



THE 2016 RUFFED GROUSE HUNTING SEASON IN MINNESOTA

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SUMMARY OF FINDINGS

The Minnesota Cooperative Fish and Wildlife Research Unit, at the University of Minnesota, in collaboration with the Minnesota Department of Natural Resources (MNDNR) conducted a survey of ruffed grouse (*Bonasa umbellus*) hunters following the 2016 season. A statewide survey of small game hunters pre-screened for grouse hunting participation was conducted to understand: grouse hunting behavior and intensity of participation, motivations for grouse hunting, and preferences for regulations and hunting experiences.

INTRODUCTION

Ruffed grouse populations undergo a periodic cycle (Zimmerman et al., 2008). During the 20th century grouse hunter participation in Minnesota has fluctuated with the population cycle. This variation has implications for managing grouse hunting experience, especially given the potential for wide differences in expectations and real experiences, and ultimately satisfaction (Schroeder et al., 2019). This study was undertaken with these concerns in mind.

Objectives

1. Evaluate grouse hunters' patterns and rates of participation and harvest
2. Understand grouse hunters' satisfaction with the activity
3. Determine factors that motivate participation and influence satisfaction
4. Understand differences in metro-county, and non-metro county hunters' beliefs, attitudes and behaviors about grouse hunting

METHODS

Sampling

The sample frame for this study was Minnesota residents aged 18 and over that possessed a small game license for the 2016 hunting seasons. A random sample of 8,000 hunters was selected from this population for participation; stratified by place of residence (4,000 residents of the 7-county area surrounding Minneapolis/Saint Paul, and 4,000 non-metropolitan county residents). Hunters were mailed a screening postcard to assess participation in grouse hunting. 1,332 postcards (668 metropolitan and 644 non-metropolitan) were returned from grouse hunters willing to participate.

Data Collection

Data were collected following the recommendations of Dillman (2000). Participants were sent a survey packet containing a personalized cover letter, questionnaire, and a self-addressed

business-reply envelope. Three full survey packets were distributed to non-respondents at roughly 3-week intervals. Following distribution of the third survey packet, a shortened survey was sent to non-respondents to assess non-response bias.

Analysis

Descriptive statistics were generated for all variables, and mean and proportion differences in outcomes were estimated between metro and non-metro hunters on variables of interest using paired sample *t*-tests and chi-squared tests respectively.

RESULTS

Response Rates

Of the 668 surveys sent to metropolitan county hunters, 461 were returned. This represents a response rate of 69%. Of the 644 surveys sent to non-metropolitan county hunters, 426 were returned for a response rate of 74%. Thirty-eight and 52 short surveys used to gauge non-response bias were returned from metro and non-metro hunters respectively.

Grouse Hunting Participation and Harvest

Grouse hunters spent on average 9.3 days afield during the 2016 season. Over the course of the season, hunters harvested roughly 4 grouse, or 0.43 grouse per person/per day. Grouse hunters, on average, had been hunting grouse for 36 years. Respondents took an average of 6.4 trips during the 2016 season to hunt grouse. Differences were observed between metro and non-metro hunters in trip length, with metro hunters traveling an average of 151 miles per trip and non-metro hunters traveling 88 miles per trip.

Satisfaction, Crowding and Change in Quality of Hunting over Time

Overall, hunters were satisfied with grouse hunting in Minnesota with a majority indicating that they were either “slightly,” “moderately,” or “very” satisfied. However, differences were observed when examining various aspects of satisfaction with grouse hunting access, the number of grouse flushed, and quality of grouse habitat. For instance, a smaller proportion of respondents indicated that they were either “very” or “moderately” satisfied with the number of grouse they flushed during the 2016 season.

The majority of respondents did not experience crowding while hunting grouse in 2016, with 80% indicating either “not at all” or “somewhat” when asked to evaluate their perceptions of the number of other hunters or people they encountered while hunting. Among those hunters that did experience interference, ATVs and other off-highway vehicles were the most commonly reported source.

When asked to compare the quality of grouse hunting in Minnesota in 2016 to 5 and 10 years ago, most hunters felt that grouse hunting in 2016 was about the same. However, on average, hunters felt that the number of grouse they flushed and the amount of crowding they experienced was slightly worse today when compared to the past.

Grouse Management and Trust in MNDNR

Hunters were asked about their perceptions of bag limits for grouse management. Items measured hunters’ beliefs that bag limits should be set based on grouse biology (biology), what is fair (fairness), what is desirable (social desirability), what is right (injunctive), and what other hunters commonly think bag limits should be (descriptive). On average, hunters agreed with items measuring these beliefs about grouse bag limits, with the exception of social desirability. Differences were also found between the ratings of metro and non-metro hunters, where metro

hunters more strongly agreed that grouse bag limits should be set based on the species biology and what is right.

On average, hunters agreed with statements expressing aspects of trust in MNDNR including a belief that the MNDNR “does a good job managing ruffed grouse,” “can be trusted to make decisions about ruffed grouse,” and that the MNDNR “listens to grouse hunters’ concerns,” among others. However, agreement on these items was only slightly positive. (~3 on a 5 point scale).

Importance of Grouse Hunting, Motivations, and Preferences

Very few hunters reported that grouse hunting was either their most important recreational activities, or their least important recreational activity. The vast majority indicated (>80%) that grouse hunting was either less important than their other recreational activities or no more important than their other recreational activities. Slightly greater than 10% of respondents reported that grouse hunting was one of their most important recreational activities.

Respondents were asked how important a variety of experiences were to them as determinants of their satisfaction with grouse hunting. On average, the most important experiences for grouse hunters were; enjoying nature and the outdoors, reducing tension and stress, and seeing grouse in the field. Hunters placed less importance on harvest related experiences including; bagging enough grouse to share, bagging enough grouse to freeze for the future, and bagging a daily limit. Hunters reported enjoying nature and stress reduction. Harvest orientation was further examined, with around 85% of respondents agreeing strongly that “a grouse hunting trip can be enjoyable even if no grouse are bagged” and one-third agreeing that “the more grouse I bag the happier I am.”

LITERATURE CITED

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