

FARMER ATTITUDES TOWARD WILD TURKEYS
IN SOUTHWESTERN WISCONSIN

by Scott R. Craven¹/

INTRODUCTION

The reintroduction of the Wild Turkey (Meleagris gallopavo) represents one of the great success stories for Wisconsin wildlife management. Human settlement, habitat loss, and perhaps disease, combined to eliminate once-common turkeys from Wisconsin by 1900. Periodic attempts to restore a viable turkey population were unsuccessful with the exception of a small flock at Meadow Valley-Necedah in central Wisconsin. However in 1976, the Wisconsin Department of Natural Resources (WDNR) began a new, well conceived cooperative project with the Missouri Department of Conservation. Under the agreement, Missouri received 3 wild Wisconsin ruffed grouse (Bonasa umbellus) in exchange for each wild-caught Missouri turkey. In retrospect, the true wild nature of the reintroduced turkeys (rather than game farm stock) and the rapid transfer from Missouri proved to be key elements in the program. Over several years, 353 Missouri turkeys were released in the heavily wooded Coulee Country of western Wisconsin. Just over a decade later in 1989, the Wisconsin turkey flock was estimated at 50,000 plus over a wide range in the southern half of the state, especially in about a dozen southwestern counties.

By 1983, the population was large enough to support a "gobblers only" spring season. Only 1,200 permits were issued and 180 turkeys killed, but excitement and interest were high. Since then, hunter numbers, huntable area, and harvest have increase annually. By 1989, over

20,000 permits were issued and a fall, "either sex" season was opened on a trial basis. Clearly, the restoration was a success from the standpoint of hunters and the WDNR.

The important relationship between program success and private landowners attitudes toward turkeys and hunters was recognized at the outset of the program. Cooperation between the WDNR, The Wisconsin Conservation Congress, the Wild Turkey Federation, and various landowner groups emphasized hunter training and ethics and the importance of privately-owned habitat. As the flock expanded in range and numbers, landowners were generally anxious to have turkeys reach their property and were protective of the "new resource." However, as the flock increased dramatically in range that had been occupied for 5-10 years attitudes began to change, especially within the farm community. The WDNR began to receive complaints of turkey damage to crops and rumors circulated about the "turkey problem," even in areas yet to be populated.

By 1987, it had become clear that the real or perceived crop damage and the attendant publicity generated by the media could threaten the growth of the turkey program or, at the least, influence management decisions relative to harvest levels and strategies and range expansions. Little help was available from other states with high turkey populations or from the literature. Most states did not consider turkeys a major problem and while some consumption of farm crops was mentioned in food habits studies, its impact on agriculture was not known. To determine the actual role of wild turkeys in farmland habitat, the WDNR initiated a major field research

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project using radio telemetry in 1987. The initial results of that research are reported on elsewhere in these proceedings (see Wright et al.). To address the short-term need for data on farmer and non-farmer attitudes and perceptions about turkeys, turkey management, and turkey damage, the WDNR contracted with the University of Wisconsin Department of Wildlife Ecology to conduct a postal survey in the heart of turkey range. This paper presents the results of that survey.

Acknowledgements

I thank the many landowners who took the time to respond to the survey. Thanks also to WDNR wildlife managers Tom Howard, Paul Brandt, and Charles Burke who provided names of farmers who had contacted their offices regarding turkey problems. Ed Nelson, WDNR, provided assistance in the formulation of the survey itself. John Kubisiak, Ed Frank, Gerald Bartelt, and Tom Hauge all reviewed the survey prior to distribution. Phil Berg interviewed farmers to collect background data used to structure survey questions. Don Wachter (ASCS) instructed ASCS offices in the 6-county survey area to provide the addresses of the random samples of farmers who were to be surveyed. WDNR provided funding for the survey and the Department of Wildlife Ecology, UW-Madison provided staff time, space, computer facilities, and secretarial help.

Methods and Study Area

Postal surveys have been used extensively in the United States to describe various forms of wildlife damage and quantify the attitudes of the agricultural community toward wildlife (Pomerantz et al., 1985). In Wisconsin, extensive surveys of farmers were conducted to describe damage problems caused by white-tailed deer (Wisconsin Department of Agriculture, Trade, and Consumer Protection, 1984) and Canada geese (Heinrich and Craven, 1986). The

same survey format was selected to study wild turkey damage.

A presurvey was conducted in August and September 1987. A list of 31 farmers who had complained about turkey damage was compiled from WDNR offices in southwestern Wisconsin. These farmers were interviewed in person by a technician from the University. Their conversations and responses to a series of general questions about turkeys were tape recorded, transcribed, and used to formulate a printed format for the actual randomized postal survey. WDNR managers, researchers, and U.W. staff cooperated to develop the final survey form.

The final survey contained 31 questions arranged in 4 sections: turkey ecology and basic landowner knowledge of turkeys, turkey damage, turkey hunting, and background information. The survey was structured so it did not focus only on the damage issue.

The study area (Figure 1) was selected to include the primary range of turkeys in southwestern Wisconsin; especially areas where complaints had been filed and areas of high turkey density (Turkey Zones 1, 2, 4, 10). Six counties were selected: LaCrosse, Richland, Vernon, Crawford, Iowa, and Grant.

Study area farmers were the primary sample population for the survey. A 5% random sample (508 names) of farmers was selected from ASCS mailing lists (9634 names in the study area). Each county ASCS office provided mailing lists. For comparative purposes, we also selected 91 members of the Wisconsin Woodland Owners Association (WVOA) identified in the WVOA directory as landowners within the study area. In addition the 31 farmers contacted in the presurvey interviews were also sent a questionnaire.

A presurvey letter was mailed to all potential respondents on 19 November 1987. The questionnaire survey, a return envelope with postage, and a cover letter were

mailed on 26 November. A reminder postcard was mailed on 3 December. A second mailing was sent to nonrespondents on 15 December and a third mailing on 12 January. Response rates were excellent: 81% overall for farmers, 84% for WWOA members. Data acquisition was terminated in mid-February 1988.

The farmer sample is identified as sample "1," WWOA members as "2," and complainants as "3." Reported sample sizes are not equal for every question also allowed multiple responses from the same respondent. Results were also summarized where responses were allowed prose answers or an "other" category.

FIGURE 1 SIX COUNTY STUDY AREA



Results and Discussion

Most respondents from all 3 samples had seen wild turkeys on their land in the previous year. As expected, all the known complainants had seen turkeys and a few more WWOA members than farmers had seen birds. Turkeys were seen in all seasons of the year with a slight peak in fall and the fewest sightings in winter. Although turkeys are more conspicuous during winter, they may be in larger flocks and thus not as widely distributed on the landscape. When asked, "in which season have you seen

the most wild turkeys?" 50% more respondents selected fall (60%) than the 3 other seasons combined (40%).

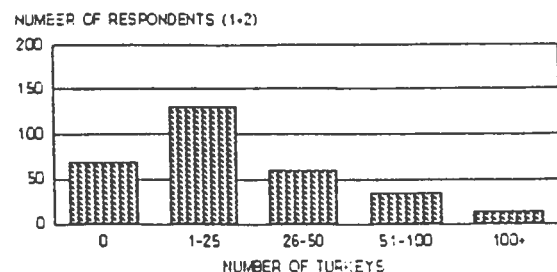
DID YOU SEE TURKEYS ON YOUR LAND LAST YEAR?

SAMPLE	YES	NO	% YES
FARMERS	252	158	61
WWOA	58	17	77
COMPLAIN	20	0	100

This could be a result of increased opportunity through increased fall activity (hunting and crop harvesting).

The largest flock sizes were expected during winter. Thus respondents were asked about maximum numbers during that season. About 40% of all respondents reported seeing 1-25 turkeys and 38% reported seeing 26 or more. Only 15% of the random farmer sample (1) saw flocks in excess of 50 birds. On the other hand, 70% of the known complainants reported flocks of 50 or more. Similarly, 46% of the farmers who reported a dollar loss attributed to turkeys reported flocks of 26 or more compared to 24% of those who did not report damage.

LARGEST NUMBER OF TURKEYS SEEN DURING WINTER 1986-87



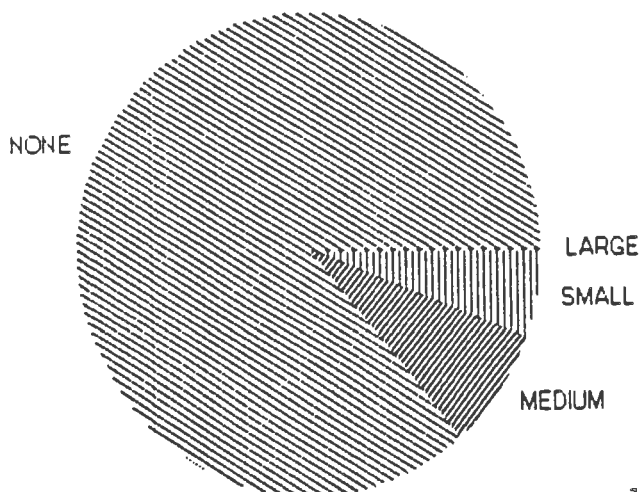
When asked about changes in the turkey population over the past 5

years the opinion was almost unanimous that the population had increased. Farmers favored "increased" (86%, 95% CI = 80-90%) over "stable" (12%, 95% CI = 8-16%) by a wide margin. There was no difference in opinion between WWOA members and farmers ($\chi^2 = 1.63$, $P = .442$). Farmers reported presence of turkeys on their land for a mean of 4 years. The range of up to 20 years suggests either the presence of semi-domestic stock prior to the WDNR releases or remnant populations from other restoration efforts.

Only respondents who actually farmed their land were asked to complete Section 2 (turkey damage). Thus only 36 of 91 WWOA members are represented in these data. Respondents were first asked to what extent they felt turkeys were a problem on their farm. WWOA members (those who farmed only) did not believe turkeys were a problem at all, 86% (95% CI, 65-96%). For the farmer sample, 51% (95% CI, 43-58%) did not believe turkeys were a problem. Only 9% (95% CI, 5-14%) indicated they turkeys were a large problem. The dollars lost were not clear; 81% of the farmers in high density areas reported \$100 or less in losses; 86% in low density areas. Most of the known complainants (12 of 15, 80%) were located in high density areas.

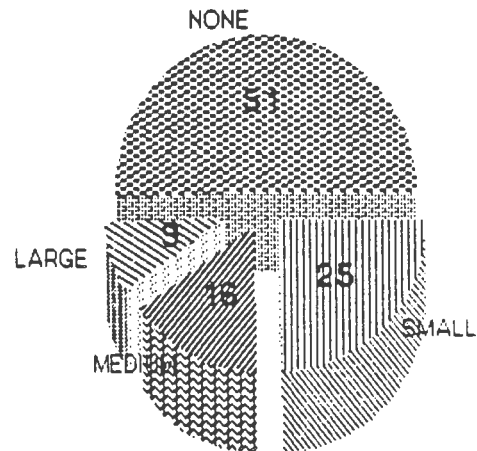
HOW MUCH OF A PROBLEM ARE TURKEYS ON YOUR FARM?

WWOA MEMBERS



HOW MUCH OF A PROBLEM ARE TURKEYS ON YOUR FARM?

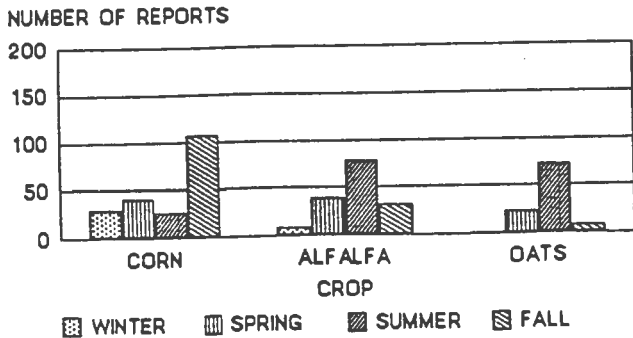
FARMERS



Before being asked to quantify damage, farmers were asked to indicate if they could determine the actual crop damage caused by turkeys. In the random sample only 14% (95% CI = 7-17%) felt they could assess turkey damage with any accuracy. Farmers who actually reported damage felt they could be slightly more accurate (20%). This response is very important to any consideration of total estimated dollar damage by turkeys.

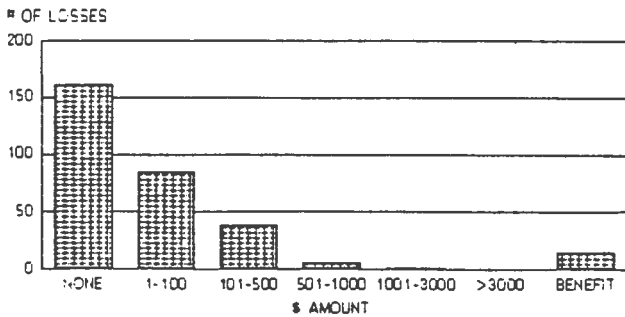
Corn was the most frequently damaged crop, primarily during the fall, but with some losses throughout the year. Alfalfa and oats were frequently damaged, primarily during the growing season of spring and summer. There were few reports of damage to soybeans, wheat, or other crops, but these crops are uncommon in the study area. No attempt was made to relate damage to the relative abundance of the various crops. Perceived damage occurred in many forms (seed pulling, trampling, scratching, etc.) which resulted in the distribution of losses throughout the growing, harvesting, and dormant season.

SEASONAL INCIDENCE OF DAMAGE TO CROPS
(FARMER SAMPLE)



Two hundred and ninety-four farmers estimated their economic loss to turkeys for the 1987 calendar year. Exactly half reported no damage and 15 (5%) indicated that turkeys were a benefit to their crops (by eating insects, controlling weeds, etc.). The remaining 45% (N=133) reported some economic loss. Only 9 farmers claimed losses in excess of \$500.

ESTIMATE OF DOLLARS LOST TO TURKEY DAMAGE
(FARMER SAMPLE)

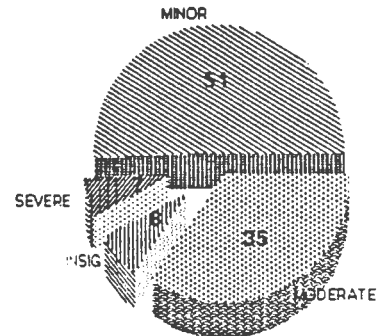


Using the midpoint of each damage level, the total reported loss to turkeys was \$27,450. This figure represents a combination of perception and rough estimation as revealed in an earlier question. The relationship of this figure to real damage is unknown; it could be more or less. Almost 25% of the total was contained in only 3 large claims.

Extrapolation of this figure to total damage in the 6-county study area was done in several ways. The

simplest was to expand the \$27,450 by the fraction of all farmers surveyed. Thus (508 surveys) + (9634 total ASCS names) = 0.527 or 5.27%; 27,450 + .0527 = \$520,872. If nonrespondents actually had the same distribution of damage as the respondents, then that figure must be increased. Only 322 respondents completed the "farm" section. Thus 411-322, or 89 ASCS contacts were nonfarmers. This decreases the 9634 total names to 7547. Expanding the \$27,450 to all 322 farmers yields \$30,065. \$30,065 + (322 + 7547) = \$704,758. Regardless of how the numbers were manipulated, the total loss estimate was between 0.5 and 0.75 million dollars. This figure(s) SHOULD ONLY BE INTERPRETED AS PERCEIVED LOSSES.

DAMAGE CAUSED BY WILD TURKEYS IS:
(FARMERS REPORTING DOLLAR LOSS)



Farmers were also asked about their attitudes toward turkey damage. Only 7% (95% CI = 4-14%) rated the damage as severe. About half (51%) rated it as minor. Thus, many of the farmers who reported an economic loss did not feel it was a major problem. Although the sample size was small for farming WWOA members, the difference in attitude between them and the farmer sample again appeared significant ($\chi^2 = 7.51, P = .057$).

Few farmers (4%) reported that turkey damage had decreased in the past 5 years. Even though 40% indicated damage had increased, this percentage was much less than the

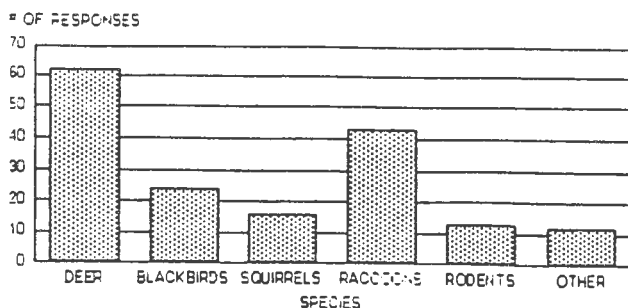
percentage of farmers who reported an increasing turkey flock (86%). Thus the perceived relationship that more turkeys equals more damage was supported but was not clear cut. However, when asked why they believed turkey damage may have changed over time, "more turkeys" was the number one choice by a large margin. Other choices: late harvest, poor weather, and other (such as poor mast crop) were not important determinants of turkey damage to most farmers. The severe winter of 1985-86 when significant corn acreage (about 30%) was left unharvested, had little apparent influence on farmer opinions of turkey damage.

Farmers did little on their own, to try to reduce or prevent turkey damage. Only 13 of 313 indicated any attempts to reduce damage and most of these attempts involved only the presence of hunters. Flags, gas cannon, and other devices were used too infrequently to evaluate their efficacy.

Other species were frequently identified as doing more damage than turkeys. Deer were the number one choice followed by raccoons and several others. Beaver were a frequent "write-in" selection.

WHICH ANIMALS CAUSE MORE DAMAGE?

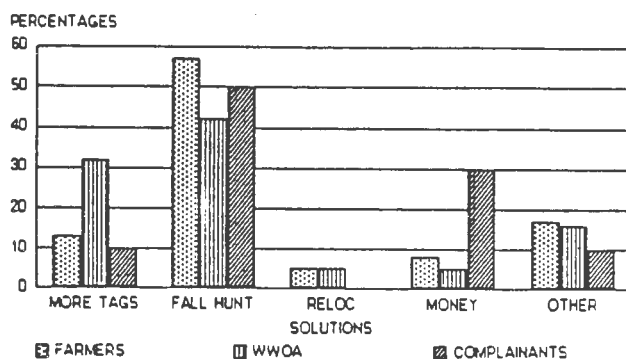
(FARMERS)



When asked to select a favored "solution" to the high turkey population, a fall hunt emerged as the first choice. Relocation and compensation received little support even among those respondents who claimed an actual dollar loss; only

9% selected compensation. "More spring tags" and the "other" category ("issue landowners a free permit") received more support. The responses suggest that farmers believe the "problem" can be solved through management changes. Interest in turkeys as an add-on to the Wisconsin Wildlife Damage Program (with resultant abatement and compensation) did not appear to be strong. There was no difference of choice on the part of WWOA members vs. farmers ($\chi^2 = 5.1, P = 0.27$).

RESPONDENTS FAVORING VARIOUS SOLUTIONS TO THE HIGH TURKEY POPULATION



As further verification of prevailing attitudes in the agricultural community, I contacted the UW-Extension Agricultural Agents in each of the survey counties (plus Sauk County). Their telephone comments reflected typical farmer attitudes. Such comments as "more and more turkeys and complaints," "turkeys going to be a big problem," "some farmers think they (turkeys) are worse than deer," and "add turkeys to the county damage program" were prevalent. However, the agents agreed that the problem had not become intolerable. They felt that a positive step(s) toward dealing with the growing turkey flock and a better effort at getting factual information to the farm community would reduce tensions.

SUMMARY

Farmers in southwestern Wisconsin exhibited an interesting shift in

their attitude toward wild turkeys as the flock progressed from a small scale "novelty" during the early years of the restoration effort to a large, well-established resident population. Concerns over damage to farm crops were common among survey respondents, but did not suggest the level of concern indicated by rumor and informal discussions. The relationship between the perceptions reported in this survey and actual turkey damage should be established by an extensive WDNR field research project. Some damage was caused by turkeys. However, respondents implicated several other species in crop losses and admitted difficulty in the accurate assessment of losses.

In the short term, distribution of these data within turkey range in Wisconsin, an experimental fall turkey hunting season in 1989, and a rapid liberalization of spring hunting seasons (more area, more tags) have reduced tension over crop damage. Continuation of these activities, additional research data, and continued WDNR responsiveness to farm concerns should allow a very successful turkey program to continue to expand.

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