



**ADAP**  
Agricultural Development in the American Pacific

*Mwoakilloa*  
*Workshop Report*  
*For*

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

**Dr. Virendra Mohan Verma**  
Principal Investigator  
Kosrae Agricultural Experiment Station  
Cooperative Research and Extension  
College of Micronesia-FSM, Kosrae FM 96944

**INDEX**

<b>S. No.</b>	<b>Description</b>	<b>Page</b>
1.1	Introduction	3
1.2	Purpose	3
1.3	Objectives	3
1.4	Workshop Activities	3-4
1.5	Outreach Material	4
1.6	Outcomes	5
1.7	Evaluation	5-7
1.8	Photographs of the Activities ⇒ PowerPoint Presentations ⇒ Composting Techniques ⇒ Cultivation Techniques ⇒ Closing Events	8-17

## **WORKSHOP FOR THE AGRICULTURAL DEVELOPMENT IN THE AMERICAN PACIFIC REGIONAL FOOD SECURITY AND SUFFICIENCY PROJECT**

### **1.1. Introduction**

- 1.1.1. A five-day training workshop for Agricultural Development in the American Pacific Regional Food Security and Sufficiency Project was organized at the Mwoakilloa Municipal Government, Mwoakilloa, Pohnpei, Federated States of Micronesia and Farmers' Field, Mwoakilloa from September 29th to October 3rd, 2009. Dr. Virendra Mohan Verma, Principal Investigator of the project coordinated the training workshop. The workshop was funded by the grant from the Agricultural Development in the American Pacific (ADAP).
- 1.1.2. Fifty-nine local growers, farmers and extension staff including youth, and women attended and participated in the training workshop, which was conducted in both Mwoakillese and English languages. Dr. Virendra Mohan Verma gave all the presentations in English while Mr. Engly Ioanis of Cooperative Research and Extension, College of the Micronesia, translated in Mwoakillese.

### **1.2. Purpose**

- 1.2.1. The ultimate aim of the project is to increase production of sweet potato, taro and other staple food crops in the Federated States of Micronesia (FSM) and Republic of the Marshall Islands (RMI) to achieve food security and sufficiency.

### **1.3. Objectives**

- 1.3.1. Organize second workshop and extensive hands-on trainings to educate and train local extension staff and farmers at Mwoakilloa, Pohnpei, Federated States of Micronesia in appropriate agricultural practices that will contribute for the Agricultural Development;
- 1.3.2. Distribute acclimatized plantlets of sweet potato and soft taro multiplied through tissue culture at the Kosrae Agricultural Experiment Station;
- 1.3.3. Train-the-trainer and provide recommendations for cultivation of sweet potato and soft taro in atoll conditions.
- 1.3.4. Create awareness, develop skill, and train participants in taro and sweet potato cultivation and composting techniques;
- 1.3.5. Provide technical assistance to develop a sustainable food security system in the FSM and RMI.

### **1.4. Workshop Activities**

- 1.4.1. In the opening ceremony, Extension Coordinator Mr. Engly Ioanis welcomed the participants. Principal Investigator Dr. Virendra Mohan Verma gave a brief workshop introduction.

- 1.4.2. PowerPoint Presentations were given on land preparation, planting material preparation, planting material storage, methods of planting, time and distance of planting, replanting, fertilizer and compost application, watering and maintenance, weeding and harvesting for sweet potato and soft taro, and compost preparation.
- 1.4.3. Extensive hands-on trainings were organized on composting techniques (collection of green and brown material for composting, shredding of green and brown material for composting, compost preparation), cultivation techniques (land preparation: clearing, plowing and flattening, layout designing for sweet potato and taro cultivation, and application of compost as top dressing, bed preparation for sweet potato and taro cultivation; planting: planting material preparation, planting material storage, methods of planting, time and distance of planting, replanting, fertilizer and compost application, watering and maintenance, weeding and harvesting).
- 1.4.4. Participants were encouraged to ask question any time during the workshop. Extension Coordinator Engly Ioanis and Alpenster Henry provided their services to translate participants' questions in English from Mwoakillese and vice-versa. This problem solving session was great and participants felt satisfied to get answers of their every question and concern. There were more than 30 questions related with tissue culture, acclimatization process, maintenance of plantlets, cultivation, supplied varieties, quality production, composting, fertilizer application, planting techniques, nutrient deficiency symptoms and their control etc.
- 1.4.5. All the outreach materials were provided to each participant.
- 1.4.6. Participants were evaluated two times, once prior to and once after the training sessions of the workshop. Evaluation data were analyzed and graphical summary is presented in the next section of this report.
- 1.4.7. In the closing ceremony, Extension Coordinator Mr. Engly Ioanis gave thanks to the participants for their heartily and active participation. The Chief Magistrate of Mwoakilloa, Hon'ble Ruly Neth gave closing remarks and distributed the certificates of achievement to the participants.

## **1.5. Outreach Material**

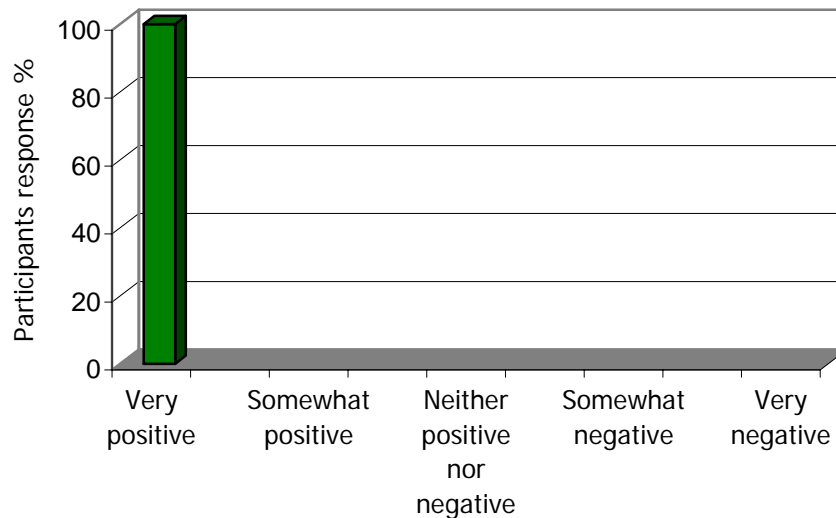
- 1.5.1. Two multicolored, Farming and Production Guides for Growers on taro and sweet potato were developed in English. These guides have all useful facts for cultivation of taro and sweet potato (like land preparation, planting material preparation, planting material storage, methods of planting, time and distance of planting, replanting, fertilizer or compost application, cultivation, weeding, control of diseases and pests, and harvesting etc.)
- 1.5.2. A two-page fact sheet was developed on 'Sweet Potato Cultivation: Management Techniques'.
- 1.5.3. Two easy-to-understand, before-and-after questionnaires with clear directions and specific questions to evaluate the response and outcomes of the training workshops, hands-on trainings and demonstrations were developed.

## 1.6. Outcomes

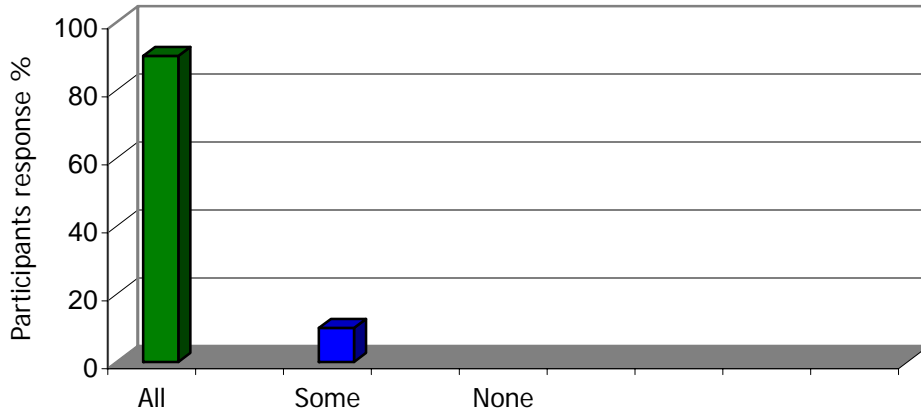
- 1.6.1. Encouraging outcomes of this training workshop are that all the participants showed positive attitudes and zeal for learning techniques and farming aspects that would help to increase production of sweet potato, taro and other staple food crops.
- 1.6.2. Most of the participants shared that this was very first time demonstration and training on composting and cultivation techniques in Mwoakilloa and first time they learned about composting, top dressing and bed preparation.
- 1.6.3. The participants admitted and evaluation proved that this training workshop has increased their knowledge and awareness. It has developed their agricultural abilities and skills, and they are very enthusiastic and eager to use gained knowledge in their fields to serve their communities.
- 1.6.4. Moreover, as a training byproduct we have developed one sweet potato and taro farm, which would serve the needs of the particular family and would also stand as an agricultural model for other people in the community and would encourage them to establish their own gardens.
- 1.6.5. Two easy-to-understand, before-and-after questionnaires with clear directions and specific questions to evaluate the response and outcomes of the training workshops, hands-on trainings and demonstrations were developed and successfully used.

## 1.7. Evaluation

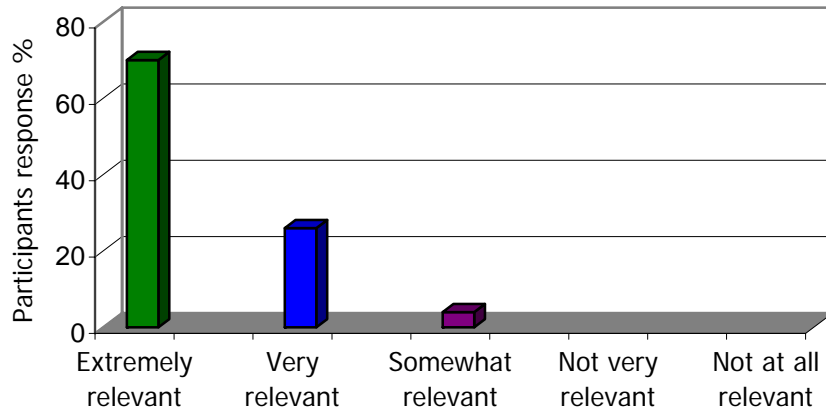
- 1.7.1. What effect do you believe this workshop would have on your performance regarding sweet potato and soft taro cultivation, and composting?



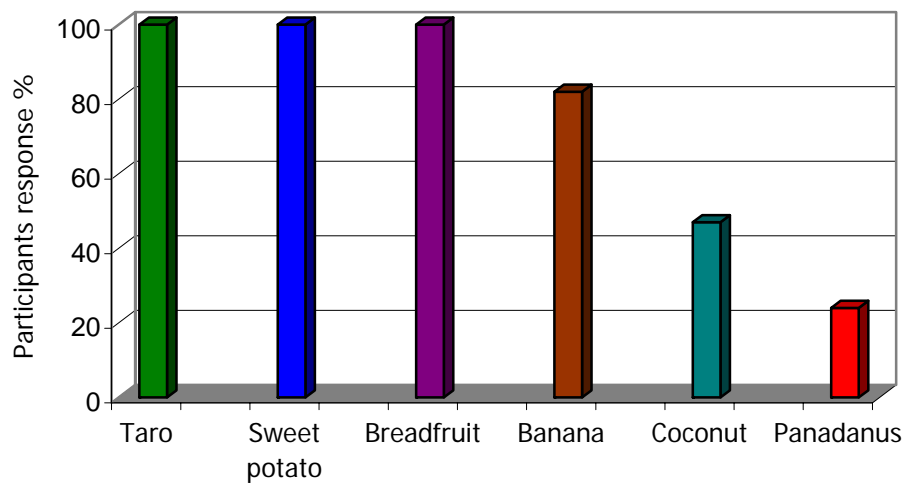
1.7.2. How much of the knowledge and skills obtained from this workshop would you use in your state?



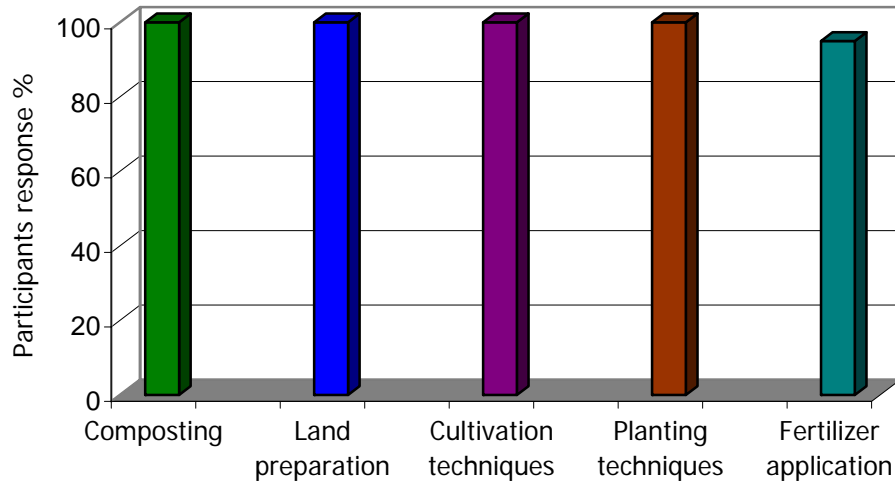
1.7.3. How relevant the information and training provided in the workshop, is to your community in terms of insuring food security?



1.7.4. What are the three main crops, which could contribute for food security in your state?



1.7.5. What skills learned during this training workshop have you found to be most valuable for you?



### 1.8. Photographs of the Activities



Participants Evaluation: Before Training Workshop



PowerPoint Presentations: Composting and Cultivation Techniques; and a Group Photo of the Workshop Participants



PowerPoint Presentations: Composting and Cultivation Techniques





**PowerPoint Presentations: Composting and Cultivation Techniques**



**Hands-On Training: Mixing Soil and Organic Matter to Fill Cups to Transfer Acclimatized Taro and Sweet Potato Plants**



**Hands-On Training: Transfer of Acclimatized Taro and Sweet Potato Plants into the Soil Mixture Filled Cups**



**Hands-On Training: Transfer of Acclimatized Taro and Sweet Potato Plants into the Soil Mixture Filled Cups**



**Hands-On Training: Transfer of Acclimatized Taro and Sweet Potato Plants into the Soil Mixture Filled Cups**



**Hands-On Training: Transfer of Acclimatized Taro and Sweet Potato Plants into the Soil Mixture Filled Cups**



**Hands-On Training: Shredding Green Material for Composting**



**Hands-On Training: Shredding Green Material for Composting and Composting Bin**



**Hands-On Training: Filling Coconut Husk at Bottom of Compost Pile for Better Aeration; and Layering Brown Material for Composting**



**Hands-On Training: Layering Top Soil as Activator; and Layering Green Material for Composting**



**Hands-On Training: Layering Brown and Green Material for Composting and Top Soil as Activator**



**Hands-On Training: Layering Brown and Green Material for Composting and Top Soil as Activator**



**Hands-On Training: Layering Brown and Green Material for Composting; and Participants along with Compost Bin**



**Hands-On Training: Clearing the demonstration Plot for Sweet Potato and Taro Cultivation**



**Hands-On Training: Plowing the demonstration Plot for Sweet Potato and Taro Cultivation**



**Hands-On Training: Plowing, Leveling, Layout designing and Bed Preparation for Sweet Potato and Taro Cultivation**



**Hands-On Training: Top Dressing and Bed Preparation for Sweet Potato and Taro Cultivation**



**Hands-On Training: Top Dressing and Bed Preparation for Sweet Potato and Taro Cultivation**



**Hands-On Training: Bed Preparation for Sweet Potato and Taro Cultivation**



**Hands-On Training: Bed Preparation for Sweet Potato and Taro Cultivation**



**Hands-On Training: Bed Preparation for Sweet Potato and Taro Cultivation**



**Hands-On Training: Taro Planting**



**Hands-On Training: Sweet Potato Planting**



**Hands-On Training: Sweet Potato Planting**





**Workshop Closing Events: Thanks and Closing Remarks**



**Workshop Closing Events: Distribution of the Certificate of Appreciation to the Participants**



**Workshop Closing Events: Prayer and Singing of Song by the Participants**