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6/25/56

FISH AND WILDLIFE SERVICE

For Release JUNE 25, 1956

DRAINAGE LOWERS DUCK PRODUCTION IN PRAIRIE POTHOLES, FWS REPORT SHOWS

High duck production and an early spring abundance of small water-holding depressions--or potholes--go hand in hand. Any drainage of potholes, even those which carry water for only two or three weeks in the spring, will decrease the production of ducks, a four-year study by the Fish and Wildlife Service shows.

This study was made in Day County, South Dakota, on an 11 square mile area which was typical of the pothole region of South Dakota, North Dakota, and Minnesota. The purpose of the study was to determine the relationship between pothole drainage and duck production.

The study shows that:

The number of breeding pairs is related directly to the number of water areas present when the birds arrive in early spring;

The temporary potholes, those which are dry in the summer, make up more than half the total number of potholes;

These temporary potholes are hardest hit by drainage programs.

The temporary potholes do two things which the breeding ducks require. They offer an opportunity for the dispersal of breeding birds, thus giving the mated ducks the space and noninterference they require during this season; and they afford the proper type of nesting cover.

By the time the broods are ready to leave the nests the temporary potholes may be dry, but the mother duck merely leads her brood overland to a more permanent water area. Tests conducted by the Fish and Wildlife Service have shown that some broods have traveled as far as two and a quarter miles from nest to water and that some of the broods were less than two weeks old when they made the journey.

Brood movements have been studied by injecting dyes into the eggs. This results in color-dyed ducklings similar to those colored chicks which adorn the show windows of stores during Eastertime. When a marked brood shows up at a pond, the distance from the nest to the pond is measured.

By the time the broods are ready for water the desire for isolation is gone and several broods will crowd into a single water area, which a month earlier was used by possibly one or two pair of breeding and nesting ducks.

Production on this area averaged 140 ducks per square mile.

The report is designated as "Duck Production Studies on the Prairie Potholes of South Dakota--Special Scientific Report, Wildlife No. 32." Copies of the report may be obtained by writing to the Fish and Wildlife Service, Washington 25, D. C.