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*College of  
Micronesia-FSM*



*Cooperative  
Research and  
Extension (CRE)  
A Component of*



*College of  
Micronesia Land  
Grant Program*

*Funded by:*



**The Importance of Careers in Agriculture**

In light of misleading recent published articles, AgCareers.com wanted to share some current statistics regarding education and careers in agriculture.

The value of agriculture-related degrees cannot be underestimated. No other industry can feed the world's population that is growing at a rate where we cannot produce enough food for the number of people. According to research (Feedstuffs, October 26, 2009) our food production must double by 2050.

To do that, graduates in degree programs such as agriculture, horticulture and animal science are needed. According to the latest data from AgCareers.com, 81% of jobs in the ag industry require education beyond high school and almost half require at least a bachelor's degree. According to the AgCareers.com/ AgrowKnowledge Enrollment and Employment Outlook Report in 2008 there was a deficit of 9,317 graduates with agriculture degrees to fill open positions in the US. The [USDA](#) also estimates there are or will be 54,400 annual openings for individuals with baccalaureate or higher degrees in food, renewable energy, and environmental specialties between 2010 and 2015.

Although U.S. unemployment rates remained high in 2011, AgCareers.com experienced a significant increase in jobs posted on the site. In 2011, AgCareers.com had almost 40,000 job openings posted in the United States (up 16% from the previous year). That is more than 3,300 agriculture-related job openings each month.

Agriculture positions are not only production-based, but encompass a broad range such as sales representatives, research scientists, quality assurance, marketing and engineers, just to name a few. People may also be surprised to find out that the average starting salary for a graduate in the ag industry is almost \$49,000 (according to the AgCareers.com/ AgrowKnowledge Enrollment and Employment Outlook Report and the AgCareers.com Compensation Benchmark Review).

Job seekers also feel the agriculture industry is more stable (46%) or as stable (41%) as other industries, according to the last AgCareers.com Job Seeker Survey. For those of us inside the agriculture industry, it is easy to recognize that our careers are rewarding, however we need to do a better job of sharing this with our network and mainstream media. The general public views ag employment as hard work with little pay and limited opportunities as noted by job seekers in the last survey, but we all know this is NOT the case. We encourage you to spread the word of the fantastic opportunities in ag. Please share this via social media, and post your feedback on the AgCareers.com [Facebook](#), [Twitter](#) and [LinkedIn](#).

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**CHUUK CRE WITH PARTNERS IS LOOKING FOR SALT-TOLERANT TARO**

American Samoa Community College (/Community and Natural Resources Division (Principal Investigating Institution), COM-FSM Chuuk Campus/CRE , USDA/ARS/ PBARC and University at Hawaii at Hilo, Hawaii received a two-year grant from the Tropical-Subtropical Agricultural Research (TSTAR) starting October 2011.

This project called Sustainable Giant Taro Production under High Salinity in the Pacific aims to develop salt- tolerant giant taro cultivars for the Pacific islanders affected by high salinity (See photos).



Chuuk CRE received a total share of \$53, 580 for collection of cultivars in four FSM states and their evaluation at greenhouse and a low-lying area where taro could be subjected to salt spray or salt water intrusion.



Abandoned giant swamp taro patch in Romalum

Typical newly planted giant swamp taro in

Presently, twenty cultivars collected from Chuuk atolls are maintained in a swamp while awaiting for greenhouse completion near seashore at Chuuk Campus. Likewise, cultivars from other states are known for collection and evaluation.

**Yap CRE Public Safety/Prisoner Gardening Program –Stan J. Fal’Mngar**

The certificate is a sample of awards for prisoners for participating and completing a CES workshop in gardening. In early November 2011, COM/FSM-CES staffs Martin Ruwniyol, Steven Young Uhk and Stan Fal’Mngar conducted a workshop at the Public Safety Detention Facility. In this first (of 2) workshop, 10 prisoner participants heard about COM/FSM’s formal academic programs, and mostly about informal extension programs in 4H and Youth Development, Aqua/mari-culture and gardening. The workshop

came at the completion of their prison garden in which germination of vegetable seeds take place every month ensuring monthly harvests. Prisoners have ample vegetables each day and they do not wait for the ship to bring in vegetables.



The workshop gave an overview of the College, gardening principles and review of skills and knowledge already practiced in the garden. Their next requested project is in agro-ponic, a small aquaculture system combining agriculture/hydroponic (edible water spinach) grown in gray waters from a fish tank.

**Pohnpei Extension – First-Flush divergent technique can keep your rainwater safe!**

Rainwater is an essential source of drinking water many islands of the Pacific. Despite the widespread use of rain catchment systems, evidence suggests most catchment systems are poorly constructed and not properly maintained. Available safe drinking water is a problem in Palau, FSM, and the Marshall Islands.



Environmental exposure of one or more of the system components (1) collection surface, typically the household roof (2) conveyance component, gutters or pipes or (3) Storage tank would renders the typical catchment system susceptible to microbial contamination (bacteria, protozoa, and viruses). For rainwater catchments to be safe and effective users required an understanding of the best construction techniques and materials, potential water contaminants, how to test for contaminants, and effective decontamination methods.

The ‘first-flush divergent’ consists of an additional component to the rainwater catchment on the house. The additional component diverts the first flush of rain on the roof effectively removing such contaminant as soil and plant particles, dusts, small animals and bird droppings. The divergent pipe, with a plug with a small hole at the bottom, is installed before the storage tank. Initial rainwater is washed into the pipe until it is filled up. The rest of the rainwater then travels to the storage tank. The volume of the divergent pipe should be equal to 10 gallons per 100 square feet of roof: For more information please call 320-8181.

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**Kosrae CRE: INTEGRATED SUSTAINABLE AGRICULTURE AND LIVESTOCK PRODUCTION WORKSHOPS**

Dr. Virendra M. Verma, Project Coordinator organized two one-week workshops for participants for Western Sustainable Agriculture Research and Education (WSARE) project on on-farm implementation and demonstration of integrated sustainable agriculture and livestock production systems for small-scale farmers. Eighty-one participants including agriculture college students, agriculture high school students,



farmers and women attended the workshops. Extensive PowerPoint presentations and hands-on activities were organized to make participants acquainted with tissue culture multiplication, acclimatization, banana cultivation, soft taro cultivation, sweet potato cultivation, diseases and nutrient deficiency symptoms and control, insect and pest control, fertilizer and compost application, harvesting, storing and composting. Seven multi-colored cultivation

guides on banana, soft taro, sweet potato, eggplant, papaya, composting and swine diet were prepared and distributed to participants.

**Agriculture Research: Yap Aquaculture**

Tropical sea cucumbers processed into beche-de-mer have high potential as valuable source of income for Yap and many islands in Micronesia. However, overfishing can lead to high population depletion and species extinction. In order to address these issues, aquaculture (rearing of aquatic organisms) including hatchery (artificial production of juveniles) is considered to be a major contribution to the establishment of the sea cucumber industry.

In late November, 2011, Mr Masahiro Ito from the COM-Land Grant Program in Pohnpei visited Yap to continue his extension work on sea cucumber hatchery and aquaculture development. He was able to assist Yap CRE and the Yap State Marine Resources Management Division in setting up a sea cucumber “habitat simulator” system demonstration. This simple system which imitates their natural habitat can provide sufficient environment for holding adults and for growing juveniles to certain sizes. This is a major step toward sustainable production and export of sea cucumber or beche-de-mer in Yap.



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