MILKFISH CULTIVATION IN SARAWAK

by

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Abstract

The paper reports the results of experimental rearing of milkfish fry in both fresh and brackishwater ponds in Sarawak. Date on the growth and survival of these imported fry are also given.

Introduction

Adult milkfish has been reported to occur in Kuala Lawas in the Fifth Division (Ong, 1968). The cultivation of this fish was first experimented on when a batch of 5000 milkfish fry were imported from Thailand in 1971. Of these, 4,000 fry were stocked in both the brackish and freshwater ponds in the Coastal Aquaculture Station, Semariang Batu, while the rest were stocked in the freshwater ponds of Semongok. At Semariang Batu, it was observed that the fish stocked in brackishwater ponds grew much faster than those stocked in the freshwater ponds. The yield is considered remarkably high with our present method of culture. No explanation could be given except that organic manure/ poultry dropping was added directly from the poultry shed built over the ponds. No special nursery ponds were used. The fry were stocked directly into the rearing ponds.

Experiments and Results

Experiment 1

Fry of 15-20 mm were stocked in a one-half acre (0.2 hectare) brackishwater pond at a stocking density of 2,000 fry per acre (approx. 1 fry/2 sq m). The salinity of water ranged from 3 to 18°/oo. Unlike the ponds used in Indonesia, the water level could not be kept at a low level of 30.5 to 61 cm (1-2ft), but at a depth of about 91.5 cm (3 ft). Poultry dropping was used to fertilize the pond and fine rice bran was used as feed. There was little or no algal felt found on the bottom of the pond.

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Sampling done when transferring the fish temporarily to another pond to allow repair work to be carried out showed that they grew to 140 mm in 80 days.

After stocking for 15 months the fish were harvested. They grew to an average size of 368.3 mm (14.5") and to an average weight of 688 g (approx. 1-1/2 lb). The recovery rates were 77.2% after 80 days and about 50% after 1-1/4 years of stocking.

The general growth of fry when food and stocking conditions were satisfactory was about 50-70 mm in 1 month, 120-150 mm in 2 months and 400 mm in 1 year (Hora and Pillay, 1962).

Experiment 2

When other factors remained the same, with reduced stocking rate of 1200 fry per acre (3,000 fry/hectare or approx. 1 fry/.83 sq m, the growth was 40.674 cm (16") and 890.2 g over the same growing period. The recovery was 81.8% in 3 months and 65.2% in 1-1/2 years stocking.

However, in ponds where inorganic fertilizer was used, the fish attained the length of 30.5 cm (12") in one and a half years but only with an average weight of 460.0 g (slightly over 1 lb). Experiments indicate that poultry manure is superior to inorganic fertilizer.

The second batch of fry imported from Thailand on October 22, 1973 was in poor condition. Practically, all of the fry died on the second day after the arrival.

The third batch of 64000fry with sizes ranging from 15 to 20 mm was received on June 8, 1975 from Indonesia. These were kept in an enclosure made of coarse material (cloth) for two months before they were sent to Pueh, Sematan and Punang. The fry grew to 102 mm (about 4") in 2 months. The feed consisted of rice bran.

Reference

Hora, S.L. and T.V.R. Pillay, 1962. Handbook on fish culture in the Indo-Pacific region. FAO Fish Biol. Tech. Pap., 14:204 pp.