Southeast Asian Fisheries Development Center **Aquaculture Department**

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How important are snappers?

Aquaculture Department, Southeast Asian Fisheries Development Center

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How important are snappers?

The Food and Agriculture Organization in 1990 reported that only three countries in Asia produce substantial amounts of snappers: Singapore, Indonesia, and the Philippines.

SINGAPORE

Status of culture: developing
Species cultured: John's snapper
Culture method: floating cage
Source of seed: artificial and wild (imported)
Yield/ha: 44 mt/ha
Production area: 35 ha
Market: domestic
Major constraints: limited fry supply; high cost of fry; limited labor

History and status. Coastal seafarming started in 1970 and originated from palisade trapping (*kelongs*) where fish were captured with lift nets. Market-sized snappers were sold immediately, while undersized ones were stocked in fixed holding cages suspended from the *kelongs,* or from floating wooden frames. These were raised to marketable size on trash fish trapped in the *kelongs.* Since the implementation of the Marine Fish Farming Scheme in 1981, aquaculture techniques have improved and larger and more sophisticated floating cages came into operation. There are at present 70 floating fish farms, covering 35 of the 300 ha available for seafarming in Singapore. The total seafarming production in 1988 was 1,973 mt , of which 24% was contributed by fishes, and 2.5% by the snapper, *Lutjanus johni.* Research on formulated feeds is being conducted by the government. Major constraints affecting the expansion of snapper culture are shortage of labor and fry, and seasonality of market demand and price.

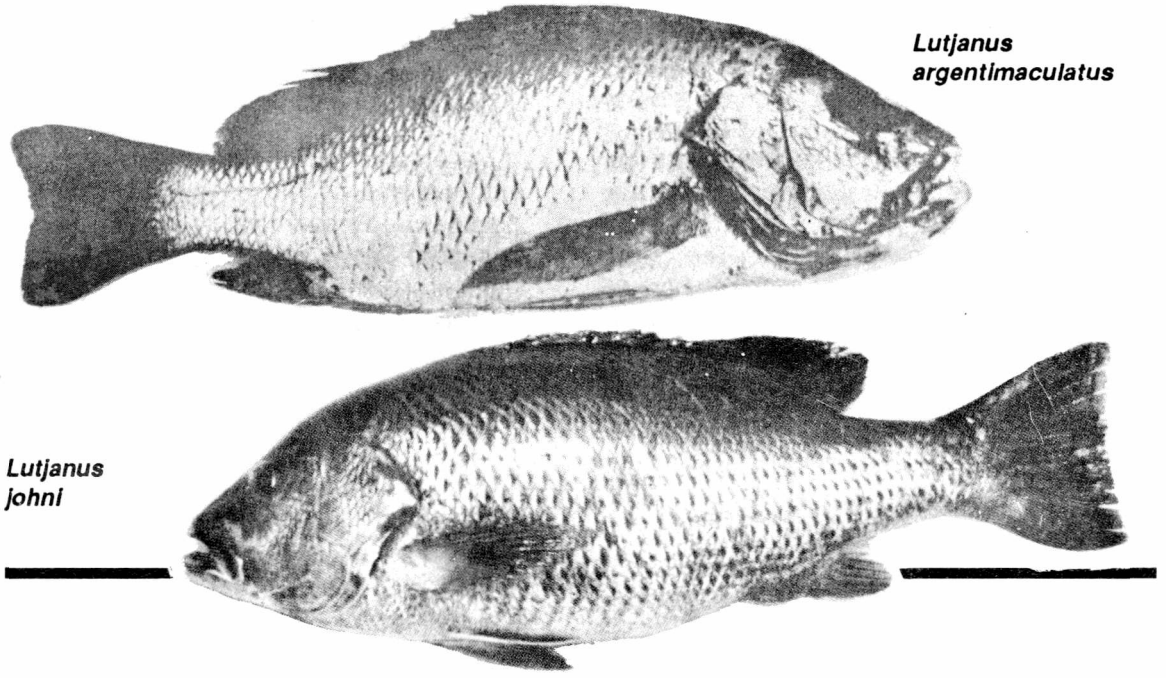
Culture practices. Culture is done in floating cages made of a simple wooden frame kept afloat by plastic buoys. A single farm is typically 1,500 m² anchored within an area of 5,000 m². Cages vary in dimension, but most are 2 x 2 x 2 m, 3 x 3 x 2-3 m, or 5 x 5 x 2-3 m. The seed are mostly from Malaysia and Indonesia. Fingerlings (2-5 g) are initially stocked at 100-150/m² and then reduced to about 44/m² when they have attained body weights of 80-100 g. The snappers are fed chopped trash fish, and the feed conversion is 5-7 kg trash fish to 1 kg snapper. Culture period is 6-8 months when the fish have attained a body weight of 600-800 g.

INDONESIA

Status of culture: developed
Species cultured: Red snapper and John's snapper
Culture method: floating cage
Source of seed: wild
Yield/ha: no data
Production area: no data
Market: domestic
Major constraints: limited seed supply and lack of high-quality feed

Status. Snappers are well known and appreciated marine fishes in Indonesia, and are often a by-product of shrimp trawlers. These species have a high local and export demand, and command relatively high market price. Snappers are usually cultured in floating cages and pens in areas around the Riau Archipelago, Bangka and Belitung Islands. The main constraint related to its seafarming is the limited availability of fry which are collected entirely from the wild. Further, there is lack of high-quality feed and trained personnel. More research is required to refine culture techniques, and more extension work to familiarize local fishermen with such an alternative activity.

Culture practices. Snappers are cultured in floating cages, stake cages, or in pens. In the floating system, cages are fixed on a wooden frame kept afloat by plastic or oil drums. In the stake system, cages are fixed to wooden poles which have been driven into the bottom. Polyethylene net cages of various dimensions are used, usually 5 x 5 x 3 m or 3 x 3 x 3 m. The



snappers are fed chopped trash fish in the morning and afternoon. The amount of feed given is about 8-10% of the total weight of the fish stock. During culture, cages are changed every month to guarantee good water flow. Market-sized fish are harvested by pulling the net to one side of the frame unit and slowly concentrating the fish by lifting the net over the edge of the frame. The fish are scooped into holding tanks in boats.

PHILIPPINES

Status of culture: developing
Species cultured: John's snapper
Culture method: floating cage
Source of seed: wild
Yield/ha: no data
Production area: no data
Market: domestic and export
Major constraints: hatchery and culture techniques; lack of suitable artificial diet

Status. Production at present is only from capture fisheries. In 1987, over 19,000 mt were fished from coastal waters around the country. Culture potential is great as snappers are widely distributed and appreciated highly in the local and export market. Proper management techniques for grow-out have yet to be established including feed requirements and seed production.

Although commercial culture of snappers is not yet practiced, culture trials using floating cages have been attempted. Potential culture sites have been identified in some localities throughout the country. The cage design and construction is the same as that used for other marine fishes. A farm consists of a number of interlocked floating cages suspended in a bamboo and/or wooden frame. The farm is kept afloat either by a bamboo raft or styrofoam floats, and is held in place by heavy anchors. The cages are of different sizes and mesh, depending on the initial size of fingerlings. *Hapa* cages made of fine-mesh net are used to rear fry to the fingerling size. Snapper fry are fed twice daily with finely chopped trash fish or green mussel.

Source: ***Regional seafarming resources atlas.*** FAO/UNDP Regional Seafarming Development Project. RPS/SG/024/Jan. 1990.