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Do they [snappers] grow well?

Aquaculture Department, Southeast Asian Fisheries Development Center

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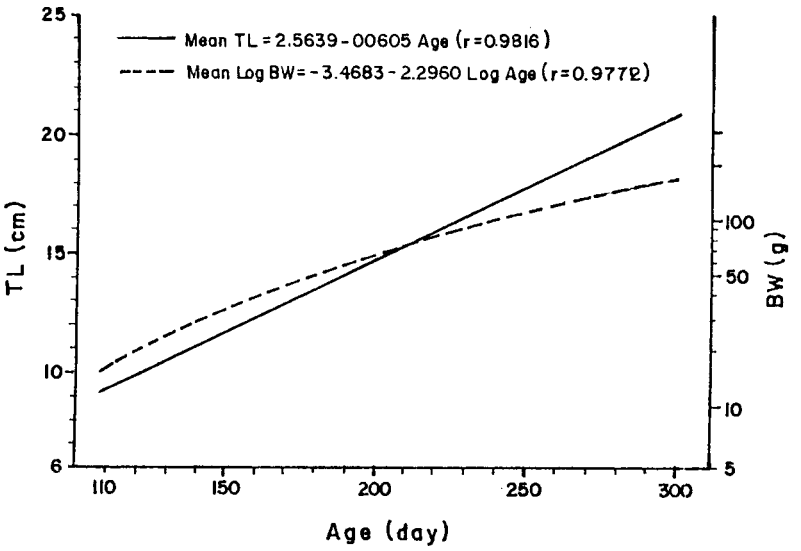
Do they grow well?



Age-total length and age-weight relationships of red snapper, Lutjanus argentimaculatus. The red snapper has a high potential to be a suitable species for aquaculture.

Thailand reports its progress on floating cage culture of the red snapper, *Lutjanus argentimaculatus*:

Red snapper is one of the commercially important species in Thailand, but culture of this species has not been established yet. Cage culture was first conducted in 1976 using wild juveniles. Experimental seed production and study on larval development were conducted in 1983 and the first successful induced spawning was achieved in 1984. Larvae were successfully reared to juvenile stage.

Ninety juveniles (9 ±1 cm in total length and 14 ± 5 g in body weight) were selected from a naturally spawned group and stocked (180/m^3) in a floating cage (1 x 0.8 x 0.8 m) made of mosquito net. After one month, the juveniles were transferred to a bigger cage of polyethylene net, 4.0 x 4.0 x 2.5 m, at a stocking density of 2.75/m^3. Water exchange rate was 40% per day.

Water conditions were as follows: 28.8°C average temperature (range, 26.5-31.2°C) and 28 ppt average salinity (range, 24.5-32 ppt). During the first month, juveniles were fed minced fish, and subsequently chopped fish.

(***Philippine Daily Inquirer***, 4 April 1992)

"If you're really a super fish, why didn't we know about you?" "My PRO was asleep."

After 120 days of culture, fish gained 8.25 cm in mean total length and 81.52 g in mean body weight. Survival was 85.6%.

Total weight gain was 6.09 kg against 52.85 kg of total weight of feed given to the fish. Food quotient (total weight of feed/total weight gain of fish) was 8.68.

The above baseline study showed that the growth rate was relatively high, and that snappers may be suitable for culture. However, to establish the culture system, the following are needed:

1. Establishment of mass seed production technology to provide a constant supply of fry and juveniles for culture.

2. Feed and nutrition studies to look for biologically and economically suitable food for optimum growth.

3. Ecological, physiological, and pathological studies for the establishment of optimum culture conditions and disease control methods.

Sources: (1) P. Bonlipatanon. 1988. *Growth and survival of red snapper Lutjanus argentimaculatus in captivity;* and (2) S. Maneewong, T. Tattanon, and Y. Yashiro. 1988. *Experiment on the cage culture of red snapper.* In: **Report of Thailand and Japan Joint Coastal Aquaculture Research Project (Feb. 1986- Mar. 1987).** No.3. Dec. 1988. National Institute of Coastal Aquaculture, Department of Fisheries (Thailand) and Japan International Cooperation Agency. (3) S. Maneewong, T. Tattanon and Y. Yashiro. 1986. *Progress report on floating cage culture of red snapper, Lutjanus argentimaculatus.* In: **Report of Thailand and Japan Joint Coastal Aquaculture Research Project (Apr. 1984-Jan 1986).** No. 2. April 1986. Japan International Cooperation Agency.

Notes on snappers

Gonzales LW and Celaya J. 1986. Socio-economic diagnosis of the medium range snapper-grouper fisheries of the Nueva Esparta state. Contrib. Cient. Nucl. Nueva Esparta Univ. Oriente, Porlamar No. 8. Univ. Oriente, Venezuela.

The social welfare and living conditions of fishermen are not in accordance with the economic benefits they perceive from the fishing activity, which is relatively well compensated.

Perez Puentes C. 1986. Protection of the Cuban shelf fishery resources 5. Scale fishes. MAR PESCA No. 255, pp. 40-43.

This briefly reviews the biology, reproductive cycle, spawning grounds, stock size, and regulations for the fisheries of the lane snapper, mullet, and mangrove snapper.

Correa Ivo CT and CA Sobreira Rocha. 1988. Hook selectivity of the Caribbean red snapper, Lutjanus purpureus Poey, in northern Brazil. Arq. Cienc. Mar. 27:49-56.

The study used six different hook sizes numbered 618 to 613. A length distribution for each hook number showed a normal distribution from which it was possible to estimate the kind of hook to be used in the Caribbean red snapper fishery. For protecting juveniles, only hook numbers 615, 614, and 613 should be used.

Pramokchutima Somsak and Vadhanakul Surapon. 1987. The use of artificial reefs as tool for fisheries management in Thailand. Symposium on the exploitation and management of marine fishery resources in Southeast Asia; 16-19 February 1987; Darwin, Australia. FAO Reg. Off. for Asia and the Pacific, Bangkok: 427-441.

The (Thai) Department of Fisheries has constructed 34 artificial reefs at a depth of 4-18 m along the coast of the Gulf of Thailand and in the Andaman Sea. The reefs are reported to be fished on a regular basis by small-scale fishermen from nearby villages, and the catch are mainly groupers, snappers, rabbitfish, and parrotfish.