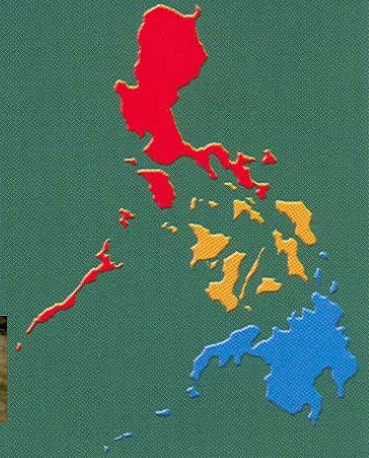




Australian Government
 Australian Centre for
 International Agricultural Research

ACIAR Philippines



ACIAR Country Newsletter

September 2008

Australia Launches Program to Improve Quality of Fruits and Vegetables in Southern Philippines

**Inaugural Meeting
 ACIAR-Philippines Fruits &
 Vegetables Programs**

15-16 July 2008 Marco Polo Hotel Davao

Organised by: ACIAR, PCARRD, NSW DPI and QDPI & F

ACIAR launched on 15-16 July in Davao City two big horticulture programs aimed to improve the domestic profitability and export competitiveness of selected vegetable and fruit value chains in the southern Philippines.

Australian Agency for International Development (AusAID) Counsellor Sam Zappia, representing Australian Ambassador Rod Smith, and Philippine Council for Agriculture, Forestry and Natural Resources and Development (PCARRD) Executive Director Dr Patricio Faylon opened the inaugural meeting.

Representatives from ACIAR's partner organisations were also present at the event, including Rey Velasco, Chancellor, University of the Philippines at Los Baños; Jose Bacusmo, President,

Visayas State University; David Hall from the New South Wales Department of Primary Industries; and Bob Williams from the Queensland Department of Primary Industries and Fisheries.

ACIAR is providing Php285 million (A\$7.5 million) of the two programs' total cost of about Php444 million (A\$11.7 million), the rest of which are contributions from Australian and Philippine collaborators.

The four-year vegetable value chain program, to be managed by the New South Wales Department of Primary Industries, aims to develop integrated soil and crop nutrient management in vegetable crops in the southern

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THE PHILIPPINES HORTICULTURE PROGRAM IS A NEW MODEL FOR ACIAR WHEREIN SYNERGY IS CREATED BY LINKING NOT ONLY THE DIFFERENT RESEARCH PROGRAMS OF THE CENTRE BUT ALSO RESEARCHERS FROM DIFFERENT FIELDS, EXTENSION WORKERS, THE LGUS, FARMERS, AND THE PRIVATE SECTOR.

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IN THE NEWS



Photo: Sookyoung Kim

Mr John Oakeshott (right) joins Mr Sam Zappia who opened the Inaugural Meeting on behalf of the Australian Ambassador, Mr Rod Smith

Australia launches *continued from page 1*

Philippines and Australia.

The vegetable value chain program will also look at developing a cost-effective protected vegetable cropping system, particularly in the high rainfall areas of Leyte and Mindanao, to produce high value crops in the wet season when prices are high. These systems will also be modified for use in Australia.



Photo: Sookyoung Kim

More than 55 key researchers from 27 research providers in Australia and the Philippines are working on the fruits and vegetables programs

The fruit value chain program, on the other hand, will be managed by the Queensland Department of Primary Industries and Fisheries and implemented over the next four years in Leyte, Northern Mindanao/Cagayan de Oro, and Southern Mindanao/Davao. This program aims to improve domestic profitability and export competitiveness of the following fruit crops: mango, papaya, durian and jackfruit.



Photo: Sookyoung Kim

Private sector participation is encouraged in the horticulture program. Dr Chesed Sison of Del Monte Philippines, Inc. presented the papaya component of the fruits program

Philippines Horticulture Program: Components

HORT/2007/066 Enhanced profitability of selected vegetable value chains in the southern Philippines and Australia

Component 1 - Integrated soil and crop nutrient management in vegetable crops in the southern Philippines and Australia

Component 2 - Development of a cost-effective protected vegetable cropping system in the southern Philippines and Australia

Component 3 - Integrated strategies for the management of bacterial wilt and other wilting diseases in Solanaceous crops in the southern Philippines and Australia

Component 4 - Analysis of selected vegetable

value chains in the southern Philippines

Component 5 - Economic impacts of new technologies and policy constraints in the production of vegetables in the Philippines and Australia

Component 6 - Program management

HOR/2007/067 Improved domestic profitability and export competitiveness of selected fruit value chains in the southern Philippines and Australia

Component 1 - Analysis of the constraints to selected tropical fruit (Papaya) supply chains and implementation of improved quality systems for the southern Philippines and Australia

Component 2 - Integrated management of Phytophthora diseases of durian and jackfruit in the southern Philippines

Component 3 - Integrated crop management strategies for productive, profitable and sustainable production of high quality papaya fruit in the southern Philippines and Australia

Component 4 - Improved and sustainable value chains for mango production in the Philippines and Australia

Component 5 - Economic Impacts of New Technologies and Policy Constraints in the Production of Fruit in the Philippines and Australia

Component 6 - Program management



Photo: Sookyoung Kim

The soil management and vegetables crop nutrition team headed by Dr Chris Dorahy had their own workshop session last 17-18 July 2008 in Davao



Some members of the Mango Component also took the opportunity to visit the Samal Island project sites last 18 July 2008

Interagency Planning Meeting for Philippines Horticulture Program

An interagency planning meeting was organised by the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) last 11 September 2008 at the University of Southeastern Philippines (USEP).

The meeting, attended by several heads and representatives of the research organisations involved in the Philippines Horticulture Program, aimed to provide an update on the fruits and value chains programs, define the roles and responsibilities of key players and collaborating partner institutions in the program implementation, and present mechanisms for efficient monitoring and evaluation, financial management and control, and preparation and submission of technical reports.

During the meeting, Dr Patricio Faylon, Executive Director of PCARRD which serves as the Philippines' coordinating body for the program, emphasised that the program will require flexibility from research partners as activities must be tailored to the needs of the fruits and vegetables industries. Dr. Faylon expressed full support to the various project components and called on the other organisation heads to invest on the projects as well.



Source: John Oakeshott

Represented in the meeting were ACIAR, BPI-Davao NCRDC, DA-NOMIARC, Office of the Provincial Agriculturist Office in Davao del Norte and Davao del Sur, PCARRD, UP Los Baños, UP Mindanao, USEP, Visayas State University, and the World Agroforestry Center (ICRAF). SMARRDEC, based at USEP, hosted the meeting

Project briefing *continued*

ing: Planning and Policy, Forest Management Bureau, Protected Areas and Wildlife Bureau, Ecosystems Research and Development Bureau, and DENR Regions 8 and 10. The Philippine Council for Agriculture, Forestry and Natural Resources Research and Development was likewise represented in the meeting.

Project Briefing for DENR Officials Conducted



Several models were developed and presented by the project team to the DENR officials, one of which was a smallholder growth model developed by Professor Jerry Vanclay of The University of Queensland

The ACIAR-funded Project “Enhancing Tree Seedling Supply via Economic and Policy Changes in the Philippines Nursery Sector” conducted a briefing for the officials of the Philippines’ Department of Environment and Natural Resources (DENR) on 5 September 2008 at the Dusit Thani Manila. The objectives, research activities and the likely key implications for policy formulation in the nursery sector were presented by the project team consisting of senior researchers from the University of Queensland and Southern Cross University in Australia, the Visayas State University (VSU), the World Agroforestry Centre (ICRAF) and the Department of Environment and Natural Resources Regions 8 and 10.

The four-year project aims to improve the economic efficiency and policy environment of the Philippines’ Tree Nursery Sector and has sites in Leyte Island and Northern Mindanao. As part of the project, a number of pilot studies involving policy reform will be undertaken and it is expected that the results of the studies will have important implications on a broader national level. It is therefore essential that the project has the support of senior DENR officials and that the implications of the project results for policy development and change are fully communicated to the key decision makers and policy implementers. This briefing session provided an excellent opportunity to obtain inputs from DENR on the proposed research activities and their potential relevance to DENR.

Mr Steve Scott, Deputy Head of Mission of the Australian Embassy representing Ambassador Rod Smith and Dr Caroline Lemerle, Agricultural Systems Management Research Program Manager of ACIAR delivered the keynote messages at the opening program.

The following offices of DENR were represented in the meet-

IN THE NEWS

The Hon Stephen Smith, Minister for Foreign Affairs approved the appointment of Dr Arsenio M. Balisacan and the reappointment of Dr Patricio S. Faylon to the ACIAR Policy Advisory Council (PAC) effective 15 May 2008 to 14 May 2011.

Dr Faylon who is on his third term as member of the Council obtained his Ph.D in Ruminant Nutrition and Physiology/Meat Processing/Forage and Pasture and B.S in Agriculture at the University of the Philippines at Los Baños and his M.S. in Ruminant Nutrition/Production Economics at the University of Illinois, Illinois, USA.

He is the Executive Director of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) from 1999 to present providing quality leadership in managing the Philippine agriculture, forestry, and natural resources R&D system.

Dr Faylon brought his expertise in the actual implementation of international and Southeast Asian projects including the application of participatory smallholder farming and sustainable agriculture and natural resources management. He is likewise recognized for having extensive linkage with international and local organizations, enabling PCARRD to sustain its resource generation activities.

Dr Balisacan is the Director of the Southeast Asian Regional Centre for Graduate Study and Research in Agriculture (SEARCA), the regional center of excellence for agriculture

Two Filipinos at the PAC



Dr Patricio Faylon of PCARRD (left) and Dr Arsenio Balisacan of SEARCA (right) seat on ACIAR's Policy Advisory Council

and rural development of the Southeast Asian Ministers of Education Organization (SEAMEO). He is concurrently a Professor of Economics at the University of the Philippines Diliman.

Prior to his appointment at SEARCA in 2003, Dr Balisacan

served as Agriculture Undersecretary (Deputy Minister) in the Philippine Government.

He has served as adviser and expert in poverty and rural development issues to Government chief executives and legislators and to bilateral and multilateral development institutions, including the World Bank, Asian Development Bank, and various United Nations agencies.

His research interests are on poverty, inequality, agricultural and rural development, globalization, and political economy of policy reforms.

He holds a PhD (Economics) from the University of Hawaii, a Master's degree (Agricultural Economics) from the University of the Philippines Los Baños, and a Bachelor's degree (Agriculture) from the Mariano Marcos State University.

Dr Faylon and Dr Balisacan attended the 28th PAC meeting held in Canberra on 1-6 September 2008.

Staff Changes at PhilRice

The Philippine Rice Research Institute (PhilRice) has announced the appointment of Atty Ronilo A. Beronio as its a new Executive Director effective 31 July 2008. He replaced Dr Leocadio S. Sebastian who has joined the Bioversity International (formerly known as International Plant Genetic Resources Institute) as Asia Pacific Regional Director. He is now based in Malaysia.

Dr Madonna Casimero, Deputy Executive Director for R&D and Project Leader of the recently completed ACIAR project SMCN/2003/011 – *Herbicide use strategies and weed management options in Filipino and Australian cropping*, has joined IRRI in August 2008 as Project Scientist at the Crop and Environmental Science Division.

Felicity Muller is ACIAR's graduate trainee for 2008. The graduate trainee program commenced in 2007 and enables young Australian graduates to become involved in international agricultural research within the broader context of Australia's aid program.

Felicity has been involved in a number of activities at ACIAR including the preparation of the Philippines Horticulture Program document and in the recent survey on John Allwright Fellows. Also, just this July, she had the opportunity to join ACIAR Research Program Manager for Soil Management and Crop Nutrition (SMCN), Dr Gamini Keerthisinghe, in the latter's



Photo: John Oakeshott

Felicity at Work

During a visit to a vegetable farm in Davao

trip to the Philippines. Both participated in the inaugural meeting of the fruits and vegetables programs and attended various meetings and field visits of the different SMCN project teams in Luzon, Visayas, and Mindanao.

Felicity has a Bachelor of Science in agriculture (First Class Honours and University Medal) from the University of Sydney.

IN THE NEWS

Ambassador Rod Smith Visits IRRI AND PCARRD

Ambassador Rod Smith travelled to Los Baños on 14 August to visit the International Rice Research Institute (IRRI) and the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD).

At IRRI, the Ambassador was welcomed by Dr Robert Zeigler (Director General), Dr Achim Dobermann (Deputy Director General for Research), Dr Mike Jackson (Director for Program Planning and Communications), Dr Darshan Brar (Head, Plant Breeding, Genetics and Biotechnology), and Dr Ruairaidh Sackville Hamilton (Head, T.T. Chang Genetic Resources Center).

Dr Zeigler led in giving the Ambassador a briefing of the Institute's activities and concerns as well as a tour of its facilities particularly the International Rice Genebank (IRG) which holds in trust the world's most comprehensive collection of rice genetic resources, more than 110,000 accessions.

IRRI is one of the International Agricultural Research Centres (IARCs) being supported by the Australian Government through ACIAR.

At PCARRD, Dr Patricio Faylon (Executive Director) led the Directorate in welcoming the Ambassador. Dr Faylon likewise made a presentation about PCARRD in the S&T system and updates of the PCARRD-ACIAR collaboration.

PCARRD is one of the original partners of ACIAR in the Philippines, dating back to 1983 and Dr Faylon is a member of the Policy Advisory Council of ACIAR. He is now on his third term in the Council.



Photo: Chris Quintana / IRRI

IRRI Director General Robert Zeigler presented IRRI's nine-point action plan to address the rice crisis and issues on food security



Photo: Chris Quintana / IRRI

Ambassador Rod Smith had the opportunity to tour one of the greenhouse facilities at IRRI



Photo: Cesar Katimbang / PCARRD

Ambassador Rod Smith and senior officials of PCARRD headed by Executive Director Patricio Faylon and Deputy Executive Director Richard Juanillo toasted to the Australia - Philippines cooperation



Photo: Chris Quintana / IRRI

Dr Zeigler shared that during his recent visit to Australia, he solicited support from donors and policy makers - to focus on solutions to the "rice price crisis" in Asia and elsewhere

6th ASAE International Conference Held in Manila

The 6th Asian Society of Agricultural Economists (ASAE) International Conference entitled "The Asian Economic Renaissance: What's in it for Agriculture?" was held on 28-30 August 2008 at the AIM Conference Center, Makati City. It was organised by ASAE in collaboration with the SEARCA and the Philippine Agricultural Economics and Development Association (PAEDA). ACIAR is one of the sponsors of the Conference.

The aim of the conference is to provide a venue for sharing experiences, exchanging perspectives, and discussing emerging issues and challenges of the Asian economic miracle on agriculture and rural development, food security, and poverty reduction.

Paper presenters in the plenary sessions were world renowned experts, including Professor Peter Timmer (Stanford University and Center for Global Development, USA), Professor Keiji Otsuka (Foundation for Advanced Studies on International Development, Japan and former Chair of the IRRI Board of Trustees), Dr Mark Rosegrant (International Food Policy Research Institute), Dr Prabhu Pingali (Bill and Melinda Gates Foundation), Professor James Roumasset (University of Hawaii), Professor Jikun Huang (Center for Chinese Agricultural Policy, Beijing), Dr Shabd Acharya (Institute of Development Studies, India), and Dr. Cristina David (Philippine Institute for Development Studies).

Parallel sessions during the three-day conference covered the following topics: food supply and demand outlook, globalisation and food security, changing agricultural food markets, energy and food, rural renewable energy

development, agricultural biotechnology, and pathways out of rural poverty.

Several papers from three ACIAR projects were presented in various sessions. These were:

1. Impact Assessment Studies
 - Impact Assessment of Sustainable Endoparasite Control for Small Ruminants
 - Impact Assessment of ACIAR's Grain Drying Research in the Philippines
2. Impact of Migration on Roles of Women and Appropriate Technologies in Asian Farming Systems
3. Bridging the Gap Between Seasonal Climate Forecasts and Decision Makers in Agriculture
 - Use of SCF in Philippine rice policy
 - El Nino Southern Oscillation (ENSO) in the Philippines and Australia: Impacts, Forecasts and Management
 - Risk-Efficient Planting Schedules for Corn in Matalom, Leyte, Philippines
 - Using SCF in Corn Production among Smallholder Farmers in Cebu, Philippines.



Dr John Mullen, Principal Research Scientist, New South Wales Department of Primary Industries and Project Leader of Impact Assessment Studies and the Economic Impacts of New

Technologies and Policy Constraints in the Production of Fruits and Vegetables in the Southern Philippines, chaired Day 2 Plenary Session 4: Philippine Agriculture in International Perspective.

Planning Workshop for the Adoption of Integrated Weed Management Held

SMCN/2003/011 - Herbicide use strategies and weed management options in Filipino and Australian cropping conducted a planning workshop for the post project adoption of integrated weed management (IWM) at PhilRice, Muñoz, Nueva Ecija on 3 June 2008 led by Dr Madonna Casimero, then Deputy Executive Director for R&D and Project Leader, PhilRice and Ms Sally Marsh, Senior Research Officer, University of Western Australia.

The objectives of the workshop were to identify strategies to sustain the high level of adoption achieved among farmers in the village close to the project activity, to increase the level of adoption among farmers in Nueva Ecija and Iloilo provinces

who had some exposure to IWM project activities and outcomes, and to develop a strategy and corresponding activities to promote ongoing adoption and development of IWM to address the complex weed problem in direct-seeded areas and thus, contribute to the achievement of higher yields and better income for Filipino farmers.

Six implementation strategies identified by the Nueva Ecija group include: technical briefing with municipal coordinators; introduce IWM as component of PalayCheck; information campaign through farmers' meetings, LGU meetings, radio interviews, field days; conduct Metho-demo for 22 sites where farmers can showcase their own farms during actual farm activities, cross-visit to other sites; weekly site monitoring by agricultural technicians; putting up sign boards and properly labelled plots; and seeding rate for direct seeding: 40 kg/ha.

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PROJECT UPDATES



Valerie (6th from the right, first row standing) at Del Monte Phils.



Hands-on. Fungicide injection on a trunk is tried by one of the workshop participants



Photos: Valerie Justo and Greg Quimio

Phytophthora expert, David Guest, demonstrated during the workshop a simple technique on isolating the causal organism

The research on the integrated management of *Phytophthora* diseases in durian, jackfruit, and papaya is part of the ACIAR Philippines Horticulture Program.

Valerie Justo shares her experiences and lessons learned from the *Phytophthora* workshop in Bukidnon

The training workshop on Integrated Management for *Phytophthora* Diseases of Durian, Jackfruit and Papaya was held on 29 July – 1 August 2008 at the Bungalow House, Del Monte Philippines, Inc., Camp Philips, Bukidnon. There

were 34 participants consisting of researchers from the Visayas State University, Local Government Units of Leyte Province and jackfruit farmers; Davao City National Crops

the inexpensive and readily available selective media such as water agar, carrot agar, and cornmeal. Through the hands-on exercise on isolation, we were able to see the development of symptoms and growth of *Phytophthora* disease both in the agar medium and the papaya fruit.

David also discussed how to deal with *Phytophthora* disease in the field. He emphasized the importance of correct identification of the causal agent, proper understanding of the disease cycle and epidemiology to effectively manage the disease. Integrated management of *Phytophthora* disease in-

Project Training Workshop on Integrated Management for *Phytophthora* Diseases of Durian, Jackfruit and Papaya (ACIAR HORT 2007/067/ 2 – Durian and Jackfruit; ACIAR HORT 2007/067/03 – Papaya)

Research and Development Center and durian farmers; Del Monte papaya researchers and contract growers and researchers from UP Los Baños and the University of Southeastern Philippines. The workshop was conducted by Drs David Guest and Rosalie Daniel.

Participants gathered so much information from the workshop. We were able to see the pests and disease problems and their extent of damage in jackfruit, durian, and papaya and other crops such as cacao and coconut from the presentations made by component leaders from the Visayas State University, Davao City National Crops Research Center, Del Monte Philippines, Inc. and David Guest, respectively. We were also able to understand clearly about *Phytophthora* diseases and how to deal with them in the field. The most useful experience we gained from the workshop was the simple technique of isolating the causal organism (*Phytophthora*) using baiting and

cludes hygiene, sanitation, cultural measures, chemical control, biological control, and resistance. Participants, grouped by commodities, discussed and made plans on the participatory action researches to be conducted as a project activity by each component. The participatory action researches were designed to address the needs and concerns on crop production and protection against pests and diseases particularly *Phytophthora*.

As a participant of the workshop, my goal is to transfer and share the hands-on experiences and knowledge gained in the workshop to improve durian and papaya production by farmers in Mindanao.



Contributed by Ms. Valeriana Justo
National Crop Protection Center
University of the Philippines - Los Baños

PROJECT UPDATES

The Australian Centre
Agricultural Re-
funded

Looking at the ACIAR Smallholder Forestry Research Projects

for International search (ACIAR) has two continuing large projects in the Philippines, the *Tree Farm Project* (ASEM/2003/052 – Improving Financial Returns to Smallholder Tree Farmers in the Philippines) and *The Seedling Enhancement Project* (ASEM/2006/091 – Enhancing Tree Seedling Supply via Economic and Policy Changes in the Philippine Nursery Sector). These projects have been concerned with promoting smallholder forestry by improving the supply of high quality planting materials of wide species base, improving productivity of tree plantations and removing impediments in timber marketing. Both projects have been joint research efforts between The University of Queensland, Southern Cross University, Visayas State University and the Philippine Department of Environment and Natural Resources.

The *Tree Farm Project* has commenced in 2004 and will finish by the end of 2008. Key outputs of this project include the development of the *Primer on Tree Registration, Harvesting, Transport and Marketing Policies on Private Land*, a manual that was envisaged to improve the awareness and understanding of the policies, rules and regulations on tree farming on private land by concerned stakeholders, particularly the smallholders so as to encourage them to register their trees. A survey on timber supply chain in the islands of Leyte, Samar, Biliran and Cebu has been undertaken to investigate the market requirements of timber in terms of tree species, type, volume and the quality of timber required by timber processors. The market potential of trees from existing tree farms in Leyte province has been assessed in terms of four related activities, namely: (i) an assessment of timber quality and



Primer extension booklet produced in English, Cebuano and Waray

likely yield by product class, (ii) further financial analysis including on mixed-species agroforestry systems (mixtures of trees and crops and mixtures of trees with non-wood products including abaca), (iii) modeling of timber supply and demand, and (iv) an investigation of the social and economic factors that affect the management of plantations and the types of outputs produced.

Extension program as part of the *Tree Farm Project* has been developed and trialed which aim to test mechanisms to improve the silviculture skills of farmers. Extension activities include the 'bus tour', which took smallholder tree farmers to demonstration sites in order to deliver key information about silviculture. A whiteboard designed to link buyer and sellers of timber, which reflects the smallholders and the woodlots (species, area, location and plot registration number) they were growing, details about timber species that processors will purchase and the purchase prices was installed outside a DENR office. A manual on seedling production and tree plantation establishment was also developed.

The *Seedling Enhancement Project* started in 2007 and will operate until 2010. The focus of the initial activities of this project was to examine the respective roles and effectiveness of the tree nursery sector. The nursery industry and policy environment in the Philippines has been examined through a survey of nursery operators in Leyte and Mindanao. Preliminary data analysis has been undertaken and published in a conference paper. Project researchers have also commenced an economic evaluation of the private sector nurseries. Data from the survey of nursery operators and managers is being used to develop benchmarks of current performance and to identify improvements in current business practices.

A comparative analysis of seedling nursery systems has been undertaken with other SE Asian countries, including both a

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Photos: ACIAR Smallholder Forestry Research Team

Dr Nestor Gregorio of the Visayas State University has been an active member of ACIAR's Smallholder Forestry Research Projects. He and the rest of the team have developed various models from numerous sets of data they have collected in the Philippines. They have also put in significant effort in the extensive dissemination of information to stakeholders

PROJECT UPDATES

SCFs in monetary terms: How much is their worth to farmers?

In Isabela: marginal, individually but significant, on the whole

As part of the ACIAR-funded project “Bridging the gap between seasonal climate forecasts (SCFs) and decisionmakers in agriculture,” a simulation study was carried out in selected sites in the province of Isabela, with the aim of developing an approach to valuing the contribution of SCFs in decisionmaking under conditions of climate uncertainty.

The study was conducted in Angadanan and Echague, the top two corn-producing municipalities of Isabela province. From the two municipalities, three barangays were chosen based on their land types—river/flood plain, broad plain, and hilly/rolling. The agroclimatic condition, which mainly determines the timing and number of cropping a rainfed farmer can have in a year, is dry to moist for Echague and moist for Angadanan. The traditional corn planting seasons in Echague and Angadanan are April to June for the wet season cropping and October to December for the dry season cropping. Each cropping season lasts approximately 120 days or 4 months.

Historic climatic data (1951–2006) of Tuguegarao,¹ which include daily values of solar radiation (MJ/m²-day), daily maximum and minimum air temperature (C), and daily rainfall (mm), were collected from PAGASA while crop management practices of farmers were gathered using the Decision Support System for Agrotechnology Transfer (DSSAT) program. The DSSAT program is an approach developed for the purpose of helping provide a more precise SCF and simulates outcomes of corn yield.

Said program allows the simulation of different corn varieties and cropping systems, targeting issues such as climate variability, crop rotations, and management alternatives in generating corn yields. In terms of corn varieties, the only local hybrid variety available in the DSSAT program is the Pioneer corn variety. Thus, even if the survey conducted by the project team did not actually use such variety, corn yields for the areas using the DSSAT were simulated based on this variety for both the wet and dry seasons.

Yields were also simulated under different climate variability conditions, viz, for El Niño (poor year), La Niña (good year), and Neutral (neutral year) scenarios. The amount of rainfall is an important variable that greatly influences corn production. In view of this, having an accurate forecast is potentially of value to the farmers inasmuch as it could help them decide

Table 1. Expected gross margin (PhP/ha/season) of Pioneer corn variety at various climatic variabilities during wet and dry season

Season/Climate	Good	Neutral	Poor
Wet	31,378	26,903	26,704
Dry	29,067	29,626	28,958

whether to grow their corn now or to delay it for the next cropping opportunity. Meanwhile, the simulated long-term corn yields generated from the DSSAT were then used to calculate farmers’ income. Income was calculated by multiplying the simulated corn yield by the price of corn, a variable gathered from the responses during the interview process.

For the study, with the use of weather data from Tuguegarao, corn yield was simulated using DSSAT for the period 1950 to 2006. The crop parameters used were within the observed values reported in the survey, implying that crop growth and development were simulated realistically. Hence, the simulation provides confidence that the DSSAT is able to capture the sensitivity of corn productivity to climate over a long time series.

To be able to evaluate the monetary value of SCF information, the expected gross margin of each Pioneer corn variety was calculated at various climatic conditions (Table 1). Corn is very susceptible to climate variations due to the plant’s requirement for water for cell elongation and its inability to delay vegetative growth. Therefore, there is always the danger of yield loss regardless of the timing of planting. The amount of yield loss that occurs during climate variations depends on what growth stage the corn is in and how severe the climate conditions may become. Highest yields will be obtained only where environmental conditions are favorable at all stages of growth.

Based on the results, it was found that during the wet season, the good years (La Niña) yielded PhP31,378/ha on average; more than the yield for neutral years at PhP26,903/ha. On the other hand, the neutral years yielded more (PhP29,626/ha) than the good years (PhP29,067/ha) during the dry season. Hence, the Pioneer variety is estimated to have higher gross margin during the dry season across different climatic variabilities.

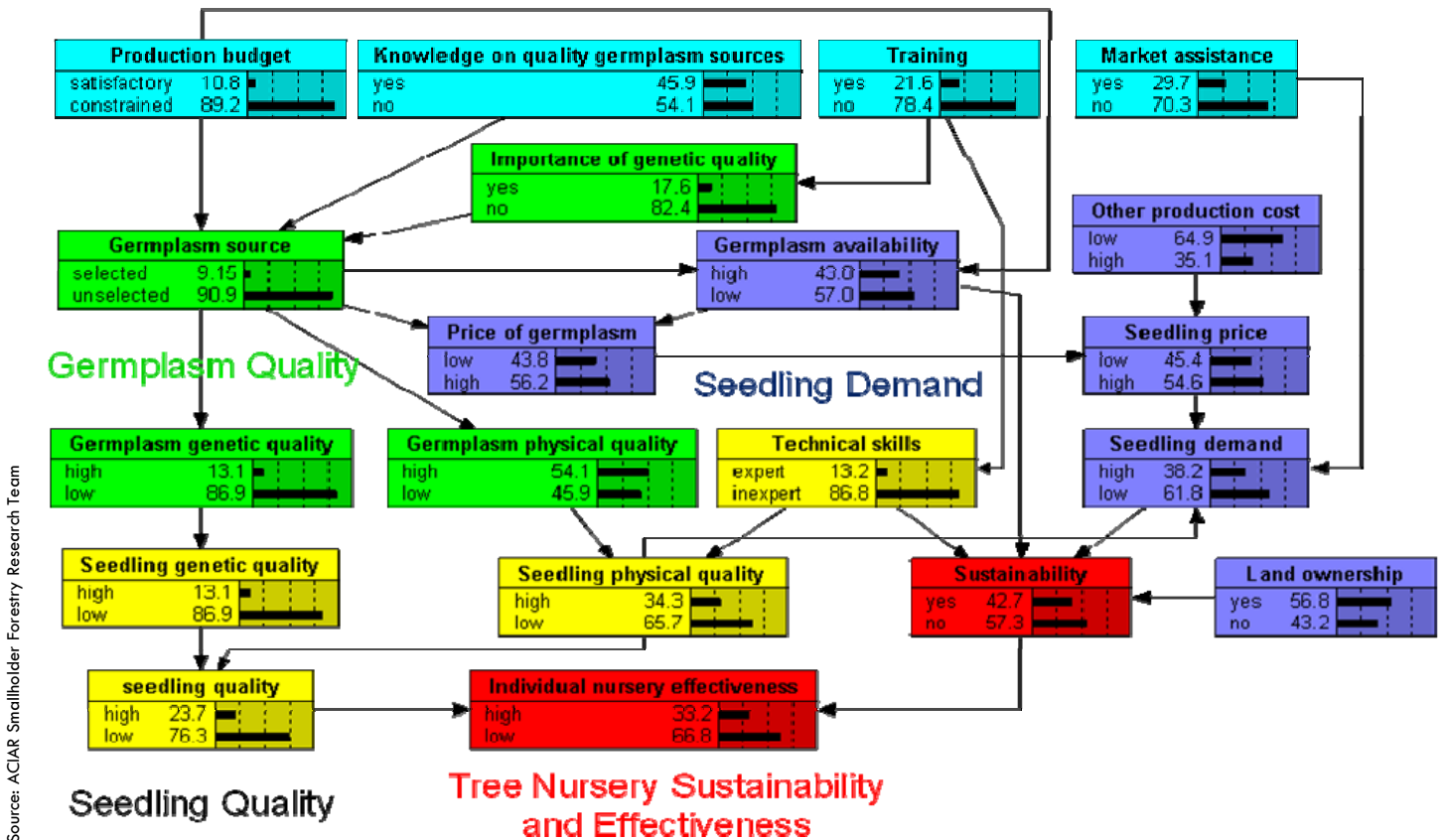
The value of SCF information can be computed as the difference between the gross margins of those *with* and *without* SCF scenarios. Chances of farmers who were not using SCF to attain higher gross margin might be lower than those who were using the forecast. Such value difference calculated was found to be PhP221/ha/season. While this figure could be considered very marginal for the individual subsistence farmers whose land-holdings average only about 3.56 hectares, translating this amount to the total land area planted to corn in the Philippines

¹ Unfortunately, solar radiation data from Isabela are unavailable. The nearest weather station, with similar climatic conditions as Isabela, is in Tuguegarao.

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PROJECT UPDATES

Looking at the ACIAR Smallholder *continued from page 8*



The figure shows the policy assessment model developed by the project team for the private tree nursery sector in Leyte, the Philippines. The model can be used to assess the potential impact of policy interventions on the sustainability and effectiveness of tree nurseries

desktop study and visits to Indonesia, Vietnam and Thailand to talk with nursery managers and foresters about their nursery practices and systems. The results of this investigation have helped inform other activities in the project. Journal papers based on this analysis have been published in a special issue of *Small-scale Forestry*.

Project researchers have developed a policy assessment model based on a Bayesian Belief Network (BBN) used to identify a series of policy options to be implemented by the project at the local level in conjunction with DENR and the World Agroforestry Centre. The model has undergone extensive validation and testing through workshops with various stakeholders.

Work has also commenced on testing business strategies to enhance the economic viability of tree seedling nurseries. Extension materials on best nursery practices are being developed and will soon be distributed to nursery operators and extension workers. Training of nursery operators have been carried out to enhance their skills in seedling production and

improve their knowledge about the importance of seedling quality. Further training and assessments of the effectiveness of the training will be carried out over the next year. Collaboration with four pilot municipalities in Leyte has been established and a Memoranda of Agreement between the project and the mayors of these municipalities have been signed. The agreements emphasize the regulation of the seedling quality from the communities of these municipalities. Controlling of seedling quality will be the responsibility of the Local Government Unit, with technical support from the project. The project has started to draft the nursery accreditation and certification procedure, and develop criteria for certifying nurseries, which require them to apply the best practice technologies. Certified nurseries are expected to attract more seedling sales and higher prices.



Contributed by **Dr. Nestor Gregorio**
College of Forestry and Natural Resources
Visayas State University

PROJECT UPDATES

SCF in monetary *continued from page 9*

(2.6 million hectares as of 2007) would, however, redound to a substantial amount and thereupon be of great significance for Philippine agriculture. Because of this, it would be of critical importance for decisionmakers/policymakers in agriculture to greatly improve the access of farmers to SCF information

as well as to make such information affordable and efficiently available to corn farmers.



Katrina G. Gonzales
SCF Project Updates Vol. IV No. 2 (June 2008)

In Cebu: use of SCF gives higher income to corn farmers

Recently, a survey conducted by the Visayas State University in connection with the ACIAR-funded project “Bridging the gap between seasonal climate forecasts (SCFs) and decision-makers in agriculture” shows that almost all of the SCF-user respondents considered climate in their production decisions. In fact, they considered SCF as having a medium to high significance in terms of value or contribution to their farming enterprise. The main reason cited by farmers is that climate plays a major role in corn production.

The study also indicates that both users and nonusers of SCF received adequate information about weather/climate. However, a higher proportion of SCF-user respondents reported receiving more accurate information about climate.

Using SCF innovation in corn production has indeed provided

monetary benefits to corn farmers in Cebu. The study shows that the mean gross margin during the first season for SCF users was about PhP4,290/ha. This is comparatively higher than the mean gross margin of nonusers of SCF (PhP3,080/ha). Computed as the difference of gross margin between users and nonusers of SCF, the economic value of using SCF was found to be PhP1,210/ha. For the second cropping, the mean gross margin obtained by SCF users was about PhP7,867/ha while nonusers of SCF realized only PhP3,080/ha, which indicates that the economic value of using SCF in corn production decision is about PhP4,787/ha. Findings of this study imply that there is economic incentive for farmers to use farming innovation such as SCF in corn production.



Eva Monte and Canesio Predo
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Yes, seasonal climate forecast (SCF) is popular among corn farmers in Bukidnon. This is according to a recent study on “Corn farmers’ decisionmaking based on probabilistic climate forecast” conducted by a team of researchers from the Visayas State University (VSU) based on the results of focus group discussions among farmers from selected sites in the province of Bukidnon in Mindanao. The study found that farmers are aware of SCF, their sources of which included television, radio, and the PAGASA station in Malaybalay City. At the same time, it was learned that PAGASA and the City Agriculture Office often hold seminars and workshops on the SCF.

Notwithstanding this, however, “farmers depend more on their indigenous climate forecasting than on SCF,” the study reported. For one, the study found that farmers think of climate forecasts as deterministic rather than probabilistic.

SCF is popular in Bukidnon but...

Thereupon, if the forecasts given do not jibe with what climatic condition actually takes place, then farmers tend to lose confidence in the forecasts. They also said that climate forecasts are hard to understand. Thus, they suggested that said forecasts use simple words and be downscaled to their locality.

The decisionmaking exercises utilizing hypothetical forecasts showed that under unfavourable climate forecasts, farmers would apply coping mechanisms like growing shortseason crops, backyard gardening, raising animals, and finding a job in sugarcane plantations and industries in Malaybalay City. Generally, farmers’ decisions were aimed to maximize profits and minimize cost.



**Gian Carlo Borines, Rotacio Gravoso,
Jude Nonie Sales, and Ulderico Alviola**
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Planning workshop *continued from page 6*

The Iloilo group on the other hand came up with the following strategies: work with irrigators’ associations; advocacy to the provincial and municipal executives and legislative offices; conduct of trainings (FFS on PalayCheck, cross visits, field days and field demos); tap existing farmer cooperators as

resource persons during farmer-led trainings; involve the information division of DA Regional Office and community; information centres in dissemination of information on IWM; and forging of a Memorandum of Agreement by LGUs, PhilRice, DA-WESVIARC, NIA and Irrigators’ Associations.

IN FOCUS



JOHN OAKESHOTT

John Oakeshott joined ACIAR in April 2008 as the Philippines Horticulture Manager. He plays a critical role in the implementation of the new fruits and vegetables program as he is expected to liaise with research and industry program partners, foster new partnerships with farmer groups and industry, coordinate and integrate the different program components, assist in technology transfer and education activities, and assist in the monitoring and evaluation of the program. A big challenge indeed, but John came prepared.

John has a degree in agriculture from Sydney University and an MBA from the University of New England. Prior to his appointment at ACIAR, he was the Senior Research Manager for New Rural Industries at the Rural Industries R&D Corporation (RIRDC). John also served as an industry services manager and extension agronomist at Horticulture Australia Limited. He also lived and worked in Japan, Korea,

and Qatar for a total of 7 years, on agricultural market research and teaching projects. As he stepped into his new role in the fruits and vegetables programs, John brought with him a good understanding of the roles of both the private and public sectors in the delivery of agricultural knowledge and services having worked in both sectors in the past. He also has experience in developing communication materials in Asian countries which can prove useful to the program in the long run.

John is joined by his wife, Sookyoung, in their home for the next 3 years — Davao City, Philippines.

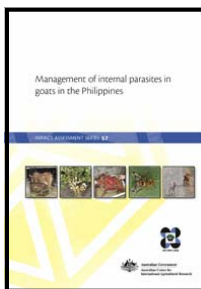
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ACIAR BOOKSHELF



Management of internal parasites in goats in the Philippines

Author(s): N.D. Montes, N.R. Zapata Jr, A.M.P. Alo and J.D. Mullen

ISBN: 978 1

921531 08 8 (print) 978 1 921531 01 1 (online) ISSN 1832-1879

Publication number: IAS57

Summary: Goats are an important source of income for smallholders in the Philippines and were shown to be sustaining significant losses from internal parasites. In collaboration with Philippine and international organisations, ACIAR funded a program which developed a management package which effectively controlled internal parasites and enhanced goat productivity. The study found, via an extensive survey of farmers and local extension groups, that

there has been substantial adoption in the target regions. This is continuing to expand due to a strong commitment of further resources from local extension groups. The outcome has been significant impact with the estimated net present value of welfare gains of \$66 million, a benefit to cost ratio of 10:1 and an internal rate of return of 25 per cent. At this stage there has been no transfer of the outcomes to other regions in the Philippines but given the success in the two regions of focus, this is likely. If this happens the returns will be much higher. This IAS only looked at the Philippine component of a larger effort. The full project covered several countries in Southeast Asia, it is expected that similar results will be found in all.

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Impact of migration and off-farm employment on roles of women and appropriate technologies in Asian and Australian mixed farming systems

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ISBN: 978 1 921531 15 6

Publication number: FR2008-42

Publication date: August 2008

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