The Rockefeller Wildlife Refuge

A Report on Catfish Experiments In Deep South Louisiana

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Fisheries research is relatively new to the Refuge Division of the Louisiana Wild Life and Fisheries Commission.

Wildlife studies, consisting mainly of waterfowl and alligator projects, have been conducted by this division for several decades. Numerous projects have been conducted—and are presently underway—concerning various facets of marsh ecology and the development and management of these marshes for wildlife.

The uniqueness of this area, the scarcity of fisheries research in this type of environment and the excellent facilities prompted the initiation of fisheries work at the Rockefeller Wildlife Refuge at Grand Chenier, Louisiana.

The 84,000-acre refuge is located in the coastal marshes of Southwest Louisiana. The Rockefeller marsh waters have salinities ranging from 0.1 ppt (parts per thousand) to 30 ppt, depending upon the nearness to the Gulf of Mexico. The typical salt marsh flora of wiregrass, Spartina patens, and saltmarsh grass, Distichlis spicata, are dominant in the non-impounded areas of the refuge.

Sixty-one ponds have been constructed at the Rockefeller Refuge for fishery studies. They range in size from 0.1 to 5 acres and are constructed in such a manner to allow saltwater-freshwater manipulations in order to obtain desired salinity levels for culture experiments.

Fortunately, the majority of these ponds are statistically identical in size and receive water from the same source. This makes replicated treatments possible with fewer variables to influence the data. All of the culture experiments are conducted in dirt ponds—as, presently, most commercial operations are in similar environments. The data often is more applicable than that obtained from artificial surroundings.

Culture of Catfish In Saline Water

Eight years ago, the Louisiana Wild Life and Fisheries Commission, in cooperation with the Louisiana State University Agricultural Experiment Station, began exploring the possibilities of producing freshwater catfish in brackish coastal waters.

It was felt that the warmer climate of the vast, fertile, coastal lands should offer longer growing seasons and possibly thousands of acres of marshland now idle may possess a potential to fish farmers.

As an example, coastal farmers in Louisiana enjoy from 60 to 120 more days free of killing frost than farmers of North Louisiana. If catfish could be grown in brackish water unsuitable for any other crop, then a whole new industry awaits coastal waters.

Also, potential inland fish farmers with wells containing certain amounts of salt may be more fortunate than we once believed since this may prove to be acceptable for fish culture and may have some degree of theraputic effect.

The old practice of "salting" diseased fish has been used as a treatment for external parasites since the initiation of

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W. Guthrie Perry, fisheries biologist, transfers a brood catfish to a spawning pond prior to spawning season. Field studies and observed spawns indicate that channel and blue catfish can spawn in salinities nearing two parts per thousand in the brackish coastal waters at the Rockefeller Wildlife Refuge.