Abstract

In Michigan, the hybrid tiger muskellunge is utilized as a relatively easy to catch, trophy-sized esocid. In 1982, about 16,112 Michigan anglers harvested 13,447 tiger muskellunge, one for every 10 angler days of fishing.

A change from extensive to intensive hatchery rearing techniques in 1976 resulted in a five-fold increase in annual fingerling production and a 50% increase in managed tiger muskellunge lakes, but a considerable decrease in fingerling survival and angling quality. Subsequently, it was found that extensively reared fingerlings stocked at about 8 inches in early July had 4 to 16 times higher survival than intensively reared fingerlings stocked at 6 to 7 inches in early August. Attempts to enhance survival of intensively reared fingerlings by early or late stocking were not successful.

Four factors important to survival of stocked fingerlings were time of stocking, size at stocking, predator density, and density of small soft-rayed forage fishes.

Management recommendations include a return to extensive fingerling rearing techniques. Returns from 30,000 extensively reared fingerlings will equal those from 200,000 intensively reared fingerlings, the current program level. But, if intensive rearing techniques continue, fingerling stocking rate should be increased 600% in lakes with good populations of tiger muskellunge. Stocking of tiger muskellunge should cease in lakes with demonstrated poor fingerling survival. The fish populations and angling quality in managed lakes should be monitored more closely. Fishing regulations should be modified to reflect the image of the tiger muskellunge as a trophy fish.