

Span



IRETA



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USP Highlights for 2015

(Message from Vice-Chancellor and President)

I am pleased to share with you our final highlights for 2015. I reiterate our thanks to everyone for the success of the University for the past year and best wishes for this New Year 2016.

Samoa Prime Minister receives Honorary Degree

A key highlight of The University of the South Pacific's (USP) Alafua Campus graduation ceremony was the awarding of the Honorary Doctor of Laws (LLD) degree to the Prime Minister of Samoa, Honourable Tuilaepa Sa'ilele Malielegaoi. The ceremony was held in Savaii for the first time on 11 December 2015. Honourable Malielegaoi emphasized the need to try and generate internal capacity necessary to sustain the development of PICs into the future. In this regard, the Prime Minister reaffirmed Samoa's strong support for USP and its work in the region in building capacity to complement the higher education strategies of individual countries.



USP Vice-Chancellor and President, Professor Rajesh Chandra

Emalus campus graduation

A total of 120 graduates received their certificates, diplomas and degrees during the graduation ceremony at The University of the South Pacific's (USP) Emalus Campus in Vanuatu on 18 December 2015. 50% of the total graduates were females. 106 students graduated with undergraduate qualifications while 14 graduated at the postgraduate-level.

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USP Highlights for 2015

Pilot programme for high school entrepreneurs

The University of the South Pacific's (USP) Pacific Technical and Further Education (Pacific TAFE) in partnership with Nabua Secondary School successfully completed a two-week programme for young entrepreneurs conducted over the summer break. This pilot programme concluded on 18 December 2015 with the awarding of 34 participants by the Chief Executive Officer for iTaukei Trust Fund Board, Mr Isoa Kaloumaira. Pacific TAFE will continue to venture into this type of early intervention trainings with schools in years to come through its community outreach initiative. Pacific TAFE is looking at running three cohorts this year, one in Fiji and two in other USP member countries.

Niuafo'ou Day at USP's Tonga Campus

The University of the South Pacific's (USP) Tonga Campus continued its efforts to revive and promote the Niuafo'ou language with the successful Niuafo'ou Day on 3 December 2015. This event was led by an annual Provincial Poetry Competition which ran from 30 October to 23 November 2015. The competition was jointly organized by USP Tonga Campus staff, Curriculum Unit of the Ministry of Education and Training, the Culture Division of the Ministry of Internal Affairs, Tonga Broadcasting Commission and Tonga Communication Corporation. Her Royal Highness Princess Salote Mafile'o Pilolevu Tuita was the Guest of Honour. She presented certificates to students who completed the first conversational course in the Niuafo'ou language.

Kick-off Meeting on Regional ICT Initiative (Pacific Islands Forum Secretariat (PIFS), Asian Development Bank (ADB), World Bank (WB) and The University of the South Pacific (USP))

The initial kick-off meeting to get the major partners in ICT (PIFS, ADB, WB and USP) was held on 17 December 2015. The purpose of the meeting was to collectively discuss and work through on the regional ICT initiative and plan going forward to deliver on the expectations of the 2015 Forum Leaders decision on ICT. As this was a short meeting there were preliminary discussions on a few ideas and in particular whether or not to establish a Regional ICT Advisory Council (RIAC).

ACIAR again grants scholarship to USP

Six new scholars to the USP-ACIAR Scholarship Scheme were welcomed to USP Alafua campus by the Head of School of Agriculture and Food Technology (SAFT) and Director of IRETA; Associate Professor Mohammed Umar, Dean of the Faculty of Science, Technology and Environment Dr. Anjeela Jokhan and ACIAR Scholarship Officer Mr. Viliamu Powell.

From these six students, two of them will be undertaking Masters Studies and four are postgraduate Diploma students.

According to Ms Leikitah Naituku from Vanuatu, the meeting discussed the contracts and expectations of the scholarship. They were congratulated and introduced to the ACIAR scholars in Suva. Ms Naituku is one of the Masters student's from the six recipients of the ACIAR Scholarship from Alafua Campus.

She also added that Associate Professor, Mohammed Umar reminded the Master students, to start working on their proposals and for all of them, including postgraduate students, to study hard and meet the grades that the scholarship expects from them.



Leikitah Naituku and Rosemary Votaia (new ACIAR scholars)

What is International Society for Tropical Root Crop (ISTRC)?

Since 1967, the International Society for Tropical Root Crop (ISTRC) has fostered, stimulated and supported activities leading to the general improvement of tropical root crop production and utilization.

To achieve its objectives, the ISTRC does the following:

- Sponsor regional, international meetings, workshops and training courses.
- Support the establishment of regional branches and affiliates to the society.
- Strengthen cross linkages between nationals, regional and international research centres and organizations.
- Publish newsletters, proceedings of meetings and other appropriate material.
- Provide financial assistance if possible to members of the society from developing countries to attend the society's meetings.



President of ISTRC (middle) with Councilors from the Pacific (left) and the Caribbean (right)



Councilors and Presidents of ISTRC with main organizer of WCRTC (third from right)

Award members of the society prizes for outstanding publications or any other achievement for the improvement of tropical root crops.



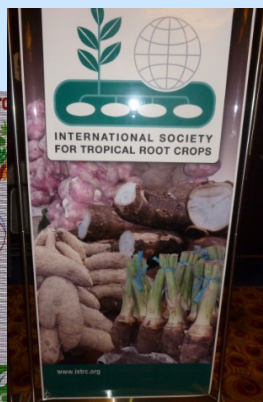
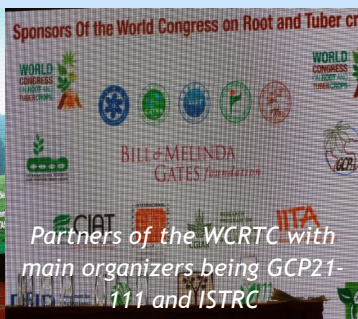
President of ISTRC and South East Asia President of ISTRC

The ISTRC is open to any person or organization interested in the objectives of the Society.



President of ISTRC (left), South East Asia President of ISTRC (middle) and Pacific Branch President of ISTRC (right)

The Council for the Society serves members from one Symposium/Congress to the next. It is composed of the President, First Vice President (Symposium), Second Vice President (Fund Raising), Secretary Treasurer, Editor Publication, Past President and Regional Councilors representing West and Central Africa, East and Southern Africa, South Asia, South Pacific, South America, North America, and Europe and the Caribbean.



Head of SAFT and Director of IRETA presents at the World Congress on Root and Tuber Crops



The World Congress on Root and Tuber Crops (WCRTC) was held in Nanning, China on 18-23 of January 2016.

Associate Professor, Mohammed Umar who is the Head of the School of Agriculture and Food Technology (SAFT) and Director of the Institute of Research, Extension and Training in Agriculture (IRETA) at USP Alafua, presented a poster at this congress on the International Society for Tropical Root Crops - Pacific Branch (ISTRCP-PB) activities.

He highlighted why ISTRCP-PB has been established for Pacific Island Countries (PICs) by highlighting the importance of “Agriculture, Fisheries and Tourism to the region as the main sources of food, income and job opportunities. Agriculture is the basis of PICs economies with root and tuber crops, vegetables, fruits, live-stock and some cereals as main agricultural activities”.

Roots for the PICs include Cassava, Taro, Sweet Potato, Potato, Cocoyam, Giant Swamp Taro-GST (Micronesia), Giant Taro-GT and Yams. “That’s the basis for the formation of ISTRCP-PB. It is to assist PICs with improvement in root and tuber crops production, value adding and exports”, he stated.

Mohammed Umar also highlighted the different types of root crops grown and consumed as staples in the Pacific Island Countries. All PICs grow just about all types of root and tuber crops but due to their preferences for particular root and tuber crop, there are differences in the emphasis as to how much each one is grown.

For instance, cassava is a staple root crop in Fiji and Tonga. Taro is a major root crop in the whole Pacific especially in Samoa, Cook Islands and Fiji. Sweet potato is largely grown in Papua New Guinea, Tonga and Fiji while potato is mainly grown in Papua New Guinea. Giant Swamp Taro (GST) is grown all around the Micronesia and Giant Taro (GT) is mainly found in Papua New Guinea, Tonga and Samoa.

Research focus for taro is in; breeding, disease control and productivity. In Vanuatu, disease of yam has been investigated with soil health research. Sweet Potato disease research has been carried out in Papua New Guinea and its agronomy is being studied in the Cook Islands. Traditional varieties are emphasized in Fiji and maintenance of genetic material is being done in Samoa, Fiji and the Cook Islands.

In terms of production and export; Tonga produces and exports yams and cassava. Fiji exports taro and local processing of cassava. Samoa exports taro and processes cocoyam. Vanuatu produces and exports yam.

He lastly presented on the capacity developing and mentoring. ISTRCP-PB was formed in 2012 in Papua New Guinea. The ISTRCP-PB has conducted training in Writing Winning Research Proposals and Maximizing Value Chain for Root & Tuber Crops for PICs and others. ISTRCP-PB has been mentoring young scientists from Fiji, Tonga, Vanuatu, the Cook Islands, PNG, Samoa and Solomon Islands. Close to 100 scientists, researchers, private sector and extension officers have been trained. ISTRCP-PB secured close to €100k from donor funds for the above activities over the past 4 years. The South Pacific Agriculture Newsletter (SPAN) and the Journal of the South Pacific Agriculture (JOSPA) have been used to report some of these activities.

His final message to the Congress was that the PICs will need to continue to maintain root and tuber crops diversity for their food and nutrition security, income and equally importantly for adaptation to climate change and sustainable development.



"Pathogens and Pests of Crops" Summer School

Senior lecturer of the School of Agriculture and Food Technology (SAFT) from Alafua campus, Dr. Rashmi Kant conducted a summer school on Pathogens and Pests of Crops at USP Laucala campus.

The course was carried out for four weeks with a total of 43 students from different parts of Fiji attending the course.



Group discussion

The summer school allowed the students to learn about the roles of different microorganisms such as bacteria, fungi, virus, nematodes and mycoplasma in agriculture. Furthermore, the students also learned about insects; their morphology, physiology and classification as well as their roles in agriculture.

Other components of the course included; group discussions, group presentations and insect collections. The students also took a field trip and a Research Station visit. Students visited the Secretariat of Pacific Community (SPC) and were able to get acquainted with SPC activities in the Pacific region. They explored SPC as a potential employer. Mr Fereti Atumuirava and his team explained the activities of SPC in the area of plant protection. Students also visited the Entomology lab and appreciated the SPC's work on Insecticide Resistance Management.



Students' Insect Collection Box

The class also visited the Koronivia Research Station of the Ministry of Agriculture in Fiji. This is one of the pioneer agricultural research station's in the Pacific region. They also got the opportunity to visit the Coconut Stick Insect and Rhinoceros Beetle Management Project. Further they were explained about economically important plant diseases in Fiji including the Anthracnose of Chillies. The course coordinator Dr. Kant acknowledged the help of Dr. Apaitia Macanawai from the Ministry of Agriculture and Mr. Atumuirava in organizing the field visit.



Group Presentation



*Koronivia Research Station—
Stick Insect Management Project*

The course organized laboratory practical on fungal identification and bacterial isolation. The course coordinator acknowledged permission from Prof. Surendra Prasad, Head of School of Biological and Chemical Sciences for using the laboratory for the course practical. Also, Mr. Siva Padayachi, the technician, for organizing the practical.



Students' inspecting insects at recently opened Insect Museum at Koronivia Research Station

“Sustainable Crop Production and Technologies” - Summer School

The Summer School for AG364 “Sustainable Crop Production & Technologies” coordinated by Mr. Falaniko Amosa, started on the 11th of January and finished on the 6th of February 2016. There were twenty nine students enrolled in the course.

The students were mainly mature students consisting of teachers and Ministry of Agriculture employees. According to Mr. Amosa, this made the teaching and learning process somewhat easier and more effective.



AG364 course coordinator
Mr. Falaniko Amosa

The highlight of the course would certainly be the practical exercise on seed processing technologies; constructing climate diagrams; cropping systems evaluations exercise and the weekly quizzes. The excellent well equipped classrooms used for the classes were also greatly appreciated and have contributed to an effective teaching and learning process. All these helped in a successful summer school.

The final exam was on the 6th of February 2016. The results were generally good which showed the commitment and hard work of the students.

The office of the Dean FBE is to be commended for the services provided to facilitate the teaching. Thanks goes to, Majorie for the excellent support services and Sanjay and Dr. Poasa for their assistance.

Effects of frequency of collection on egg production and egg qualities of Shaver Brown Hens



The longer the egg is allowed to stay in the nest, the more likely the egg will get dirty, broken or even lose interior quality. Experiential collection of eggs potentially exposes them to the vagaries of the weather and to bacterial contamination. Researchers have assumed that eggs which are not collected frequently can therefore be exposed to such conditions for extended periods, prior to collection especially when nest in large paddock (cage) are overlooked.

This study by AG383 students Chanel Paul Sanele and Veronica Vaaia under the supervision of Senior lecturer, Dr. Siaka Diarra was to determine the effect of frequency of collection on egg performance of Shaver Brown hens, with the specific objectives of studying the effects on; the rate of lay and some external and internal egg qualities.

The researchers concluded that reducing frequency of collection improves hen-day production, but reduces excellent egg quality. Further research into optimum nesting space that will maintain egg quality is warranted.

Student
Research
Project

USP Alafua at the MAF Agriculture Show in Savai'i

(December 2015)

USP Alafua Head of School of Agriculture and Food Technology (SAFT) and Director of IRETA, Associate Professor Mohammed Umar, attended the Savaii Agriculture Show organized by the Ministry of Agriculture and Fisheries (MAF) last year in December.



Minister of Agriculture, Forest and Fisheries, Le Mamea Ropati (far left) and Prime Minister of Samoa, Tuilaepa Sa'ilele Malielegaoi (middle)

The Show displayed different agricultural and fishery products that farmer's of Savaii were able to produce. The hard work and efforts shown by the farmers through their products was tremendous which made the Show amazing and interesting. Prizes were awarded in different categories to growers for produce quality, presentation, variety and other attributes.



Pacific Agriculture Policy Project livestock feed trial

The Pacific Agriculture Policy Project (PAPP) has launched a livestock feed trial on a farm in Nawai, Nadi, Fiji as part of its program to carry out research into the community level production of livestock feeds using locally available inputs such as root crops, vegetables, fruits, coconut meal, fishmeal, meat & bone meal, plant husks and stalks, etc. Improvements to increasing livestock productivity are significantly restrained by the cost of compounded imported livestock feeds or imported feed ingredients. Feed currently makes up 60%-70% of production costs. Smallholder livestock production could be a significant alternative source of household livelihoods as well as enhance food and nutritional security, if this constraint can be addressed through practical field and laboratory research.



The livestock feed trial in Nadi, Fiji was launched at the end of September 2015 with the rearing of a batch of meat chickens on different feed rations. The performance of each feed ration will be determined by the total weight gained by the meat chickens in the trial as well as the cost of the different feed rations. The livestock feed trial is expected to be completed in November 2015, where all the data recorded will be compiled and analyzed. The findings will be disseminated via a research paper and compared to similar livestock feed trials that are currently being implemented by other collaborating institutions, including other feed trials that are expected to be implemented by PAPP in other PICTs.

The Pacific Agriculture Policy Project is a €8.6 million technical assistance programme funded by the European Union (EU) through the 10th European Development Fund (EDF) allocation for Intra-ACP (Africa, Caribbean, and Pacific) co-operation, and implemented by the Land Resources Division (LRD) of the Secretariat of the Pacific Community (SPC) from 2013-2017.

<http://www.spc.int/lrd/animal-genetics/pacific-agriculture-policy-project-livestock-feed-trial->

International Year of Pulses 2016

The 68th UN General Assembly declared 2016 the International Year of Pulses (IYP). ([A/RES/68/231](#))

The Food and Agriculture Organization of the United Nations (FAO) has been nominated to facilitate the implementation of the Year in collaboration with Governments, relevant organizations, non-governmental organizations and all other relevant stakeholders.

The IYP 2016 aims to heighten public awareness of the nutritional benefits of pulses as part of sustainable food production aimed towards food security and nutrition. The Year will create a unique opportunity to encourage connections throughout the food chain that would better utilize pulse-based proteins, further global production of pulses, better utilize crop rotations and address the challenges in the trade of pulses.

What are pulses and why are they important?

Pulses are annual leguminous crops yielding between one and 12 grains or seeds of variable size, shape and colour within a pod, used for both food and feed. The term “pulses” is limited to crops harvested solely for dry grain, thereby excluding crops harvested green for food, which are classified as vegetable crops, as well as those crops used mainly for oil extraction and leguminous crops that are used exclusively for sowing purposes (based on the definition of “pulses and derived products” of the Food and Agriculture Organization of the United Nations).

Pulse crops such as lentils, beans, peas and chickpeas are a critical part of the general food basket. Pulses are a vital source of plant-based proteins and amino acids for people around the globe and should be eaten as part of a healthy diet to address obesity, as well as to prevent and help manage chronic diseases such as diabetes, coronary conditions and cancer; they are also an important source of plant-based protein for animals.

In addition, pulses are leguminous plants that have nitrogen-fixing properties which can contribute to increasing soil fertility and have a positive impact on the environment.



<http://www.fao.org/pulses-2016/en/>

Unusual nest location

While inspecting a used and damaged imported utility vehicle, Quarantine Officer Adar Tabak located a bird's nest complete with eggs located under the vehicle bonnet. This vehicle was imported on the RORO vessel Trans Future 6 from Japan.



Bird's nests and eggs can introduce avian disease to New Zealand as well as the nesting material providing a habitat for insects and carrying weed seeds.

The nest and contents were removed at Intergroup and the vehicle, which was heavily contaminated with grass seed, was decontaminated at this facility.

(Monthly Newsletter - Ports News, January 2016)

The 81th Council Meeting of The University of the South Pacific (USP)

The USP Council is the highest decision-making body of the University and meets twice a year to discuss the affairs of the University. The two-day meeting, which was held on 26 October, last year in Nadi, Fiji was chaired by the Acting Pro Chancellor and Chair of Council, Mrs Fekitamoeloa 'Utoikamanu.

Some of the major decisions made by the Council include the following:

- Approval of the draft Protocol recognizing the University in each of its member countries to reinforce the status of the University and the commitment of the member countries to continue their participation in the University as it heads for its 50th anniversary in 2018;

- Approval of the Annual Plan 2016 which contains priorities and activities of the University for 2016.

- Agreed that the current practice of charging fees and paying salaries in local currency be maintained and further decided that no major adjustments to be made to the current tuition fee levels in each country.

- Approval of a new Graduate Certificate in School Leadership programme. The programme was requested by the Solomon Islands Government. The programme will be offered in Solomon Islands initially and to other member countries at a later stage.

- Approval of the mechanisms for new countries joining USP

The Council comprises Pro-Chancellor, the Vice-Chancellor and President, representatives of the 12 member country governments, staff, students, community and business leaders. One representative from Australia and New Zealand and a member of a CROP agency are also part of the Council. A representative each from the Asian Development Bank (ADB), Australian Department of Foreign Affairs & Trade (DFAT) and New Zealand Ministry of Foreign Affairs & Trade (MFAT) also attend as Observers.

The next USP Council meeting will be on 17-18 of May this year in Samoa.

Giant African Snail *Achatina fulica* found

A live giant African Snail was located on the outside of a container in the hold of the vessel Southern Lily voyage 372 by a Stevedore who handed it onto MPI. Another excellent example of the good work done by our AP's

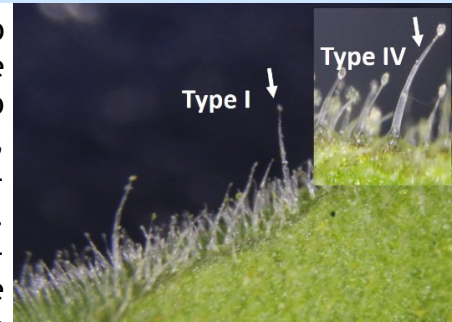
The container was PCIU2504654 which was an empty sea container located in Apia. The finding of this snail is not uncommon from Apia where they are a frequent pest.

(Monthly Newsletter - Ports News, January 2016)



Hair a key to resistance inheritance

In search of a faster way to screen, or evaluate tomato plants for resistance traits, AVRDC researchers are looking closer at trichomes, the very fine hairs on tomato stems and leaves. There are different types of trichomes, and by checking the trichome type on more than 225 accessions of *Solanum galapagense*, *S. cheesmaniae* and *S. pimpinellifolium* (wild relatives of tomato) and conducting assays with whitefly and spider mites, breeders were able to rapidly identify tomato accessions resistant to these pests.



On 7 January 2016, Mohamed Rakha, Postdoctoral Fellow in Tomato Breeding, explained to colleagues how his research is uncovering strong associations between acyl-sugar content, type IV trichome density and insect resistant.

“High levels of whitefly and spider mite resistance were found in accessions of all three species,” said Mohamed. “Insect resistance in these accessions is noteworthy because these species are closely related to cultivated tomato, so introgression of whitefly resistance should be relatively straightforward.”

Whitefly/spider mite-resistant accessions could offer a future solution to other important tomato pests such as South American tomato leafminer and thrips.

http://203.64.245.61/web_docs/media/newsletter/2016/001_Feb_05_2016.pdf#page=3

Dindymus versicolor found alive on deck

This highly coloured insect was found alive on the deck of the vessel *Hammonia Calabria* by one of the Auckland port Stevedores and was handed on to Quarantine Officer Riv Siulepa.

It appears to be a harlequin bug, *Dindymus versicolor*, which is a species of cotton stainer bug found in south east Australia and Tasmania. It is an attractive insect, up to 12mm long.

These sucking insects have a reputation as a pest in the garden, damaging a wide range of plants. They are known to damage a variety of crops and ornamentals. The New South Wales Department of Primary Industries report they attack, cotton, pome fruits, figs, grapes, Kurrajong, Strawberrys, vegetables, wisteria, dahlia and violets.

In winter they find shelter in dark shady places such as under compost, timber, hedges and fence palings. These are regulated pests when intercepted at the border.

(Monthly Newsletter - Ports News, January 2016)



Inaugural forum for Chairs of Regional Campus Advisory Committee

Speaking at the event, USP's Vice-Chancellor and President, Professor Rajesh Chandra emphasized that a lot cannot be achieved in the regional campuses without excellent chairs and directors.

He explained that the activities of the University were based on the Strategic Plan 2013-2018, which is aimed at transforming USP from a good to an excellent university.

"The University is engaged in lifting the bar in demonstrating that it is among the best in the world and we are doing that through our quality and reputation which is largely through external validation. Accreditation of our programmes is being done by respected international bodies and are using the practice that is among the best in the world," he stated.

According to Professor Chandra, there is a strong focus on the need to serve member countries and to ensure that the range and quality of its services to regional campuses are improved.

CAC Chairs were informed that USP is trying to ensure that the regional campuses are embedded more fully in their own respective countries.

"We want to see that the campuses see themselves as part of their country's overall system, including development of tertiary education. We want to see that they are highly engaged and meeting the needs of that country. It is the responsibility of both the University and the government to have that kind of relationship," he mentioned.

According to Professor Chandra, the University is also trying to ensure that it evolves from being a largely teaching institution to carrying out more research which is relevant and has more impact and contributes to the development of each of its member countries.

<http://www.usp.ac.fj/news/story.php?id=1968>

ACIAR Pacific Regional Programs



In the Pacific ACIAR had commissioned studies to create more resilient and sustainable farming and market systems to address extreme weather events.

In the Highlands of Papua New Guinea (PNG) a cluster projects being developed for sweet potato-based farming systems in the highlands of PNG will help farmers to develop market-oriented production systems that are more resilient in the face of various changes, including adverse weather associated with climate change.

Improving soil health on atolls of Kiribati and Tuvalu, particularly in the outer islands which are most vulnerable to extreme weather-related isolation and extended dry periods, will benefit the growth of food crops.

Across the Pacific islands, taro and cassava are two key crops vital for the food security. An ACIAR project, understanding the responses of taro and cassava to climate change, aims to understand the impact of climate change on the Pacific islands - and on the production systems that are built around them.

Fish play critical roles in the economic development and food security of coastal people and are subject to the vagaries of climate change. Three contrasting case studies of the role of fish in development across the Indo-Pacific will examine whether it is better to place fish in national and regional food systems as, for example, a source or food in the aftermath of natural disasters, as a source of better nutrition, and income for coastal communities through pro-poor development of mariculture.

http://aciarc.gov.au/files/aciarc_climate_change_8_page_print.pdf



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, double-blind 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

Deadline for submission will be 21 October 2016. Guide for authors will be provided upon request. Refer to section on **Submission of Manuscripts** for additional information required on submission.

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