The relative cost effectiveness of growing *Peneaus indicus* in monoculture using compounded feed.

The coconut grove pond aggregating 10 cents of water area and a depth of one metre in the broader, deeper sections was stocked with 3000 numbers of *P. indicus* seed (average initial length 6 mm and average initial weight 6.9 mg respectively) in the last week of December, 1992. A feed formulation comprising of fish meal, prawn head waste, groundnut oil cake, squid waste, soya flour, oil (a mixture of crude sardine and soya oils in equal proportion) and tapioca powder with an overall crude protein content of 35% was compounded in the laboratory in the form of 3 mm pellets. The sun-dried feed devoid of any fortification in the form of vitamin and mineral premixes was stored in polyethylene bags and was considered suitable for use in the semintensive culture of *P. indicus* from the post-larval to the finisher stage. Daily feeding of shrimp was entrusted with the farmer and was carried out in the form of single dose. Feeding rates were adjusted every fortnight and growth of shrimp was monitored along with other environmental parameters viz. dissolved oxygen, pH and salinity. The shrimp were healthy throughout the growing period and no diseased conditions were observed.

Shrimps were harvested after a 90 day grow-out period by cast nets during the first week of April 1993 and a higher than anticipated yield of 30 kilograms with a 98% recovery was obtained. The Apparent Feed Conversion Ratio (AFCR) of 0.90 : 1 implied that an input of only 0.9 kilogram of feed was required for the production of one kilogram of shrimp. At Rs. 14/- per kilogram the feed proved extremely efficient in terms of productivity and profitability with an increase in income of Rs. 59 and 43 respectively as returns to feed.

The results positively indicate that contrary to present expectations feeds with high nutrient specifications may not be required for feeding shrimp under the prevailing culture practices and should enable production of low cost feeds at the farm site itself using simple household machinery. Further work to test other feed formulations is also being pursued.

**Pearl Oyster seed supplied**

As a part of the extension programme, the institute is supplying the seed for large scale culture of pearl oysters and pearls. A total of 1.5 lakh pearl oyster seeds were supplied by Tuticorin Research Centre to the M/s. Tamil Nadu Fisheries Development Corporation Ltd., Mandapam Camp at the rate of Rs. 4/- per hundred. It fetched an amount of Rs. 6,000 for the Institute.

**Spawning of Sea cucumber**

Spawning of sea cucumber, *Holothuria scabra* was achieved during this quarter at Tuticorin. A total of 850 juveniles of *H. scabra* were transferred to Karapad Bay and stocked in Velon screen pens. Another 100 juveniles were transferred to Valinokkam Bay. The average weight of each juvenile was 4 gm. The growth in the sea was found to be two times more than that of those kept in the hatchery as control.

**Whale shark landings**

During March-April an estimated 300 numbers of whale sharks, *Rhiniodon typus* were landed at Veraval. The whale sharks were caught mainly for its fins and liver.

**Dolphin landings**

A female bottlenose dolphin, *Tursiops truncatus* measuring 225 cm and weighing 160 kg landed at Kakinada on 28 April, as reported by Shri T. Nageswara Rao and Shri B. Venkata Ramana, Kakinada Research Centre. It was caught in bottom set gillnet (Panduvala) operated by motorised nova (IBM) at about 20 m depth and was sold for Rs. 500/-. The meat is regularly used as bait for hooks and line fishery.
relative cost effectiveness of growing Peneaus indicus in monoculture using compounded feed.

The coconut grove pond aggregating 10 cents of water area and a depth of one metre in the broader, deeper sections was stocked with 3000 numbers of P. indicus seed (average initial length 6 mm and average initial weight 6.9 mg respectively) in the last week of December, 1992. A feed formulation comprising of fish meal, prawn head waste, groundnut oil cake, squid waste, soya flour, oil (a mixture of crude sardine and soya oils in equal proportion) and tapioca powder with an overall crude protein content of 35% was compounded in the laboratory in the form of 3 mm pellets. The sun-dried feed devoid of any fortification in the form of vitamin and mineral premixes was stored in polyethylene bags and was considered suitable for use in the semintensive culture of P. indicus from the post-larval to the finisher stage. Daily feeding of shrimp was entrusted with the farmer and was carried out in the form of single dose. Feeding rates were adjusted every fortnight and growth of shrimp was monitored along with other environmental parameters viz. dissolved oxygen, pH and salinity. The shrimp were healthy throughout the growing period and no diseased conditions were observed.

Shrimps were harvested after a 90 day grow-out period by cast nets during the first week of April 1993 and a higher than anticipated yield of 30 kilograms with a 98% recovery was obtained. The Apparent Feed Conversion Ratio (AFCR) of 0.90 : 1 implied that an input of only 0.9 kilogram of feed was required for the production of one kilogram of shrimp. At Rs. 14/- per kilogram the feed proved extremely efficient in terms of productivity and profitability with an increase in income of Rs. 59 and 43 respectively as returns to feed.

The results positively indicate that contrary to present expectations feeds with high nutrient specifications may not be required for feeding shrimp under the prevailing culture practices and should enable production of low cost feeds at the farm site itself using simple household machinery. Further work to test other feed formulations is also being pursued.

Pearl Oyster seed supplied

As a part of the extension programme, the institute is supplying the seed for large scale culture of pearl oysters and pearls. A total of 1.5 lakh pearl oyster seeds were supplied by Tuticorin Research Centre to the M/s. Tamil Nadu Fisheries Development Corporation Ltd., Mandapam Camp at the rate of Rs. 4/- per hundred. It fetched an amount of Rs. 6,000 for the Institute.

Spawning of Sea cucumber

Spawning of sea cucumber, Holothuria scabra was achieved during this quarter at Tuticorin. A total of 850 juveniles of H. scabra were transferred to Karapad Bay and stocked in Velon screen pens. Another 100 juveniles were transferred to Valinokkam Bay. The average weight of each juvenile was 4 gm. The growth in the sea was found to be two times more than that of those kept in the hatchery as control.

Whale shark landings

During March-April an estimated 300 numbers of whale sharks, Rhiniodon typus were landed at Veraval. The whale sharks were caught mainly for its fins and liver.

Dolphin landings

A female bottlenose dolphin, Tursiops truncatus measuring 225 cm and weighing 160 kg landed at Kakinada on 28 April, as reported by Shri T. Nagaswara Rao and Shri B. Venkata Ramana, Kakinada Research Centre. It was caught in bottom set gillnet (Panduvala) operated by motorised nava (IBM) at about 20 m depth and was sold for Rs. 500/-. The meat is regularly used as bait for hooks and line fishery.