Central America

Researchers at the Choluteca station characterized shrimp farm effluents as the first step in estimating the carrying capacities of local estuarine systems for shrimp. Intake and discharge from shrimp farms located on the estuaries of the Gulf of Fonseca were sampled during both the rainy and dry seasons in 1993-94. Results showed a mean net consumption of inorganic nitrogen and phosphorus and a mean net discharge of organic matter. Most of the nitrogen entered and left the ponds through water exchange; most phosphorus entered the ponds as feed but left by water exchange. Pond discharge of both nitrogen and phosphorus increased linearly with the feed conversion ratio. The conversion of feed and nitrogen to shrimp flesh was greater during the wet season than the dry season.

Taura Syndrome is the cause of high mortality in some Central American shrimp ponds. In response to an urgent need for information on how to manage ponds affected by Taura Syndrome, researchers at the Choluteca station investigated the relationships among stocking density, survival, and shrimp yield in affected ponds. *Penaeus vannamei* were stocked in ponds on two farms during the wet season and on three farms during the dry season. At each farm, four different stocking rates were used. Researchers found no significant correlation between stocking density and survival during either the wet or dry season, nor did they find a seasonal influence on survival. Shrimp production rose with increased density, regardless of the season. Farmers' net income increased with density during the wet season, but decreased or remained neutral with an increase in density in the dry season, because income is related to both biomass and shrimp size. During the wet season, production increased without a decrease in size of harvested shrimp; however, during the dry season, mean shrimp size decreased.

In addition, researchers stationed in Central America conducted activities that were originally scheduled for the Rwanda site (see East Africa).