



IOWA DEPARTMENT OF NATURAL RESOURCES

Sport Fish Restoration Research Findings

Evaluation of the Split Stocking Method in Iowa Ponds



Project Duration: 1975 - 1980

Location: Southern Iowa Ponds in Adair, Cass, Davis, Guthrie, Lucas and Montgomery counties.



Small Impoundments Fisheries Research Team:

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Evaluation of the Split Stocking Method in Iowa Ponds

Iowa's pond program began in 1945, and several fish stocking combinations and densities were used. At the time of this study, ponds in Iowa supported 11% of fishing trips, and 47% of respondents in an eight county area in SW Iowa chose pond fishing as their most frequent fishing pursuit. In 1973, a split stocking system was started using an October stocking of 1,000 Bluegill per acre and a June stocking of 100 Largemouth Bass per acre. This strategy used hatchery space more efficiently, enabling production to double, and promised to prevent a missing year class of bass the first year after stocking. This study evaluated this new stocking system.

Goals

- Develop timing and density of stocking Largemouth Bass and Bluegill that allow bass to reproduce in their second year of life, thereby causing the size structure of these developing fish populations to provide excellent fishing for Iowa anglers in a shorter timeframe.



Results

- The first stocking strategy (1-inch Bluegill in October and 100 Largemouth Bass the following June) resulted in only 1 of 9 ponds producing a Largemouth Bass year class the first year after stocking. It took 4 years for fisheries to develop into balanced populations.
- Reducing Largemouth Bass stocking to 70 fish per acre resulted in 4 of 5 ponds with Largemouth Bass reproduction the first year after stocking. Three of these ponds developed balanced fish populations within 3 years.
- Bluegill spawning documented in early July as opposed to mid-August resulted in slightly larger Largemouth Bass that were more likely to be mature and produce a year class by age 1.
- Only 1 in 3 ponds with row crop watersheds produced a self-sustaining fishery.



Conclusions

- Stocking 1,000 Bluegill per acre should occur by late September to early October at the latest. This will allow more growth and quicker maturity. These fish will spawn earlier the following year, providing forage that will help to increase Largemouth Bass growth and maturity.
- Spring Largemouth Bass stocking should be reduced to 70/acre to insure the best chance for development of a balanced fishery within 3 years.
- Small public lakes should receive two successive stockings of Largemouth Bass fingerlings each year to guard against a missing year class. The second-year stocking rate should be at least double the initial rate.
- In heavily fished ponds, a 14-inch minimum length limit on Largemouth Bass will insure that all age 2 and most age 3 fish will be able to reproduce before harvest.
- Row crop watersheds and access to ponds by cattle result in unpredictable fishery development.