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# What you need to know about sea bass and sea bass farming

Aquaculture Department, Southeast Asian Fisheries Development Center

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## WHAT YOU NEED TO KNOW ABOUT SEA BASS AND SEA BASS FARMING

Sea bass (*Lates calcarifer*) locally called "apahap" is one of the economically important cultured fish species in Southeast Asia. Adult sea bass spends most of its life in lakes, rivers, estuaries, and lagoons. During the spawning season, fish with developing gonads migrate downstream and move to estuaries and adjacent coastal waters for gonadal maturation and subsequent spawning.

Sea bass spawns naturally or when induced by hormonal treatment. Earlier studies (1983-1985) on hormone-induced spawning used human chorionic gonadotropin (HCG), puberogen, carp pituitary, and other gonadotropic hormone preparations. Luteinizing hormone-releasing hormone analogue (LHRHa) induces single or sequential spawnings. This is administered either in saline injections, cholesterol pellet implants or loaded into osmotic pumps. Pellet implantation proved to be more reliable, cheaper and less stressful to fish. Under ambient conditions (28-30°C, 30-35 ppt) in floating net cages, mature sea bass receiving a single injection or implantation of pelleted LHRHa spawn 30-36 hours after hormonal administration.

At 27-30°C, sea bass eggs hatch in 13-18 hours. Newly hatched larvae are about 1.5-1.7 mm in total length. Larvae start to feed on rotifers at day 2, change their feeding habit at day 10, and prefer *Artemia* nauplii at day 15. Sea bass larvae may be weaned to artificial diet as early as day 10. Survival rates of up to 90% can be attained provided water management is good and food supply is unlimited. But, the best time and scheme is gradual weaning to artificial diets on the day of harvest (day 21).

In the Philippines, monoculture of sea bass in ponds, pens, and cages has been tried with fairly good results. At present, sea bass is fed trash fish although a food conversion ratio (FCR) of only 7:1 can be attained. The insufficient supply and the high cost of trash fish is a major constraint in sea bass monoculture. Because of these constraints, SEAFDEC AQD has recently addressed the need to develop an abundant, cheap, and economical food source for sea bass culture. In particular, basic studies on the nutritional requirements (e.g., fat and protein requirements) of sea bass are presently in progress. The use of cheap and nutritious substitutes (e.g., soy bean meal, meat and bone meal, shrimp head meal, and leaf meals) for costly and imported fish meal ingredients in commercial fish diets is also presently being evaluated.

An alternative to trash fish as food for sea bass is the culture of forage fish such as tilapia in polyculture system. A sea bass-tilapia (1:15) polyculture system appears to have some promise. Sea bass may also be grown together with milkfish and tilapia. In such a system, 5000 sea bass juveniles are stocked in a one hectare pond together with 1500 milkfish fingerlings and 4000 tilapia adults. Sea bass juveniles are stocked 90 days after tilapia and milkfish. A cost-and-return analysis of this polyculture system appears higher relative to a monoculture system. Also, it is economically competitive compared to other food production systems.

Sea bass is sold frozen or may be sold live in the local market. Live sea bass commands a much higher price of P100-P150 per kilo. However, frozen sea bass sells for only P50-P70 per kilo.

**Source :** A **Technology Dispatch** of the SEAFDEC Aquaculture Department, Tigbauan, Iloilo, Philippines, October 1988.

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### THE VALUE OF SEA HORSE

The sea horse is more valuable than you think. It is very much in demand as curios and souvenirs and as medicine, too.

This small fish with a horse head shaped like that of a horse and bent at right angles to the body catches the interest of visitors in marine aquariums. It can be kept indefinitely because of its firm external skeleton and is not distorted when dried. It can be mounted on driftwood blocks or affixed to pedestals and used on a chessboard instead of the knight. The sea horse is also used for jewelry such as earrings and for medicinal purposes when pulverized or turned into powder.

There is a sea horse ranch in Marungas, Jolo, Sulu with an initial stock of 5,000 breeders for propagation. Dried sea horse is sold for P2,200.00 per kilo. It has market outlets in Borneo, Singapore, and Hongkong.

Sea horse ranching, anyone?

**Source :** AGCOM (Agricultural Communication) Services  
Department of Agriculture  
Region IX, Zamboanga City

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