Shrimp Species

A number of different shrimp species are used in pond culture. The western white shrimp, Penaeus vannamei, native to the Pacific coast of Mexico and South America, is the most commonly cultured shrimp in the U.S. A recent disease problem with this species has sparked interest in other species including the northern white shrimp, Penaeus setiferus, native to the Gulf of Mexico. Since the northern white shrimp has not been used extensively in pond culture, there is much more to learn about the utility of this species.

Stocking

Ponds are stocked with post larval shrimp (PLs) purchased from a hatchery. At stocking the PLs are less than 1/2 inch in length. Because of our temperate climate, ponds are stocked less than one post larval shrimp per square foot for extensive farming to two to five per square foot for intensive farming.

Management

Little management of feed and water quality is required for extensive farming. Semi-intensive and intensive farming require much more management to accommodate higher stocking densities.

Pond Construction

The farming strategy used determines the size of the pond. Extensive farming usually requires large ponds and a lot of acreage while intensive farming is done in smaller ponds of 1 to 10 acres. Pond depth is generally four to seven feet. When building the pond, give careful thought to how the shrimp will be harvested. Bottoms should have a gentle, smooth slope toward the outflow to aid both drainage and harvest. Dikes between and around ponds should be strong enough and wide enough to accommodate heavy vehicles.
Harvest

Shrimp are harvested in October when temperatures begin to drop and growth begins to slow. At harvest, the shrimp should be about 22 to 36 to the pound. Harvesting is accomplished by draining the pond and collecting the shrimp using special pumps or by capturing them in nets. The shrimp are then placed in an ice bath or packed in ice for transport to a processing plant.

Two Common Problems

The supply of post larval shrimp for stocking ponds can be erratic. Few hatcheries produce post larval shrimp, and they often have a problem balancing supply and demand. The second problem is that shrimp farmers soon realize that if they could grow more shrimp per acre they could make more money. As the amount of shrimp per acre increases, the amount of feed needed increases and the risk that something will go wrong in the pond increases dramatically. A considerable amount of management expertise and experience is needed to successfully produce large amounts of shrimp from small ponds.

Summary

Despite its romantic allure for some, shrimp farming is a business like any other. Income must be greater than costs to show a profit. Buying land, building ponds, pumping water, buying small shrimp, feeding, harvesting, and managing costs must be considered in view of expected sales. Careful analysis of the costs and benefits should be undertaken before investing.

More Information

This pamphlet provides a broad overview of shrimp farming. More detailed information can be found in the following publications.


Wyban, James A. and James N. Sweeny. The Oceanic Institute Shrimp Manual. The Oceanic Institute, Makapuu Point, Honolulu, Hawaii.