COMPARISONS OF STRIPED MULLET AND TILAPIA FOR ADDED PRODUCTION IN CAGED CATFISH STUDIES

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MUCH LOCAL INTEREST HAS ARISEN in the mixed culture of fishes for increased production. Researchers are combining such species as buffalo, minnows, and catfish. Others have considered various combinations of carp, goldfish, and tilapia with catfish for better utilization of natural food and space. Of these, the catfish-tilapia combinations have probably been the most successful.

Kilgen at Auburn University (personal communication) found that larger crops of catfish could be produced in ponds by stocking *Tilapia aurea* with the catfish and circulating the water. He reported a large *T. aurea* harvest in addition to the catfish as they fed on catfish waste and phytoplankton. Smith [*7*] recorded high production with caged catfish, tilapia and with aeration.

Tilapia are not native to the United States. *Tilapia nilotica* (recently re-described as *T. aurea*) was introduced into the Southeastern United States in 1957 as a prospective pond fish and to control various types of aquatic vegetation [*6*].

Since their introduction, tilapia have been transported into many States including Florida, where they are reported to be the fastest spreading exotic in the history of the State. Tilapia catchability is low, and they are said to compete for space and spawning areas with centrarchids. Also, the young are in direct competition with young bass and other sunfish for food [*2*]. Salinity and temperature barriers may keep the fish from spreading into other Coastal States, but this is questionable. In studies conducted in brackish water ponds at Rockefeller Wildlife Refuge, we found that the fish spawned in waters with salinity concentrations ranging up to 4.3 parts per thousand. We were amazed at the production of one 0.2-acre pond when 3,053 fish weighing 303.5 pounds (1,517.5 pounds per acre) were recovered 211 days after the pond was stocked with only 22 4-inch fingerlings. The pond floor was saturated by numerous depressions created by the spawning fish.

Water temperatures less than 45° F. are reported to be lethal to *T. aurea* [*1*]. However, McBay [*6*] reports that some of these fish will tolerate waters as low as 38°F. for short periods of time, the larger ones being more tolerant. Tilapia have overwintered in ponds at Rockefeller Wildlife Refuge and at Louisiana State University.

As an alternative, we have selected our native striped mullet (*Mugil cephalus*) for culture in catfish ponds to obtain higher yields. Mullet are widely distributed throughout the world, in

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