

HUNTER AND LANDOWNER ATTITUDES CONCERNING STATE-LEASED AND FEE DOVE HUNTING IN TENNESSEE

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ABSTRACT

Five hundred and thirty-two hunters from 58 hunting areas throughout Tennessee completed questionnaires probing their views on quality dove hunting. Three types of hunting areas were examined: private areas which charged a fee; state-leased areas, no fee; and state-owned management areas which charged a fee. There was no significant difference in the criteria for determining hunt quality between types of hunting areas. Hunters' opinions were related to the number of shells fired, the number of doves killed, and the number of hours hunted. Hunters' opinions became more favorable with an increase in the number of doves seen, shells expended, doves killed, and hours hunted. Crowded conditions resulted in decreased satisfaction. Hunters within 22 m of each other felt crowded and had a poorer opinion. A spacing of 39 m between hunters was favorable. Hunters thought paying a fee was fair. Hunters on state-leased fields where no fee was charged thought \$2.25 would be a reasonable fee. Those hunting on private fee fields where the average charge was \$5.32 considered \$4.05, on the average, a fair price. The most frequent complaints of landowners were littering, too many hunters, objecting neighbors, and uncontrolled driving and parking on their farms.

Dove hunting in Tennessee has grown from an estimated 50,000 hunters in 1961 (Legler 1961) to an estimated 88,000 in 1972 (Hayne 1972). Marcum (1975) found indications that the demand for dove hunting in Tennessee is still growing with no apparent adverse effects on dove populations. Fee dove hunting is an attractive source of income for many landowners in Tennessee (Minser 1974) and may be one way of meeting increasing hunting pressure.

The Southeastern Section of The Wildlife Society pointed out the lack of information concerning fee hunting. In view of increasing trends in fee hunting, the Southeastern Section stressed the importance of determining the extent of paid hunting and its effects on the wildlife resource in the southeastern states.

The challenge to the wildlife manager, then, is to provide and promote safe, quality dove hunting without being detrimental to the resource. Because quality is subjective, many facts concerning the quality of dove hunts and other facets of dove hunt management can only be determined through an evaluation of hunter attitudes.

Owners of farms which are leased for dove hunts have made complaints concerning the management of state-leased dove fields and desire input towards improvement. The Tennessee Wildlife Resources Agency (TWRA), therefore, needs additional information from these landowners to insure a leased dove field program which is more satisfactory to all (Marcum, TWRA, personal communication).

Many farmers are interested in having fee dove hunts on their lands but are uncertain as to the fees hunters are willing to pay or the management that is necessary and that hunters desire. An evaluation of hunter attitudes on privately operated fee dove fields is necessary to provide these answers.

STUDY AREAS

This study was conducted during the fall of 1975 on 58 hunting areas in Tennessee. The areas were of three types: (1) privately owned and managed areas open for dove hunting for a fee; (2) state-owned wildlife management areas open to the public for a fee; and (3) privately owned and farmed areas with dove hunting rights leased to the state and the public admitted without charge. All privately owned areas are farms upon which agriculture typical of the region is carried out. Crops over which hunts were held were typically corn silage (*Zea mays*), wheat (*Triticum aestivum*), millet (*Setaria italica*) and

bean hay (*Glycine max*), and other small grains. The average size of dove fields was 15 ha with a range of 6 ha to 32 ha.

METHODS

A questionnaire was administered to evaluate the attitudes of Tennessee dove hunters. Pertinent areas of interest were what hunters think of fee dove hunting, how much they are willing to pay, how far they are willing to drive to hunt, and what factors influence attitudes about the quality of dove hunts.

Biologists and wildlife officers of the TWRA assisted with implementing the statewide survey. A majority of the questionnaires was administered on the opening day of dove hunting season (1 September 1975), and all were completed during the first two weeks of hunting. Hunters were given the questionnaire as they left the field and were asked to fill them out while the researcher waited. Questionnaires were in multiple-choice and yes or no answer form. Hunters were provided pencils with which to complete the questionnaire. In some cases it was necessary to give the questionnaire orally. The questionnaires were then returned to the researcher. An attempt was made to survey an equal number of hunters from each of the four TWRA administrative regions of the state.

The hunter sample was likely biased in at least two ways. The hunters were sampled as they left the field resulting in a nonrandom sample. Also, surveys were taken during the first two weeks of the season which is usually the most popular portion of the dove hunting season.

Statistical analyses of the data included analysis of variance, correlation coefficients, and chi-square contingency tables. Analysis of variance was used to compare qualitative variables with quantitative variables. Correlation coefficients were used to compare quantitative variables, and chi-square contingency tables were used to test qualitative variables. Tests reported were those significant at the .05 probability level except where stated.

Following the dove hunting season a questionnaire for landowners taking part in the state-leased dove field program was used to evaluate landowner suggestions and to identify problem areas in hunt and hunter management. Questionnaires were sent by mail to all landowners participating in the program, and self-addressed, stamped envelopes for return were included.

RESULTS AND DISCUSSION

Hunter Survey

Questionnaires were completed by 532 hunters from 58 hunting areas distributed throughout Tennessee. One hundred ninety hunters surveyed were using private hunting areas; 165 were using wildlife management areas and 177 were using state-leased fields. No data were recorded on the rate of refusal of hunters to complete questionnaires though a reasonable estimate is less than two percent.

Data from the three types of hunting area were evaluated. There was no significant difference in the criteria hunters used for determining hunt quality between types of hunting areas. Data concerning quality is therefore treated collectively except where stated. Fifty-two percent of the respondents were in the younger age grouping (20-35) while smaller proportions comprised the remaining age groups (<20=11%, 36-51=22% >51=15%). They hunted an average of 4 hours and 20 minutes and fired 24 shells (range 0-200) to kill 5 doves (range 0-15).

Hunters' attitudes concerning fee hunting was evaluated. Seventy-six percent thought paying a fee to the landowner for the privilege to hunt was fair. Fifty-six percent of those on state-leased fields where no fee was charged thought paying a fee to hunt was fair. There appeared to be three distinct viewpoints concerning the idea of paying a fee to hunt. There were two viewpoints based on the concept that paying to hunt was independent of quality and a third viewpoint supporting the idea that the degree of fairness in paying was dependent on the quality of the hunt. Of the two groups which believed that fairness in paying was quality independent, one group felt that paying to hunt under any circumstances was not acceptable. This was demonstrated by 28 percent of those who

experienced a good hunt on no charge fields but said they would not have paid to hunt on the same field. The second group apparently felt that the fee charged was only an access fee independent of their hunting success. This philosophy was exemplified by 71 percent of those using fee fields who experienced poor hunts but thought paying to hunt was still fair. The third viewpoint seemed to be that the degree of fairness in paying was dependent on the quality of the hunt as was demonstrated on all three types of hunting areas. The percent of hunters who had experienced good hunts and thought paying to hunt was fair was 100 percent on private fee areas, 91 percent on wildlife management areas and 72 percent on no-charge, state-leased areas. The willingness to pay of those experiencing poor hunts on the same areas decreased by 25 percent on private and wildlife management areas and by 35 percent on state-leased areas. Some hunters were willing to pay a higher fee than others. The willingness of hunters to pay more was positively correlated with the spacing between hunters, age, and number of shots fired. Accompanying this willingness of hunters to pay more was an increased demand to have a wildlife officer present during the hunt.

Dove hunt managers may want to consider hunter philosophies in deciding whether or not to have fee hunts, and if fee hunts are decided upon, the most equitable way to manage them. If fee dove hunts are held, a portion of the hunter population will not come. If doves are reasonably abundant and number of hunters is controlled, most hunters will be happy. Many (25-35 percent), on the other hand, will be dissatisfied feeling they have not gotten that for which they have paid if few doves are present. Managers may, therefore, want to consider a flexible policy by which fees could be reduced or eliminated if the number of doves using the field should diminish drastically.

Hunters were asked what they considered to be a fair price for an afternoon of hunting. The fee they thought was fair approximated the fee charged at the field where they hunted. Those hunting on private areas where the average fee was \$5.32 (range—\$2.00-\$10.00) thought \$4.05 was a fair price. On wildlife management areas where the fee was \$1.80, hunters felt \$1.87 was fair. Those utilizing state-leased dove fields where no fee was charged felt that if a fee were to be charged, \$2.25 would be fair. The average of responses of hunters from all areas was \$2.75.

Hunters were asked if they thought the presence of a wildlife officer during the hunt was desirable. Eighty-nine percent on the public hunts responded that it would be desirable, while on the private hunts only 42 percent thought a wildlife officer should be present. The majority of hunters on private areas may have thought that what happened on a private area, where they had bought exclusive hunting rights, was not the business of the wildlife officer. On state-controlled areas the public expected an officer to be present.

Hunters were willing to drive mean distances of 66 km if a fee were charged and 76 km if they could hunt free. The mean distance driven was 48 km.

Factors concerning hunter opinion of hunt quality were evaluated. Quality of the hunt in the opinion of the hunter was related to the number of doves seen, the number of hours hunted, the number of shells fired, the number of doves killed, and the space between hunters.

A primary factor in determining satisfaction was the interval between hunters on the dove field. The relationship between hunter interval and hunter opinion was significant at the 10 percent level. Forty percent felt that others were too close for them to enjoy a good hunt. Hunters on state-leased hunts who stated that others were too close were within 22 m, on the average, of those hunters. Those stating that others were not too close, were spaced 39 m from other hunters. Sixty-seven percent thought the number of hunters in one field at one time should be limited, indicating that even though many had not been crowded, they did not want to be crowded in the future and thought numbers of hunters should be controlled to maintain quality. As the interval decreased and competition grew keener, dissatisfaction increased. Hunter competition was reduced on areas charging higher fees.

Numbers of doves were important to hunters. Hunters were more pleased when doves were abundant. Hunters who reported a greater abundance of doves, hunted longer, fired more shells, and killed more doves than those who saw fewer birds.

Some factors affecting the harvest were examined. The kill was correlated to the size of the field and to the number of hours spent hunting. Larger fields supported a higher number of birds killed. Those who hunted longer killed more doves. The number of birds killed, however, was not correlated to the number of shells fired. Other factors likely affecting harvest but not examined include hunter ability, weather and dove wariness.

Landowner Questionnaire

Sixty-one (85 percent) of the 72 questionnaires were returned. Landowners taking part in the leased dove field program complained only moderately about problems arising from the hunts; 46 percent had no complaints at all. The most frequent complaints were litter, too many hunters, objecting neighbors, hunters in unauthorized areas, and parking and driving over the entire farm rather than in one area.

Concerning hunter control, 74 percent of the landowners felt that the number of hunters on the field should be limited, and 49 percent felt that signs delineating parking areas would be desirable. All landowners indicated that most hunters were well-behaved.

A series of questions was presented to the landowner to determine current and future needs. Landowners were asked what would have been the hunter utilization of the land had there been no leased dove field program. Thirteen percent said there would have been no hunting, 52 percent said hunting by friends, 24 percent said open to the public for a fee, and 11 percent said open to the general public at no charge. Landowners were also asked what type of dove hunting they would have next year. Only 2 percent said no hunting would be allowed; 36 percent were undecided, and 62 percent would allow some type of hunting. When asked for suggestions for improving the leased dove field program the most common landowner responses were "limit the number of hunters" and "pay the lease fee promptly".

Eighty-five percent of the landowners hoped to participate in the lease program again next year.

CONCLUSIONS

Quality dove hunting for most dove hunters in Tennessee means at least seeing and shooting at a lot of doves without being crowded by other hunters. Quality improves, in the opinions of the dove hunters, with an increase in the number of doves, number of shots, the duration of the hunt, and with an increase in the kill. Applying a limit on the number of hunters allowed in the field at one time so that the hunter interval is about 40 m would be one way of maintaining hunting quality. Most hunters believe paying a fee to hunt is fair and are willing to pay a fee of \$2.75 to \$4.00 for an afternoon of hunting.

Landowners participating in state-leased dove field programs are generally pleased with program administration and hunter conduct though many landowners felt that improvements in promptness of lease payments, control of numbers of hunters, littering, and parking should be made. With an annually decreasing farm base upon which dove hunts can be held and an increasing demand for places to hunt, a monetary incentive to landowners is one answer for providing additional hunting opportunity for which most Tennessee dove hunters are happy to pay.

LITERATURE CITED

- Hayne, D. W. 1972. Dove hunting in the eastern management unit 1972-73. Rept. VII. Institute of Statistics, N. C. State Univ., Raleigh, N. C. 4pp. Unpubl.
- Legler, E. Jr. 1961. Tennessee survey of 1961 hunting and fishing activities. Tennessee Game and Fish Commission, Nashville, TN. 79pp.
- Marcum, L. C. 1975. Evaluation of leased dove field program—1974. Tennessee Wildlife Resources Agency, Nashville, TN. 11pp.
- McConnell, C. A. 1976. Executive board meeting, Southeastern Section, The Wildlife Society, 12 March 1976, Athens, Ga.
- Minser, W. G. III. 1974. Fee dove hunting. *The Tennessee Conservationist*, 60(11):13.
- _____. 1975. The plight of farm game wildlife. *The Tennessee Conservationist*, 61(12):16-17.