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INTERIOR FOLLOWS UP ON "DROWN THE MOSQUITO--SAVE THE DUCK MARSH" PLAN

The "drown the mosquito--save the duck marsh" plan which proved successful in the three-year cooperative experiment in the Delaware tidewater, is being further pursued this year, Arnie J. Suomela, Commissioner of Fish and Wildlife, Department of the Interior, reports.

The experiment was conducted on the Bombay Hook National Wildlife Refuge, about seven miles from Dover, Del. Similar cooperative tests were made in New Jersey. Negotiations are now being conducted for additional experiments on other tidal marshes along the Atlantic seaboard.

The findings in the Delaware and New Jersey studies not only offer hope for having huge areas of duck marsh which might otherwise be drained but also may contribute importantly to the solution of the general estuarine situation which is causing concern to wildlife management and sport and commercial fisheries.

The fundamental technique was controlled flooding of salt marshes where pest mosquitoes abounded. At times the water would be several feet deep. Net results were that the populations of pest mosquitoes decreased appreciably while the number of waterfowl using the area increased manyfold.

Those participating in the experimental project were the United States Fish and Wildlife Service, the Delaware Agricultural Experiment Station, the Delaware board of Game and Fish Commissioners, and the United States Department of Agriculture. The study was completed a few months ago.

The study showed that all portions of the marsh did not produce mosquitoes in equal numbers. The most intense production of mosquitoes occurred at the upper edges subject to irregular flooding by high tides and heavy rains. These salt-marsh mosquitoes, by reason of their large numbers, long flight ranges, and both daytime and nighttime biting habits, constitute the principal pests in coastal areas.

Erection of earthen dikes on the marsh and continuous flooding of this zone with fresh water to a depth of several feet effectively eliminated breeding of almost all salt-marsh mosquitoes, which do not lay their eggs or develop under these conditions. Stabilizing the water also encouraged predation by fish on the larvae of other pest mosquitoes of lesser importance. The result was a large deduction in production of nuisance mosquitoes and a substantial increase in use by ducks, geese, and other kinds of wildlife.

The value of these findings assumes greater significance when it is realized that DDT and newer insect control chemicals can also kill fish, crabs and other desirable aquatic animals. The development of mosquitoes resistant to a number of these insecticides has caused a return to open ditching as a control measure. In the past, such drainage has often been even more destructive to wildlife than the use of chemicals by drying the marshes in which these animals live.

Diking and controlled flooding provide a means in many areas of effectively integrating mosquito abatement and wildlife conservation interests and have now been adopted by some mosquito control agencies.

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