

# Span



IRETA



SPAN Vol. 41, No. 9 September 2016 ISSN 1015 - 950

## Always look for hidden opportunities

(Presentation by former lecturer of the School of Agriculture and Food Technology)

**D**r. Myo Win was a former lecturer at the School of Agriculture and Food Technology, USP Alafua from 1979 to 1982. He was the “Head of Agricultural Engineering” at the time and then worked at Charles Sturt University, Australia from 1982 to 2005. He is also experienced in the areas of food security and rural development mainly in Myanmar and ANU in Canberra.



On Thursday of September 1<sup>st</sup>, 2016, he visited the campus and presented a seminar to the staff and students. His first presentation was a photo powerpoint. He showed pictures of the Alafua campus as well as staff and students from 1979 to 1982. His second presentation was on food security and rural development. He was able to give more time for discussion with the students and respond to their questions.

“Students are the most important in a university or in a school”, said Dr. Myo Win. He added that without the students, there will be no teachers, no jobs and no products. He also added that education is open to everyone and we should always look for hidden opportunities.

**What's  
inside:**

AG134 Field Trip ...pg 2    Staff-Student Profile ...pg 5

News Bits ... Pg 7-10

AG363 Field Trip ... pg 3

Meeting with DVC and the  
Director of Research ... Pg 6

JOSPA Call for Papers ... Pg 11

SAFT Lecturer Presentation ... Pg 4

IMAGES ...pg 12

# “Shoot physically and shoot spiritually”

(A message from Ricky Westerlund to AG134 students)

**AG134** students and course co-coordinator Mr. Ioane Malaki went on a field trip to Ricky Westerlund’s vegetable farm on the 21<sup>st</sup> of September 2016 for their course tractor operations practical.

Mr. Ricky Westerlund is a civil engineer and a farmer. His farm is the leading supplier of vegetables in Samoa. His farm success comes from his knowledge and skills of mechanization. This practical allowed the students to learn from Mr. Westerlund in operating different machines such as tractors, cultivators and etc.



The objectives of the practical was to expose and familiarize students with routine tractor operations and commonly associated cultivation implements including the disc plough, rotavator, spring tyne cultivator and also teach students how to properly hitch and use implements.

Mr. Westerlund believes that in years to come, Samoa will go into mechanization and that knowledge in this area will be much needed. Beside from operating different machines in agriculture, he can fix and repair damaged machines, and this has saved him from expenses which have also made his farm very successful. “Shoot physically and shoot spiritually” was his message to the students. He shared that his success also came from his faith to the lord.

At the end of the practical, students should be able to list and follow the correct procedure for starting a tractor engine, list and follow the correct procedures for hitching a disc plough, tyne cultivator and ridge to the 3-point linkage hydraulic system, operate implements to cultivate a selected crop, and to analyze and evaluate implement performance and make recommendations.



## AG363 Field Trip

**P**rof. Manuel K. Palomar and students of AG363: Pest and Disease Management, class went on a field trip towards the end of September. The purpose of the visit was to allow students to have first-hand knowledge on how the government officers, help farmers and stakeholders control pest and diseases of crops in Samoa. The students visited Quarantine Office in Apia and the Ministry of Agriculture and Fisheries (MAF) Crops Division at Nu'u.



ACEO of Quarantine, Mr. Lupeomanu Pelenato Fonoti presented a powerpoint on the activities and work done by their organization. Samoa Quarantine Service (SQS) is one of the six divisions of MAF. The Biosecurity Act 2005 mandates their work, where they prevent or control the introduction and spread of pests and diseases that could cause significant damage to human beings, animals, plants and other aspects of the environment or economic activities. The presentation also included some of the pests and diseases that their organization was able to find during their services.

MAF Crops Consultant, Dr. Seuseu Tauati welcomed the students to Nu'u, MAF's Crop Section. He gave the students a tour around the area and showed them the different activities and projects done at the Crops Division. He showed the students' new equipments and planting materials that the organization has. Later the students were introduced to the Pest and Disease officer in charge and he was able to show the students his work on the pest of coconut trees which is a big problem in Samoa. Dr. Seuseu also showed the students the new variety of banana they imported from South Africa to address the Bunchy Top Disease in Samoa. The students lastly visited the nursery greenhouse which contains many types of plants which are for sale to the public.



## “How climate change has affected pest population and behaviour that could have contributed greatly to worldwide hunger”

Climate change also called ‘global warming’ refers to the rise in average surface temperatures on Earth. It is caused from the burning of fossil fuels, such as oil and coal, which emits greenhouse gases into the atmosphere. It is caused from agriculture and deforestation to the proliferation of greenhouse gases and also people. Climate change affects the rising of the sea levels due to the melting of the polar ice caps contributing to greater storm damage; warming ocean temperatures are associated with stronger and more frequent storms, additional rainfall leading to flooding and other damages and etc.

Professor Manuel K. Palomar, SAFT USP consultant and the Professor Emeritus from the Philippines presented a seminar on the 22<sup>nd</sup> of September 2016, on how climate change has affected pest population and behavior that could have contributed greatly to worldwide hunger alone and in tandem with it. According to Prof. Palomar, as landscape change, so do the animals that depend on them for survival and there are other less obvious climate impacts that inflict a different kind of emotional and cultural distress. Taro leaf blight disease was also presented and he suggested using biological control as a way to mitigate climate change.

Biological control is the use of one living organism to regulate the population of another which is more environmental friendly, historically more important in insect pests - predators and parasitoids and for plant pathogens which uses one organism as antagonist to another.



# STAFF-STUDENT PROFILE

**Name:** Betty Marie Pinati



**Status:** Employed full-time and part-time student

**Staff post:** Senior Library Assistant

**Student program:** Diploma in Library and Information Studies

**Future career:** Manage an Information Centre

**Background:** Betty Marie Pinati is the eldest of five children in her family. She has been working for USP Alafua Campus for 8 years. She plans to continue with Bachelor's in Library and Information Studies or Management when she completes her Diploma. She finds working in USP to be challenging but have experienced a lot in her working years. She encourages all students and staff of USP to "Keep living the dream".

**Name:** Sateki Fangupo

**Status:** Full-time student and part-time employed

**Student program:** Masters in Agriculture, Crop Science

**Staff post:** Crop's Technician

**Future career:** Become the Head of School of Agriculture

**Background:** Sateki Fangupo is a Tongan student who started his Bachelor's in Agriculture, Applied Science in 2010. He continued with his postgraduate studies in Crop Science and is currently or towards finishing his Masters in Agriculture, Crop Science. He was recently hired to work temporarily as the Crop's Technician. He plans to return home when he graduates this year and work for some time and hopefully start with his PhD studies soon. His advice to the staff and students of USP is to simply "Never give up" and regardless of any qualification striving for, everyone has the potential to be better.



# Meeting with DVC and the Director of Research

**A** meeting with the DVC (R&I), Professor Derick Armstrong and the Director of Research, Dr. Jito Vanualailai, on September 22, 2016 was held at the USP Alafua Library Conference Room to discuss research programs and activities in Alafua including the QoR, publications and funding. The DVC also mentioned the procedure for proposing research and the ways by which red tape can be minimized at USP. Head of the School of Agriculture, lecturers and staff members attended this meeting.



Prof. Manuel K. Palomar who was one of the attendees, added that the meeting mainly targeted staff members of USP in terms of research and publication. In every two years the Research Office evaluates staff members' researches and publications, and part of being a lecturer or staff of USP, they are encouraged to do more publications which was the main emphasis of the meeting. If staff members decide to publish in Journals that require a fee payment, they are advised to pay for such fee but will be deducted from publication funds once the paper has been published.

## A Chameleon in the screen

The VINESA project recently installed a ‘Chameleon’ in the Best Practice Hub located at the World Vegetable Center Eastern and Southern Africa office in Arusha, Tanzania.



The Chameleon is a soil moisture tensor sensor that measures how much suction a plant must apply to get water out of the soil. With a simple ‘traffic light’ display unit that lights up in red, blue, or green, depending on the amount of moisture present, farmers can gauge if they are adequately irrigating their crops.

The Chameleon was designed by Dr. Richard Stirzaker, irrigation scientist at the Commonwealth Scientific and Industrial Research Organization (CSIRO) in Australia, who believed there was little value in imposing complex soil moisture technology onto small-scale farmers. Instead, he developed a technology to facilitate adaptive learning, so that over time farmers will understand what is happening in their soil and crops.

(avrdc.org)

## Red, bold and beautiful

It’s been five years in the making, but one look at this red beauty and you’ll know it’s been worth the wait. The World Vegetable Center is pleased to announce the release of **sweet pepper hybrid ‘Hsing AVRDC no. 5’** in Taiwan.

The blocky (8 x 8.7cm), large (200grams average weight) fruit can be harvested when green or red, but the sweet flavor is especially concentrated when the peppers are picked at maturity - about 95 days after planting in the spring season, and 110 days after planting in the fall. The vigorous plants with strong stems and large green leaves are well-adapted to high temperature and humidity, and can be grown year-round under both protected and open field conditions.

The hybrid’s resistance to several problematic viruses and blights, including Tobamovirus (ToMV) and Phytophthora blight (race 1), is sure to make it a favourite among farmers, said WorldVeg Pepper Breeder Sanjeet Kumar.

(avrdc.org)



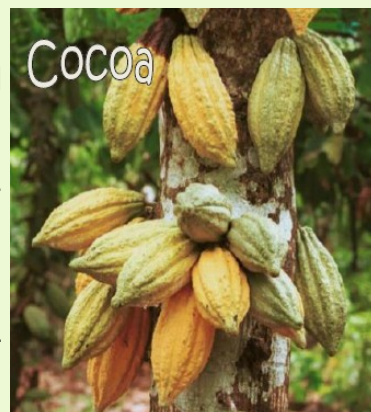
# Cocoa

**Potential:** Increased income for rural farmers, increased opportunities for employment, accessibility to basic services and highly regarded internationally.

**Problems/Constraints:** Investment, Infrastructure, Low production, “Smoke taint” cocoa.

**Solutions:** Cocoa strategic plan, increasing investments in cocoa industry, increase cocoa production and SMEs (Co-operatives).

**Strategies:** Utilize organized groups/co-operatives/LLGs, integrate business structures for these groups, extension & Training, partnership with micro finance institutions, partner with DDAs, and roll out combination driers and Net-working/Partnerships.



# Coffee



**Problems/Constraints:** Not enough money for re-investment (Infrastructure)

**Solutions:** Re-align regulatory policies to capitalize on the market opportunities. Mobilize growers towards sustainable coffee farming system through co-operative marketing groups. Establish Productive Partnership Model to attract potential investors. Open market accessibility and improve market infrastructure. Create incentive scheme for farmers to be engaged in coffee farming.

**Strategies:** Secure Government funding, consolidate efforts, upscale and out scale to new growth areas. Empower growers through SMEs to move into processing, marketing and exporting.

**Funding:** Contribution to National Purse/Employment

**Potential:** Important part of PNG business, society and culture, upgrade quality to international standards, develop SMEs and large entrepreneurs and expand to new areas.

Coffee is a major foreign exchange earner. It produces K541m annually to national economy and 3.3m depend directly or indirectly on coffee.



# Postharvest envoys ready for the real world

**F**ruit and vegetables need careful handling from the field to the table at all stages in the value chain, from harvesting, transportation, and storage to processing and preparation for consumption. To ensure knowledge and skills for good postharvest management are widely shared, the World Vegetable Center, in collaboration with the University of California (Davis) and the Horticultural Research and Training Institute - Tanzania (HORTI), organized and conducted a training course on postharvest handling of fruits and vegetables at the WorldVeg Eastern and Southern Africa campus in Arusha, Tanzania from 11 -15 July 2016. Forty-four participants from agricultural training institutes, research institutes and ministries in Tanzania took part in the training.



The facilitators covered the importance of good postharvest handling, product quality, harvesting systems, cooling technologies, preparations for market, food safety, postharvest diseases, grades and standards, ethylene and ripening, drying and storing of dried products. Specific handling techniques for tomato, pepper, cucumber, melons, leafy vegetables, potatoes, banana and citrus were described. All participants received postharvest tools and equipment, including a weighing balance, water activity test paper, thermometer, refractometer, humidicator paper and a chlorine test kit for product quality measurements. The participants gained hands-on experience in sorting, grading, hydrocooling, water activity measurements, packaging, cooling and drying.



## Key messages for World Food Day 2016

**1 Now that 177 nations have signed the Paris Agreement on Climate Change, 2016 is the year for climate action.** The global goal for achieving Zero Hunger is 2030 and without addressing climate change, it cannot be reached.

**2 Climate change threatens the livelihoods of the rural poor.** Over 70 percent of the world's poor live in rural areas and livelihoods in the Small Island Developing States (SIDs) also depend heavily on climate-sensitive agriculture sectors. The majority of these people earn income from agriculture. Without concerted action to build resilience, many of the world's poorest and most vulnerable inhabitants will struggle to generate enough food and income to feed themselves and their families.

**3 Climate change threatens the stability of food prices.** Variable rainfall and temperatures, as well as extreme weather events, threaten to disrupt food production. By some estimates, yields for major crops (maize, wheat, rice and soybeans) could decline 5-60 percent by 2100. The effects on food prices and security - particularly in major food-importing regions - could be significant.

**4 We need to adopt sustainable agricultural practices.** By adopting sustainable agriculture practices that are tailored to the local context, smallholders can achieve considerable productivity and income gains, while simultaneously increasing the resilience of their agricultural activities and income to extreme and variable weather. Sustainable agricultural practices can halt and even reverse the over-exploitation of natural resources and degradation of ecosystems.

**5 We need to reduce greenhouse gas emissions from the agricultural sector.** The agricultural sectors account for 20-25 percent of global greenhouse gas (GHG) emissions. Sustainable agricultural practices can increase productivity and resilience. They can simultaneously reduce GHG emission intensities; ease the pressures that drive deforestation (e.g. the conversion of old-growth forest to arable land for farming) and improve the health of soils, landscapes and forests - all of which sequester carbon. These mitigation co-benefits can often be achieved at little or no additional cost, and without inhibiting overall agricultural development.

**6 Everyone has a role to play in mitigating the effects of climate change.** By being conscientious or ethical consumers and changing simple day-to-day decisions, for example by wasting less food or eating less meat and more nutritious pulses, we can reduce our food print and make a difference.

*(Agriculture Nius (Newsletter) Vol. 37, Issue 2)*



## Journal of South Pacific Agriculture

### CALL FOR PAPERS

The Journal of the South Pacific Agriculture (JOSPA) is a peer reviewed Agricultural journal which publishes research articles, critical reviews, general papers and short communications in tropical agriculture. It has highly qualified editors and a transparent peer review system which normally takes about 6 to 8 weeks from submission of manuscript to the decision with reviewers' comments. We are inviting contributions relevant to agriculture in the tropics for JOSPA's Volume 19.

Please send manuscripts as email attachments to the editor at [sunil.singh@samoa.usp.ac.fj](mailto:sunil.singh@samoa.usp.ac.fj)

Deadline for submission has been extended to 31 November 2016. Guide for authors will be provided upon request. Refer to section on Submission of Manuscripts for additional information required on submission.

For technical enquiries, please contact the Managing Editor:

Sunil Singh (PhD)

The University of the South Pacific

School of Agriculture and Food Technology

Alafua Campus, Apia, Samoa

Tel: [\(+685\) 21671 Ext 272](tel:+68521671272); Fax: [\(+685\) 22347](tel:+68522347)

Email: [sunil.singh@samoa.usp.ac.fj](mailto:sunil.singh@samoa.usp.ac.fj)

# SEPTEMBER IMAGES

