

Federal Aid in Wildlife Restoration Project: W-15-R
Title of Job: 2023 Spring Wild Turkey Harvest

Job: E2



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24 July 2023

The spring turkey hunter survey is conducted each year at the end of the spring season. The season closed on 31 May 2023. The objective of the survey is to obtain information on the spring turkey harvest and success. Information on age and sex composition of the harvest is also obtained and is reported elsewhere. This year's survey was available to hunters from 14 June 2023 until 28 June 2023. A full summary of hunter responses is provided in a separate report, *Spring 2023 Turkey Hunter Survey Report*.

Caveats. For the spring 2023 season, however, 92.4% of unique permits sold were associated with an email address, and as such, the sample frame was representative of the population of permit buyers. A reminder email was sent to all non-respondents one week after the initial invitation was sent, but no further attempts were made to contact hunters who failed to respond to the survey. Therefore, results might be biased toward successful hunters if successful hunters respond more readily to harvest surveys. Regulation changes instituted in 2023 reduced the number of permits hunters could purchase per season and put a quota of 10,000 on non-resident permits. As such, changes in permit sales were likely affected by these regulation changes and not by the permit-buying behavior of spring turkey hunters. Likewise, the reduction in available permits may have reduced total harvest.

Interpretations. Youth permits continue to be a strong component of overall spring permit sales, comprising 12.9% of the total permits sold for the spring 2023 season. Spring 2023 harvest was 25.4% lower than spring 2022 harvest (16,498), with an estimated total harvest of 12,302 turkeys in 2023. Overall harvest success was 48.8% for spring 2023, compared to 53.8% for spring 2022. Spring 2022 success rates were below the management goal for spring harvest success of 50%, but continue a pattern of decline.

Take-home Message. Spring turkey hunters continue to enjoy a somewhat high rate of success in Nebraska. The decrease observed in the number of permits sold and in total harvest can be attributed, at least partially, to the reduction in the number of permits a hunter could purchase and in the establishment of a quota for non-resident permits. For those spring hunters who went afield, success has continued to decrease while falling below 50% for the first time since 2004.

Methods. This year's survey was composed and administered in-house using Snap Survey development software (Snap v11) and Snap Webhosting service. An initial invitation to participate in the survey for the spring 2023 season was sent to 18,872 permit buyers (92.4% of unique permit buyers), but 15 were bounced back as undeliverable, giving an effective sample size of 18,857 permitted hunters. Initial invitations were emailed on 14 June 2023, and a reminder email was sent to all non-responding hunters on 21 June 2023. The survey was closed on 28 June 2023. Because nearly all permitted hunters provided an email address, no standalone version was available on the agency website for this year's survey. At the end of the survey period, responses had been received from 4,965 spring turkey hunters, representing 6,205 individual permits for the spring 2023 season. The raw response rate was, therefore, 26.3% and the permit response rate was 32.9%. Each survey respondent represented 4.11 unique spring 2023 permit buyers.

Results. Permit sales for the spring 2023 season ($n = 20,200$) were 19.4% lower than spring 2022 sales ($n = 31,273$; Figure 1). Although there were no COVID-related permit sale restrictions for the 2023 season, regulation changes did reduce the number of permits a hunter could purchase from three to two, and instituted a cap on the number of permits available to non-residents (10,000). These changes will have impacted both permit sales and total harvest. Of permits sold, 3,259 (12.9%) were youth permits and 16,941 were statewide regular permits. Youth permits sales were 21.1% lower than in 2022 ($n = 4,132$), and statewide regular permit sales were 19.2% lower than in 2022 ($n = 27,141$). Of all unique permit buyers ($n = 20,430$), 81.1% bought only one permit and 18.9% bought two permits. Estimated total turkey harvest for the spring 2023 season was 12,302 turkeys. Of these, 1,518 were harvested on youth permits and 10,784 were harvested on regular statewide permits (Table 2, Figure 2). Overall, harvest was 25.4% lower during the spring 2023 season compared to spring 2022. Success during the spring 2023 season was 48.8%, with youth success lower at 46.6% and regular permit holders' success higher at 49.2% (Figure 3). Table 3 summarizes the 2023 spring season results.

TABLE 1. Comparison of demographic factors among all permit buyers, permit holders sampled, and survey respondents for the spring 2023 turkey hunter survey.

Demographic Factor	Sample Size	Permit Buyers	Permits Sampled	Respondents
		20,430	18,872	4,965
Residency	Resident	61.2%	59.5%	47.4%
	Non-resident	38.8%	40.5%	52.6%
Sex	Male	92.9%	93.5%	95.1%
	Female	7.1%	6.5%	4.9%
Age	Median	37	38	47
	Mean	38.6	39.8	46.5
	% Youth Permits	12.9%	8.7%	9.5%

TABLE 2. Spring turkey season harvest and success, 2017-2023.

Type	Statistic	Year						
		2017	2018	2019	2020	2021	2022	2023
Shotgun/ Regular	Permits	28,352	26,058	24,793	18,453	32,279	27,141	21,941
	Harvest	18,569	16,301	16,834	11,540	18,770	14,781	10,784
	Success	67.5%	64.7%	67.9%	62.5%	60.4%	54.5%	49.2%
Youth	Permits	4,822	4,004	3,541	4,297	4,626	4,132	3,259
	Harvest	1,862	1,430	1,297	2,057	2,012	1,717	1,518
	Success	41.5%	37.2%	36.6%	47.9%	44.8%	41.6%	46.6%

TABLE 3. Summary of spring 2023 turkey hunter survey responses and estimated harvest.

Residency	Permit Type	Permits Sold	Survey Permits	Reported Harvest	Success Rate	Estimated Harvest
Resident	Youth	2,388	332	90	27.1%	647
	Regular	11,841	2,437	1,028	42.2%	4,997
	Sub-Total	14,299	2,769	1,118	40.4%	5,644
Non-resident	Youth	871	284	93	32.7%	871
	Regular	10,100	3,152	1,807	57.3%	5,787
	Sub-Total	10,971	3,436	1,900	55.3%	6,658
Total		25,200	6,205	3,018	48.8%	12,302

FIGURE 1. Spring turkey permit sales, 1964-2023.

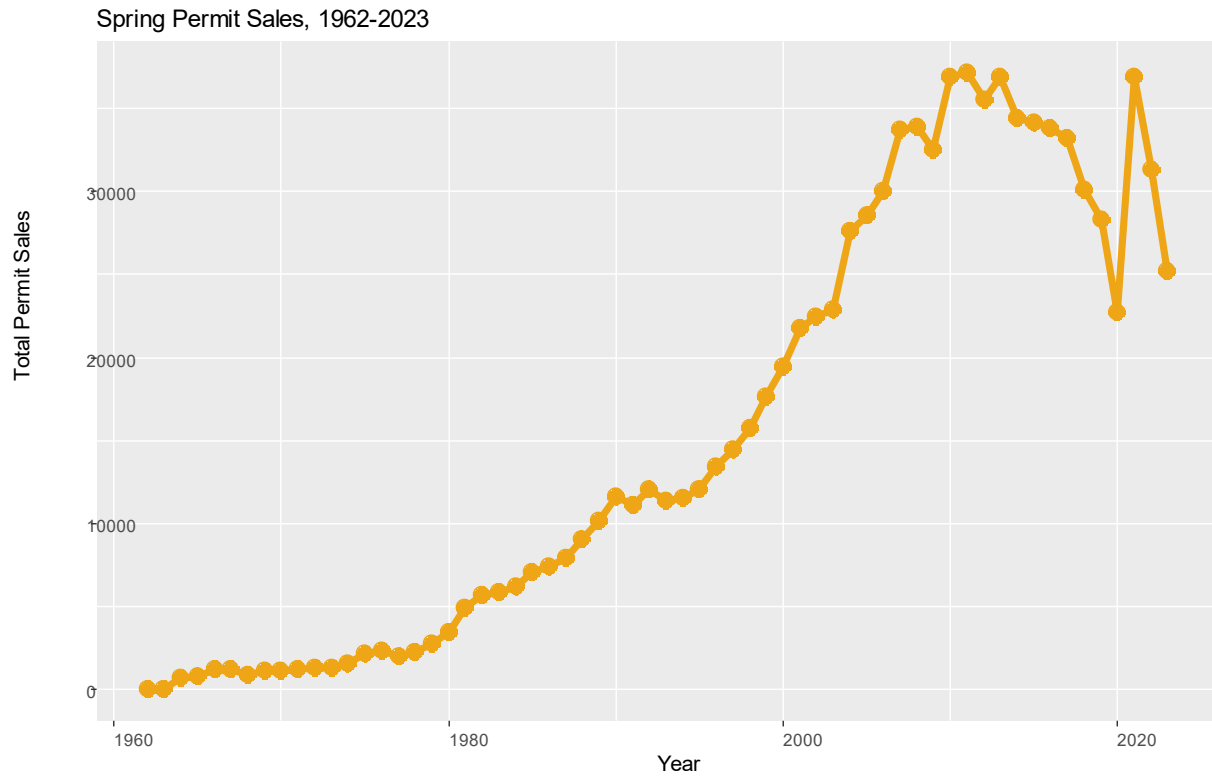


FIGURE 2. Spring turkey harvest, 1964-2023.

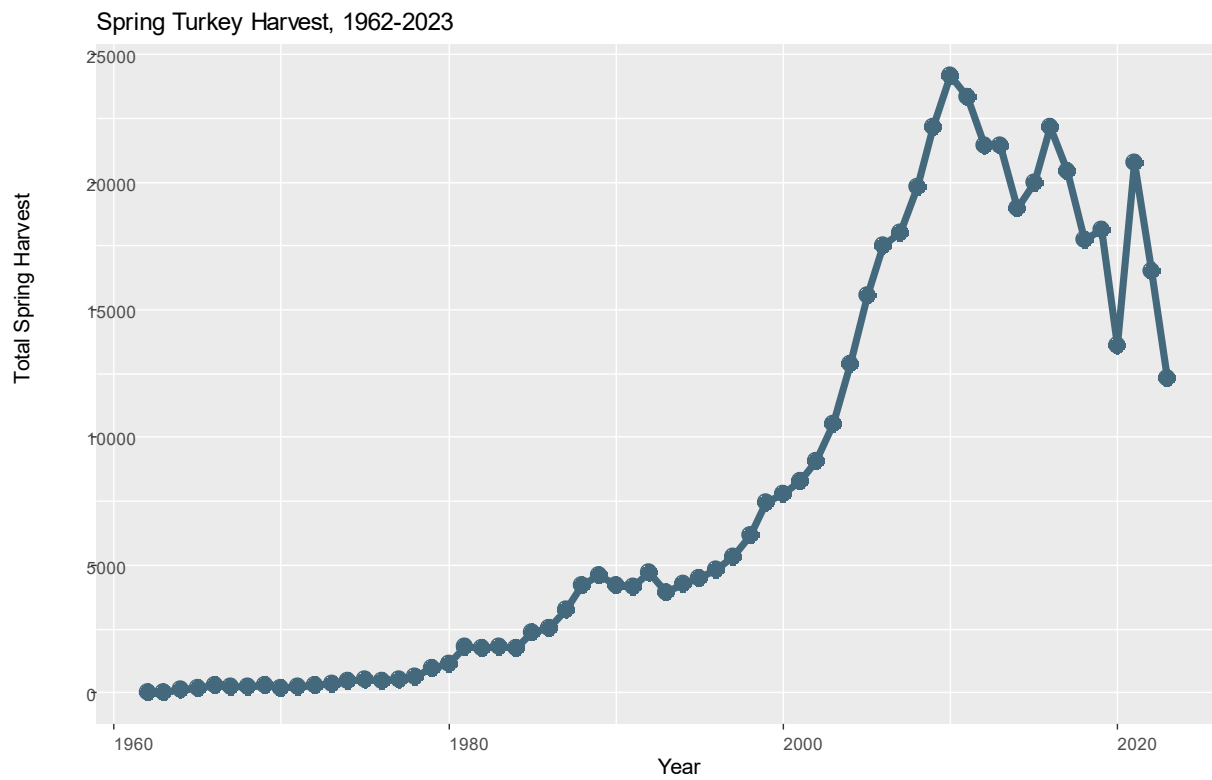


FIGURE 3. Spring turkey hunter success rate, 1964-2023. The horizontal line represents the success-rate goal (50% success) established in the 2011 Focus on the Future plan.

