

# Grouper Culture for the Caribbean

## *Progress Report*

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As demand increases and wild stocks are depleted, farming of marine fish is becoming more feasible in the Caribbean region, especially on islands with little fresh water to spare. Tilapia are being raised in salt water, and may be appropriate in some situations. Much research has been done on pelagic species such as pompano and dolphin, which swim constantly and use up much of their food energy to fuel this activity. More sedentary fish such as groupers put a greater part of their food energy into growth. Groupers have been raised in the Far East for many years; however, wild juveniles are used for stocking and trash fish is used for food. Hatchery and feed technologies are still only experimental.

The Nassau grouper *Epinephelus striatus* is one of the most popular and sought after food fish in the Caribbean region, and many stocks have been depleted. It is considered by many to be a high-ranking candidate for aquaculture. During two years (1987-1988), preliminary work was done in Grand Cayman on induced spawning, larval rearing, and juvenile growth.

Five out of seven female Nassau groupers (2.2-4.7 kg) were induced to ovulate with injections of human chorionic gonadotropin (HCG). In two cases, fresh milt was available and timing of fertilization was correct: 3.2 kg female, 548,000 eggs, 65% survival from ovulation to first feeding (3 days); 4.7 kg female, 630,000 eggs, 66% survival from ovulation to first feeding.

Larvae were reared for 20 days after hatching, until the limits of the facility prevented further rearing. Larvae developed long pelvic and dorsal spines and did not swim far but drifted passively in the tank.

When four wild groupers (range 272-374 g, mean 317 g; range 264-286 mm total length, mean 274 mm) were fed an experimental dry feed for 20 days in a 1,000-liter fiberglass tank, mean daily growth was 0.48% (range 0.36-0.56%) or 1.6 g/day (range 1.5-2.0).