POSSIBILITIES FOR FURTHER EXPERIMENTAL WORK IN PHEASANT RESTOCKING

Mr. M. O. Steen's letter of December 3 brought out the need, especially in other states, for more information on the effectiveness of pheasant stocking in increasing hunting season yields. We have done some work in restocking pheasants, rabbits, and raccoons, and we have enough general data on the dynamics of wildlife populations, to convince us that the artificial method does not get down to cases. It is prohibitively expensive and does not cure what ails unproductive areas.

Of course, we hear enough from people who want bigger and better game farms to realize what administrators are up against in some states where that has constituted the entire program for many years. They need something clean-cut and spectacular that will catch the customers right between the eyes. It ought to be simple and definite enough so that John Doe can draw his own conclusions.

Mr. Steen's letter suggested that such work might be carried on at the Rose Lake Wildlife Experiment Station. Herewith is an inventory of possibilities.

Advisability of Doing Stocking Work at Rose Lake

The main idea in establishing the Rose Lake experiment station was to develop practicable wildlife management measures for use in Michigan farmland. Our greatest need is for something constructive -- methods that will actually produce results at what we can afford to pay.

In accordance with this purpose we have set up some experimental areas on which various soil conservation measures, farming practices, and cover control developments are being carried out. By keeping track of wildlife populations, hunting season yields, and the use that is made of the various habitats by different species we expect to have a fairly exact evaluation of some of the things that could be done by the average farmer on his land.

It is obvious that to get satisfactory results in this work it is necessary to have good game inventories on the area each year and to identify population trends with those habitat changes which cause them. This is difficult at best, and if we complicated the entire picture by superimposing a restocking experiment on it, the chances are good that we would not know anything for sure.

If the habitat improvement methods are effective, and we restocked (even near by), those who wished to could ascribe our results to the turned-loose birds. If the stocking was carried on for just one year and the population then returned to "normal," we might be reasonably well convinced ourselves that it would have no effect on future operations. But in the eyes of the customers it would be the important thing, and our future triumphs would always be vitiated by the reminder "but you turned some loose."

While the restocking experiments were in progress at Rose Lake, the remainder of the program would need to be largely held in abeyance. I doubt that it would be good business to devote that much overhead to a type of work which probably could be done at much less cost somewhere else.

Present Information on Pheasant Restocking

The most significant results that we have obtained in this work were those at the Kellogg Farm in Kalamazoo County. This is an area of rolling morainic farmland with a low pheasant population. In the summer of 1933 three hundred game-farm pheasants were liberated on a 500-acre tract. A little over a year later, in the fall of 1935, an inventory indicated approximately 30 birds on this area. Fall censuses showed about this number of pheasants (25-30) during the next three years. Pheasants have not been hunted on the Kellogg Farm for more than 11 years, and sex ratios have been approximately equal. In the absence of any hunting-season kill, restocking an excessive number of game-farm pheasants thus failed to increase the productivity of

In the winter the population was 30 to 40 birds. Late reports indicate that in the fall just past (1941) there were less than a dozen pheasants on the farm.

Over a period of three years, 638 game farm pheasants have been stocked on this area, but less than two dozen birds have been subsequently recovered except as mortalities soon after liberation. Each winter the population has been 30 to 50 birds. Restocking has conspicuously failed to raise the productivity of this unit of range.

Aside from these two fairly intensive studies, a large amount of restocking has been done from which general conclusions can be drawn. During the nineteen-twenties shipments of birds were made annually to various parts of the north, including the northern part of the Lower Peninsula and even as far north as Sault Ste. Marie in the Upper Peninsula. In addition to these scattered efforts, intensive restocking work involving thousands of birds annually was done on private properties such as "Grousehaven" (the Jewett estate), and the Turtle Lake Club. On these tracts private game breeders were employed and small fortunes spent in attempts to establish the ringneck on small areas in the northern part of the Lower Peninsula. All such efforts have failed and informed people now generally concede the futility of "planting a breeding stock" of these birds north of Townline 16. In the southern Michigan farming area most of the land will support pheasants, although it varies from low to high in carrying capacity. All evidence indicates that the northern half of the peninsula will not support these birds at all regardless of what restocking is done.

The work at the Kellogg Farm and Swan Creek bears out the logical expectation of what restocking will accomplish in pheasant range of low carrying capacity. In the fall of 1940 it was undoubtedly possible to shoot more birds on the Swan Creek farm because of the large number of males liberated in August. But such game cost far more than it was worth. As "breeding stock" the released birds added very little, if anything, to what the native population produced in previous years. The situation was essentially the same after the stocking on both the Kellogg and Swan Creek farms. It

the area. This work was sufficiently clean cut and devoid of complicating factors so that the information is applicable most anywhere. Perhaps we should get it out in information circular form, or in a magazine article for reprinting.

Full details of the work are in the files at the Swan Creek Wildlife Experiment Station, but a summary of the pheasant restocking on that area can be given. The situation there is much different from the Kellogg Farm. About 250 acres of river-bottom farm constitute an "island" of pheasant habitat in the midst of the scrub oak land which does not support pheasants. Directly across the river from the farm are some openings and old fields which are used by the birds at times.

The pheasant population on the Swan Creek farm varies with movements back and forth across the river, but it appeared to be from one to three dozen birds from the summer of 1937 to 1938.

In August of 1938, two-hundred fifty (50 males, 200 females) game farm breeders were liberated there. Excessive garden damage to tomatoes and other crops resulted. Even though cover was very rank on the farm, an unusual mortality among banded (released) pheasants was observed. Weasels probably accounted for a part of these, and great horned owls took toll. During the winter of 1938-39 there were approximately 50 pheasants on the farm. In the spring practically all of the birds left the area and another release of 200 birds (75 males, 125 females) was made. In the fall an attempt was made to shoot off all birds of both sexes to determine how many banded individuals could be recovered. Only 10 pheasants were shot and none was banded, although 5 were old birds. Again winter counts showed a population of about 50. Trapping accounted for 21 birds during the winter but no banded ones were recovered. There were 19 cases of mortality (mostly Cooper hawk predation) during the winter.

In 1940 an April release of 58 birds (13 males, 45 females) and an August release of 130 males were made at the Swan Creek farm. In the following hunting season 17 cocks were killed. Eight of these were banded, all from the August group. Four other birds of the August release were accounted for but none from the spring.

took one year, as a maximum, for the population to return to "normal," that is, what the area could support. Restocking amounts to an attempt to "stuff" a habitat with more than it can support. The artificially-produced birds are eliminated along with the natural surplus which succumbs to environmental controls each year.

Need for Further Information

For technical people our experimental work, plus a general knowledge of wildlife populations, probably is sufficient to show that the path of least resistance is not the path of glory. It is probably also sufficient for our Michigan clientele, as they seem to be going along with us on it. If we can make our conception stick with what we have, there probably is no need to expend much effort in getting more. It seems to me to be more important to find out what will work, as we are at Rose Lake, rather than to obtain more reasons why something won't.

What we already have may help them out in other states. We should make it available with that in view. But it seems likely that people who are in a rut on restocking are not going to be easily convinced by information from other states. They will believe something much quicker if it is tried out right under their noses at home. Not only that, but they need to get into the fact-finding frame of mind anyway if they are ever going to deal efficiently with their conservation problems. This is as good a place as any for them to start.

For these reasons I doubt that further intensive restocking experiments need to be carried out in Michigan at this time.

Where Restocking Experiments Might be Carried On

In case we did wish to establish another experimental restocking project on the pheasant, the following considerations probably would apply. It could be supported by Pittman-Robertson funds and handled like our other research work.

In selecting an experimental area, we should choose one fairly typical of those from which we get our greatest demand for game-farm birds. The pheasant populatb n

should not be high, but there should be enough birds to act as "bait" for hunters -- hunters who probably will not be satisfied. In other words, it should be in a moraine or till plain area with land averaging from second to third class for farmland.

This rules out the Prairie Farm which is too productive already to make a good experimental area. The Dansville project appears at first sight to be one of our best bets. From the standpoint of land fertility and pheasant population it probably would serve. Its chief objection is the same as for nearly all of our other recently-established projects. It is not well blocked.

This would not necessarily need to bother us. We might lease the game rights on certain private properties for five years; or we could make a special effort to buy them. We probably should have two years of population figures on the area before any restocking is done, and that would give us time to make arrangements for working on private farms.

The requisites of the study would be these: We should keep our intentions quiet so that public reaction would not be different before and after the stocking. We should have a man on the area, at least periodically, through the spring and summer to get a census of breeding birds and brood counts. The man assigned to the work should arrange to check all hunters in and out at a central station and to examine all birds taken in hunting. By means of census drives, sex ratio counts before and after hunting, kill records, and other means, he should get a reasonably accurate measurement of pheasant populations each year. In the third summer of the work, at the usual time, we should stock an excessive number of young banded birds in the usual manner. For at least two years following, we should continue the population work using the same methods.

A minimum of two sections of land probably would be needed for this project. Four sections would be better. The Barry County area would also be a possibility, and the experiment could doubtless be set up there. Since a man would have to be resident on the tract most of the year, the distance from Lansing probably is not important.

As I see them, the foregoing are the most important points in considering the need for and the setting up of a pheasant restocking project.

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