THE PRAWN AQUACULTURE INDUSTRY IN QUEENSLAND

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Prawn farming in Australia is one of the fastest growing primary industries. In Queensland, its production and value have increased by 11.3 and 25.6 fold respectively since 1988. Total production was 1294.1 tonnes, valued about A$28.2 m in the 1995/96 season (Lobegeiger 1997). The industry mainly produces two species, black tiger prawns (*Penaeus monodon*) and kuruma prawns (*Penaeus japonicus*). Black tiger prawns are tropical species and are farmed from northern New South Wales to north of Cairns. In south Queensland and northern New South Wales, the production season starts in September and finishes in April, thus only one crop a year is harvested. However, in northern Queensland, farmers are able to produce more than one crop a year because of the warmer climate.

Increase in production is mainly due to expansion in the farmed pond area and, in the case of kuruma prawns, improvements in pond productivity (Table 1). Black tiger production decreased in 1995/96 mainly due to disease problems, difficulties in obtaining wild breeders and poor quality of postlarvae. The industry relies on wild caught spawners which vary in availability and quality both seasonally and from year to year. Although number of spawners increased, there is a considerable decrease in the reproductive qualities such as hatching rate and larval survival. This situation poses a risk to the future of the industry.

The major production cost is feed which comprise up to 60% of the operation cost (Saraç *et al*. 1993). The cost of feed is around A$1.5/kg for black tiger prawns and A$8 to $10/kg for kuruma prawns. Food conversion ratio within the industry greatly varies from farm to farm and year to year. This is due to various factors including feeding practices and quality of feed. Most of the feed is imported. Only 26% of the feed for black tiger prawns is produced in Australia while all feed for kuruma prawns is imported. Major countries which export feed to Queensland are Taiwan, Thailand, Japan and Indonesia.

Queensland produced black tiger prawns are mainly sold on the domestic market (83% interstate and 15% in Queensland) while almost all kuruma prawns are exported live to Japan. Farm gate prices of black tiger and kuruma prawns are around A$13/kg and A$70/kg respectively. The price of kuruma prawn sometimes exceeds $300/kg. Although total production of kuruma prawns is 5.8 times less than that of black tiger prawns, due to its higher prices, value of the kuruma prawns is nearly the same as the value of the black tiger prawns.

Despite the fast growth, the prawn aquaculture industry is facing two major problems. The first one is the disease which affected the major black tiger prawn producers in 1993 onwards. The second problem is the availability of reliable spawners. Currently, research is underway to address these two issues in order to secure the future growth of the industry.