

2005 Minnesota Prairie-chicken Hunter Survey Report

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Introduction

Hunting seasons for prairie-chickens (*Tympanuchus cupido pinnatus*) in Minnesota were closed from 1943 through 2002. During October 2003 a limited-entry, 5-day hunting season for prairie-chickens was held within 7 contiguous permit areas in western Minnesota (Figure 1). Permits were awarded through a lottery system, and each hunter could harvest a maximum of 2 prairie-chickens. The same format was implemented for prairie-chicken hunting seasons during 23–27 October 2004 and 22–26 October 2005.

The prairie-chicken permit areas are located in a portion of Minnesota that is closed to the hunting of sharp-tailed grouse (*T. phasianellus campestris*). A new rule effective during the 2005 hunting season allowed permitted prairie-chicken hunters who were also properly licensed for taking sharp-tailed grouse to take sharp-tailed grouse while hunting prairie-chickens. The new rule eliminated the need for prairie-chicken hunters to distinguish between the 2 species, which are similar in appearance.

Methods

Results of the 2005 hunting season came from 2 sources. First, the Electronic Licensing System (ELS) recorded all permit applications, lottery results, and the mandatory registration of each prairie-chicken that was harvested. Second, I sent a post-season survey by mail to all hunters who purchased a prairie-chicken permit. The survey consisted of 14 questions. Twelve of the questions were identical to those in surveys sent to prairie-chicken hunters during 2003 and 2004. The other 2 questions were new and were related to the harvest of sharp-tailed grouse during the prairie-chicken hunt.

Results and Discussion

One hundred ten prairie-chicken hunting permits were available during 2005; 100 were available during 2003 and 2004. Ninety-two (19%) of 487 regular applicants were awarded permits (Table 1). The number of regular applicants declined from 835 in 2003 and 734 in 2004. During 2005 an additional 12 permits were awarded through a separate lottery to hunters who applied as landowners or tenants of ≥ 40 acres of grassland within a permit area (92% success). There were 18 and 25 landowner applicants during 2003 and 2004, respectively.

Harvest results from the ELS and hunter survey differ for several reasons. First, not all hunters returned a survey. Eighty-two hunters responded to the first mailing of the survey, and 3 responded to the second mailing, so the response rate was 92.4%. Second, 6 (7.1% of) hunters who purchased a permit and responded to the survey reported that they did not hunt. Third, hunters who registered prairie-chickens in ELS may not have been the same hunters who reported killing them.

The number of prairie-chicken hunters, amount of time spent hunting, hunting methods, and number of prairie-chickens flushed have been similar during the last 3 years (Figures 2–5). Hunters killed and retrieved approximately 89, 55, and 129 prairie-chickens during 2005, 2004, and 2003, respectively (Table 2). Six percent of hunters ($n = 79$) reported knocking down a prairie-chicken and not being able to retrieve it during 2005. Approximately 60% of hunters harvested at least 1 prairie-chicken during 2005, which was similar to the success rate during 2003 (68%) but not 2004 (46%). Only 18% of prairie-chicken hunters ($n = 78$) reported also flushing sharp-tailed grouse, but 7 of them flushed 10–25 sharp-tailed grouse each. No hunters reported wounding or retrieving a sharp-tailed grouse while hunting prairie-chickens.

Thirty-two percent of prairie-chicken hunters ($n = 79$) hunted only on public land, 25% hunted only on private land, and 43% hunted on both public and private land during 2005. The percentages were nearly identical during 2004. Of the 45 hunters who reported their ease of gaining access to private land and who had not applied for a permit as a landowner or tenant, 47%, 49%, 4%, and 0% reported it being very easy, somewhat easy, somewhat difficult, and very difficult, respectively. This distribution was only slightly different than when landowners themselves were added to the sample (Figure 6).

Hunter satisfaction with the 2005 prairie-chicken hunting season was reported as a median of 8.0 (mean = 7.7) on a 1–10 scale ($n = 79$, Figure 7), and 88% of hunters ($n = 77$) reported that they would apply for a prairie-chicken permit again in the future. Twelve prairie-chicken hunters (15.6%, $n = 77$) reported being interfered with by other hunters a total of 16 times during 2004.

Acknowledgments

Wendy Krueger, Richard Kimmel, and others developed and initially implemented the hunter survey for the 2003 prairie-chicken hunt. Wendy also provided the map in Figure 1. I thank all the hunters who responded to the survey for their cooperation and Mark Lenarz for reviewing a draft of the report.

Table 1. Results of the lottery for prairie-chicken hunting permits in Minnesota during 2005.

Permit type	Permit area	Permits avail.	No. of applicants	Lottery winners		Permits purchased	
				no. ^a	prop. ^b	no.	prop. ^b
Regular	405A	11	85	11	0.13	11	1.00
	407A	9	51	9	0.18	8	0.89
	407B	14	61	14	0.23	12	0.86
	407C	11	40	14	0.35	13	0.93
	420A	12	65	12	0.18	11	0.92
	420B	17	110	18	0.16	14	0.78
	421A	14	75	14	0.19	13	0.93
	All	88	487	92	0.19	82	0.89
Landowner	405A	3	1	1	1.00	1	1.00
	407A	3	5	4	0.80	3	0.75
	407B	3	1	1	1.00	1	1.00
	407C	3	2	2	1.00	2	1.00
	420A	3	2	2	1.00	2	1.00
	420B	4	1	1	1.00	0	0.00
	421A	3	1	1	1.00	1	1.00
	All	22	13	12	0.92	10	0.83
Both	All	110	500	104	0.21	92	0.88

^a In 3 permit areas more permits were awarded than were available because the last hunter selected in the lottery had applied as a member of a hunting party.

^b Proportion of the previous column (i.e., lottery winners/applicants and purchasers/winners).

Table 2. Hunter harvest of prairie-chickens in Minnesota during 2005.

Permit area	Permit type	No. of hunters ^b	Birds retrieved		Birds / hunter		Success rate ^a	
			ELS ^c	Survey ^d	ELS ^b	Survey	ELS	Survey
405A	Both	12	11	11	0.9	0.9	0.50	0.50
407A	Both	10	11	11	1.0	1.1	0.55	0.60
407B	Both	11	11	10	0.8	0.9	0.54	0.55
407C	Both	13	12	11	0.8	0.8	0.53	0.46
420A	Both	10	15	15	1.2	1.5	0.77	1.00
420B	Both	13	23	20	1.6	1.5	0.79	0.77
421A	Both	10	7	7	0.5	0.7	0.36	0.50
All	Regular	72	84	80	1.0	1.1	0.60	0.64
	Landowner	7	5	5	0.5	0.7	0.30	0.43
	All	79	90 ^e	85	1.0	1.1	0.58	0.62

^a Proportion of hunters who killed and retrieved at least 1 prairie-chicken.

^b Number of hunters who responded to a mail survey and reported to have hunted.

Number of hunters according to the Electronic License System (ELS) is the number who purchased a permit to hunt prairie-chickens (Table 1).

^c Results from the ELS database of registered harvest.

^d Results from a mail survey sent to hunters after the prairie-chicken hunting season.

^e A person without a permit registered a prairie-chicken from permit area 407B, so that bird was not included in either the Regular or Landowner subtotal.

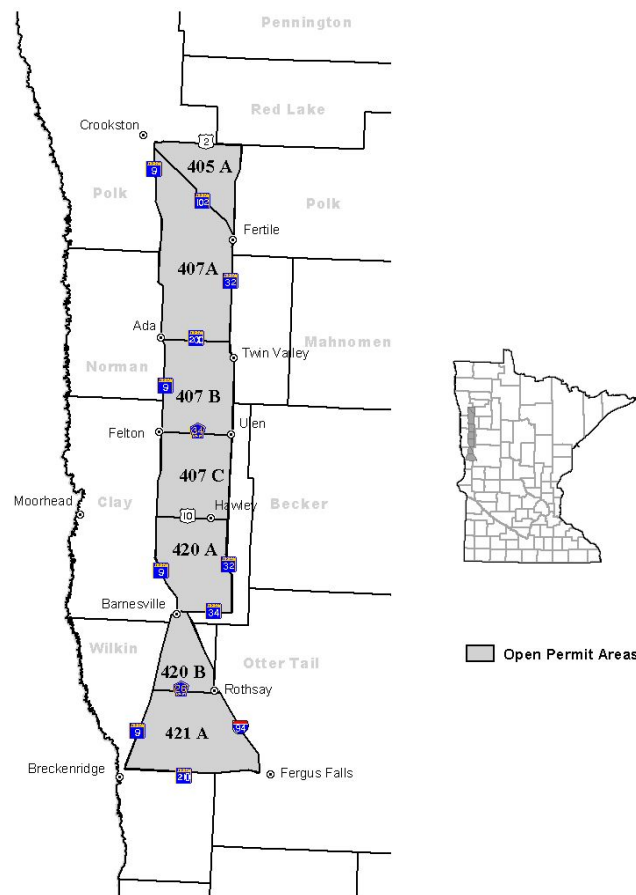


Figure 1. Map of permit areas for prairie-chicken hunting in Minnesota during 2003–2005.

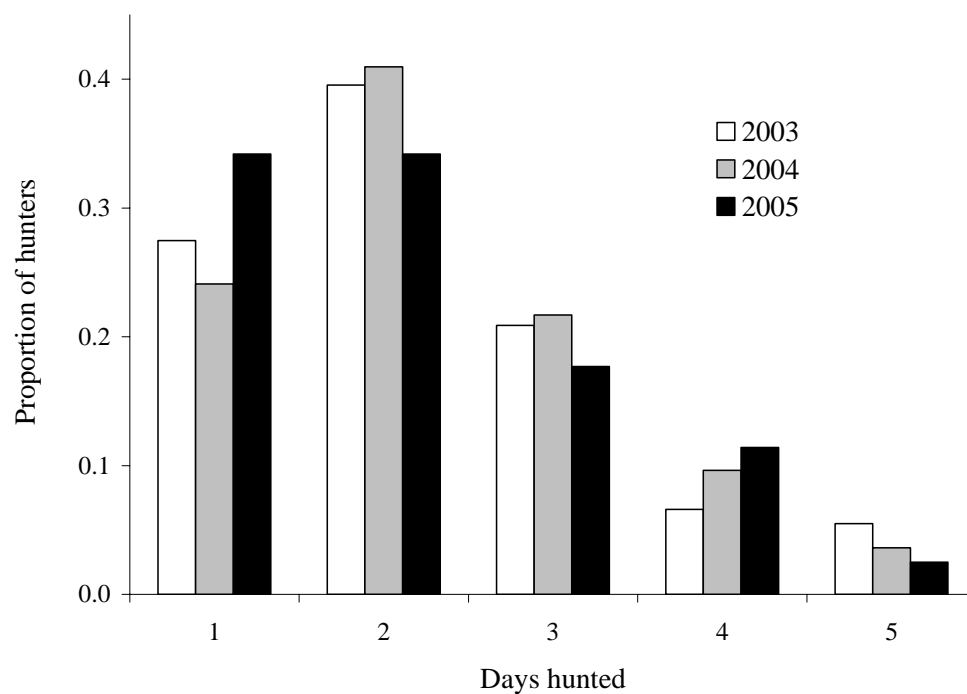


Figure 2. Number of days hunters pursued prairie-chickens in Minnesota during 2003 ($n = 91$ survey respondents), 2004 ($n = 83$), and 2005 ($n = 79$).

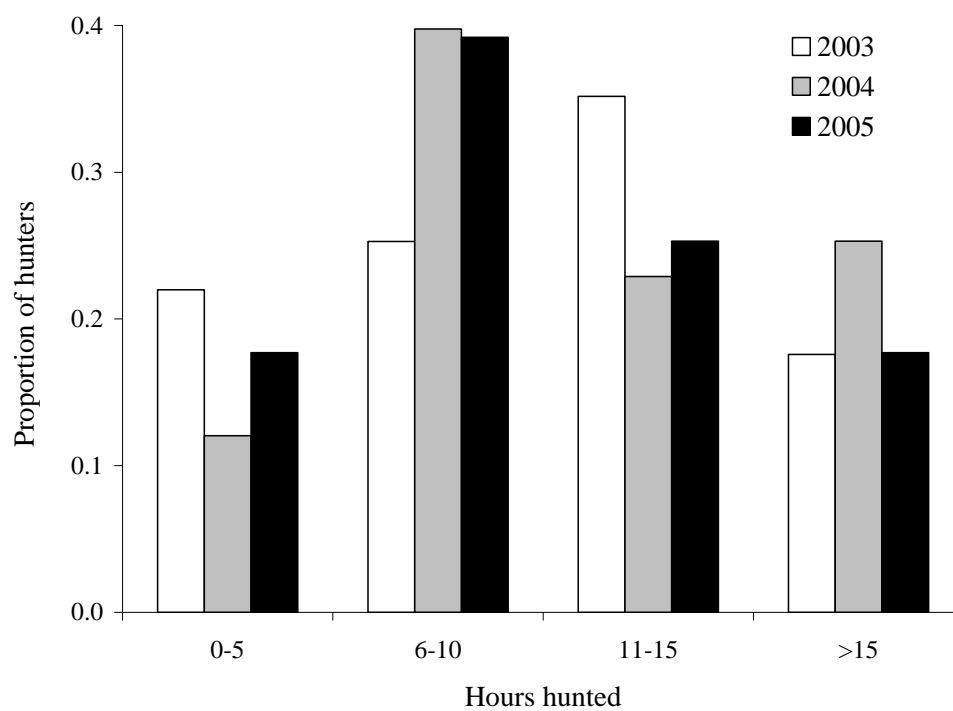


Figure 3. Number of hours hunters pursued prairie-chickens in Minnesota during 2003 ($n = 91$ survey respondents), 2004 ($n = 83$), and 2005 ($n = 79$).

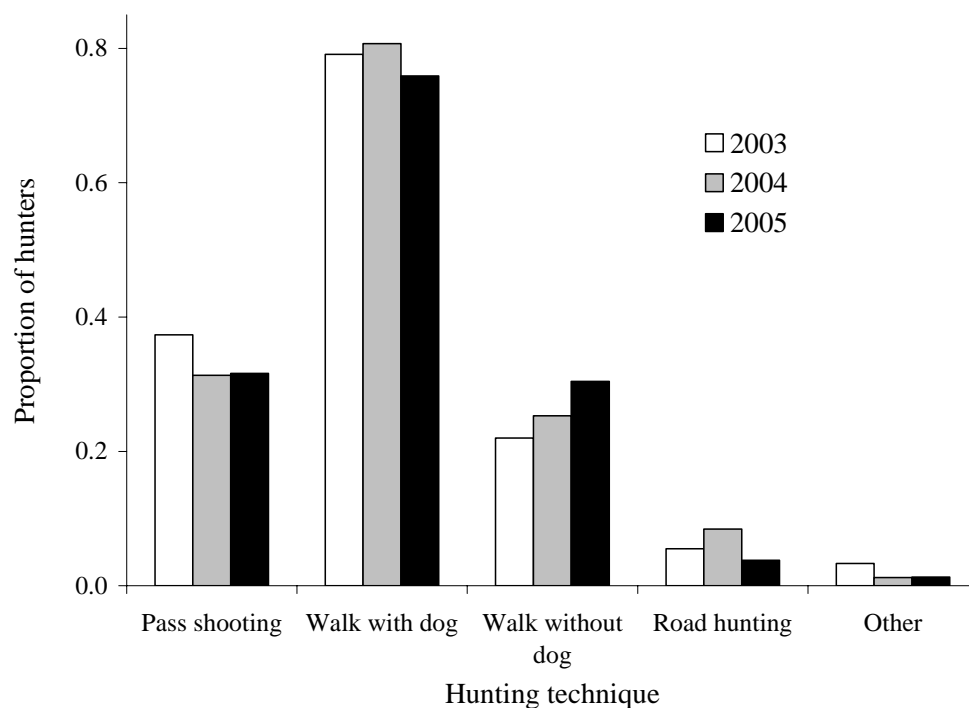


Figure 4. Methods used by prairie-chicken hunters in Minnesota during 2003 ($n = 91$ survey respondents), 2004 ($n = 83$), and 2005 ($n = 79$). The sum of proportions may be >1 .

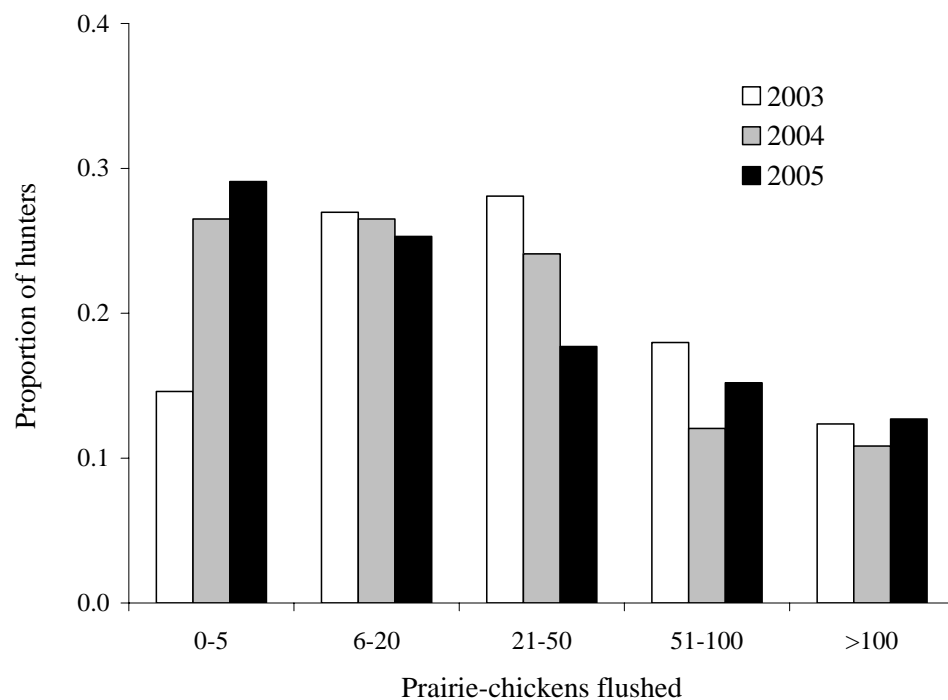


Figure 5. Number of prairie-chickens flushed by prairie-chicken hunters in Minnesota during 2003 ($n = 89$ survey respondents), 2004 ($n = 83$), and 2005 ($n = 79$).

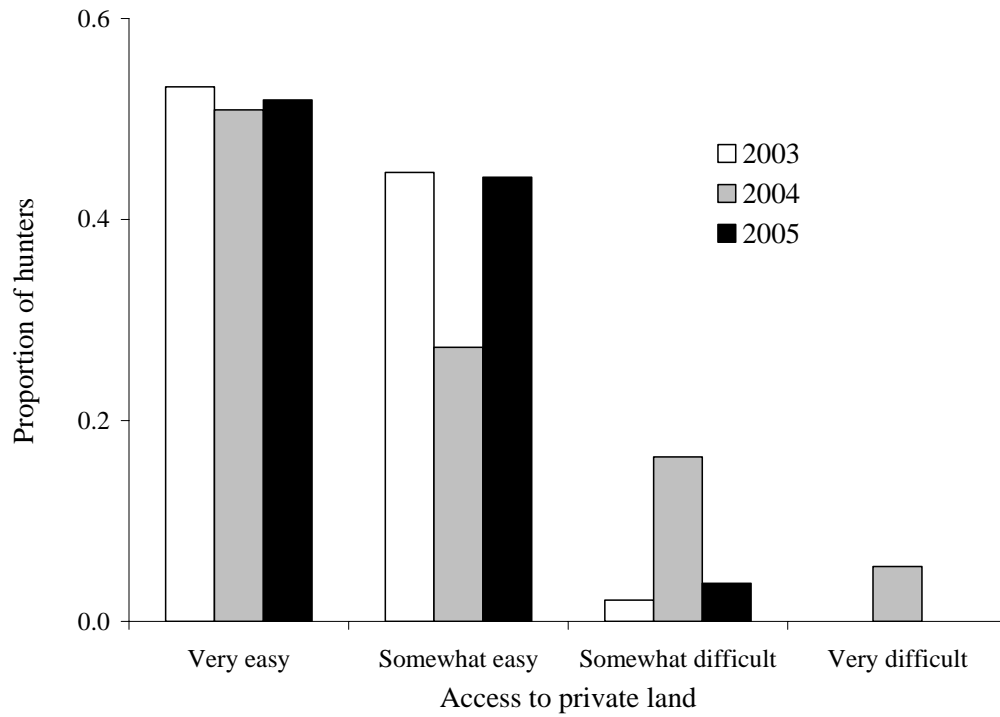


Figure 6. Ease of acquiring permission to access private land for prairie-chicken hunters in Minnesota during 2003 ($n = 47$ survey respondents), 2004 ($n = 55$), and 2005 ($n = 52$).

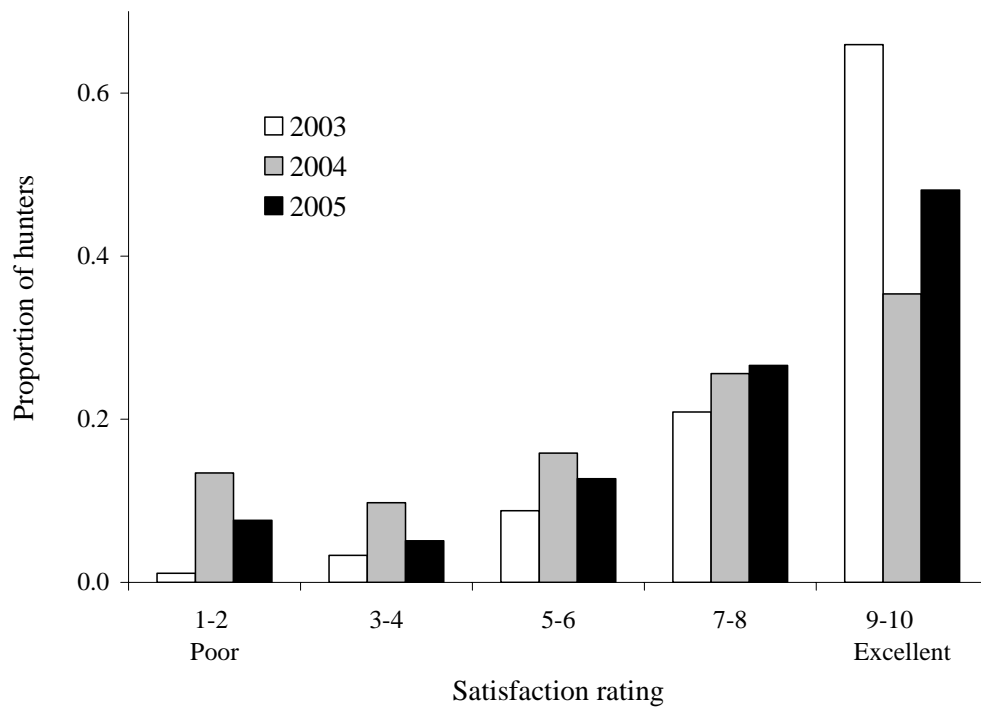


Figure 7. Degree of overall satisfaction of hunters with the prairie-chicken season during 2003 ($n = 91$ survey respondents), 2004 ($n = 82$), and 2005 ($n = 79$).