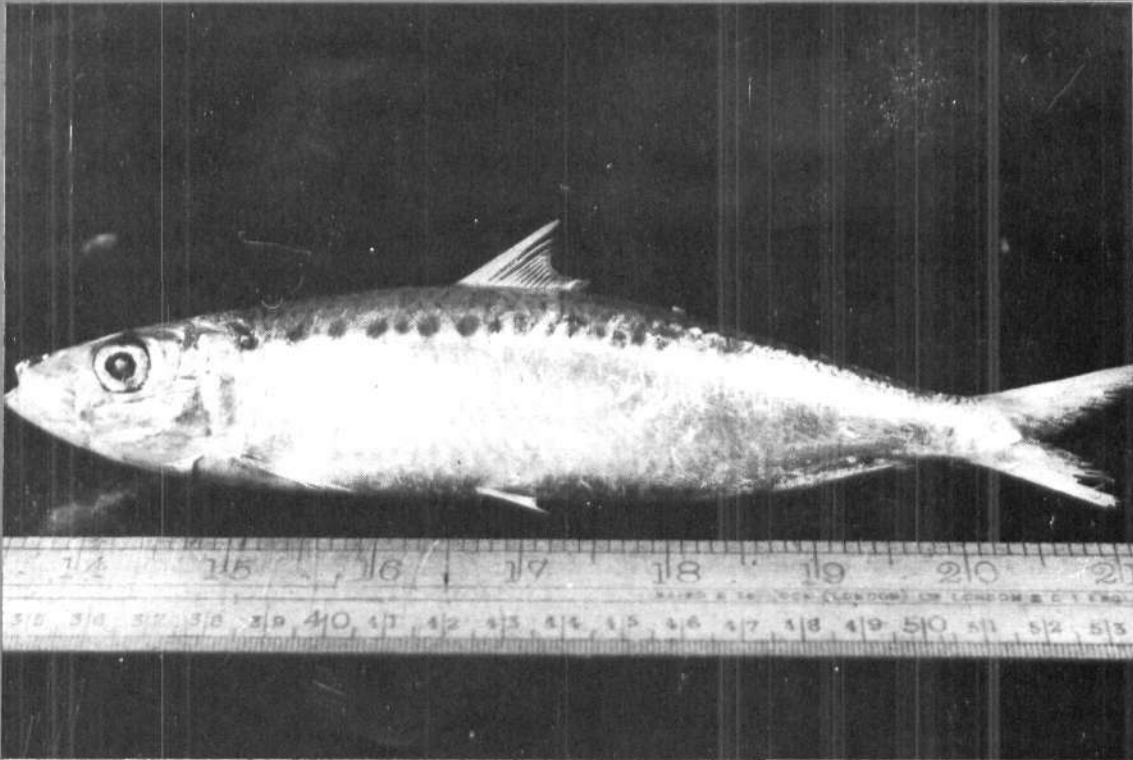




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AN APPRAISAL OF A SEMI-INTENSIVE PRAWN FARM AT KANJIRAMKUDI, RAMANATHAPURAM DISTRICT*

Arun Aqua Farm is a semi-intensive prawn farm of medium scale operation with a production target of around 4 - 5 tonnes/crop. The farming operations started in 1992. The farm had a total of 11 ponds each with an area of 0.5 ha for culture purposes. The total developed area was 6.5 ha and another 5 ha were being developed.

The farm is located near the mouth of a creek and has good water exchange facilities. The ponds are in two parallel rows with the supply canal running in between them. The outlet canals run along the periphery of the ponds on either side and empty to the creek. Water exchange was adjusted according to tide level, i.e., the ponds were drained during low tide and water pumped in during high tide.

The dimension of the rectangular ponds are 125 X 40 m and depth of water column is between 1.2 to 1.5 m. Approximately 10-15% of water was exchanged during initial stages of operation and a maximum exchange of about 50% towards the end of the cropping period. Each pond is provided with 4 - 6 paddle wheel aerators of 1 HP rating, with provision to increase it to 8 per pond in case of necessity. Paddle wheels were operated throughout the night and also during afternoon (2-4 PM) for mixing of water to reduce water temperature.

Initially *Penaeus monodon* at a rate of 30/m² (3.00 lakh/ha) were stocked but the survival rate was very poor (60%). Later the stocking rate was reduced to 1.4 - 1.5 lakh/ha. The farm produced 4-5 tonnes/ha/crop, with the maximum production of 6 tonnes/ha/crop. Except for an occasional problem of tail rot, the animals were healthy. The salinity of pond water tended to increase in summer months to above 35 ppt and became almost fresh during north-east monsoon period.

A Taiwanese feed is being imported directly by the farmer. The feed gave an FCR of 1.4 - 1.5 in semi-intensive culture

and around 1 in extensive culture (60,000/ha stocking). Feed was given 4 times daily in the initial stages and upto 6 times in the final stages. Feed consumption and health of prawns were monitored regularly by observing the check nets, 4 in each pond. One of the ponds when harvested, gave a yield of 2.25 tonnes; 1.75 tonnes of *P. monodon* and 0.5 tonnes of *P. indicus*.

On visual examination, the prawns appeared to be healthy with normal behaviour. However, beginning of tail rot was seen in a few prawns. The salinity (37-38 ppt) and water temperature (30.6°C at 0900 hrs) appeared to be on the higher side. All the other water quality parameters were within acceptable limits for prawn farming.

Histopathological examination did not indicate any disease situation in the samples collected. Bacterial studies revealed that the total bacterial count was low (1.2 X 10⁵ /ml) for the water samples. The bacterial colonies isolated were of circular, spreading and convex type. Both gram negative and gram positive bacteria were observed. The isolates were found to be non-pathogenic.

The plankton was typically marine and no bloom was recorded. In the *P. monodon* pond, *Zoothamnium* sp. was recorded, which could cause problems if the water quality deteriorates.

Based on background information and analyses of data collected, the farm appears to be a well maintained and well managed one. However, a serious disease problem was reported in a farm about 3 km away, where the same creek water was used. Arun Aqua Farm stopped pumping water for a few days to prevent introduction of the pathogens. They were also advised to reduce feeding and operate paddle wheel aerators more frequently.

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