



Agriculture Education at the University of the West Indies

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CTA S&T SWOT Workshop
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Faculty of Food and Agriculture
UWI
St Augustine



Origin

- ✓ Formal training in agriculture in the British West Indies commenced in 1924 with the establishment of the Imperial College of Tropical Agriculture (ICTA)
- ✓ ICTA served as a research centre as well as training
- ✓ The focus of ICTA training was a postgraduate diploma in tropical agriculture to produce trained manpower to serve colonial governments in the tropics
- ✓ The trainees were almost exclusively British
- ✓ ICTA ceased function in 1960



Legacy of ICTA

- ✓ The journal of Tropical Agriculture, which has been published since 1923
- ✓ The introduction of cocoa cultivation in tropical West Africa and beyond from a base in Trinidad (The Cocoa Research Scheme that began in 1929)
- ✓ A reputation for its valuable scientific work of significance on tropical agriculture over its existence
- ✓ When it ceased to operate in 1960, it left behind valuable infrastructure for agricultural training and research
- ✓ The most significant of these are the 860 acres of farm land



Transformation

- ✓ The newly formed Faculty of Agriculture, as part of a regional University system, inherited ICTA's infrastructure and commenced degree level training graduating its first batch of students in 1960
- ✓ The site of the ICTA along with its farms became the foundation of a new university campus
- ✓ The St Augustine Campus of the University of West Indies started operations at the ICTA venue and the development of a new University commenced



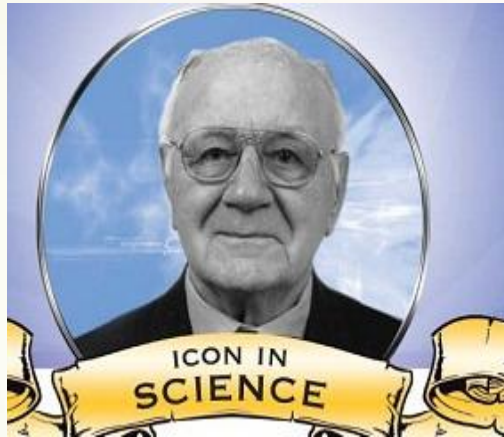
Initial Situation and Struggle to survive

- ✓ Teaching staff included well known names like Purseglove, Ahmad, Cope, Mahadeven
- ✓ Enrolment was low
- ✓ Introduced a special one year pre-science programme for holders of Cambridge O' Level qualification for admission to BSc Agriculture in an attempt to increase enrolment
- ✓ This attempt did not yield the expected outcome.
- ✓ In 1974/75, a special one year pre-agriculture programme was introduced by the faculty
- ✓ This was effective and was ran by the faculty until 1996.

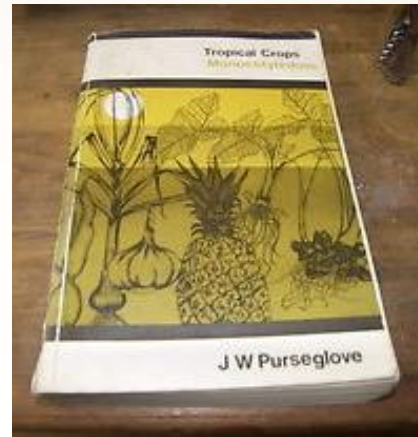
Some of Our Icons



Prof Frederick Hardy



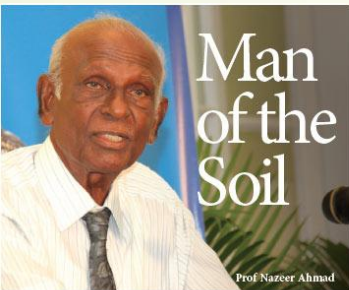
Prof Francis Cope



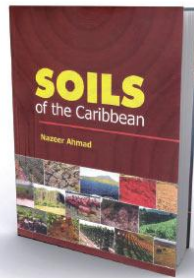
Prof J.W. Purseglove



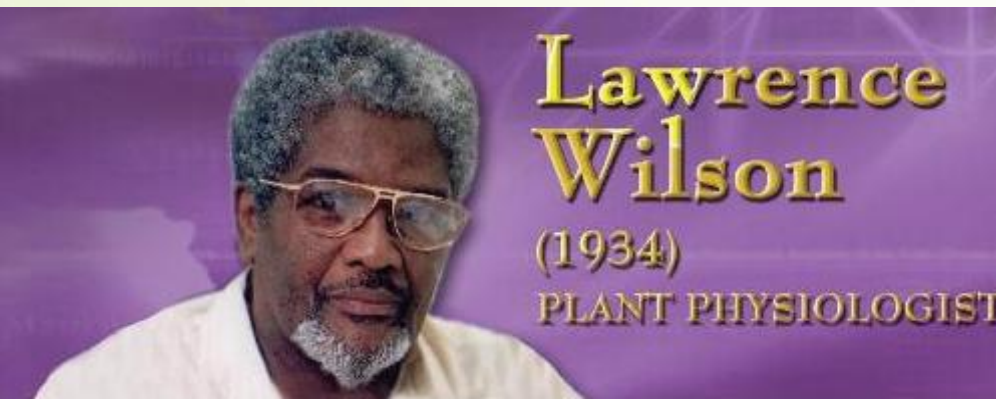
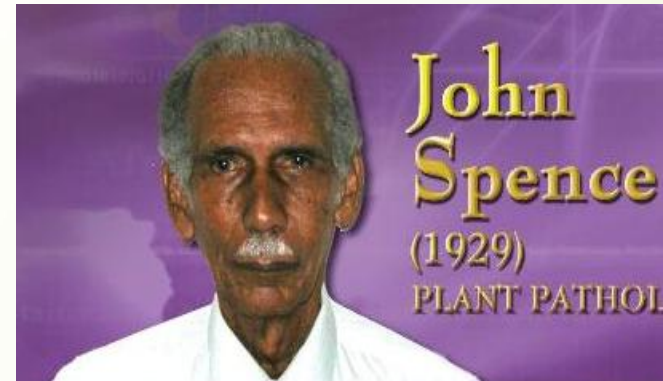
Dr Francis J. Pound



Prof Nazeer Ahmad



Prof H.E Williams



Prof Julian Duncan



Initial Situation and Struggle to Survive

- ✓ By mid-1970, there were six departments
- ✓ The BSc agriculture was based on a generalist curriculum with options in Crops, Livestock, Soils, Agricultural Economics and Agricultural Extension
- ✓ MPhil and PhD programmes in Crop Science, Livestock Science, Soils Science, Agricultural Economics as well as Agricultural Extension were offered as well
- ✓ By early 1980's, a BSc in Agronomy was introduced.
- ✓ Undergraduate diploma as well as MSc programme in Agricultural economics were also offered

Initial Situation and Struggle to Survive



✓ By 1980s

- The farm size had been reduced to 40 acres
- Laboratories were relatively well equipped and maintained
- Technicians were well skilled, experienced and knowledgeable
- There was small but active and vibrant postgraduate student population
- Undergraduate enrolment in BSc Agriculture was stable
- The faculty had outreach offices in Jamaica, the Leeward and Windward Islands



Leading to 1995

- ✓ Average number of BSc graduates was 68 since 1978
- ✓ BSc programmes in Agribusiness Management and Human Ecology have been introduced
- ✓ The Pre-agriculture programme contributed 50% of enrolment as well as 50% of graduates in BSc Agriculture, the rest coming from regional Diploma programmes
- ✓ The BSc agriculture was based on a generalist curriculum with options in Crops, Livestock, Soils, Agricultural Economics and Agricultural Extension
- ✓ Laboratories were undergoing upgrade and new ones being built



Leading to 1995

- ✓ New lecture rooms were under completion
- ✓ Facilities at the farm were in the process of upgrade and a new feed mill had just been commissioned
- ✓ Staff at all levels were funded to receive short-term training
- ✓ The University's governance was undergoing major review
- ✓ Agriculture was a single campus Faculty in the UWI system
- ✓ As part of the governance reform, Agriculture was merged with the Faculty of Natural Science by management edict effective August 1, 1996



Aftermath

- ✓ Outreach offices were closed except in Jamaica
- ✓ Pre-agriculture programme was squashed leading to a fall in enrolment
- ✓ Departments reduced from six to two
- ✓ Agriculture lost the ability to manage its own affairs and as a result its decline ensued
- ✓ The new feed mill was turned off permanently
- ✓ Other development initiatives were frustrated



Aftermath

- ✓ However, campus senior management became increasingly sensitive to the plight of agriculture from 2000/2001
- ✓ During this period, a new undergraduate programme in Environment and natural resource management was introduced
- ✓ Following that a Geography programme was also introduced
- ✓ Enrolments in many of the programmes increased
- ✓ New postgraduate programmes were also introduced
- ✓ Funds for laboratory upgrade and refurbishment were provided by senior management



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Aftermath

- ✓ In 2010, reorganization of the school of agriculture was initiated by the Campus Principal.
- ✓ This role was assigned to a New director, who was the Director of IICA
- ✓ The discussion to reorganize the school within the merged Faculty soon morphed into the imperative of recreating a new Faculty for Agriculture and allied disciplines
- ✓ On August 1, 2012, a new Faculty of Food and Agriculture was established at the St Augustine Campus

Current Focus



- ✓ The Faculty of Food and Agriculture (FFA) is a more diverse entity, adjusting to regional needs to achieve food security
- ✓ The Faculty has three Departments, an allied Centre
 - Department of Food Production
 - Department of Agricultural Economics and Extension
 - Department of Geography
 - Cocoa Research Centre
- ✓ The Faculty also has a 40-acre farm in addition to 200 acres of land under development as an additional university farm
- ✓ The Faculty is working towards further excellence in teaching and research
- ✓ The Faculty is strengthening human and institutional capacity and building strategic linkages

Current Focus



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✓ The Faculty of Food and Agriculture (FFA) runs the following undergraduate programmes

- BSc Agribusiness /Agribusiness Management
- BSc Agricultural Technology / Agriculture
- BSc Tropical Landscaping
- BSc Environment and Natural Resource Management
- BSc Geography /Geography (Special)
- BSc Family and Consumer Sciences
- BSc Foods & Food Service System Management
- BSc Human Nutrition & Dietetics
- BSc Nutritional Sciences

Current Focus



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✓ The Faculty of Food and Agriculture (FFA) runs the postgraduate research based programmes

- MPHIL/PhD Agricultural Economics
- MPHIL/PhD Agricultural Extension
- MPHIL/PhD Crop Science
- MPHIL/PhD Geography
- MPHIL/PhD Horticulture
- MPHIL/PhD Livestock Science
- MPHIL/PhD Soil Science
- MPHIL/PhD Tropical Earth & Environ Science
- MPHIL/PHD Agri- Food Safety and Quality Assurance

Current Focus



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✓ The Faculty of Food and Agriculture (FFA) runs the following taught masters programmes

- MSC Agri Food Safety and Quality Assurance
- MSC Agricultural Economics
- MSC Marketing and Agribusiness
- MSC Tropical Animal Science & Production
- MSC Crop Protection
- DIP Institutional & Community Dietetics & Nutrition



Enrolment

Year	Undergraduate Enrolment		Postgraduate Enrolment	
	2012	2013	2012	2013
Total	928	942	203	215



CURRENT ENVIRONMENT

- ✓ Fourteen CARICOM member states spend US\$4.0 billion on food imports
- ✓ Four Member States – Haiti, Jamaica, T&T and the Bahamas – account for nearly 75% of the region's food imports
- ✓ Unsustainable
- ✓ Needs to be changed





CURRENT ENVIRONMENT

- ✓ Disorganized and antiquated extension system
- ✓ Weakened, underfunded and ill-equipped research units
- ✓ Food production dominated by small holding, resource challenged subsistent farmers
- ✓ Limited application of technology
- ✓ Limited or non-existent investment in Agriculture
- ✓ Poor internal infrastructure
- ✓ High risk of natural disaster
- ✓ Transportation problems





Role of FFA

- ✓ Provide trained agriculturalists in sufficient numbers, at every level and in every area
- ✓ Provide skills and knowledge upgrade through the delivery of short courses (outreach)
- ✓ Produce graduates who can effectively become involved in agriculture
- ✓ Provide research support



Constraints (*Weaknesses*)

- ✓ FFA funded only for training
- ✓ Antiquated research infrastructure
- ✓ Low level technology applied for field operations
- ✓ Insufficient funding for the Faculty since the level of funding depends on enrolment
- ✓ Short-term training not funded internally
- ✓ Buildings maintenance and upkeep challenges
- ✓ Resource challenges for developing the new farm



On-Going Activities-Training

- ✓ A new two-year diploma in Agriculture as a more suitable, effective and efficient alternative to better serve the human resource development needs for the regions.
- ✓ The main features of the diploma curriculum:
 - has a broad science base
 - includes a strong practical component
 - would prepare the participants for a dual track
- ✓ Curriculum to be made available to Tertiary Level Institutions (TLIs) in CARICOM countries currently offering or planning to offer Diploma/Associate degree level training in Agriculture



On-Going Activities-Research

Soils and Environment

- ✓ Emissions of CO₂ and NO₂ from tropical soils
- ✓ Investigation into nutrient status of heavy clay soils in Trinidad
- ✓ Interaction between cadmium uptake by certain crops and soil pH status
- ✓ Composting including identification and characterisation of populations of microbes



On-Going Activities-Research

Animal Science

- Studies into reproductive systems of selected neo-tropical wildlife and evaluation of their potential for captive production
- Studies into suitability of various tropical forages as economical and useful feeds for small ruminants



On-Going Activities-Research

Crops/Horticulture

- ✓ Distribution and uptake pattern of cadmium by selected crops
- ✓ Agronomic studies into some tropical root crops
- ✓ Agronomic and diversity study of Breadfruit
- ✓ Investigation into tropical pests and diseases



Research Agenda

- ✓ *The University sets its research agenda in its strategic plan*
- ✓ *Areas of interest for agriculture are:*
 - *Food and nutritional security*
 - *Biotechnology*
 - *Environment, climate change resilience and sustainable agri-food systems*



Resources for research

Staff and Graduate students research activities are funded through one or more of the following:

- ✓ Departmental budgetary allocations (for routine activities)
- ✓ Research and publication (for special equipment or research material as well as supporting students' foreign University attachments and attendance of international meetings)
- ✓ Externally funded research project funds



Local fresh produce and processed products



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THANK YOU!

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