THEMATIC NOTE 4

Building Innovation Capabilities in Farmer Organizations

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SYNOPSIS

Organizational capabilities for innovation encompass the abilities of the organization's members (such as specialized knowledge, creativity, and task commitment) and the organization's key characteristics (such as culture, governance, communications and learning routines, and resources). Interventions to build organizational capabilities for innovation involve building the individual and collective capabilities themselves and making the enabling environment more supportive of innovation. Instruments for capacity building have included fostering interactions among actors in the AIS, creating venture capital funds, consolidating innovation brokers, strengthening the policy framework for innovation, and setting up training and mentoring programs and multistakeholder platforms. The environment for innovation improves when governments and donors facilitate dialogues to develop consensual innovation policies, create market and social opportunities for innovation, facilitate access to crucial inputs, strengthen flows of commercial and technical information, offer public institutions incentives to interact with farmer organizations, and promote a legal environment that supports farmer organizations and encourages decentralization to empower local farmer organizations. The most innovative farmer organizations have a federated structure, i.e., are composed of small, linked farmer groups, thus combining the best features of large organizations and small groups. In designing projects to develop farmer organizations that can innovate, practitioners should select organizations that can learn; avoid overly strict criteria for participation; avoid requiring organizations to become formal entities; identify the networks in which the farmer organization participates, because its partners can indicate its own innovativeness; use external consultants and innovation brokers to design training programs; and develop a monitoring and evaluation system that promotes exploration and learning.

BACKGROUND AND CONTEXT FOR INVESTMENT

The weakening of public research and extension organizations and wider recognition of the complexity of innovation processes are creating opportunities for farmer organizations to develop and diffuse innovations. By pooling resources for innovation, connecting with other partners in innovation processes, and building their individual and collective capacity, farmers who belong to organizations are participating more effectively in innovation networks and value chains. They are gaining better access to new markets and production methods, including methods to manage natural resources. Farmer organizations acquire new bargaining power in input and output markets and they can also coordinate other actors in the AIS. They increasingly participate in designing and implementing innovation and research policies and programs and join national innovation councils, sectoral coordinating bodies, and the boards of research institutes. They lobby public organizations such as research institutes and industry regulators (World Bank 2004). They manage research funding and share in the financing, development, and diffusion of technical, commercial, organizational, and institutional innovations.

Whether farmer organizations participate effectively in these processes is strongly determined by their origin, evolution, the enabling environment, and the capabilities they develop, as discussed in the module overview. Often farmer organizations are unskilled in identifying the specific capabilities they lack and in defining strategies to build them up. Organizations do not develop capabilities for innovation overnight; they must make a sustained effort, make major

investments over the long term, have committed leadership, and work with specialists in organizational change and innovation processes.

For many years, governments and funders favored the creation of cooperatives, but their performance has been rather disappointing. Lately, farmers and rural households have sought alternative organizational arrangements. These arrangements have had different goals, operate at different levels (local, regional, and national), and include community organizations, self-help groups, associations to manage natural resources (such as water user associations), and lobbying associations. According to the capabilities they develop and the type of interactions they establish with other actors in the AIS, farmer organizations can be categorized into four types:

- Traditional, commodity-based farmer organizations, such as the Colombian Coffee Growers' Federation, India's dairy cooperatives, or the Kenya Tea Development Agency. Input supply, output processing, and marketing can be done by the organization or outsourced to private firms. Less attention goes to facilitating interactions and cooperation with potential partners in innovation. While the declared goal is usually the diffusion of technical innovations, successful commodity-based farmer organizations have innovated to coordinate large numbers of farmers. These organizations often sponsor their own research teams.
- Nontraditional, market-oriented farmer organizations seek to improve market access through collaboration with key actors in the marketing chain (supermarkets or brokers). Often this kind of farmer organization is created with assistance from NGOs and/or externally funded projects (Papa Andina is an example). Innovations are viewed as technical, commercial, and social processes to be addressed through participatory methods. Research capabilities reside in local and foreign universities or international research centers.
- Innovation-oriented farmer organizations focus on developing technical innovations, but they can also develop commercial or organizational innovations or a combination of all three (a good example, discussed in IAP 1, is South America's no-till farmer associations). These organizations may be created by farmers, NGOs, or public programs, and they may use public or private funds. They usually become the coordinating agent of a diverse network that includes research institutes, private firms, and public programs. Some focus mainly on farmer-developed innovations and seek to improve and/or diffuse them (the ecologically oriented Prolinnova network is one such organization).[1] Other farmer organizations concentrating on innovation include farmers and researchers as equal partners. These farmer organizations use participatory methods to manage the innovation process and may combine top-down and bottom-up approaches.
- Farmer organizations that are service-oriented and networked, such as Mexico's Produce Foundations, promote the emergence of local farmer organizations that form part of larger networks (IAP 2). Through collective action and participation in local and national forums, they establish partnerships with other actors in the AIS for the provision of services, including research, extension, training, credit and savings schemes, lobbying (like the West Africa Network of Peasant and Agricultural Producers' Organizations),[2] or developing value chains (TN 3).

INVESTMENT NEEDED

No recipe exists to create farmer organizations for innovation (Rondot and Collion 2001). The organizations that carved a niche for themselves did so by developing: organizational innovations, such as a clearly articulated purpose, mission, and vision; organizational cultures that allowed change; effective learning routines and heuristics (especially the ability to analyze the organization's needs and to implement plans to address them); strong technical capabilities; skills to participate in innovation networks, interact with the political and economic environment, and mobilize the resources to accomplish the organization's goals; effective and transparent governance structures (including new incentives) and leadership that prevented them from being captured by donors, governments, or elites; and active participation of members (Ekboir et al. 2009).

Successful farmer organizations develop their own organizational models. Some emerge spontaneously, such as the innovation networks that developed no-till agriculture in Argentina, Bolivia, and Paraguay; others are created by a market actor (a supermarket leading a supply chain, for example), by a coalition of actors (as usually occurs in action-research projects), by outsiders in the framework of a project (Papa Andina), or by public programs (after which they assumed a life of their own, like Mexico's Produce Foundations). Independent of their origins, farmer organizations have succeeded when they could adapt their original "business plan" to unexpected problems and opportunities. Adaptation is possible only when farmer organizations have

the organizational and innovation capabilities to create a shared understanding of the organization's goals, overcome institutional inertias and conservative cultures, train all members (board members, senior management, and field staff) on the nature of innovation processes, and muster the internal and external resources for innovation. Organizational and innovation capabilities cannot be built only with short courses. Nor can they be bought easily. They require a sustained effort to cultivate.

Relatively few publications describe steps for building innovation capabilities in nonprofit organizations, but many successful experiences have been documented in private firms (for example, see Skarzynsky and Gibson 2008; Davila, Epstein, and Shelton 2006; and Christensen, Anthony, and Roth 2004). From this literature, this note distills the most valuable recommendations for farmer organizations. Programs to build organizational capabilities for innovation feature a complex menu of interventions over a sustained period and usually include investments in physical capital, short- and long-term consultancies, courses, and long-term mentoring.[3] The interventions can be divided into two categories: building the capabilities themselves and making the enabling environment more supportive of innovation.

Building social capital

The lack of social cohesion and capital, including transparent governance mechanisms, often explains why farmer organizations fail or cannot be sustained for long. Capacity-building programs for any particular farmer organization should identify the extent to which the lack of social capital is an issue and determine the type of capacity building that can compensate for it. Otherwise, capacity-building investments may not yield the desired results.

Developing organizational capabilities for innovation

Organizational capabilities for innovation encompass the *abilities of the organization's members* and the *organization's key characteristics.* Organizational abilities for innovation include specialized knowledge, creativity, and commitment to the organization; developing a long-term vision for the organization; absorbing information generated by other agents (also called the absorptive capacity); creating new knowledge; and using this knowledge to develop innovations that address commercial, social, organizational, or technological needs or opportunities.[4] An organization's key characteristics include its culture, governance, and communications routines (whether they are hierarchical or allow individual exploration of opportunities and horizontal communication); learning routines (the heuristics and methods used for collectively accepting new ideas and procedures); the propensity to interact and cooperate with other actors in the AIS; and resources available for the development of innovations (capital and specialized assets) (Davila, Epstein, and Shelton 2006; Ekboir et al. 2009). ICTs, which facilitate networking and information sharing, are one resource that appears inherently suited to improve the potential for innovation among farmer organizations (box 1.20).

A comprehensive program for capacity development contains a long list of measures, but often the implementation of a few critical actions is sufficient to trigger a virtuous cycle of autonomous capacity building. In fact, each organization has to develop its own menu of interventions. Possible investments include the following:

- An institutional assessment to identify the farmer organization's culture, learning routines, human capital, and leadership capabilities.[5] The assessment should be the basis for defining the investments required to develop organizational capabilities for innovation.
- Assess and reinforce the organization's social capital to prevent opportunistic behavior, strengthen governance structures, and establish links with external partners.
- Train and mentor an innovative leadership group.
- Develop learning mechanisms such as the one used by Mexico's Produce Foundations (IAP 2).
- Strengthen channels (including IT platforms) to exchange information on innovative activities.
- Implement budgeting procedures that allow experimentation.
- Create dedicated teams to explore potential innovations. These teams should include groups to design and try innovations; temporary teams of organization members, partners, and researchers to generate new ideas and proposals; an innovation board to screen and fund innovation proposals, both internal and with other actors in the AIS; and trained "innovation champions" to guide and mentor any member who has an innovative idea. If the farmer organization is too small to have these specialized structures, it should partner with others in the AIS that have similar attitudes toward innovation.

Farmer organizations cannot survive, let alone improve their capacity to innovate, unless they develop sustainable financing (box 1.21), based on successful experiences,

Box 1.20 ICTs Improve the Effectiveness of Farmer Organizations

In rural areas of many developing countries, farmer organizations may be the only organizations on the ground. Because information and communication technologies (ICTs) make it easier to speak for and to farmers, they can dramatically heighten the capacity for networking, good governance, collective action, and innovation in producer organizations and agricultural cooperatives:

- *ICTs enhance farmer organizations' connections and governance.* ICTs can facilitate the sharing of market and technical information, help organizations attract and retain members, and inform members of the organization's activities on their behalf. In Mali, Coprokazan (http://www.coprokazan.org), a cooperative for female producers of shea butter, computerized its operations to reach a wider market online, develop more effective training materials for coop members, and more generally raise its profile. An unexpected outcome of using ICTs was that members became more confident in the coop's governance after coop staff started using computers for routine administration and to develop visual overviews of yearly accounts and activities. The well-known capacity of ICTs to streamline administrative and accounting tasks of all kinds makes them highly useful for administering farmer organizations. In dairy and coffee cooperatives in India and Kenya, for example, farmers believe that automated measurement and record-keeping systems help ensure fair compensation from the cooperative. Automated systems have the added advantages of speeding transactions and reducing spoilage.
- *ICTs give organizations a stronger collective voice.* High-speed connectivity may still be out of reach in many parts of the world, but individual farmers can still use mobile phones and text messages to "have their say" on agricultural radio. Feedback about services offered by farmer organizations and local government, when expressed over the airwaves, has more influence than comments made in a less public forum. In Mali's Sikasso Province, an ambitious project brings farmer organizations into the national agricultural policy debate through telecenters in seven towns and villages, together with local radio stations. In locations throughout Africa, the Participatory Radio Campaigns of Farm Radio International (a nongovernmental organization) invite farmers' participation and respond to their feedback. Text messaging on cheap mobile phones is proving to be a highly adaptable medium for organizations to mobilize members around specific issues and concerns, acquire resources (information, credit, and even insurance) to facilitate production and marketing, and generally become more integrated and visible within the innovation system.
- *ICTs can foster innovation.* As the examples indicate, ICTs can spur farmer organizations to innovate in how and where they operate, with whom, and why. The use of ICTs can make organizations more effective lobbyists, better at acquiring information or services from public and private sources, more effective participants in markets and value chains, and more valuable partners in research and development initiatives (such as initiatives to provide early warning of plant and animal diseases).

Farmer organizations may be aware of the potential of ICTs but may not necessarily find it easy to acquire and learn to use them. Generally it is governments, donors, and nongovernmental organizations (NGOs) that have the funds to develop ICT solutions that benefit farmer organizations. (The software used in the Indian dairy cooperatives mentioned earlier was developed through public-private partnerships, for example; Farm Radio International is an NGO.) Another challenge is to sustain the use of ICTs after external support ends. Significant costs are usually associated with equipment, maintenance, training, and continuing system development. New technology must generate enough additional income for an organization to cover its ongoing costs, or it must generate enough additional benefits for individual users to be willing to pay for it. Finally, although ICTs facilitate communication, it is important to recognize that they cannot substitute for building social capital.

Source: World Bank 2011.

Box 1.21 Successful Financing of Farmer Organizations

Voluntary contributions. The Argentine Association of Regional Consortiums for Agricultural Experimentation (AACREA) is an apex organization of self-help groups of commercial farmers in Argentina. Each group has about 10 members who jointly hire a technical advisor and conduct adaptive research and validation. The group also contributes to the apex organization. The latter gathers the information developed by each group and shares it among its 1,880 members. This structure is an example of decentralized experimentation with centralized learning.

Levies. The Colombian Congress can tax specific agricultural products to finance programs to support them. A specific law must be enacted for each taxed product, and the proceeds can be used only to support the product's market chain. The central government collects the tax. The funds are administered by a contract between the Ministry of Agriculture and a farmer organization of national reach that represents producers of the taxed product. Colombia has 15 such taxes.

Sales of goods and services. Starting in 1970, India's National Dairy and Development Board imported food aid in the form of dairy products and marketed them under its own brand name. The surplus from these sales was invested in the expansion of the cooperative movement in the dairy industry. Today farmers organize into village-level cooperatives, which in turn are organized into district-level cooperatives (comprising 400–1,000 primary village cooperatives). The district-level cooperatives federate into a state cooperative. At the apex is the National Cooperative Dairy Federation, which coordinates marketing for all state cooperatives. The cooperatives currently supply about 70 percent of the processed milk marketed in India and provide a wide range of services to members.

Government programs. The Mexican government created a program in 1996 to finance research and extension projects through Produce Foundations, civil society organizations in each state that currently also finance and implement innovation activities. The presence of a foundation in each state makes it possible to clearly identify local farmers' needs and foster the emergence of local innovation networks. The Foundations set the priorities, decide which projects are funded, and administer the projects; the federal and state governments audit the use of the funds. See IAP 2 for a detailed discussion.

Source: Author.
Note: AACREA = Asociación Argentina de Consorcios Regionales de Experimentación Agrícola.

voluntary contributions (such as those used in Argentina by AACREA),[6] levies (used in many countries, including Australia and Colombia), sales of goods and services (Kenya Tea Development Agency and the Indian dairy cooperatives), and partnerships between the government and civil society organizations (such as the Mexican Produce Foundations) (box 1.21).

Using new and more sophisticated instruments to support innovation

In the past, most projects that sought to build capabilities in organizations supported professional education, short courses, or consultancies on specific topics. Current projects also support interactions among different actors in the AIS (including public-private partnerships), creation of venture capital funds, consolidation of innovation brokers and "deal flow" promoters, and strengthening the policy framework for innovation. Other instruments introduced recently include mentoring programs, multistakeholder platforms, knowledge-exchange fairs, and IT platforms to facilitate communications and coordination.

Adding flexibility to the enabling environment

Farmer organizations' ability to change depends on whether the broad policy and institutional environment enables them to change. For this reason, policies that seek to foster innovation should also consider promoting changes in the enabling environment. Because so many actors participate and because the enabling environment is loosely governed, however, it is very difficult to initiate changes and, once they are introduced, to predict the effect of particular actions (Ekboir et al. 2009). Given this complexity, governments should use

adaptive approaches to induce changes in the enabling environment. Various instruments can be used to this end:

- Devising capacity-building programs to strengthen the understanding that different actors in the AIS, especially governments, donors, extension agents, and research organizations, have of innovation processes.
- Building confidence and promoting coordination among potential partners, including financing for multiactor programs, innovation brokers, and sustainable extension programs.
- Strengthening research capabilities, especially by focusing on the quality of researchers and changing the culture and incentives of research organizations.
- Certifying innovation brokers.
- Financing programs for innovation, including venture and angel capital funds and innovation brokers; flexible financing of action-research projects to explore new instruments; and institutional arrangements to foster innovation. These programs could be organized as stakeholder-driven and client-controlled mechanisms, in which farmer organizations have a financial stake.
- Creating a committee to coordinate the AIS and facilitate multistakeholder dialogues on innovation policies.
- Strengthening the participation of farmer organizations that represent marginalized populations (including smallholders and women) in policy- and decision-making processes and in the provision of services.

POTENTIAL BENEFITS

Box 1.22 presents an example of the benefits of instilling innovation capabilities in a farmer organization in Kenya. More generally, farmer organizations with stronger innovation capabilities can offer the following benefits:

- Faster development of social and economic innovations, resulting in stronger economic growth and more sustainable use of natural resources; strong farmer organizations are particularly necessary when public organizations (especially research and extension) are weak.
- Quicker development and implementation of organizational and commercial innovations.
- Better provision of services when governments are not decentralized or are weak.

Box 1.22 Benefits of Innovation Capabilities in a Farmer Organization: The Kenya Tea Development Agency

The Kenya Tea Development Agency (KTDA) was created soon after independence as a state company to regulate tea production by smallholders, but it repeatedly demonstrated its capacity to innovate over the years as it evolved into a major corporation owned by small-scale farmers. It provides production and marketing services for members, successfully manages tea nurseries and 59 factories, and represents small-scale farmers in the Kenya Tea Board. The agency's innovation capabilities include the following benefits:

- Increasing the income of its associated small-scale farmers.
- Successfully implementing collective action involving hundreds of thousands of small-scale farmers. In 1963, tea was cultivated by 19,000 smallholders on 4,700 hectares, with an annual crop of about 2.8 million kilograms of green leaf. In 2009, about 400,000 smallholders grew tea for KTDA on 86,000 hectares and produced in excess of 700 million kilograms of green leaf.
- Developing new tea products and opening new markets for them.
- Implementing new programs to support its associates (affordable credit and input supply, for example).
- Developing strong managerial capabilities.
- Developing strong competitive advantages. The agency accounts for 28 percent of Kenya's exporting earnings and is the world's second-largest exporter of black tea.
- Adapting its operations and governance in response to changes in the socioeconomic environment and market opportunities.
- Influencing strategic stakeholders to allow organizational change.
- Partnering with private actors and foreign universities to develop and diffuse sustainable production practices for small-scale farmers.

Source: Author, based on information from KTDA, http://www.ktdateas.com.

- Stronger two-way information flows, conveying technical and commercial information to a larger number of farmers as well as communicating farmers' needs and concerns to other actors in the AIS, including researchers and policy makers. ICTs can be important enablers of communication, but they should not be seen as an alternative to building social capital.
- More effective use of human, social, physical, and financial resources for innovation.
- Easier access to input and output markets and to other resources for innovation (technical advice, innovation networks, and participation in action-research projects), both for commercial farmers and marginalized populations (women and landless farmers, for example).
- Better interaction and coordination with other actors in the AIS.
- More inclusive and effective institutional innovations when marginalized groups have a stronger influence on the design and implementation of innovation policies.
- More relevant and more effective public research and extension programs when farmer organizations effectively participate on boards of research and extension organizations.
- More inclusive development, especially when affirmative action allows more effective participation of marginalized groups in decision-making bodies.

POLICY ISSUES

Farmer organizations have policy issues similar to those of innovation networks. They include considerations related to social hierarchies and inclusiveness, sustainability and dependence on external funds, and the respective roles of the public and private sectors.

Social considerations

Local social considerations inevitably come into play in many farmer organizations. For example, it is difficult to introduce organizational or institutional innovations (especially more transparent governance) in societies dominated by elders or clans. Hierarchical societies also stifle technical and commercial innovation, reducing opportunities for farmer organizations to benefit members. In such cases, efforts to strengthen farmer organizations may award more power to local groups or individuals that are already powerful. Affirmative action (reserving seats on the organization's board for marginalized groups, for example, or well-designed communications programs to reach all subsets of farmers, such as women or poorer farmers) can ensure that weaker groups have greater influence on the farmer organization and that it meets their particular needs. These programs succeed, however, only if representatives of the marginalized groups have the appropriate capabilities. Often women are illiterate and at a disadvantage in organizations that rely on written information.

Institutional considerations

An enabling environment that allows farmer organizations to operate effectively and with as little external interference as possible is a prerequisite for innovative organizations. This environment can be achieved more easily when governments, donors, and farmer organizations themselves have a clear understanding of innovation processes. When governments or donors finance farmer organizations, the funding agencies usually try to influence them. Governments may resent having to negotiate policies and priorities with independent farmer organizations. Finally, farmer organizations operate more effectively when laws, regulations, and interventions by external stakeholders (especially governments and donors) facilitate transparency and accountability to farmers.

Sustainability

Farmers who organize spontaneously in response to a need or opportunity often demonstrate self-reliance and strong and lasting solidarity, but often these farmer organizations command limited resources. They can profit greatly from programs to build their capabilities and link them with other actors in the AIS. On the other hand, farmer organizations created by external partners usually have more resources but are less sustainable. They run the risk of not attending to members' priorities, and they may lose their autonomy and effectiveness. Bigger farmer organizations are better at influencing innovation processes—but they are more likely to be captured by governments or elites.

Public and private sector roles

Farmer organizations can substitute for weak private organizations, especially when the commercial private sector is slow to take over activities abandoned by the public sector, such as input provision. More frequently, farmer organizations are seen as substitutes for weak public research and extension organizations, as occurred in Latin America and

sub-Saharan Africa when farmer organizations began to specialize in natural resource management (IAP 1). Although farmer organizations can effectively implement research and extension programs, this activity should not substitute for research and extension by public programs, because it increases the odds that nonmembers will be excluded or that their needs will not be meet. Farmer organizations should rather participate in joint research and extension efforts that complement those of public organizations. When farmer organizations take the lead in fostering innovation, research institutes may feel threatened, perceiving that farmer organizations are essentially trying to change the ways that research institutes interact with the AIS.

Appropriate policies and incentives may prevent some of these problems and at the same time strengthen farmer organizations. In addition to implementing general policies (such as research policies or policies facilitating the operation of markets), the public sector can support farmer organizations by introducing new incentives for researchers and other civil servants to work more intensively with farmer organizations; providing resources for organizational facilitators (such as NGOs) and innovation brokers to create or strengthen farmer organizations (IAP 6); and supporting the development of farmer organizations' innovation capabilities. It is vital that farmer organizations do not end up responding to government interests in lieu of members' needs.

Nonpublic actors—including private firms, international research institutes, and NGOs—can play a number of roles. They can induce the creation of farmer organizations, create new marketing channels for small-scale farmers, and work with existing organizations to build their innovation capabilities.

LESSONS LEARNED

The considerable variety of farmer organizations, experience with older forms of organization, and new organizational strategies are yielding a number of lessons about farmer organizations and innovation. The sections that follow summarize the conditions that make farmer organizations effective (especially as innovators), including lessons related to their structure, way of operating, capabilities, financing, and the environment in which they operate.

When are farmer organizations most effective at innovating?

Farmer organizations are particularly effective for developing technical and commercial innovations when they focus on specific products (the approach of the Colombian Sugarcane Research Center, CENICAÑA)[7] or subsectors and commercial farmers. Sectoral or national farmer organizations can also influence the introduction of institutional innovations, either for commercial or small-scale farmers. Finally, local farmer organizations (especially community-based organizations) are effective in developing social innovations, including facilitating poor households' access to markets, and addressing local problems that require collective action. These observations, however, are not absolute. In some cases, national associations that coordinated local groups have developed important economic or technical innovations (see, for example, IAP 1).

Innovative farmer organizations tend to have federated structures

The most innovative farmer organizations are composed of small, linked farmer groups. This structure combines the best features of large organizations and small groups and benefits the organization's capacity to innovate. Small groups have greater internal cohesion, and it is easier to monitor the members. Farmer organizations with strong community ties enable grassroots concerns to be voiced more clearly. They facilitate greater upward participation and downward accountability. The drawback is that they command so few resources. By federating into larger groups, they can achieve greater economies of scale, but they can also be more easily captured by elites or governments and find it harder to control free riding. Examples of federated farmer organizations are India's milk cooperatives (described in box 1.21), the no-till farmer associations in South America (IAP 1), and Mexico's Produce Foundations (IAP 2).

Building capabilities for innovation in farmer organizations

In helping farmer organizations develop their capacities to innovate, it is important to focus not only on technical or commercial issues such as accounting or crop management but on developing good governance, creating structures and incentives for innovation, developing external links, and building strong leadership. Capacity-building activities may include traditional training in purpose-built facilities, on-the-spot training, consulting services, extension, seminars and workshops on the dynamics of organizational innovation, exchange programs so that managers can see the capabilities of innovative farmer organizations, tutoring, and mentoring. For example, African managers at the Kenya Tea

Development Agency developed their capabilities by working over many years under senior managers from multinational companies (Ochieng 2007).

Building capabilities for innovation should be a permanent effort, because organizations tend to lose their innovativeness once they have found routines that help them reach their goals. The conservative nature of organizations is particularly strong when top management lacks a good understanding of the nature of innovation processes (Christensen, Anthony, and Roth 2004). The incentives to change in commercial firms are provided by markets; the incentives in nonprofit organizations come from their associates, their own sense of duty, and the pressure exerted by donors and governments. This pressure usually is convened through two channels: funding and policy dialogue. When funding is conditional on the implementation of capacity-building programs, funders should be careful not to impose their objectives on the farmer organizations or alienate management from the farmers. Recognizing this problem, the World Bank and other donors are providing funds for farmer organizations to build capacity based on demand (training, advisory services, and startup funds for innovative ideas), sometimes requiring matching contributions. The decision on how to allocate the funds is left to the farmer organization's management, which can contract specialists from a roster of regularly appraised service providers. This approach allows external experts to be truly independent and at the service of the farmer organization. Such independence is often harder to ensure when donors select the experts. The World Bank has funded projects with this design in Bolivia, Brazil, Colombia, Guatemala, Mexico, and Panama (IAP 6).

Development of innovations requires flexible management by farmer organizations, governments, and donors

Innovations are developed by exploring alternatives. The failed initiatives may seem to have wasted resources, yet failure is part of the learning process. Farmer organizations must be allowed to explore, but in that case, donors and governments must strengthen their own capabilities to manage innovation, because the inflexibility of public procedures runs counter to the need for flexibility and adaptability. Courses and consultancies on the management of agricultural innovation for donors and senior civil servants are necessary for flexible management practices to take root. Appropriate controls and audits are also necessary to prevent misuse of resources without hindering exploration. A committee, formed by donors and senior civil servants, should be established to review changes to the original project design at least once a year.

Financing farmer organizations for innovation

As noted, some farmer organizations have developed sustainable sources of funding by selling products or services, including lobbying, for members. These organizations do not need special support, but they should be able to access all of the programs available to private firms, including those that support innovation.

Demanding that farmer organizations be self-financing is generally not realistic, especially if they include a large share of small-scale farmers or if they manage public funds. Demanding cofinancing from farmer organizations that include marginalized groups may further alienate those groups from innovation processes. Even so, farmer organizations should ask members to contribute some funding (even in kind), because it stimulates commitment. A number of financial arrangements have been used to support the innovation activities of farmer organizations, including competitive grants, matching grants (see module 5, TN 2; IAP 2), credits, funds distributed through government channels with no mention of competitive or matching grants, revolving funds for services, beneficiary fees for services (such as advisory services, veterinary services, and maintenance of group-managed infrastructure), contracting of services, and performance-based contracts. In each case, the arrangement that is adopted should match the needs and capabilities of the organization.

Groups to generate technology have been sustainable only when formed by commercial farmers

Commercial farmers have usually solved their main organizational and commercial problems and have resources to invest in becoming more efficient. Most noncommercial small-scale farmers, on the other hand, have limited resources and a diversified livelihood strategy, in which agriculture is a dwindling source of income. They can be reluctant to invest time and money in developing new techniques, although they can occasionally benefit from innovations developed by commercial farmers.

A more supportive environment for organizational innovation

The level of innovation achieved by farmer organizations depends on the enabling environment. Governments and

donors can create a more supportive environment for innovation in many ways. They can create market and social opportunities for innovation (by deregulating markets, for example), facilitate access to crucial inputs (such as affordable credit), and strengthen the flow of commercial and technical information (by strengthening universities and innovation brokers, for example). They can offer public institutions better incentives to interact with farmer organizations. Promotions in many research institutes are based mostly on the number of indexed papers published, whereas interactions with farmers are less valued. Action-research projects could be implemented to identify new instruments to build innovation capabilities in farmer organizations, such as the structure of decentralized experimentation with centralized learning described in IAP 2 for the Produce Foundations. Policy dialogues could be set up to develop consensual innovation policies; national committees for innovation are critical in implementing such dialogue and defining the policies, as discussed in the module overview and TN 1. Government could promote a legal environment that supports farmer organizations and encourages decentralization to empower local farmer organizations.

RECOMMENDATIONS FOR PRACTITIONERS

A few principles are useful to consider in designing and implementing projects that focus on developing farmer organizations that can innovate.

When selecting project participants, support organizations that can learn. Organizations tend to be conservative, and not every organization can develop innovation capabilities (Christensen, Anthony, and Roth 2004). Organizations that can learn are identified in two ways: They have already shown their innovativeness, or it can be evaluated through organizational assessments (see, for example, Ekboir et al. 2009). The assessment is critical to identify the best approaches to develop innovation capabilities. For example, if the farmer organization is particularly conservative, participatory methods may not be suitable, because management is likely to oppose change. The assessment should also look at the organization's innovation strategy, identify its mission and vision, determine the resources available for innovation and those that must be secured, and identify the most important current and potential partners. The identification of important partners can be done using multistakeholder, participatory procedures such as those described in Devaux et al. (2009), Vermeulen et al. (2008), and Hartwich et al. (2007).

Eligibility criteria should not be too strict. Given the diversity of farmer organizations and the difficulty in knowing an organization's true potential for change beforehand, any membership organization should be eligible for support as long as it: (1) is recognized as useful by its members; (2) has an identity—in other words, a history and effective operating rules that, even if they are informal, regulate relations between members and between members and the outside world; (3) has governing bodies that function effectively; and (4) has demonstrated its willingness to develop its innovation capabilities. An organization can demonstrate its willingness explicitly (for instance, by training members or contacting external advisors to develop a plan to strengthen capabilities) or implicitly (through its formal and informal routines, the nature of its leadership, its culture, and its incentives).

Do not push farmer organizations to become formal entities. Experience shows that when a farmer organization survives a period of informality, it is more likely to succeed because its members have had time to develop a common experience and resolve the issues that emerge when implementing collective action.

Identify the networks in which the farmer organization participates. An organization's partners can indicate its own innovativeness. Consider all stakeholders that collaborate with the organization in innovation networks and identify the appropriate incentives for them. In particular, public organizations may face major hurdles to interacting effectively with farmer organizations.

Identify support and training needs. The leaders and staff of farmer organizations usually need help to identify the capabilities they lack. Even when the needs have been identified, it is difficult to build the capabilities, especially in organizations formed by marginalized groups, which need economic, managerial, and technical support. External consultants and innovation brokers are necessary to identify these gaps and design training programs for farmer organizations, given their generally limited organizational experience and resources. Support for these farmer organizations should be based on the principle of empowerment. Experience shows that building farmer groups for learning and reflection often requires continual access to external facilitation (van der Veen 2000).

Seek nonconventional instruments to strengthen farmer organizations. The effectiveness of formal courses for building innovation and entrepreneurial capabilities is quite low,

because these capabilities can be developed only by doing and by observing other actors who possess the capabilities. In addition to the instruments mentioned in box 1.8 in the module overview, exchange visits have been very useful in spurring innovation in farmer organizations, but only when visitors had the capabilities to absorb the information and only when their organization had reached a certain maturity.

Develop a monitoring and evaluation system that promotes exploration and learning. Examples of indicators that can be used are given in table 1.2 in the module overview.