

## Another 1000 graduates from USP



*The Vice Chancellor of USP  
Professor Rajesh Chandra  
Photo: www.usp.ac.fj*

In his official address at the University of the South Pacific's April Graduation, the Vice Chancellor Professor Rajesh Chandra foremost on behalf also of the Deputy Chair of the Council, acknowledged the presence of the distinguished dignitaries.

They included the President of the Republic of Nauru and Chancellor of the University of the South Pacific, His Excellency Honorable Marcus Stephen; Ministers of the Government of Fiji; their Excellencies and Members of the Diplomatic Corps; The Deputy Chair of USP Council, Mr. Ikkal Jannif; Heads of International and Regional Organizations; Permanent Secretaries and Heads of Statutory Organizations. He welcomed the Members of Council and Senate; Deputy Vice-Chancellor and other members of the Senior Management Team. He also noted the presence of Sponsors for prizes and awards, USP alumni, staff, graduands; parents; partners and spouses.

Professor Chandra noted that this day was a special day being the first graduation ceremony for 2010.

"Seeing the graduates here this morning is a proud moment for many of us in different ways. It is a happy occasion for the graduates because they are being rewarded for the completion of their studies; it is a proud moment for the parents and guardians because their dreams of giving their sons and daughters education has finally

come to fruition; and its is an achievement for the University because it has been successful in providing higher education to students of the region who will now step forward in life to build their respective career paths—some will even go on to become leaders of their respective communities and countries".

Before he spoke specifically about the graduates of this day, he shared some good news about the University within the last 6 to 12 months.

"The financial position of the University continues to improve strongly, with better year end results for 2009 compared with 2008. The strong financial results have been accompanied by a considerable strengthening of financial controls. The University is determined to continue its quest for greater cost-effectiveness while at the same time improving quality."

"The University's Triennial Submission 2010-2012 to the University Grants Committee was prepared and accepted by the USP Regional Ministers of Finance, which included a 2% reduction in the 2010 levels of member governments' funding. Restoration of financial confidence and winning back the confidence of the stakeholders have been a major boost for the University."

"We are grateful to the many donor partners who have continued to contribute to the University's work. The Governments of Japan, Australia, New Zealand and the European Union (EU) continue to be the largest donors. Other donors and development partners have also shown interest in supporting and partnering with the University.

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# The changing Pacific threatens food security

IRETA Staff

The Pacific region has gone a long way from being traditional to becoming modernized societies. They have changed so much from untouched natural paradises to towns with high rise infrastructures, lights, tap water and vehicles, for a short description of our islands nowadays.

Most significantly, their diets had also changed from locally produced farm food to imported food that, are costly and nutritionally unreliable.

Dr Vili Fuavao, Subregional Representative for the Food and Agriculture Organization (FAO) noted these changes in the recently held Pacific Food Summit in Vanuatu late this month.

“Changing circumstances, including urbanisation, increased farm commercialisation, a dominating reliance on food imports, globalisation and climate change are threatening the capacity of local agriculture and fishery systems to produce a sustainable supply of nutritious food for local populations,” said Dr Fuavao.

Population growth of above 2% in some Pacific island countries, places pressure on agricultural land and increases demands on limited water resources from urban sectors. Intensified cropping, land degradation and over fishing make the sustainable management of the natural resource base critical to food security and agricultural productivity.

“We need dramatic change. Long-term food security requires establishing food supply systems that can mitigate risk and cope with stress. There is a need to create more resilient food systems, capable of adapting to shifts at local and regional levels and absorb disturbances resulting from the volatility of the global economic market and environmental changes,” continues Dr Fuavao.

Looking to the future, the integration of agricultural, food processing, value addition and non-agricultural business activities is essential in order to enhance food security. Conserving fish stocks and investing in sustainable management of our oceans is critical.

“And the longer we leave taking strong action to create sustainable food supplies and supportive agriculture, the harder and more complex it becomes to fix it. Ultimately, that makes it harder to feed our people. None of us wants that,” states Dr Fuavao.

If people don't have access to safe, healthy, nutritious food, health and development outcomes are dramatically negatively impacted. Increasing sustainable agricultural productivity in the face of steadily more difficult environmental conditions is critical. Meeting current food needs without compromising the rights of future generations involves multisectoral policies and actions that target the most vulnerable.

For more information visit the [www.foodsecurepacific.org](http://www.foodsecurepacific.org)



*Dr Vili Fuavao and Dr Jimmie Rodgers of SPC (Photo - [www.spc.int](http://www.spc.int))*

## Presenting their research proposals

IRETA Staff

Twenty five students taking up the Research Project Management Skills course at the School of Agriculture and Food Technology (SAFT) presented to their Supervisors and other students progress of their research projects.

“This course is designed to provide students with understanding of theoretical and applied aspects of agricultural research methods so that they are able to choose appropriate research methods and analytical tools for managing research projects for specific type of research problems.”

“Students are required (individually or in a team) to conduct research experiments/field surveys on specific topics of their choice in any particular sub-discipline of agriculture, and then analyse the data, interpret results, draw conclusions and communicate them in project reports and seminars,” according to Course Coordinator Ioane Malaki

This year, the focus of these projects vary from kava, broiler production, sugarcane, pigs, egg production, Tiavi (a village in Samoa) soil, quality of education at SAFT, taro and head cabbage.

# Another 1000 graduates from USP

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Recently, the Government of India has given a grant through ADB and we are hoping that this relationship with India and ADB will develop further in the near future. And the Government of South Korea is expected to finalize a package of assistance soon.”

“We are also very pleased that Australia has signed a new, 3 year Australia-USP Partnership Framework, the first to be signed with any regional organization. This agreement which is aligned to our Strategic Plan, provides for significant increase in funding over the next three years, as well as greater flexibility for USP.

I would like to thank the Government of Australia very much for its strong support and confidence in USP.”

“The other recent notable achievement for the University is the USP Strategic Plan 2010-2012. Our Member Governments and donors alike have commended the University on the Strategic Plan. With strategies in place for striving for relevance, quality and sustainability backed by a healthy financial situation, the University is confident that in 2010 and beyond it will better its results and move forward with greater confidence and purpose. This will contribute to a solid future that USP, member governments and other stakeholders expect and deserve.”

“I am also pleased to inform you that the construction of the state of art Japan–Pacific ICT Centre funded by the Government of Japan through its bilateral aid to the Government of Fiji, has now been completed and the keys will be handed to us on Monday. The dates for the official opening will be announced soon.”

“I am very pleased that after declining annually for the last few years, enrolment at USP increased this year moderately by 7 percent in terms of headcount and 3 percent in terms of Full-time Equivalent Students. This is a very welcome development as it indicates continued demand for high quality internationally recognized programmes of USP.”

“The University has developed a Master plan through extensive consultation for the Laucala Campus on what the campus should look and feel like to the year 2030. The Report on the The Report on the Master Plan, which will be considered at the USP Council meeting in May 2010, has very good plans for future development of the Laucala campus. There are also plans for other campuses as well.”

“We have been working on improving all areas of USP’s Campus with special focus on campus accommodation facilities as well as computing, learning and sporting facilities. A stronger focus on students is the hall-mark of the new Strategic Plan.”

But the graduation saw a total of **1210** students receiving degrees, diplomas and certificates today. Out of the total there is: **1** PhD, **126** Masters, **158** Postgraduate Diploma, and **56** Post-graduate Certificate level graduates. At the undergraduate level, there are **787** degree, **68** Diploma and **14** Certificate level graduates. It is pleasing to note that **341** of today’s graduates, or 28% are at the postgraduate levels. It is also pleasing to note that for the first semester this year there has been an increase in postgraduate enrolments.

Professor Chandra reiterated that “the graduation ceremony and the degrees, diplomas and certificates you receive today is an announcement to the world that you are ready to go ahead to the next steps in your lives.

You have passed through a rigorous learning process. It may have been easier for some of you than for others.

But for all of you, it is an accomplishment that your parents, families, and friends can be proud of. You have completed an important phase of your education.

Use it well and challenge yourselves to progress further.”

“My advice to you all is what the great Martin Luther King, Jr said *“The ultimate measure of a man (woman) is not where he stands in moments of comfort, but where he stands at times of challenge and controversy”*. So be bold and break new ground. Be a trail blazer rather than a follower.

# Urban farming possible - even with the little space we have

IRETA Staff

**I**n the urban areas we think we have no land to grow food. We do not know, that around our own houses there is enough space, and with appropriate farming techniques, we can grow and be sufficient in food supply.

We see the possibility of urban gardening in one farm at Vaigaga. On a quarter acre, the only other space not planted is the location for the family home. There is almost no space for a car park.



The front porch of the house holds a 5 gully hydroponics system with four sections of cabbage, parsley, basil and lettuce. The place is surrounded by buckets, drums, pots, coke bottles, polybags and empty can drinks growing lettuce, mint, coriander, tomatoes, okra, taro, beans, cucumber, watermelon and many others.

This garden also demonstrates how easy and fun urban gardening is. The farm uses water from the laundry or the kitchen sink to water the plants. Because of the soap contained in that water it keeps away the little insects like thrips, millibugs, mites. Urban farming is a concept that needs emphasizing and practical implementation to ensure that the urban settlement can depend on their backyards and front yards for food supply.

## Capitalising on crops and livestock

IRETA Staff

**S**elling off the first harvest of vegetables from the USP-IRETA farm is a little step towards establishing the farm as a self funded operation.

Egg plants, tomatoes and capsicum are the first of the various crops that have fruited. Sweet corn, pineapple, watermelon are other crops soon to be harvested.

These vegetables are not harvested in large quantities but IRETA is taking the challenge to expand production slowly and maintain productivity.

IRETA's commitment to strengthen the commercialisation of farm products has resulted in the initiative to clear some available land suitable for crop planting. More needs to be done. Some pasture areas are cleared of large trees and paddock and maintained for the livestock while other areas are being cleared to grow more pasture. Water supply has also been provided for the crop planting areas.

IRETA is also capitalising on livestock. IRETA is also capitalising on livestock by increasing the number of layers and introducing the broilers. At present eggs, meat chicken and pigs are being sold.

For more information about the USP-IRETA Farm write to: [uspireta@samoa.usp.ac.fj](mailto:uspireta@samoa.usp.ac.fj)



*Eggplants  
(Photo-M.Umar)*



*Broiler chicken raised in a clean environment  
(Photo-M.Umar)*

# SFA ask research experts to share knowledge

## IRETA Staff

Participants of the Samoa Farmers Association workshop on marketing and post harvest handling revealed that research results are not reaching them sufficiently.

IRETA's presentation was the opportunity for the members present on this day to learn about IRETA and related SAFT services. The presentation by the Director of IRETA, emphasised the Research, Extension and Training activities of the Institute. IRETA's research is pinned on the need to strengthen food security, explore income generation activities and find climate change adaptive food systems. The Extension part is when results from those research are documented, simplified and delivered to the extension officers, farmers and other stakeholders. In training, the focus is to improve the knowledge and skills of farmers and staff in agricultural ministries.

However the SFA members were more interested in research. In fact research needs to be driven along the lines of successful production and sustainable productivity.

During IRETA's presentation, the SFA members were given a brief introduction to one farming method that is currently under research by IRETA and the School of Agriculture and Food Technology (SAFT). This is the rapid multiplication of taro planting material. A simple technique is to use a taro corm (the part we eat) to produce or plant several suckers within a short period. Cut the top, apply ash on the cut surface, let it dry for a few hours, then plant. Use a polybag (PB5) filled halfway with soil already mixed with compost or chicken manure. After two months, it can produce about 5 suckers with an average of six leaves per sucker. You can use the suckers to plant more taro. From 10 polybags, you can get 50-60 suckers and lots of taro leaves for luau.



*One corm with several suckers  
(Photo-M.Umar)*



*After a few months the suckers are multiplying in leaves and stems  
(Photo-M.Umar)*

# Learning the basics of Excel

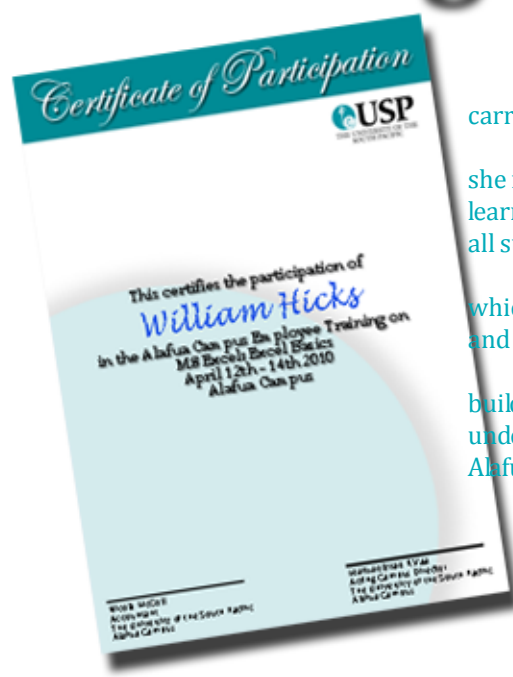
Learning the basics of Microsoft Excel was fun and worthy for some staff members of Alafua Campus. As beginners and for most who knew nothing about Excel found the start difficult but as the training carried on, most of them learned quickly and mastered the basics of using Excel.

The training was conducted by the Alafua Campus Accountant Nicola McColl she noted that all the "attendees actively participated and showed a willingness to learn. A good understanding of skills & techniques taught was demonstrated with all successfully completing the assessment qualifying learning."

The objective of this training was to empower the staff of Alafua Campus which leads also to improving academic and general services offered for students and its clients.

According to McColl this training is aimed at strengthening, improving and building on existing skills and knowledge with an aim of developing new skills and understanding. She added that it is one of the many trainings planned to empower Alafua Staff depending on their needs of areas that has to be strengthen.

Acting Campus Director Leatuaolevao Ruby Vaa also congratulated the participants and noted that completing this training is an achievement to be included in their personal Curriculum Vitae regarding their professional developments.



# PNG women target bee farming

Soldier Buruka, ALO PNG - DAL

A women leader has called for more government assistance to promote women's involvement in bee farming. Maggie Seko, president of the Eastern Highlands Women in Agriculture Association, also appealed for more awareness, training and extension support to encourage women to take up bee farming. Mrs Seko told the national honey bee workshop in Goroka recently that many women were interested and excited about bee farming because it did not require much land or space, meaning bee hives can be set up in the backyard. It was not that labour-intensive but required proper management and training for women to become successful bee farmers.

Mrs Seko was among a dozen of women who participated in the two-day workshop, the first ever for the honey bee industry. She was happy that one of the workshop recommendations was for more efforts in promoting women in bee farming.

"My association, representing women in agriculture, is pleased with the outcome of the honey bee workshop which has included women in the participatory process and in the revival of the

industry," said Mrs Seko.

"More women are showing interest in bee farming and are preparing to be actively involved but they need more awareness and training, regular extension visit, credit support and other assistance."

Mrs Seko urged that women be given special preference in bee farming and that more women should be trained to become expert bee farmers so that they can train the women themselves.

Highlands Farmers and Settlers Association Secretary, Wilson Thompson, and Eastern Highlands Beekeepers Association Chairman, Jonah Buka, thanked the government for initiating the workshop and stressed that more funding, technical assistance, training and awareness is needed to boost the industry. They also called on the government to provide more funding and resources to its agencies that will play an important role in promoting the honey bee industry.

A leading farmer who buys honey and also trains farmers in agri-business management, Stephen Rere, urged bee farmers to learn how to manage their funds wisely. He said farmers must be more self-reliant because they had the land and resources and should raise their own capital instead of waiting for government handouts. He urged them to do one thing at a time.

# Stimulus package to replant coconut, cocoa and coffee

Samoa Ministry of Agriculture

A Stimulus Package to replant coconut, cocoa and coffee has been planned by the government. The Ministry of Agriculture and Fisheries have set up a mixed-farming programme which involves 1,000 acres of land.

The programme includes the planting together of 50 coconut trees, 750 cocoa and 250 coffee trees in a selected area of land.

An estimated 500 farmers are expected to register for the programme.

The programme will start during the financial year 2010/2011 and will run for four years at an estimated cost of \$4.5 million.

The Government has initiated this programme to revive and develop the replanting of coconut, cocoa and coffee trees and to attract interest from farmers.

A small reward will be offered.

Registrations for interested farmers had started this month until May.

The Ministry of Agriculture and Fisheries will monitor the progress of the programme with the aim that 500 farmers will harvest the fruits of their crops on the fourth year.



# Improved climbing beans offer lifeline to African farmers

Farmers in Rwanda will soon benefit from new climbing bean varieties that promise significantly higher yields, and which could challenge the dominance of bush beans in the country.

Extensive trials by CIAT and the Pan-Africa Bean Research Alliance (PABRA) have shown that the new varieties can quadruple the yields compared to the more commonly-grown bush beans. The varieties grow in poor soils and are well-suited to warmer, mid-altitude regions. The different varieties of improved 'climbers' are also less vulnerable to certain diseases, including root rot, ascochyta blight, and bean common mosaic virus.

Beans are a vital subsistence crop in many parts of Africa, as well as an important income-earner for farmers. But rapid population growth means there is a pressing need for farmers to intensify food production. CIAT, and its research partners, are now promoting a switch to the cultivation of hardier climbing beans as one possible solution.

The new climbing bean seeds were officially released to farmers in Rwanda by CIAT research partner the Institut des Sciences Agronomiques du Rwanda (ISAR) in January. Improved varieties have already

gained popularity and are now increasingly grown in Eastern and Central Africa, including Burundi, South West Uganda, Eastern DRC, and Eastern Kenya.

"We're tremendously excited about a real opportunity to significantly increase bean yields for hundreds of thousands of farmers in sub-Saharan Africa," said Dr Robin Buruchara, coordinator for CIAT Africa. "CIAT and its PABRA partners have been working for a long time on developing climbing varieties suitable to the environments where many bean consumers live."

#### Contact:

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# Fighting malnutrition with yellow bananas

Anne Vezina - Biodiversity International

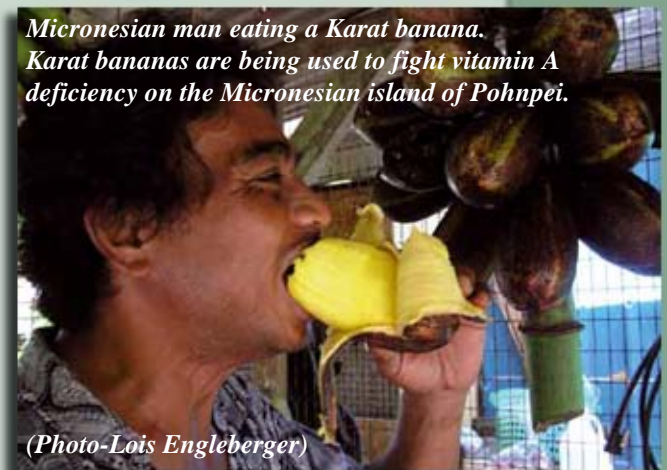
"E at your colours" is good advice when it comes to healthy eating, but it might leave banana lovers feeling as if their favourite fruit is not as nutritious as they thought. The whitefleshed Cavendish variety, which dominates the export trade, may not be in the same nutritional league as the richly coloured papaya, mango, pumpkin, carrot and sweet potatoes but other varieties definitely are.

Many of the banana varieties domesticated in the Pacific (see 'Angela Kepler and Frank Rust: living with Hawaiian in our March issue) contain high levels of provitamin A carotenoids, the source of the yellow or orange colour of their fruit. These micronutrients are converted in the body to the health-promoting vitamin A.

The importance of carotenoids becomes clear when one considers that vitamin A deficiency afflicts around 120 million children around the world per year. Vitamin A deficiency has many effects, including weakening the immune system and causing blindness. Between 250 000 and 500 000 children suffering from vitamin A deficiency go blind each year and half of those will die within 12 months. Vitamin A deficiency is also a major cause of illness in young mothers.

Lois Englberger an American nutritionist based on the Micronesian island of Pohnpei, has shown that as little as one yellowfleshed Karat banana—the local name for Fe'i bananas—could meet all of the vitamin A requirements of young children or non-pregnant, non-lactating women. These bananas have become the emblem of Pohnpei and are being used to fight the problem of vitamin A deficiency in young children on the island. But they can be tricky to grow, take a long time to mature and possess a distinctive texture and taste that people might not like. This may constrain their adoption in other places where people have not grown up with them. Fortunately, a study of the *Musa* gene pool, led by Bioversity International as part of the HarvestPlus Challenge

*Micronesian man eating a Karat banana. Karat bananas are being used to fight vitamin A deficiency on the Micronesian island of Pohnpei.*



*(Photo-Lois Englberger)*

# Nutritional value of Micronesian food

Anne Vezina - Biodiversity International

A 5-year study completed in 2009 has shown that two traditional foods in the Pacific islands of Micronesia—pandanus (*Pandanus tectorius*) and garlic pear (*Crataeva speciosa*)—are rich in provitamin

A carotenoids, which can help protect people against vitamin A deficiency and anaemia. Carotenoid-rich foods have also been shown to protect against cancer, heart disease and diabetes.

Despite their nutritional value, in recent years these traditional foods have been increasingly neglected as a result of dietary and lifestyle changes and a growing reliance on imported refined foods with high levels of sugar, salt and fat. As Micronesians replace their traditional foods with these refined foods, the incidence of diet-related diseases such as diabetes, cancer, heart disease and anaemia grow.

Pandanus is one of the few food plants that thrive in the harsh climate and sandy, saline soils of the Micronesian atoll islands. Pandanus fruits are made up of individual pieces called 'keys' that are attached to a fibrous core. The term 'bunch' refers to the entire fruit (including keys and core). People chew on the inner parts of the keys for their sweet pulp. Pandanus chewing is commonly considered as akin to gum chewing and consequently the fruit is undervalued as a healthy food.

The study focused on 11 pandanus cultivars from the remote islands of Mwoakilloa and Kapingamarangi Atolls, Pohnpei and the Federated States of Micronesia. For the first time, Pohnpei pandanus were also shown to be rich in provitamin A carotenoids (beta-carotene, alphacarotene and beta-cryptoxanthin), as well as other carotenoids (lutein, zeaxanthin and lycopene). Fruits contained substantial concentrations of carotenoids: 110–370 micrograms of beta-carotene per 100 g of edible fruit, and 990–5200 micrograms of total carotenoids per 100 g. Ripe papaya may contain around 700 micrograms of beta-carotene per 100 g, and rice (white or brown), which is a major staple food in the Federated States of Micronesia, contains none at all.

Garlic pear from the Mortlock Atolls of Chuuk was also found to be rich in provitamin A and total carotenoids (1070 micrograms of beta-carotene per 100 g of edible fruit and 1460 micrograms of total carotenoids per 100 g). This fruit is eaten raw as a snack and is also cooked with coconut.

Much like other traditional foods, pandanus and garlic pear get less respect than modern Western crops. Given the health benefits of a diet rich in vitamin A, they deserve far better.



*Pandanus fruit*  
(Photo: Lois Engleberger)

## Fighting malnutrition with yellow bananas ...from page 7

*The salmon-coloured Iholena, a type of Pacific plantain, has nearly 40 times as much provitamin A carotenoids as Cavendish, the common desert banana.*



(Photo: Anne Vezina)

Program, has revealed that Karat bananas are not the only *Musa* option for improving nutrition and fighting vitamin A deficiency around the world. Banana cultivars were sorted according to the 'orangeness' of their fruit pulp and analysed in the laboratory by partners at the Katholieke Universiteit Leuven (KULeuven) in Belgium, and the Centre Africain de Recherches sur Bananiers et Plantains and the International Institute of Tropical Agriculture in Cameroon. The results found high carotenoid levels in some varieties of African and Pacific plantains. The analysis will help specialists select banana varieties for use in breeding schemes or for introduction in regions, such as Africa,

where vitamin A deficiency is widespread. Initial projections predict that, in certain African countries, increasing the consumption of high carotenoid plantains could reduce the burden of illness caused by vitamin A deficiency by as much as 20%.

"The knowledge we have gained provides us with the data and new hope for developing a banana and plantain breeding programme for varieties with better nutritional content and for the direct introduction to farmers of varieties that are naturally rich in carotenoids," said KULeuven scientist Mark Davey.

# Why you should know about quarantine

The wonderful wooden carved artefacts are items target for tourists. But some of these handicrafts are confiscated making a loss for the buyer, tainting the chances of local business if these items carry pests. The New Zealand Ministry of Agriculture and Fisheries (NZ MAF) specifically its division in charge of New Zealand Ports, has been taking an effective stand to raise awareness about pests and diseases and the role of quarantine to eradicate these agricultural bio security unfriendly species landing on their shores.

Quarantine is a requirement, crucial for the safety of another country from invasive and disruptive pests from another country. In their newsletter of April 2010, the NZ Ports revealed several pests that entered NZ through the port. These pests were found or carried through the most unexpected ways. "The Asian gypsy moth (AGM) *Lymantria dispar* is regarded as a high impact pest which could cause serious damage to New Zealand forests if it became established in this country. The larvae are gross feeders of foliage with a large host range." This was discovered under a car hub cap. Dirty footwear also can carry pests.

The NZ Port's newsletter also implied a message. Our own local Quarantine specialists in PIC's need to educate our people about the need to have their goods thoroughly inspected or quarantined.

Quarantine also ensures that the tourist can trust local traditional products that they buy and take as souvenirs.

We need to understand that other countries do take a stand in protecting their environments and so we must be prepared to meet their standards.

The NZ Port's newsletter also implied a message. Our own local Quarantine specialists in PIC's need to educate our people about the need to have their goods thoroughly inspected or quarantined.



Wooden carvings from Samoa  
(Photo: Gary Higgins)



Car hub cap fostering a pest nest  
(Photo: Gary Higgins)



Sticky seeds found under a travellers footwear  
(Photo: Gary Higgins)

## Four islands keen to revive agriculture

Cook Islands Herald

Agriculture Minister Robert Wigmore is keen to see the \$3.5 million Te One Kura project take off after holding initial talks with the four islands taking up the challenge.

The people of the Nga Pu Toru islands of Atiu, Mitiaro and Mauke along with Mangaia are all keen to take up the offer of assistance from government to revive the country's agriculture industry.

Wigmore spoke to the media about his three day visit to Mangaia with Te One Kura's project team and the potential that the island has for supplying a range of produce to the Rarotonga market.

According to team member Selina Napa from the Business Trade Investment Board (BTIB), the four islands have now expressed their view that if there is a market and cheap freight then they will sign up to the project.

"One of the main issues we took to the islands was that the supply of the market in Rarotonga has to be continuous and there has to be a demand there. They are all in favour of the plan. The next step now is to secure technical assistance to run the project on each island."

Napa says what Mangaia lacks more than the Nga Pu Toru islands is a young labour force.

"There is a missing gap in the labour force. The youth and the working age group are missing so the island is considering outside labour to assist with the project."

The minister said he is keen to see Mangaia grow

the kind of produce for the local market that presently is almost entirely imported.

"The colder climate in Mangaia means there is potential there for it to grow veges like broccoli, cauliflower, capsicum and snow peas during the cooler months," he said.

Te One Kura team member William Wigmore from the ministry of agriculture, said the Mangaia growers have indicated an interest in growing new veges such as celery. While there are still a few Granny Smith apple trees growing on the island, Wigmore said there are more attractive options for commercial crops such as table grapes and persimmons.

"We have to be careful not to introduce any diseases but we can trial some table grape varieties from Australia."

Wigmore also says Mangaia growers have a desire to grow citrus crops for their own consumption and later to supply Rarotonga. A new variation of pineapple is being trialled and Mangaia is hoping to increase its production of black taro, taro tarua, yam, and dragon fruit.

Tinirau Tamarua from the ministry of infrastructure and planning is looking at the livestock production strategy for the four islands. He says Mauke and Atiu, Mangaia wants to focus on goat farming.

# Rehabilitating agriculture after Cyclone Tomas

Fiji Ministry of Primary Industries

**R**ehabilitation work on Fiji's agriculture will focus first on food security in the wake of damage caused by Cyclone Tomas.

Principal agriculture officer Uraia Waibuta said the rehabilitation work had started in this month of April.

The Ministry of Agriculture has allocated \$2.6 to revive agriculture. "The \$2.6 million will be used for planting materials, agro inputs, land development, desilting of drains in Cakaudrove and inland of Macuata, veterinary drugs, pasture seeds, supplementary feeds and fencing materials for cyclone affected farmers," Waibuta said.

"However, an immediate rehab for food security and economic recovery will be done for Taveuni since the devastating effect of tropical cyclone Tomas has caused a lot of damage to the dalo and yaqona industry." "Farmers in Taveuni were producing 500 to 600 tonnes of dalo per month and the impact of the cyclone to the tausala export market will be enormous," he said. "After the cyclone it is anticipated that dalo production in Taveuni will drop to 150 to 200 tonnes per month before it may begin to stabilise after three months with the drop in production worth \$2.4 million," he said.

"Total cost of damage by tropical cyclone Tomas to the agriculture sector is almost 50 million," Waibuta said. Cikobia and the Lau group.

"Apart from the devastating strong winds velocity, which twisted and uprooted crops, further damage was done through salt water sprays to crops and vegetation along the coastlines," he said. "High

rising sea levels or tide drastically affected crops, infrastructure and shore lines through the deposition of debris, stones and sand from the seas which were washed inland onto villages and farms," Waibuta said.

The existing crops on the ground will be able to supplement and support the communities for the next three weeks. Waibuta said root crops such as dalo and cassava which are less than three months old can recover while older root crops are assessed as 90 to 100 percent damaged and cannot recover. "

The strong winds by Cyclone Tomas caused 100 percent damage to breadfruit which was a reliable source of carbohydrate for the people and it will take another year to recover," he said. "The livestock damage was not significant but in estates and other livestock enterprises in Cakaudrove suffered some damages," he said.



*The tausaka dalo*  
(Photo: Fiji-MPI)

# Quarantine risk sent back to sea

Fiji Ministry of Primary Industries

**T**he Biosecurity officials stopped the discharge of containers from the Russian registered cargo ship

'MV Florence' at the Suva Kings Wharf following the interception of live pest on the ship and containers. The pest live larvae were detected during a routine inspection of cargo and container discharge from the vessels which arrived from Pacific Island Countries. The live pest is an exotic pest that poses a serious threat to Fiji's horticulture industries and native forests," he said. "The pest is not known to occur in Fiji and its establishment would cause significant economic losses for horticulture production," Mr. Boa said.

Mr Boa said the occurrence of live pest on vessel has been infested through damaged containers spillage of processed animal feed originating from the west coast via Pacific Island Countries. "All Fiji bound containers and cargo got contaminated through

cross infestation," he said. "The risk to Fiji's horticulture and timber industries was simply too great to allow this vessel to dock," Mr. Boa said. "Biosecurity Quarantine has well established procedures for dealing with this type of risk by sending the vessel to sea for anchorage for decontamination by treating the entire vessel, containers and cargo," he said. Mr Boa said after the completion of treatment and inspection, the vessel was allowed for berthing and further inspection, spraying was conducted during the discharge and all spillage and residues were incinerated. "Biosecurity also turned away another cargo vessel arriving from Pacific Island Countries following detection of Giant African Snail on the vessel," said Mr Boa. Mr Boa encourages all stakeholders to share the responsibility of quarantine by reporting unusual findings in shipments to Fiji Biosecurity Quarantine Division. "Watching out for any unusual pests and disease symptoms is just one way to help protect Fiji's agriculture, forestry and marine life," he said.

# PNG holds first poultry symposium

Senirol Anzu, Didinet-PNG NARI

PNG's first symposium on poultry research and development in the country held in April at NARI's Alan Quartermain Hall at Bubia near Lae, Morobe Province.

The inaugural event, "Small poultry farms for rural prosperity and poverty alleviation in Papua New Guinea", is being organised by the PNG Branch of World Poultry Science Association (WPSA-PNG).

Interim President of WPSA-PNG, Janet Pandi, said the main purpose of the symposium is to establish a scientific forum for the exchange of poultry research and development issues in PNG. "It is also envisioned that the recommendations from this workshop can be used to influence policy and decision making on aspects related to the development of poultry industry in the country," Ms Pandi said.

The one-day symposium coincides with the first general meeting of the country branch.

Ms Pandi, who is a senior livestock scientist with NARI, said: "The forum is also expected to create an electronic network or discussion forum for WPSA-PNG members for regular exchange of information on issues affecting the poultry industry in the country."

Other issues for discussion include the development of a branch website and annual or biennial scientific symposiums on poultry developments in PNG.

Among the key presenters will be livestock specialists including Professor Alan Quartermain of the University of Natural Resources and Environment (UNRE), Dr Gariba Danbaro of the PNG University of Technology, Dr Workneh Ayalew of NARI, Dr Phil Glatz of South Australian Research and Development Institute, and others from New Zealand, Australia and PNG.

The WPSA PNG Branch was established and launched in November 2009. The official launch was made by WPSA President Dr Bob Pym in Lae and was witnessed by President of WPSA-Australian Branch Dr Julie Roberts and inaugural members of WPSA-PNG.

Dr Pym said the "role of WPSA was to support poultry production in developing countries and contribute towards efficiency and sustainability of poultry production which include increasing awareness within WPSA of the importance of poultry meat and eggs to meet protein needs in developing countries".

"The primary role is to organise international, national and local meetings for information exchange on science and practice of poultry production", he said.

The WPSA-PNG comprises interested and registered staff from NARI, PNG Unitech, UNRE, Ok Tedi Mining Limited, Goodman Fielders Ltd, Child Fund PNG, and is expected to grow in the next few months.

More information can be obtained from the NARI Livestock Team on Phone (675) 475 1066 or Email [narils@nari.org.pg](mailto:narils@nari.org.pg).



(Photo: Senirol Anzu - Didinet)

## FINAL CALL for JOSPA

The closing date for submission of manuscripts intended for publication in the next issue of JOSPA is 12<sup>th</sup> May, 2010. Authors who wish their papers to be considered for publication in this issue are advised to adhere to this deadline. Submissions made after this deadline may not make it into the next issue, but will be considered for the 2011 issue.

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# *Chickens and vegetables - a small start*



# *SPAN*

## South Pacific Agricultural News

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