, SAB Miller/NBL, together with NARO, NaSARRI, and NAADS, have respectively provided the financial and technical assistance required for the smooth running of the contract scheme; and Afro-Kai Limited (a seed and commodity broker, who joined the scheme in 2003) is responsible for seed multiplication and distribution, as well as for the procurement of the harvested product from the farmers, including transport and storage. Afro-Kai multiplies Epuripur seeds on its own farms and through organized growers. Seeds for planting are then distributed by Afro-Kai via farmers' associations and governmental and nongovernmental organizations. NBL/Afro Kai does not enter into direct forward contracts with farmers but with district farmers' associations. The GoU supported the initiative through removing the excise duty paid by NBL on beer produced under the contractual scheme (Eagle Lager and Eagle Extra Lager)—this was increased from zero at the beginning of the scheme to 20 percent in 2006.⁸⁶

The initial pilot comprised only 350 farmers from four traditional sorghum producing districts. In the season 2002/2003 the number of farmers participating in the scheme increased to 1,133 and reached 8,326 farmers in 2006, generating a supplemental or seasonal labor demand for about 58,238 rural workers. Prior to 2005, the double seasonal production of sorghum by contracted farmers resulted in undersupply—below the projected production quantities, with several factors responsible for this including the reluctance of farmers to adopt the seeds and civil disturbance in 2003.

As a result, Afro-Kai initiated a more aggressive strategy to increase the volume of product reaching NBL's plant by expanding the number of farmers recruited into the contract scheme, including the recruitment of relatively large-scale farmers. NBL was then a victim of its success, with the 2006 harvest causing oversupply. Increased confidence of a reliable market at a guaranteed price, a better understanding by farmers of the need to buy seeds, access to extension services, and volatility of markets of other cash crops such as cotton, contributed to many farmers embracing the scheme, and, with ample seed available, to

the delivery of sorghum supplies more than double NBL's requirements.

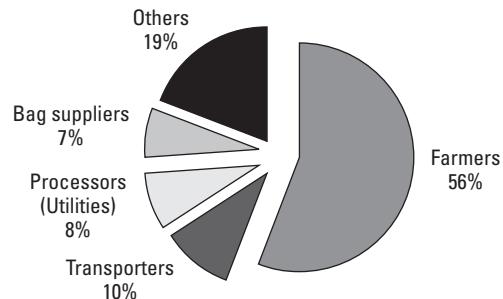
The company honored the contracts and ensured that farmers were informed that the company was not going to buy sorghum in the next season, and it supplied farmers with maize and rice seeds to ensure that their incomes wouldn't drop off significantly. Yet it also started to put in place a strategy to prevent oversupply in the future, including selective distribution of seeds to limit harvests, identifying specific communities for long-term relations and more timely communication with farmers. In 2007/2008, the number of farmers involved in the scheme dropped to 1,071. Yet, since then the company's brewing capacity has been expanded and some 5,800 farmers were involved in the scheme in 2009.

Benefits Accruing to Farmers

Clearly the farmers that have been able to participate in the scheme have benefited from an assured or reliable market, an additional source of cash income, and increased adoption of improved sorghum technologies. Afro-Kai/NBL remains the single largest buyer of Epuripur sorghum, with the other marketing channels available offering lower prices and trading lower volumes. There have been, however, a few occasions when alternative marketing channels have become more attractive. For instance, due to the huge demand for grain in South Sudan some Epuripur sorghum has found its way there.

Since the inception of the contract scheme, NBL has paid over US\$5 million to the players involved. Of this total payment, about 56 percent of it has been received by farmers (figure 6.3). Farmers have evidently used this money to meet their household needs (e.g., nutrition, education, health, clothing, entertainment, etc.) and to procure household assets (e.g., land, livestock, bicycle, radio, house, etc.).

FIGURE 6.3: Percent Distribution of NBL Payment



Source: Afro-Kai (Reported by Elepu and Nalukenge, 2007).

⁸⁶ Significantly lower than the duty paid on other beers, which could reach 60 percent.

Other actors also benefit: The company estimates the beer sales revenue at US\$43 million per year in Uganda (SAB Miller 2008), generating revenues to the Ugandan government estimated at nearly US\$6.8 million on excise duty and VAT of US\$4.8 million in 2007/08. Eagle Lager has been part of SAB Miller's success in Uganda.

The company estimates that farmers have received over US\$3.8 million through the program over the past four years, providing a supplemental income of around \$250 per farmer over and above their subsistence farming, with each farmer supplying an average of 1.4 tons of sorghum each year.

The introduction of Epuripur sorghum, and its contractual production arrangements, has led to its wide adoption by farmers. Previously, the adoption of improved sorghum technologies such as improved varieties had been low mainly due to the lack of output markets. For example, improved sorghum varieties that have been developed before but have not been widely adopted include Serena, Seredo, and Sekedo.

Although the scheme does not operate without problems, it does certainly constitute an example of the upgrading possibilities available to private actors, the government, and development partners to leverage poverty outcomes through upgrades at levels 1 and 2. In the example cited, the market served may not have the capacity to engage thousands of small-scale producers; however, it illustrates the power of markets to leverage supply-chain improvements. In Africa, a number of improved hybrid varieties of sorghum are available that can help improve yields (Olelombo et al. 2010). The experience in Uganda illustrates how combining improved technology with strong market links can provide a powerful boost even for a crop that is not generally considered a cash crop in Africa.

SAB Miller has recently highlighted the learning that the experience in Uganda has provided to the company's operations in other locations. In 2005 the company initiated a similar operation in Zambia, operating almost entirely through an outsourcing model benefiting around 2,600 producers in 2007/08.⁸⁷ The operations in Tanzania and South Africa have been implemented through an in-sourcing model, with the company providing directly the support and leading the operation. In Uganda, and most recently in India, the programs used a partnership model, with various levels of engagement

by the company, which they believe have provided better results. The partnership model avoids the company taking over responsibilities that are outside its core competencies, but also allows it to get a certain level of control, to be able to get the grip with emerging problems.

CASE 4: AFRICA'S GROUNDNUT TRADE AND EUROPEAN UNION (EU) MYCOTOXIN STANDARDS⁸⁸

Compliance with EU Aflatoxin Standards: A Barrier to SSA Trade to Europe?

Awareness of the safety risks associated with the consumption of products contaminated with mycotoxins—aflatoxins in particular—has increased significantly since the late 1980s, when the International Agency for Research on Cancer (IARC) placed Aflatoxin B1 on the list of human carcinogens. In response, countries have established a set of regulatory measures to reduce risks associated with consumption of products contaminated with aflatoxins. The European Union's adoption of harmonized standards for aflatoxins in groundnuts and groundnut products in 1998, above the levels that were proposed/discussed at the Codex Alimentarius Commission,⁸⁹ has been one of the most controversial food safety regulatory interventions in international trade. It has been argued, and discussion remains ongoing, that the strict EU standards would not significantly lower the health risk to consumers, but they would impose serious costs or technical difficulties on the suppliers. The discussions have also questioned EU methods of sampling and analyzing aflatoxins.⁹⁰ It is empirically difficult to determine definitively how one country or region adopting new or more stringent standards affects trade, because of the many repercussions of such

⁸⁸ For a more detailed analysis of this case see Diaz Rios and Jaffee (2008).

⁸⁹ EU maximum limits for groundnuts to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in foodstuffs were set at 8.0 ppb for B1 for 15.0 ppb for Total aflatoxins. The maximum limit for groundnuts and nuts, and processed products thereof, intended for direct human consumption or use as an ingredient in foodstuffs were set at 2.0 ppb for B1 for 4.0 ppb for Total aflatoxins. Codex maximum limit for peanuts intended for further processing (hereafter referred to as "Codex limit") was set at 15 ppb.

⁹⁰ Criticism has also extended to the maximum levels set by Codex, as the recommendations resulting from the risk assessment carried out by JECFA compared relatively low levels (10 ppb and 20 ppb), with critics arguing that the developing-country perspective—that such levels would be very challenging to achieve and would not greatly reduce risk—was not considered during the process of setting the Codex International Standard.

⁸⁷ Partners in the initiative include the NGO CARE, the Cooperative League of the United States of America (CLUSA), and CHC Commoditys, a grain dealer and brokerage firm.

standards, the varied responses, and the multitude of other factors affecting trade flows and competitiveness. Even so, there have been some attempts to measure the impacts. For aflatoxins, some of the most referenced studies on the trade impacts of the EU regulations come from [Otsuki and others \(2001a, 2001b\)](#). The authors predict large losses for Africa's trade in cereals, nuts, and dried fruit to Europe.⁹¹ Although the authors employed a hypothetical and greatly simplified model, their findings have frequently been referred to as evidence that African countries in fact lost such levels of trade as a result of EU regulations, and consequently, these stricter regulations have often been referred to as the cause for SSA's continued marginalization within international groundnut trade.

The responses adopted by countries to the challenges associated with market developments are critical to ensure their sustained participation in the served markets. Suppliers of groundnuts and groundnut products to the EU responded very differently to the challenges imposed by strict standards and overall demands for quality and safety. In some countries, the response has included proactive, forward-looking strategies seeking to reinforce competitive advantages, with stricter standards acting as a catalyst for continued improvements. In other countries, the response was to deliberately accept rejections as part of business costs, with tremendous consequences for these industries. Often, the noncompliance by individual companies resulted in collective punishment against an entire export-oriented cluster of companies. These events forced industries (and governments) to act reactively and defensively, seeking to adjust in the face of restricted trade. As analyzed below, the most effective responses to compliance challenges associated with stricter standards have come from those industries that had been gradually making investments to improve their competitive position in the EU market. SSA industries, for several reasons, have failed to do so.

Evolution of EU Market Requirements for Groundnuts and Groundnut Products and Upgrades Required to Achieve Sustained Market Participation

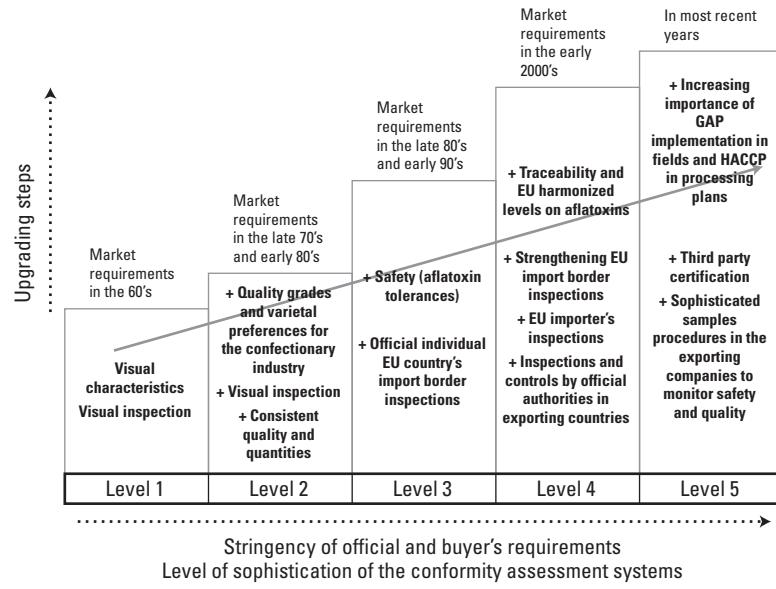
Since the colonial era, groundnut exports have traditionally been an important source of export revenue for several African countries and a source of livelihood for thousands of SSA small-scale producers. The market demands of the EU—the lead importing market—have played a critical role in determining SSA's participation and competitiveness in groundnut trade, and in shaping international trade for groundnuts and groundnut products, overall. These market developments have involved a period of increasing EU demand for vegetable oil and industrial oils and fats, which marked the emergence and expansion of SSA's groundnut production and trade during the 1960s and 1970s and the subsequent shift from the oil market to edible groundnuts in the 1980s. The shift to edible groundnuts led to tough competition among old (SSA and United States) and emerging (Argentina and China) suppliers to capture a larger share of the EU market, including being able to effectively respond to new, stricter and evolving market requirements. The evolution of these requirements and associated systems for conformity assessment are illustrated in [figure 6.4](#).

The evolution of requirements in the edible groundnut trade to Europe has implied two clear phases of upgrading steps at production and processing levels. The first phase related to very basic product quality and productivity upgrades (upgrades from level 1 to 2) and implies the expansion of crop areas or increased yields (or a combination of both) and adoption of desirable varieties and grades. The second phase involved the adoption of improved production and postharvest technologies and practices to maintain quality and quantities, but also to achieve safety outcomes and differentiate products (upgrades at levels 3 to 5). These second stages of upgrades are combined with end-product testing and inspections at different stages of the supply chain implemented by official authorities in importing and/or in the exporting countries, as well as by the buyers and exporters.

In the first stage, upgrades are facilitated by reliable external markets for inputs and outputs, extension services, access to credit and technologies, and a stable macroeconomic environment. The second phase of upgrades is facilitated by (i) available knowledge of production and processing practices (e.g., good agricultural practice—GAP—and good manufacturing practices—GMP), technologies (e.g., shelling/blanching), and systems (e.g., Hazard Analysis and Critical Control Point—HACCP) oriented at reducing aflatoxin contamination and differentiating products, (ii) availability of

⁹¹ Their findings suggested that the trade of nine African countries would potentially decline by \$400 million under the proposed, stringent new EU standards, whereas this trade might have increased by some \$670 million had the EU based its new harmonized standards on the guidelines of the Codex Alimentarius ([Otsuki et al. 2001a](#)). A second study, focusing only on edible groundnut exports from Africa, estimated that the new EU standard for aflatoxin would result in an 11 percent decline in EU imports from Africa, and a trade flow some 63 percent lower than it would have been had the Codex international standards been adopted ([Otsuki et al. 2001b](#)).

FIGURE 6.4: Evolution of EU Market Requirements and Associated Conformity Assessment Systems for Groundnuts and Groundnut Products



Source : Diaz Rios and Jaffee, 2008.

extension services and credit to facilitate the adoption of those practices/systems and technologies by farmers and/or firms, and (iii) a reliable official control in place, supported by the availability of testing and certification services (either public or private).

First Stage of Upgrades Yet to Happen in SSA

Groundnut Industries

The emergence of leading suppliers of groundnuts, such as Argentina and China, in the 1980s, was marked by tremendous expansion of production area and yields. In Argentina, toward the mid-1980s, the industry started replacing traditional varieties with those specifically oriented to producing high quality groundnuts for the confectionery industry. In the case of China, process upgrades have focused mainly on achieving productivity gains. China's source of competitiveness in the international groundnut market has been its ability to provide consistent quantities at competitive prices. Argentina, along with recently emerging suppliers such as Nicaragua and Brazil, combined initial production level upgrades with process upgrades based on the development of competitive advantages through a cycle of continuous improvements and innovations to supply high-quality and safe products to highly differentiated markets (levels 3 to 5). Supply-chain coordination and increased collaboration between the private and public sectors were critical factors facilitating the supply-chain upgrade process.

In contrast, efforts to increase productivity within SSA have been constrained by market inefficiencies in the distribution of agricultural inputs (seeds and fertilizers). After the exit of governments from this market, farmers mostly relied on informal (including farmer-to-farmer) sources of seed, which are often of low or variable quality (World Bank 2003c; Mbaye 2004; World Bank 2007c). Upgrades accomplished through the use of varieties suitable for the confectionery industry have also been constrained by the difficulties in reproducing suitable seeds of a standard quality. In Africa, overall, there have been several scattered efforts to upgrade groundnut supply chains by introducing preferred varieties, changing production practices, and focusing attention on quality control. But progress has been uneven, without sustained success in international competitiveness.⁹²

The Second Stage of Upgrades Required Investments and Strict Public and Private Collaboration

The upgrade processes to be followed to achieve compliance with safety requirements are more complex and many countries use different strategies. Proactive strategies, seeking to reinforce competitive advantages have been

⁹² See Diaz Rios and Jaffee (2008) for detailed information on the attempts made to upgrade groundnut chains in selected SSA countries.

adopted by countries such as Argentina, and most recently also Nicaragua and Brazil. In China and Egypt, in contrast, significant reactive measures came after groundnut interceptions (and a temporary ban in Egypt) and critical inspection missions by EU authorities. In all cases, effective responses have implied strong collaboration between the public and the private sector, as well as upgrading the capacities of both. A discussion of a few of those experiences follows.

Argentina—The country's efforts to achieve compliance with EU regulatory developments have included regulatory measures; technical and scientific research; improvements in production, postharvest, and processing technologies; investments in physical infrastructure; and strengthening of accreditation and certification systems. At the regulatory level, responsibility for the control of agricultural products exported from Argentina (including groundnuts) lies with the National Service for Health and Quality of Agri-Foodstuffs (SENASA). Argentine authorities have issued official measures regarding the certification and control of exports, including peanuts, since the mid-1990s, yet it was not until the beginning of this decade that SENASA established the procedure and requirements with regard to the certification of peanut exports to the European Union (Resolution 436/2002). Although official supervision of aflatoxin is oriented toward end-product control, the private sector has implemented preventive measures to reduce aflatoxin contamination along the supply chain. Groundnut cultivation in Argentina is based on modern agricultural technology, including incorporation of good agricultural practices (GAPs). The same applies to the processing area, in which companies have been applying good manufacturing practices and the principles of the HACCP system. Conformity assessment of product intended for export is the responsibility of private authorized certification bodies, which carry out official sampling and analysis of groundnut consignments and issue lot-specific safety certificates. Local infrastructure for conformity assessment includes several private laboratories and one national reference laboratory. Official efforts have been focused on generating opportunities for private operators to perform conformity assessment services.

Argentina's reputation as a reliable supplier of quality product, as well as the low number of notifications during the years prior to and after implementation of the EU harmonized levels, may have given Argentina the time needed to make the necessary adjustments to strengthen the local official control systems. In May 2005, the European authorities carried out the first mission to Argentina to assess the control systems in place, with overall positive results from the mission.

China—In contrast to the situation in Argentina, China's production of groundnuts is highly fragmented. Limited availability of arable land and a large rural population restrict large-scale peanut cultivation. Despite this, according to EU buyers, Chinese peanuts have come a very long way in terms of quality, with remarkable improvements in the control systems, implemented by both the private and public sectors, to assure compliance. However, for China, the delay in compliance has had considerable consequences. As a result of the mission carried out by the EU authorities to assess the systems in place for aflatoxin control in 2001, specific provisions were set for peanuts consigned from or originating in China. A second mission, carried out in December 2006, indicated that China had made great progress during the ensuing five years to improve the system to certify compliance, including significant changes in the regulatory framework in terms of registering establishments, sampling and analyzing peanuts for export, setting domestic standards for aflatoxin (aflatoxin B1 at 20 ppb), and improving public and private infrastructure for conformity assessment. In 2006, more than a dozen accredited official laboratories and two private laboratories carried out official analysis for aflatoxins on product intended for export. At the time of the first EU assessment mission, the General Administration of Quality and Supervision, Inspection and Quarantine (AQSIQ), responsible for the control of peanut exports, had only recently been established. Since then, the capacities of AQSIQ have considerably strengthened.

Furthermore, the government was promoting a “shock tactic policy” to promote approaches to aflatoxin reduction among farm and exporter operations. These policies included enforcing requirements related to the application of GAPs, GMPs, and HACCP during cultivation and processing of peanuts for export; application of aflatoxin levels stricter than the ones set by the EU; and suspension of sanitary registration to those companies that are involved in a Rapid Alert System for Food and Feed (RASFF) notification, until corrective measures have been taken and verification is carried out.

Experiences from SSA—As in the case of China, reactive measures to prevent aflatoxin contamination, though not yet generalized, have also been taken in some SSA countries. For example, in Ghana, the government has initiated a program to support the implementation of GMPs and HACCP principles in small- and medium-scale enterprises. A most recent milestone was the accreditation of a laboratory for microbiological analysis with support of several donors, in 2009.

In Malawi, the National Smallholder Farmers Association of Malawi (NASFAM) and International Crops Research Institute

for the Semi-Arid Tropics (ICRISAT) collaborate in the implementation of cost-effective methods for aflatoxin detection, while in Senegal, Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD) in partnership with the main Senegalese producer organization (Association Sénégalaise pour la Promotion du Développement à la Base –ASPRODEB), is implementing the “Edible Groundnut Program,” aiming to ensure high-quality product to satisfy demands for confectionary groundnuts in export markets.

Evidence of Direct Impacts of EU Standards on SSA Groundnut Trade

As mentioned above, during the 1980s, African suppliers were unable to meet emerging demand for consistent volumes and quality of product and thus were overtaken by competitors from Latin America and Asia—SSA accounted for just under 89 percent of global exports in the 1960s, yet the region’s share of international trade fell to the single digits by the late 1980s, and to only 1.2 percent in 2008.

Although the changes in the global groundnut trade during the 1970s and 1980s were significant, according to [Badiane and Kinteh \(1994\)](#), the decline of African raw groundnut exports was primarily the result of macroeconomic and sector policies that reduced producer incentives through direct or indirect taxation. In most sub-Saharan exporting countries, the sector faced heavy government involvement in input supply, marketing, and producer prices. Inefficient provision of quality seed and other agricultural inputs and too little supply chain coordination still constrain quality and productivity.

Lower competitiveness and limited demand for groundnut oil—along with an inability to shift industry focus to the edible confectionery market, a market with higher quality and safety requirements—helped marginalize sub-Saharan Africa’s global market position. The region’s participation in the global trade of groundnuts and groundnut products has fallen in both the dynamic (edible groundnuts) and least dynamic (oil/cake) sectors. As they have not achieved sustained gains in groundnut productivity and product quality, many of Africa’s groundnut industries were ill prepared to meet stringent official and buyer requirement. By the late 1990s, compliance with aflatoxin standards was only one of many challenges faced by SSA industries supplying the international market.

How much the EU aflatoxin standards subsequently affected the already marginalized African groundnut export trade is difficult to determine precisely. From the point of

view of intercepted trade, one analysis of EU official figures pointed to little more than 949 tons being intercepted during 2004–06, with the total volume affected during 1999–2006 likely being no more than 1,600 tons, at an estimated value of \$1.2–\$1.5 million. Against the region’s \$175 million in sales to Europe over the period, the affected trade appears insignificant. Taking into account that a large proportion of the product intercepted underwent physical treatment, and therefore could be traded in the European market, the value of “lost” trade becomes even smaller.

The indirect effects are more difficult to estimate, including the deterrent effect on stakeholder investments in groundnut-related activity and changes in the commercial orientations of groundnut processors and traders. Certainly for the individual companies involved in the notifications, the EU regulations have had more profound effects, as the economic implications of returned consignments or discounted product can be significant. Yet, the “lost” trade that can be confidently attributed to the EU standards has been extremely low, given the multitude of other technical, institutional, and other problems reducing the competitiveness of African groundnut supply chains seeking to participate in any international markets—let alone the more discerning one in the EU.

The evidence indicates that the SSA region would not significantly benefit from a less stringent standard, for example the international levels accepted by Codex. Nearly 80 percent of the consignments from Africa that were intercepted by EU authorities between 2004 to 2006, would have failed even the less strict Codex standard.⁹³ In Ghana, particularly, aflatoxins remain a significant problem in exports of processed products.

The primary beneficiaries of less stricter standards would be Africa’s main competitors (in the EU market), especially Argentina, the United States, Brazil, China, and Egypt. These countries have made considerable investments to upgrade their production systems to achieve quality and productivity gains, and most recently, to also achieve safety objectives by preventing and reducing aflatoxin contamination.

For most African supply chains, it is more accurate to refer to an aflatoxin management problem than to a trade standards compliance problem. The focus of policy-maker attention

⁹³ During the period 2007–09, the equivalent percent of notifications related to aflatoxins from SSA, compromising peanuts, but also other products, presenting levels above Codex was 55 percent (of which 50 percent presented levels above 50 ppb).

on the alleged trade barrier aspect of the EU's aflatoxin standards has contributed little to exports or public health improvements in SSA, and does not provide a basis for improved strategy development and investment.

Undoubtedly, for some countries supplying edible groundnuts to the EU market (Egypt and China), the stringency of the EU aflatoxin regulation did act as a temporary barrier to trade, and subsequently (in a reactive way) as a catalyst for the modernization of the supply chain and for improved collaboration between the public and the private sector. The catalytic role of EU standards enforcement is more clearly seen in the case of the Argentine industry, which has used compliance as a means to improve the industry's competitive position and gain market participation.

In contrast, for most SSA countries, the stringency of the EU standards has served neither as a significant barrier to trade nor as a significant catalyst for proactive action. Sub-Saharan suppliers' inability to build a reputation for reliable supply, consistent quality, and safe product contributes to their marginalization in international groundnut trade. Upgrades at the production and harvest levels to improve basic quality characteristics and ensure consistency are needed, along with safety improvements. Yet, attempts to move off of this continuum of improvements often results in the need to go back to re-enforcing basic compliance capacities (see box 6.2).

The Multiple Dimensions of the Aflatoxin Problem in Africa

The aflatoxin problem in SSA has often been considered within a trade barrier context, whereas the domestic market, and the associated public health and food security dimensions, have received much less attention.⁹⁴ Recent attempts made by private actors and donors to improve quality and safety by setting and enforcing requirements for aflatoxin

levels have highlighted the magnitude of the problem on the domestic/regional scale.

However, it is recognized that the establishment of aflatoxin regulations or of strict standards by buyers will have limited effects in terms of health protection in the region, as many farmers grow grains and groundnuts for their own consumption. Although in SSA, regulatory intervention and strict end-product controls are necessary, they have limited roles to play due to the prevalence of subsistence farming. Thus, there is a realization that the solutions to this problem need to be holistic, looking at multiple dimensions of the problem and the specific characteristics of SSA's supply chains.

Emerging Cost-Effective Management Solutions

While aflatoxins cannot be completely eliminated, measures can be taken to manage the risks to lessen their prevalence and minimize the trade, health, and food-security effects on humans and animals. Approaches to managing aflatoxin risks rely on prevention to reduce the probability of product contamination and mitigation to reduce its potential impact. Research efforts undertaken by several organizations in the region are progressively making available appropriate and potentially cost-effective measures for aflatoxin prevention/mitigation, emphasizing on-farm technologies.

For example, research led by ICRISAT and the International Institute of Tropical Agriculture (IITA) is targeting the problem through holistic approaches, including (i) the development of resistant/tolerant varieties, (ii) the identification and validation of appropriate agronomic practices (e.g., application of soil amendments—lime, crop remnants, manure—to reduce the effect of drought at the end of the harvest season, testing proper crop densities, planting days, etc.), (iii) the identification of proper practices and technologies for drying, storing, and processing, and (iv) the development of cost-effective diagnostic tools. These efforts have been complemented by the exploration of alternative uses for contaminated product.

Biological control has also emerged as a very promising solution in the United States, with pilot trials being implemented in SSA under the leadership of IITA and the U.S. Department of Agriculture (USDA), although mainly in maize. Several efforts are underway to gain support for more trials/pilots and possible partnerships to commercialize the technology. However, as solutions emerge, a lot of work is still needed to understand the effectiveness of these technologies/practices in different contexts and the incentives for their adoption among different types of farmers. For example, research led by ICRISAT in Mali determined that the immediate removal

⁹⁴ Several authors have found widespread chronic dietary exposure to aflatoxins in Africa (Peanut Collaborative Research Support Program—PCRSP). Also several studies in China, Kenya, Mozambique, the Philippines, Swaziland, Thailand, and South Africa have shown a strong positive correlation between aflatoxin levels in the diet and the development of cancer (WHO 2005). The synergy between exposure to aflatoxins and infection with hepatitis B substantially increases the risk of carcinoma. Aflatoxins are also associated with growth retardation and immune suppression. In Benin and Togo, children in high aflatoxin exposure zones were found to gain 22 percent less height than children in low-exposure zones. Childhood exposure to aflatoxin in the Gambia was also associated with immune suppression (Mycoglobe 2005).

BOX 6.2: Attempts to Develop Fair Trade Nut Exports to Europe

In an effort to open opportunities for nut producers to supply the EU market, a project known as “Capturing value for smallholder nut producers in southern Africa, through Fair Trade nut market access” was implemented within the frame of DFID’s Regional Trade Facilitation Programme for Southern Africa, starting in 2005. The project was implemented by the fair trade (FT) organization Twin, working with organizations of smallholder producers in Malawi (NASFAM) and Mozambique (Ikuru) to revitalize exports of groundnuts and cashews to Europe.

The project concentrated on the establishment of end-market links with potential European buyers through participation in international FT exhibitions and support for preseason planning meetings and midseason crop assessments in support of the management of export contracts. The participation of smallholder nut producers in the value chain was strengthened through the formation of Liberation Foods, as a community interest FT company, with participation of smallholders. In order to increase the number of southern African FT nut producers with access to markets, visits to potential new producer organizations in Malawi, Kenya, and South Africa, and groundnut producers in Zambia, were facilitated by the project.

The project was able to develop an emerging trade of FT product to the EU market. In 2007, exports of FT groundnuts reached 632Mt (of those, 44Mt were also certified as organic) and trade of cashews reached 110Mt. However, developing a reliable supply of quality and safe nuts proved to be quite challenging. Therefore, to ensure that export opportunities were captured, Liberation Foods (the trading company) has been forced to build its procurement strategy by buying from several sources (Malawi/Mozambique, but also Nicaragua), to deal with seasonal shortages in the supply due to weather and aflatoxin problems, as well as serving different markets,

such as food ingredients, peanut butter, oil, and bird food. The seasonal variation in crop volume and quality creates additional burdens on the POs, as they have to deal with members’ and exporters’ expectations.

Although the project has been able to demonstrate the potential for a significant scaling-up of exports through links with international and regional buyers, overall quality and aflatoxin remain major risks, which limits the ability to capture new market opportunities. Ensuring that an increasing number of farmers understand aflatoxin risks and that systems are established to facilitate the trade of larger volumes of low aflatoxin groundnuts to value added markets is a critical challenge.

Critical control points in the supply chains in order to manage risks have been identified, as well as improved practices to minimize risks. These practices include the need to shift from hand-shelled to in-shell nut purchases controlled by farmer organizations, as well as significant investments in postharvest processing and crop quality management. In the cashew trade, there was a realization of the need to shift toward longer-term issues that affect crop quality, such as the planting of new cashew tree stock with increased yields, larger kernels, and improved processing efficiencies.

The initial positive results have motivated several partners to support the initiative through the implementation of measures to improve quality and safety, including the multiplication and distribution of improved groundnut seed, training to farmers, upgrading processing infrastructure—e.g., the introduction of mechanical shellers through Sainsbury’s Fair Development Fund, and a pilot initiative to install processing equipment and aflatoxin testing facilities, which is funded by DFID through its support of the Regional Standards Program (RSP), and which is expected to have a demonstration effect.

Source: RTFP Final Report, Twin Trading Ltd. (2008).

of pods from harvested plants was the most effective control method for drying groundnuts, yet higher labor demands constrain the applicability of this method.

In 2008, several organizations partnered to explore the scope of cost-effective aflatoxin risk reduction strategies in maize and groundnut value chains in SSA, under the AflaControl initiative, which is led by the International Food Policy Research

Institute (IFPRI) and supported by the Bill and Melinda Gates Foundation. Thus, there is clear evidence of the emergent willingness of the development/donor community to deal with this long-standing issue in SSA. In addition to the efforts described here, there is ongoing dialogue among several organizations on the possibility of forming a broader partnership to overcome challenges associated with the development,

adoption, and scaling-up of cost-effective reduction/mitigation methods by small-scale farmers to achieve desired trade, domestic commercial, and public health objectives. These efforts are certainly welcome news to SSA smallholder producers.

CASE 5: RWANDA—GAINING A PLACE IN THE “SPECIALTY” COFFEE MARKET

Introduction

Since its introduction early in the twentieth century, coffee production in Rwanda was subject to strict official controls, both during the colonial period and following independence. In the early 1930s, growing coffee was made compulsory in Rwanda. At independence (in 1963), legislation prohibited the uprooting of coffee trees, with a Government of Rwanda (GoR) majority-owned company holding a monopoly on coffee exports. These restrictions remained in place until the implementation of economic and sector reforms in the 1990s.

The combined impacts of social strife, reduced international coffee prices, and relaxed restrictions led many farmers to neglect coffee in favor of more profitable food crops. National coffee production fell from 35,000 tons in 1986 to 14,000 tons in 1998, with a substantial reduction in quality mix of marketed sales. Farmers were exiting the sector. Some 55 percent of Rwandan farmers grew coffee in 1991; by 2002, only 30 percent were active growers. While in the 1970s, coffee exports accounted for up to 80 percent of Rwanda’s merchandise exports, this share fell to less than 60 percent in the 1990s and to only 34 percent in 2000.⁹⁵

Despite declining production and participation, coffee remained an important element in the Rwandan rural landscape. According to a production census, some 400,000 smallholder farmers were still producing coffee in 2002. Average plantings were very small, at some 150 bushes, with a large percentage of plants being thirty years old or older. The critical situation at the production level was aggravated by the lack of cost-effective technologies for processing. This translated into poor (and declining) quality coffee. Although two coffee washing stations (CWS) had been built, these were not operational. The bleak situation at home was compounded by international developments. Large and low-cost suppliers such as Vietnam and Brazil were increasingly dominating the low-quality coffee segment, with expectations that

each would continue to expand output. Thus, without major investment and, perhaps, a reorientation of the industry, the prospects for Rwanda’s coffee sector looked bleak.

Taking Action—Targeting the Coffee “Specialty”⁹⁶ Market (Upgrades from Level 1 to Levels 3 and 4)

From an agro-climatic perspective, Rwanda enjoys ideal conditions for the growth of Arabica coffee, given its rich volcanic soils, high altitudes, ample rainfall, and mild year-round temperatures. The latter leads to the slow maturation of the coffee bean and creates a distinctive taste in the cup. This natural comparative advantage has formed the basis for the collective efforts of the GoR, private sector, donor agencies, and NGOs to revive Rwanda’s coffee industry with a particular focus on targeting the “specialty” coffee segment.

Plans for the revitalization of the industry were laid out in the late 1990s and early 2000s. A Rwanda Coffee Working Group outlined a very ambitious strategy covering the 2002 to 2010 period. Over this period, targets were set for \$70 million in investments and accumulative export revenues of \$600 million. The strategy proposed multiple interventions, along different points in the value chain, to address productivity and quality bottlenecks and to open new market opportunities. About half of the sector revitalization budget was supposed to be directed at the farm level, to support the replacement of trees, the training of farmers, and the uptake of fertilizer and other production inputs. About one-third of the budget was to go for investments of CWSs and other infrastructure (e.g., energy, water, and roads).

⁹⁵ See Lode et al. (2004), Loveridge et al. (2002), and USAID (2006) for more details.

⁹⁶ There is no unique definition of “specialty” coffee. It was initially used to describe the range of coffee products sold in dedicated coffee shops, in order to differentiate these supplies from coffee generally available through supermarkets and other retail outlets. Specialty today refers both to whole-bean sales and to coffee beverages sold in coffee bars and cafés (as opposed to restaurants and other catering establishments). The range includes higher-quality coffees, both single-origin and blends, unconventional coffees such as flavored coffees and coffees with an unusual background or story behind them. However, with the rapid growth in the number of specialty coffee retail outlets and particularly the expansion of the specialty coffee product range into more mainstream outlets such as supermarkets, the term has become much looser. It is fair to say that “specialty” coffee has become a generic label covering a range of different coffees, which either command a premium price over other coffees or are perceived by consumers as being different from the widely available mainstream brands of coffee. The Specialty Coffee Association of America says the following: “Sometimes called ‘gourmet’ or ‘premium’ coffee, specialty coffees are made from exceptional beans grown only in ideal coffee producing climates. They tend to feature distinctive flavors, which are shaped by the unique characteristics of the soil that produces them.”

International development agencies were expected to contribute about one-third of the costs associated with this sector (re-)development strategy. In fact, the development community lived up to its commitments. For example, USAID has been a major supporter of the industry, through a series of projects implemented within Rwanda and at the regional level.⁹⁷ The costs of these projects have been around \$17 million. IFAD has been another significant player through its \$6 million Smallholder Cash and Export Crop Development Project (PDCRE). Many other donors have provided contributions, particularly for the expansion of processing capabilities (CWSs). Examples include the EU through its STABEX⁹⁸ program, and the United Nations Development Program (UNDP). A regional coffee program supported by the Gates Foundation and being implemented by TecnoServe also has been very active in Rwanda.

A central pillar of the coffee strategy and related donor investments has been the promotion of coffee washing stations. With proper processing, it would be possible to increase the volume and uniformity of quality coffee. Two approaches have been taken. One approach has emphasized the role of private entrepreneurs in the establishment of CWSs and in developing relationships with individual farmers and/or farmer cooperatives as the most sustainable way to facilitate the process of quality upgrading. A second approach has focused on collective action, with farmer cooperatives taking the lead in processing and marketing functions. Cooperatives were also used as the basis for achieving fair trade and organic certifications. The majority of donor interventions took the latter route, focusing on the development and operations of coffee cooperatives as this arrangement was seen to have better prospects for technical outreach to farmers and, perhaps, a more equitable sharing of the benefits from improved quality and market access.

Although there have been a series of donor interventions over the past decade, a nod in the direction of an exit strategy has been made through the establishment of two industry umbrella organizations. One is the Rwanda Smallholder

Specialty Coffee Company (RWASHOSCCO), created in 2004 by eleven coffee cooperatives to represent the interests of approximately 20,000 farmers. The company's service includes extension, quality control, buyer relations, marketing, and shipping on behalf of its member cooperatives. The second is the Rwanda Fine Coffee Association (RFCA), which represents the interests of the privately owned enterprises. Support to these two initiatives has continued under the USAID SPREAD project and with other donors (e.g., Agence Française de Développement—AFD).

Significant Gains Resulting from the Quality Upgrading Process

The combined results of NGOs, government, and donor support efforts have been impressive. Table 6.3 summarizes indicators of achievement over the past decade, in terms of investments, trade, beneficiaries, and so forth. Even though only a relatively small proportion of Rwanda's coffee exports are fully washed (just over 3,000 tons in 2009 or 7 percent of export volume), Rwanda has become something of a "hot" destination for global coffee roasting companies and large wholesale buyers seeking new origins for specialty coffee.⁹⁹

The efforts to support product quality upgrades were complemented with efforts to further differentiate products through sustainability certifications, including fair trade and, to a lesser degree, also organic certification. Information retrieved from the Fair Trade Africa database indicate, a total of seven cooperatives fair trade certified, covering about 23,000 small-scale producers—about 5 percent of total coffee farmers.¹⁰⁰ International buyers such as Starbucks and Green Mountain Coffee have been switching product lines toward fair trade product, and are becoming active supporters of fair trade programs in Rwanda.¹⁰¹ Furthermore, certification against Café

⁹⁷ These have included the Agribusiness Development Assistance to Rwanda (ADAR) project; the Partnership for Enhancing Agriculture in Rwanda through Linkages (PEARL) project, implemented by Michigan State and Texas A&M Universities, in collaboration with the National University of Rwanda; the ACDI-VOCA PL 480 food monetization program; the Sustaining Partnerships to Enhance Rural Enterprise and Agribusiness Development (SPREAD) project; and support through the Eastern African Coffee Association.

⁹⁸ French acronym for the EU program on Stabilisation des recettes d'Exportation.

⁹⁹ The industry's achievements fell far short of the very ambitious targets set out in the 2002–10 strategy. The export of 3,000 tons of fully washed coffee in 2009 is but a fraction of the target set at 20,000 tons. Aggregate export revenues over the planning period were \$270 million, compared with the target of \$600 million.

¹⁰⁰ SPREAD project estimates the number of coffee farmers at half a million (higher than the 400,000 figure reported in 2002).

¹⁰¹ Starbucks partnered with fair trade organizations to certify Rwandan coffee coming to the UK in 2010. The company made commitments in 2009 to sell exclusive Rwanda coffee in the UK. Similarly, TransFair USA, the Cordes Foundation, Green Mountain Coffee, and the Clinton Global Initiative partnered to fight poverty among small farmers in Rwanda by enabling them to sell more fair trade certified coffee (Trans Fair USA, September, 2009—http://www.transfairusa.org/press-room/press_release/transfair-usa-cordes-foundation-and-green-mountain-coffee-announce-commitment)

TABLE 6.3: Summary of Achievements of the Rwanda Coffee Industry in Recent Years

PRE-STRATEGY (LATE 1990S/EARLY 2000S)	COFFEE STRATEGY 2002–2010—QUALITY UPGRADING (FULLY WASHED COFFEE)				POST-STRATEGY
	<ul style="list-style-type: none"> Investments of about US\$60–70 million to raise total accumulated revenues from coffee exports above US\$600 million in 2010 44,000 tons of coffee are produced in 2010 (63% fully washed, 25% standards and 12% ordinary) Yield per tree 0.35 to 0.74 (kg/tree) 				
<ul style="list-style-type: none"> Two coffee washing stations (CWS) in 2002 48 Tons of Green specialty coffee exported in 2002 Fully washed coffee represents 1 percent of production Total value of specialty coffee exported US\$90,000 	Internal capacities of the industry	Individual level	Farmers	Replace old trees	<ul style="list-style-type: none"> Over 120 washing stations by the end of 2007 (185 in 2010) 3,045 Tons of green specialty coffee exported in 2009 Total value of specialty coffee exported US\$11.6 million Fully washed coffee represents 20 percent of production in 2007 Approximately 50,000 households have seen their incomes from coffee production double 4,000 jobs in 2006 created by the washing stations Rwanda coffee featured by main international buyers as a highly prestigious product Quality ratings for Rwandan coffee have improved considerably since 2002 (from 3.5 to 4.5)
				Increase use of inputs	
		Collective level	Firms	Train at the farmer level	
				Expand use of shaded grown trees	
				Support the establishment of private washing stations, training, and TA on processing and business skills	
				Support the establishment washing stations by farmer's cooperatives, training, and TA on processing and business skills	
				Train cuppers and implementation of quality control systems	
				GIS Study	
				Strengthen producer association and cooperatives	
				Promotional campaign/initiate coffee culture	
	External capacities of the industry			Market end-market linkages	
				Institutional strengthening	
				Reinforce ISAR's coffee department	
				Information (Webpage creation OCIR)	
				Reinforce OCIR-CAFÉ	
				Reinforce Banque Populaire	
				Infrastructure (Road and infrastructure to washing stations)	
				Provide financial framework throughout coffee chain	
				Keep the pace of reforms	

Source: Compiled by the Authors.

Practices (a well-recognized standard) to obtain Preferred Supplier Status has been pursued, mainly by privately owned CWSs.

The Challenges to Sustained Progress

While the revitalization strategy proposed to develop the coffee industry via interventions and improvements throughout the entire supply chain, in practice the bulk of attention has been on improving quality and strengthening the industry linkages with international buyers, with the entry point for quality upgrading being the establishment of washing stations and quality control capacity. The experience has demonstrated that although under specialty coffee markets, importers, and roasters buy and sell a "story," the most powerful marketing tool to the specialty coffee industry is the promise of consistent quality and a reliable supply.¹⁰²

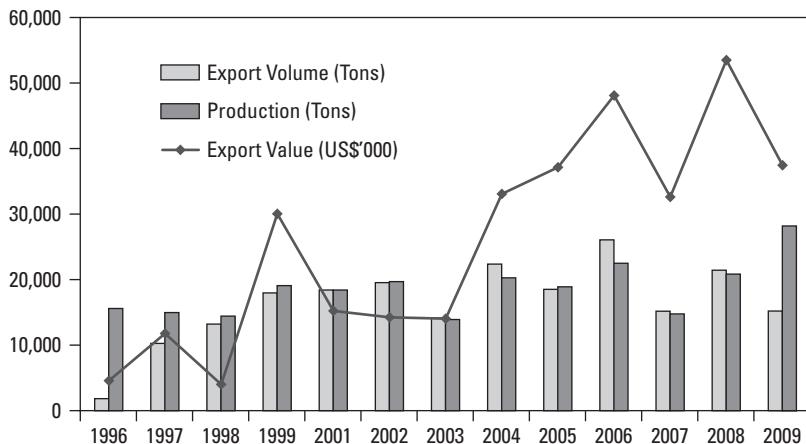
There remain, however, evident weak(er) links in the chain. One of these is at the level of primary production. Due to the fragmented structure of production, the quality upgrading

strategy placed little responsibility on Rwandan smallholders, but also provided them with only modest support or incentives to improve (or better classify) the quality of harvested beans. Primary production has also not kept pace with the expansion of processing capacity, leading to a situation in which all raw materials are competitively sought with little price differentiation. Many CWSs have experienced low profitability due to high operational costs (partly related to capacity underutilization) and management limitations.

Limited On-Farm Production Improvements—Lagging Pace with Processing Capacity

Primary production of coffee has remained stagnant over much of the past decade (figure 6.5). With expanding investment in processing, many CWSs are operating at only 30

¹⁰² According to a survey among coffee international buyers undertaken in 2002 and 2007, reliability, consistency, and strength of relationships are the most important supply attributes for buyers (MAAR, 2008–12).

FIGURE 6.5: Production and Exports of Coffee in Rwanda

Source. Trade data from the Commodity Trade Statistics Database (COMTRADE); production data from FAO statistics (FAOSTAT)

percent of their installed capacity. Production of ordinary coffee, favored by increasingly attractive international prices, has been the main driver of coffee receipts. The strategy highlights the critical problem of pests and diseases that may reduce Rwanda's production by as much as 50 percent.¹⁰³ Low production inputs, cyclical production, and poor agronomic practices aggravate the picture. Although availability of coffee cherries is a critical factor determining low coffee processing, perhaps an equally important issue has been the inadequate business, planning and management of the CWS.

Competition for raw product between CWSs and ordinary processors, and between processors (cooperative and private processors), together with poor financial skills and mismanagement, characterize the coffee industry. Thus, although farmers may well be benefiting from the strong competition among buyers, it also means higher transaction costs—e.g., by excessive search for cherries and additional incentives to farmers to fill the processing capacity (Murekezi 2009). This situation, in the end, may be affecting overall industry competitiveness, as it has already been operating under high costs.¹⁰⁴ In addition to the little progress made at production level, an important problem has been the significant proportion of the fully washed coffee produced

that is of undistinguished quality and that does not fetch the higher prices crucial to long-term financial stability (USAID 2006, MAAR 2008).

The quality of cherries has not improved, as very little has been done to upgrade farming practices with farmers having had very little reason to do so. Differential prices for quality are not applied—CWS paid a flat rate for cherries, having to accept floaters along with good cherries—coffee is accepted regardless of the quality (RNCS 2009–12).

Low Performance of Cooperatives

In 2007, the SPREAD project undertook an assessment of the cooperatives supported by USAID investments, highlighting the factors hampering the sustainability of these entities vis à vis competition with privately operated CWSs. A summary of their findings is presented in box 6.3.

Several studies have sought to compare the benefits accruing to coffee farmers from being affiliated with cooperatives versus selling their crop through private processors. The results have been mixed, although one study did find that cooperative members have access to additional services not otherwise available (Murekezi 2009; Boudreax 2010).

¹⁰³ For example, nearly 25 percent of all Rwandan specialty coffees in 2008 revealed significant levels of potato taste defect. Already, Rwanda is losing income due to this problem. Several higher-end buyers have even refused to continue to buy Rwandan coffee because of this problem (Strategic Plan for the Transformation of Agriculture Phase II Kigali December 2008—Reported by J. E. Austin Associates, Inc. 2009).

¹⁰⁴ For example, Diop et al. (2005) estimated the transport cost from the farm gate in Rwanda to the port in Mombasa at about 80 percent of the producer price. The transport cost from the farm gate to the capital, Kigali, was estimated at 40 percent of the farm gate price. In order to increase efficiencies, reduce transportation costs, and improve quality, donors are supporting the distribution of special bicycles called the "coffee bike." The device was designed by the NGO Project Rwanda, and allows the transport of up to 200 kilograms of coffee cherries.

BOX 6.3: Weak Cooperatives as a Bottleneck to Improved Export Performance in Quality Coffee Markets

One of the principal problems facing coffee cooperatives in Rwanda today is that the producers themselves—the supposed actual owners of these cooperatives—have not kept pace with the capacity building that has taken in other areas of the coffee value chain. Attention given to links in the upper levels of this value chain (outside the cooperative itself) has been very successful, and has launched Rwanda into the world specialty coffee market—accessible to any Rwandan group, private entrepreneur, or cooperative capable of competing. Rwandan cooperatives, their Board of Directors (BoDs), and their members, however, have not been making the organizational and behavioral changes needed fast enough, and face an uncertain future.

When focus and some training is given to the cooperative, much of this goes no farther than the BoD, who tend to run their cooperative like a social welfare organization, without consideration of business principles. Members have almost no ownership of their cooperatives, and only see the cooperative as one option, among others, for selling their coffee cherries.

In the face of rapidly growing and aggressive private-sector coffee entrepreneurs, competition for the farmer's

cherries has grown. Farmers will sell their most valuable cash crop where they can get the best return, and in the past two years, cooperatives have lost ground to the private entrepreneur businesses.

None of SPREAD's 14 cooperatives can be said to be well managed or business focused. Without major changes in management styles, priorities, and efficiencies in internal operations, it is almost certain that many of these cooperatives will go bankrupt as soon as project support is removed. SPREAD will need to move additional financial resources toward this membership base of the cooperative systems they are supporting. The alternative will be to see many years of USAID effort and millions of dollars expended on coffee cooperatives in Rwanda leading to ultimate failure. Private-sector entrepreneur competition within the coffee industry is a very good thing, and this reality may finally force cooperatives to make the changes they need to make. This competition should help assure that Rwanda's smallholder coffee farmers receive the prices they should for their valuable coffee.

Source: SPREAD, 2008.

The advantages of cooperative membership certainly relate to the distinctive performance and management of one's own cooperative. For example, one study found, not surprisingly, that the range of benefits accruing to members of cooperatives affiliated with Fair Trade distribution channels may be undercut by poor management of such cooperatives (Whitfield 2010). Thus, the low performance of cooperatives is limiting their capacity to leverage larger gains for their members and for the industry as a whole. In order to address these constraints, SPREAD, ICIR-CAFÉ,¹⁰⁵ and TecnoServe have been implementing a program to strengthen the most viable cooperatives known as the "turnaround cooperative program."

Overall Perspective of Developmental Impacts—Coffee Farmers Are Better Off

Producers have certainly gained from sector reforms and from GoR, donor, and private investments in the sector.

Thousands of Rwanda smallholders are benefiting from higher coffee prices for fully washed specialty coffee. The price that cooperatives and noncooperative (private sector) CWSs are paying to farmers for cherries has risen from 60 to 80 Rwandan francs in 2004 to between 160 and 180 Rwandan francs in 2008 (RNCS 2009–12; SPREAD 2008).¹⁰⁶

Diop et al. (2005), using household data from 2001, carried out a set of indicative simulations that demonstrated the potential for substantial reductions in rural poverty from initiatives that reduce trade costs in coffee supply chains, enhance the quality of coffee, and facilitate movement out of subsistence into commercial coffee production. Assessment of actual farmer

¹⁰⁵ OCIR (Office des Cultures Industrielles du Rwanda) CAFÉ is the government authority for the coffee sector.

¹⁰⁶ Murekezi (2009) found that marketing through the coffee cherry channels increases the average annual food expenditures per adult equivalent by 15 percent compared to selling through traditional nonwashed (parchment) coffee channels. Similarly, selling coffee cherries improves the total annual expenditures per adult equivalent by 17 percent compared to selling parchment coffee. Coffee growers have improved the overall household expenditure by 13 percent in 2007 compared to the period before the reforms.

gains has recently been undertaken, using both general and very detailed analytical methods. Boudreux has highlighted in several reports the set of direct and indirect benefits accruing to farmers from coffee sectoral reforms (Boudreux 2007; Boudreux and Sacks 2007; Boudreux and Ahluwalia 2009; Boudreux 2010).

Thus, thousands of Rwanda smallholders are benefiting from higher coffee prices for fully washed specialty coffee, but also from ordinary coffee. Exports of coffee represented 36 percent of total export revenue in 2009, with ordinary (not specialty) coffee accounting for the bulk of sales.

During the past decade a small quality-based industry has emerged in Rwanda, yet significant challenges remain ahead. The GoR is taking measures to implement the needed adjustments to push for further progress in the industry.

Donors and NGOs are committed to supporting those efforts and continuing the search for innovative solutions to the problems faced by the industry. The coffee strategy has been revisited and new targets have been set. This time, the expectation is to increase production to 33,000 tons by 2012, with 19,000 tons of this being fully washed, generating exports of US\$115 million by 2012, and estimated investments of US\$51.8 million. This time the strategy also embraces ordinary coffee.

Clearly, positive international markets are contributing to export growth, yet for Rwanda, a small player in international coffee markets, the efforts to improve quality along the chain would certainly provide a better buffer for the inevitable periods of low prices. However, the notion driving improvements needs to be that quality starts at the farm level and can be maintained only through proper processing.

Chapter 7: CASE STUDIES: UPGRADE OF HIGHER-VALUE "NONTRADITIONAL" EXPORT PRODUCTS

This chapter provides a series of short case studies pertaining to the challenges and experiences of upgrading quality, food safety, and other standards in African supply chains for horticultural products and other so-called "nontraditional" exports. For the latter, we include cases related to honey and organically certified commodities. Support to African horticulture export industries has been widespread among development agencies over the past decade and more. Sustained success stories have been few in number, although the sector continues to attract attention due to its continued potential for employment and other livelihoods' support. The specter of smallholder market exclusion due to rising standards has motivated an array of governmental and development assistance interventions. The following cases are discussed here:

- Case 1: "Saving" Kenya's Horticultural Exports, Preventing "Smallholder Exclusion," and Other Illusions
- Case 2: Many Donors, Yet Few Certified Farmers: The Elusive Quest for a Zambian "Smallholder" Horticulture
- Case 3: Servicing Europe's Ethnic Food Markets: Tales from Kenya, Uganda, and Ghana
- Case 4: Shifting Market Preferences Partially Derail Ghana's Pineapple Industry
- Case 5: Intrigued by the Buzz, Stung by the Results: Adventures with Ugandan Honey
- Case 6: Overcoming Competitive Challenges via Organics Certification: Uganda's "Success"

CASE 1: "SAVING" KENYA'S HORTICULTURAL EXPORTS, PREVENTING "SMALLHOLDER EXCLUSION," AND OTHER ILLUSIONS

Background

Kenya's horticultural exports are based on a long-standing industry dating back to the post-World War II years. The industry faced and successfully overcame a steady series of

challenges, in the forms of freight bottlenecks, new competition, macroeconomic instability, periodic industry indigenization campaigns, and new requirements from regulators and customers. The industry has progressively moved with the tide, altering its product mix, upgrading production and postharvest/packing operations, improving management systems, and periodically reinventing its basis of competitive advantage. Highly favorable agro-ecological conditions and abundant labor were leveraged by a series of highly (local and foreign owned) entrepreneurial firms to create and sustain a very dynamic industry. Kenya's growing status as an economic and tourism hub in East Africa brought with it the availability of freight and various technical services that contributed to the expanding horticultural cluster. Although uneven and of mixed efficacy over the years, the Kenyan government provided some important areas of support to the industry, including the provision of high-quality phytosanitary services, the facilitation of expanded freight services, and access to the latest technology.

The industry developed and expanded with a mixed or multimodal structure. Some subsectors featured large-scale production and vertically integrated supply chains. The pineapple canning industry was an example. The flower industry also had its roots in the 1960s with the same pattern, although massive investment since—both local and foreign—has taken multiple forms. For the most part, however, smallholder farmers have been marginal players in Kenya's successful floriculture industry. The fresh fruit and vegetable industry has long featured a dominant lead core of 8 to 15 companies, complemented by a large competitive fringe of some 50 to 150 companies. In both groups there has been a blend of ownership structures—foreign, Kenyan of Asian origin, and so-called indigenous Kenyans. Production structures have varied by crop and shifted frequently over time, being influenced by developments within the industry itself, in sectors with which it has competed for land and labor (e.g., coffee, dairy, etc.), and in the broader economy. Long-standing players in the industry have frequently shifted their product sourcing structures and strategies between backward integration

(on owned or leased farms), coordinated sourcing from larger or smaller outgrowers, and purchases via intermediaries—all the while trying to manage costs and risks, while getting the best return on their own capital and other resources.

As Kenya's fresh horticultural produce export industry matured through the 1980s and 1990s, smallholder farmers came to play a rather important role. There was a large pool of growers to draw from. Upwards of 500,000 rural households had some experience growing fruits and vegetables for the domestic market, with large numbers of such growers operating in locations within 50 to 100 kilometers of Nairobi (and its airport and other transport nodes). Other than for pineapple, large-scale fruit plantations had a poor track record in Kenya, and thus the bulk of the country's nascent and ultimately not very successful trade in avocado, mango, and other fruits came to be dependent upon supplies from large numbers of smallholder farmers, each maintaining relatively few trees. For vegetables, smallholders became the lead suppliers of crops requiring very high labor input (and careful husbandry), yet neither sophisticated techniques (e.g., artificial lighting) nor heavy capital (e.g., for wire tresselling). Green/French beans emerged as the signature feature of Kenya's fresh produce trade in the 1980s, with smallholder farmers likely accounting for the bulk of its supply. Jaffee (1990) estimated that in the mid- to late 1980s, some 7,000 smallholders were regularly supplying the fresh vegetable export trade, accounting for some 45 percent of the traded volume. These farmers were located in several clusters just to the east, north, and west of Nairobi.¹⁰⁷

During the 1990s, Kenya's vegetable trade became more diversified, although French beans remained an anchor in the sales of most of the leading companies. With higher freight costs and intensified competition in some traditional product lines (so-called "Asian" vegetables), and with the rapid growth of supermarket chains within Europe, Kenya's fresh vegetable trade raised its game, progressively moving into higher value-added segments and increasingly directing its sales to leading and secondary supermarket chains. Many Kenyan pack houses were upgraded from dusty warehouses to modern hygienic facilities with tight quality controls. While sales of bulk vegetables in 5- to 10-kg cartons continued, a growing proportion of Kenya's vegetable trade took the form of labeled consumer packs and a growing assortment of prepared salads, vegetable mixes, and other products. By 2000,

the value of Kenya's fresh vegetable trade exceeded \$100 million, while the total combined exports of horticultural and floricultural products exceeded \$250 million. Over the period from 1980 to 2000, this sector contributed nearly two-thirds of the incremental value of Kenya's entire agricultural exports.

In the late 1990s many of the leading exporters undertook to vertically integrate a substantial part of their raw material needs. Those firms that previously had a farm acquired or leased others. Gaining more control over supplies and ensuring traceability were the leading motivating factors as supermarket buyers and/or their category managers were insisting on these elements. Some firms found that having their own farms was a good showpiece for potential new customers. Having their own, professionally managed farm also enabled firms to experiment with new crops or produce highly specialized crops in the small quantities needed for the (high-value) prepared vegetable products. With professional agronomists employed, the firms were able to apply and even move beyond the pesticide use regimes of their major clients.

As a result of this backward integration, the contribution to the trade being made by smallholder farmers evidently declined in the mid- to late 1990s. Dolan et al. (1999) estimated that the smallholder share of the vegetable export trade had fallen to 18 percent by 1998. Jaffee (2003) found the smallholder share to be somewhat higher in 2001–02, at 27 percent. However, his findings suggested that the volume of smallholder produce supplied to the fresh vegetable export trade was more or less the same in 2002 as it had been in 1989, implying that the entire increment in export volume during the 1990s was attributable to either medium- or large-scale outgrowers or, more substantially, to expanded production on export company-owned or leased farms.¹⁰⁸

At that time, the evolving commodity composition of the trade pointed to the possibility of the further erosion of the once very large smallholder contribution to the sector. But did this matter? The industry's poverty reduction role appeared to be strong, with continued rapid growth in employment, both in pack houses and on large farms. In the late 1990s and early 2000s, there were probably 10,000 to 13,000 smallholders supplying the fresh vegetable export trade and a

¹⁰⁷ Another 15,000 to 20,000 smallholders were then part of an outgrower scheme in western Kenya supplying French beans for canning and subsequent export.

¹⁰⁸ For example, runner beans emerged as a new and expanding product line, yet smallholders played no role in this trade as the varieties planted required artificial lighting to grow properly under Kenyan conditions.

similar number supplying the processed vegetable industry. Yet, already then there were some 50,000 people regularly employed on larger horticultural farms and in pack houses, and a somewhat larger number of people employed in the affiliated floricultural sector. While finding that horticultural growers obtain higher incomes than nonhorticultural growers, McCulloch and Ota (2002) found that more powerful welfare effects were coming from employment as both pack house workers and farm laborers are poorer than horticultural producers.

While new product innovations and a strong reputation for quality seemed to be assuring sustained competitiveness for vegetable exports, Kenya's fruit exports showed little momentum despite some breakthroughs in sea freight systems. The fruit subsector was not attracting new investment, and entire supply chains remained fragmented. Weaknesses also persisted in the domestic fresh produce market, characterized by strong seasonality of supplies and prices, high post-harvest losses, low hygienic wholesale facilities, and minimal cold chain development. In response to growth and upgrading opportunities in the fruit subsector and in domestic fresh produce marketing, a number of development assistance programs were designed for implementation during the early to mid-2000s. These included the International Fund for Agricultural Development (IFAD) Smallholder Development Project, two projects supported by the U.S. Agency for International Development (USAID), the Department for International Development (DFID) Business Services Market Development Programme, and several projects initiated by international nongovernmental organizations (NGOs). In the phraseology of the conceptual framework (Chapter 3), these programs were designed to enable the upgrade of smallholder production and market links from level 1 to level 2 or 3. In several cases, efforts would be made to develop or strengthen innovative approaches for service delivery to smallholders and reduce the transaction costs of these farmers in reaching remunerative markets.¹⁰⁹

The experience of these interventions was mixed but ultimately they became a sideshow, completely overshadowed—and, in several cases, hijacked—by initiatives from the development community to “save” Kenya's horticultural export industry from the haunting specter of “exclusion.” This stemmed from the arrival of EurepGAP at the gates of Nairobi. First released in 2000 by a consortium of European retailers, the Euro-Retailer Produce Working Group (EUREP) Fruit and Vegetable Protocol sought to manage the legal and reputational risks facing European retailers in the context of evolving European Union (EU) pesticide-related and wider food safety regulations. While the protocol was first directed at European fresh produce farmers, by 2002 and 2003 pressures began to build to apply this to all sources of supply, including developing countries such as Kenya. A deadline of January 1, 2004, was set for compliance by some of the participating retailers.

While the Kenyan industry was then in the midst of making adjustments in pesticide use and other practices to comply with the new EU regulations, the EUREP protocol demanded much more. It called for on-farm physical infrastructure for pesticide storage and human hygiene and the introduction of a wide series of risk identification, management, and control systems, with accompanying documentation. These systems would need to be checked and certified by third-party auditors. In addition to the on-farm investments and production process controls, measures would be needed to ensure full traceability of produce through the supply chain.

For those Kenyan exporters that had previously developed their own farms, the EUREP Protocol may have required some incremental investments and changes in management practices, yet it posed no serious business risk. By 2002, four of the leading companies had already had their own farms EurepGAP certified. Yet, questions quickly emerged about the applicability of the protocol for outgrower-based systems, especially involving smallholder farmers. How were some of the physical and planning requirements to be interpreted in the context of a developing country?¹¹⁰ Could the technical changes really be done at the farm level by smallholders? Could the control systems and traceability requirements be met? Could all this be done at a reasonable cost, as there didn't seem to be the offer of price premiums for compliant/certified growers?

¹⁰⁹ The Kenya Business Service Development Project (KBSD) was one of the first USAID projects to apply a value chain approach to market development, with the core objective of increasing growth and income among rural micro and small enterprises through increased access to business services. The program focused on tree fruits (avocado, mango, and passion fruit) to satisfy both domestic and export market demands. The Kenya Horticultural Development Project (KHDP) was designed with a wider focus, but also used service development as a key approach for implementation (specifically in passion fruit). Although these interventions were formulated with a strong smallholder focus, none of them were designed specifically to support compliance with private standards.

¹¹⁰ For example, does a nearby stream qualify as “running water” or are piped systems required? Can a “chemical store” be a secure container or does it require a concrete building?

Development Response

When the January 2004 deadline was announced in early 2003, confusion reigned in Kenya. Official and private statements mistakenly linked the EUREP Protocol to EU regulations, implying that applying it would be mandatory—even in circumstances when one was not supplying one of the EUREP retail members. That is, this would become a new “license” simply to supply fresh produce to Europe. Kenya’s Fresh Produce Exporters Association (FPEAK), representing many of the smaller exporters, issued statements warning that this would undermine the industry. FPEAK and the Kenyan government requested multiple donors to provide assistance in order to “save” the industry, and especially to prevent the “exclusion” of smallholder farmers and the adverse welfare impact that this would have. Exaggerated claims about the number of affected smallholders were mixed with exaggerated fears about the shutdown of the industry to yield a very compelling case for support.

And the development community did respond. Several projects that had other foci shifted their direction or attention. For example, the Business Service Market Development Program (BSMDP) (2003–07) decided to concentrate all its initial project activities in the export horticulture subsector in supporting compliance with this standard,¹¹¹ while keeping its initial approach to market service development. USAID’s Kenya Business Development Project (KBSDP) and Kenya Horticulture Development Program (KHDP) and the German Private Sector Development in Agriculture (PSDA) readjusted their activities to include components related to smallholder compliance with EurepGAP. Similarly, NGO-managed intermediary organizations, whose work was focusing on improving smallholder links to input and output markets, played the “exclusion” card, increasing their donor funding to include compliance with EurepGAP as a new objective of their farmer support.

From the (hindsight) perspective of nearly all stakeholders, the initial flurry of activity was uncoordinated, misdirected, and largely unproductive. One initiative sought to train

several thousand farmers in good practices. It printed 4,500 copies of the EUREP Protocol, paid farmers to attend three-day events, and discussed a range of issues, both practical (safe pesticide use) and abstract (the concept of quality management systems). More training took place, including the training of trainers, yet it wasn’t really clear what farmers needed to practically do and what guidance they would be given to do so. The specific roles for farmers, farmer groups, and companies in the development and implementation of quality management systems (QMS) remained unclear.¹¹²

Another project worked with one (passive) exporter to demonstrate that it was technically possible to prepare and certify smallholders under EurepGAP yet the costs for doing so appeared unwieldy, especially when use was made of international advisors, new structures were built to a very high standard, and tests of water, soil, and products were done for each and every farmer. Groups that were certified in 2004 were not recertified the next year. Within a three-year period (late 2003 to late 2005) nearly two dozen donor supported initiatives were launched with the goal of assisting EurepGAP compliance/certification, especially for smallholder outgrowers (table 7.1).

Some of these were dedicated to this purpose, while others were retrofitted from other designs to take on this purpose.¹¹³ It was not uncommon for individual export companies to be accessing assistance from three to five donor programs at the same time.

Several different approaches or models were applied in this effort. For example, one set of programs worked directly with or through companies, essentially seeking to strengthen their QMS and traceability arrangements and to train their

¹¹¹ This project was connected with an initiative to set up produce collection/packing depots in rural areas, under the auspices of the Horticultural Crops Development Authority. Farmers trained in EurepGAP were encouraged to supply these depots, which, in turn, were to supply small exporters who lacked their own pack houses. Yet, none of these small exporters were supplying European customers that required EurepGAP.

¹¹³ For example, promoting the provision of integrated crop management services (case 17) would support the implementation of EurepGAP but would also be relevant for meeting EU pesticide maximum residue levels (MRLs). The same is true for the EU’s PIP, case 2. PIP’s mandate was not to provide support in meeting EurepGAP, yet some 17 companies did eventually use PIP support to meet the standard. Several programs supported the development and improvement of the institutional infrastructure for compliance, including a new certification body, Africert, and existing institutions dealing with pest management and phytosanitary services (cases 4, 5, and 6). Again, the activities of these bodies were not confined to EurepGAP.

¹¹¹ A BSDMP report noted, “The industry as a whole appears to be desperately short of target in establishing a coherent and realistic approach to this rapidly approaching deadline. The players in the industry with the biggest possibility of experiencing severe damage and dislocation—the smaller exporters, the intricate chain of marketers linking smallholders to the market and the small-scale producers—are the least well informed about the regulations and basically totally unprepared for the challenges.” (BSDMP—Project Concept Note: Planned Activities in Export Horticulture Subsector 2004).

TABLE 7.1: Donor Projects (Re-)Directed Toward EurepGAP

DONOR AGENCY	PROJECTS	TIME PERIOD
Japan International Cooperation Agency (JICA)	1. Training of extension staff on EU regulations and EurepGAP. Project extended to include market development services and horticulture marketing infrastructure. With Ministry of Agriculture and Horticultural Crop Development Authority (HCDA).	2003–05
EU Pesticides Initiative Programme (PIP)	2. Training programs for technical staff and small growers at 41 export companies. Not focused solely on EurepGAP. 3. Support for Africert (also provided by Deutsche Gesellschaft für Technische Zusammenarbeit GmbH—GTZ—and BSMDP). 4. Support for the Kenya Plant Health Inspectorate Services (KEPHIS) capacity building programs.	2002–08
Dutch government, NAK AGRO*	5. Certification of small farmers, working with Vegpro.	2005–08
GTZ	6. Development of QMS manual and testing with farmer groups (also supported by DFID).	2003–07
USAID, through KBDSP and KHDP	7. Training of trainers for the International Centre of Insect Physiology and Ecology (ICIPE). 8. Formation of avocado grower groups with Kenya Horticultural Exporters (KBDSP). 9. Support for passion fruit and avocado producers through QMS manual, certification of six groups and promotion of awareness of EurepGAP (KBDSP). 10. EurepGAP implementation and certification, Gatanga Horticultural Farmers' Group and Myner Exporters (KHDP). 11. Certification of outgrower groups working with East African Growers (EAGA) and Woni (KHDP). 12. Work with Karikoini Green Growers group, linked to Kenya Horticulture Exporters Ltd. (KHE) (KHDP). 13. Promotion of market link firms to support avocado farmer groups (KBDSP).	2003–07
DFID through BSMDP	14. Promotion of new intermediary service provider, Freshlink. 15. Small exporters association—Association of Developing Horticultural Exporters of Kenya (ADHEK). 16. Promotion of integrated pest management services, Real IPM. 17. Support for Agribusiness and Allied Kenya Ltd to provide training for EurepGAP. 18. Training of field staff (independent from exporters) to create private sector service providers to work with farmer groups (with ICIPE and the Natural Resources Institute (NRI)). 19. Support for ICIPE. 20. Support for integrated pest management (IPM) through Dudutech (not part of BSMDP).	2003–06 (from 2007 linked to DANIDA business development program)
Pride Africa-Drumnet (United States)	21. Formation of farmer groups in Mount Kenya region, farmer training, credit, and market linkages to KHE.	2004–06
CARE International through Rural Enterprise Agribusiness Promotion Project	22. Provision of EurepGAP services to farmers organized in farmer groups. Linked to Vegpro and to Reach-the-Children. Also partly supported by BSMDP.	2004–07

*NAK AGRO is an institute for inspection and analysis established in 1995, as a subsidiary of NAK (Dutch General Inspection Service for Agricultural Seeds and Seed Potatoes).

Source: Adapted from Humphrey (2008).

farmers to meet their (and EUREP's) requirements. These lead-firm-centered interventions were ostensibly owned by the firms, who contributed substantially to the costs. Support included training for staff; materials for farmer training; provision of software; subsidized testing of soil, water, and products; and/or coverage of certification costs. Donors bore the majority of costs for these items, although firms (and farmers) bore more of the costs for on-farm and farmer group infrastructure.

Another set of programs centered on strengthening farm and business service capabilities and included efforts to strengthen certain intermediary organizations to take on the responsibilities for quality management systems. This intermediary-centered model was deemed potentially suitable to link farmers with smaller exporters (whose own management capacities were limited) or link farmers to larger companies

in locations or for crops where these companies did not have their own organizational presence (and would thus be more passive). A third model involved group and individual farmer-centered interventions. Farmers were generally organized as a PMO (producer marketing organization) and trained and equipped to service an array of potential market outlets. In a EurepGAP context, such entities would be supported to develop their own QMS.

Lead-firm-centered interventions were premised on the types of assumptions underpinning the conceptual framework presented in Chapter 3. They assumed that exporters act as gatekeepers to the important segments of Europe's fresh vegetable market, and that the keys to gates are system controls within outgrower schemes. The costs of these controls, together with the other costs of smallholder compliance, could lead to "exclusion." To the extent that the costs

of setting up compliant schemes fall on exporters—either because they pay some of the farmers' costs or because the schemes increase management costs—they might be tempted to switch to large farm production, including their own. Donors might reduce the risks of small farmer exclusion by subsidizing either or both of these types of cost.

Some attempts were made to calculate the costs of compliance for smallholder farmers or related to smallholder outgrower schemes. These were generally found to be quite substantial, although highly variable. While one set of researchers concluded that the costs far exceed levels that smallholders can bear (Graffham et al. 2007), other researchers found that considering certain benefit streams, the rate of return would be reasonably high for farmers provided that they remained in this line of activity through the medium term (Asfaw et al. 2007).¹¹⁴

The highly variable estimates of compliance costs are not surprising given wide differences in the circumstances facing particular farmer groups and export companies. For some that have made past investments to upgrade farm and post-harvest infrastructure, the incremental physical investments to match EurepGAP requirements would be much lower than for those starting from scratch. Also, over time companies and auditors learned better how to interpret the intentions of the protocol and apply it in ways more effectively in a Kenyan context. Hence, a closed tin container with a nozzle could classify as a source of "running water." With an increasing number of Kenyans trained as advisors and auditors and with local capacities improved for soil, water, and residue testing, some of the enormous service costs incurred in early efforts were reduced later on.

Whether or not the interventions aimed at embellishing and subsidizing outgrower schemes actually prevented "exclusion" is not clear, although there are reasons to doubt this. First, standards nonconformity is only one of the types of risk faced by exporters. Weather, disease, and logistical risks

¹¹⁴ Asfaw et al. (2009) report on survey evidence showing that, all other things being equal, GLOBALG.A.P adopters had significantly higher revenues per acre than nonadopter export growers. And, while adopters and nonadopters were found to use similar amounts of pesticides, adopters generally use safer pesticides as determined by the World Health Organization (WHO) classifications. This seems to have translated into health benefits, with surveyed adopters reporting a 70 percent lower incidence of acute illness compared with nonadopters and with the former spending some 50 to 60 percent less in restoring health following pesticide-related illnesses. Adopters also perceive other benefits, including more assured (year-round) markets, improved bargaining power with buyers, better on-farm hygienic conditions, and so forth.

are others. Sourcing from smallholders continues to provide exporters with a means of spreading weather and disease-related risks. Second, smallholders may continue to provide the lowest-cost (and highest-quality) supply of particular products, even taking into account compliance and other transaction costs. But, more decidedly, as we will see below, the actual number of smallholder EurepGAP certifications remained quite low through to 2007, yet has picked up in more recent years—that is, after the end of donor subsidy programs.

This is not to say that exporters were not appreciative of the assistance provided, and many cite these programs, especially that of PIP, of providing important insights and opportunities to learn by doing. While those companies that were required to have their systems fully compliant with EurepGAP (and other even more stringent schemes) would certainly have pursued various strategies on their own, the financial and technical support provided may well have accelerated and deepened their learning (and experimentation) process. For smaller exporters, the efficacy of these interventions was likely more mixed, being quite positive for some (whose upgraded operations enabled them to access more discerning yet reliable buyers), but perhaps even negative for others (which found themselves managing more sophisticated systems and higher recurrent costs yet without any change in their sales or any demand from their traditional buyers for EurepGAP).

One area in which interventions did appear to make a substantial difference was in the development of a "new model" for smallholder scheme certification. The intervention by NAK AGRO introduced the concept that farmers in a tightly organized outgrower scheme could be considered individual fields rather than distinct operators. This helped to substantially cut down soil and water testing and also eased the auditing process.¹¹⁵

While the "lead firm" approach had the benefit of targeting those companies that effectively act as the gatekeepers to the prime external market, working with exporters raises issues about whether or not private companies should benefit from the direct application of public funds. And, such arrangements do little to improve farmer bargaining power and may actually strengthen the hand of the gatekeepers. For these reasons, and also to cater to the needs of SMEs, a number of donor interventions sought to create market provision of support services that, in principle, could benefit many farmers and also be used by different firms.

¹¹⁵ However, this approach was not further pursued by GLOBALG.A.P due to concerns about actual compliance across the different plots (farms).

The range of business services covered by donor interventions was very broad. It included strengthening of institutions, such as interventions 4 and 7 in [table 7.1](#). It also included support for the development of specialist local services, such as funding by various donors of a local certification company, Africert; support for integrated pest management; and the promotion of companies providing spraying services and training of staff who were expected to provide consultancy services in the field. In each case, the model was one of independent producers being enabled to meet the EurepGAP requirements so that they would then be able to supply exporters.

These interventions faced three problems. First, by subsidizing the services offered to smallholders in order to reduce the costs of certification, and also by bringing in experts from their home countries, some donors undermined the local market for EurepGAP-related services. Second, the training of local experts did not necessarily lead to the creation of specialist services available to all producers. In fact, in some cases these newly trained specialists were hired by the larger exporters. In other words, initiatives to increase local service provision raise the local stock of knowledge but do not necessarily create independent service suppliers.

Third, even if the barriers to compliance with EurepGAP were lowered by the development of such services, would exporters be willing to source from the producers using these services? One of the projects sought to upgrade an existing firm to become a type of super intermediary whose functions would include farmer group formation and development; provision of credit, inputs, and spraying services; facilitation of construction of collection centers; and marketing of farmer group produce. The entity would also develop and implement a EurepGAP quality management system for the various groups working with it. In principle, it would free up farmers from dependence on particular exporters and be in a position to provide certified produce to the range of different exporters. The firm had contracts with neither the farmers nor with exporters and did not take ownership of the product. It simply brokered the relationship between farmers and various exporters.

This model has risks, which soon manifested themselves. While farmers have the possibility of supplying various exporters and are no longer tied into the fortunes and strategies of a particular exporter, they no longer have a particular exporter committed to them. For exporters, the potential of working with multiple farmer groups without the costs of running an outgrowers scheme is offset by the fact that they no longer have an assured source of supply. If product is in short supply, which exporters will be favored? Four exporters

indicated an interest to purchase from the intermediary. Yet, in late 2005 there were flood conditions in the main production area, leading to a shortfall of supply and higher spot market prices. Most of the farmer groups bypassed the intermediary, selling to the highest bidders. The intermediary company then collapsed.

Several other intermediary-based or service provision schemes also had short lives, either because farmers refused to pay for the services that were subsidized by donors through the intermediary organization, or because the end products did not meet the quality and other requirements of the exporters. The lesson learned by several exporters—which experienced pesticide residue problems for produce purchased through one scheme was that nice paperwork (about spraying records) is a poor substitute for direct control. While perhaps more costly to develop, direct relationships with farmers are an absolute necessity in circumstances where there is no margin for error in standards compliance. For smaller exporters, oriented to less discerning buyers, this was less of an issue, although the volume requirements of such exporters were insufficient to provide adequate revenue for the service providers.

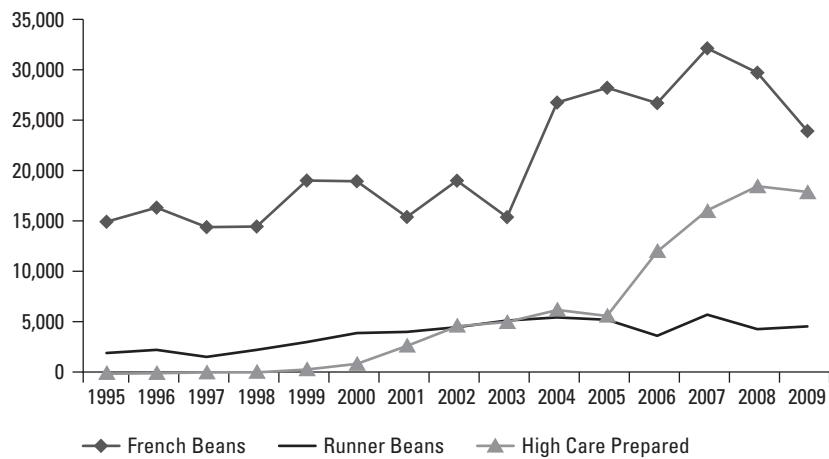
Efficacy and Subsequent Developments

The January 2004 deadline came and passed as did the deadline the following year. A drought in the 2004–05 winter resulted in a sharp temporary shortfall in production, leading even those EUREP members who were insisting on EurepGAP certification to relax their enforcement (or face empty shelf space). By September 2005, only 300 Kenyan smallholders were EurepGAP certified, although quite a few of the own farms of the exporters were also certified. The majority of these smallholders were not recertified the next year. By September 2006, still only 386 smallholders were certified. By April of 2007, when the name of EurepGAP was changed to GLOBALG.A.P, this would increase to 606. Yet, [Mithofer et al., \(2006\)](#) had estimated that in 2005 there were 11,100 smallholders producing vegetables for fresh export in nine districts of Central or Eastern Provinces.¹¹⁶ Considering that there were additional active growers elsewhere, this implied that only about 5 percent of the active smallholders were then certified.

Why wasn't "exclusion" happening—or were some farmers being excluded while others were replacing them? During

¹¹⁶ This is consistent with the fact that the 41 companies supported by PIP in the mid-2000s had, in aggregate, 9,500 reported smallholder outgrowers.

FIGURE 7.1: Kenya Export Volume Trends (Tons)



Source: Calculations based on HCDA data.

that period and through to 2009 (when adverse weather conditions and the financial crisis adversely impacted both supply and demand), Kenya's vegetable exports continued to expand as the lead firms continued to bolster their positions in traditional markets plus develop new outlets within Europe and elsewhere. Despite increased competition (including from Ethiopia and from North Africa) Kenya's French bean trade remained vibrant and actually increased in volume from 15,450 in 2003 to 32,190 tons in 2007 (figure 7.1). While profit margins for this product were under pressure, this high-volume product continued to serve an important role in spreading the overhead costs of companies and in enabling less expensive bulk air freight charter arrangements, which also carried the higher-value product lines. A few of the leading export companies sought to source a larger share of their French bean requirements from their own farms, yet this was not the norm in the industry, and some other firms have moved in the opposite direction, finding the return on capital too low when growing French beans on their own farms.

Hence, based on information provided by leading companies, in recent years smallholders have continued to account for the largest share (perhaps 60 percent) of Kenya's French bean exports. A rough calculation—based on typical planted areas, yields, wastage rates, and so forth—leads to an estimated 11,500 smallholders still active in that specific trade in 2009, similar to the earlier estimate for 2005–06.¹¹⁷ By January 2011, long after the end of programs to subsidize certification, the number of GLOBALG.A.P certified smallholder farmers had risen to 1,076, according to information provided by FoodPLUS GmbH, the administrator of GLOBALG.A.P. Thus, perhaps only 15 percent of the French beans supplied by

Kenya's smallholders derive from farms with up-to-date certifications. And for the industry as a whole, the share of French bean exports that originate on farms that are GLOBALG.A.P certified (or part of a certified outgrower scheme) is in the order of 45 percent.

How to explain this? First, while the United Kingdom is the dominant outlet for Kenya's French beans, a significant quantity is sold on the European continent, including in markets and among buyers for which GLOBALG.A.P is not required. Yet, it is evident that a large volume of beans from not currently certified growers are being sold in the United Kingdom. Why are some buyers not enforcing the stipulation for GLOBALG.A.P certification? Regular certification is a valuable signal to downstream buyers that all systems are in place and good agricultural practices are being applied. Yet, it is not the only signal for this. Kenya's leading companies have an excellent reputation in this business. Their management, internal control systems, and expertise are first class. Their systems for quality control and product traceability have been upgraded and regularly tested—by buyers—over the years. Periodically, things go wrong, but this is apparently rare.

Hence, major buyers are very confident in their Kenyan suppliers and trust the latter to be performing adequate due diligence arrangements that are consistent with meeting EU regulations (e.g., for pesticide residues) and meeting the

¹¹⁷ Assumptions: (i) export volume of 26,000 tons, (ii) wastage/cuttings of 20 percent during preparation, (iii) smallholders account for 60 percent of supply, (iv) average planted area is 0.4 acres, (v) average number of crops per year is 2.5, (vi) average marketable yield is 1.6 tons/acre.

core principals and requirements of GLOBALG.A.P. Having all or even large numbers of outgrowers formally certified each year is thus not necessary for risk management purposes. Where there is no smoke, there generally is no fire! There are a few companies that annually obtain recertifications of their smallholder outgrowers, yet this is not the norm. It also doesn't seem to be a problem. Many players in the industry thus seem able to provide assured compliance through means other than annually updated certificates.

Even though the overall number of smallholders active in the French bean and broader fresh vegetable export trade seems not to have declined since the early to mid-2000s, might the phenomenon of "exclusion" have still occurred? Some growers, especially those operating on very small plots or those lacking reliable rainfall or irrigated water supply, might have exited this sector or come to only provide labor to their neighbors who have remained direct suppliers. Have the stringent product and production practice and record-keeping requirements led exporters to be much more discerning in their selection of outgrowers—choosing the cream of the crop and developing more intensive and long-standing relations with such farmers? Over time, the transaction costs involved in dealing with those farmers would be expected to fall considerably as many aspects of the relationship would be routinized. Thus, while once the industry featured some fluidity with farmers dealing with multiple exporters or shifting between them from season to season, perhaps the new requirements have in fact led to much tighter vertical coordination with a finer distinction between farmers who are "in" and those who are "out."

Despite a great deal of research done in the past few years on the Kenyan horticultural industry, we know remarkably little about the underlying dynamics of smallholder participation. There does appear to be a process of differentiation occurring, although in all likelihood this predated the EurepGAP/GLOBALG.A.P era and was also a feature of structural change in the industry during the prior decade. [Asfaw et al. \(2007\)](#) report on a 2005–06 survey of 439 farmers in Kenya's Central Province. Comparisons between the EurepGAP adopters and nonadopters showed the former to have larger amounts of fertile land, more livestock, a higher number of farm machinery, higher incidence of access to irrigation and higher levels of household member education than was the case for nonadopters. They identify lack of human capital, physical capital, and social capital (group membership) as factors inhibiting broader adoption.

A survey conducted as part of the present research revealed a remarkable fluidity in farmer behavior. The survey included

some 772 farmers, located in Kirinyaga, Central Province, a site in which there have been a couple of donor-supported interventions. These farmers were interviewed as part of sequential surveys in 2005, 2006, and more recently in 2009, with one line of inquiry covering whether or not they grew French beans for the fresh export trade. Of this sample, approximately 20 percent have never grown French beans, 37 percent were new entrants since either 2005 or 2006, 21 percent had exited these supply chains, while 23 percent remained involved over the whole period. Interestingly, many of the growers who ceased to produce beans for the fresh export trade shifted over to supplying a different variety of French beans to a canning company—which in the late 2000s had more than 25,000 outgrowers.

Discussions with leading exporters about the composition and geography of their smallholder outgrower schemes reveal surprisingly high rates of turnover, with many farmers and groups still being dropped (or dropping out) and many new (for the company) farmers coming on board on a year-by-year basis. Turnover rates seem to be in the range of 15 to 30 percent. How can an industry that faces very stringent standards and challenges, to assure smallholder compliance, persist in having seemingly fluid movements of different smallholder groups between and among the exporter supply chains? One possibility is that the long years of experience and the extensive programs of training and technical assistance have, in fact, created a large and dense pool of knowledgeable and (more or less) standards-compliant smallholders and smallholder groups that are readily transferable among different exporters.¹¹⁸ Exporters that drop certain groups and pick up new ones find many of the latter to be very well aware and equipped to meet high standards and only minor adjustments are needed to incorporate these outgrowers within the company's quality control regime. The transaction costs of this fluidity thus seem to be manageable.

Hence, even if an individual donor's program was not able to point to high levels of success in terms of the number of certified (and recertified) smallholder farmers, there appears to have been a substantial aggregated impact from an array

¹¹⁸ One survey undertaken as part of this research reinterviewed, in 2009, farmers who had been involved in a 2004–05 training, credit, and exporter link scheme in Kenya's central region. While that scheme had collapsed in 2006, in 2009 these farmers were 29 percent more likely to grow French beans than were farmers in a control group (not earlier supported but having similar household characteristics). And, for many issues related to pesticide safety, these scheme-supported farmers displayed better knowledge than did farmers in the control group.

of programs, together with the continued diligent efforts of Kenya's export companies. The broad legacy seems to be that the average producer in the sector is now more aware of and more compliant with crop protection and other good practices. And, many companies have been much more deeply involved over the years in providing support and oversight to outgrowers.¹¹⁹ While earlier research concluded that "standards compliance is not possible without external support" (Graffham et al. 2006), *the recent experience has illustrated that standards compliance should not be equated with certification and that time and experience tend to enable strong industries to find workable solutions to seemingly intractable constraints.*

Kenya's horticultural industry never needed to be "saved" by the development community, and the threat of smallholder "exclusion" due to standards proved to be quite exaggerated. This industry and these farmers attracted rather exceptional attention (and resources) in part due to its long history of absolute and relative success. While some donor resources were undoubtedly wasted and several individual projects featured more failures than successes, the overall efficacy of the multiple programs is positive. Yet, in reaching this conclusion, we also believe that the development community was a bit lucky. While most of the institutional experimentation by donors seems to have either failed or not been sustainable, the inherent strengths and leadership within the industry seems to have extracted victory from the jaws of defeat. Had the messy scene of interventions that occurred in the period from 2004 to 2006 taken place in virtually any other high-value (or horticultural) export industry in Africa, there probably would have been little to show for it five years later.

Whether this heavy focus on the livelihoods of some 10,000 to 20,000 farmers (including some significant number of fruit growers in the Central Province) from a poverty-reduction point of view was fully justified is hard to say, as from the perspective of the early to mid-2000s more was at risk, including perhaps significant numbers of pack house and other jobs. Still, in more recent years donor support to Kenyan horticulture has reverted to addressing constraints and pursuing opportunities in the domestic market, where, prospectively, far more stakeholders—producers, traders, and consumers—can be impacted.

¹¹⁹ There were also several useful by-products from these interventions. One was the creation and accreditation of a new, locally based audit/certification company called Africert, whose work over time has extended to cover multiple types of certification and multiple African countries.

Looking forward, there are uncertainties in the path of Kenya's fresh vegetable exports, in a context of high fuel (and thus airfreight) costs and growing competition. Vegetable exports declined sharply in both 2009 and 2010 as a result of adverse weather conditions in Kenya, a downturn in demand, and exogenous shocks, including the Icelandic volcano eruption, which disrupted airfreighted business into Northern Europe in early 2010. Yet, Kenya's trade in French beans may have peaked in 2007. A year later, the value of the country's trade in high-care prepared vegetable products matched that of its French bean trade for the first time ever and surpassed it in 2009. Does this foreshadow a future in which the overall volume of Kenya's vegetable trade declines, yet its value is sustained by further shifts into prepared consumer products—meeting some of the highest quality and food safety standards in the food industry? If so, what are the implications for smallholders as suppliers? As it has for 40 years, the saga continues.

CASE 2: MANY DONORS, YET FEW CERTIFIED FARMERS: THE ELUSIVE QUEST FOR A ZAMBIAN "SMALLHOLDER" HORTICULTURE

Over the past decade, at least a half dozen donors have provided support geared toward mimicking Kenya's experience and fostering a smallholder outgrower system within Zambia's export horticultural sector. From today's vantage point this effort can be deemed a failure, as only tiny quantities of smallholder fresh produce leave the country and as the larger fresh produce industry has continued to struggle over recent years. Yet, perhaps this experience has yielded important insights about the scope and limitations of various types of development interventions. If so, then the failed investments might still have made an important contribution.

Zambia's horticultural crop exports date to the early 1980s, a time in which the country was experiencing severe foreign exchange shortages. A few farmer/investors, mainly of European origin, entered the field in order to access foreign exchange and diversify beyond cereals and livestock production. The early trade was based upon the supply of off-season vegetables and strawberries to the U.K. market. By the mid-1990s this sector was dominated by two companies:

- York Farm, by then owned as a joint venture between the United Kingdom's Commonwealth Development Corporation and the University of Zambia. York Farm operated its own large farm just outside of Lusaka, which employed more than 1,000 permanent employees and 1,500 part-time employees. It produced a variety of temperate vegetables as well as cut flowers,

plus grew maize, soybeans, and vegetables for the domestic market.

- Agriflora, which started operating in 1994 with its own large farm and a cluster of 25 medium/large-scale outgrowers. It focused on high-value/low-volume vegetables such as mange-tout peas, sweet peas, baby corn, and other baby vegetables.

By the late 1990s, there was emerging interest by donors to support the links between Zambia's smallholder farmers and end markets. With USAID support, the Zambia Agribusiness Technical Assistance Center (ZATAC) was established in 1999 in order to provide technical assistance, information, and financial intermediation to smallholders and agribusinesses committed to working with small farmers. Agriflora viewed smallholders as a potential basis for expanding its business—plus tapping into low-cost finance. Therefore, in 1999 the company founded a subsidiary called Agriflora Small Scale (AFSS), with the objective of incorporating up to 500 smaller producers into its export operations.

Over a three-year period, ZATAC provided low-interest loans totaling nearly \$240,000 to support smallholder farmer investments, especially in irrigation facilities. Japan's Financial Sector Assessment Program (FSAP) financed most of the farmers' seasonal credit needs. Seven production sites were selected that already had cooperatives established. JICA financed produce collection depots in each of these locations.

From the very beginning, this was a rather capital-intensive model. Zambia's agro-climatic conditions necessitated the investments in irrigation, in contrast with the typical pattern in the Kenyan highlands where multiple rainy seasons and other conditions permit nonirrigated vegetable production by smallholders. Also, the very definition of "smallholder" was rather liberal in the context of the ZATAC and other support. The Zambian small farmer targeted by AFSS and later initiatives was typically a government retiree who had invested in land around Lusaka as part of his/her pension plan. Compared to Lusaka area residents as a whole, many such commercial farmers are in the higher end of the income scale. Their typical production of vegetables was on one to four hectares, in contrast with the typical pattern in Kenya where vegetable plantings are generally on 0.1 to 0.2 hectares and, in some schemes, are limited to a few hundred square meters.

The Agriflora outgrower scheme experienced some initial teething pains, with smallholder group output frequently not complying with the company's volume and quality requirements. Yet, incremental gains were made and by the

2002–03 season, some 447 farmers were selling to AFSS. Their sales, amounting to around \$300,000, still represented a very small share of Agriflora's overall business (\$25 million) as the latter continued to rely heavily on its own vegetable and flower farms where it employed thousands of people. In 2003, two new collection centers were built, drawing upon just over \$100,000 provided by IFAD under its smallholder water utilization project.

That same year, yet another donor project was initiated. This one was financed by DFID and focused on improving food safety management for small-scale farmers and their associated commercial exporters. An extensive program of training was introduced, targeting farmers, farm workers, and agro-chemical dealers. One of the objectives of the intervention was to facilitate EurepGAP certification for the smallholder outgrowers. In July 2003, Agriflora estimated that about one-fourth of its outgrowers (121) had the potential to be certified given their infrastructure, production practices, and existing record keeping. After several meetings, about half of these (64 farmers) actually signed on to pursue the certification.

The ink was barely dry on these agreements when Agriflora declared bankruptcy in early 2004 under the weight of massive debt. After some considerable delay, Agriflora's productive assets were acquired by another company—Chalimbana Fresh Produce. While this helped prevent a massive loss of jobs—the estimated employment in the industry in 2004 was 7,000—Chalimbana would not continue with the outgrower scheme.

Agriflora had been serving as the farmers' PMO for purposes of the EurepGAP certification. With its demise, an alternative arrangement was needed. The existing two other exporting companies had their own large farms and were not generally interested in sourcing from smallholders and managing an outgrower scheme. In stepped the Lubulima Agricultural and Commercial Cooperative Union (LACCU). LACCU was originally formed in 2000 as an informal grouping, largely to negotiate with Agriflora and other buyers the prices and other contractual terms of produce sales and inputs provision. Now, LACCU would be formalized—with the support of a \$300,000 grant from DFID—to take up the responsibility of developing and implementing a EurepGAP-compliant quality management system. Other donors followed the trail, including the EU's PIP program, which provided training and auditing services.

Implementation did not go as planned. Depot sites were not effectively maintained and fell below EurepGAP standards. Equipment and protective clothing went missing. Trained

staff moved on to more secure positions in the floriculture industry. By July 2006, only 10 of the growers had received certification. That was a smaller number than the combined number of donors and local institutions that had been involved in supporting these schemes.

A couple dozen smallholder farmers were able to find a new outlet for their export production through LACCU. York Farm, then the leading exporter, agreed to enter into a contract with LACCU in 2005, yet only for the supply of a limited amount of baby corn, which was perceived by the company as an easy crop to manage and less risky.¹²⁰ An additional reason for outsourcing the production of baby corn is that it is relatively land-intensive and one of the main constraints faced by York Farm is land (ACI 2005). It was widely perceived by development partners at the time, that EurepGAP certification would make the smallholders either more attractive to the lead firm or enable the smallholders and their cooperative to export directly. Neither model proved functional. The new lead firm made it clear that it wouldn't make much difference to them. The cooperative was proving incapable of meeting the company's volume requirements (deliveries went up and down and rarely matched contractual specified amounts) and the smallholder baby corn was not being sold to the firm's most discerning clients.

Additional efforts to find alternative market options for the smallholder farmers were made. For example, USAID, through the Market Access, Trade and Enabling Policies Project (MATEP) and Production Finance and Technology Project (PROFIT), initially supported the implementation of an outgrower scheme to supply Freshpikt, a large processor beginning operations in late 2005. Yet, it was expected that LACCU would serve as the entry point for the contracting of about 200 smallholder farmers to grow sweet corn and a certain variety of beans under irrigation (MATEP 2006). Under the scheme, Freshpikt arranged financing for inputs through the donor-supported Agri-Business Forum (which directly pays input suppliers), and assisted with technical backstopping. This scheme also ran into severe problems, hence the transformation from a subsidized lead-firm model to a subsidized cooperative model proved problematic.¹²¹

With hindsight, after the demise of Agriflora in May 2004, the string of interventions by donors appears to be a clear

application of the principle of throwing good money after bad. By then, it must have been clear to many that the sector was in peril and what had been gained would probably not be sufficient to constitute a viable sector, or at least a viable smallholder dimension to it. Instead, donors chose to plow ahead as if nothing had happened, identifying new challenges (on top of the old challenges that had not been resolved) and responding with new interventions that looked more and more desperate as time passed. Just on the issue of EurepGAP compliance, donors spent more than \$400,000 on what was initially targeting 450 farmers but ended up certifying only 10 former civil servants-cum-commercial farmers.

And why was supporting these outgrowers deemed to be especially critical for rural development and poverty reduction, while the employment of 5,000 to 7,000 people on the larger farms and in pack houses was not worthy of attention? Would not efforts to upgrade the skills and working conditions of these employees not have had a more significant impact? Maybe so, yet those employees fell outside of the terms of reference for multiple development assistance projects, whose focus has been on smallholders and their commercialization.

But, perhaps this experience was not a failure after all. Perhaps this period of trial and (mostly) error experimentation gave rise to some considerable learning within the development community about the scope and limitations of upgrading smallholder horticulture to supply high-end supermarkets in Europe. Was this what donors did in Zambia? Did they subsidize experiments to discover the true costs of facilitating new markets for smallholder farmers? While some donor initiatives give the impression of one scheme following another over the proverbial cliff, there has evidently been some learning going on, even if this is not widely shared.

Many of the currently implemented donor programs are focusing their horticultural attention on domestic and regional markets, seeking scope for the participation of many more (real) smallholders in improved supply chains locally and in providing raw materials for processors. Here, the foci are on planting the needed varieties of produce, attaining consistent quality, and managing postharvest and logistical challenges. GLOBALG.A.P certification is irrelevant for these close-vicinity market outlets. In Zambia more generally, efforts are being

¹²⁰ Baby corn is considered to be a low-risk crop due to the final spraying taking place two months prior to harvest so that little, if any, residue from chemical treatment remains, and that is removed with the outer layers during the cleaning and packing process (ACI 2005).

¹²¹ Between 2006 and 2008 LACCU benefited from a \$101,026 grant by the U.S. African Development Foundation (USADF) used to strengthen planning, management, and marketing capacity with the ultimate goal of capturing a larger proportion of local and export market for fresh vegetables (USADF 2008).

made to improve the functioning of outgrower schemes involving hundreds of thousands of farmers, associated with an array of industrial crops. Again, the emphases are on productivity enhancements, raw material quality, and generally improving efficiency and farmer returns. While all this may seem to be somewhat traditional work, the prospects for its sustainable success appear to be much greater than the so-called "innovative" schemes.

CASE 3: SERVICING EUROPE'S ETHNIC FOOD MARKETS: TALES FROM KENYA, UGANDA, AND GHANA

While wealthier European consumers have long been interested in exotic fruits, vegetables, and spices from distant sources, with advances in production and logistics, many of these products became mainstreamed in trade and European food distribution over time. Examples include pineapple, mango, papaya, and kiwi fruit. Over the past few decades, many European countries have experienced changes in the composition of their population as a result of immigration and other demographic phenomena. This immigration has taken many forms, including individual guest workers (who frequently remained and subsequently brought other family members), migrations of families and larger communities from former colonial areas, and movements of displaced or socioeconomic refugees. The immigrants have brought with them their traditional diets and eating patterns. In some countries, they have also substantially influenced mainstream food consumption, especially through the emergence of much more diverse out-of-home eating options.

With many first-generation migrants retaining their traditional food preferences and with the mainstreaming of some specific items into broader national consumption, there emerged a significant trade in "ethnic" or "specialty" fruits and vegetables. The earliest and still largest element of this trade centered upon several wholesale markets on the outskirts of London and a few cities in the British Midlands area. These wholesalers serviced specialty retailers (and caterers) who, in turn, were servicing a rapidly expanding U.K. immigrant population from South Asia and East Africa from the mid-1960s onward. A trade in so-called "Asian vegetables" developed, with supplies coming predominantly from Kenya but supplemented from elsewhere. This trade typically involved family-affiliated companies trading in a broad array of chiles, leaves, gourds, and other types of vegetables. In fact, this trade comprised more than two dozen varieties of vegetables, catering to the dietary preferences and norms of different ethnic groups of South Asian origin.

Both then and some 40 years later, produce was sent in cartons and largely sold on a consignment basis. Competitiveness was (and remains) based upon price, quality, and supply consistency, the range of varieties offered, and trust. Although not immune to the wider changes occurring in EU fresh produce quality and food safety regulations, this trade segment has witnessed only minor adjustments in the ways companies manage their supply chains. While some mainstream supermarkets have sought to regularize a supply of certain Asian vegetables—and have sought out suppliers who can meet their requirements for product traceability and production system oversight (or certification)—this pattern is not widely found in the supply chains that continue to specialize in ethnic produce.

Over time, similar wholesale markets (or individual wholesalers) in the United Kingdom have also taken on the importation and distribution of produce servicing other immigrant/ethnic communities, including those from West Africa and the Caribbean. In Holland, Denmark, and Germany, selected companies have developed specialized businesses servicing a range of immigrant/ethnic communities. As observed in the United Kingdom, these distribution channels also continue to feature a predominant competitive focus on price and product quality, with only limited attention to pesticide residues and other matters that have concentrated the attention of EU regulators and entities such as GLOBALG.A.P. Ethnic or specialty vegetables have only rarely been the subject of pesticide residue monitoring programs carried out by EU agencies.

This mini case study highlights selected experiences of African countries in servicing Europe's ethnic fresh produce market. In keeping with the broader theme of this paper, emphasis is placed on efforts to upgrade pertinent supply chains, based on smallholder farmers, to service this market (or, technically, these markets).

Kenya: Trendsetter but Now a Declining Player

As noted above, the trade in ethnic produce to Europe was started by a half dozen Kenyan companies between the mid-1960 and mid-1970s.¹²² These were family-owned companies whose proprietors were generally second- or third-generation Kenyans with family origins in South Asia. Most of these companies had been involved in farming and/

¹²² More details about the early origins and evolving structure of the Kenyan Asian vegetable trade can be found in Jaffee (1990).

or domestic produce wholesaling before entering the export business. Some of the companies had their own farms; most developed nascent outgrower schemes involving a combination of smallholder and medium-scale farmers. The medium-scale farmers generally grew those crops requiring a bit more investment (e.g., in wire tressles) yet less labor. Production centered in or around irrigation schemes that had been developed earlier about half-way between Nairobi and Mombasa.

When outgrowers were involved the companies provided seeds and some limited technical advice and then dropped off cartons just before harvest time. Basic visual quality norms were applied and these were checked for in the boxed produce before the exporters' truck would accept and load the produce. Payments to farmers were made on a cash or weekly basis. Relationships were loose rather than contractual. Loyalty was a scarce commodity and farmers typically sold to multiple buyers. Yet, with many of the Asian vegetable varieties having only limited alternative local outlets, farmers needed to retain some regular ties to selected companies. Produce was collected by open-air trucks and taken to simple warehouses where some additional quality grading was done and cartons were clustered together for individual consignments and buyers. Several companies consigned the produce to companies in the United Kingdom that were affiliated by familial ties; others shipped through a few importer/wholesalers.

This line of business grew steadily and by the mid-1970s, Kenya was exporting about 5,000 tons per year of a basket of 25 Asian vegetables, with okra, karela, and eggplant being the most important items. Many new companies entered the trade although most were short-lived, and the early pioneers continued to dominate this trade, even though several of them began to diversify their businesses to green beans and other higher unit value commodities.

Over the subsequent three decades, little changed in the modus operandi of Kenya's supply chains for Asian vegetables. Through the mid-1980s, this trade expanded (peaking at just over 10,000 tons in 1986) and began to service specialty vegetable distributors on the European continent. In the mid- to late 1980s, approximately 3,000 farmers were supplying this segment of Kenya's fresh produce trade, with some diversification of growing areas beyond the original sites. While in the 1990s it became increasingly common for the leading export companies to enter into more formal contractual (and service provision) arrangements with their outgrowers, this was not the norm in the Asian vegetable channels as overseas sales remained largely consignment/commission based (rather than involving prenegotiated prices).

By the mid-1990s, Kenya's Asian vegetable trade had contracted somewhat (to 8,500 to 9,000 tons per annum), as an array of new competitors entered the market for individual products (India and Cyprus for okra, several countries for chilies) and as rising airfreight rates reduced sales margins and led many of the leading companies to focus their expansion efforts in higher value legumes, prepared vegetables, and cut flowers.¹²³ This trend has accelerated with more and more competition eroding Kenya's once-dominant market share for a range of specialty vegetables. While some innovations were introduced—including distinctive varieties for certain types of vegetables—the overall trend has been downward, and in recent years Kenya's Asian vegetable trade has been on a volume similar to that attained in the mid-1970s. Very few Kenyan companies continue to specialize in this product line and only a few of Kenya's largest fresh produce companies retain a toehold in this market—seemingly more out of respect to their company's founders than for commercial purposes.

Over the course of the 2000s there were multiple and generally unsuccessful efforts to modify the traditional *modus operandi* of selected Asian vegetable supply chains in Kenya in order to supply prepackaged produce to mainstream European supermarkets and comply with the latter's more stringent requirements for produce traceability, pesticide residue limits, and production system certification. One company that hadn't diversified out of this product line drew upon the support of PIP to implement a scheme to upgrade the supply of some 300 outgrowers via intensified training, chemical spraying services, pesticide residue testing, and significant upgrades to the company's pack house structure and management. Some technical improvements were made, yet the company was ultimately unsuccessful in developing an expanded line of prepacked Asian vegetables as the price premiums (and other services) it could offer farmers were apparently insufficient to earn their loyalty and commitment.¹²⁴

A second example involved a seemingly innovative business concept—a joint venture between an NGO, a leading exporting company, and farmers. This was the creation of VegCare in 2004.¹²⁵ VegCare grew out of two origins:

- Earlier work done by CARE under an IFAD-supported Small Rural Enterprise and Agri-Business Promotion Project (REAP), dating from the late 1990s. CARE

¹²³ This stage within the evolution of Kenya's horticultural trade is examined in Jaffee (1995).

¹²⁴ The company invested some 50,000 euros in this upgrade effort, with this sum being matched by PIP.

¹²⁵ The VegCare story was derived from interviews with key players in 2008.

had organized several hundred smallholder farmers into groups and provided links to credit and other service providers as well as fresh produce distribution companies—including domestic wholesalers and supermarkets. A range of fruits and vegetables were supplied. Farmer groups were expected to graduate from being self-help groups to commercial private entities. A central management unit coordinated the project and took on many marketing functions. Some difficulties were encountered in meeting sales commitments and in the accumulation of farmer debts. CARE was also bearing much of the commercial risk in an environment of variable prices.

- Continued challenges faced by one of Kenya's leading fresh produce exporters to ensure continuity in its supply of Asian vegetables and to facilitate upgrades in pertinent supply systems to enable it to sell this produce to mainstream European supermarkets. This company had already substantially diversified beyond Asian vegetables (which accounted for only 5 percent of its sales by the mid-2000s), yet retained a subsidiary working in this product line. It has the potential of developing a line of cleaner Asian vegetables that might differentiate its product in the market.

VegCare was formed as a joint venture with CARE having a 70 percent share and the company a 30 percent share. The CARE shares were supposed to be taken up by the participating farmers over time. The new entity was to work with some 450 farmers. The entity would provide commercial services to these farmers and sell their produce on a profitable basis, primarily to the partner exporter but also to others. Production systems were to be upgraded to ensure compliance with both GLOBALG.A.P and the Ethical Trade Initiative. By dealing with one coordinating entity, the exporter hoped to substantially reduce its transaction costs when sourcing Asian vegetables from smallholder farmers. Several donor agencies would support this scheme. In 2004, USAID provided a \$450,000 grant through its Global Development Alliance. Subsequent support was provided by DFID, GTZ, the Rockefeller Foundation, and PIP.

VegCare's operations were never smooth. The technical capabilities of its management unit did not meet the high standards of the exporting company and were inadequate to support farmers who were being asked to make some considerable changes in their production practices. The company's strict quality requirements exceeded what CARE and the involved farmers had been used to. This initially resulted in high rates of product rejection, which discouraged farmers. A subsequent drought lowered supplies below the

exporter's needs and led prevailing market prices to far exceed the exporter's contracted price, resulting in widespread farmer side-selling. While the company wanted to be the exclusive outlet for the scheme's production, farmers wanted to retain the option of selling through alternative channels. Insiders refer to a "clash of cultures" within the partnership, with the company adopting a strictly commercial posture, while farmers had already grown used to donor grants and an NGO's willingness to market produce of any quality. The upgrading pressures came suddenly, even while many of the participating farmers were unsure about the (prospective) benefits. While a limited number of farmer groups attained GLOBALG.A.P certification through a QMS established by VegCare, the joint venture ultimately failed to meet the expectations of any of its stakeholders and was brought to a close at the end of 2006. Follow-up measures were taken to link VegCare with other exporters and domestic buyers.

Ghana—Addressing Basic Constraints to Sustained Industry Growth

Ghana developed a relatively small horticulture industry during the 1990s, on the basis of airfreighting of pineapples and later also vegetables. Yams, chiles, and a wide range of vegetables serving ethnic populations, constitutes the bulk of Ghana's vegetable trade to the EU, particularly to the United Kingdom. Vegetable exports have made some gains during the last decade, increasing from 12 million euro in 1999 to 17 million in 2009.¹²⁶ Exports of yams have been showing a positive performance, while in the segment of "other vegetables," exports have been in decline in the last years, moving from nearly US\$10 million early in the 2000s to about US\$6.8 million in 2009, and from 6,700 tons to 4,700 tons during the same period—a much lower volume than the estimated countries' potential of 8,000 tons/year (Jaeger 2008).

In 2005, the number of exporters taking part in vegetable export in Ghana was estimated to be over a hundred, with a leading exporter accounting for 25 percent of export volume (Sefa-Dedeh 2005).¹²⁷ Smallholder farmers account for the bulk of supplies of vegetable exports, although reliable data on the number of smallholders who are suppliers of vegetables for exports, regularly or irregularly, are lacking. Producer/

¹²⁶ The country's vegetable exports experienced a short boom in 2008, reaching 34 million euro, particularly due to positive international prices for yams, one of the leading country's export products—exports of yams were estimated at almost 9 million euro in 2008.

¹²⁷ Only 34 vegetable export companies were listed in the export directory in 2008, which might indicate some concentration in the sector or rather the informal nature of the business.

buyer relations are very loose, and exporters have not been able to win farmer loyalty and thereby control “side selling.” Farmers constantly report buyer reliability and trustworthiness as a main problem in their transactions.¹²⁸ Yet, although there are certainly a number of speculative buyers, there are a number of structural industry constraints that explain, to an extent, the lack of buyer’s reliability.

Exports of vegetables have grown without significant investment, or indeed support; with the success relying more on either the airfreight cost advantage or trading connections. Therefore, problems of access to quality seeds, lack of irrigation, appropriate inputs, absence of appropriate structures to serve as points of product aggregation, poor packing and packing facilities, lack of adequate storage and cool chain facilities, and so forth, are some of the structural and fundamental constraints faced by this industry. These aspects have been aggravated by the level of uncertainty that characterizes market transactions.¹²⁹

Efforts to Upgrade Asian Vegetable Supply Chains

Efforts to upgrade Asian vegetable chains have been scattered; the most significant ones were led by USAID, through the Ghana Public-Private Partnership for Industry Development Program (GHPPP), and the TIPCEE program. The latter was implemented under an approach that focused on developing linkages between farmers and nucleus firms/exporters, with a few pilot initiatives undertaken by the project, aimed at professionalizing the vegetable export industry through producer/buyer coordination models. Under these models, production upgrades included the provision of quality seeds, establishment of irrigation infrastructure, adoption of better practices, and so forth.¹³⁰ Yet, these initiatives

found little backup from the firms and the producers/industry associations. A few efforts were also made more broadly, for example, in terms of setting grade standards and delivery of some training on production practices to farmers.

Thus, with the failure of the attempts to strengthen producer/buyer coordination, development support to this industry has most recently focused on addressing broad constraints. For example, improving export logistic infrastructure complemented by support to strengthening farmer organizations and training on GAPs, drive most of the recent projects. Significant investments are planned and/or are under implementation to improve overall logistic infrastructure for production and exports, which will also benefit the vegetable sector.¹³¹

Past investments in this industry have lacked a core of lead firms that would drive its modernization and development to prepare itself to address future compliance challenges.¹³² However, while recent donor investments are very much-needed developments, a great part of the future success of the Ghana vegetable industry to sustain growth and support a shift in market orientation toward more demanding markets relies on the capacity of the firms to shift from their current role as consolidators to quality manager exporters. Skills and sound management capacities of firms are needed to support this shift, and although there is little evidence that those capacities are currently in place, they may well come from foreign or new investors interested in pursuing opportunities as a result of better enabling factors and comparative advantages offered by the country, or at least, as a reactive response to strict demands for compliance.

128 In Ghana, from a total of over 400 Asian vegetable growers interviewed in 2008 as part of this work, 36 percent reported that buyer reliability was a serious or very serious problem, and only 48 percent considered the buyers relatively trustworthy. In comparison, farmers producing for local markets scored better results (Sean et al. forthcoming). This factor may be one of the main reasons that farmers exit Asian vegetable production—for example, 8 of 19 former Asian producers interviewed as part of this research in 2008 indicated they had switched to producing only local crops, mainly due to problems with exporters or their agents, including failure to pick up the product or returned later than agreed upon, changes in the agreed volume they were willing to purchase, or the price they were willing to pay, and being dropped by the buyer/exporter, without a particular reason.

129 Exporters mentioned the lack of cold storage as critical, highlighting several incidents in a six-month period where product was lost due to lack of cold storage at the airport; adding that airfreight uncertainty, inaccessible financing, and lack of good quality seed compounded these problems and further decreased the competitiveness of exports.

130 Examples included the attempts to create a smallholder-based production hub linked to a lead company to produce high-quality chiles, okra, and baby corn; an organized scheme with other company to produce corn; and a pilot program on okra, for export purposes, with the two main vegetable associations—the Vegetable Producers and Exporters Association (VEGEAP) and the Association of Vegetable Exporters (GAVEX)—facilitating different services to small-scale producers, including the link to the export company.

131 For example, the Export Marketing and Quality Awareness Programme (EMQAP), in implementation since 2007 and financed by the African Development Bank, covers important components of improved logistic infrastructure and continuation of demonstration farms in each region on better production practices and GAPs. Agricultural-related investments through the Millennium Development Corporation are also focusing on production and export infrastructure.

132 This has been the case of the vegetable exports (peppers and eggplants as well as other products) from the Dominican Republic, which have been subject to increased oversight on pesticide residues from the EU authorities.

Uganda: Late-Comer and Still Struggling

During Uganda's post-conflict period, several Government of Uganda (GoU) and development assistance efforts sought to revive and diversify the country's agricultural exports as a means of accelerating growth, reducing poverty, and lowering fiscal vulnerability associated with the country's extreme level of dependence on a single export commodity—coffee. Particular attention was given to the development of trade in fresh fruit and vegetables.¹³³ Uganda appeared to be blessed with a favorable climate, ample natural resources, and a plentiful and inexpensive labor force to underpin a successful horticultural export thrust.

Despite multiple interventions during the 1990s, the industry attracted few investors with significant financial and managerial capacity. Many technical experiments and demonstration plots had been done, but few translated into commercial activities. Hence, by the early 2000s—after a decade of development assistance and government support—Uganda's horticultural trade remained very small—with a free on board (FOB) value of a few million dollars—and seemingly fragile, with weaknesses at all levels in the supply chain, limited capacity for collective action, and relatively few individual success stories at the commodity or firm level. Both then and subsequently, this export trade has been highly fragmented, with large numbers of very small companies (exporting one or a few tons per week) and perhaps two dozen companies operating on a regular basis. With little commercial investment, most supplies have come from smallholder farmers, generally loosely organized by individual exporters.

The bulk of Uganda's small horticultural trade consisted of various types of peppers and other vegetables servicing the U.K. markets for Asian vegetables and other specialty produce. While Ugandan firms continued to struggle with very basic supply and logistical bottlenecks, by the early to mid-2000s some of their European buyers began asking questions and applying subtle pressure on their Ugandan suppliers to undertake and demonstrate improvements in production and pack house hygiene as well as broader quality management. While operating from a position of relative weakness and low profitability, many Ugandan fresh produce exporters have taken steps to adjust in an evolving market and regulatory environment. Some have sought to upgrade their outgrower production practices, pack house operations, and associated documentation. Others have sought to reposition themselves in the market for organic produce; while

still others have exited the fresh produce trade and instead sought niche markets for dried fruit.

Almost all of these upgrading or market repositioning strategies have been supported by GoU and/or development assistance efforts, of which there have been many. Figure 7.2 provides a summary of these interventions. The most prominent of these efforts have been the ones initiated by the GoU and the EU's PIP, which are briefly summarized here.

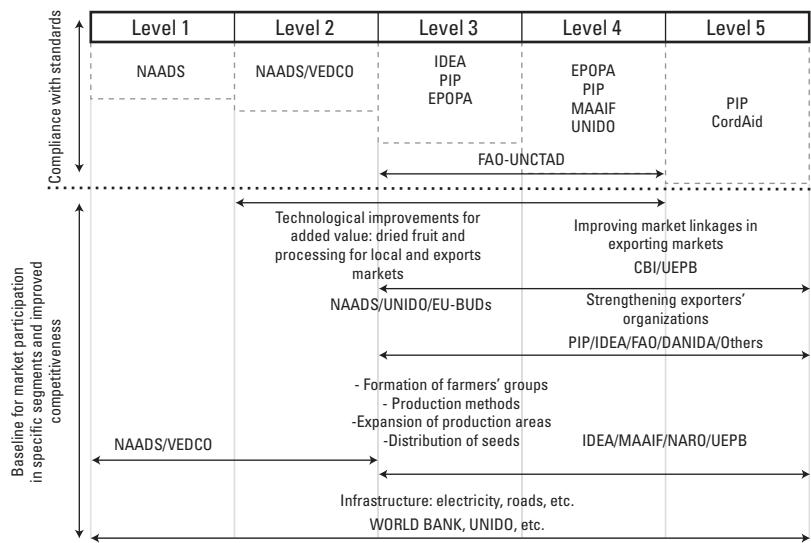
In 2004, the Ugandan government re-structured its support to export horticultural development, with a focus on GLOBALG.A.P compliance, via support under an Export Production Villages (EPV) program. The aim of the EPV was to improve the skills and capacities of organized farmers to supply export markets. From 2004 to 2006, a total of 23 export villages (covering 1,314 farmers) were trained on different aspects of compliance with the GLOBALG.A.P protocol, and on the importance of group cohesion. Training was delivered by multidisciplinary teams from different public institutions. In so doing, the EPV brought together the capacities of the different public institutions supporting the sector, promoting cohesion and common targets. Typically, the training was conducted over a three-day period and held on a lead farmer's premises. The EPV envisaged establishing an inspection and traceability system, and working toward GLOBALG.A.P certification for each export village. Resource constraints, however, soon served to limit the scope of the EPV such that none of these aspirations materialized, and even the farmer training had to be curtailed toward the end of 2006.

Through PIP, 23 companies with links to some 1,650 producers benefited from training and technical assistance in areas related to food hygiene, traceability, and integrated pest management (IPM) systems (see Table 7.2). The project supported companies in their attempts to shift market orientation and/or comply with market requirements by achieving certification with respect to GLOBALG.A.P (i.e., levels 4 and 5). Twelve additional companies that received support from PIP were directed at markets for noncertified products in the European Union (level 3). Aggregate PIP support to Ugandan companies totaled about €776,000, suggesting an average of €35,000 per company.¹³⁴

¹³³ A more detailed review and analysis of Uganda's horticultural export development experience is provided by Diaz Rios et al. (2009).

¹³⁴ Through the partnerships established, PIP covered the cost of training and technical assistance, traceability software, laboratory analysis, and occasionally the establishment of demonstration plots for IPM. A company's financial commitment mainly included the costs associated with the logistics of training and the implementation of recommended practices. PIP generally did not support investments in infrastructure and logistics associated with internal company training events or for their out-growers.

FIGURE 7.2: Framework of Recent Interventions in the Uganda Horticulture Sector



Source: The Authors.

One of the main characteristics of the program was its cost-sharing basis; yet, progress in the implementation of action plans was highly dependent on the capacities of the companies to undertake the investments required. For example, a training session could not be delivered if the company did not provide transport and food to the outgrowers that were attending. This is a major factor explaining the quite significant variation in the progress of action plans among companies that received support, as only half were finalized by the end of PIP in 2008. Additionally, out of nine companies attempting to achieve GLOBALG.A.P certification, only two obtained it, plus there was uncertainty regarding the capacity of even those companies to sustain certification.

Bottom-up models have also been piloted, through the involvement of business service providers or the engagement with cooperatives/associations. For example, in Uganda efforts were led to help a small-scale producer association to become GlobalG.A.P certified through the engagement of a service provider in charge of marketing services and technical assistance. As presented in Box 7.1, this initiative faces considerable challenges.

Through PIP, some support went to strengthening broader service capacities, including the capacities of regulatory authorities and a private laboratory, and to train and engage a cadre of local professionals to take on training and advisory services. According to the PIP final evaluation, the program trained 29 Ugandan consultants, with about three-fourths of these still providing advisory services to the horticultural sector, either on a commercial basis or under some other development

assistance program. The training for inspectors of the Department of Crop Protection of the Ministry of Agriculture, Animal Industries, and Fisheries (MAAIF) has had into mixed results. As of mid-2008, no database of approved pesticides had yet been created, and regulatory oversight of pesticide distribution channels remained weak—despite the greater awareness among staff about the key issues and challenges.

After nearly two decades of GoU and development assistance support, Uganda's horticultural export sector remains small, having only a marginal presence in the EU market and featuring few modern supply chains. The total value of the trade remains in the range of \$6 to \$8 million per year. Between 1,500 and 2,500 smallholder farmers are either regularly or

TABLE 7.2: Broad Themes of Assistance Provided by PIP Program

ACTIVITY	NUMBER OF COMPANIES
Diagnostic	21
HACCP	16
General technical support	16
Pesticide analysis	10
Microbiological analysis	10
Soil analysis	1
Pre-audit	8
Pre-GlobalGAP option 1	2
Pre-GlobalGAP option 2	7
Pre-Organics	1

Source: Diaz Rios et al. 2009.

BOX 7.1: Hot Stuff: A Cooperative-Based Approach to Supply Upgrading in Kasese, Uganda

Since the late 1990s, several interventions have sought to foster a cooperative-based vegetable export venture located some 400 km west of Kampala in the Kasese region. Initially, a USAID-supported project helped to experiment with the production of alternative vegetable crops within a previously developed irrigation scheme. This led to the development of a small trade in hot peppers, tied to a buyer in the Netherlands. When the USAID support came to an end, the Dutch buyer connected the farmer cooperative to CordAid, which made available funds for further investment in the scheme and for technical assistance.

Under the program, a local consulting firm provided technical advice and training to farmers but also assumed crucial packing, logistical, and marketing functions. An interesting characteristic of the business model was its expected financial sustainability, as it should provide sufficient funds to pay for the technical assistance and other services provided by the consulting firm. Thus, it was expected that the grant and loan provided by the donor—nearly 0.25 million—would support initial project activities, including the costs of technical assistance, but that in the medium-term, 80 percent of technical assistance costs would be funded through income-generating activities.

An array of assistance has been provided to hot pepper producers, including the financing of a tractor and of a revolving fund for farmer inputs, repair of the association's cold truck to reduce postharvest losses, and provision training to farmers. In 2005, with the support of PIP, the association also embarked on GLOBALG.A.P certification. However, several problems delayed its achievement, in particular an outbreak of bacterial wilt in 2006 and 2007, which practically wiped out the cooperative's production. Other problems experienced were high postharvest losses and difficulties ensuring availability of cargo space.

While 131 hot pepper producers have benefited from continuous institutional support over more than a decade, only a subgroup of 32 of these farmers obtained GLOBALG.A.P certification. The cooperative faces significant ongoing technical and financial challenges, including starting the repayment of loan obligations, the maintenance of GLOBALG.A.P certification, and ensuring the sustainability of the services provided by the consulting firm after the end of the project.

Source: Diaz Rios et al. 2009.

irregularly involved in supplying some two dozen (mostly struggling) exporters. The future prospects for this trade do not look especially bright, although this remains a priority of the GoU. There is arguably much greater potential (and consumer benefits) in focusing future support to better develop supply chains for the domestic and regional markets.

Several lessons can be drawn from Uganda's recent experiences:

- The fragmented structure of its industry and very small size of most individual companies greatly limited its absorptive capacity for development assistance. With limited exceptions, increased awareness and knowledge—brought about through training and technical assistance—have not been translated into improved practices along the value chain as Ugandan companies have lacked the financial resources to make the needed upgrades in physical facilities or hire the staff to implement improved management systems. The companies' thin structure has prevented

them from reinforcing and following up the training provided to farmers.

- In supporting standards compliance, efforts involving great leaps forward are unlikely to have high success rates. Ugandan firms were mistakenly encouraged to move their supply chains and systems to become compliant/certified to GLOBALG.A.P and other stringent standards when, for the most part, their buyers were not requiring (or rewarding) this. From the base they were operating at, this necessitated a transformation of their entire business without tangible assurances of benefits. Program subsidies can help to offset some of the initial upgrading costs, yet the firms are left with the recurrent costs of running a more complex supply chain. In the Ugandan case, and perhaps more generally whenever small- and medium-sized enterprises (SMEs) are involved, a more graduated and incremental process of management system and commercial practice upgrades seems more appropriate and potentially sustainable.

- Both GoU and donor programs in the 2000s may have devoted too much attention to standards compliance issues and too little attention to the more fundamental constraints facing the industry. Fundamental limitations remain in relation to applied research, technology transfer, access to finance, and SME management. Dedicated programs focusing on standards compliance (and even more narrowly on certification) are not likely to be successful in the context of emergent or immature/struggling industries.

CASE 4: SHIFTING MARKET PREFERENCES PARTIALLY DERAIL GHANA'S PINEAPPLE INDUSTRY

Background and Industry Take-Off

The production of pineapple in Ghana dates from the 1940s and was helped by the establishment of a government-managed canning factory, built in 1957, aimed at supporting the economy after independence. From the mid-1980s onward, the Government of Ghana (GoG) initiated a number of investment programs to rehabilitate basic agricultural services, culminating in the formulation of the Medium-Term Agricultural Development Strategy in 1990, which included support for agriculture export diversification. Financial incentives were given to growers producing pineapple for export as a way of reducing dependence on cocoa, the country's dominant export crop.

The World Bank supported the government's efforts via several investments, including the Ghana Diversification Project (1991–98), through which support to the pineapple sector was provided for production expansion, international market penetration, and construction of roads in selected areas. Pineapple production expanded rapidly during the mid- to late 1980s, reaching an estimated 10,000 tons by 1990. A small export trade in airfreighted pineapples began. By 1993, a group of exporters established a pilot pineapple plantation, which resulted in further expansion of the industry. By 1999, production had expanded to nearly 35,000 tons. The development of sea freight capacity drove down freight costs and facilitated the expansion of exports, which reached nearly 26,000 tons, valued at €16 million by 1999. Collaborative efforts in logistics and other areas led to the formation of an industry association in 1995, the Sea-freight Pineapple Exporters of Ghana (SPEG). The embryonic industry also developed a small trade in fresh-cut pineapple, prepared fruit salads, and pineapple juice (Danielou and Ravry 2005).

The two largest donors supporting nontraditional export development in Ghana during the 1990s—the World Bank and

USAID—each initially concentrated on enhancing the overall enabling environment for trade. Yet, there was also room for supporting the supply response to policy reforms. For example, 20 percent of the nearly US\$80 million investments made by the USAID's Trade and Investment Project (TIP, 1991–98) were expected to support the capacity of firms to export. Innovative efforts were made by donors to support production expansion, using both the capacities of lead firms to integrate smallholders and the benefits of farmers' collective action.

USAID/TIP's broad support to nontraditional export development applied a graduated approach to enterprise development, consisting of providing direct assistance to firms with different levels of readiness to engage in exports, and classified as firms A, B, or C.¹³⁵ The Trade and Investment Reform Program (TIRP, 1998–04), TIP's successor, was implemented via a commodity chain approach, with a component specifically targeting horticulture development. The approach to support firms under TIRP relied on the so-called "push-pull" approach, by which a limited number of lead firms were to be selected for assistance to push them to a higher level of performance and international competitiveness. In the process of increasing their production and revenues, these firms were expected to develop links with small producers and, in effect, pull them into the production and marketing chain. Thus, the establishment of links between producers and firms was to be central to the enterprise development strategy of TIRP. Institutional support was also provided to industry apex associations for improved service provision. This, together with the push-pull approach, was supposed to expand the impact of the program well beyond the few firms that could be reached directly.

While the industry's level of exports grew steadily, reaching 54,000 tons in 2004, the bulk of the growth was attributable to expanded production on exporter-owned larger farms, as well as the contributions made by small producers linked to Farmapine (see below). Attempts to strengthen exporter-smallholder links advanced little. Each of the lead exporters had their own farms, yet typically sourced from smallholder farmers for between 25 and 40 percent of their volume requirements. But the relationships with these smallholders

¹³⁵ A-level firms were ready for immediate assistance in finding trade and investment opportunities; B-level firms required technical and/or managerial assistance to prepare them for trade and investment opportunities in a reasonable period of time; and C-level firms were willing to take the steps necessary to prepare for trade and investment opportunities at the time.

typically remained loose, without seasonal contracts or technical assistance and rarely involving the provision of inputs. Most smallholders were approached on an ad hoc basis when exporters received an order or wanted to send a consignment to Europe.¹³⁶ A limited few became regular outgrowers, qualifying for credit or other forms of support from the exporters (Yeboah 2005).

This pattern of procurement was a mirror image of the basis for export sales. Most Ghanaian pineapple was sold into Europe on a commission/consignment basis without pre-agreed prices. Suzuki et al. (2008) found that the quality rejection rates of exporters for smallholder produce was closely linked with ups and downs in market demand, suggesting that exporters use the complementary procurement from smallholders as a mechanism to transfer market risks to such suppliers while protecting the revenues from their own farms. The strengthening of links between exporters and producers thus became the central focus of the USAID Trade and Investment Program for a Competitive Export Economy Project (TIPCEE), over the 2004 to 2009 period. Attempts were also made by donors to open more stable export opportunities for small farmers through a farmer ownership-based export model, yet, as will be noted below, that effort proved quite challenging and was ultimately not sustainable.

An Exogenous Shock Undercuts Ghana's Position in the EU Pineapple Market

Up until then, Ghana's pineapple export industry had developed with comparatively little investment production, postharvest, and logistical infrastructure. Its bases for competitiveness consisted of low labor costs and low freight costs, with no particular market or consumer preference for Ghanaian pineapples.¹³⁷ These advantages would soon be undermined by measures taken by Ghana's competitors. Costa Rica was a long-standing supplier to the international pineapple market, although it was noted for supplying relatively cheap, low-

quality fruit. Yet, in 1996 it began to ship a newly developed variety called MD2 that was considered to have a sweeter taste than the dominant variety then being traded (and grown in Ghana), the Smooth Cayenne. MD2 had benefited from an extensive combination of research and development, supply chain improvement, and marketing initiative by a leading multinational company.

The introduction of MD2 proved to be an enormous success in the European market. Costa Rican exports to the EU increased from 100,000 tons in 1999 to nearly 640,000 tons by 2009. Similarly, Ecuador, with an insignificant trade of around 1,000 tons in 1999 has become the second leading supplier to the EU market, exporting about 54,000 tons in 2009. In contrast, Ghana's export volume in 2009 (29,000 tons) was little different than its level of trade a decade earlier. During this period, Ghana fell from being the second to the fourth largest supplier of pineapple to the EU market.

The varietal shift from Smooth Cayenne toward MD2 pushed the Ghanaian industry to revisit its basic factors of production and restructure its supply chains. Adopting MD2 has meant substantial changes in production practices—including use and methods of irrigation as well as strict fertilization programs. Major upgrades have also been needed in postharvest infrastructure and in logistical arrangements. A more effective cold chain from the field to the port has been needed. Relative to traditionally grown varieties, the MD2 has proven to be more knowledge- and capital-intensive to manage.

And, other changes were afoot. Ghana's traditional outlet had been the so-called discount segment of the northern European market—a channel focused firstly on price, but also calling for consistency of supply and quality. Buyers in this market segment had put little pressure on the Ghanaian suppliers to upgrade production and pack house controls to address matters related to pesticide residues, hygiene, and other food safety matters. Yet, by 2004 major supermarkets in several European countries were pressuring suppliers to comply with the EurepGAP standard, covering risk identification and management and requiring full traceability of sourced product. The expectation in Ghana was that demand for EurepGAP certification would soon be articulated by their buyers servicing the discount segment. This would necessitate additional investments and changes in management practices (and intensified record keeping) on the farms owned by the exporters. Given the very loose relations exporters had with smallholders, it wasn't evident how the production changes and exporter oversight functions could be applied for those channels.

¹³⁶ Fold (2008) describes the process as follows: "The exporter inspected the fields to estimate the number of harvestable pineapples that met the importer's contract specifications, usually in terms of the degree of sweetness and size. If a deal with the smallholder was agreed, the exporter took care of all successive handling, from 'de-greening' the suitable pineapples, harvest, cleaning, grading (according to size), packaging and transportation to Tema terminal, together with pineapples from the exporter's own farm. Pineapples left in the smallholders' field were either sold to local juice-manufacturers or petty traders who sold them on local markets."

¹³⁷ In 2008, daily rural wage rates were between \$1 and \$1.50 in Ghana, compared with \$10 in Costa Rica. Sea cargo from Ghana to most European ports takes a few days vs. 12 days or longer from Central/South America to Europe (Jaeger 2008).

BOX 7.2: Farmapine—A Nice Concept Yet Unsustainable Results

During the 1990s, TecnoServe was supporting the establishment of pineapple grower cooperatives in Ghana as a way to aggregate product and enhance farmers' collective capacities to access services and export markets, and to overcome poor experiences from their participation in outgrower schemes. With technical support through the TIRP/USAID program, an exporting company—Farmapine Ghana Limited (FGL)—emerged from the merger of five small-scale producer cooperatives and two private medium-scale exporting companies. The company was established as a limited liability company, with the five pineapple cooperatives (164 farmers with an average cultivated area of 1.9 acres) holding 80 percent of the shares and the two exporters each holding 10 percent shares. The company received its original capitalization of US\$1.4 million through a government loan from the Agricultural Diversification Project (ADP), funded by the World Bank, to be repaid over a seven-year period including a grace period of three years. The exporting companies were expected to bring experience, equipment, and market-end links to the new commercial entity.

During the first years of operations, the company was a success from the perspective of accessing exports markets—it soon became the second largest pineapple exporting company in Ghana, reaching about 6,000 tons in sales in 2002. However, since the commencement of its operations, the company faced severe teething problems. According to a World Bank report (2001), it was clear that to be viable in the long run, the company needed to quickly increase the volume of its operations, cut back on its management costs and sort out the problem of compensation to the two former export companies. An additional problem was the massive devaluation of the Cedi after January 2000, which resulted in a contraction of the working capital provided under the loan to farmers. The loan was borrowed in foreign

currency and the purchases of imported inputs had to be paid at far more expensive prices. As a result, the typical farmer was generating a crop yield sufficient to repay only 50 percent of the original input loan value. These problems were compounded by poor management of the company, and difficulties achieving production volume targets and matching quality specifications. The company experienced high product rejection rates, widespread farmer side-selling, and the accumulation of debts among its suppliers/members. By 2004, the company was no longer viable. While designed to be a model of farmer ownership, in practice the participating farmers contributed to and understood little about the company's business decisions.

In late 2004, in an effort to restore member confidence, a new management team was appointed and measures taken to restructure the company. Membership increased to 300 and the company's improved finances helped it widen its sources of financing. Farmapine's exports recovered during the subsequent year. However, the apparent recovery would not be enough to ensure its financial viability.

Nevertheless, several donor-supported initiatives sought to help Farmapine members to gain EurepGAP and fair trade certification and/or convert production to the MD2 variety. Planting material was imported by a local NGO and provided to Farmapine members, but this turned out not to be the MD2 variety. Subsequent arrangements were made to provide proper planting material, yet lack of capital prevented the farmers from applying proper techniques. Production continued to decline. The company shut down its operations in November 2006 and its assets were auctioned off in June 2007.

Source: WB Report No. 22439 (2001). Yeboah 2005; Danielou and Ravry 2005; Moss and Donu (no date). Interviews with former Farmapine farmers and managers, March 2008.

Industry Response to Emerging Challenges

Ghana's pineapple export industry has featured relatively high rates of concentration among relatively few firms. For example, in 2000 the leading five companies accounted for 72 percent of export volume. By 2008, the top seven companies had an 80 percent share. This concentration,

and the typical pattern of exporters relying upon their own farms for the bulk of their supply, should have facilitated the relatively rapid take-up of EurepGAP and the MD2 variety within the industry. EurepGAP did not seem to be a problem. By 2004, according to a survey undertaken under the Ghana Horticultural Public-Private Partnership Program (GHPPP), 16

out of the 24 farms that accounted for over 72 percent of the total exports in 2003 had GLOBALG.A.P certification and 8 farms also had fair trade certificates (Sefa-Dedeh 2005). And, by 2007, almost all leading exporters were already GLOBALG.A.P certified.

MD2 conversion did not proceed as smoothly. One company had started the conversion process in 1999, and several others began in 2002. Yet, by 2004, only about 225 hectares (of total national plantings of nearly 10,000 hectares) were under the MD2 variety. And, much of these plantings involved agronomic and postharvest practices little different than for Sweet Cayenne, despite the rather different characteristics of these varieties. No sense of urgency was apparent. In fact, the success of MD2 in Europe seemed to come as something of a surprise to the Ghanaian industry. A consumer survey undertaken by GHPPP in 2004 highlighted no significant preference between MD2 and Sweet Cayenne and concluded that the introduction of MD2 should not come at the expense of other varieties in Ghana (Sefa-Dedeh 2005).

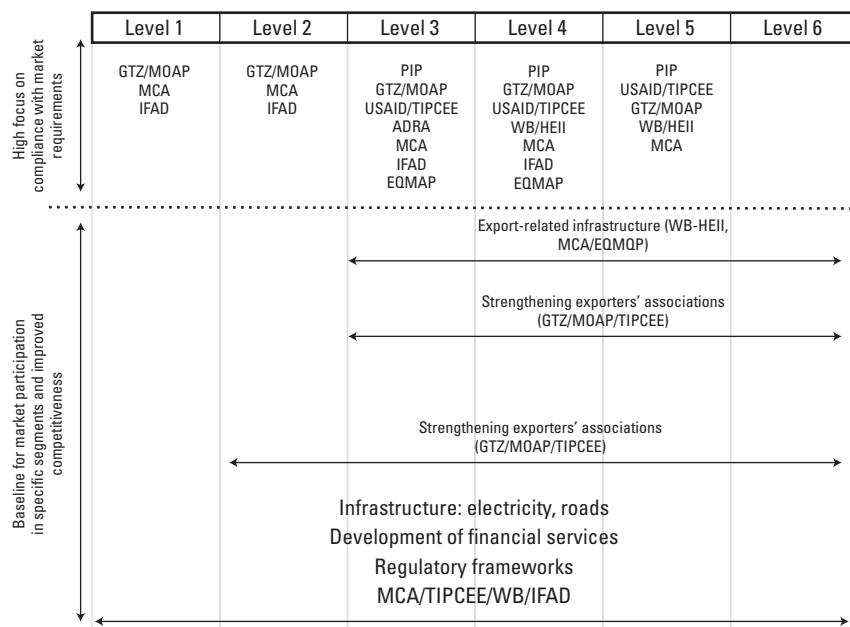
In 2006, Del Monte officially launched its "Honey Gold" brand in Europe, based on deliveries from Latin America. Consumers quickly shifted over to this product and Ghanaian exporters suddenly found themselves with sharply reduced orders. One set of companies merged to form HWP Fair

Trade Ltd. and by 2007 it was exporting about 15,000 tons of MD2 and 3,500 tons of Sweet Cayenne. Several companies sought to differentiate themselves by targeting the market for organic and Fair Trade pineapple, with mixed results. Other firms shifted into other product lines, including mango. Companies that had been relatively more reliant upon smallholder supplies were very adversely impacted as the pace of smallholder conversion to MD2 was very slow. Many smaller exporters simply went out of business. The farmer-owned company that had been established with development assistance in the 1990s—Farmapine—collapsed during this time (box 7.2).

Development Community Response

Figure 7.3 illustrates the range of donor-supported interventions in Ghanaian horticulture during the past decade. For a high proportion of these investments, the focus was on export horticulture and value-addition. Many of these investments were formulated to address overall constraints to product quality and reliability in the supply. However, with increasing demands for quality, safety, and traceability, and the need to accelerate conversion rates of variety, several programs incorporated strong support to the pineapple export industry.

FIGURE 7.3: Framework of Recent Interventions in Ghana Horticultural Sector



Source: The Authors.

For example, the World Bank–funded Agricultural Services Subsector Investment Project (AGSSIP, 2001–07) was originally designed to strengthen producer organizations and public institutions, yet in 2003 it was restructured to allow strong private-sector participation and support the development of nontraditional export crops. A new component was added—the Horticulture Export Industry Initiative (HEII)—to address the challenges faced by the sector. For pineapple, support would be given to upgrade sea- and airfreight terminals, construct farm-level pack houses, and make available MD2 planting material.

The USAID/TIPCEE project was designed with a strong horticulture export focus, later also concentrating on domestic value chains. In pineapple, the project concentrated on quality upgrades including the promotion of product standards, supporting the development of inspection protocols for the industry, and introducing geographic information system (GIS) mapping. EMQAP, funded by the African Development Bank (ADB), includes the establishment of demonstration farms for the application of Good Agricultural Practices and other related support. The Millennium Challenge Corporation large program in agriculture includes support for postharvest and cold chain infrastructure.

During the mid-2000s, PIP was a major donor supporting compliance with food safety and traceability requirements. It worked with 23 pineapple companies (18 of them small), which, in aggregate, had some 600 smallholder outgrowers. Many of the companies that were supported by PIP had already obtained EurepGAP certification on their own farm(s). Attempts were thus made to support a few exporters to certify their outgrowers. Yet, this was not generally successful. Given the prevailing situation, PIP devoted considerable resources to assist the industry with its most pressing need—to convert to MD2. Complimentary support was provided in training and in GPS mapping.

With the industry struggling to reorient itself, smallholders were supported to achieve compliance with GLOBALG.A.P and to convert over to MD2. For example, TIPCEE/GTZ and HEII implemented a pilot program to provide training, defray costs of investments needed to upgrade operations, and more generally support five farmer groups to achieve GLOBALG.A.P certification. The expectation was that once certified, these farmers would be more likely to sustain the market channels for their pineapple. This proved temporary, and over time, the certification of such farmers has lapsed.

Conversion to MD2 was supported mainly through absorbing the costs of the planting material (“suckers”). The HEII

project sourced some 5.7 million plantlets of MD2 variety from tissue culture laboratories and then some 75 farmer groups (900 farmers) were assisted to establish nurseries. While the availability of (subsidized) planting material certainly increased, the lack of technical knowledge among farmers proved to be a major bottleneck in effective adoption.

A survey of 400 farmers carried out in 2008 as part of this research program found very mixed experiences. Nearly 30 percent of the sample had ceased growing pineapple. Only 26 percent had fully converted over to MD2, with the remaining farmers growing a range of other varieties. The analysis of survey results found that none of the demographic factors considered—age, education, household size, and influence in the community—could explain MD2 conversion patterns. Yet, many of those who did convert seemed to have had more regularized relations with particular exporters.

Nevertheless, smallholder farmers do continue to have market outlets for other varieties, including in the local market, for processors, and a continued small trade in farm ripened airfreighted Smooth Cayenne (Jaeger 2008). While Ghana's pineapple export volume to Europe declined sharply in the mid- to late 2000s, overall production does not seem to have declined, suggesting higher take-up by processors in the domestic market and also within West Africa. The presence of these channels may have contributed to the low rate of conversion, with farmers less willing to take the risks of adopting the new variety. The collapse of Farmapine and the negative experience of its members when introduced to a wrong variety may also have limited smallholder interest to make adjustments.

In the current precarious market environment, the near-term success of Ghana's pineapple industry should probably not be measured by how inclusive it is in providing opportunities for the engagement of small-scale producers in the supply of fresh pineapple to conventional or more differentiated EU markets. A more appropriate metric would relate to the capacity of the industry to regain and maintain sustained growth, and to provide opportunities for many stakeholders, including farm and pack house workers. The industry faces a persistent challenge in realizing economies of scale and in delivering a product of consistent and reliable quality.

CASE 5: INTRIGUED BY THE BUZZ, STUNG BY THE RESULTS: ADVENTURES WITH UGANDAN HONEY

Honey has been one of the persistent donor (and NGO) “darlings” as a result of its natural properties and potential tie-ins

with natural resources management, SME development, and livelihood improvements in remote locations. Only a small subset of honey sector interventions have focused on formal supply chain development and compliance with regulatory requirements or market standards. We examine in the following pages one such set of interventions.

This case study of Ugandan honey presents an example of (failed) attempts to achieve wholesale upgrading of a type 1 value chain directed at local markets to assured compliance with the regulatory and market requirements of export markets of type 3 or 4. While Uganda has essentially been successful in achieving compliance with EU standards, it has never actually exported commercial consignments of honey to the EU markets. More pervasive problems in integrating honey producers into upgraded and quality-governed value chains have thwarted the best efforts of the private sector, Ugandan governments, NGOs, and multiple donors.

Ugandan Honey Production

Honey production has long been practiced in Uganda and, in some parts of the country, especially the West Nile, is an important source of livelihood for rural populations (UEPB 2005). A string of assessments pointed to a plentiful supply of honey (see, for example, UHA 1997; UEPB 2005; Commonwealth Secretariat 2002; ADF 2005), with one estimate of up to 9,000 tons per annum. Yet, data on honey production remains unreliable, with most estimates of annual production much lower, at between 300 and 600 tons.

In a 1997 census, 70,192 households were engaged in honey production, with 876,279 traditional hives, constructed of bamboo or out of wooden logs, of which 757,262 were colonized (UHA 1997). In addition, there were an estimated 16,105 improved traditional hives, of which 11,871 were colonized. These data highlight how the use of traditional hives largely remains the norm, with very limited penetration of improved traditional hives (such as the Kenya Top Bar) and, especially, frame hives (such as the Langstroth). Honey hunting, involving the collection of honey from hives in the wild, also remains widespread. Where improved hives have been introduced, this has been largely as a result of development projects providing free or subsidized access to the technologies.

And, there have been many such projects. There are long-standing efforts to enhance the productivity of honey production in Uganda, predominantly as a means to improve rural livelihoods among small farmers. Honey production is concentrated in the West Nile region, with the majority of

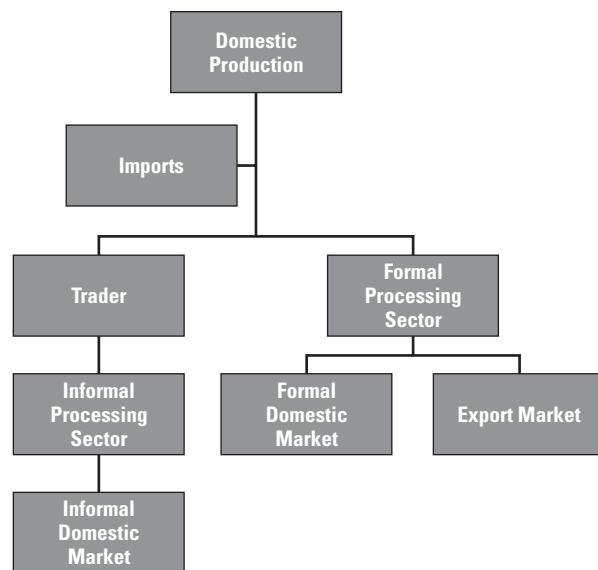
households engaged in semisubsistence farming and cottage industries (Wilson 2008). Rates of poverty are among the highest in Uganda. Thus, since the mid-1980s, numerous NGOs (for example, CARE Canada, Oxfam, Action Aid, Accord, World Vision, and the Red Cross) and donors (for example, the Food and Agriculture Organization of the United Nations [FAO], Austrian Development Cooperation, the German Development Service [DEDI], African Development Foundation [ADF], USAID's Africa Project Development Facility [APDF], and Investment in Developing Export Agriculture [IDEA] project) have invested in the diffusion of improved hives (most notably the Kenya Top Bar Hives—KTB), establishment of collection centers and refineries, demonstration farms and workshops for hive construction, and the training of farmers. Further, there have been more elaborate initiatives for the development of the apiculture sector, for example the Plan of Action for Apiculture Promotion and Development in Uganda (UHA 1997). The success of such interventions, however, has often been compromised by the inability of farmers to access credit, lack of training in appropriate harvesting and postharvest handling practices, and the vagaries of informal markets (see, for example, Commonwealth Secretariat 2002). Thus, the adoption of improved hives has often been out of sync with efforts to establish linkages with processors, such that honey producers have often been disappointed with the financial returns. Thus, significant rates of abandonment of hives have been observed—both in the aftermath of sector interventions in the mid-1980s to mid-1990s, and more recently.

Local Markets for Honey

There is a vibrant local and regional market for honey in Uganda. Honey is traded on local informal markets, predominantly for use in brewing. There are also substantive informal exports to neighboring countries, notably to Sudan, Tanzania, and the DRC. Typically, beekeepers or honey collectors sell their honey to local traders who amalgamate the supply (figure 7.4). The honey is purchased by urban dealers who separate the honey and wax, package the honey, and sell it direct to consumers or to retailers. The wax is normally discarded. Honey has been traditionally sold in used jerry cans and recycled mineral water bottles, although new plastic containers are becoming more common (Wilson 2008). In 2009, formal market prices were typically US\$ 4,000 to 5,000 per kilogram. These relatively high prices reflect both vibrant local demand and the constrained supply of honey due to the persistence of traditional production methods.

In recent years, formal markets for honey have been established, through both supermarkets and stores dedicated to

FIGURE 7.4: Honey Value Chain in Uganda



Source: The Authors.

apicultural products. Initially, supermarkets sold imported honey, but have increasingly stocked locally produced honey that tends to be positioned at the lower end of the market. The supermarkets are supplied by five local formal sector processors, who typically purchase directly from producers (figure 7.4). Some of these processors are commercial companies and others are NGOs and/or producer organizations. Such relations are critical, since the formal sector has historically been a residual market, absorbing surpluses from the informal sector in times of high production. In 2009, imported honey was typically priced at USh 8,000 to 12,000 per kilogram, while locally produced honey was sold in the range USh 7,000 to 8,000 per kilogram.

Local markets for honey can be characterized as of type 1 and type 2, according to the classification defined in Chapter 3. The main quality criteria are color and smell, both of which can be readily assessed at the time of purchase. There is little or no concern about ash content and or smoky taints due to traditional methods of harvesting; these are considered normal and not an issue given that the predominant use of honey is brewing. Most Ugandan honey has a dark amber color. While local supermarkets pay more attention to the consistency of quality than do informal markets, their main concerns are the continuity of supply and the integrity of the packaging. There is little evidence that the Uganda national honey standard, itself based upon international standards and covering a range of quality criteria, is either widely applied or enforced.

The Allure of Exports

Historically, Uganda has had no presence in international markets for honey, with the exception of some informal trade with neighboring countries (see above).¹³⁸ A succession of reports and strategy documents, however, examined the potential for Uganda to establish substantial exports of honey (MSE Consultants 1994; UHA 1997; Commonwealth Secretariat 2002; GoU 2004; ADF 2005). These culminated in the drafting of the Uganda Apiculture Export Strategy in cooperation with the International Trade Centre (UEPB 2005).

The EU consumes around 22 percent of global honey production, with consumption increasing over time as a result of increasing concerns about health and honey's position as a natural product that is perceived to have therapeutic properties and a healthier alternative to sweeteners such as sugar (CBI 2006). The EU is far from self-sufficient in honey, with imports accounting for around 50 percent of consumption. Major suppliers have included China, Argentina, and Mexico. Uganda was seen as being well-situated to exploit emerging niche markets for honey in the EU, including varietal and organic honey (UEPB 2005).

At a time when honey imports to the EU were booming, the exclusion of one of the most important importers was seen as opening up market opportunities. In 2001, China exported over 375,000 tons of honey to the EU. However, the detection of residues of the antibiotic chloramphenicol in multiple consignments of honey in 2002 resulted in the imposition of restrictions that acted to curtail Chinese exports. In 2006, similar measures were applied to exports of honey from Brazil, which was found to lack an approved residue monitoring plan. These restrictions led to price increases in EU markets, making these markets even more attractive to potential Ugandan exporters. At the same time, negative media attention threatened to jeopardize the reputation of honey as a natural health product among EU consumers. Thus, honey importers were on the lookout for suppliers with a product that was of reliable quality and could maintain natural credentials. Uganda might have a competitive advantage in this context, given that antibiotic use in honey production is virtually nonexistent in the country.

¹³⁸ This is not to say that exports abroad have never occurred. For example, MSE Consultants (1994) cites reports of two companies exporting 11 tons of honey to the United Kingdom and Germany in 1993.

Export Market Requirements

In order to export honey to the EU, a country must obtain prior authorization from the European Commission. Under Council Directive 96/23/EC, the EU requires that imports of all animal products from Third Countries are subject to an approved monitoring plan covering banned veterinary substances, authorized veterinary substances, and environmental pollutants, which for honey predominantly means residues of pesticides and antibiotics. When requesting initial approval, a Third Country must demonstrate that it has an appropriate legal framework in place, an appropriately structured Competent Authority, accredited laboratories to undertake the analysis, and an official sampling procedure. The results of this monitoring plan have to be presented to the European Commission annually to demonstrate changes in levels of contaminants, with the implication that approval to export honey to the EU is renewable on an annual basis.

The official compositional and quality standards of international markets, including of Codex Alimentarius and the EU, stipulate a range of parameters including moisture content, solid residues (for example ash), microbial contaminants, chemical residues, invert sugar, sucrose, hydroxymethylfurfural (HMF), and diastase activity. Among these parameters, the greatest challenge for Uganda is complying with maximum HMF levels; the level of HMF tends to increase rapidly after harvesting in hot and humid conditions. Both the Codex and EU standard require that the HMF content of honey after processing and/or blending is not more than 40 mg/kg. However, in the case of honey of declared origin from countries or regions with tropical ambient temperatures, a less strict limit of 80 mg/kg is applied. Importantly, however, industrial buyers tend to apply a stricter standard regardless of origin, which can be as low as 10 mg/kg.

There are also local European market requirements covering color, flavor, and so forth. While there are significant differences in consumer preferences across EU member states, the general preference is for clear honey with a mild taste. There are signs that preferences are changing, however, with monofloral varieties (for example, acacia) becoming more popular (CBI 2006).

Establishing Formal Sector Honey Exports

In the face of the EU's restrictions on China's honey exports in 2002, the perception in Uganda was that to access the EU market the first order of business was to test Uganda's product for compliance with EU standards and to put in place a residue (and broader quality) monitoring program to assure compliance over time. This, in fact, was done. Many samples

of Ugandan honey were tested, the results showing that only 40 percent of samples met the EU standard for HMF and only 20 percent met the standard for diastase number (Kabasa et al. 2003). Over a three-year period, Uganda:

- Put in place a national standard and legal framework that was compatible with EU requirements
- Established a Competent Authority—the Animal Husbandry Department within the Ministry of Agriculture, Animal Husbandry, and Fisheries—to be responsible for the implementation of these controls
- Designed and began implementing a residue monitoring plan, involving the annual collection of honey samples and their laboratory analysis
- Facilitated the upgrading of testing facilities, namely in the privately operated Chemiphar laboratory, and international accreditation of the laboratory

These measures were undertaken with the funding and technical support of the Shell Foundation and United Nations Industrial Development Organization (UNIDO). Uganda was approved for the export of honey to the EU in March 2005 (Commission Decision 2004/432/EC), one of only five countries in sub-Saharan Africa (SSA) to achieve this.¹³⁹

Parallel to putting in place a reliable system for quality monitoring and standards assurance, investment was needed in modern production facilities if Uganda was going to obtain and maintain a toehold in the European market. Thus, in 2002 a private limited company called Bee Natural Products (BNP) was established with a vision of targeting the EU market. BNP borrowed and invested \$600,000 in a modern facility in the West Nile region, with a capacity to process 600 tons per year.¹⁴⁰

¹³⁹ The costs of implementing the residue monitoring plan have not been trivial. Doing the initial tests and setting up the routine system cost \$40,000, while subsequent annual costs have been \$26,000. This would certainly have been manageable had there been a successful export industry that might have paid fees to finance this program. Yet, exports have not occurred and the Component Authority has struggled to maintain the program. Thus, it has often failed to submit the results of the monitoring plan on time. Evidently, the European Commission has tolerated this to date, since Uganda remains on the list of countries approved to export honey to the EU as of June 2010 (Commission Decision 2010/327/EU).

¹⁴⁰ According to the investor, the scale of the factory was based upon the findings of the Commonwealth Secretariat study of 2002, which indicated that some 850 tons of honey was produced in the immediate vicinity of the factory. Yet, it seems that this estimate reflected local availability rather than local production, with the bulk of supplies actually originating in Southern Sudan and Eastern Congo.

BNP then set about building links with local honey producers by providing training in production techniques and supporting access to improved hives. However, this proved more difficult than anticipated, and the company soon ran into logistical and financial constraints. Due to poor production and harvesting methods, up to 80 percent of the honey initially procured did not meet the company's quality specifications. When the company sought to provide improved hives on credit, little of this (or the honey) was recovered as high rates of side-selling took place among producers. BNP faced a situation in which local (informal) markets were offering higher prices and without concern for the presence of ash or smoky smells in the honey. In its first year of operation, BNP procured 80 tons of honey. With widespread farmer side-selling and with the company facing liquidity constraints, this fell to 11 tons in its second year. All of this honey was sold locally. In its first year of operations, BNP sourced honey from some 2,700 farmers; only a few hundred farmers supplied it during its second year.

Clearly, developments were not going as planned. In an effort to reorganize its supply base and induce both technological change and product quality improvements among farmers, BNP turned (in 2005) to the GoU's National Agricultural Advisory Services (NAADS) for support. NAADS resources financed local private service providers that, in partnership with BNP, organized farmers and provided training in improved beekeeping practices as well as proper honey collection.¹⁴¹ Carpenters were trained to construct improved hives. NAADS implemented a scheme to provide these hives and harvesting kits to farmers, with the repayment to be made via the sale of honey to BNP. In parallel, BNP obtained direct support from UNIDO to strengthen the quality management system at its processing facility.¹⁴²

Some gains were achieved, with BNP producing some 67 tons of honey in 2005–06 and with its rejection rate from suppliers falling to the 10 to 15 percent range. Still, BNP was struggling to compete with the local market, and the

underlying economics of the improved hives seemingly remained marginal for farmers. In 2006, several additional schemes were introduced. One, involving the Development Finance Company of Uganda and a DANIDA-supported program, featured the leasing of hives and other equipment to beekeepers. Another, supported by the Export Promotion of Organic Products from Africa (EPOPA) project, involved an effort to purchase and sell organically certified honey. BNP hoped that the latter program would enable it to pay a premium price to farmers and thus retain their loyalty. EPOPA covered a large part of the training and certification costs for this initiative. The initial goal of this scheme was to certify 2,000 honey producers. Yet, after 18 months this program was curtailed due to limited progress and broader financial problems being faced by BNP. Only 195 producers achieved organic certification by December 2007.

BNP's production never exceeded the level (80 tons) that it achieved during its first year of operations. Nearly all of its production was sold locally, with limited exports within the region and a consignment or two of bulk honey sent to the United Kingdom. Despite repeated attempts by government and donor agencies to throw BNP a lifeline, its vicious cycle of low production, financial problems, and difficulties in maintaining farmer loyalty persisted. In January 2008, BNP went into receivership, having not repaid its original investment loan. The company has subsequently been resurrected, having shed its financial obligations. The new company is focused on the higher value segments of the domestic and regional markets.

Synthesis

The case of Ugandan honey exports to the EU, on the one hand, presents an example of successfully complying with relatively strict official requirements, namely the implementation of an approved residue monitoring plan. On the other, it highlights the challenges faced in bringing about wholesale changes in the structure and modus operandi of the value chain for honey, such that it is directed at type 3 or 4 rather

¹⁴¹ The postharvest handling of honey is critical for establishing and maintaining quality. Given that processors tend to purchase honey in bulk during harvest periods when the price is at its lowest, there is considerable scope for quality deterioration if storage facilities are inappropriate. Notably, the temperature at which honey is stored is critical for the control of HMF levels. These initiatives have included efforts to promote the use of protective equipment and smokers rather than burning hives, dedicated equipment and utensils, proper storage practices, and squeezing or centrifuging the hives rather than boiling the honey. Thus, training has been provided alongside efforts to organize honey producers into groups that can share equipment, and so forth.

¹⁴² Various efforts have been made to establish organizations that can represent the interests of honey producers, act as the locus of technical assistance programs by NGOs and donors, and even facilitate honey marketing. Donors—for example, USAID through its IDEA project—have supported this process. Currently, three organizations coexist—the Uganda Honey Association (UHA), Uganda Honey Beekeepers (UHB), and Uganda National Apiculture Development Organization (TUNADO)—which are variously engaged in providing training to producers, supplying improved hives, operating processing facilities, and so forth. All of these organizations are weak and remain reliant on donor funding.

than type 1 markets. Here, the substantive efforts by NAADS and BNP, with significant donor support, have evidently failed.

The shift from type 1 value chains even to those only of type 3 or 4 will always be difficult. This is even more the case when producers are located in remote areas and with little or no past experience selling to formal value chains. For most producers in Uganda, honey was a sideline activity, although one for which local informal markets were lucrative, paid in cash, and had little or no quality requirements. Many producers had been cheated in the past by buyers that claimed they would "make them rich," and so understandably they were skeptical. The fact that BNP could not even match the prices on the local market perhaps meant that its efforts were doomed from the start. Certainly, it did not have deep enough pockets to weather the inevitable teething problems and to implement a system of procurement and oversight that could supply sufficient supplies of honey in a manner that achieved assured compliance.

An undoubted critique of the efforts to establish honey exports to the EU, which is now recognized by BNP, is the failure to prioritize the upgrading and organization of honey production as the first step. It is noteworthy that the EPADU study (1993) of the scope for Ugandan honey exports highlighted the need to organize the value chain for honey to ensure that orders can be fulfilled on a continuous basis before embarking on a serious export program. Instead, BNP initially invested in a high-grade processing facility and the implementation of a QMS. This facility never operated anywhere near its capacity. The sequencing of these efforts was evidently wrong. Unless the more fundamental and traditional problems of production and marketing are sorted out, exporters never even get to the stage of achieving assured compliance.

A more fundamental question is whether Uganda should have been aiming to export honey to the EU at all. Evidently, there are vibrant local and regional markets, both within the informal and formal sectors, which pay comparable (if not much higher) prices than exports to international markets. Perhaps BNP never stood a chance competing with local informal market traders who had little concern over the quality of the honey they purchased and paid good prices. In 2005–06, the local prices paid for honey in remote locations in northern Uganda exceeded the landed cost, insurance, and freight price (C.I.F.) prices for Chinese honey in Europe! Despite having an attractive storyline of linking remote, poor beekeepers with Europe's honey market, it doesn't seem that BNP ever had a viable chance to play out its vision.

Indeed, some evaluations of the honey sector in Uganda (for example, EPADU 1993; Commonwealth Secretariat 2002) were rather skeptical of the scope for establishing a substantive and sustainable export sector, or at least suggested that local markets present a logical first step in the development of the honey sector. Some larger-scale support programs, such as USAID's IDEA project, questioned whether viable exports of honey could be established and maintained. While some support was provided to the honey sector in the early years of that project, these were soon abandoned. Other donors were not deterred by BNP's early teething pains. A range of different schemes were put in place to induce technological changes and strengthen supply chain links. Some innovative elements went into the design of these schemes. Yet, this didn't matter. Subsequent developments brought out fundamental flaws in the underlying commercial proposition that many of these schemes sought to support. It took the receivership of the lead firm six years of (painful) lessons to sink in.

CASE 6: OVERCOMING COMPETITIVE CHALLENGES VIA ORGANICS CERTIFICATION: UGANDA'S "SUCCESS"

Over the past two decades, a rather significant industry featuring organic production, certification, and trade has emerged.¹⁴³ The global market for certified organic food and drinks was estimated to have a retail value of \$46 billion in 2007, this being triple its value at the beginning of the decade. A range of organic principles and standards has been developed, at national, regional, and international levels, with a system for third-party certification of production systems and with regulations on the use of an organic label. The largest markets for organically certified foods and beverages are the United States and the EU, although significant markets are also emerging in India, China, and elsewhere (Van Elzakker and Eyhorn 2010).

For developing countries, the international market for certified organic produce offers some appeal due to the potential for realizing either higher or more stable prices than for conventional commodities and/or simply being able to differentiate one's supply and secure reliable access to favorable

¹⁴³ The International Federation of Organic Agriculture Movements (IFOAM) defines organic agriculture as "a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity, and cycles adapted to local conditions, rather than the use of inputs with adverse effects." Most consumers understand organic produce to be that which is produced without the use of chemical fertilizers or pesticides.

supply chains. For some product lines, organically certified produce has commanded substantial price premiums at retail level, with a (small) proportion of this being transferred back through supply chains to farmers. And, for some developing country producers, the costs and challenges of converting from conventional to organic production may be relatively modest if limited or no use is being made of synthetic agrochemicals.

Uganda is generally considered an African success story in terms of the development of certified organic production and trade. According to data provided by various sources, Uganda is the world's leader in terms of the number of producers engaged in organic production—over 200,000 farmers, equal to nearly 16 percent of all registered organic producers worldwide (IFOAM and FiBL 2010). Nearly 300,000 hectares of agricultural land are currently organic certified in Uganda. In the early 1990s, Uganda's trade in organic produce was nonexistent; by 2008 this totaled some \$25 million. Organic product exports have been developed for a range of products, including coffee, cotton, cocoa, sesame, vanilla, and various fruits. Uganda's organics success has been built upon heavy support from international development assistance.

Uganda is richly endowed with natural resources, has a very favorable climate, and has a topography that enables a diverse pattern of agriculture. Uganda has also had a troubled history, with extended periods of social conflict in regions or major parts of the country. In many parts of the country, there has been limited development of physical infrastructure and limited spread of agricultural technologies. Although much progress has been made in recent years, Uganda is still one of the world's lowest users of fertilizers and pesticides.¹⁴⁴

A recent promotional campaign advertised Uganda as "Gifted by Nature." Past patterns of agriculture have also made much of the sector "organic by default." That is, the absence of use of purchased inputs for many crops has rendered much produce and production areas organic according to prevailing standards. In other countries, farmers normally need to go through an extended and costly process of converting their farms from conventional to organic prior to getting certification. In Uganda, no such conversion was necessary (or has involved modest changes for some crops),

yet what was needed was the development of internationally acceptable management information systems—by purchasing companies—to provide the oversight and assurance that certain practices are/are not applied on these farms. Hence, an organics industry could be started from scratch through management efforts made by processing and trading companies—supported by development organizations.

This short case study summarizes the experience of Ugandan organics development since the mid-1990s, highlighting the roles played by development assistance interventions, characterizing the evident gains and shortcomings, and drawing some selected lessons.

Origins and Overview of Development Assistance Efforts

Uganda's organics industry dates to the early 1990s, when a Swiss consultant formed a joint venture with a Ugandan investor to export organic fruits. A second initiative, undoubtedly having a stronger impact on future developments, came from a Swedish textile company, which requested support from SwedeCorp to initiate a project on organic cotton in northern Uganda. An emerging market opportunity, combined with large areas of cultivated land (due to conflict) and the absence of traditional use of chemicals by the farmers there, provided the bases for the scheme. An initial pilot project showed promise and this gave rise to EPOPA, a broader umbrella program funded by the Swedish International Development Cooperation Agency (SIDA). EPOPA's initial operations were to cover Uganda and Tanzania for a period between 1995 and 2000.

During this initial phase I period, seven organics projects tied to a lead firm were implemented, with three focusing on coffee and two each for cotton and cocoa. Five of the schemes were still in operation by 2000, with some 24,000 farmers then participating in Uganda. Phase II of EPOPA was started in 2002 and was implemented through 2008. The program sought to greatly diversify the portfolio of Uganda's organic export products and the number of individual subprojects increased to 20. During EPOPA's second phase, efforts were also made to go beyond project support to individual companies to also support the development of a Ugandan organics promotional organization and of local service supply companies.

During the 2000s several other donors entered the Ugandan organics space. For example, beginning in 2003 USAID's Agriculture Productivity Enhancement Project (APEP) began to support selected organics ventures through a matching

¹⁴⁴ While Uganda has one of the highest soil nutrient depletion rates in the world, it has one of the lowest rates of annual inorganic fertilizer application—only 1.8 kg per hectare (Namaazi 2009). According to MAAIF and MFPED, in the year 2000, the use of chemical pest control was practiced by only 10 percent of farmers (reported by Nkonya and Kato 2001).

grants fund and, later, through direct support for organic producers of cotton, sesame, and other crops in northern Uganda. Producers and exporters of organic fruit have variously benefitted from interventions supported by the EU, DANIDA, UNIDO, and DED. ADF has supported initiatives for organic vanilla and sesame. In many of these cases, the targeted industry (and companies) was experiencing problems competing in conventional product markets, due to either higher costs (associated with Uganda's land-locked position), not having distinctive quality attributes, and/or being unable to meet the volume requirements of more mainstream buyers.

While there have been some short-lived bottom-up interventions focused on certifying farmer group production and encouraging them to market (and sometimes process) their produce directly, most donor support related to organics in Uganda has taken a lead firm approach. Active exporters have either applied for support or been approached by the various schemes. The companies generally have had a preexisting outgrower system with smallholders and have sought to have those farmers/production areas certified as organic. The companies' farmer support and supervisory structure would often need strengthening, through training and the development of improved record keeping. In fact, the development and implementation of Internal Control Systems (ICS) became the centerpiece of support, together with the (partial) coverage of certification costs by the projects. In almost all cases, the starting point was a situation of organics by default, in which little or no change was required in farmer practices to attain organic certification. In many cases, organics by default remained the operative mode.

The level of project subsidy and the intensity of training and technical assistance varied over time and between different projects. For some subprojects EPOPA provided a broad package of support including that for business development, company staff selection and training, farmer mobilization and extension, subsidy for farmer inputs, setup of tree/crop nurseries, development/revision of ICS, cost-sharing of initial certification costs, market surveys and buyer contacts, participation in trade shows, and mediation for trade finance. One of the first achievements of EPOPA was the application of the (farmer) group certification concept in East Africa—substantially reducing certification costs per grower or scheme—and negotiating with international certification bodies. Because the organics support was part of broader initiatives on postconflict economic development, both USAID and Deutsche Investitions und Entwicklungsgesellschaft mbH (DEG) financed land-clearing and other significant

establishment costs for organic cotton growing in northern Uganda. The package of support for organics schemes under most other programs was more limited.

Grower certification and maintaining well-functioning ICSs were the dominant foci of most assistance efforts to companies. Comparatively little attention was given to training for farmers to improve their farm management or raise their productivity. This has been highlighted as one of the major shortcomings of EPOPA, while the application of farmer group certification has widely been recognized as a landmark achievement of the program in East Africa, with replicable effects elsewhere.

During its phase II, there were attempts to increase attention to on-farm activities beyond the mere focus on certification, including through using lead farmer demonstration plots. However, support to farmers was expected to come mainly from the lead companies themselves—with the capacity to do so varying greatly from company to company. During its second phase, EPOPA provided support to a broader range of SMEs seeking to break into the organics market. Many of these companies had very limited technical staff and their ability to provide advisory services to their outgrowers was either infrequent or nonexistent. There is no systematic program of agronomic research applying organic principles and approaches in Uganda.

Some efforts were made to support broader institutional capacities related to organics. For example, during its second phase, EPOPA supported the establishment of standards-related services (national certification bodies TanCert and UgaCert in Tanzania and Uganda, respectively), and provided support, together with the Dutch Humanistic Institute for Development Cooperation (HIVOS), to the National Organic Movement of Uganda (NOGAMU)—established in 2001, through the initiative of a small number of lead firms—aimed at strengthening platforms for advocacy and the provision of services to the organic sector.

More recently, other donors have joined EPOPA in providing support to the organics sector through enhancing elements of the enabling environment for compliance. To illustrate, the work of the United Nations Conference on Trade and Development/International Trade Center (UNCTAD/ITC) and the United Nations Environmental Program (UNEP) has had a more regional focus, with an emphasis on sector advocacy, supporting market expansion, fulfilling knowledge and information gaps, creating platforms for consensus building and policy dialogue, and pushing for harmonization of standards. On the latter, the development of a regional

East African Organic Standard (EAOS) represents a significant achievement, in terms of regional cooperation between several interested stakeholders. Within a broader perspective, UNCTAD has advocated for the integration of organic agriculture within national policy frameworks in East Africa. In Uganda a multistakeholder process is currently developing an organic agriculture policy.

Achievements and Status

The case of the organics development in Uganda has been highlighted as a success story in terms of the achievements of NGOs, donors, and private actor efforts to expand certified production. Uganda's reputation for clean agricultural products has been touted as a huge benefit, and this reputation was one of the arguments made against the proposal of Uganda's Ministry of Health to reintroduce household and localized use of DDT (dichlorodiphenyltrichloroethane) as a means of combating the country's huge problem with malaria. On the surface, certain numbers look impressive, including the estimated number of organic producers, although that number may be an exaggeration.¹⁴⁵ Organic product exports have increased from virtually nothing in the mid-1990s to more than \$20 million per year in the late 2000s. A national certification body received accreditation and was able to provide services locally, with a pool of professionals from local institutions, private service providers, and company staff acquiring skills to support the needs of the sector. Yet, it is not evident that these efforts have had any transformational impact on Ugandan agriculture or trade. Organic produce accounts for less than 2 percent of Uganda's total food and agricultural trade. Coffee currently accounts for the large majority of Uganda's organic export earnings, yet organics have accounted for between 1.5 to 2.5 percent of the country's total coffee exports in recent years. Due to the limited changes in production practices brought about under most organics programs, the footprint of more productive and sustainable practices still appears to be shallow.

What about replication and sustainability? In the case of cotton, the success of the pioneer firm was replicated by a larger company, with the target being to achieve large-scale impact. By the mid-1990s, several new players came on to the Ugandan cotton organics scene, including a few major multinational companies. Very ambitious plans were laid out

to develop organic cotton in the north of the country and also to have farmers build in other crops in their rotations (including sesame and sunflowers) that would also be sold in organic markets. Uganda's conventional cotton was not competitive, yet market opportunities for organic cotton were evident. However, many of these schemes have collapsed in recent years as a result of competition among companies (with farmers side-selling), continued low yields among farmers, pest management problems, and other issues.

In relation to coffee, one company began working with EPOPA in 1997 and continued that relationship for several years, with some considerable expansion of its outgrower system. Only one additional company pursued organic coffee certification with EPOPA support, although a few other companies have entered this space in recent years, on a small scale. A lack of remunerative price premiums, complications in marketing organic coffee, and increasing demands for other sustainability certifications (e.g., Rainforest Alliance, UTZ Kapeh—known currently as UTZ Certified, may explain the limited replication. An additional aspect is the issue of oversupply—that is, more organic coffee (and sustainable coffee in general) is produced than is actually sold (SSI 2010).

Initiatives aimed at expanding the portfolio of exported organic products have had some success in opening up markets for differentiated products, yet with only a limited outreach and replication effect. For example, in cocoa, according to EPOPA data, there are over 7,000 farmers under a company organic scheme. Despite this company's favorable results, there have been few followers. In the case of sesame, the sector has experienced an interesting dynamic, with significant export growth during the last few years. The main innovation in this sector has been the introduction of an improved variety, which has significantly increased farmer yields. Entry into the organic vanilla market was seen as a possible rescue line in the face of depressed international prices for conventional vanilla. Yet, only limited sales have occurred. Several other efforts were made to diversify exports of organic exports into value-added products, including instant coffee, honey, ginger in syrup, and so forth. These had little success, due to varied reasons (e.g., strong local demand, weak firm capacities to sustain the investments required, lack of commitment of the exporter, high-costs of packaging materials, etc.).

Overall, the most significant contribution of programs supporting organic-certified production, in terms of expansion and replication potential, has undoubtedly been the learning that has taken place at the enterprise and service provider levels in the establishment of platforms for certification (ICS),

¹⁴⁵ EPOPA's support included companies that had an aggregate of 87,375 farm outgrowers, 85 percent of which were growing cotton, coffee, and sesame. Most of the organic cotton schemes have collapsed in the past three years.

easily adapted to other certification programs and with potential to bring into compliance large numbers of producers. In the view of some of the companies, organic-certified production has brought positive changes in terms of streamlining value chains—the field operations set by companies have put farmers in direct contact with the buyer (or its representative). Requirements for traceability and chain of custody have pushed for vertical coordination and support for some level of farmer organization, in some cases leading farmers to assume new roles as middlemen (company brokers) and extension agents. There is an apparent better flow of information about quality requirements and prices with some buyers buying in the production regions, eliminating risk and assuring quality. Some companies report getting better-quality raw materials for which they can justify a better price.

However, in quite a few cases these relations are still very weak and marked by a lack of commitment by both buyers and farmers. Developmental/private efforts have focused on the positive market impacts of organic-certified production, with much less emphasis on its potential to catalyze on-farm improvements. In those cases in which changes have been sought in farmer practices, this has been motivated by a need to raise product quality. For example, drying/fermenting of coffee and cocoa represent major challenges for achieving compliance with downstream buyer requirements.¹⁴⁶

Benefits to Ugandan Smallholders

Several (limited) attempts have been made to understand the benefits accruing to Uganda's farmers from these various initiatives. One study examined the experiences associated with three schemes supported by the EPOPA program—for Arabica coffee, fresh pineapple, and cocoa/vanilla—with data collected during the 2005–06 season.¹⁴⁷ The authors reported increased revenues and apparent increased yields for the sample of participating farmers interviewed. The schemes they examined had involved some farmer training elements, leading the authors to conclude that “certified organic farming in Uganda is more profitable and realizes higher yields than ‘organic by default’ systems” (Bolwig and Gibbon 2008).

¹⁴⁶ For cocoa, the cycle of preparation for fermentation, fermentation itself, and subsequent drying takes, on average, 13 days from harvesting. Similarly, processing coffee to the standard required by the buyers takes 1 to 3 weeks, depending on the weather, with the main constraint being cash for hiring labor and equipment. Cash constraints push farmers to sell in unprocessed forms (Gibbon 2007).

¹⁴⁷ Bolwig and Odeke 2007; Gibbon et al. 2009.

Broader evaluations have reported mixed results. For example, the evaluation of EPOPA highlighted that the uptake of organic farming methods—including measures to increase soil fertility—was generally quite limited, and that the overall impact in the production systems has been less than expected—“*Not so many farmers increase their productivity in a dramatic way, even if there were such examples. Expansion of the cropped area seemed to be a more favored response to improved market conditions*” (EPOPA 2008). Observations in terms of gains on biodiversity, soil management, and other critical parameters associated with organic management indicate very little difference between traditional farms and those involved in the certified organic schemes. Delivering those types of outcomes was not the objective of the interventions.

Broader evidence, beyond the data associated with the best performing schemes, allows for the following general observations:

The challenges of organic production vary among crops and industries. The schemes under examination by DIIS researchers were not confronted with significant agronomic challenges. In the case of coffee, only Arabica coffee was analyzed, and therefore, no answers were provided as to what happened in the context of plantations facing the challenge of coffee wilt disease (most commonly affecting Robusta coffee). Also, the scheme was certified both as organic and UTZ certification and therefore it was difficult to isolate the effect of organic certification on farm income and coffee marketability. For crops facing higher agronomic challenges, overall low profitability, strong competition between buyers and lack of alignment between private and government objectives—as in the case of cotton—the experiences have been less successful. In pineapple, part of the success has been the buffer effect provided by strong domestic and regional demand for conventional pineapple, allowing farmers to market the pineapple that does not fulfill quality requirements (mainly required size) through local channels.

Many farmers participate, but only some benefit from the premium. There are clear differences between schemes in terms of active scheme participants, average quantities of product delivered by the farmers to the organic buyer, and average premium from the organic crops. The differences in ratio of farmers participating in the schemes and those actually delivering are even more pronounced across crops (Table 7.3). This is due to many reasons, as noted in box 7.3, with requirements for quality being an important factor.

TABLE 7.3: Participation of Farmers in Different Schemes Supported by EPOPA

PRODUCTS	SHARE OF VALUE (%)—US\$25 MILLION	SHARE OF VOLUME (%)—10,700 TONS	TOTAL NUMBER OF FARMERS IN THE SCHEMES	NUMBER OF FARMERS DELIVERING	SALES/FARMER DELIVERING (\$)	
Coffee	40.8	37.9	26,779	22,246	20*	374*
Sesame	4.6	6.4	20,000	7,800	63	
Cotton+Sesame	19.7	21.7	27,000	16,000	138	
Cocoa+Vanilla	26.0	21.6	7,141	4,180	626	
Fruits	7.2	9.9	2,630	307	1443*	2616*
Vanilla	0.4	0.2	1,003	731	13*	76*
Sub-Total	98.7	97.7	84,553	51,264		
Total projects	100.0	100.0	87,356	54,385		

* Data for different projects funded by the program.

Source: Calculations based on data presented in the final report of the EPOPA program (EPOPA 2008).

BOX 7.3: Reasons Why Many Certified Farmers Don't Deliver under the Organics Schemes

A substantial part of the production of certified farms/production areas was sold to conventional buyers, whether there was a high organic premium or not. The rate of this “leakage” varied per project, but it was quite common that 50 percent to 60 percent was not sold to the organics product buyer. The main reasons for this relate to risk management.

Reasons specific to farmers:

- Maintain good relations with other traders as a fallback position in case the organics buyer disappears.
- Maintain outstanding credit with a local middleman who can only be paid back with the cash crop.
- Other buyers followed the price of the organic buyer, some even advertising that they were also buying “organic” produce, reducing the premium advantage.
- The farmer was forced to sell part of the organic crop to traders in exchange for household necessities.
- Farmers kept their crop in stock as a bank. In some cases the farmers want to speculate and wait for the price to go up. By the time they want

to sell, the organic buyer has stopped buying altogether.

- In some projects, the buying took place on a limited number of days and only at certain locations, and it was simply more convenient for the farmer to sell to a trader appearing in the village or on his doorstep instead.
- In a few cases the exporter supplied inputs that would be deducted from the price, and some farmers then chose to sell their whole crop to someone else (thereby defaulting on the credit).
- In some cases, the exporter bought only properly fermented and dried product (e.g., coffee and cocoa), or a certain grade (e.g., pineapple).

For some exporters, there was low interest to buy the entire crop. Often, the buyer/exporter preferred to buy small amounts from a larger group rather than buy a lot from a limited number of farmers—in order to spread production risks and reduce farmer bargaining power. Overcontracting for produce is common, as it allows maximum flexibility on the part of the company. This is also a tool to keep out other buyers of organic produce.

Source: EPOPA 2008.

The extra income of the organic premium varies significantly among crops. Direct extra income of the organic premium resulting from the projects supported by EPOPA reached about US\$2.6 million using 2006–07 data, with total income from organic sales of organic crops estimated at about US\$12 million, and an average annual income of US\$140 per farmer. The annual sales per delivering farmer varies greatly. Average sales for coffee were low, yet benefitted a larger numbers of producers. These gains unlikely resulted in any significant poverty reduction outcomes (EPOPA 2008). Efforts to extend support to other crops were made, particularly high-value crops. Here, the income supplements were certainly higher, yet only a few hundred farmers benefitted. *Thus, despite the relative success in developing Uganda's organic product trade, its impact on poverty reduction appears to have been very limited.*

The weakness of the export-led model. The top-down approach to develop the organic sector in Uganda set the foundations for the expansion of the sector and created the need for complementary approaches targeting broader constraints, including the provision of compliance-related services and support for advocacy and policy. However, the lead-firm model suffered from drawbacks, particularly in terms of promoting significant on-farm improvements. Clearly, buyers' incentives to continuously provide extension services and agricultural inputs to farmers depends very much on the profitability of the business and of the challenges associated with ensuring a reliable supply of quality product to fulfill market demands. When those incentives are not present, the gains in terms of inducing systemic changes on the ways firms and farmers do things may be tiny. The focus on certification represented a missed opportunity to induce positive changes at the production level. Furthermore, the model has showed its limitations when implemented in sectors composed of small companies facing significant managerial, financial, and organizational constraints, and therefore, with limited capacities to support their outgrowers.

The pioneering efforts undertaken by development partners, in partnerships with lead firms, were critical in the establishment and expansion of organic certification production. However, in some sectors, the involvement of the government may have been needed even in earlier stages—for example, the experience of cotton—where the government has traditionally been involved in seed supply, procurement zoning, and other areas. Lack of coordination between public and private initiatives can seriously undermine progress. The outcomes of the recent efforts to design a policy framework for the organic sector and support advocacy remain to be

seen. Their outcome will be closely linked to the capacities of those policies to be aligned with identified needs, opportunities, and challenges faced by the entire targeted sectors, rather than responding to preestablished agendas. An organic industry does not exist in isolation. The broader challenges faced in specific subsectors are still faced within the distinctive supply chains for organic produce. It has proven to be an illusion that a firm or set of farmers can escape from these basic constraints simply by designing a decent ICS and getting products certified as organic.

Conclusions

Can an industry that is not competitive or profitable in a conventional market use distinctive certifications to transform itself and sustainably reposition itself in international markets? The various experiences in Uganda suggest caution, certainly on the question of the sustainability of gains. Movement toward organics certification certainly provided initial incentives for improvements and increased product marketability, although this support needs to go hand in hand with complementary measures. The gains realized in segments of Uganda's coffee, cocoa, vanilla, and sesame subsectors arguably have more to do with improvements in basic quality than the attainment of organics certification for targeted farmers. Farmers who have been able to upgrade drying, fermentation or other postharvest processes have benefitted the most from their organics certification. Where quality and/or productivity gains have not occurred, the benefits from organics certification seem to have been ephemeral.

The experience of donors and the private sector in the development of the organic-certified production in Uganda has certainly provided valuable insights regarding the constraints to more active farmer and firm involvement. Many development agency efforts have only weakly addressed the productivity challenges plaguing Uganda's smallholders. Price premiums alone—for certified products or raw materials—do not provide the basis for sustainable gains. Sometimes premiums are not paid, as even certified product is sold as conventional product. And, over time, the premiums that are paid wane as supply catches up to (or surpasses) demand. Longer-term competitiveness is ultimately tied to productivity and quality, with distinctive certifications offering a potential bonus. The certification is the "icing on the cake." Arguably, the cake warrants more attention than does the icing.

Are some of the gains achieved through the support of EPOPA and other organics-related initiatives sustainable? Several companies do, in fact, seem to be expanding their operations and continuing to attract buyers. Yet, donor

support continues and so it is premature to say whether this trade and these smallholder outgrower schemes can stand on their own. These operations remain subsidized. One would expect that as company capacities improve and as farmer and firm learning takes place, the incremental costs for expansion would decline, and with increased economies of scale there would be a reduction in the unit running costs for the ICS and other elements of the scheme. This should enable higher profitability for the firm and increase accrual of benefits to farmers through improved services and perhaps better prices. We don't yet have much of a picture of how this is playing out without donor subsidy.

Almost the same situation applies to the sustainability of existing support services, including those for training, ICS development, and certification. Donor programs certainly helped to establish or strengthen local service providers in these and related areas. Yet, much of the effective demand for such services has been tied to the availability of donor resources. The ability and willingness to pay for services has not been fully tested, and the willingness and ability of service providers to charge local rather than donor-inflated rates is also just now being tested. A shift from donor-based demand to private sector-based demand is essential for the sustainability of pertinent business development services.

Chapter 8: CONCLUSIONS

Social scientists and development practitioners hold widely varying views on the role and impacts of product, production process, and other standards in the trade and domestic markets of food and agricultural products in developing countries. Some see the standards as posing trade barriers, market access constraints, and additional costs; others emphasize the trade-facilitating aspect of standards, the new opportunities that they present, and their role in catalyzing production and supply chain investment and capacity upgrades. Not surprisingly, there is evidence to support an entire spectrum of viewpoints given the diversity of settings in which standards are applied.

In the context of African agriculture, both the “concerned” and the “encouraged” schools of thought have been well represented over the past decade. With respect to food safety standards, the tone is one of concern, both that African industries as a whole will lose their competitiveness and that smallholder farmers will be excluded from remunerative (higher-value) market channels. With respect to social and environmental standards, the tone is positive, with emphasis given to how African industries and smallholders can readily differentiate themselves in international commodity markets.

Both perspectives have motivated a wide range of programs and projects in Africa, supported by development agencies and NGOs. Some of these focused specifically on the challenges and opportunities related to standards compliance; others embedded work in this area within considerably broader trade, private sector development, or rural development programs. Several hundred million dollars has been invested in programs of training, technical assistance, and, less frequently, physical infrastructure, to enable African farmers and firms to apply and comply with emerging regulatory and private standards, and to implement standards conformity assessment.

Relatively little of this expanding field of development assistance has been the subject of formal evaluation to consider its cost effectiveness and impacts. Rather, most reviews

have simply highlighted the inputs provided and sought to attribute some identifiable outcomes to the interventions. Most development practitioners active in this field clearly recognize the limitations of prevailing systems for program/project monitoring and evaluation. Despite this, there are evident signs of learning and adjustment within the development community regarding the strengths, limitations, and pitfalls of various approaches, and, relatively recently, some efforts made to begin to share these lessons and begin to better coordinate development assistance in this field.

This research program was not designed to evaluate any specific project and, in this synthesis, we have specifically refrained from examining the details, and evident impact, on any single project or donor program. Instead, a broader, medium-term perspective was provided, cutting across various types of standards and commodities, and industries of varying degrees of size and maturity. Not surprisingly, we find the evidence on the cost-effectiveness and impacts of development programs in this area to be decidedly mixed, with as many “failures” as “successes.” We use quotation marks because sometimes “failures” resulted in valuable learning, subsequently applied, while some “successes” involved missteps along the way.

Of course, badly designed interventions were rarely successful. Yet, evidently well-designed projects also had very mixed experiences among countries and even within the same industry in the same country. Looking across the broad range of projects and case studies that we considered, *the dominant success factor—in explaining achievements in enabling smallholders to comply with standards and remain participating in remunerative supply chains—was the (prior) strength and capabilities of so-called lead firms*. Where these were well managed, amply resourced, and had a competitive position within domestic or specific international markets, an array of support schemes were able to get reasonable traction on the (sustained) upgrading of smallholder production.

In contrast, fragmented and weak industries have generally not effectively used and absorbed standards-related technical

assistance. There must be at least a subset of leaders who can provide a local demonstration effect. It is the lead firms that have tended to drive improved standards adoption by smallholder farmers—through the requirements they set and, typically, through their outreach and procurement oversight systems. Programs that initially ignored the lead firms or somehow sought to bypass them with the project linking farmers to markets were either forced (by poor results) to amend their approach or they closed, attributing failure to one or another exogenous factor.

In circumstances in which lead firms themselves apply low standards, we observe that efforts to independently promote improved (product and production) standards by smallholders have generally failed or obtained little leverage. If the focal market is not calling for or rewarding a change, it simply is not going to happen even in the presence of enlightened advisers. Bottom-up standards initiatives—that is, involving the improvement of products/systems of farmers and the assumption that enthusiastic buyers will come charging—seem to rarely work in practice, in large part because such initiatives don't typically achieve a consistency of standards and supply and a large enough volume to command the market power that is being sought. Not all bottom-up market initiatives have this fate, although those whose centerpiece is standards compliance (rather than basic produce assembly, logistics, etc.) do not appear to have a good track record.

Thus, experience shows that development interventions in this field work best when they complement the commercial strategies being pursued by lead and other companies. And, they should be consistent with those strategies. While it has been beneficial to encourage firms to be proactive and to anticipate requirements/opportunities emerging in their focal markets, there has been some tendency, especially in programs supporting SMEs, to reorient firms down the path of a specific standard/protocol, sometimes exposing them to a level of financial risk and technical challenge that they cannot manage without the intensive resources provided under the donor program. When the program ends, some such companies find themselves caught in the middle, having adopted certain investments and other changes and raised their cost structure, yet still not able to fully comply with the focal standard or meet the other (including volume) requirements of buyers. Thus, the structure and maturity of an industry should strongly influence the design of standards-related and complementary interventions.

Looking across the range of experiences, a second critical success factor appears to be the targeted market, and the proximity of the improved standards with the prevailing

practices and capabilities of farmers, service providers, and commodity buyers. Efforts to promote great leaps forward have normally failed or were not sustainable. For smallholder agriculture, incremental upgrades, involving technical learning, institutional coordination, and increased record keeping, can progress well over time, yet radical shifts, entailing costly investments, are rarely successful or appropriate.

Despite the impression given by some of the prevailing literature and commentary, our observation is that African smallholders—or at least those with some commercial orientation—only rarely encounter situations in which there are significant technical barriers for them to meet quality and other market requirements. There may certainly be financial constraints or inadequate economic incentives to meet this or that requirement. Generally, however, there still remains a spectrum of market segments with improved standards representing an opportunity space for farmers/farmer groups to differentiate their supply from the norm.

In fact, one could argue that the broadest opportunities for development impact in lower-income countries—that is, where the chances of success are highest, where more people are impacted, and where gains are more readily sustained after interventions—lie at the interfaces between levels 1, 2, and 3 in our conceptual framework.¹⁴⁸ Evidence for this was provided in the case studies highlighted in Chapter 6. For most countries of sub-Saharan Africa (SSA), there are ample opportunities to upgrade smallholder productivity and make very basic improvements in product quality, presentation, and assembly—to service domestic and regional markets.

Thus, while well-meaning and underpinned by a growing academic literature, a proportion of donor activity in this space seems to have centered on the wrong end of the standards spectrum. The foci of attention have been on standards and market segments that are most familiar to Western market actors and technical professionals. That is, greater understanding has existed about the standards required by European and North American (upper-end) supermarkets, and those associated with social movements in the West, including those related to organics and fair trade. Meeting high-end supermarket standards was deemed to be necessary for African smallholders (to remain engaged in export-oriented production), while adopting one or another social

¹⁴⁸ This situation may begin to change as countries enter middle-income status and there is a growing body of domestic consumers able and willing to pay for certified and otherwise production process differentiated foods.

standard has been cast as an opportunity to reposition smallholders in global supply chains, to their benefit. Both streams have required an elaborate apparatus of paperwork, advisors, and auditors. The shortcomings of this approach and areas of emphasis have been recently recognized and led to shifts in some programs.

Still, comparatively fewer donors have been active, and less emphasis has been placed on the early and middle levels in the standards spectrum, associated with nearer or more mainstream markets, more incremental and less visible upgrades, amenable to local solutions and South-South technical advice, yielding benefits for local consumers, and having greater potential for long-term sustainability. Unless this imbalance is addressed, standards-related initiatives will remain marginal to the broader challenges of promoting agricultural commercialization and rural development in SSA.

In the last few years, however, as a result of the lessons learned from past experiences, there is an evident shift in the foci of development efforts toward domestic and regional value chains. Specifically in the area of standards, a growing number of donors have come to understand the limitations of focusing attention on achieving farmer/product certification under some specific international standard. The point of departure of some earlier support for smallholder certification was that fundamental upgrades had already been made, and that the remaining gaps can be easily narrowed. In many cases, this assumption was incorrect, with the need to go back to basics—in farmer organization, applied research and advisory services, business development services, and logistics improvements—frequently emerging as lessons learned from these experiences.

It has become increasingly evident that the strategy to use certified production as a tool for smallholder market integration needs to be based on a continuum of improvements, with the target being to provide tools for long-term competitiveness. When certification is applied as a replacement for undertaking the upgrades required for gradually achieving gains in terms of quality + consistency + improved on-farm information, it is very unlikely to contribute to sustainable outcomes. In the end, international buyers will buy the product that fulfills their requirements. Social and environmental claims are a plus and may become a *requirement* in certain markets in the near future, but will never be substitutes for quality and consistency.

In SSA, challenges of consistency in the supply and quality remain major bottlenecks of small-scale farmers' participation in markets. The need for farmer collective action, and strong

group cohesion to aggregate volumes and facilitate small-scale farmer's access to services, remain important problems to be solved, both in certified and noncertified markets. Therefore, the emphasis on the achievement of certification by farmers/farmer groups should not detract from the critical role of development efforts in supporting continuous improvements to achieve quality and productivity gains, promote smallholders organization and empowerment, and so forth.

As noted in the Introduction, much of the prevailing literature has viewed standards and smallholders through the very narrow lens of the experience with horticultural exports and with the GLOBALG.A.P standard. This analytical concentration on GLOBALG.A.P helped to steer the donor community down the path of programs to subsidize smallholder GLOBALG.A.P compliance and certification. While there have been some limited success stories—generally amid already successful and dynamic industries—this path of assistance has proven to be a cul-de-sac, impacting relatively few beneficiaries, in relation to the much larger number of African smallholders engaged in horticultural crop production. Donor programs to facilitate GLOBALG.A.P compliance may have had some minor impact on African trade flows, yet their impact on broader rural development patterns and poverty reduction appears to have been rather marginal. After several years of experimentation, *there is a palpable sense of frustration within the development community regarding the impacts achieved and the sustainability of these gains in an ever-changing commercial environment.*

In this area, *bottom-up* approaches (producer models) often lacked attention to sustained buyer relationships, thereby further exposing the participating farmers to market risks. Various training materials and guidelines have proven useful for numerous farmer groups, yet the revision of these materials and their reinforcement by buyers has often waned at the closure of projects. Some producer groups can, in fact, be well prepared for GLOBALG.A.P certification, but this is not an end in itself, especially where these groups are not well aligned with competitive exporters. And, how sustainable is this approach in the face of recurrent costs—both for certification and for maintaining improved farmer group systems and infrastructure? A critical lesson learned has been the need to identify the *readiness* of a group to move toward certification. Weak group cohesion is a key determinant of the future sustainability of the efforts undertaken. Building strong links between farmers around common needs and opportunities takes time and requires significant development efforts. Yet, many projects simply don't have an extended period of time.

Top-down approaches, using lead firms as the entry point to integrate smallholders, have been seen by several development organizations as a more promising approach—at least in terms of obtaining relatively quick and effective implementation of GLOBALG.A.P. Yet, issues of smallholder dependence on the exporter (who generally owns the certification) arise, putting at risk the certification if the relationship between the exporter and the group ends. Additionally, the approach based on the capacities of firms to serve as integrators has also shown its limitations. *Intermediary models*, on the other hand, seem to face persistent sustainability challenges, particularly in environments characterized by poor trust and unreliable buyer-seller transactions.

Despite the mixed experiences, there exists a generalized perception about the positive outcomes of GLOBALG.A.P adoption, with the associated costs—particularly the costs of certification and recurrent costs associated with maintaining certification—as the main barrier for smallholder integration. In this regard, some have pointed out that one of the most valuable contributions of development assistance in this field has been to demonstrate that compliance with GLOBALG.A.P is not a technical issue, but rather an economic one. The experiences have proven that smallholders, in spite of the difficulties faced in relation with some technical aspects of the standard, have been able to overcome these aspects to achieve and demonstrate compliance through certification. The main bottleneck remains the capacity of smallholders to overcome the costs associated with upgrading operations and particularly maintaining certification, in a sustained manner.

Considering the wider range of products, markets, and standards, the challenges of GLOBALG.A.P compliance represent something of an outlier, pertinent for only a small segment of African smallholders and (larger) export-oriented horticultural companies. The vast majority of African horticultural producers are (and should be) oriented to servicing different markets for which the standards requirements are readily achievable and which offer opportunities for differentiation and price advantage. The same applies for most small-to medium-sized trading companies whose success rate in supplying and sustaining business relations with high-end international supermarkets is very low. Programs pushing small- and medium-sized enterprises (SMEs) in this direction may well be diverting them away from more remunerative and sustainable commercial strategies and therefore accelerating their demise.

While the numbers of excluded producers may go up or down with each new academic study, the development community

seems to have moved on, recognizing that the scope for sustainable smallholder participation in certain markets relates to many factors, and also recognizing that there is little prospect for large numbers of African smallholders to participate in GLOBALG.A.P certified markets. These realizations have led to several shifts in the direction and emphases of development assistance in this area. One is from a strong emphasis on supply-side constraints (working at the firm/farmer level) toward more emphasis on standards-related enabling factors (e.g., generic training and training materials, improving associated services to reduce costs and improve outreach, enhancing policy frameworks, etc.). A second shift is in devoting more attention to standards-based markets, which appear to be more accommodating and suitable for smallholder farmers—thus fulfilling a vision of large numbers of African smallholders actually benefitting from improved standards.

Overall, this field appears to be struggling to identify and apply suitable exit strategies for development programs. In comparatively weak institutional environments, many donors have opted for capacity-bridging rather than capacity-building approaches, with project-hired staff providing the core technical assistance. In some cases, efforts have been made to localize the technical assistance units at the end of the project, yet typically these entities have struggled or have become dependent upon other donor programs to sustain their operations. Programs designed to support local business development service have tended to initially over-subsidize these services, and then prematurely withdraw the support (in line with short project cycles), all too often leaving behind a distorted market for technical, advisory, and auditing services and relatively few examples of viable service providers who are able to withstand any production or market shock. And, while in the sanitary and phytosanitary field some attention has been given to strengthening public sector capacities—especially among competent authorities responsible for company licensing and product clearance for selected export products—little attention has been given to public sector capacities pertinent for the support of improved social and environmental standards. After all, such standards are widely regarded as both private and voluntary.

Thus, while there have certainly been important advances over the past decade, much of the enhanced capacity for standards management has been embedded in a range of processing and exporting companies, with comparatively little broader institutional capacity. The pool of local advisers, quality managers, and standards certifiers has certainly grown, but not nearly in proportion with the investments that the development community has made in this area.

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CHAPTER 7

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