Building Aquaculture Capacity

Western SARE Program

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Situation

The aquaculture industries of Guam, American Samoa and the Commonwealth of the Northern Mariana Islands (CNMI) are expanding, each with more than 50,000 pounds of production a year. All three areas import most of their seedstock from Hawaii and Asia, but such imports can create problems, like shrimp white spot disease introduced from imports to Guam, which shut down Guam's largest shrimp farm.

Thailand faced a similar situation a decade earlier and has since developed cultural strategies that may be instructive to aquaculture industries on Pacific islands, which have environment conditions parallel for those in Thailand for such species as marine shrimp, freshwater prawns, tilapia and catfish.

Female tilapia with eggs in her mouth.

Above, fresh harvested shrimp from a Thai cooperative market. Below, bamboo racks are used to hold the hapa nets.

Objectives

1. Train producers and agricultural professionals in Guam, American Samoa and CNMI in sustainable commercial aquaculture techniques used in Thailand
2. Produce a training manual of grow-out methods used in Asia
3. Produce a video and DVD of commercial aquacul-

Professional Development Program Grant

Project Number: EW05-017

Project Title: Capacity Building and Training in Commercial Aquaculture for Guam, Commonwealth of the Northern Mariana Islands and American Samoa

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SARE **Grant**: $90,000

Western Region Sustainable Agriculture Research and Education

Western SARE, a USDA organization, funds grants for research and education that develop or promote some aspect of agricultural sustainability, which embraces

- *profitable farms and ranches*
- *a healthy environment*
- *strong families and communities.*

The Western Region, one of four SARE regions nationwide, is administered through Utah State University.

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Above, workers use nets to harvest catfish in one of the aquaculture ponds. Below are the results of their efforts.

ture technology used in Thailand

4. Conduct two workshops in Guam, two in American Samoa and three in CNMI to disseminate sustainable aquaculture information to ag professionals, employees of government agencies, producers and others

Actions

Working teams of ag professionals and producers from each participating island and a photographer – 12 participants in all – completed a two-week study tour in Thailand, with training conducted in Bangkok by the Asian Institute of Technology. Material and information were gathered to produce a training manual and video, and still photographs of major activities and facilities on the study tour were recorded to produce a video and DVD and for use in training.

These activities are now being addressed:

- Complete the training manual
- Complete the video and DVD
- Conduct training on each of the three participating islands

Results

Even though the project has yet to be completed, several impacts have already been realized:

- Farmer participants are engaging family and friends in discussions about their experiences in Thailand.
- An article was submitted to and published in "Regional Notes," a newsletter of the Center for Tropical and Subtropical Aquaculture.
- Two farmers purchased enhanced tilapia fry from commercial tilapia hatcheries in Thailand to improve their production.
- The public hatchery in Guam purchased, from the Asian Institute of Technology, 6,000 enhanced tilapia broodstock for its tilapia hatchery.
- While in Thailand, based on what they were able to see and experience, eight farmers and ag professionals purchased equipment for their farms or work activities.

Potential Benefits

Using train-the-trainer techniques, the study tour participants will extend what they've learned and experienced to other agricultural professionals and producers on their respective islands, fostering sustainable, biosecure aquaculture industries. This, in turn, will allow aquaculture producers and policymakers to make informed decisions.

Photos by John Williams, David Crisostomo, John Brown, Michael Ogo, Joseph Fuamoto and Bob Barber.

Tour participants inspect fry tanks during their tour in Thailand.