



**Western SARE Program**

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## DEMONSTRATING A FISH POND

### Situation

The people of Yap and other Pacific islands can benefit from aquaculture. A created test and demonstration pond can provide first-hand knowledge and examples of raising fish in ponds.

### Objectives

Using a constructed fishpond, provide practical and technical factors, including constraints, involved in raising fish in brackish water.

### Actions

A small pond, 75 by 125 feet, was created with a dike across the mouth of a cove-like area. Mud and debris were excavated from the pond and a gate installed for draining the pond and for water exchange during tide changes.

Mullet and rabbitfish were caught and stocked, 600 juveniles in all, the mullet 1-2 inches long, the rabbitfish 2-3 inches. The ponds were not fertilized nor were any supplements fed to the fish.

### Results

Several events, including Typhoon Sudal and an invasion of tilapia that attacked the mullet, altered the scope of the project. Even so, several positive outcomes evolved.



Many of the students visiting the farm volunteered to harvest the fish.



- The harvested tilapia proved popular at the market, selling for \$1.75 a pound, compared with \$1 a pound for other species

**Producer + Professional Grant**

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*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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- Water and soil quality of the demonstration pond are similar to water and soil in surrounding areas, meaning water exchange in the pond is adequate for fish growth
- Algal growth was observed, but it was limited because of poor soil fertility and the tilapia invasion. Algae, as feed for the fish, could be enhanced with natural fertilizer (it is recommended that pig manure be tested)
- Costs, high at first, should drop as fish crops are harvested
- Labor for such projects is readily available
- Interest in the project is very high

More than 300 people visited the pond.

- 50% were students ages 6 to 16
- 25% were members of various communities
- 15% were government officials



Volunteer assistants cast the net for tilapia and rabbitfish.

- 5% were interested Filipinos and tourists
- 5% were interested farmers and fishers

**Potential Benefits**

The pilot project provided a clear picture of how this resource can be utilized and methods for increasing the populations of much demanded fish products.

- Potential aquaculture farmers now have guide-

lines for planning and developing a fishpond.

- Such farmers are aware that the market for tilapia may prove more profitable than other species, especially among the Filipino community.
- Future farmers will have information about how to deal with natural disasters, marketing and fishpond modification and improvement.



The dam, with flow gate for water exchange.



Tilapia from the pond sold well at the market.