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**For the States of Yap, Chuuk, Pohnpei and Kosrae  
Cooperative Research and Extension Service**



*Chuuk Research Laboratory*

**Report to the Board of Regents of the COM/Land Grant Program**

**June 5, 2009- December 01, 2009**

**W. James Currie, VP-CRE**

## Office of the Vice President:

### Administrative Activities:

- VP-CRE Participated in all COM-FSM Administrative responsibilities such as Committee actions, Cabinet, Program Reviews, Facilities and IDP preparation, Board meetings, efforts to streamline the college functions and budget review and balancing
- VP-CRE COM-LGP Budget for FY'10 was prepared and submitted
- The COM-FSM FY '11 budget in the Performance Based Budgeting format, including the projected CRE budget was prepared reviewed and submitted to the President.
- VP-CRE office maintains a log of all personnel actions and has for the FY'10 budget, provided copies to the Exec. Director with the budget forms. All personnel actions are up to date.
- Following the President's Retreat of May, 2009, and with the concerns over budget balancing there has been an on-going review of programs throughout the college to reduce cost and/or produce better quality programs at the same cost. CRE programs are included. The on-line reporting system and the Excellence in Extension survey will be the basis for the program assessment. Due to enhanced recognition of the program, the Performance Based Budgeting and the inclusion in the Accreditation review, CRE will continue to focus on and improve the assessment procedures for all programs and all states.
- VP-CRE attended the Western Region Extension Directors meeting in Blaine Washington in August where Dr. Murukesan was recognized for his efforts in the Gargey Project in the Awards of Excellence in Extension ceremony.
- One JOCV and one JICA volunteer are due to arrive at Pohnpei CRE in January to continue efforts in Food Processing with an emphasis on fish.
- CRE Budgets were presented as requested with matching fund requests
- All fy'09 accounts are closed and have been reconciled. There are some minor un-reconciled accounts due to non-receipt of receiving reports by the Business Office. This concern across the COM-FSM System has finally led to the recruitment of a Procurement Officer to be in place early this fiscal year. This should improve such situations and improve the Inventory tracking.
- annual Reports are being prepared by VP office based on submissions from all sites
- State Sites have improved their acquisition of project funding from outside sources (see below)
- Personnel issues and the issue of position vacancies have improved although at the moment, there are still too many open positions. (see below)
- Due to the length of time since the last LGP-BOR meeting, there has been considerable travel for all sites. Many of the activities have been under No-Cost TAs meaning that the participation in the activity was requested by and paid for by an outside agency. Pohnpei CRE is especially affected by requests from National Government due to their proximity to FSM offices. This is also a strong indicator that CRE is being recognized by the State and National governments for their technical abilities and their connection tot eh community.

### Project Activities:

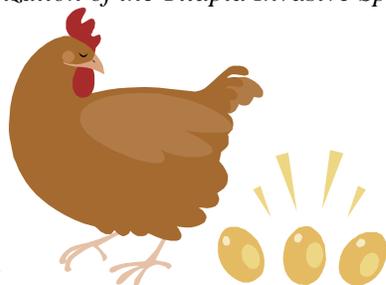
Water Quality: This project is now re-activated after a one year hiatus. The funding available is much reduced for this year due to the host university extracting a 23% Indirect Cost from the budget at the last minute and with no time for the applying department to shuffle their budget allocations. Whereas in the past, 20% of one FTE was included, the COM-FSM allotment can only allow for 10% FTE and very



restricted program actions.

WSARE: The SARE-PDP coordinator organized a regional training for selected Agriculture Extension Agents in August at UoG focused on commercialization of production. He has signed the MOU for the next funding and will focus on the Strategic Plan for Micronesia (including Palau and RMI) plus \$5000 mini-Grant scheme.

- Steven Young Uhk of Yap CRE was awarded \$29,892 Producer/ Professional grant for a project entitled “*Utilization of the Tilapia Invasive Species as a Low cost Protein Feed to Improve Egg*



*Production.”*

- Dr. Virendra Mohan Verma, CRE Kosrae was awarded \$38,220 for “*On-Farm Implementation and Demonstration of Integrated Sustainable Agriculture and Livestock Production Systems for Small-Scale Farmers in Micronesia*”.
- FSM CRE has been awarded a sub-contract with UOG for \$5000 from a project entitled “*Farmer-Chef Connection*” to promote the use of local foods in restaurants and hotel kitchens.

USDA-RI Distance Education Project: A Special Services Contract is on-going with UoG. Phase 3 of this project is completed. Phase IV and Phase V are in action and reported following this synopsis.

Communities Youth and Families at Risk – Kosrae CRE continues to participate under sub-contract with the University of Guam for entrepreneurial training for youth. In the next round of competitive applications, FSM will submit a proposal on their own behalf.

Sun-Grant – VP-CRE office is administering a sub-contract with the Research Center of Univ. of Hawaii to collect and submit for analysis coconut oil from trees at different elevations and under different soil conditions. The analysis will be for factors effecting energy levels in the oil as an alternate fuel.

CTA/SPC Regional support – following the regional Institutional Communication Policy workshop in Fiji VP-CRE successfully acquired: The Essential Electronic Agricultural Library (TEEAL) from CTA. Once received, this will be replicated on external hard drives for distribution to all State campus libraries for researcher, staff, student and faculty use.

Food and Agriculture Organization – Response to Soaring Food Prices – Special project commissioned from FSM Dept. of Resources and Development for the organizing of the distribution of planting materials to less fortunate families and farmers throughout the FSM with special consideration for outlying islands and for nutritional quality of local produce. This has been a very difficult agency (FAO) with which to work. Justifications and criteria by which they work has been a major constraint within our system especially with the National budget office involved. The project funding period is almost complete and most of the funds have still not been expended. Actions to date have provided planting materials from Pohnpei to Kosrae and to the southern atolls of Chuuk as well as local farmers in Pohnpei. Distribution is currently taking place to the southern atolls of Pohnpei.

## COM-FSM CRE On-Line Activity Reports FY'09

Since not all reports show up if selected by Activity Dates these reports are the total by site since 10.01.08 to 09.30.09

State	Agent	Number of reports fy'08	# of reports in fy'09
<b>Yap</b>		41	81
	Steven Young Uhk	2	29
	Bernie Minginug	14	15
	Martin Ruwniyol	8	0
	<b>Only Research has been reviewed because I do that</b>	V.K. Murukesan	17 (Res. 8) (Ext. 9)
	Stan Fal'Mngar	0	15
<b>Chuuk</b>		18	35
<b>Reports submitted by Yosko Kim include activities of other agents who may not have a password or access to the on-line ssyte.</b>	Ansina Kony	3	1
	Yosko Kim	3	11
	Eva Capella	8	23
	EFNEP Extension Ass't.	0	0
<b>Pohnpei</b>		209	305
<b>One report from Manuj Nair and one from Steven Young Uhk are listed with Pohnpei since that is the local of their activities.</b>	Tobias Tamerlan	43	35
	Marcellino Martin	48	51
	Alpenster Henry	26	57
	Welsihter Hagilmai	14	43
	Justino Smith	9	4
	Engly Ioanis	24	67
	Jackson Phillip	3	0

	Augustine Primo	31	30
	Mark Kostka	11	16
<b>Kosrae</b>		49	80
	Jackson Albert	12	9
	Kenye Killin	1	13
	Hellen Jonas	0	1
	Shirley Jackson	13	17
	Julie Timothy	8	19
	Virendra Mohan	Res. 1	4
		Ext. 13	15
	Paliknoa Singrah	0	2

\*\*\* Please note\*\*\*

**FY'08 figures are in the first column**

**There may be some overlap with FY'09 since some of the reports submitted in fy'09 are for activities in fy'08 however when searching by activity date, many reports were missed since agents did not always report activity dates and it was noted that the program accepts incorrect activity dates such as one report that indicated a starting date of 10/01/08 with a termination date of 09/30/08**

**FY'09 figures are in the last column.**

**\*\* by this date each agent should have at least 44 reports submitted\*\***

**Extension Specialists should have 12 Extension Reports and 4 Research Reports for each project funded.**

**Observations:**

- 1. There has been improvement in total numbers of reports at all sites in fy'09.**
- 2. The poorest reporters seem to be the Youth Extension Agents followed by CRD agents**
- 3. The most prolific seem to be the Agriculture agents especially in the Small Island Agriculture Systems Program area**
- 4. The researchers seem to have different criteria whereby they report research activities. Dr. Muru reports by individual Hatch project where-as Dr. Verma reports all projects in a single report.**
- 5. Chuuk State is severely limited due to the shortage of staff and the classification of staff with passwords to the on-line reporting system. Many of the staff members have been advised to report under Yosko Kim's address until appropriate access can be arranged.**
- 6. Supervisors are not reviewing the reports as expected. Even at National Campus, it is very difficult to get consistent access to the data base once the students begin classes. It is even more difficult in the state sites. To edit one report takes four moves and requires at least 15 minutes on a good day.**

## **Major Administrative Concerns:**

### **Research facilities:**

1. Pohnpei AES laboratories in Kolonia are ready to occupy when the researcher arrives in January (according to Facilities Director Francisco Mendiola). CES facilities that are to occupy the same building are not ready nor authorized for funding at this point.
2. The Micronesian Plant Propagation Research Center in Kosrae is ready for opening with only minor additions to be completed. Dr. Verma is moving equipment and materials back in this month with expected opening early in the New Year. One new Hatch Grant is ready for submission.
3. Chuuk AES site is open and operational although there are minor issues to resolve with the contractor. COM-FSM has provided a 300KW generator for Chuuk Campus including the AES facility. Two Hatch Grants and one TSTAR grant have been submitted.
4. Yap AES – Greenhouse Facility that was damaged in Typhoon is being renovated thanks to funds provided through LGP carry-over funds.

## **Personnel:**

### **Hiring:**

1. Pohnpei:
    - AES –PNI Researcher Dr. Josekutty will arrive January 04, 2010
  2. Chuuk:
    - CRE state Coordinator position- finally one potential Chuukese applicant to be interviewed this week.
    - Agriculture Agent position in Chuuk has been advertised again with one Certificate in Agriculture graduate applicant.
    - Youth agent position open – no applicants filled by Special Contract
    - CRD position open
    - – one applicant under qualified but awaiting Campus review
    - Research Assistant – person terminated with cause, position being advertised after BOR meeting
  3. Kosrae:
    - Clerk/typist position open
  4. Yap:
    - Agriculture and Natural Resources Agent – one applicant of low qualifications to be reviewed while I am there for BOR meeting
    - AES Assistant – terminated with cause – position to be announced after the BOR
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Staff Travel: Due to the length of time between BOR meetings this time there are many trips to report. Following is a list of all travel: those with outside funding are noted as NC

TA Number	Dates	Staff involved	Fund source	Reason	cost
TALG10-1011	12/05-12/15	VP-CRE	AES/ CES COM-FSM	COM-LGP BOR and COM-FSM BOR plus review Yap programs	
TALG10-1010	11/24 - 12/23	Augustine Primo	Chinese Embassy	Crop production training in China	NC
TALG10-1008	12/4-12/11	Augustine Primo		VOIDED due to invitation to China	
TALG10-1004	12/04-12/11	Tobias Tamerlan	S/L match	Provide Extension services to Southern PNI islands	
TALG10-1005	12/04-12/11	Dohra Semes	S/L match	Provide Extension services to Southern PNI islands	
TALG10-1006	12/04-12/11	Welsiher Hagilmai	S/L match	Provide Extension services to Southern PNI islands	
TALG10-1007	12/04-12/11	Mark Kostka	S/L match	Provide Extension services to Southern PNI islands	
TALG09-1055	8/18- 8/26	Jackson Phillip	SARE	Present SARE training in UoG	NC
TALG09-1056	8/20 8/26	Lolita Ragus	SARE	Attend WSARE training at UoG	NC
TALG09-1057	8/19- 8/25	Steven Y. Uhk	SARE	Attend WSARE training at UoG	NC
TALG09-1053	8/20 8/26	Jackson Albert	SARE	Attend WSARE training at UoG	NC
TALG09-1054	8/20 8/26	Mark Kostka	SARE	Attend WSARE training at UoG	NC
TALG09-1058	09/12 09/21	Dr. Verma	Hatch + FAO	Participate in ProMusa World Conference in China	
TALG09-1050	08/12 08/25	Dr. Muru	Hatch, S/L, and Noni	Attend and present at International Congress on Ecology	
TALG09-1049	06-20 07/01	Engly Ioanis	SPC	Attend Pacific Heads of Veterinary and Animal Health Production Services mtg	NC
TALG09-1046	6/15 7/10	Jackson Phillip	H2O + Personal	Attend H2O Quality Planning meeting plus personal leave	
TALG09-1045	06/19 06/22	Alpenster Henry	S/L Match	To Mwoakilloa to assess conditions of swamp taro & provide Extension Services	
TALG09-1044	06/19 06/22	Mark Kostka	S/L Match	To Mwoakilloa to assess conditions of swamp taro & provide Extension Services	
TALG09-1039	05/29 06/11	Dr. Muru	Noni & Gargey	Attend Program managers meeting and to hand carry samples	
TALG09-1038	07/16 07/27	VP-CRE	AES/ CES	Attend Western Region Directors Meeting and Extension Middle Managers meeting	
TALG09-1051	07/21 07/24	Sonny Padock	VP-CES Chuuk CES	Assist Chuuk CES with procedures and training	
TALG09-1052	08/21 08/27	VP-CRE	SunGrant and VP	Set up SunGrant project tin Kosrae and attend COM-FSM BOR meeting	
TALG09-1064	09/22 09/28	Mark Kostka	Chinese Embassy	Attend China-Pacific ICs Ag. Cooperation Forum	NC
TALG09-1059	09/11 09/20	VP-CRE	SPC/CTA	Attend Communication management meeting in Fiji	NC
TALG09-1065	09/24 10/07	Dr. Verma	ADAP	Food Security training in Mwoakilloa Included CES PNI Staff – Engly Ioanis, Welsi Hagilmai, Alpenster Henry on CES funds	NC
TALG09-	09/26 10/01	Engly Ioanis	OIE	Attend OIE Veterinary Assessment Conference	NC
No TA	11/14 11/22	Engly Ioanis	OIE	To attend follow-up meeting and 26 <sup>th</sup> Conference of OIE regional commission	NC

## **Announcement from CTA**

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Dear Mr. CURRIE,

On behalf of the Technical Centre for Agricultural and Rural Cooperation (CTA), I am pleased to inform you that the application of the College of Micronesia to acquire The Essential Electronic Agricultural Library (TEEAL) has been approved by CTA.

As a result, CTA will soon be forwarding the application to Cornell University, the producers of the TEEAL database, for further action.

It is our hope that the database will contribute to improving access to global literature for agriculture and rural development.

Yours sincerely

**Madjiguène Ndiaye**

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**College of Micronesia-FSM, Agricultural Experiment Station, Yap Campus**

**Report for the COM-Land Grant Board of Regents**

Agricultural Experiment Station generates knowledge through strategic research to enhance agriculture, natural resources and families and communities in Yap. Its mission is fueled by close ties with Extension, State agencies, community groups and other stakeholders as well as support from local government.

Current research brings together four Knowledge Areas under Small Farms. They are:

205 – Plant Management Systems

212 – Pathogens and Nematodes Affecting Plants

216 – Integrated Pest Management Systems

601 – Economics of Agricultural Production and Management

**Projects**

***Nematode Project:*** Field experiment to test the efficacy of soil Solarization to control the root-knot nematodes on eggplants completed. After seven months of growth, on an average each plant showed 62 percent increase in fruit yield when compared to the data from the first cycle of experiment. Based on the above findings, one scientific poster was presented during the 10<sup>th</sup> International Congress of Ecology held in Brisbane. This Hatch Project is successfully completed.

Invited to attend and contribute to the Phytosanitary Capacity Evaluation workshop organized by the SPC for the quarantine officers in the FSM.

***Noni Varietal Evaluation Project:*** Collaborations with Hawaii Agricultural Research Corporation helped to carryout necessary assay to study the chemistry of noni fruit cultivars. Laboratory analysis for three important chemical contents/properties – polysaccharides, polyphenols and antioxidant activity – revealed significant differences among the cultivar forms of noni varieties. Results substantiate farmers’ traditional knowledge on the potency of noni cultivar forms which help to tap more potent forms for traditional use and commercial marketing.

***Noni Project:*** Under the extension component of noni project, noni seedlings are being continuously raised and distributed to farmers. Since September, 1231 noni seedlings were distributed to 15 homeowners. Field management and cultivation assistance are being extended on an ongoing basis. Publication of monthly newsletter had to be discontinued owing to a technical hitch.

World Noni Research Foundation invited me to attend the 4<sup>th</sup> National Symposium on Noni and also to the Research Advisory Board Meeting in Chennai, India.

There are two new publications:

- i) Murukesan, V.K. 2009. *Helping makes farmers idea a reality – Value addition and market development for Yap’s Noni*. In: Proceedings of Noni Search 2008, 3rd National Symposium on Noni, held in New Delhi.
- ii) Murukesan, V.K. 2009. *Noni – A Powerful Adaptogen*. Article submitted to World Noni Research Foundation for inclusion in the souvenir to be released during the 4<sup>th</sup> National Symposium on Noni.

**Gargey Community Outreach Project:** Gargey Community members are actively engaged in vegetable cultivation using simplified micro gardens. Inclusion of fresh garden vegetables in their daily food menu will have some impact in the overall health of the community. This project received an ‘Honorary’ mention during the Western Extension Director’s Award of Excellence in July 2009. The project is recently extended for one more year.

**SwampTaro Nematode Project:** Activities of this project centered on variety identification and evaluation. Out of the 14 cultivars identified so far, six most common cultivars will be selected for further scrutiny, nursery evaluation and field experimentation. Lack of field staff and additional funding hindered the progress of this project work.

**Other extension program:** Yap AES continues to provide training and technical assistance to ‘Island Farm,’ a small vegetable farm established by an expatriate farmer. This small farm is now catering local markets with vegetables like Chinese cabbage, eggplant, okra, pumpkin, bitter melon, watermelon, garden peas, cucumber and sweet and hot peppers.

## Personnel

- i) Research Assistant, Katherine Assistant’s service has been terminated
- ii) Two students are attached with Yap AES under Work Study Program



**Noni varietal forms:** People in Yap identify potent noni varietal forms primarily based on the leaf morphology. Our research now substantiates their traditional knowledge



Watermelon



Cucumber



Eggplant



Sweet pepper

***Island Farm:*** Yap AES continues to provide training and technical assistance to ‘Island Farm,’ a small vegetable farm established by an expatriate farmer. Once a rare commodity, fresh vegetables are now readily available for Yapese community.

**MICRONESIA PLANT PROPAGATION RESEARCH CENTER KOSRAE AGRICULTURAL  
EXPERIMENT STATION COOPERATIVE RESEARCH AND EXTENSION COLLEGE OF  
MICRONESIA-FSM, KOSRAE CAMPUS**

Date: November 18th, 2009

**Report for the period of August-October 2009**

**Summary of Activities**

- **Total 4 active research and extension projects,**
- **Approved one new Hatch project,**
- **Extended one Hatch project for a year,**
- **Approved one competitive grant award for new extension project by the WSARE-USDA,**
- **Organized two showcases of taro and sweet potato seedlings,**
- **Produced more than 9,000 elite seedlings,**
- **Distributed more than 4,000 seedlings to 40 interested farmers,**
- **Developed two banana germplasm mother blocks/demonstration farms,**
- **Building renovation project will be completed in the month of November 2009,**
- **Organized a one-week training workshops at Mwoakilloa,**
- **Presented a research paper in International Symposium at in Guangzhou, China,**
- **Developed two multicolored, Farming and Production Guides for Growers on taro and sweet potato,**
- **Developed a fact sheet on Sweet Potato Cultivation: Management Techniques,**
- **Participated in the Curriculum Committee discussions, and**
- **Submitted total 19 reports.**

**Details of Activities**

The Kosrae Agricultural Experiment Station concentrated on four research and extension projects viz., Multiplication of Staple Food Crops through Micropropagation and In Vitro Germplasm Conservation in Kosrae State; Multiplication and Distribution of Banana, Taro, Sweet Potato and Noni in the State of Kosrae; Agricultural Development in the American Pacific (ADAP) Regional Food Security and Sufficiency Project, and On-Farm Implementation and Demonstration of Integrated Sustainable Agriculture and Livestock Production Systems for Small-Scale Farmers in Micronesia during the reporting period.

A Hatch proposal on In Vitro Selection for Salt Tolerance in Taro has been approved by the USDA.

Another Hatch project on Multiplication of Staple Food Crops through Micropropagation and In Vitro Germplasm Conservation in Kosrae State has been extended for a year to wrap-up the experiments and conclude the research results.

The Western Region Sustainable Agriculture Research and Education-United States Department of Agriculture (WSARE-USDA) has approved Competitive Grant Award for 'On-Farm Implementation and Demonstration of Integrated Sustainable Agriculture and Livestock Production Systems for Small-Scale Farmers in Micronesia' project. Preparation has been started for initiating the project work. Showcases of taro and sweet potato seedlings were organized in Tafunsak and Lelu Municipalities during the State-fair for farmers, growers and exporters. Seedlings of taro and sweet potato were made available for on-site distribution.

The Kosrae Agricultural Experiment Station continued seedling distribution and farm visits for on-site recommendations. During visits, technical assistance and support were provided to farmers on new and innovative farming techniques and practices. Transfer of tissue-cultured plantlets from growth room to greenhouse for acclimatization; and from greenhouse to nursery for maintenance, and distribution are being continued. In the reporting period, more than 9,000 elite seedlings of banana, taro and sweet potato were produced; and more than 4,000 seedlings were distributed to 40 interested farmers.

Two selected sites at Malem and Lelu Municipalities were cleared and 200 plants of 26 banana varieties were planted in 2' x 2' x 3' holes filled half at the base with compost and with amended soil at the top-half. All the banana plants are showing healthy growth at the banana germplasm mother blocks/demonstration farms and are being maintained regularly.

A training workshop was organized for Agricultural Development in the American Pacific (ADAP) Food Security Project. Extension agents and farmers were trained in food security practices in Mwoakilloa. Sweet potato and soft taro plants were hand carried and used for the hands-on trainings. Fifty-nine local growers, farmers including youth, and women and extension staff attended and participated in the training workshop. The training workshop was conducted in both Mwoakillese and English languages. Participants were evaluated two times, once prior to and once after the training sessions of the workshop. Evaluation data were analyzed and presented in the detailed report for the workshop, which was submitted separately to appropriate authorities. Appreciation and encouraging comments were received from the ADAP for the great work done and nicely documented reports.

The ProMusa and Bioversity International, France organized an ISHS/ProMusa International Symposium in Guangzhou, China. The scientific review committee accepted the research paper on 'Evaluation and Tissue-Culture Conservation, Multiplication and Distribution of Rare and Carotenoid-Rich Fe'i Banana Cultivars in Micronesia' for presentation. Attended, actively participated and the research paper was presented during conference (under session 1: Novel approaches to understanding, conserving and using banana genetic diversity). The paper will be published in the peer reviewed the Acta Horticulturae proceedings published by ISHS. The presentation and publication is a product of approved hatch project on 'Multiplication of Staple Food Crops through Micropropagation and In Vitro Germplasm Conservation in Kosrae State'.

Two multicolored, Farming and Production Guides for Growers on taro and sweet potato were developed in English. These guides have all useful facts for cultivation of taro and sweet potato (like land preparation, planting material preparation, planting material storage, methods of planting, time and distance of planting, replanting, fertilizer or compost application, cultivation, weeding, control of diseases and pests, and harvesting etc.)

A two-page fact sheet was developed on 'Sweet Potato Cultivation: Management Techniques'.

Participated in the Curriculum Committee discussions as a member.

Seven research and extension reports were prepared and uploaded on the College of Micronesia Reporting website. Three monthly, one quarterly and one COM-FSM annual, one USDA annual reports, one Individual Plan of Work, one Major Functional Responsibilities, one Audit Report, two Time and Effort Reports, one workshop report were prepared and submitted through e-mail attachment to appropriate authorities.



Project: Multiplication of Staple Food Crops through Micropropagation and Germplasm Conservation

Project: Assessment of Grafting for Rapid Production of Elite Grafted Lime Seedlings Project: Renovation of Research Facility for Plant Biotechnology in Kosrae State



Project: Agricultural Development in the American Pacific Regional Food Security and Sufficiency



# COM Land Grant BOR Update

## I. Aquaculture

Aquaculture Agent revisited the pearl farm in Pakin with two Japanese experts to inspect the farm and conducted a community meeting regarding the transferring of the pearl farming activities or for the full operation of the farm to the Pakin community.

The preparation for spawning induction and larvae rearing for sea cucumber was conducted at Nett Point hatchery. There were around 20,000 juveniles sea cucumber collected from this trial run and were transferred into the raceway tanks and monitor. The hatchery staff has to be ensured the food is available for the juveniles therefore, the micro-algae culture were prepared almost daily for feeding purpose. The running seawater should be always available and to keep the water temperature constant and warm and therefore, the staff are always taking responsibility to come on week-ends to make sure the condition of the hatchery is on standard operation.

## II. Small Island Agriculture Farming Systems

CES Agents visited 8 farmers and carried-out 15 demonstrations on crop activities such as fertilizer applications and frequency, spacing, pruning, and selection of planting materials, how to administer medication, castrate and teeth clip.



*Extension agent demonstrating to farmers' castration procedures and safe restraining of pigs*

CES Agents conducted and facilitated three workshops on Mwoakilloa for one week. In attendance were local chief, his cabinet members, local council men, homemakers, men and children. About 90% of Mwoakilloa residence attended presentations, and hands on in EFNEP programs, crop and livestock, and special program funded by ADAP program for the Micronesian Islands. At the end of the week, a short ceremony was held in acknowledgement and recognition of all who successfully complete each workshop requirement. There were 28 men/women completed the EFNEP programs and 55 participants received certificate of completion for the ADAP project.



*Hands-on for farmers in plot preparation and seedling transplants in foam cups*

CES Agents assisted 389 farmers whom requested assistance from CES PNI through demonstrations on how to sterilize soil for vegetable soil media, sowing and tinning vegetable seedlings, transplanting seedlings, spacing between plants and planting beds in the field, mulching, and fertilizer application with recommended amount. Discussion based on every demo above was also conducted with the participants to the demonstrations. Documents on crop profile for selected crops were disseminated among the farmers for them to adopt and do the work on continual basis. Additionally some farmers do not have suitable area to do commercial farming thus were given information on planting in container with information such as amount of soil, compost, sand, and commercial fertilizer; and de-worming, antibiotics treatment, teeth-clipping, iron, pregnancy test, and castration.

World Food Day 2009 activities involved registering of farmers and their exhibit crop, judging of crops, local for vegetable crops and livestock, and final judging and presentation of winner, booth presentation and cooking demonstration. A total of 587 individual entries were handled and processed during the world food day activities. The World Food Day 2009 was a success, though there were still more room for improvement



*Yellow flesh bananas for distribution; show of manly hood- a 389 lbs year old yam of one vine took first prize*

### III. Food, Nutrition, and Health

EFNEP program conducted one 24 hours food recall surveys in Sekere involving 39 participants

World Food Day 2009 activities took place at the State Agriculture Station on October 15-16, 2009. Twenty-three homemakers registered for the world food day cooking contest, however, 13 participated and 8 won prizes.



*CES Nutrition agents coordinator world food day cooking contest and prepared local dishes for taste testing*

Traveling to Mwoakilloa, EFNEP agent conducted trainings in the EFNEP program and concluded the one-week training with a short ceremony held in acknowledgement and recognition of all who successfully complete the EFNEP training requirements. There were 28 men/women completed the EFNEP programs and received certificate of completion.



*CES agent presentation on EFNEP program and Mwoakilloa EFNEP women group serenading during closing ceremony*

#### IV. Others

- CES PNI continue to hold weekly staff meeting on Mondays, participated in subcommittee meetings and activities including, PNI Campus, NGOs, State Collaborative Agencies, etc. Conducted and participated in communities, agencies and boarding meetings in order to promote CES PNI programs and collaborated with other NGOs in order to link up programs and promote healthy living, improved environment socially, culturally and economically.

- CES staff submitted 45 on-line reports, and 25 on-line reports have been edited and approved from the subordinate staff
- CES Agents attended an afternoon workshop on grant proposal writing sponsored by Rural Development Program
- EFNEP staff attended a one-week workshop on Food Safety and Food Processing sponsored by SPC.
- Three CES PNI staff shared their training experience with rest of CES staff through prepared presentations and discussion during the month
- Two CES PNI staff attended a training on vulnerability and adaptation survey in preparation for the FSM wide outer islands survey to be conducted first of 2010.
- Coordinator attended workshop on Animal Health Communication: the way forward held in Singapore.

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## COM-FSM CHUUK CAMPUS/CRE 2009 REPORT



Taro from PNG and Hawaii



Sweet potato from Fiji



Agroforestry nursery in Patta



Gardening class of  
Special Ed students

### Small Island Agriculture

This program caters to the needs of sustainable farmers and gardeners (of whom 600 adults and youth were direct contacts) to address food security issues concerning improving soil fertility using local plant materials, providing planting materials to growers, conserving local germplasm of staple rootcrops, among others

- Use of local plants like *tangan-tangan*, *Sesbania* and farm residues as fertilizers
- Proper site selection for growing plants
- Composting using plant residues
- Mulching with fresh or dried plant residues or composts
- Planting traditional crops such as taro, sweet potato, pineapple, breadfruit, cassava in the gardens
- Farmers and gardeners seeking for vegetable seeds for planting

- Stronger ties with the Department of Agriculture for collaborative activities like sharing sweet taro and sweet potato collection and morphological characterization
- Special Education training of mute and deaf in gardening
- Furnishing the newly-built agricultural research station in Weno
- Two research proposals developed and now under peer review: . Sweet potato Collection, maintenance and Utilization and 2. Production and Profits of Cassava Intercropped with Selected Vegetables
- Establishment and maintenance of nurseries in Patta (3) and Tol (1)
- Prepared a short paper-Rapid Appraisal: FSM-Chuuk's Production-Marketing-Consumption System of Local Produce and one draft of flyer entitled: What is Organic Crop Production?



Cooking demo at Chuuk CRE



Sewing graduates at Chuuk CRE



Handicraft training graduation at Tonoas



SUCCESS STORY: Husband of a graduate selling her sewn mumuus



Youth-at-Risk training graduates at Chuuk CRE

## Families, Youth and Communities

This program focuses on providing the families, youth and communities relevant skills and opportunities as indicated below to be responsible and caring for the welfare of the entire Chuuk, FSM and Micronesia:

**Culinary Arts:** Sixty participants learned to measure ingredients and cook take out popular foods like spaghetti, sugar cookies, pancakes, banana cake, white bread and curry chicken. They saved money from preparing their foods for special occasions or selling to neighbors.

**Sewing:** Sixty participants learned to make patterns and sew boys' and men's shorts, pants and polo shirt and girls' and ladies skirts, ordinary blouses and muumuus. They saved or earned from this training for their respective families.

**Handicrafts.** Sixty participants either saved or earned some incomes for their families from learning basic handicraft skills in preparing different decors, leis and necklaces.

**Youth and Community Development Programs.** Seventy participants consisted of youth with family and community concerns like being drop-outs, trouble makers. With assistance from the experts, most of them passed the evaluation and were recommended to go back to schools.



Demonstration of how to prepare tuna mango sashimi with coconut milk

## Food, Nutrition and Health

Health is wealth thus this program with 466 direct contacts of adults and youth addresses the need to improve and/or maintain the health of the Chuukese population through the indicated health and nutrition interventions:

- Through nutrition and health classes i.e. EFNEP, clients learned that food, diet, physical inactivity and stress lead to NCD – Fefen, Institutional Land Grant, Romalum, Polowat
- Food-borne diseases reduced in areas where food safety was taught
- Conducted School Nutrition Enrichment program to educate community and family through students from Pentecost Light House Academy, Saramen Chuuk Academy, SDA health classes.
- Participated in Inter-agency Diabetes Celebration, World Health Day parade, International Women's Day advocating local nutritious foods, healthy diet in preventing NCD thru food display and demonstrations
- Demonstrated use of local foods i.e. fish/sea foods, fruits and vegetables in preparing recipes i.e. tuna sashimi and others in the communities and COM's Foundation Day.
- Provided dietary counseling, follow-up, and BMI (Body Measurement Index) on previous clients

## **Resident Instruction in the Insular Areas: CARIPAC**

Since 2005, the Vice President Cooperative Research and Extension (VP-CRE) in collaboration with Vice President Instructional Affairs (VP-IA) has received funding directly under the US Department of Agriculture Farm Bill. This fund is for educational programs in Agriculture and Natural Sciences and Food related sciences. This program is known as CARIPAC. The acronym refers to the US affiliated areas in the Caribbean and the Pacific regions. The institutions involved are: University of the Virgin Islands; University of Puerto Rico; University of Guam; American Samoa Community College; Northern Marianas College; Palau Community College; College of the Marshall Islands and COM-FSM.



***Pohnpei Campus Agriculture Certificate students gathering soil samples. Alten Lorens – holding shovel, Moyleen Tolena, Valentine Chipen & Wainer Kihleng***

Phase I of CARIPAC emphasized an evaluation of the institutions readiness to prepare and deliver programs through Distance Education. This evidence led to a change to improving facilities and systems to deliver programs through conventional means. Accomplishments through Phases II and III included the development of a Certificate in Agriculture program at Pohnpei Campus and the provision of the first ‘Smart-Boards’ to all campuses. Three staff or students from COM-FSM participated in training at the Univ. of Puerto Rico and the Chair for Agriculture Program was sponsored to attend the

US National Small Farms Conference. Two students received scholarships to attend University of Guam.



***Agriculture Instruction Chair, Kiyoshi Phillip conducts recruitment at PICS High School***

In Phase III and increasingly in Phase IV and V, the focus is changing to include training for Public School teachers and programs leading to improving the transition from High School to college and retention programs within the college. To accomplish these goals a project coordinator has been hired. Phase IV and V are funded through signed Memoranda of Understanding with the University of Guam as the Program Administering Institution.

Phase I started with just over \$48,000. Currently Phase IV provides \$80500 and Phase V increased to \$86,468.50. This increase has allowed the planned purchase of scientific, instructional and connectivity equipment, training and scholarships. This year CariPac funding will provide 1 scholarship at the University level, 5 for AS students and 5 for students of certificate programs in each of Kosrae and Pohnpei. Criteria for these scholarships will be finalized and announced before the beginning of the spring 2010 semester. As part of our recruitment and retention we are arranging a trip for outstanding agriculture students to see what facilities are available in Palau and Guam; to help encourage our students to consider careers in agriculture, entrepreneurial actions or continued studies at the University of Guam as part of our CariPac collaborative effort.

## **Water Quality (first-flush divergent demonstration) at the 2009 World Food Day Celebration:**

More than 100 individuals were on hand to witness a first-flush divergent demonstration. Many in the audience expressed surprised at the simplicity and effectiveness of the system and most requested further demonstration in their community. In the audience were a high ranking FSM Government official, who immediately catch-on the idea and took upon himself to explain the concept to other audiences; two Chinese Embassy officials; two Americans; farmers and homemakers; and 8 high school students from one of the low coral islands. We conducted 5 demonstrations and explaining to interested individual and groups. In additions we had on display of water quality materials and handouts.

We conducted the first public demonstration on how to remove contaminants from catchment water during the 2009 World Food Day held October 16, 2009 at the Pohnpei State Botanical Garden (Agriculture Office). The first-flush divergent is a simple and effective means to sanitize drinking water, in effect separating rainwater with contaminants, e.g. bird-droppings, dust, and other foreign materials before the rest of the water is stored for consumption. To demonstrate the effect we used Kool Aid powder spread over a slanted roof and then washed it down with water. As the water is discharged colored water is collected in the first container and the rest, without the color-effect of the Kool Aid, is collected in the second container.



The divergent mechanism is by gravity with the use of a “V trap” to prevent overflow of contaminated water into the catchment. The guideline is to divert 10 gallons of water from a 10,000 ft<sup>2</sup> of roof. To allow for the process to repeat itself the next time it rains a small hole is made on the cap of the divergent pipe where collected water is drained. The cap should not be glued to allow for removal of debris and other materials from the divergent system.

Thomas Gonzaga of the Maintenance Division was requested to assist and he did a good job in setting up demo unit and did most of the explanation and answering question during the demonstration. That was a good example of team-effort and it should be noted without Thomas we could not have conducted the demonstration.

For more information or comments please call the Office of the Vice President CRE: 320-8181 or send email message to [jphillip@comfsm.fm](mailto:jphillip@comfsm.fm).

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