AN ABSTRACT OF THE THESIS OF

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As an initial basis for a game management plan of agricultural lands in the Willamette Valley, Oregon, 272 farmers in Benton County were interviewed during the summer of 1936. Forty-four farmers in Linn, Lane, and Clackamas counties and 193 sportsmen in these and other counties in the valley were also contacted in meetings during the winter of 1938-39.

The major objectives were to determine some of the more important social and economic factors existing between farmers and sportsmen in relation to hunting in farm lands in this particular location.

Practically all of the information for twenty-four questions was obtained indirectly from the farmers in Benton county while interviewing them in an upland game nesting study. The hunters were asked twenty-eight questions in club meetings.

The following data were obtained:

1. A majority of the farmers were interested in having a few birds around the farm. Over half of them indicated an interest in more birds than the present population.
2. Most of the farmers indicated that they tried to save game when it could be done without too much interference with the regular farm program. Many farmers apparently did not realize how some farm practices affected wildlife.
3. Over half of the farmers hunt upland game every hunting season.
4. Most farmers permitted hunting by anyone that would ask permission and respect the farmer's property. Many hunters said that they had never been refused hunting privileges.
5. Control of trespassing was the farmers' greatest problem. Damage to stock and fences and "road hunting" were other hunters' actions often criticized by farmers.
6. Sportsmen said that they did not always ask hunting permission because it was often too inconvenient. Others feared being refused.
7. Farmers considered game birds of no material expense
on the farm but suggested that they fed, raised, and protected them and therefore should have something to say as to how they were taken.

6. While most of the farmers were not interested in an income from game, some of them believed that providing some financial return together with better farmer-sportsmen relationships would stimulate an interest in game management.

9. Both farmers and sportsmen agreed that there was no incentive at present for farmers to provide game for some outside hunter.

10. Sportsmen were willing to pay a reasonable amount for hunting privileges.

11. Farmers as a group did not report observing much illegal hunting. Sportsmen believed that approximately twenty-eight per cent of the game birds were taken illegally every year.

12. Hunters believed that most of the illegal hunting was done by farmers, with "out-of-season" hunting and "road hunting" next in importance.

13. Sportsmen made the following suggestions to improve upland game hunting conditions: liberate more birds; close the season; destroy vermin; control cats; control poaching; cooperate with farmers; provide more food and cover and more refuges.

14. Farmers and sportsmen believed liberating birds helpful in increasing game.

15. Approximately one-fourth of the sportsmen owned dogs for hunting purposes but the majority favored the use of dogs at all times during the hunting season.

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**
AN ANALYSIS OF FARMER-SPORTSMEN RELATIONSHIPS AS A GUIDE TO UPLAND GAME MANAGEMENT IN THE WILLAMETTE VALLEY, OREGON

by

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The writer is deeply indebted to the farmers and sportsmen who have furnished the data for this study and to others who have helped make this study possible.
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AN ANALYSIS OF FARMER-SPORTSMEN RELATIONSHIPS
AS A GUIDE TO UPLAND GAME MANAGEMENT
IN THE WILLAMETTE VALLEY, OREGON

Introduction

As an initial basis for a successful game management plan of agricultural lands in the Willamette Valley, Oregon, 272 farmers and 193 sportsmen were interviewed. The major objective was to determine some of the more important social and economic factors existing between farmers and sportsmen in relation to hunting on farm lands in this particular location. It is intended that, first, some parts of this study may serve as a guide to better farmer-sportsmen relationships in an upland farm game management plan by placing emphasis upon the desirable features and eliminating some of the undesirable features involved in upland game hunting; second, a study of the ideas expressed by either group may be of value as suggestions in a research program by proving some of the present ideas either true or false; and third, a knowledge of present ideas may serve as a guide in determining what should be included in an educational program for game management.

Most of the data involving the farmers were obtained during the summer of 1936 and the information from the hunters was obtained during the winter of 1936-39.
A majority of the farmers lived in Benton County. Forty-four farmers were contacted in Linn, Lane, and Clackamas counties in order to determine the uniformity of the information obtained. This makes a grand total of 509 farmers and sportsmen interviewed during this study. The sportsmen interviewed lived in a number of locations in the Willamette Valley.

Since this study mainly concerns the expressed opinions of the two main human groups involved, namely the farmers and the sportsmen, in relation to upland game problems in western Oregon, and since no known similar type of investigation has been undertaken in other sections of the United States, the bibliography of this dissertation is of necessity brief.

General Description of the Area Studied

The major portion of the farm area studied was in the valley portion of Benton County, Oregon.

According to the Soil Survey(12) of Benton County, Oregon, published in 1924, the agriculture of the county consists of general farming, dairying, fruit raising, and to a relatively small extent, truck-gardening. Wheat, oats, clover, vetch, and corn are the principle crops grown. The report also states (p. 1437) that according to the census of 1920, fifty-three per cent of the area of the county was included in 1,320 farms. The average size of
these farms was 176.8 acres, of which 44.2 per cent, or 78.2 acres, was classed as improved land. The size of individual farms ranged from forty to several hundred acres, the larger ones being devoted principally to stock raising.

Fig. 1. Map of Oregon showing area studied. Red denotes location of farmers. Blue denotes location of sportsmen.
History and Status of the Game

Native Game Birds

The native game birds of the area are the Sooty Grouse, *Dendragapus fuliginosus fuliginosus* (Ridgway), Ruffed Grouse, *Bonasa umbellus sabini* (Douglas), and Mountain Quail, *Oreortyx picta picta* (Douglas). They are now reported as greatly reduced in numbers compared to years ago.

According to the 1925 Biennial Report of the Game Commission of the State of Oregon (3), "The members of the grouse family native to Oregon do not thrive under conditions prevailing generally throughout the state but in favored localities are holding their own."

Game Birds Introduced into the Willamette Valley from Other Parts of Oregon

Valley Quail, *Lophortyx californica vallicola* (Ridgway)

According to an unpublished report by Einarsten (5) the Valley Quail were introduced into the Willamette Valley from their native habitat in Josephine and Jackson counties early in the 1900's. They have increased quite rapidly under limited hunting seasons and because of hunter preference for the ringneck pheasant as game.

Game Birds Introduced into Oregon from Other States

Bobwhite Quail, *Colinus virginianus virginianus*
Linnaeus (Linnaeus) A publication by Phillips (11) published in 1926, in discussing the importations and establishments of game birds report that, "Oregon started stocking in the Willamette Valley at least thirty-five years ago, from which region the birds were distributed to various other places, including several islands in Puget Sound. Nevertheless, it does not appear that the species is now particularly abundant or widespread."

Exotic Species of Game Birds Introduced into Oregon

The fact that native species of game birds have gone down in numbers while an exotic species or the ringneck pheasant has increased in numbers is brought out in the 1925 Biennial Report of the Game Commission of the State of Oregon (3) (p. 15). "It is a peculiar coincidence that probably ninety per cent of the upland bird shooting in Oregon is provided through the introduction of a foreign bird (an oriental) ......"

Ring-necked Pheasant, Phasianus colchicus torquatus (Gmelin) No two authorities were found that agreed on all details in the introduction of the Chinese or ring-necked pheasant, hereafter referred to as the pheasant, into Oregon. The following summary is taken from Crew's report, "The History of the Ringneck Pheasant in Oregon" (4): "The ringneck pheasant (Phasianus colchicus) is indigenous to
various Asiatic countries and therefore it is an exotic bird in the state of Oregon. Its history dates back to 1861 when the Honorable O. N. Denny serving as Consul General to Shanghai, China made a shipment of twenty-eight birds, eighteen females and ten males, to his brother John Denny, who liberated them at Peterson's Butte, near Lebanon in Linn county. From that time on the bird has been successfully transplanted, propagated, and spread throughout the entire state.

"There has been three subspecies of this bird introduced into the state of Oregon. The original stock coming from Shanghai, China is known as the Chinese ringneck (Phasianus colchicus torquatus). It is indigenous to eastern and southern China, from Canton to Hunan north to the lower and middle Yangtze, up the Yangtze river to Ichang, north to Pekin, Kagua, and the Ordos country. The two other subspecies which have been introduced are the English ringneck pheasant, (Phasianus colchicus colchicus) and the Mongolian ring-necked pheasant (Phasianus colchicus mongolicus)."

According to a summary of the laws pertaining to the ringneck pheasant, Crews (4) (pp. 12-60) the pheasants were protected from hunting for a period of ten years. They increased so rapidly during this early period that a two and one half months open season was permitted in 1891 and 1892.
with no provisions for a bag limit. A three and one half months open season with no bag restrictions was permitted during 1893 and 1894. The open season was reduced to two and one half months in 1895 with the first daily bag limit of twenty birds per day included as a part of the law. From then on, both the length of the open season and the bag limit was reduced until in 1936 the open season was for a period of ten days with a bag limit of four male birds for the entire season.

Most of this history is for the area of Oregon west of the Cascades.

European or Hungarian Partridge, *Perdix perdix perdix* (Linnaeus) The July 1914 issue (pp. 3-4) of the Oregon Sportsman (10) gives the following brief history of the Hungarian partridge in Oregon. "The bird generally known as the European or Hungarian partridge (Perdix perdix) imported into Oregon from Europe is also variously called the English, Gray, Bohemian, and German partridge.

"The first shipment of ninety-seven partridges was imported into Oregon in 1900 and liberated in the Willamette valley....In the early part of 1913, two hundred and eighteen Hungarian or European partridges were purchased and liberated on the different game refuges in Oregon. During the past year, fifteen hundred and twenty-two of these partridges were liberated...." Of this liberation,
six birds were liberated near Lewisburg in 1913 and twelve birds were liberated near Alsea in 1914. These were the only liberations for Benton County at that time. The birds exist today only in small isolated spots in the Willamette Valley. It is reported that liberations of partridges east of the Cascades were reasonably successful.
The Major Factors of Upland Game Management

A farm game management program must recognize two sets of factors, namely the biological factors and the relationship factors. Biological facts are necessary to make management basically sound. This is being provided through other research of the Oregon Wildlife Cooperative Research Unit. It is also most necessary to know the relationship that exists between farmers and sportsmen, and their relationship to game. Most of these factors must be understood and worked out in harmony before any successful game management plan can be put into operation. This study is directed toward a solution of the problems involved between the farmer and the hunter.

Diagram 1, showing the relationship factors involved in upland game management.

It is the purpose of this figure to show that proper relationships among game, farmers, and sportsmen is essen-
tial and must be in proper balance with the biological factors in a successful upland farm game management program.

The Problem

The major objective of this study was to determine the relationships that exist between farmers and sportsmen in regard to the hunting of upland game on farm land. Efforts were also made to determine the farmer's interest in farm game; his likes and dislikes toward it; his attitude toward hunters; the actions of hunters that irritate him; the possibilities for more game; and to determine the hunter's side of the upland game situation.

No adequate system of providing for more game and more hunting can be undertaken without considering some of these fundamental factors. The degree of success of a farm-game plan in the future will depend very largely upon the farmers' interest because the birds are dependent practically entirely upon the habitat and protection offered them on farm land. The farmers' attitude toward game and game management may change as information accumulates and as they learn more about game and its management.

Up to within the past few years there has been no organized effort among farmers to increase game in most of the western states. Years ago, farm game was reported very plentiful, but it has been steadily decreasing until now many farmers and city hunters have given up hunting en-
tirely because of the scarcity of birds, chiefly Pheasants, Valley and Bobwhite quail. According to this survey, more land is gradually being closed to hunters by farmers because of the increasing scarcity of birds and for other reasons. No longer is it possible to do as many old timers expressed it, "Why, when I was a boy the swales were full of 'em. If I couldn't go out with a good dog and in an hour's time or so get eight or ten 'chinys', there was something wrong--and do it day after day. Now you can walk all day and not see over one or two--especially after the first day of the season."

Another very striking example, "Ten or fifteen years after the pheasants were introduced I rode my horse out to the pasture to pump water for my cattle. I had two dogs--one a Shepherd and the other a Pointer-Spaniel cross. While going through the tall grass the Spaniel pointed several birds and the Shepherd pounced on top of them because they were young and in the tall wet grass were slow to take wing. I took home five one day--you never see that any more."

This situation is further amplified by the expression of many hunters, "I like to hunt but the birds have been so scarce in the past few years that I did not buy a hunting license." Some farmers have done no hunting, and have not permitted hunting on their place because of the scar-
city of game birds.

Some evidence of the present scarcity of game birds is brought out by Moore (9) in a report of an upland game census of approximately 10,000 acres of unmanaged land in Linn and Benton counties, February 1 to March 15, 1938. This census was a part of the work of the Upland Game Management class under the direction of Professor R. E. Dimick. According to this census there were 31.1 habitable acres per pheasant; 29.7 acres per Bobwhite quail and 23.1 acres per Valley quail, making an average of 7.3 habitable acres per game bird.

A census was made of approximately 500 acres of the "Failing Estate." This is an area of about 4000 acres, located a few miles south of Corvallis. It has been closed to public shooting for approximately thirty years but has been partially managed and used by a private group of hunters. This area had a pheasant population of one bird per 5.3 acres according to the class census.

No figures are available as to the probable upper limits of density for pheasants per acre in the Willamette Valley during the early history of the bird. According to all indications, both verbal statements made by people that were living here at that time and as indicated by the game laws during the early open seasons, this game bird was exceedingly abundant.
Some idea of the density of pheasants per acre, both near London, England and in the State of Iowa is indicated in Leopold (1936, 53) where he states: "Maxwell gives the average kill of wild-raised pheasants on a 5,800 acre estate near London as 1,400, and the maximum as 2,000. This indicates a wild population of possibly one per two acres.

"Figure 12 shows a pheasant census of 210 farms and a Hungarian partridge census of fifty-four farms within the established range of these species in Iowa. The maximum density of both species approaches, but in only one case exceeds, a bird per acre. This one case covers a winter concentration of pheasants known to be only temporary."

According to Leopold (1936, 56) it is his belief that the upper limits of density in the fall of the year on large areas cannot be expected to be over one bird per acre and this density only on the most favorable range.

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1. This was a pheasant census of Iowa during the winter of 1931-32, made by the district game wardens and Aldo Leopold for the Iowa Conservation Plan.
Methods Used in Obtaining Data

Method Used in Obtaining Farm Data

Most of the farmers were interviewed individually while making a nest survey and while inquiring as to the reason for the reported decrease in the numbers of game birds that had once been so plentiful. Practically all of the information for this part of the study was obtained indirectly rather than by direct questions. This method was used because farmers as a group are sometimes skeptical of answering the routine questionnaire, and therefore more unbiased views would probably be expressed if the information came voluntarily during a visit.

An effort was made to be a good "listener," and it was sometimes possible to obtain almost all the necessary information in a short interview. With others it took much longer. In most cases it was possible to guide the conversation so as to get the desired information without much difficulty. Former experiences were of great value in this study.

Direct questions were asked in some cases. For example, the farmers were usually asked if they had observed any actual damage to crops by quail or pheasants. Frequently this was answered in their conversation.

As an example of indirect questions, toward the latter
part of the survey an attempt was made to determine the approximate number of birds shot by farmers. Some statement such as, "Well, I haven't shot a bird for two years," often resulted in an expression from him. If not, then some similar statement was usually made later in the interview. Very often an expression or two was the key to the farmer's attitude toward game and hunters. These were kept in mind and were jotted down on the survey blank together with the other information after leaving the farm and before stopping at the next place. The following expressions by farmers were indicative of their interests:

1. "We will do all we can to save the birds because we like them."
2. "I think it niggardly not to allow any one to hunt.
3. "I invited two out to hunt. One shot a wood duck and went over into the neighbors melon patch—rather embarrassing for me."
4. "I was feeding a nice covey of Bobwhite quail until somebody came and shot them—and no open season either."
5. "What burns me up is to have them come right in my yard and shoot the birds."

Some of the data were made up from an evaluation of their expressions. In most cases this was rather definite because of the statements made during the interview. All through the interviews a neutral stand was maintained as far as possible on all issues, the only interest was in

1. Quotations form some of the most valuable parts of this thesis. Some of the expressions may seem rather homely to a few but they form a basis of understanding to those close to both the life and trials of the farmer and the hunter and his chase.
determining the farmers' ideas on game matters.

It should be borne in mind that the statistical data for this group are not complete. It was not always possible to get answers to every question, because it was the busy time of the year for farmers. In each interview an attempt was made to learn the farmers' paramount reaction to sportsmen contacts—for example, the farmers' expectation of hunters. The data show that 131 of the farmers interviewed mentioned at some time their disapproval of individuals hunting without asking permission. Out of this group, 121 mentioned it early in the conversation, while ten relegated it to a lesser place of importance by mentioning it after other things. There was very little doubt but that all of the farmers expected that their property and rights be respected. If a direct question had been asked as to whether or not they expected the hunters to respect their property, quite obviously the answer would have been "yes" in practically all cases. On the other hand, by making no direct question, the farmers undoubtedly expressed their primary desire as to what was expected of hunters—namely, that they were most interested that hunters ask permission before going through or on the place. They frequently expressed the opinion that they usually did not worry about the hunter that stopped to ask permission. It was the hunter that sneaked in that generally did the damage
and caused the trouble. Very seldom were any complaints made against the hunter that had received permission.

Methods Used in Gathering Data From the Hunters

Practically all of the information from the hunters was obtained by direct questions in club meetings. Each hunter was given a blank sheet of paper and a pencil and asked to write his opinion as soon as each question was asked of the group. There was no discussion of any question, other than to make the question clear, until after the papers with the answers were collected. No signatures were requested. Caution was used to guard against the possibility of anyone misconstruing the purpose of the survey. Very little time was apportioned to each question in order to avoid as much as possible any discussion of the question between individuals. Consequently the answers were very brief, in some cases, which makes some of the quotations appear incomplete.

Questions Used in the Survey

Some of the questions asked of the 272 farmers interviewed were direct. The reactions to other questions were obtained indirectly. For example, in question number five below, the aim was to determine what the farmer considered as the most desirable feature of having game around the
place without actually asking it in the form of a direct question. Both direct and indirect questions are listed in the following list:

1. Do you hunt?
2. Do you allow others to hunt?
3. Do you allow the public to hunt?
4. Do you limit hunting to friends only?
5. What is the most desirable feature of having game around the place?
6. What is the most undesirable feature of having game around the place?
7. Would you like to have more game?
8. Do the birds cost you anything?
9. Do the birds do any damage?
10. Are the birds of any value?
11. What do you expect of hunters?
12. If you were to provide more game, what would you expect of hunters?
13. Do you try to save game?
14. Would you be more interested in game if there were some kind of an incentive?
15. Do you now practice or are you interested in game management practices?
16. Do you have any dislike for hunters?
17. What are some of the actions that some hunters
do that are irritating or that might be considered damage?

18. Do you have any specific cases of damage done by hunters?

19. What do you think of liberating birds?

20. Are you in favor of the free entry of land for hunting purposes?

21. Do you think that you have an equal chance with hunters?

22. Is there much illegal hunting?

23. Do you know of any specific instances of illegal hunting?

24. How many cases of illegal hunting have you reported?

The sportsmen were asked the following questions:

1. In your opinion what is the reason for the decrease in pheasants?

2. In your opinion what is the reason for the decrease in quail?

3. In your opinion what is the reason for the decrease in blue grouse?

4. Will liberating birds provide sufficient shooting on a practical basis?

5. What percentage of game is taken illegally?
6. What types of illegal hunting have you observed?

7. What percentage did you report to authorities?

8. If not reported—why not?

9. Are you in favor of more law enforcement?

10. Is more land now closed to hunting than ten to fifteen years ago?

11. Should hunters ask permission to hunt?

12. If you did not always ask permission before hunting on a farm—why not?

13. Have you ever been refused when you have asked for permission to hunt?

14. What reason did the farmer give for refusing?

15. Did any farmer ever suggest to you that the birds were too scarce to justify shooting?

16. Do you own a dog that you use in hunting?

17. When do you suggest the use of dogs?

18. Are birds any expense to the farmer?

19. What incentive is there for farmers to provide birds for you as an outsider?

20. Will farmers provide more game without some kind of an incentive?

21. Would you be willing to pay something for the privilege of hunting?

22. Would you prefer to pay direct to the farmer or through an increase in license?
23. What basis per bird or per day?

24. What would you do to improve upland game hunting conditions?

25. Do you shoot hawks? If so what kind?

26. Do you think that limiting guns to two shells would improve our upland game situation?

27. Would you be willing to do so?

28. Should the Game Commission improve the Bobwhite situation?
The Farmers' Interests in Upland Game

Most leaders in scientific game management for farm lands believe that a successful upland game plan must have the cooperation of the farmer, because his land harbors, feeds, and protects them with cover. Consequently, in order to determine some of the possibilities of cooperation for the increase of upland game on the farm, it was necessary to know something of the farmers' interest and attitude toward game. This was accomplished largely through noting anything in his conversation that indicated his interest. Sometimes this was a key statement and at other times through an evaluation of all the data obtained during the interview.

The survey brought out that many farmers had more than one interest in wildlife matters while others had none. Out of 272 farmers interviewed, 164 or approximately sixty per cent were interested in seeing a few birds around the farm; 143 or fifty-two per cent were interested because of the pleasure they enjoyed hunting the birds; thirty-three or twelve per cent were interested in birds for their friends' hunting; thirty-one or eleven per cent had no particular interest and fourteen or five per cent had no interest. For all practical purposes the two last mentioned groups may be considered as one in a game management program because of their lack of interest. One hundred
fifty-four or fifty-six per cent of the farmers indicated interest in more birds while five or approximately two per cent were of the opinion that the present population of birds was ample.

The following chart shows the varied interests of the 272 farmers in upland game:

<table>
<thead>
<tr>
<th>Count</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>164</td>
<td>Interested in esthetic value of the birds.</td>
</tr>
<tr>
<td>143</td>
<td>Interested in hunting.</td>
</tr>
<tr>
<td>33</td>
<td>Interested because of birds for friends to hunt.</td>
</tr>
<tr>
<td>31</td>
<td>Partially interested, but nothing in particular.</td>
</tr>
<tr>
<td>14</td>
<td>No interest.</td>
</tr>
<tr>
<td>154</td>
<td>Wanted more birds.</td>
</tr>
<tr>
<td>5</td>
<td>Wanted no more birds.</td>
</tr>
</tbody>
</table>

Figure 2. Varied interests of the 272 farmers in upland game.
A study of the chart is encouraging because it indicates that the general attitude among farmers was for the protection of the birds in order to have a few around the farm. The fact that 154 farmers were interested in more birds indicates a possibility of increasing them above the present population. The following were some typical expressions:

1. "We will do all we can to save the birds because we like them. They are very beneficial. We like to feed the quail around the buildings in the winter and then watch them strut."
2. "We have a couple of broods on the place this year and it would make us awfully mad if someone came and shot them for us."
3. "We like a few around--particularly Bob-white quail."
4. "We don't want our birds shot--we think they're too beautiful."
5. "It's nice to see a few around--especially quail."
6. "We don't keep cats, because we enjoy the birds so much."
7. "I hate to see the birds shot."
8. "We enjoy the birds very much. We had 4 or 5 banded male birds around the place all winter."
9. "I never hunt. I would rather see the birds alive."
10. "I don't want hunters to kill off all of the birds."
11. "I enjoyed one old cock this summer that would crow every morning from a stack near the house."

This is a fair sample of the various views expressed during the interviews indicating that many farmers were

1. It has been the policy of the Oregon State Game Commission in cooperation with the Oregon Wildlife Cooperative Research Unit to band some of the birds raised on the game farms before releasing them in the wild.
conservation minded but not necessarily game production or game management minded.

It was very evident throughout the survey that a majority of the farmers, even though they came in the group that hunted, preferred to have the birds around the place for their enjoyment rather than for hunting whenever the supply became too low for good hunting purposes. Some typical expressions:

1. "I didn't shoot any last year, because the birds were too scarce."
2. "I used to hunt and I don't want to see the birds exterminated."
3. "I like to hunt when there is something to hunt."
4. "I would like to see the game preserved for the kids."
5. "I don't hunt now because the birds are too scarce."
6. "I like to hunt, but I don't like to see them all destroyed."
7. "I am interested in having game for my boys when they get old enough to hunt."

The Number of Farmers Who Hunt Regularly, Occasionally, or Not at All

Hunting provides the chief incentive for the interest in upland game for many people. In order to determine the interest of the farmer in hunting, it was necessary to find out how many farmers hunted.

According to the survey, 109 or forty per cent of the 272 farmers hunt practically every open season while fifty-three or nineteen per cent hunted occasionally and 110 or
approximately forty-one per cent did not hunt. Some of the latter group hunted as boys. These data are recorded in the following chart:

<table>
<thead>
<tr>
<th>109</th>
<th>Number that hunt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
<td>Hunt occasionally.</td>
</tr>
<tr>
<td>110</td>
<td>Number that do not hunt.</td>
</tr>
</tbody>
</table>

Figure 3 showing the number of farmers that hunt regularly, occasionally or not at all.

A large percentage of those that hunt regularly or occasionally indicated that they would hunt oftener if more game were available. Hunting is still considered by many of them as one of the greatest of American sports. A few typical expressions:

1. "I like to hunt, but I don't like to have to walk a half day over the farm and then not get any."
2. "I don't care much for pheasants, but I would shoot more if there were more birds around. I probably shoot one or two a year."
3. "I didn't shoot any last year because the birds were too scarce."
4. "I used to hunt a lot, but now I would like to see the game preserved for the kids."
5. "Much to my sorrow I used to shoot for the market."
"Used to be able to get several in a short time. I used to have a goal of 2 (never more than 2) every evening after work, but that was years ago when they were very plentiful. Now I hunt occasionally, but seldom see any birds."

The Number of Farmers Who Permit Hunting

Very often sportsmen have made the statement that so much farm land is posted with "No Hunting or Trespassing" signs that the only hunting available to the average hunter is usually small areas of land already over-run with hunters. In other words, too much land is reserved for either the farmer's own use or for the use of his friends.

Therefore, in order to ascertain the potential hunting area available to the public (11), the farmers were usually asked if they permitted hunting. The survey shows that 204 or seventy-five per cent permitted hunting rather regularly; twenty-four or nine per cent permitted hunting occasionally, while thirty-four or twelve per cent permitted no hunting on their lands. See the following chart for an evaluation of these data.

Another common fallacy is that hunting is practically limited to hunters leasing the hunting rights on a farm or to those who are friends of the farmer. In this survey it was found that approximately seventy-eight per cent of the farmers permitted hunting by the public while twelve per cent confined hunting for the use of their friends.
204
Permit hunting rather regularly.

24
Permit hunting occasionally.

34
Permit no hunting.

Figure 4 showing the number of farmers that permit hunting and the number that do not permit hunting.

only. These data are shown in the following chart:

179
Hunting permitted by the public.

26
Hunting permitted by friends only.

Figure 5 showing the classification of groups permitted hunting on farm land.

The survey also brought out that many of the places, even though posted, could be hunted providing the hunter asked permission and was careful of the farmers property. In other words, farmers were not fundamentally opposed to hunting. It was also evident that some farmers who permitted hunting would in many cases have preferred no hunters because as some farmers expressed themselves: "We're over-
run with hunters--posting does no good." There were also other exceptions where, as some farmers stated it, "We have sometimes been pestered by so many hunters, some asking permission and others just going through that we finally refused everyone." Also as will be brought out later, some farmers objected to several hunters on the place at one time. The chief objection to hunters was the lack of protection of livestock, which with other objections will be taken up under a different heading.

Some of the following remarks were heard rather regularly, while others only occasionally. The remarks have arbitrarily been grouped into four groups of tolerance to hunting.

Group 1. Farmers that show no partiality:

1. "I've never stopped but one hunter. That was last year, because of the shortage of game."
2. "I feel sorry for the fellow who likes to hunt, and no place to go."
3. "I've never posted my land."
4. "I let anyone hunt--there's plenty of room. I don't see why they should pay any attention to signs. A man would have to spend a lot of time just locating hunting ground if he had to get permission from everyone."
5. "Hunters never bother me any--I just let them go as they please."
6. "I think it niggardly not to allow anyone to hunt."

Group 2. Farmers that permit anyone, but would probably prefer selection of hunters.

1. "I wouldn't mind hunters so much if they
were all gentlemen."
2. "We're over-run with hunters. Posting does no good."
3. "We're run to death by hunters."
4. "We don't encourage hunting."
5. "I can't keep them off. I have posted my place, and had the signs torn down."
6. "Hunters over-run the place."
7. "I counted 19 hunters in one of my 21 acre fields last year."
8. "They will get kicked out, if they don't ask permission, but I've never turned a man down."
9. "I never turn them down if they ask, but I want them to ask, so I can tell them where I have my stock."
10. "I am glad when hunting season closes. I had a good cow shot through the udder and had to dispose of her as beef. I put up signs, but they pay no attention to them. I don't mind hunters if they ask and are decent about it."
11. "It's like an army the first morning."
12. "I generally keep my place protected the first day or two, and then just turn them loose."

Group 3. Farmers that select their hunters.
1. "They're all your friends the first day of the season. Afterwards they don't know you."
2. "I don't want everybody."
3. "If it's someone that I know, I let them hunt, but I don't encourage it."
4. "I have my place posted, but I don't turn anyone down if they ask."
5. "We're not particularly anxious to have many hunters."
6. "Not bothered much with hunters, they went with the game."
7. "They just shoot everything out and I'm getting rather tired of it. I've never posted my place, but I plan to. It used to be that we could see lots of birds, but now we scarcely see any. I fed a bunch of 9 pheasants one winter, and then someone came along and shot them. There would have been a lot of them if they had left them alone."
8. "If they ask, but I don't allow any hunting by sneakers. I kick 'em off."
9. "I am not going to raise the birds and have most anybody come out and shoot them."
10. "I don't allow any city hunters any more--they're always bringing a carload of 'friends'"
11. One trespasser said to a new owner, "I've hunted this place ever since I was a kid 35 years ago. Who are you?"
12. "I don't mind hunters, but I don't want anybody around because sooner or later there will be too many. We let a few in to a picnic in a park-like field. The next time there were 12 cars, and the next time 22 cars--then we locked the gate."
13. "I wouldn't really mind a few of them hunting, but people used to come in and fish and picnic on the place until they got so thick that we just had to keep them all out. One Sunday they were so thick that the cows were afraid to go down to water so they broke the fence down in another part of the pasture. Another Sunday they left the gate open so the cattle got into one of the fields and 7 were bloated."
14. "They will get in trouble right now if they shoot quail."

Group 4. Farmers that permit no hunting.

1. "The birds never did me any damage, and the hunters don't do me any good, so I would rather have the birds."
2. "I don't hunt and I don't allow others."
3. "I don't permit hunting because of stock."
4. "I used to allow pheasant hunting. Right away they started shooting quail, so I permitted no more hunting."
5. "We don't permit hunting because of livestock."

From the interviews it appears that the best chances of sportsmen getting permission to hunt is prior to hunting season, but which, of course is not always possible. It
was obvious throughout the survey that the reason many hunters were refused the privilege to enter on farm ground was not because of the farmers opposition to hunters, but rather because of the discourtesy shown by many hunters in ignoring ownership of the lands. Some farmers referred to those hunting without permission as "sneakers." They sometimes irritated the farmers to the point where all hunters were refused even though they asked permission. This situation is evidently one of the greatest problems in the way of satisfactory hunter-farmer relationships. Many farmers intimated having in mind posting their place with "No Hunting" signs, not with the idea of keeping all hunters out, but rather to control trespassing.

The Possibility of a Closure of Farm Land to Hunting for an Indefinite Period of Time

Farmers and sportsmen are generally of the opinion that more land is now closed to hunting than was closed a few years previously. The survey indicated that this is so. It also indicated that all of this land will not be closed indefinitely to hunting but may remain posted with "No Hunting or Trespassing" signs. It was found that in many cases land was closed to prevent the taking of all the game breeding stock. This is substantiated by such comments as, "I didn't hunt last year and didn't permit others to hunt because the birds were too scarce." A very large percentage
of the farmers were in favor of closing the season or closing land to prevent extinction of the birds. Another comment was, "I like to hunt, but I don't like to tramp all over the farm and not see anything."

Another very important factor in the closure of land was the failure on the part of many hunters to recognize the rights of private property. The majority of owners expect that their property rights will be respected. Consequently, the farmers chief request was that any one desiring to hunt should ask permission. Many of them were of the attitude, that, "If it's not worth asking for, it's not worth hunting over."

The following remark characterized the average farmer's attitude toward hunting on his land: "They will get kicked off right now if they don't ask permission, but I seldom turn a man down." Some farmers have refused to grant hunting privileges and probably for a very good reason.

Methods of Hunting

Most farmers indicated that their hunting activities were confined to probably an hour or so either in the morning or in the evening while doing the chores. Seldom did they cite instances of hunting in groups. A few indicated that they took some time from their regular farm duties for hunting with a group of friends that came to the place.
Frequently, the farmers criticized others for hunting in large groups. The chief objection was that this type of hunting made it possible to take too much game—the birds do not have a chance. "Two men and a dog is OK, but I don't like to see an army of six to ten men and four or five dogs going across my fields. The birds just don't have a chance." In several instances, large groups of hunters were referred to as "armies" and were the object of criticism, while two or three hunters and possibly a dog was considered much better sportsmanship.

Some objected to the use of dogs because they considered it unfair to farmers and to other hunters that could not afford owning a hunting dog. Others thought it unsportsmanlike because it is taking advantage of the game, especially when they are in such small numbers as at present.

The Number of Birds Shot by Farmers

It is the belief of many sportsmen that one of the chief causes for the scarcity of game is the killing of birds by farmers and farm boys chiefly prior to hunting season. Just how many birds farmers take is rather difficult to ascertain but an effort was made during the latter part of the survey to obtain this information indirectly.

In discussing hunting, the average farmer usually said, "Oh, we like a mess or two and that's about all." It was
rather obvious that the poultry flock on the average farm was too readily available for much time to be taken from field work for hunting purposes.

The general impression of the interviews indicates that the majority of farmers shot very few birds. Very few farmers shot quail or allowed others to shoot them. Forty-one farmers indicated that they shot a total of twenty-four birds in the 1937 season. Seventeen indicated that they shot twenty-eight in 1936. One of these, a farmer's son, shot seventeen birds. Twenty-nine shot only one bird in ten years, and five never shot a bird. These data were contributed voluntarily, and were collected only during the latter part of the survey. In all probability this does not take into account birds taken out of season. There was little reason to believe that birds were taken out of season in any appreciable numbers. Occasionally some individual was suspected of illegal hunting and almost without exception, if this were the case, the same accusation was brought up by different individuals within a short radius of the one suspected. This indicates that reports of poaching would not appear in a wheel-like formation in a community if poaching were done generally; because, if this were the case, then this one example of illegal hunting would probably not have struck such a general aversion among the neighbors. No case was investigated further than
An occasional farmer thought he was entitled to a bird in or out of season. Rarely were there any intimations among neighbors that this occurred except possibly just prior to hunting season. Even this practice was looked down upon by most farmers, despite the fact that they considered that they fed and protected the birds and had a poor chance with the "army" of transient hunters with their dogs out the first day of the season.

Many farmers said that they used to hunt frequently but almost quit the last few years because the birds were comparatively scarce. A comment that describes a typical attitude: "I like to hunt, but I don't want to see them all destroyed." According to this man he shot one bird in 1936 and one in 1937.

How the Hunting Season Fits the Farmers' Time

During the course of the survey it became evident that many farmers believed they were at a disadvantage during hunting season because it came at the busiest time of the year. A very large percentage of the farmers indicated that they enjoyed shooting a bird occasionally but because of the importance of small grain seeding at this time, very little time was taken for hunting.

In the opinions of 134 farmers, 74 farmers or over half of those commenting on this question indicated that
they were at a disadvantage because the hunting season came at the busiest time of the year on the farm. Forty-nine farmers believed they had an equal chance with hunters. Twenty-one said that the dates for the hunting season were not satisfactory. This information is shown in the following chart:

<table>
<thead>
<tr>
<th>74</th>
<th>Too busy time.</th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>Satisfactory as it is.</td>
</tr>
<tr>
<td>21</td>
<td>Not satisfactory.</td>
</tr>
</tbody>
</table>

Figure 6 showing the farmers' opinion as to how the present hunting season fits into their farm program.

The following expression was characteristic of many interviews, "The season is right at our harvest time. You can't shoot early in the morning, nor in the evening, so I guess we will just go right on feeding them and let the city fellows come out and shoot them." Other typical expressions:

1. "The farmers feed the birds so they really should let them get a mess or two before the season opens and let the hunters have the balance--they shoot them off anyway."

2. "Farmers don't have much chance--too busy."
3. "Farmers have to get out the day before season to get any."
4. "It's not satisfactory, but I don't know how I would change it."

Quite obviously if the farmer who is interested in game from the standpoint of hunting is to take the most interest in game management, the hunting season should be arranged to avoid his busy season. On the other hand, it may not be possible to change the hunting season to fit the farmers' season and coincide with a season basically sound from the standpoint of the birds. The birds raised in the wild are too immature for a season opened early in the fall. This would be especially contrary to good management in adverse spring seasons when late nesting or re-nesting is frequent.

Opening the season too late in the fall might mean less cover and protection for the birds. Some farmers follow the practice of pasturing the grain stubble fields after harvest, burning and plowing, and consequently, much of the cover might be destroyed.

No suggestion was made as to how the season could be changed to make it more satisfactory to all concerned.

Undesirable Features of Game

Very few farmers considered the game birds undesirable. Some considered that game birds damaged certain farm crops and a small number objected to birds only because of hunt-
ers. Expressions similar to the following were occasionally heard: "The more game, the more trouble with hunters." While some of the farmers objected to game because of trouble with hunters, a large percentage of them indicated that they preferred to have the birds around even though the hunters were a nuisance.

The Expense of Game to the Farmer

If upland game is to use farm crops and farm lands for food and cover, some knowledge of what the farmer thinks about the expense of game to him should be ascertained. In this survey it was found that for 257 farmers, 241 considered the birds of no expense or of no significant importance from an expense standpoint; thirteen considered the birds of some expense, while three considered the birds a definite expense to the farmer. On the other hand, while so many farmers considered the birds of practically no expense, a big majority were of the opinion that farmers provided a place for the birds to live, fed, and protected them to a greater or lesser degree, and therefore should have something to say as to how they are taken. One of the more common expressions heard was that the farmers fed the birds. No suggestion was made at any time that the farmer should receive pay for the birds because of the amount of grain taken by them, nor the amount of land left for their use under the present system of farming. It was frequently
indicated however, that this attitude might change if the number of birds were greatly increased or if special emphasis were to be placed on game management. The following chart shows the farmers' viewpoint as to the expense of game on the farm:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>241</td>
<td></td>
</tr>
<tr>
<td>Considered birds of no expense.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Considered birds of some expense.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Considered birds a definite expense.</td>
<td></td>
</tr>
</tbody>
</table>

Figure 7 showing the farmers' viewpoints as to the expense of game to the farmer.

**Damage Done by Game Birds**

At various times game birds have been criticized for the damage done to farm crops. Since the birds obtain a portion of their food from farm crops, an increase in the number of game birds, would naturally, increase their aggregate food requirements. Consequently it would be contrary to the farmers' desires if they considered the food so taken as a loss. In order to get the farmers opinion, they were usually asked if they had observed any damage to farm crops by game birds.
The survey disclosed that 169 out of 253 farmers did not consider the present number of birds sufficient to cause any damage to farm crops; fifty-eight considered the birds did some damage, while six accused the birds of doing considerable damage. Forty-five accused the pheasants while but four accused the quail of doing damage. The damage considerations are summarized in the following chart:

| 169 | Considered no damage done. |
| 58  | Some damage.               |
| 6   | Significant damage.        |
| 45  | Pheasant accused.          |
| 4   | Quail accused.             |

Figure 8 showing damage considerations of game to crops.  
(Present Population)

A big majority of the farmers were of the opinion that most of the grain taken by game birds was waste grain and therefore of no particular cost to the farmer. Some in-
dicated that when pheasants were concentrated in a limited area that they sometimes did considerable damage, especially to corn. The damage that pheasants were ordinarily accused of doing was confined chiefly to their damage to corn and gardens but largely to young corn by pulling out the entire plant at the time of coming through the ground. Some reported the destruction of a considerable acreage by pheasants in this way. One farmer's experience with this problem was of interest. The incident took place while he was farming in another state. He had lost a considerable acreage of corn and suspected that the male pheasants pulled out the young plants so he decided to investigate. Early one morning he went to the spot in the field where the birds usually fed. He waited until they had had time to fill up and then shot two of them. Opening them he found very few kernels of corn but they were gorged with cutworms. He is now very much in favor of the birds. There was no reason to doubt his story.

Many other farmers accused the pheasants of taking young corn but evidently made no investigation similar to the one mentioned above. Occasionally pheasants were accused of stripping mature corn, destroying a few tomatoes in the garden, and in some cases were accused of killing young chickens.

Only four accused the quail of doing damage and that
chiefly in the garden.

Most of the farmers that mentioned damage to crops by pheasants considered it primarily in connection with a large concentration of birds in a relatively small area.

Some typical comments regarding damage done to farm crops by game birds:

1. "A male pheasant ate almost all of our cabbage."
2. "Pheasants will take grain if they are too thick."
3. "They take some grain but I don't consider it damage."
4. "Pheasants sometimes do damage to young corn."
5. "They are destructive if too thick. The birds were so concentrated in some of our corn fields years ago that we had to shoot some of them to protect our corn."
6. "They eat something but are more beneficial."
7. "They may become a pest if too thick."
8. "Quail do more good than harm even in a berry patch."
9. "We enjoy very much watching the quail running up and down either side of the pea rows in our garden picking pea aphids."

The Farmers' Interest in Aiding Game

At the start of the survey, several farmers indicated that they followed practices that saved rather than destroyed game. This was especially evident for the nesting season. In order to get this information for practically the entire group of farmers an effort was made to ascertain the farmers' attitude toward saving or destroying game. It was found that out of 243 farmers, 130 or approximately
sixty per cent either followed some management practices or indicated an effort to save, for example, a nest when convenient to do so. Possibly some efforts were made by sixty-eight farmers to save game while it was doubtful if thirty-five did anything for game and rather definitely evident that fifteen did nothing in the way of saving game. The following chart shows graphically the farmers' attitude toward conserving or destroying a bird or nest at any given time. It should not be confused with the part of this study that deals with the farmers' interest in game management.

<table>
<thead>
<tr>
<th>130</th>
<th>Followed some methods of aiding game.</th>
</tr>
</thead>
<tbody>
<tr>
<td>68</td>
<td>Possibly followed some practices to save game.</td>
</tr>
<tr>
<td>35</td>
<td>Doubtful if they did anything for game.</td>
</tr>
<tr>
<td>15</td>
<td>Did nothing for game.</td>
</tr>
</tbody>
</table>

Figure 9 giving the number of farmers that aid or do not aid in saving game.

1. Throughout this thesis the term game management refers to any practice engaged in by farmers that might be considered a part of a game management program regardless of the terminology used by farmers.
Feeding the birds in winter was one of the common practices in trying to aid game with quail receiving the most attention. Probably a relatively small percentage of farmers that made an effort to save game did very much other than such practices that did not interfere with the regular farm program. Some followed practices of cutting around nests, leaving brush patches and fence rows grow up to brush and weeds. Others plowed around the nests and in one case a portion of sod large enough to save the nest was moved. A number of farmers or farm boys collected the eggs from deserted nests and set them under hens. A few reported some success but most of the young birds escaped shortly after hatching because of the lack of proper facilities. Far more could be done to aid birds by preventing some of the destruction of nests in the grain and hay fields.

The results of the nesting studies carried on by the Oregon State Wildlife Research Unit during the seasons of 1937 and 1938 indicate that approximately fifty per cent of all nests observed in hay and grain fields were destroyed by farming operations. Eklund, making the study during 1937 observed that for 145 nests, "haying was the greatest single factor in nesting losses, with the destruction of forty-five nests. These were either destroyed by the mower, stepped on by horses, or smashed with a tractor, combine,
or binding machine. From observations of nests, it appeared that the majority were destroyed while the hen was still setting. Seven hens were killed in attempting to get away from the machinery, and ten were crippled, such as having one leg cut off or a wing cut. This shows a 15.5 per cent fatality, and 22.2 per cent crippling loss of nesting females in hay and grain fields. The fact that only ninety-five nests were observed in these fields makes the percentage of mortality 47.5 per cent of the nests found in these habitats.

According to this study hens began setting on 114 nests out of the 145 nests observed. The 114 nests averaged 10.45 eggs per clutch.

Crawford and Young making the study in 1936 found that thirty-six out of sixty-one nests were destroyed by farming operations in hay and grain fields.

In all probability, all of the nests that were destroyed by farming operations were not a total loss because of re-nesting by some hens later in the season.

The following are some of the expressions bearing on the farmers' attitudes toward saving game:

1. "We usually cut around the nests when possible to do so."
2. "I fed ryegrass seed to 35-40 quail all last winter."
3. "I fed a covey of quail one winter until some one came and shot them."
4. "I always mow around a nest if I find it. I left a small clump of brush in the
fence corner for protection. It proved to be detrimental because many a pheasant lost his life by road hunters."
5. "We always leave extra wide fence rows for nesting cover and protection."
6. "We always feed the birds in the winter around the barn."
7. "A pheasant had a nest in the cornfield and we always went around it to save it."
8. "I used to feed a bunch of quail in the briars along the road until someone came and shot them all."
9. "We keep a bushy patch especially for the birds."
10. "Why should we try to save the birds and have some one that won't even thank you, shoot them?"

The Farmers' Interest in Game Management

Whether or not farmers will be sufficiently interested in game to practice game management will depend upon a number of factors and cannot be definitely determined from a survey of this type. It does show however that something has already been done by various individuals.

In this survey a farmer following any practice such as not permitting the shooting of hens, feeding the birds in winter, leaving cover for nesting and protection, plowing around nests, mowing around or lifting the sickle bar over nests, permitting no hunting for the increase of birds and those very much concerned about the increase of birds for any reason were classified as interested in practicing game management. Farmers that indicated saving, for example, a nest only when very convenient to do so are not included in
this grouping.

While conclusions cannot be drawn from these data as to the degree of interest in game management by farmers, it does not alter the fact that some concern has already been shown for game by protecting it. Consequently the potential possibilities of game management should be greater where individuals have shown some assistance toward the welfare of wildlife.

The data for 203 farmers show that fifty-two were interested in some phase of game management; ninety-eight possibly were interested while fifty-three were doubtful or not interested.

This is encouraging when it is realized that practically no educational or demonstration work has been done to focus the attention on the fact that some effective practical management can be done at very little cost.

Indications of the farmers' interest in game management is summarized in the following chart, page 49.

Frequently farmers agreed on management to the extent that the birds should be given a chance to survive. Suggestions were often made by farmers to the effect that the hunting season should be regulated to correspond to the supply of birds in the field during the summer or at the opening of the hunting season. As one farmer said, "If we expect to grow oats next year we don't feed all our seed
oats this fall and winter."

52
Interested in some phase of game management.

98
Possibly interested.

53
Doubtful or not interested.

Figure 10 showing the farmers' interest in game management.

Larger covies of birds following dry spring seasons were observed by many farmers. They expressed the opinion that young pheasants and quail are probably much like domestic poultry when exposed to cold damp weather during the brooding season, and consequently hunting should be regulated accordingly. One of the most typical expressions heard was: "We should have good hunting this fall because of the good weather this spring and summer during hatching and brooding time."

This is also substantiated by field observations by Einarsen (5). During 1937, a wet season, 7.8 young birds of which an average of 4.0 matured per brood were observed. During 1936, a dry season, 9.2 young birds and 7.1 matured birds per brood were observed.

All of the expressions listed under, "The farmers in-
interest in aiding game," are also applicable under this heading. More comments are listed here:

1. "We have built up a flock of about 50 Valley quail by protection."
2. "I think we should leave some birds for seed."
3. "Farmers can't afford to practice management now."
4. "I fed several seasons. I think the season should be closed every third season or so and turn out breeding pairs in February or March."
5. "We have an area of about twenty acres that we have never hunted nor allowed anybody else to hunt. It has water, brush, and good grass cover. We usually have as many birds at the end of hunting season as at the beginning—and we enjoy hunting too."
6. "I took out some berry vines near the house because I was afraid that they would get out of control. A lot of Valley quail stayed there but left when I grubbed most of the vines out. Now I wish I had left them."

The Farmers' Interest in an Incentive

Throughout the survey it was obvious that a farmer's efforts in game management were practically in direct proportion to the incentive at hand. Where there was no incentive there was little or no management. Therefore, an effort was made to find out what incentive the farmers had for doing any management practice and also to determine the farmers' interest in an incentive.

It was found that eighty-four out of 210 farmers considered the present incentive sufficient to protect game; fifteen were interested chiefly from the possibility of
game as an additional farm income; forty-three might possibly be interested in some incentive; forty-two were doubtful if interested in an incentive and twenty-five were not interested in an incentive. The following chart shows a summary of these data:

<table>
<thead>
<tr>
<th>64</th>
<th>More incentive not necessary.</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Interested in income.¹</td>
</tr>
<tr>
<td>43</td>
<td>Possibly interested if some incentive offered.</td>
</tr>
<tr>
<td>42</td>
<td>Doubtful if interested in an incentive.</td>
</tr>
<tr>
<td>25</td>
<td>Not interested in an incentive.</td>
</tr>
</tbody>
</table>

Figure 11 showing the farmers' interest in an incentive.

Very often during the interviews it was evident that the interest or lack of interest of farmers in an incentive was flexible and probably could be changed. Some had ap-

¹ Many expressed the opinion that they would expect some income if more game were to be provided on the farm. However, they were not interested in game because of the possibility of an income.
parently never given much thought to game, other than merely seeing them around the farm and some of these indicated that they were thankful when hunting season closed.

Many farmers and sportsmen suggested that educational activities directed toward pointing out some of the possibilities of game and demonstrating some of the practical phases of game management accompanied by more pleasant relationships between the farmers and the sportsmen would undoubtedly change the attitude of the average farmer and his family toward providing more game and in many cases would provide the needed incentives to put into practice some practical game management principles. Needless to say, as both farmers and sportsmen pointed out, the average farmer's primary interest in the farm was to earn a livelihood and anything that would not provide for a better living was set aside and done if and when time permitted, if at all. The desirable practices may be accomplished in the form of any game management requiring time and effort or it may be to the extent of eliminating certain practices harmful to wildlife, such as burning fence rows, removing food and cover in the form of weeds and shrubs from waste places and other similar pursuits. Several farmers destroyed wildlife habitat because they apparently had no incentive sufficient to justify their doing otherwise. No doubt several would do nothing regardless of the situation.
Some apparently did not realize the consequences that certain practices have upon wildlife and might be influenced by education. Leopold comments on this point when he states in the Game Survey of the North Central States (7), (1931, 253) ".....Here is one of the most astonishing incidents observed during the survey: I was introduced to a highly educated dirt-farmer, who was so keen for game conservation that he drove twenty miles to town each week to attend a meeting of his local chapter of the Izaak Walton League. I asked him how the game fared on his farm. He replied that he had hardly any, in spite of the fact that he allowed no shooting. I asked him about the cover, and learned he had recently cleared off the only remaining cover on his place—a strip of brushy timber along a creek bank. It was apparently a revelation to him that this had anything to do with his game crop. He apparently regarded his prohibition of shooting as the only thing he could do for his game."

It was interesting to note that almost a third of the farmers interviewed in the present survey were doing some of the practices with the attitude that the pleasure they enjoyed from seeing or hunting the game was sufficient incentive to provide for the welfare of game. Very few indicated interest in monetary returns. It was the opinion of many that providing some kind of income in a practical
way would make it possible for management practices to be put into use on farms where none now exist and at the same time increase the activities on farms now following management practices.

Income alone would apparently not provide sufficient incentive by itself. While comments such as, "I believe that farmers would be interested in some kind of income," or "Providing some kind of income may be a solution," were frequently heard, many suggested that it must be recognized that the idea of the farmer trying to do something for the welfare of wildlife is a relatively new idea in the United States. They were of the opinion that wildlife has been left to shift for itself so long that any new idea to interest the farmer to do things not previously considered good farming practice would require considerable educational work demonstrating the principles of game management and organization work to provide sufficient incentive to stimulate a desire for action. Farmers maintained that sportsmen must know more about the problems of upland game and hunting on the farm and be willing to cooperate for the benefit of all. It was very evident throughout the survey that organization work will be necessary to bring the farmer and the sportsmen together on a common basis of understanding and eliminate as far as possible the causes for most of the following statements:
1. "The more game the more hunters. We're run to death by hunters."

2. "There's certainly not much of an incentive at present to do anything about the game situation. We feed, raise, and protect these birds and a bunch of hunters with some good dogs come through and clean us up."

3. "As it is now the farmers raise and protect the birds, the State claims them and the hunters get them—not much incentive for a farmer to protect them."

4. "In winter we feed the quail near the house. They pick a lot of aphids in the garden. We also feed the pheasants in the winter and what do we get out of it?"

5. "Two hunters and their dogs got into our garden. When we asked them if they had permission they got mad about it. That doesn't make a fellow feel too good."

6. "Hunting won't be on a desirable basis until city people give the same respect for country property that they expect of their own."

7. "Farmers would save more game if there were some incentive. Farmers raise and protect the birds and hunters get them and give nothing in return."

8. "Hunters seem to lose all sense of respect when they get out on the farm."

9. "Our hunting is enough of an incentive."

Factors that were apparently considered as limiting factors by farmers in determining whether or not they followed game management practices are shown in diagram 2. On one side are listed four "incentives" and on the other side are listed six "hindrances" to game management on the farm.

The entire list of factors were in all probability not considered by every farmer nor considered to be of the same relative weight or importance. In many cases for example, it was obvious that the esthetic value of game birds or
their value as game to the farmer outweighed the factors on the other side of the balance. On the other hand, the

![Diagram 2 showing "Incentives" and "Hindrances" to upland game management by the farmers.](image)

fact that some sportsmen had previously damaged some farm property outweighed all of the "incentives" and therefore, became the limiting factor in other cases. Many other combinations of factors could be cited.

In the final analysis, it was evident that the amount of game management practiced on the farm was somewhere in proportion to the relative balance of the "incentives" and "hindrances." Consequently, the management plan that eliminates as far as possible the "hindrances" and promotes the "incentives" will be the more likely to succeed.
The Farmers' Attitude Toward Hunters

Sportsmen generally consider that farmers as a group have an inherent dislike for hunters. With that notion in mind an effort was made to determine the farmers' attitude toward sportsmen.

The data for 251 farmers, show that seventy-nine had a dislike to hunters. Some were quite bitter in their accusations for reasons which will be taken up later; sixty-five may have had some dislike, while no resentment to hunters was detected in 107 cases. These findings are shown graphically in the following chart:

<table>
<thead>
<tr>
<th>79</th>
<th>Dislike for hunters.</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>Some dislike for hunters.</td>
</tr>
<tr>
<td>107</td>
<td>No dislike for hunters.</td>
</tr>
</tbody>
</table>

Figure 12 showing the farmers' attitude toward hunters.

It was rather surprising to find that with so many complaints against hunters that so large a group had no apparent dislike to hunters. Another group had some dislike but of no significant importance. This indicates a
big majority with no traditional dislike for hunters and probably a large percentage of those that disliked hunters could be changed with proper farmer-sportsman relationships. The following comments are some of the expressions used by the farmers in expressing their attitude toward sportsmen:

1. "I don't mind hunters if they don't try to take possession of the place."
2. "Not if they keep out. Not bothered much with hunters—they went with the game."
3. "Most hunters are OK occasionally a bad one."
4. "I don't mind having decent folks hunt."
5. "I would rather have the birds."
6. "Don't care to have them around."
7. "Don't care to have hunters in with stock."
8. "They're lots of trouble; they sneak in and shoot the birds."
9. "I don't mind hunters as long as they do no damage."
10. "Sort of a nuisance. They overstep their privileges."
11. "Some lose all respect for the farmer and his property."
12. "Not if they are sportsmen."
13. "Game hogs—yes."
14. "Not the average hunter."
15. "A pest on this farm."
16. "Nuisance going through the place."
17. "Hate to see a hunter come on the place."
18. "Not many around after the first day or two."
19. "Have posted the place but they tear the signs down."
20. "Hunters don't realize that they are hard on fences and scare stock."
21. "Some of these fellows from town think they own the place."
22. "What makes me the maddest is to have some hunter come into the yard, scare up a bunch of birds and shoot—out of them, pack them all into his car and leave. When I go hunting I go to the back side of the place."
The Causes for the Dislike of Some Hunters

The carelessness or thoughtlessness of some hunters has long been recognized as one of the greatest causes for the farmers' resentment for hunters. This criticism was brought up by most of the farmers throughout the survey. Some farmers criticized hunters rather severely for carelessness while others merely voiced their disapproval and evidently thought no more about it.

A record was kept of all complaints made by farmers against hunters in order to determine the cause for the greatest number of complaints.

It was found that the chief cause for the dislike for hunters was the failure of many hunters to recognize the rights of private property. Little can be said in defense of a condition which is the cause of this type of comment, "Hunting won't be on a desirable basis until city people give the same respect for country property that they expect on their own." This remark was not always directed only at the city hunter. Occasionally a rural hunter was accused but they were usually credited with being more considerate of stock, fences and other property because they too undoubtedly had similar problems.

The data for 233 objections to hunters show fifty for hunting without permission; thirty-eight for shooting or scaring stock; twenty-nine for road hunting; twenty-seven
50
Hunting without permission.

38
Scared stock.¹

29
Road hunting.

27
Damaging fences.

24
Objected to dogs.

23
Taking too much game.

16
Shooting near buildings.

14
Cutting fences.

12
Leaving gates open.

Figure 13 showing causes for dislike to hunters.

¹ Many of these said that they had had stock killed during hunting season.
because hunters were hard on fences; twenty-four objected to the use of dogs on their place (chiefly because of stock); twenty-three objected because hunters took too much game; sixteen because of hunters shooting near buildings; fourteen because of having had fences cut, and twelve because hunters left gates open. These objections are summarized in Figure 13, page 60.

The following quotations give many of the complaints made by farmers against hunters:

1. "Not careful what they shoot."
2. "They get sort of reckless. We have had the house peppered with shot. Some don't know when to quit shooting."
3. "A bunch of hunters with their dogs are a nuisance."
4. "The farmers feed the birds and the city hunters get them."
5. "I had the car peppered with shot."
6. "I found a hole in the fence and a pair of wire snippers so I know what he was doing."
7. "Posting does no good. I had a horse shot once and some turkeys killed."
8. "We're almost afraid to go out during the opening day because of shooting from the railroad track near our place."
9. "We have had chickens shot but none lately."
10. "Hunters shot a heifer and a 90 pound pig and have occasionally peppered the barn."
11. "I've had two cows shot but not killed. Have had boards kicked out of the fence."
12. "Had a hunter shoot through the south window of our house barely missing Mother. He said that he did not do it, but there were no other hunters around. We don't mind having decent folks hunt."
13. "Don't care to have them around. We lose a turkey occasionally."
14. "One hunter shooting from the highway peppered the house with shot."
15. "Last year a hunter left a gate open and a
young calf got into the river and was drowned.

16. "So-called sportsmen that shoot too much game."
17. "Some are rather hard on fences."
18. "Don't care to have hunters in with stock."
19. "Had a fellow from ( ) ask permission. I asked him not to shoot around the livestock--but he did. That night I found one of the cows had been shot in the udder. Another group drove through my fields leaving the gates open."
20. "It cost me over $100 one year to repair cuts and other damage to my fences."
22. "Don't mind hunters as long as they do no damage."
23. "Not many around after the first day or two."
24. "They're a lot of trouble. They sneak in and shoot the birds."
25. "Hunters seem to lose all sense of respect when they get out on the farm. They knocked one fence down and scattered our sheep."
26. "Had two horses shot and fence cut for dogs--at least it happened during hunting season."
27. "Some lose all respect for the farmer and his property."
28. "Hunters don't realize that they are hard on fence and scare stock."
29. "'Game hogs'--yes. Especially those that get their limit, go home and then go out again."
30. "They run all over your place and shoot all the birds. The dogs scare the sheep."
31. "Had four or five sheep shot."
32. "Some have no regard for season or sex."
33. "Had a heifer shot that would have bled to death had we not found it in time."
34. "Some of these fellows from town think they own the place."
35. "Hunters shot some birds that I was trying to protect."
36. "All are OK except these sneakers." (Hunters that neglected to ask permission were often referred to as "sneakers")
37. "Had a horse shot but not injured. Now he is always ready to run when he hears a gun."
38. "I don't like road hunters."
39. "'Sneakers' and road hunters."
40. "Yes those that sneak in."
41. "Dogs make sheep wild."
42. "Nuisance going through the place."
43. "Hunters sometimes hard on stock."
44. "Don't respect property."
45. "They shoot at anything they see."
46. "Carloads of city hunters flock out from town and break down your fences and things like that."
47. "I don't like dogs."
48. "Dogs make sheep wild."
49. "I don't allow any dogs on the place."
50. "I have had sheep shot and killed."
51. "I butchered thirty bucks and found six had shot under the hide. I also have had two cows and a calf shot."
52. "I don't like hunters with dogs. They may not chase the sheep, but they scare them."
53. "Dogs should be prohibited--farmers can't afford to have them."
54. "Road hunters and armies from town with dogs."
55. "It burns me up to have hunters with dogs going through my place. A few years ago a group of hunters without a dog went through some tall grass and shot only a few birds. Later another group with two dogs came through and they shot a lot. That's no fair."
56. "I am glad when hunting season closes. I put up signs and they pay no attention to them--might as well let them go. I don't mind hunters so much if they would ask and be decent about it."

Actual Damage Done by Hunters

An effort was made to determine the number of cases where complaints against hunters were justified because of damage done. To make this as definite as possible, the farmers were usually asked if they had experienced any damage by hunters within the past four or five years. The replies indicated that out of 222 complaints of damage or nuisances committed by hunters, 145 had no specific case
of actual damage done to them; sixty-one had actual damage done by hunters, and sixteen complaints were doubtful. These figures are shown graphically in the following chart:

<table>
<thead>
<tr>
<th>145</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td>Cases of actual damage.</td>
</tr>
<tr>
<td>16</td>
<td>Doubtful cases of damage.</td>
</tr>
</tbody>
</table>

Figure 14 giving specific instances of damage done by hunters.

No estimate of loss from property damaged by hunters could be made because the cases ranged from very slight damage such as breaking down fences to actual damage of property including the killing of livestock. In some cases damage not definitely known to have been done by hunters was charged to them because it happened during hunting season and obviously had been done by some trespasser. Some of the incidents such as leaving gates open, pulling wire loose in fences, etc. that might have been considered as damage by some farmers were merely considered a nuisance by most farmers and have been classed as a nuisance in this study. (For quotations see, "The Causes for the Dislike of
Some Hunters.

The Farmers' Attitude Toward Liberating Birds

According to the Oregon Sportsman (10) and the Biennial Reports of the Game Commission of the State of Oregon (3), over 365,000 pheasants were liberated throughout Oregon by the Game Commission from 1913 to 1938 inclusive. Due to the fact that most of these were liberated on or adjacent to farm lands, an effort was made to get the farmers' opinion of the practice of liberating birds. It was found that in the opinion of 132 farmers that commented on the liberation of game birds, 105 considered the practice helpful or necessary; twenty-eight were doubtful of the practice and seven considered liberating birds of no value. These opinions are shown graphically in the following chart:

```
105
Thought liberating birds helpful or necessary.

26
Thought liberating birds doubtful practice.

7
Thought liberating birds of no advantage.
```

Figure 15 showing the farmers' attitude toward liberating birds.

According to this survey the farmers as a group did not
consider liberating birds of great value, but as shown by the chart, the majority were of the opinion that liberating birds was helpful and a few considered it a necessary practice. The expression, "They're too tame," was very frequently heard and was in the opinion of farmers, the chief objection or disadvantage of the practice of liberating birds. Some farmers objected to the liberating of birds on their land because they believed hunters concentrated in these areas during hunting season.

Some of the farmers' attitudes toward the practice of liberating game birds are given in the following comments:

1. "Not as good as a closed season."
2. "Should liberate birds back in the field."
3. "Will need more."
4. "Tame as chickens--ate with our hens."
5. "Can never furnish enough."
6. "We wouldn't have any birds otherwise."
7. "Not too practical because they're too tame. A man told me that he could sit in the shade and shoot them as they went by--just like sheep trailing to water. They don't know enough to be afraid."
8. "They're too tame and don't live through the winter."
9. "Our present supply is due to these birds."
10. "They might help some but they're too tame."
11. "The birds are too domesticated--cannot stand roughing."
12. "They're too tame. They don't know how to take care of themselves."
13. "Would like to have some."
14. "They're OK if protected."
15. "They were all shot off in a short time."
16. "Just like shooting chickens."
17. "Wouldn't have any otherwise."
The Farmers' Attitude Toward the Free Entry of Farm Land for Hunting Purposes

Some sportsmen have expressed the opinion that the privilege of hunting on farm lands should be available to hunters without asking permission because the birds belong to the State. Therefore, an effort was made to get the farmers' attitude toward the free entry on land for hunting purposes.

The farmers' attitude toward the free entry of land for hunting purposes is shown in the following chart:

| 200 | No free entry. |
| 10  | Free entry satisfactory. |
| 13  | Questionable. |

Figure 16 showing the farmers' attitude toward the free entry of land for hunting purposes.

The data for 223 farmers show that 200 were opposed to the free entry on their land for hunting purposes; ten had no objection and thirteen appeared to be very little interested either way. This indicates very definitely that any management plan to increase upland farm game must make
some provision to eliminate as far as possible the trespassing problem, especially due to hunters during the hunting season.

Status of Illegal Hunting

That illegal hunting and fishing has long been a subject of vital importance to the future welfare of wildlife is brought out by the Oregon Sportsman (10). The December 1913 issue, page 1, stated: ".....The protection of game and the enforcement of game laws are matters of growth and education. Formerly game was abundant. The country was unsettled and little or no attention was paid to game laws. Yet in the advance of civilization it becomes necessary to have game laws and to live up to these laws. The effectiveness of game protection is governed by the interest of the people and the spirit of those who hunt and fish."

In the September 1913 issue, page 2, the Oregon Sportsman (10) stated: "The history of game protection shows clearly that game cannot be made abundant by legislation. During the period of ten years from 1900 to 1910 there were 1324 different game laws enacted in the various states of the Union. Yet game birds and animals have been steadily decreasing in number. Some species have almost reached the point of final disappearance." Therefore, according to the October 1915 issue, page 157, of the Oregon Sportsman (10),
"......The people of our state must realize that the game is not inexhaustible and that if we expect to long continue to enjoy the splendid recreation of angling and hunting we must all of us actively cooperate in its protection."

Since it is recognized that part of the game has been taken illegally in the past, a successful game management plan in the future must provide a supply of game to adequately satisfy the normal requirements of both the legal and illegal take of game unless the latter can be eliminated. It is reasonable to suppose that the elimination of illegal hunting would not, in all probability, reduce the hunting requirements in direct proportion because a part of the game taken illegally would no doubt be offset by more taken legally. Nevertheless, birds taken illegally reduces the number of birds available for law abiding citizens and might in some instances be the limiting factor in the success or failure of a managed area.

Illega l Hunting as Observed by the Farmers

An effort was made to obtain what types of illegal hunting farmers had observed, the significance of the problem, and the possibility of some suggestions to eliminate illegal hunting as far as possible.

The observations for 144 farmers show that fifty-five had observed what they considered considerable illegal hunting; thirty-five observed some illegal hunting; twenty-
nine observed very little illegal hunting and twenty-five observed no illegal hunting. See chart below for these figures:

```
<table>
<thead>
<tr>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Considerable illegal hunting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>35</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Some illegal hunting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>29</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Very little illegal hunting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>No illegal hunting.</td>
</tr>
</tbody>
</table>
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**Figure 17 showing the farmers' observation of illegal hunting.**

Shooting from the road, or road hunting as it was commonly referred to by the farmers was criticized more than any other illegal act. Some farmers were more critical of road hunters than they were of those hunting without permission. In their opinion it was very unsportsmanlike because they considered it taking an advantage of the birds.

Many considered road hunting as one of the greatest drains on game birds, especially the pheasant because of his nature of usually spending a part of the day near the roads.
Because of the nature of road hunting, farmers considered it extremely difficult to control. Violators shoot the birds and are on their way before they can be apprehended. Several suggested more stringent regulations regarding hunting along the road with higher penalties for violation of this law. In general, it was the farmers' opinion that road hunting has decreased in the past few years because of the patrol work done by the Oregon State Police.

More complaints were heard about road hunters in communities where farm homes were relatively far apart and on roads with a relatively small amount of traffic. Early morning or late evening hours were used more than any other time of the day according to reports.

The farmers criticism of out-of-season hunting was confined practically entirely to road hunting chiefly prior to open season, but also some post season road hunting. It was their opinion that .22 caliber rifles were used for most of the out-of-season hunting along the roads.

A few criticisms were heard about hunters shooting too much game and shooting too many hens in the case of pheasants.

Specific Cases of Illegal Hunting Observed by Farmers

An effort was made to check as far as possible how many complaints of illegal hunting were cases where the
farmer knew of a specific instance where a violation had been committed. This was done in much the same method used in determining how many farmers actually had cases of damage done by hunters. As far as could be determined, there were sixty-six farmers that had actually observed cases of illegal hunting; thirteen were questionable and six knew of cases of illegal hunting. The status of eighty-five accusations is presented in the following chart:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Observed illegal hunting.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Questionable if illegal hunting had been observed.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>No cases observed.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Number of cases reported to proper authorities.</td>
<td></td>
</tr>
</tbody>
</table>

Figure 18 showing specific cases of illegal hunting.

Two cases of illegal hunting out of the entire number of accusations were reported to authorities according to the farmers interviewed. This is in common with the American practice of evading personal obligations as citizenship duties. The delegation of all enforcement of laws to a
small body of officers has made conservation work labor under a heavy handicap, which cannot be lifted until wider citizen cooperation can be attained.
The Sportsmen's Interests in Upland Game

The Sportsmen's Explanation for the Decrease in the Number of Pheasants

The fact that the ringneck pheasant has decreased in numbers in recent years compared to years ago is generally recognized by both farmers and sportsmen. Most of the farmers and sportsmen along with many authorities on game management believe that the decrease is due to a number of causes.

In order to get the sportsmen's viewpoint with the possibility of some new clues or solutions to the problem, they were asked what in their opinion was the cause or causes for the decrease in pheasant numbers. One hundred and eight out of 193 sportsmen were of the opinion that the decrease was due to either too many hunters or because of illegal hunting by farmers and sportsmen. Forty-five accused the common house cat as most destructive to the pheasants; seventeen indicated lack of cover; sixteen thought skunks and hawks were responsible; twelve believed that poor seasons or unfavorable weather conditions caused poor yields; five expressed the idea that the shooting of hens, while three stated diseases were the causes of decreased numbers of pheasants.

It was also interesting to note that during some meet-
ings the answers to some of the questions were rather uniform for that particular club indicating previous discussion among the members. For example, the cat was considered the limiting factor in three groups; one of the major factors in one group and was not mentioned in one group. A chart giving most of the suspected causes as expressed by sportsmen for the decrease in pheasants is shown on the following page.

The following quotations are some of the answers given for the decrease in pheasant numbers by sportsmen:

**Hunters:**

1. "Too many hunters for the amount of birds."
2. "Too many hunters per bird. Too many don't obey bag limit."
3. "Too many hunters for the acreage."
4. "Too much shooting and too little conservation."
5. "More hunters in the field--everybody takes the limit."
6. "The automobile makes it easy for too many hunters to cover a large territory."

**Illegal Hunting:**

1. "Too many killed out of season."
2. "'Game hogs' and poaching."
3. "Young farmers shooting before season."
4. "Not enough law enforcement."
5. "Guns on tractors."
6. "'Kids' with '.22's'."
7. "Farmers kill more birds out of season than regular licensed hunters kill during open season."
8. "Too many shot illegally as well as legally."
9. "Too many hunters shooting out of season."
10. "Too many farmers say the birds are fed by them so they shoot them when they feel like it."
55
Too many hunters.

53
Illegal hunting.

45
Cats.

17
Lack of cover.

16
Skunks and hawks.

12
Poor seasons.

5
Shooting of hens.

3
Disease.

Figure 19 showing the sportsmen's explanation for the decrease in pheasant numbers.

11. "Farmers kill them all summer."

Cats:
1. "Too many stray cats and dogs."
2. "Open season on house cats."
3. "Too many cats running at large. Cats decrease any kind of bird life, especially game birds because they nest on the ground."
4. "Too many 'tom cats'."

Lack of Cover:
1. "Sheep pasturing, less grain, more acres in hay cut early."
2. "Farmers now use mower and combine pick-up rather than binder and this destroys stubble and cover."
3. "Lack of feed and cover because of sheep pastured."
4. "Cultivation crowding out wildlife. Natural habitat destroyed. Rail fences taken out and increase in sheep on nearly every farm, taking away the cover."
5. "Less hatching places, cleaner fence rows."

Poor Season:
1. "Young birds unable to stand rain."
2. "Loss of young birds."
3. "Wet weather in hatching season."

Miscellaneous:
1. "Lowered vitality."
2. "Devitalized stock."
3. "Due to shooting hens and possibly poultry disease to stocked birds."
4. "No winter feed."
5. "Increasing population."
6. "Too easy to reach hunting grounds."
7. "More hunters with dogs."
8. "Starving in winter."
9. "Not enough birds raised and released."
10. "Farmers don't want them."
11. "More hunters and more cultivated land."
12. "Lack of protected areas."
13. "Too long season."
14. "Too many continuous open seasons."
15. "Bag limit too high."
16. "Poison used in pest extermination."
17. "Hard damp winters."
18. "Too many hens and not enough roosters."
19. "Turn loose too close to hunting season."
20. "Not enough birds put out in accordance to number of hunters."
21. "Season in past too long. Bad winter with no or poor feed."
22. "Too many birds killed when mowing hay."
23. "Small farms."
24. "Lack of cooperation among sportsmen."

The Sportsmen's Explanation for the Decrease in the Number of Quail

Quail were evidently not as popular as pheasants for hunting purposes among sportsmen in the Willamette Valley. In the first place, as brought out in both the farmer and sportsman part of this survey, many farmers objected to the shooting of quail, and second, many hunters did not consider quail of sufficient size to justify shooting. Another plausible reason may be that the pheasant increased more rapidly than the introduced species of quail in this area.

This situation probably accounts for the fact that less interest was shown in the reason for the decrease in quail than for pheasants in many of the club meetings. The question was omitted in some meetings because of a shortage of time.

The cat was considered the limiting factor for quail by thirty-four out of 115 sportsmen.¹ Fifteen considered the skunks and hawks the chief cause for the decrease of these birds. Thirteen believed illegal hunting responsible

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¹ Some questions were added after a part of the survey was completed and some were omitted in club meetings where time was limited. This accounts for the difference in the number of sportsmen answering various questions.
for the greatest decrease while five suggested lack of
cover and four believed diseases the chief cause for the
decrease in quail. These opinions are shown in the follow-
ing chart:

<table>
<thead>
<tr>
<th>Cause</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cats</td>
<td>34</td>
</tr>
<tr>
<td>Skunks and hawks</td>
<td>15</td>
</tr>
<tr>
<td>Illegal hunting</td>
<td>13</td>
</tr>
<tr>
<td>Lack of cover</td>
<td>5</td>
</tr>
<tr>
<td>Diseases</td>
<td>4</td>
</tr>
</tbody>
</table>

Figure 20 showing sportsmen's opinions as to why quail have decreased.

A few sportsmen believed that quail have increased in recent years in certain areas. It is believed that these comments refer to Bobwhite and Valley quail because both of these species were mentioned as increasing during discus-
cussions later in the evening in some club meetings. The majority of sportsmen were of the opinion that quail have
decreased in numbers.

The following quotations are some of the answers given:

1. "Too much 'pot' shooting."
2. "Bad winter with no feed and cover."
3. "Freezing weather and drowning."
4. " Destroyed by Chinese pheasants."
5. "Too hard winter without enough cover."
6. "Not enough brush and timber."
7. "Inbred."
8. "Devitalized stock."
9. "Lack of feed."
10. "Cars on the highway."
11. "Traps."
12. "Clearing of brush."
13. "Pastured too close."
14. "Increased in some sections due to open season which scatters the birds."
15. "Quail have increased because not so many hunted."
16. "Don't see any change."
17. "No decrease in Bobwhite."
18. "Covies too easily chased down."
19. "Too many allowed in one day's shoot."
20. "Quail are inbred—should be scattered or moved."
21. "Farmers' cats kill a great deal of young quail."

**The Sportsmen's Explanation for the Decrease in Blue Grouse**

According to many sportsmen the Blue Grouse has not been of much importance as a game bird within the past few years because of the limited number available. Very few sportsmen offered any suggestions as to the possible cause for the decrease in Blue Grouse. Ten out of 106 sportsmen accused the cat. Ten considered clearing the timber from the land the limiting factor. Ten suggested illegal hunting and six believed hawks were the chief causes for the decrease of the Blue Grouse. These opinions are shown
below:

| 10 | Cats. |
| 10 | Clearing timber. |
| 10 | Illegal hunting. |
| 6 | Hawks. |

Figure 21 showing the sportsmen's explanation for the decrease in Blue Grouse.

The following quotations indicate miscellaneous causes:

1. "Blue Grouse nest destroyed by Chinese pheasant."
2. "Sheep pastured."
3. "Illegal hunting."
4. "Owls."
5. ".22 rifles."
6. "Very easy prey to hunters."
7. "Disease."
8. "Don't see any change."
9. "Coyotes destroy nests and young."
10. "Census of grouse not taken at right time or place."

The Sportsmen's Ideas of Liberated Birds

One of the most general popular methods of increasing the game bird population has been through the propagation and liberation of birds raised on or for game farms. This
practice has been followed in Oregon for a number of years. The Oregon Sportsman (10) and the Biennial Reports (3) of the Game Commission for the State of Oregon for 1913 to 1938 inclusive show that over 365,000 pheasants were liberated during this time.

In order to obtain the average hunter's opinion of the practice of liberating birds, they were asked the question, "Will liberating birds provide sufficient shooting on a practical basis?" Sixty-eight out of 193 were of the opinion that liberating birds will provide sufficient shooting while ninety-two were of the opinion that liberating birds will not provide sufficient shooting.

A study of the quotations of both the hunters and the farmers indicates that in their opinions the practice of liberating birds was an important part in the increase of game birds. Many were of the opinion that birds should be placed upon land closed to hunting or the season closed for a year or more in order to give the birds a chance to reproduce. These summarized opinions are shown on page 83.

The following quotations indicate the sportsmen's opinions in regard to liberating birds:

1. "They can't protect themselves."
2. "If there wasn't any turned loose our hunting would soon be done."
3. "Yes--because the bag limit is not enough to kill more than is liberated."
4. "There should be more healthy birds released."
5. "It helps if they are healthy."
Will provide sufficient shooting.

Will not provide sufficient shooting.

Figure 22 showing the number of hunters that believe liberating birds will provide sufficient shooting and those that do not believe liberating birds will provide sufficient shooting.

6. "Not at all."
7. "I think a closed season should go with it."
8. "No. Birds are too tame."
9. "Wrong type of bird—not the original Chinese."
10. "Not with the sort of birds we now get."
11. "It will not increase them enough."
12. "Not unless season is shorter."
13. "Will help greatly with closed season."
14. "I don't think so. No."
15. "For farmers and his friends only."
16. "If liberated at the proper time."
17. "Pheasants that are raised and released are too tame and are too easy prey to house cats."
18. "They are wild and survive as well as natives."
19. "Liberated birds will not supply the growing amount of hunters."
20. "Do not advertise where birds are released."
21. "No, not alone. If let to increase will help."

Illegal Hunting from the Viewpoint of the Sportsmen

Since opinions relative to illegal hunting obtained from the farmers represents but one side of the situation, it was considered advantageous to complete the data by obtaining similar information from the sportsmen. Therefore,
sportsmen were asked to state what, in their opinion, was the amount of upland game taken illegally and what types of illegal hunting were committed. Some inquiry was also made as to the amount of cooperation law enforcement officers have received from sportsmen in the past; some of the problems in the way of better game protection and whether or not sportsmen were favorable to more or better enforcement of the present laws.

The Amount of Upland Game Believed by Hunters to be Taken Illegally

Since it was impossible to obtain accurate figures as to the number of game birds taken illegally, the sportsmen were asked to state what, in their opinion, was the percentage of game birds so taken every year.

The consensus of the 193 sportsmen was that they believed an average of twenty-eight per cent of game was taken illegally every year. This means that, in the aggregate, more than one bird out of every four was taken illegally. This, of course, can only be considered as a guess but it at least gives some idea of the amount of game the average sportsman believes is taken illegally from the law abiding sportsman.

Types of Illegal Hunting

The types of illegal hunting committed should be known
before adequate plans can be made to minimize the practice. It was believed that sportsmen could shed some light on this question so they were asked to state what types of illegal hunting were committed. According to a summary of the views of 178 sportsmen, illegal hunting by farmers ranked first, with out-of-season hunting a close second. No distinction between city hunters and farmers was made in their replies as to the latter, so no doubt it should be divided between the two groups. Road hunting was mentioned third in importance. Illegal hunting by boys; the use of the .22 rifle, and shooting over the limit were other illegal types of hunting mentioned in the order named.

When reference is made to the part of this study on illegal hunting as observed by farmers it indicates at least a partial conflict between the views of the two groups. These, of course, can be reconciled by considering the source of the opinions. Needless to say, it is a problem that should be seriously considered by both groups if game is to be permanently increased.

The following graph shows the types of illegal hunting suggested by the sportsmen. See page 85.

The following are their comments:

1. "Non-sportsmen out of season."
2. "Farmers back door."
3. "Shooting hens."
4. "Very often the landowners."
5. "Farmers on their own land. Why should we buy a license if they hunt without one?"
Figure 25 showing the types of illegal hunting that sportsmen believe are committed.

6. "Farm boys."
7. "Shooting during breeding season."
8. "Not farmers."
9. "Road hunting 40%, farmers 10%."
10. "City road hunters."
11. "Fail to buy license."
12. "Farmers shoot all year 'round."
13. "Farm and city boys with .22's before season opens."

Cooperation with Law Enforcement Officers by Sportsmen

In order to give both farmers and sportsmen interested in game management some conception of what is now being
done in the way of cooperation in eliminating illegal hunting, 126 sportsmen were asked to state the percentage of cases of illegal hunting reported by them to proper authorities. Their replies indicated that an average of five percent of all cases observed were reported. This is in line with the reports from the farmers which indicated but three percent reported. This indicates that but little help in eliminating illegal hunting can be expected from farmers and sportsmen under the present arrangement.

Reasons Given by Sportsmen for not Reporting Cases of Illegal Hunting

When an act of illegal hunting is observed and not reported, it means that there must be some reason for not reporting the violation. Since sportsmen believed that over one-fourth of the game birds were taken illegally in the past few years, and largely at their expense, the question arises, why has no greater effort been made to eliminate this loss by cooperating with law enforcement officers. Also, were the violations committed by their friends; were their efforts at reporting futile or was there some other reason?

Therefore, 169 sportsmen were asked the question, "If you have observed cases of illegal hunting and did not report the violation--why not?" As would be expected, their answers show a wide variation. No one answer was out-
standing as far as numbers were concerned. Most of them
may be summarized as follows: Friends, 13; not sufficient
information, 12; did no good, 10; did not want to be im-
plicated, 8; "no stool pigeon," 7; warden's job, 7; and
4 said that we must live with them. These data are shown
in the following chart; page 89.

The following list of quotations give some of the
other replies to the question:

1. "Didn't want to take the authority."
2. "I do not believe in reporting anything
   that isn't my business."
3. "Would not like to embarrass some of our
   leading sportsmen."
4. "Because it would just be over-looked."
5. "I have heard plenty of shooting but have
   not actually seen the birds shot."
6. "I may have done the same myself."
7. "Many reported with no action."
8. "Get a bad name amongst the rest of the
   hunters."
9. "Publicity."
10. "Because party had been previously re-
    ported and nothing done about it."
11. "Lack of prosecution."
12. "Game warden instead of a warden doing
    90% traffic and 10% game work."
13. "Don't want to be a squealer."
14. "Neighbors and don't want to cause trouble."
15. "On the farmer's own property or just town
    boys."
16. "Nobody likes a squealer."
17. "I've done it myself."
18. "Neighborhood friction and court action
difficult."
19. "Not wanting to make bad friends."
20. "Don't want to be implicated."
   perhaps."
22. "Takes too much time appearing in court
    only in many cases to have the guilty
    person turned loose."
23. "Takes too much time for nothing."
Friends.

Not sufficient information.

Did no good.

Did not want to be implicated.

"No stool pigeon."

Warden's job.

Must live with them.

Figure 24 showing reasons given by sportsmen why they did not report cases of illegal hunting.

24. "What's the use? All officers are in automobiles and uniform and its impossible to apprehend."

25. "Because the man usually has too much money they will not do anything to him."

26. "Too much bother to make report to right parties."

27. "Trouble of positive identification and difficulty of locating officer."

28. "Is the law correct?"

29. "Shooting in the back yard. Birds are
being fed by the farmers and are entitled to them."
30. "Fear of name being used."
31. "Not enough information."
32. "Because they were big shots."
33. "State Police paid to do this work. I pay for a license that should pay its enforcement."
34. "Need old game warden."
35. "Interferes with business."
36. "Because I never felt that way about it."
37. "I think it's the business of the game warden and not mine."
38. "None of my business."
39. "We do not take interest enough."
40. "You can't tell on your friends."
41. "Game department does not follow these tips."

Sportsmen's Attitude Toward Law Enforcement

In order to determine the sportsman's attitude toward law enforcement, 117 were asked, "Are you in favor of more law enforcement?" Their replies were practically unanimous in favor of better law enforcement than now exists by a vote of ninety-one, "yes", and seven "no". This is also shown in the following graph:

<table>
<thead>
<tr>
<th>91</th>
</tr>
</thead>
<tbody>
<tr>
<td>More law enforcement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>No change in law enforcement.</td>
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</tbody>
</table>

Figure 25 showing the attitude of sportsmen toward more law enforcement.

Some sportsmen suggested that better game protection
might be accomplished by education rather than by more laws and enforcement. The following are some of the other comments made by the sportsmen:

1. "Leave it as it is now."
2. "More law enforcement plus education."
3. "No--just as we are doing this evening by bringing the sportsmen close together with the authorities in charge."
4. "More education along conservation lines."
5. "Don't believe more enforcement would be the correct answer."
6. "State Police paid to do this work."
7. "Laws are OK but are not enforced enough."
8. "Not enough wardens in this territory."

The Sportsmen's Supposition as to the Amount of Land Now Closed to Hunting Compared to Ten to Fifteen Years Ago

Every season hundreds of city dwellers go out into the surrounding country to hunt upland game on farm land only to find some favorable appearing game land posted with "No Hunting or Trespassing" signs. In order to obtain the sportsmen's opinion as to the trend in the closure of land during recent years 193 sportsmen were asked to state what in their opinion was the present status of closed land compared to ten to fifteen years ago. The consensus of opinion was that twenty-two per cent more land is now closed to hunting than was closed a few years ago.

This signifies that unrestricted hunting is rapidly becoming a thing of the past and consequently with a continuation of the present trend practically no public hunting will be available in the near future. This is not intended
to imply that hunting free of charge will not be available.

Some of the sportsmen added comments to the above question. They are listed below.

1. "Due principally to unsportsmanship."
2. "Reason--destroyed property, cut fences."
3. "Yes--hunters fault."
4. "Lack of cooperation of hunters."
5. "Get the farmers viewpoint--too many reckless hunters."

During the farm survey it was evident that some farmers closed their lands in order to save a few birds for breeding stock. To substantiate this point, ninety-one sportsmen were asked if any farmer had suggested to them that the birds were too scarce to justify shooting. Thirty-seven said "Yes" which indicated that farmers were interested in maintaining a few birds around the place.

The Hunters' Attitude Toward Asking Permission Before Hunting on Farm Land

During the farm survey it was found that one of the greatest complaints against hunters was because of trespassing. In order to get the sportsman's point of view they were asked if hunters should ask permission from the farmer before shooting on his land. The replies for 141 sportsmen were ninety-nine "Yes" and five "No", indicating that a big majority believed permission should be asked. These replies are shown graphically on page 93.

The following are some of the comments:
Favored asking permission to hunt.

Did not believe permission necessary.

Figure 26 showing the attitude of sportsmen toward asking permission before hunting on farm land.

Reasons Given by Sportsmen for Not Asking Permission to Hunt on Farm Land

Since it was reported by farmers that many shooters did not ask hunting permission, a logical step was to find out why hunting was done without asking permission. It was believed that some possible solution to the problem might be possible if all of the reasons were known. Therefore, 126 sportsmen were asked this question, "If you have ever hunted without asking permission, why did you not ask?" Twenty sportsmen said that they did not always ask permission to hunt because it was sometimes too inconvenient;
ten—because they might be refused; eight—didn't take time; eight—saw no signs; seven—couldn't find the owner; six—not necessary; and six because they were neighbors. These replies are summarized below:

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<table>
<thead>
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<tbody>
<tr>
<td>20</td>
<td>Too inconvenient.</td>
</tr>
<tr>
<td>10</td>
<td>Might be refused.</td>
</tr>
<tr>
<td>8</td>
<td>Didn't take time.</td>
</tr>
<tr>
<td>8</td>
<td>Saw no signs.</td>
</tr>
<tr>
<td>7</td>
<td>Couldn't find the owner.</td>
</tr>
<tr>
<td>6</td>
<td>Not necessary.</td>
</tr>
<tr>
<td>6</td>
<td>Were neighbors.</td>
</tr>
</tbody>
</table>

Figure 27 showing the reasons given by sportsmen as to why they did not always ask permission before hunting on farm lands.

The following are some other comments given by sports-
men for hunting without permission from the farmer:

1. "Entered a long way from the house knowing would get kicked off."
2. "Because it's a free country and besides I didn't think he was to home."
3. "Afraid the rooster wouldn't wait."
4. "Did not know location of owner."
5. "Because crossing from one place to another it is too far to go to house."
6. "House too far from where I saw the birds."
7. "Too big a hurry to hunt."
8. "Hunters spend too much time after permission on place."
9. "The main reason we don't ask permission is because we don't take time."
10. "Plenty far from house or barn or livestock."
11. "Inconvenient or thought I'd be refused."
12. "Shot first because bird sighted."
13. "Always have unless party was not at home."
14. "Been chased off before."
15. "Too much trouble when going from one field to another."
16. "Most farmers kick us off."
17. "Too far around to the house from where you are hunting."
18. "They will always say, 'Somebody just ahead of you shot one of my cows or horses'."
19. "They don't care."
20. "Coming in from opposite side of place."
21. "Never done."
22. "Some others hunting there."
23. "Too much closed area."
24. "Did not know the owner."
25. "Too much trouble."
26. "If posted. Don't believe it necessary if not posted."
27. "Saw no signs and no stock."
28. "Come in from back side of place--no time--knew he (farmer) wouldn't allow it anyhow."
29. "Not able to see proper person."
30. "I do not go where not wanted."

The Number of Sportsmen That Have Been Refused Hunting Permission

In order to get some information as to the number of
sportsmen that had asked permission and had been refused they were asked to indicate whether or not they had been refused. One hundred thirteen out of 193 sportsmen said, "Yes," and fifty said, "No."

Unfortunately this question was not limited to any number of years but it does indicate that a considerable proportion have had the privilege of hunting in the past without much apparent difficulty.

Reasons Given to Sportsmen by Farmers for Refusing Hunting Privileges

During the farm survey it was found that the chief cause for the dislike for hunters was the failure of many hunters to recognize the rights of private property. Therefore, to check this data with the sportsmen they were asked to list the reasons given by farmers for refusing hunting permission. A summary of the reasons given by 126 sportsmen show that fifty-seven hunters were refused permission to hunt because the farmers had either had livestock frightened or killed or because they were fearful that this might happen to their stock. This is in line with the results of the farm survey. The next reason most often given, by twenty-three in number, was because too many fences were destroyed by hunters. The other reasons are listed as follows according to the way they were given by the sportsmen: 18, "destroyed property;" 10, "no hunt-
ing to anyone;" 9, "carelessness of hunters;" 9, "wanted birds for themselves;" and 6, "because gates had been left open by hunters." All of the above reasons are listed in the following chart:

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear of stock frightened or killed</td>
<td>57</td>
</tr>
<tr>
<td>Fences destroyed</td>
<td>23</td>
</tr>
<tr>
<td>Property destroyed</td>
<td>16</td>
</tr>
<tr>
<td>No hunting to anyone</td>
<td>16</td>
</tr>
<tr>
<td>Carelessness of hunters</td>
<td>9</td>
</tr>
<tr>
<td>Wanted birds for themselves</td>
<td>9</td>
</tr>
<tr>
<td>Left gates open</td>
<td>6</td>
</tr>
</tbody>
</table>

Figure 28 showing reasons given by farmers to sportsmen for refusing hunting permission.

The above classification is based upon the replies as
given by the sportsmen. Some of the classifications probably could be re-classified if the sportsmen's answers were more specific. For example, "property destroyed," may include fence destruction and damage to livestock which are listed under separate headings. In the final analysis this discrepancy is probably of little importance.

The following is a list of comments made by the sportsmen when asked to list the reasons given to them by farmers for refusing to grant hunting permission:

1. "No shooting around cattle. Had a horse shot."
2. "He was a 'darn crab'."
3. "True reason probably to develop own private game reserve."
4. "I haven't asked."
5. "Fences torn down and stock shot."
6. "Expect too much and give too little. (hunter)."
7. "Some of the reasons for not allowing hunting are unreasonable."
8. "'Sour puss'."
9. "They didn't want anybody walking all over their place."
10. "Want hunting for themselves."
11. "Breaking fences; wanting birds for self; getting shot at."
12. "The farmer's 'Hot Head' and wouldn't listen to reason."
13. "Shortage of game."
14. "Shoot promiscuously--independent."
15. "Shooting too near buildings and stock."
16. "He generally says, I'll shoot his cow."
17. "Claimed the birds belonged to him because they were raised on his place."
18. "Because I wouldn't give half the birds I shot to him."
19. "Too dangerous to stock."
20. "Won't let everyone. Wants some for himself."
21. "Hunters shoot the cows."
22. "Some poor sport through just ahead of me."
23. "Scaring stock and preserving the birds."
24. "Stock and poultry."
25. "Tramping down grain."
26. "Fools with a gun."
27. "Didn't want strangers."
28. "Carelessness of previous hunter."
29. "Farmers must protect their own property."
30. "Fifty cents."
31. "Scare stock and very stingy, ornery."
32. "Afraid of shooting stock and tearing down fences."
33. "Don't like the city fellow to get game."
34. "Danger of fires."
35. "Abuse the average hunters give for the privilege of hunting on his property."

The Sportmen's Attitudes Toward the Use of Dogs for Hunting Purposes

Conflicting views have been expressed as to whether or not it is desirable from the standpoint of game to use dogs for hunting upland game birds. All references to dogs in this report are in regard to their use for hunting purposes. Therefore, it was decided to find out approximately what proportion of sportmen owned dogs and the average sportsman's attitude toward their use in the field. The replies show that fifty-four out of 193 hunters owned dogs for hunting purposes.

When asked as to when the dogs should be used in the field 101 said, "always;" 25 said, "never;" 24, "when game is scarce;" and 13, "when game is plentiful." These views are expressed in the following chart, page 100.

It shows that the majority of sportmen favored the use of dogs in the field at any time during the upland game
hunting season. An interesting fact was brought out in that sixty-five out of 132 sportsmen not owning dogs were also favorable to the unrestricted use of dogs for hunting purposes. A partial explanation of this attitude may be because in all probability they sometimes accompanied friends that owned dogs. Twenty-four out of the 132 sportsmen not owning dogs were opposed to the use of dogs at any time in the field.

<table>
<thead>
<tr>
<th>101</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>When game is scarce.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>When game is plentiful.</td>
</tr>
</tbody>
</table>

Figure 29 showing the attitude of sportsmen toward the use of dogs for hunting purposes.

There was a conflict in opinion by those who considered dogs should be used "only when game is abundant" and those who considered dogs should be used "only when game is scarce." A summary of all replies indicated that dogs were considered very desirable in order to find crippled birds.
Some hunters said that they hunted primarily to see the dogs work.

The following quotations were selected from the replies regarding the use of dogs for hunting purposes:

1. "Never—if they are not thick enough without a dog, don't hunt."
2. "To get cripples."
3. "I hunt mostly to see the dog work."
4. "Saves cripples--more sport."
5. "Aid to get cripples."
6. "Always—if used properly."
7. "When necessary--ducks and pheasants most of the time."
8. "In wet weather only."
9. "No dogs to be used when birds are scarce."
10. "Give game a chance."
11. "When game is plentiful a dog is unnecessary."

The Sportsmen's Viewpoint of Game as an Expense to the Farmer

Since game birds obtain most of their living on farm land it was considered of importance to get the sportsmen's viewpoint as to whether or not they believed game an expense to the farmer. Their replies indicated that sixty-seven out of 141 sportsmen considered birds an expense; forty-seven believed that game birds were of no expense, and nine considered birds of some expense to the farmer. These beliefs are summarized in the following chart, page 102.

The following are some of the sportsmen's quotations relative to the expense of game birds to the farmer.
1. "As much good as harm."
2. "Keep down bugs."
3. "Sometimes."
4. "They are an asset."
5. "Pheasants destroy grain."
6. "Yes, pheasants—quail an asset."
7. "Very small expense to the farmer."
8. "They are not an expense."
9. "I don't know."
10. "I doubt it."

Considered birds an expense to the farmer.

No expense to the farmer.

Considered birds of some expense to the farmer.

Figure 30 showing the opinions of sportsmen as to the expense of birds to the farmer.

The Farmers' Incentive to Produce Game According to the Sportsmen

During the farm survey it was found that farmers considered that they had no incentive to produce game for any outside hunter. As this directly concerned the sportsmen, they were asked, "What incentive does the farmer have to provide hunting for you as an outsider?"

Approximately half of the sportsmen answered the question. Seventy out of 141 sportsmen said, "None." Some
sportsmen said, "for friends," while fifty-nine made no comments. This indicates that the sportsmen evidently agreed with the farmers in that there was very little inducement for the farmer to protect game.

Some of their comments are listed below:

1. "Good neighbor act."
2. "There is no advantage."
3. "No incentive only for his own sport."
4. "Only as good sportsmanship."
5. "Most farmers don't care."
6. "None whatever."
7. "Good will only."
8. "Can lease hunting rights."

The Sportsmen's Opinion as to Whether or not Farmers Will Produce Game Without Some Inducement

Since it is considered by many authorities on game management that the farmer holds the key to the upland game situation, 106 sportsmen were asked, "In your opinion will farmers provide more protection for game without some kind of incentive?" Fifty-eight replied, "No" and fourteen said, "Yes." Five thought it was questionable if farmers would provide more game without an incentive. These opinions are shown in the chart, page 104.

The following are some of the comments made by the sportsmen:

1. "Most of them will."
2. "Some are good sportsmen and will do so."
3. "Makes little difference."
4. "Don't believe farmers would try to increase supply."
5. "Very few farmers pay any attention to
game birds."

6. "Upland game hunting will not be on a permanent basis until we find some method of providing equal benefits to both farmers and sportsmen in the use of wildlife."

| 58 | No. |
| 14 | Yes. |
| 5  | Questionable. |

Figure 31 showing the sportsmen's opinions as to whether or not farmers will provide more game without some kind of incentive.

A summary of the hunting licenses sold in Oregon during the past few years (Crews, p. 67) indicates an increase in licenses sold during recent years. This indicates an increasing demand upon wildlife. Some of this increase is no doubt due to forms of wildlife other than upland game but at least it is indicative of the times. At the same time, wildlife has been subjected to some changes in environment. One important change of wildlife habitat was indicated by many farmers who reported replacing the old-time rail fence and its brushy and grassy strip for the wire fence row which provides practically no cover in many instances.

Bennitt and Nagel (2) in discussing upland game in a
publication of a Survey of the Resident Game and Furbearers of Missouri (1937, 195) says, ".....Let us never forget that the land-owner holds the key to the situation; except in limited areas, wildlife can be restored only with his cooperation."

On page 196 they state, "Either the production of wildlife is a legitimate use of land or it is not. If it is--as seems no longer to be in doubt--it deserves a place in the land economy of any farmer who is interested in it. There is no justification for insisting that every farmer produce quail, any more than he produce rye or soy beans. The choice is his. But if he wants wildlife, every possible agency should be ready to advise and assist--the conservation department, the state university, extension agents, civic organizations, local sportsmen, and so on.

"The first point in the farm-wildlife policy must be this: In any movement toward wildlife production on the farms, the initiative must be taken by the farmers themselves. The state can never supervise wildlife conditions on thirty million acres of Missouri farmland. Even if it could, enterprises imposed upon a community from the outside have a way of failing with monotonous regularity. They succeed only when the people of the community want them knowing their value."

Leopold (8) says in discussing upland game problems
106

(1936, 397-8), "Game being a low-cost low-yield crop, which can be produced only by the landholders in conjunction with his other cropping operations, it follows that many landholders—if possible, all holders of suitable lands—should be induced to practice management.

"Some will find sufficient inducement in the personal pleasure, or the opportunities for hospitality, to be derived from the crop of game........

"No conceivable system of private preserves and public shooting grounds, however, could adequately accommodate the growing army of urban citizens who like to hunt. The non-shooting land holder must also be induced to manage his game. The only conceivable motive which might activate a sufficient number of non-shooting landholders is the financial motive."

The Sportsmen's Attitude Toward Paying for Hunting Privileges

The next logical step was to find out if sportsmen were willing to offer some inducement for the increase of game on the farm. As one sportsman said, "I know several farmers in the neighborhood and many of them have invited me out to hunt but I don't like to do it that way. I feel as if I were imposing upon them even though I realize that I am welcome. This is about the way I look at it. I don't go to the theatre and expect to get in free. Why then
should I go to some farmer and expect to get my hunting free? I would go hunting quite often during the season if I knew of some farmers that were practicing game management and I could pay something for the privilege of hunting."

In order to get the average sportsman's reaction, they were asked the question, "Would you be willing to pay something for the privilege of hunting?" The reply to this inquiry indicates that 125 out of 193 sportsmen were willing to offer some inducement for hunting privileges while thirty-six were opposed. These figures are shown in the following chart:

<table>
<thead>
<tr>
<th>125</th>
<th>Willing to pay for hunting privileges.</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>Opposed to paying for hunting privileges.</td>
</tr>
</tbody>
</table>

Figure 32 showing the attitudes of sportsmen toward paying for hunting privileges.

Some of the sportsmen's comments in regard to paying for hunting privileges are listed below:

1. "If the hunting justified it, yes."
2. "License is enough."
3. "I think it would be fair to give the farmer something for the privilege of hunting on his property."
4. "I think when you buy a license it should take care of that."
5. "Not as poor as it is now."
6. "Yes, if there was plenty of game."
7. "No pay."
8. "Yes, if hunting is better."
9. "No, no--not American--no."
10. "You should be able to hunt any place without charge."
11. "It depends on the size of the place. If the place is large enough we should pay a nominal fee."
12. "Just a small amount for the privilege of hunting."
13. "So much per hunter."
15. "If protected, tagged."
16. "Do not commercialize our birds in any way."
17. "If there were plenty."
18. "No. They get their share."
19. "No, I buy a license. He hunts free on his own land."
20. "Buy tags and give to farmers."
22. "Feel farmer is entitled to some compensation."
23. "Farmers will not cooperate."
24. "Would be glad to pay."
25. "Would be willing to pay for good hunting."
26. "Two-thirds will try to sneak out the back fence and walk four miles to the car to save twenty-five cents."

A study of the chart and the comments indicates that a big majority of the hunters were willing to cooperate with farmers by paying a reasonable amount for the privilege of hunting. Many sportsmen were of the opinion that farmers were entitled to some compensation if they followed some game management practices. Others did not believe that the farmers were entitled to anything for protecting and providing for more birds on their lands. They believed this was commercializing the birds.
Methods and Amounts of Payments for Hunting Privileges as Suggested by Sportsmen

If farmers are to be paid for hunting privileges, some method for payment should be provided. Therefore 193 sportsmen were asked, "Would you prefer to pay direct to the farmers or through an increase in license fees?" The replies indicate that ninety sportsmen preferred to pay directly to the farmer. Twenty-eight preferred an increase in license fees. Their preferences are shown below:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>Direct to the farmer.</td>
</tr>
<tr>
<td>28</td>
<td>Increase in license fees.</td>
</tr>
</tbody>
</table>

Figure 23 showing the methods of payment for hunting privileges preferred by the sportsmen.

The next step was to find out what the sportsmen considered was a reasonable amount to pay the farmer for the privilege of hunting provided he tried to protect and increase game. Eighty-seven sportsmen suggested that the payment be made on a "per bird" basis. The average amount suggested was twenty-four cents per bird. Fourteen sportsmen suggested a "per day" basis with an average of a dollar ten cents per day. The following are some of the sports-
men's comments in regard to how payments should be made to the farmers for hunting privileges.

1. "Divide the kill or pay."
2. "Direct to avoid politics handling the money."
3. "Each man pay his own hunting."
4. "Scrip sold by the Game Commission."
5. "License tag."
6. "Give scrip--fifty cents in addition to license."
7. "To be arranged with the farmer direct."
8. "Per season."
9. "Direct if at all."
10. "Price set by law."
11. "None."
12. "If sufficient hunting $1 per license per season."
13. "Twenty-five cents per bird, less shells."
14. "Reasonable sum."
15. "Not to exceed $2 per bird."
16. "No more on license."
17. "No money paid individually. Indirectly paid."
18. "Drink of whiskey."
19. "So farmers could get at least $20.00 per season."
20. "So much per acre."

Sportsmen's Suggestions as to What Should be Done to Improve Upland Game Hunting Conditions

Numerous ways to improve upland game conditions have been suggested at various times and places by individuals and groups interested in wildlife. In order to find out what the average hunter believed should be done to improve hunting conditions, and thereby possibly get some new management suggestions, 193 sportsmen were asked the question, "What would you do to improve upland game hunting conditions?" Forty-three suggested that more birds should
be liberated; 26--a closed season (from 1-5 years); 27--
destroy vermin; 26--control cats; 26--control poaching;
20--cooperate with the farmer; 11--more food; 11--more cov-
er; and 8 suggested more refuges. These suggestions are
shown on page 112.

Conclusions drawn from these suggestions may be in-
fluenced by various ways of grouping. For example, if
all suggestions to control cats and to destroy vermin were
grouped together, then these two suggestions combined would
rank first. A study of these suggestions indicates that
the cooperation of the farmers is of vital importance in
carrying out some of the suggestions. The following is
a list of suggestions offered for the improvement of the
upland game situation:

1. "Shoot field cats."
2. "Pay farmer for food supply."
3. "Get farmer to provide cover."
4. "Close season for about 3 years."
5. "Destroy cats--all wild and 35% of tame."
6. "Hens must be protected to make natural
increase."
7. "Better place to hide and more feed."
8. "Encourage raising game as a crop. Give
small compensation."
9. "Remove barrier between hunter and farmer."
10. "Breed honest hunters as well as more game."
11. "Use smaller bore guns."
12. "Let's have some Hungarians around here."
13. "Pay the farmer for raising more game."
14. "Regulate the number of hunters on the land
to provide birds for all. Prevent concen-
tration of hunters."
15. "That if each farmer had 1 acre planted to a
  good cover crop and left uncut at so many
dollars per acre."
Liberate more birds.

Close season.

Destroy vermin.

Control cats.

Control poaching.

Cooperate with farmers.

More food.

More cover.

More refuges.

Figure 34 showing suggestions made by sportsmen as to what should be done to improve upland game hunting conditions.
17. "Turn all birds from pens in spring of year."
18. "More reserves and strict enforcement."
20. "Close season 1 year periodically."
22. "Have more holding pens."
23. "Arrange some incentive for the farmers to provide more cover such as seed for their swales, etc."
24. "No poison. Encourage trapping."
25. "Leave fence corners and refuges for nesting."
26. "Take some means to eradicate cats and other small vermin."
27. "Bounty on hawks and stray cats."
28. "Close season until increase is enough to hold its own."
29. "Try to get the farmers to raise more birds."
30. "Education."
31. "Make more scattered reserved places."
32. "The cat kills more gophers than birds."
33. "Build more refuges."
34. "Tax all cats."
35. "Strict enforcement of the present law."
36. "Close season 4 or 5 years."
37. "Improve enforcement of game laws."
38. "After turning birds loose, close area for period of 3 years before hunting."
39. "Protect and feed them in winter."
40. "Remove natural hazards as much as possible."
41. "Take down no hunting signs."
42. "Better understanding with the farmer."
43. "Bounty on vermin."
44. "Program of education. Better spirit between hunters and farmers."

The Number of Sportsmen that Shot Hawks

Considerable controversy exists among sportsmen and others interested in upland game regarding the value or detriment of hawks to wildlife. Therefore, an effort was made to determine the average sportsman's attitude toward hawks. One hundred fifty-eight sportsmen were asked, "Do
you shoot hawks and if so, what kinds?" The replies indicate that eighty-five shot hawks and of this group forty-five shot all hawks regardless of the species. Fifteen hunters said that they did not shoot hawks. These data are shown in the following chart:

<table>
<thead>
<tr>
<th></th>
<th>Shoot hawks.</th>
<th>Shoot all species of hawks.</th>
<th>Do not shoot hawks.</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 35 showing the number of sportsmen that shoot hawks, the number that shoot all species of hawks, and those that do not shoot hawks.

(This is based upon the replies from 188 hunters.)

The following is a list of sportsmen's comments relative to hawks:

1. "Chicken and bullet hawks."
2. "Duck or cooper's hawks."
3. "No I don't shoot hawks."
4. "All hawks should not be shot."
5. "Redtails hawks."
6. "Large or medium, not small."
7. "Sparrow hawks."
8. "Anything with a white breast."
9. "All that look bad."
10. "Fish hawks."
11. "All but sparrow hawks."
12. "I try."
13. "All except Redtail hawks."
14. "All hawks and owls too."
15. "All that I see."

The Hunters' Attitude Toward Limiting Guns to Two Shells When Hunting Upland Game.

Some sportsmen have suggested that upland game hunting conditions might be improved by limiting guns to two or three shells, similar to the regulations on guns used for shooting migratory waterfowl. In order to find out what the average sportsman thought about this suggestion they were asked, "Do you believe that limiting guns to two shells would improve the upland game situation?" One hundred and five replied, "No" and forty-three said, "Yes."

Some suggested that a 3-shell limit was preferable to two shells in order to minimize the loss through cripples.

These opinions are summarized below:

<table>
<thead>
<tr>
<th>105 No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>43 Yes.</td>
</tr>
</tbody>
</table>

Figure 36 showing the opinions of sportsmen as to whether or not they believed limiting guns to two shells would improve the upland game situation.

The following are some of their comments:

1. "Too many cripples get away."
2. "I don't believe limiting guns to 2 shells
would help."
3. "Two shells is plenty."
4. "The third shell gets the cripples."
5. "Yes, it would help."

The sportsmen were then asked, "Would you be willing to limit your gun to two shells?" Forty-nine out of 106 sportsmen were willing to limit their guns to two shells while forty were not willing to do so. These attitudes are shown below:

<table>
<thead>
<tr>
<th>49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willing to limit guns to two shells.</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>Opposed to limiting guns to two shells.</td>
</tr>
</tbody>
</table>

Figure 37 showing the attitudes of sportsmen toward limiting their guns to two shells for upland game hunting.

The Sportsmen's Attitude Toward Improvement of Bobwhite Quail Conditions

Most of the funds and efforts expended by the Oregon State Game Commission has been with the pheasant. As brought out previously in this report, the quail were not evidently as popular for game as the pheasant. However, it was decided early in the survey to determine, if possible, what the sportsmen thought about the Bobwhite. Therefore, they were asked, "Should the Game Commission
improve the Bobwhite situation?" Out of the 193 sportsmen, 139 said, "Yes" while twenty-four said, "No." The following are some of their comments:

1. "Put new birds in flocks."
2. "Trap and move some."
3. "Close season."
4. "Don't believe a great help."
5. "Why?"
6. "Import larger birds."
7. "No more partridges."
SUMMARY
SUMMARY

As an initial basis for a game management plan of agricultural lands in the Willamette Valley, Oregon, 272 farmers in Benton county were interviewed during the summer of 1938. Forty-four farmers in Linn, Lane, and Clackamas counties and 193 sportsmen from these and other counties in the valley were also contacted in meetings during the winter of 1938-39.

The major objectives were to determine some of the more important social and economic factors existing between farmers and sportsmen in relation to hunting on farm lands in this particular location.

Methods Used in Obtaining Data

Practically all of the information for twenty-four questions was obtained indirectly from the farmers in Benton county while interviewing them in an upland game nesting study. The information was jotted down on a survey blank after leaving the farm and before stopping at the next one. This method was used because farmers are sometimes skeptical of the routine questionnaire and therefore more accurate data might be obtained indirectly during a visit.

The hunters were asked twenty-eight questions in club meetings. Each sportsman was given a sheet of paper and
asked to write his answer to each question as soon as it was asked of the group. There was no discussion of any question other than to make the question clear. This method was used in order to get each individual sportsman's opinion.

1. Farmers as a group were interested in upland game birds to the extent that they would rather have a few around the place than have them all exterminated. This was especially true for quail. They were not anxious to have large numbers, because of too many hunters and because of the suspected damage to crops if birds were concentrated in a small area.

2. Farmers as a group are not intentionally destructive of wild life. Many indicated that they preferred to save, for example, a nest but did not believe that in many cases they were in a position to do so. In all probability, over half of them followed some practices that saved rather than destroyed a bird or nest when possible to do so without too much interference with the regular farm program. In other words, farmers are conservation minded but not necessarily game production or game management minded. Many farmers apparently did not realize how some farm practices affected wild life.

3. A majority of farmers hunt either regularly or occasionally and indicated an interest in a population of
4. Hunting privileges were available on the majority of farms to anyone that would ask permission and respect the farmer's property. The exception was usually either because of a valid reason or because they had been "pestered" as some said, by too many hunters either sneaking in or overstepping their privileges with the result that sometimes all hunters were refused hunting privileges. Many hunters said that they had never been refused hunting privileges.

5. Control of trespassing was the farmers' greatest problem. Damage to fences, either by breaking the fence down, cutting wires, or leaving gates open, shooting and either scaring, injuring, or killing stock and the shooting around buildings were other hunters' actions often criticized by farmers. Some criticized the use of dogs, especially around livestock, not always because they chased the stock but because dogs frightened the stock. The following expression characterized the average farmer's viewpoint: "Hunting won't be on a desirable basis until city people give the same respect for country property that they expect of their own."

6. Sportsmen said that they did not always ask hunting permission because it was often too inconvenient. Others feared that they might be refused; some did not take time;
others said that they saw no signs; some could not find the owner and other various reasons. Most of them believed hunters should ask permission before hunting on farm land.

7. Farmers criticized others for hunting in too large groups and often referred to them as "armies". Many of them objected to the use of dogs especially where there was more than one dog and one or two hunters. In both cases some farmers regarded this practice as taking advantage of the birds. Farmers were also very critical of those hunting along the roads. They believed that this practice caused the greatest decrease in the present number of game birds every year.

8. Farmers considered birds of no material expense on the farm but suggested that they fed, raised, and protected them and therefore, should have something to say as to how they are taken. They believed that a large population of birds might be destructive to crops and consequently would be an expense.

9. Many farmers were of the opinion that the bird population could be very materially increased on the farm by providing a greater incentive through more cooperation between farmers and sportsmen, and by educational work demonstrating some practical game management practices.

Almost a third of the farmers considered that the enjoyment from hunting and seeing the birds about the place
was sufficient incentive to justify doing something for the welfare of wild life. Most all of them however, were of the opinion that there is no incentive at present to stimulate any desire to feed, raise and protect birds for some outside hunter that either does not recognize the farmer or does not give anything in return. The following quotation expressed the attitude of the average farmer: "There's certainly not much of an incentive at present to do anything about the game situation. We feed, raise and protect these birds and a bunch of hunters with some good dogs come through and clean us up." To that statement might be added, "and what do we get out of it?" The sportsmen agreed that there was no incentive at present for the farmer to produce game for an outside hunter.

10. Very frequently farmers suggested regulating the "bag limit" in proportion to the number of birds available prior to the hunting season. In good seasons allow a bigger limit while in poor seasons either close the season or allow a smaller take. This quotation expressed the typical attitude of many farmers: "If we expect to grow any oats next year we don't feed up all our seed oats this fall and winter."

11. Farmers as a group did not report observing much illegal hunting. Sportsmen believed that approximately twenty-eight per cent of the game birds were taken illegally
every year.

Hunters believed that most of the illegal hunting was done by farmers with "out-of-season" hunting and "road hunting" next in importance.

12. An average of approximately five per cent of all cases of illegal hunting observed by hunters and approximately three per cent of all illegal hunting observed by farmers was reported to proper authorities.

13. According to the sportsmen, the chief reason for not reporting violations to proper authorities was because in most cases the violations were committed by friends. Others said that they did not have sufficient information, some said that reporting cases did no good, others did not want to be implicated and many were of the attitude that it was none of their business.

14. The majority of sportsmen were in favor of better law enforcement. Many suggested more education rather than more strict enforcement of game laws.

15. Sportsmen believed that about twenty-two per cent more land is now closed to hunting than was closed ten to fifteen years ago.

16. Approximately one-fourth of the sportsmen owned dogs for hunting purposes but the majority favored the use of dogs during the entire hunting season.

17. Many sportsmen did not believe that farmers would
try to increase upland game until some inducement was offered. One sportsman said, "Upland game hunting will not be on a permanent basis until we find some method of providing equal benefits to both farmers and sportsmen in the use of wild life."

18. The majority of sportsmen were willing to offer a reasonable inducement for the privilege of hunting on farm land if the farmers made an effort to practice some game management.

19. The majority of sportsmen preferred to make payments direct to farmers on a "per bird" basis. The average amount suggested by eighty-seven sportsmen was twenty-four cents per bird.

20. Sportsmen made the following suggestions to improve upland game hunting conditions: liberate more birds; close the season; destroy vermin; control cats; control poaching; cooperate with farmers; provide more food and cover and more refuges.

21. Farmers and sportsmen believed that the practice of liberating birds was helpful in increasing game.

22. Over half of the sportsmen shot hawks and over half of these shot all species of hawks.

23. The majority of sportsmen did not believe that limiting guns to two shells would improve the upland game hunting conditions.
24. Sportsmen believed that the decrease in pheasants was due to the following causes listed in sequence: (1) too many hunters, (2) illegal hunting, (3) house cats, (4) lack of cover, (5) skunks and hawks, (6) poor seasons, (7) because hens were shot, and (8) because of disease.

25. Sportsmen believed that the cats were responsible for the decrease in quail. Others thought skunks and hawks, illegal hunting, lack of cover and diseases were responsible in the order named for the decrease in quail.

26. Sportsmen believed that cats, illegal hunting and clearing timber were equally responsible for the decrease in the number of Blue Grouse.
LITERATURE CITED


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