

1994

S. guttatus and S. vermiculatus - ready for adoption?

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Southeast Asian Fisheries Development Center, Aquaculture Department (1994). S. guttatus and S. vermiculatus - ready for adoption? Aqua Farm News, 12(5), 3.

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***S. guttatus* and *S. vermiculatus* - ready for adoption?**

Of the species found in the Philippines, *Siganus guttatus* and *Siganus vermiculatus* are considered good candidates for aquaculture because of their faster growth rate compared to other siganid species. The former is more commonly cultured than the latter because of the availability of its fingerlings.

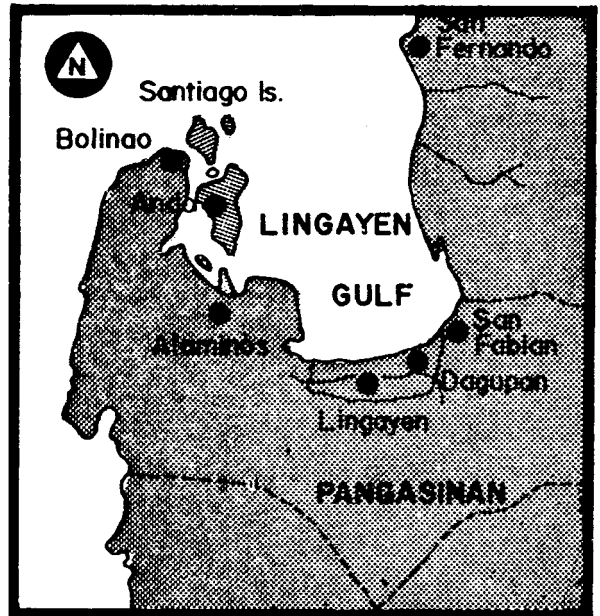
Siganids are cultured in either brackishwater ponds or cages. Both methods were found to be economically feasible.

Hatchery. Although a hatchery technique has already been developed for siganids, especially for *S. guttatus*, there are no commercial hatcheries for this species in the Philippines. At present, *S. guttatus* fingerlings for stocking in ponds or cages are bought from dealers or directly from the fishermen. The supply of fingerlings from the wild, however, is barely sufficient to meet the growing demand. The situation will become worse if *S. guttatus* culture in cages will expand and will be intensified.

Cage culture. Cages for siganids are usually made of bamboo. The size of cages ranges from 3-4 m x 3 to 5m x 3m. In some places, cages can be as large as 15m x 5m x 2m. The cages are kept in place by means of anchors. Floaters used are either plastic drum, styrofoam, or wooden boxes .

Siganids are stocked at a density of 30-40 fingerlings per sq m. They are fed with pollard (finely ground bran together with the scourings obtained from wheat) once a day at 3-5% body weight or a mixture of pollard, algae (mainly filamentous green algae and *Ulva* sp.) and some vegetables like boiled squash and swamp cabbage (kangkong) or algae alone. There are a number of studies on the nutritional requirements, digestive system, and food and feeding habits of siganids, conducted in the Philippines but there are no commercially available formulated diets for siganids until now.

Some cage operators stock 100 to 200 of *S. guttatus* fingerlings in grouper cages to



Lingayen Gulf, Pangasinan has the richest source of siganid fry in the Philippines.

minimize or retard the growth of algae on the nets. The siganids are then harvested together with the groupers at the end of the culture period and are an added source of income for the farmers.

Culture period and survival rates. In about 5-8 months, the siganids (mainly *S. guttatus*) will reach marketable size of 200-300 g if the initial stock had an average total length of about 5-6 cm. Survival rates are generally from 70 to 80%. Although siganids had been and are being cultured by the private sector, the profitability of commercially culturing them in cages remains to be demonstrated.

Source: Juario, J.V. 1991. Status of Finfish Mariculture in the Philippines. Guerrero, RD & MP Garcia, Jr. eds. *In: Advances in Finfish and Shellfish Mariculture; Proceedings of the First Philippine-French Technical Workshop on Advances in Finfish and Shellfish Mariculture, October 24-26, 1990. Los Banos, Laguna, Philippines. pp. 30-31.*