

Federal Aid in Wildlife Restoration Project: W-15-R
Title of Job: 2020 Fall Wild Turkey Harvest

Job: E2



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The fall turkey hunter survey is conducted each year at the end of the fall season. The season closes on 31 January 2021. The objective of the survey is to obtain information on the fall 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 between 26 February and 15 March 2021, inclusive. A complete summary of hunter responses is provided in a separate *Fall 2019 Turkey Hunter Survey Report*.

Caveats. The fall Wild Turkey Hunter Survey samples mostly fall turkey hunters who provided valid email addresses at the time of purchase of their permit(s). As such, the sample frame may be biased and not strictly generalizable to the population of all fall turkey hunters. However, efforts were made to make the survey available to hunters without email addresses on file. For the fall 2019 season, 73.4% of unique permit buyers had provided email addresses.

Interpretations. Permit sales increased for the fall 2020 season compared to 2019 (+20.7%; 6,570 permits sold vs. 5,445). This increase in permit sales follows a pattern observed among other hunting permits that have all seen increases in sales during the COVID-19 pandemic. Only 5.0% of permit buyers for the fall 2020 season purchased a second permit. Estimated total turkey harvest for the 2020 fall season was 3,302 turkeys, up 15.7% compared to fall 2019, when 2,853 turkeys were harvested. Resident harvest was higher than non-resident (2,546 turkeys vs. 756, respectively), but non-residents were more successful (79.2% vs. 45.7%, respectively). However, given that there was evidence that there was response bias regarding residency (i.e., a higher percentage of non-residents responded than would be expected by their permit purchases or their proportion in the email sample), non-resident harvest might have been biased high. Interest in youth permits continues to be strong, comprising 10.6% of total permit sales for the fall 2020 season.

Take-home Message. Although the general trend for interest in the fall turkey season among turkey hunters has waned since 2012, sales of permits in 2020 were 20.7% higher than in 2019. This increase was likely due to impacts on the time available to hunt due to the COVID-19 pandemic. The concomitant decline in harvest observed since 2012 was also reversed in 2020, but harvest success continued to decline. After peaking in 2009, harvest success rates have fallen below the 60% level established as a goal of the 2011-2016 Focus on the Future strategic plan.

Methods. The fall turkey hunter survey was composed and administered in-house using Snap survey software and Snap WebHost service. An initial invitation to participate was sent to 4,597 (73.4%) of unique permit buyers on 26 February 2021, of which 4,401 were deliverable. A follow-up reminder was sent on 5 March 2021 to hunters who received the first invitation, but failed to respond. In addition to the email invitations, the survey was also available to hunters via the NGPC website. The survey was closed to all participants on 15 March 2021, at which time 737 responses had been received, for a raw response rate of 16.7%. The responding hunters represented 860 individual permits, for a permit response rate of 19.5%. Each survey respondent represented 7.28 fall 2020 permit buyers.

Results. Permit sales ($n = 6,570$) for fall 2020 were 20.7% higher than for the fall 2019 turkey season ($n = 5,445$, Figure 1). Of permits sold for the fall 2020 season, 17.7% were youth permits ($n = 1,165$) and 82.3% were regular or landowner permits ($n = 6,292$). Comparison of demographic information (residency, sex, age) between permit buyers, survey sample, and survey respondents that, whereas the permits sampled were representative of all permit buyers, responses were not (Table 1). There was a higher proportion of non-residents among respondents, who were also much older than the sample and all buyers (Table 1). Respondents were less likely to have purchased youth permits (Table 1). Estimated total fall 2020 harvest was 3,302 turkeys (Table 2, Figure 2), with youth harvesting 401 turkeys and regular/landowner permit holders harvesting 2,901 turkeys. Overall, harvest was 15.7% higher for the fall 2020 compared to fall 2019. Overall success rate was 50.3% for permit holders (Table 2, Figure 3). Reported success rates for residents was 45.7% and for non-residents was 79.2% (Table 3). Table 3 summarizes the 2020 season harvest results.

TABLE 1. Comparison of demographic factors among all permit buyers, permit holders sampled, and survey respondents for the fall 2020 turkey hunter survey.

Demographic Factor	Sample Size	Permit Buyers	Permits Sampled	Respondents
		6,570	4,593	737
Residency	Resident	85.8%	84.4%	78.0%
	Non-resident	14.2%	15.6%	22.0%
Sex	Male	93.2%	93.5%	95.0%
	Female	6.8%	6.5%	5.0%
Age	Median	41	42	53
	Mean	40.9	41.5	48.1
	% Youth Permits	17.7%	15.4%	10.6%

TABLE 2. Fall turkey season harvest and success, 2013-2020.

Type	Year	Year							
		2013	2014	2015	2016	2017	2018	2019	2020
Shotgun	Permits	10,836	10,175	9,744	8,589	6,863	5,977	5,445	6,570
	Harvest	6,748	7,003	6,336	4,868	3,520	3,255	2,853	3,302
	% Success	62.3	68.8	65.0	56.7	51.3	54.5	52.4	50.3

TABLE 3. Summary of fall 2020 turkey hunter survey responses and estimated harvest.

Residency	Permit Type	Permits Sold	Surveyed Permits	Reported Harvest	Reported Success Rate	Estimated Harvest
Resident	Youth	973	102	36	35.3%	344
	Regular	4,626	546	260	47.6%	2,202
	Sub-total	5,599	648	296	45.7%	2,546
Non-Resident	Youth	192	37	11	29.7%	57
	Regular	779	175	157	89.7%	699
	Sub-total	971	212	168	79.2%	756
Total		6,570	860	464	53.9%	3,302

FIGURE 1. Fall turkey permit sales, 1962-2020.

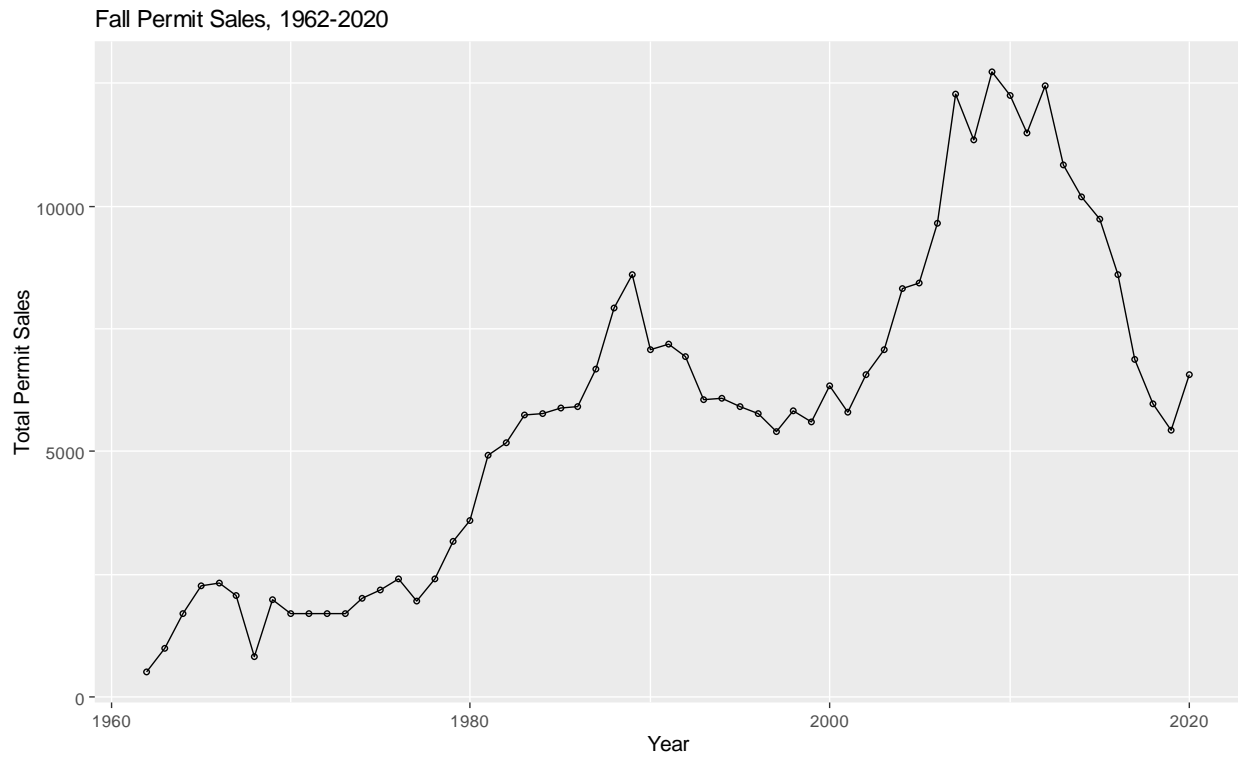


FIGURE 2. Fall turkey season harvest estimates, 1962-2020.

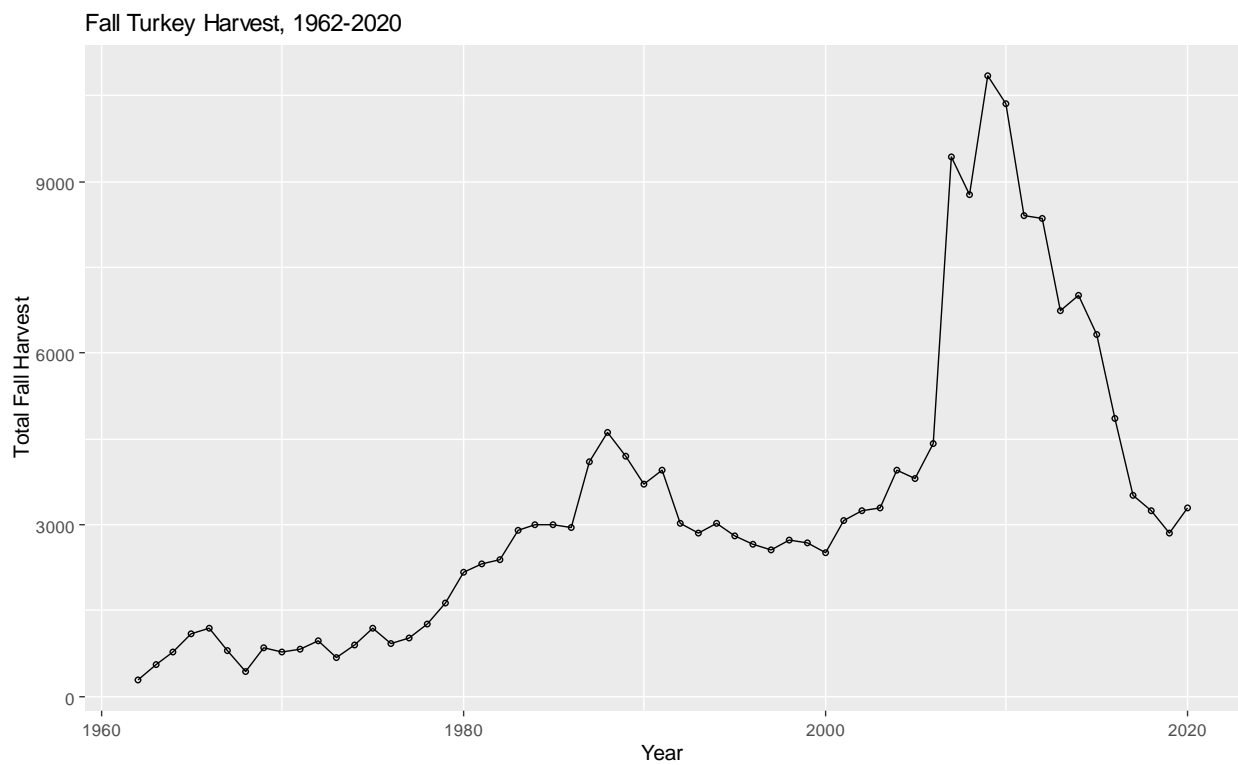


FIGURE 3. Fall turkey hunter success rate, 1962-2019. Horizontal line represents the success rate goal established in the Focus on the Future strategic plan.

