

Season Preferences of Tennessee Deer Hunters

Results of an Internet Survey 2010



TWRA Technical Report 10-03

Season Preferences of Tennessee Deer Hunters – Results of an Internet Survey 2010

Roger D. Applegate and Daryl Ratajczak

Hunter preference data are needed to support recommendations and adoption of hunting seasons. The Tennessee Wildlife Resources Agency (TWRA) Wildlife Management Division and TWRA field staff recommended changes to the 2010-11 deer hunting seasons to the Tennessee Wildlife Resources Commission (TWRC). To assist TWRA and the TWRC in making a decision on these seasons we conducted a survey of Tennessee hunters to obtain their preferences.

Methods

We used the TWRA electronic license data base to obtain names and addresses of hunters for this survey. All names in the database for the 2009 license year that purchased a Type 01 Resident Combination Hunting and Fishing (N=369,362), Type 02 Resident Youth Hunting/Fishing/Trapping (N=32,875), Type 04 Resident Sportsman (N=61,857), Type 09 Resident Big Game Gun (N=64,369), Type 10 Resident Big Game Archery (N=20,068), Type 11 Resident Big Game Muzzleloader (N=28,575), and Type 403-405 Lifetime (N= 866) licenses provided the sampling frame.

Required sample size for each license type was calculated from an internet based sample size calculator using $\alpha = 0.10$ and margin of error of $\pm 4\%$. The sample size for Type 01 licenses was increased by 40% because prior surveys had estimated that 40% of Type 01 license holders fish but do not hunt. Sample size of all other license types was rounded to provide even numbers except that all Type 404 and 405 Lifetime licenses were selected. The sample sizes randomly drawn were 840 Type 01, 625 Type 02, 600 Type 04, 600 Type 10, 600 Type 11, 203 Type 403, 194 Type 404, and 300 Type 405.

The survey questionnaire was developed on the internet survey site Survey Monkey (www.surveymonkey.com) (Figure 1) and an explanatory page was posted on the TWRA website providing a direct link to Survey Monkey. Selected hunters were mailed a postcard (Figure 2) requesting their participation (Figure 2) in the survey and providing the internet link and their TWRA number which was used to screen responses. Screening was necessary to assure that the survey could not be stuffed by responses that were not part of the selected sample. The responses of four respondents were taken over the phone due to lack of internet access.

Because of survey timing we did not perform follow-up mailings or design a non-response test for this survey. Statistical analysis was performed with SPSS 17.0 (SPSS Inc, Chicago, IL).

Results

Of the 4,562 cards mailed on 11 May 2010 with 86 cards returned undeliverable leaving a valid sample of 4,476 at time of analysis. The survey data was downloaded from Survey Monkey at 1300 on 17 May 2010 to allow for analysis of data in time for use during the Commission meeting being held on 19 May 2010. There were 399 usable responses for an 8.9% response rate. The margin of error of the survey was $\pm 4.69\%$. Not all respondents answered all questions on the survey (Table 1). Raw data are provided in the Appendix.

The majority of participants in the survey both hunted and fished (75.9%, Figure 3) and the majority of respondents preferred “no change” to the deer season (49.7%, Figure 4). Also the majority opinion was that the season length was “just right” (44.6%, Figure 5).

When given two options for fall turkey hunting (October or December), the majority of respondents (43.8%) chose October (Figure 6).

Because of concerns for hunter opinion specifically in 7 counties in southwest Tennessee, the 40 responses (38 usable from 5 counties, Table 2) from these counties were tested separately for difference in response from the remaining Tennessee respondents. Frequencies (Table 3) on all questions were similar (Figure 7, 8, 9, 10) and there were no differences in the responses (Table 4) using a t-test.

Table 1. Number of responses to each question (excluding the 7-county area).

Question	# Responses
Hunt Type	370
Season Preference	367
Season Length	368
Turkey Hunt	368

Table 2. Number of responses from 7-county area in southwest TN.

Question	#Responses
Hunt Type	38
Season Preference	38
Season Length	38
Turkey Hunt	38

Table 3. County distribution for responses from the 7-county SW TN area.

County	#Responses
Fayette	3
Hardeman	2
Haywood	3
Shelby	25
Tipton	7
Total	40

Table 4. Results of t-test of responses of from 7 southwest Tennessee counties vs. the remainder of the state.

	Sig. (2-tailed)	95% CI Lower	95% CI Upper
Hunt Type	.498	-.355	.173
	.520	-.375	.192
Season Preference	.778	-.404	.303
	.784	-.422	.321
Season Length	.827	-.240	.300
	.825	-.243	.303
Turkey Hunt	.405	-.254	.629
	.406	-.262	.637

The sampling procedure used in this survey provided a well geographically distributed response (Figure 11). Distribution of responses was concentrated in urban areas, as would be expected. Only 13 counties did not receive responses up to the cutoff date for analysis.

Figure 1. Web based survey questionnaire.

1. Default Section

*** 1. Please enter your TWRA ID# in the box below. Do not use dashes or spaces.**

Survey responses that do not have a valid TWRA ID# will not be considered.

2. As a Tennessee Hunting/Fishing license holder, which answer best fits your description?

I primarily hunt.

I primarily fish.

I both hunt and fish.

Please review the following options carefully then proceed to Question #3.

Option #1 – No Change. Please keep deer seasons as they were recommended by the TWRA.

December							January						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			1	2	3	4							1
5	6	7	8	9	10	11	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22
26	27	28	29	30	31		23	24	25	26	27	28	29
							30	31					

Option #2 – Add 7-days of gun (Dec. 6-12) and close the main gun season on Jan. 2nd.
 Ramifications: This will move the last Young Sportsman hunt to Jan. 8th and 9th and the fall turkey hunts to Oct. 23-29 and Dec. 13-17. Lost days: 7-days deer-archery .

December							January						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			1	2	3	4							1
5	6	7	8	9	10	11	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22
26	27	28	29	30	31		23	24	25	26	27	28	29
							30	31					

Option #3– Add 12-days of gun (Dec. 6-17) and close the main gun season on Jan 2nd.
 Ramifications: This will move the last Young Sportsman hunt to Jan. 8th and 9th and the fall turkey hunts to October or January. Lost days: 12-days deer-archery and gain 5-days deer-gun.

December							January						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			1	2	3	4							1
5	6	7	8	9	10	11	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22
26	27	28	29	30	31		23	24	25	26	27	28	29
							30	31					

Option #4– I am an avid outdoorsman who hunts multiple seasons and species. I would like to see the overall number of deer gun-days reduced.

3. The Tennessee Wildlife Resources Commission is considering the expansion of deer gun season. Although this may create more opportunity for deer hunters, small game hunters and fall turkey hunters may be affected by the addition of December gun days. As a Tennessee Sportsman, which of the above listed options would you most likely prefer?

- Option 1 - No changes. I am quite pleased with the current deer seasons.
- Option 2 - Add 7-days of gun (Dec. 6-12) and close the season on Jan. 2nd.
- Option 3 - Add 12-days of gun (Dec. 6-17) and close the season on Jan. 2nd.
- Option 4 - I would like to see the overall number of deer gun-days reduced.

4. Is the present deer gun season...

- too long
- too short
- just right
- No Opinion

5. If fall turkey hunting is affected by a change in deer gun season, what month would you most prefer to fall turkey hunt?

- October
- January
- No Opinion
- I do not fall turkey hunt.

Figure 2. Postcard mailed to selected sample of hunting license holders.

Dear Tennessee Hunter,

You have been randomly selected to take a survey about your preferences for Tennessee Gun Deer Hunting Seasons. Whether you are a deer hunter or not, we need your assistance. Please go to www.TWRASurvey.com and answer a few questions on your preferences. To complete the survey, you will need to enter your TWRA ID number:

999999999

Thanks for your opinions and participation.

Greg Wathen, Chief
Wildlife Management Division
Tennessee Wildlife Resources Agency
(615) 781-6500



100



TENNESSEE WILDLIFE RESOURCES AGENCY
P.O. BOX 41729
NASHVILLE, TN 37204-1729

FIRST CLASS MAIL
U.S. POSTAGE
PAID
MAILED FROM ZIP CODE 37204
PERMIT NO. 3086

John Q Doe
123 Easy Street
Anywhere, TN 99999

Figure 3. Hunting license type of respondents to internet survey.

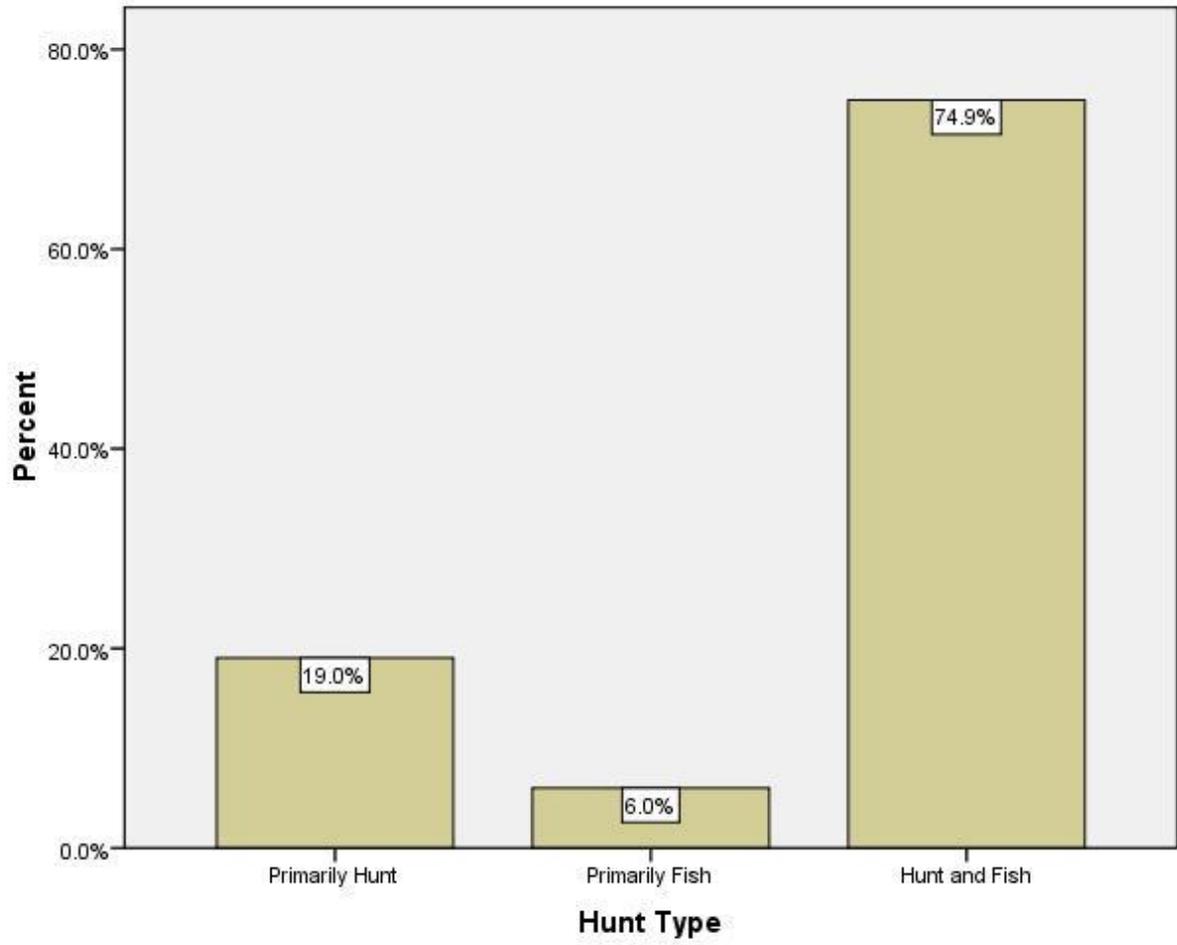


Figure 4. Deer season preference for respondents to internet survey.

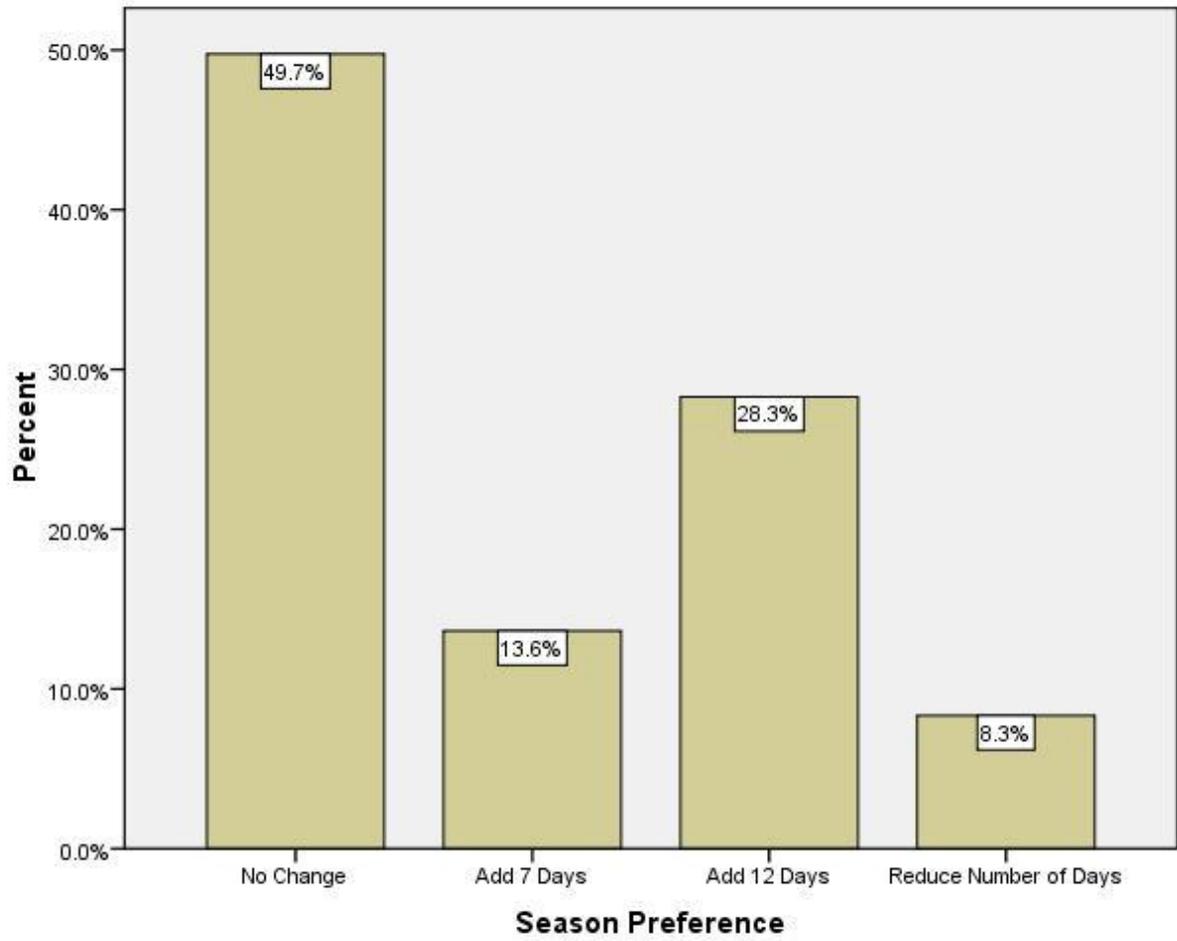


Figure 5. Opinion regarding deer season length of respondents to internet survey.

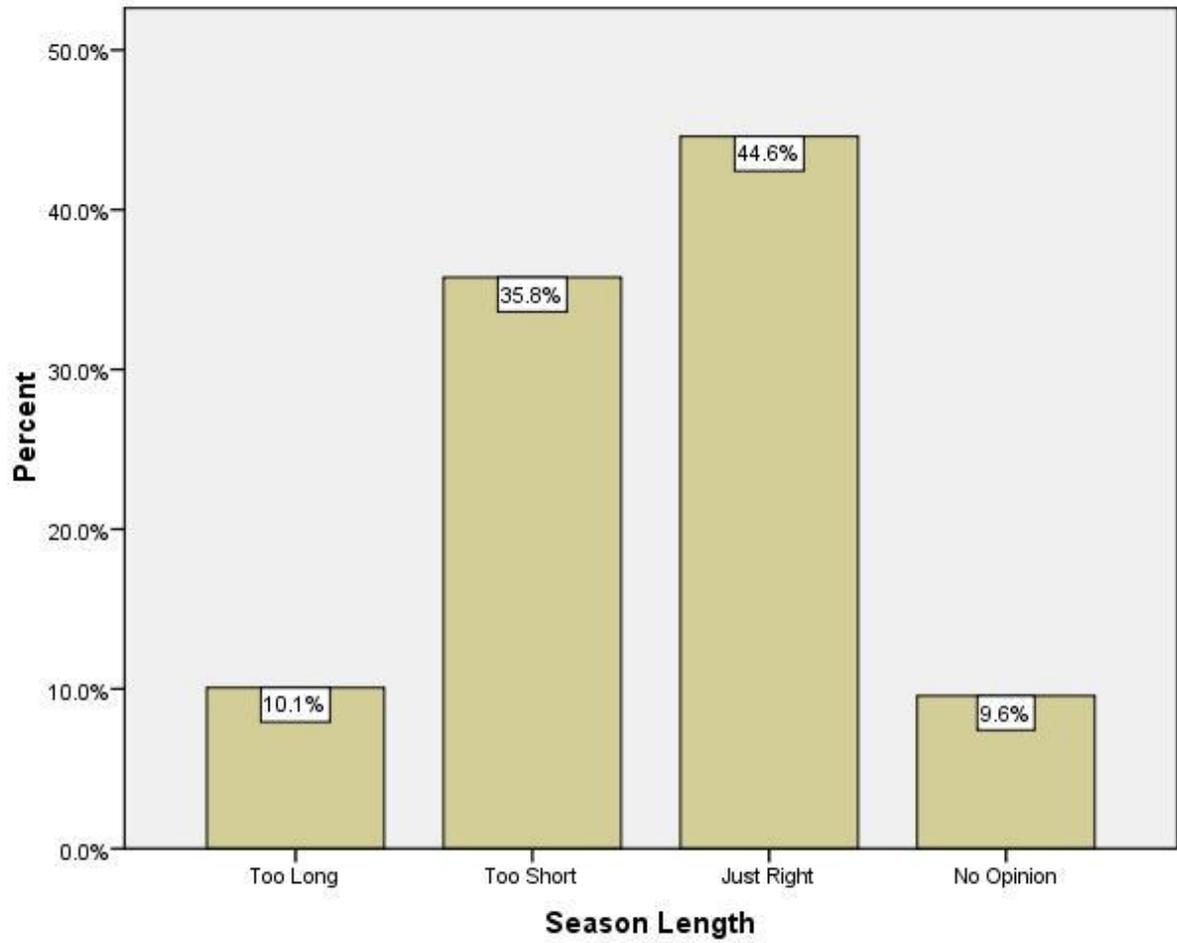


Figure 6. Preference for fall turkey season of respondents to internet survey.

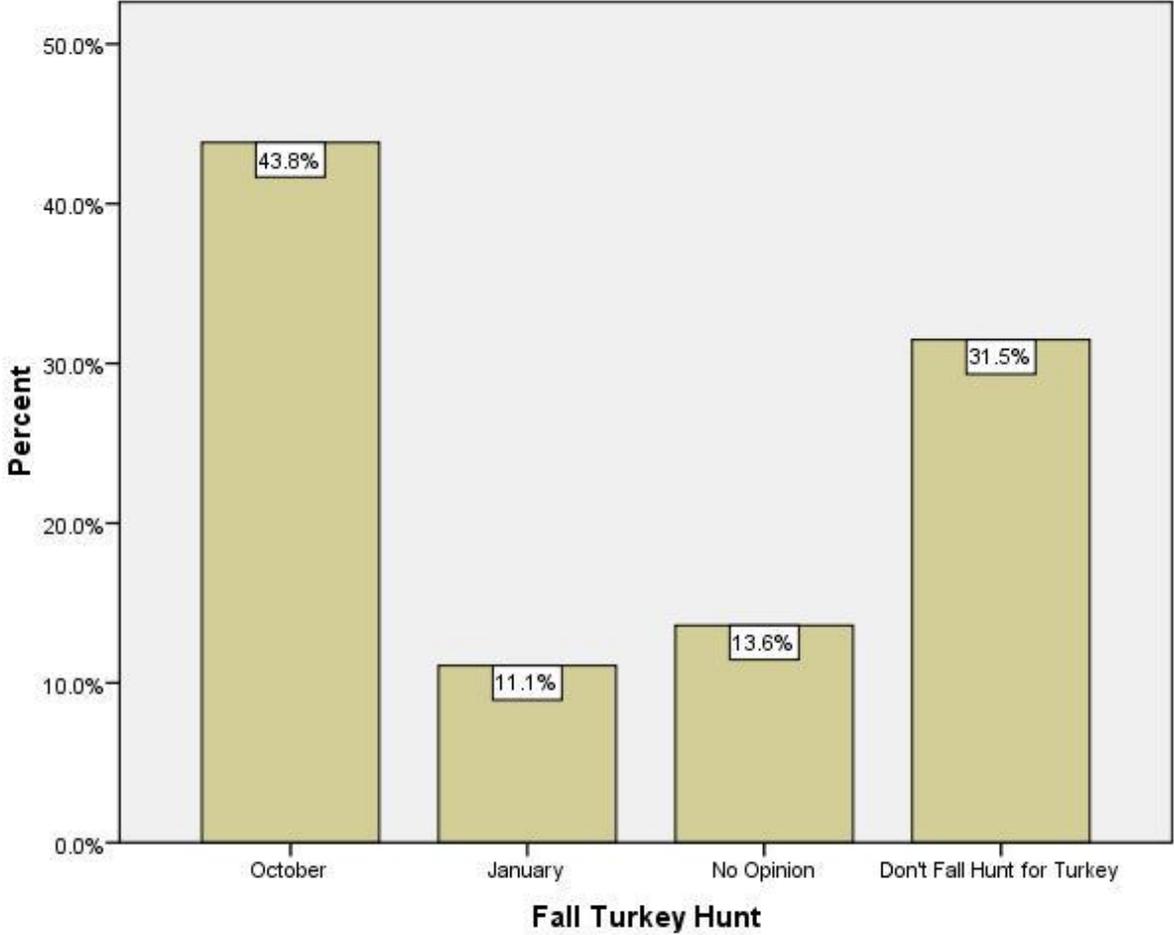


Figure 7. Hunting license type of respondents to internet survey from SW Tennessee.

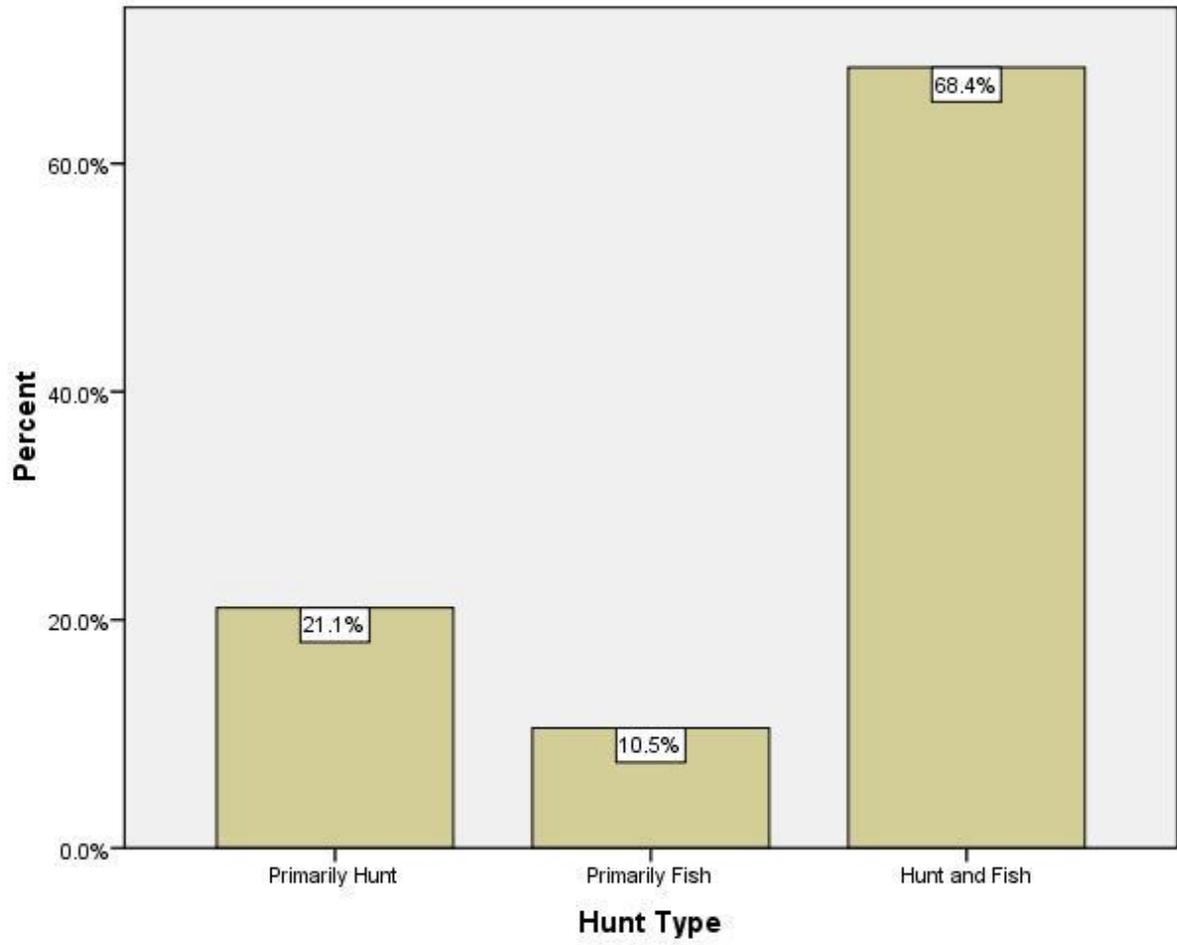


Figure 8. Deer season preference for respondents to internet survey from SW Tennessee.

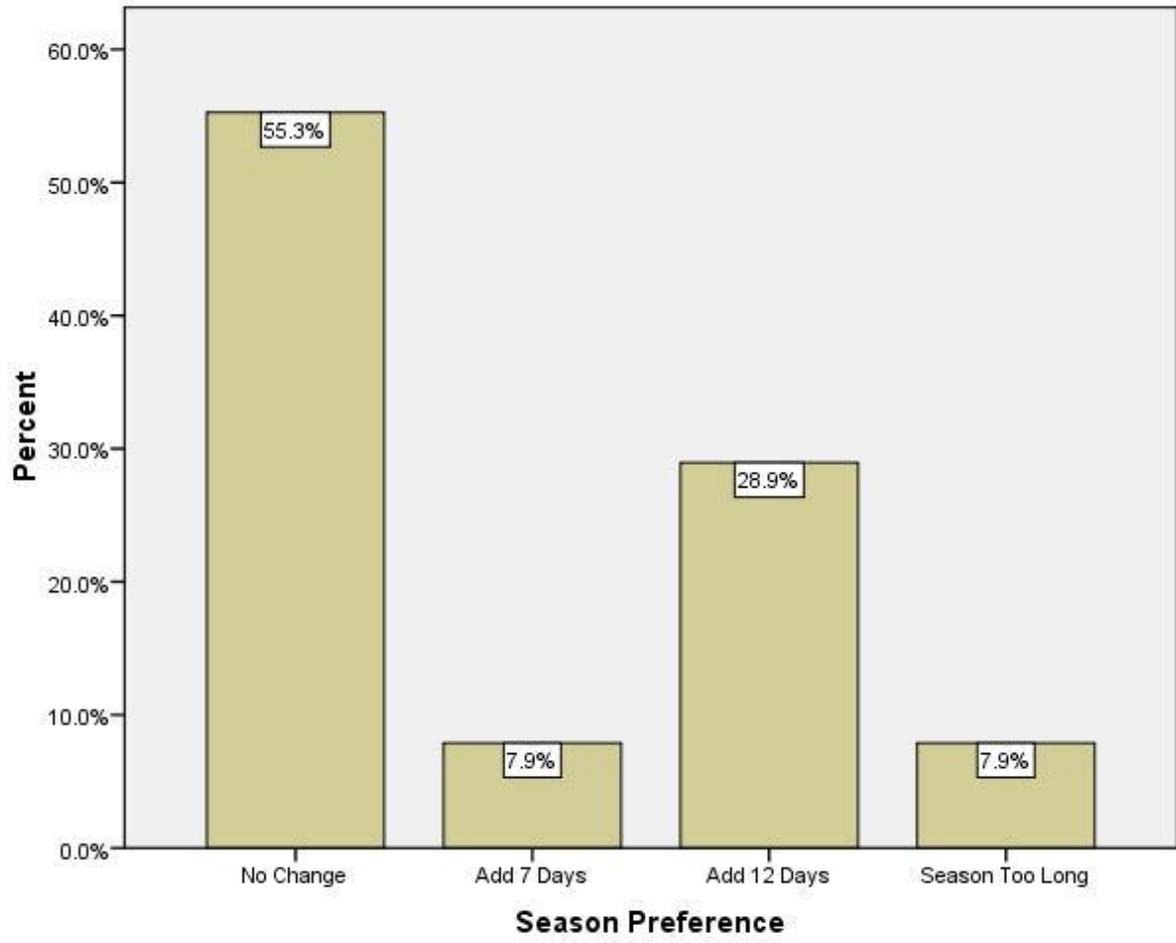


Figure 9. Opinion regarding deer season length of respondents to internet survey from SW Tennessee.

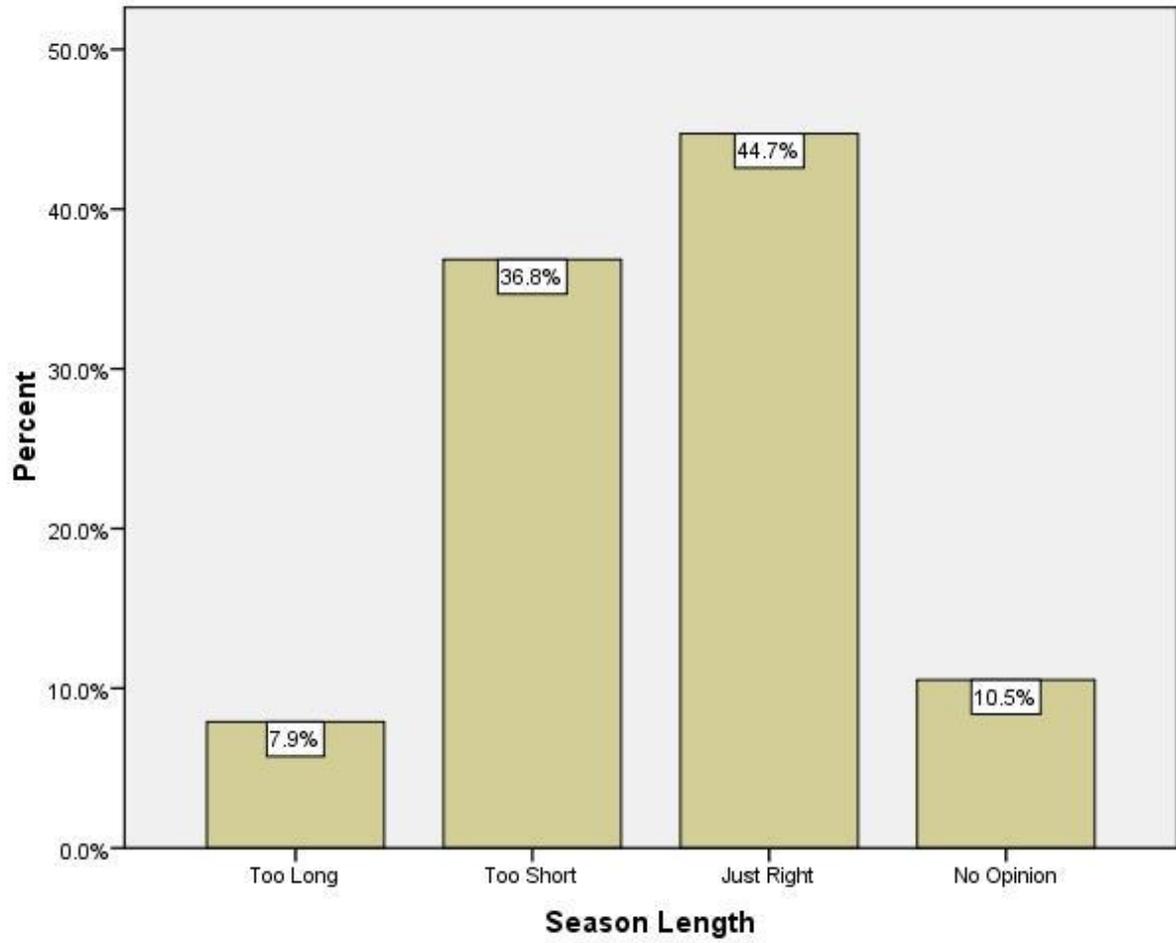


Figure 10. Preference for fall turkey season of respondents to internet survey from SW Tennessee.

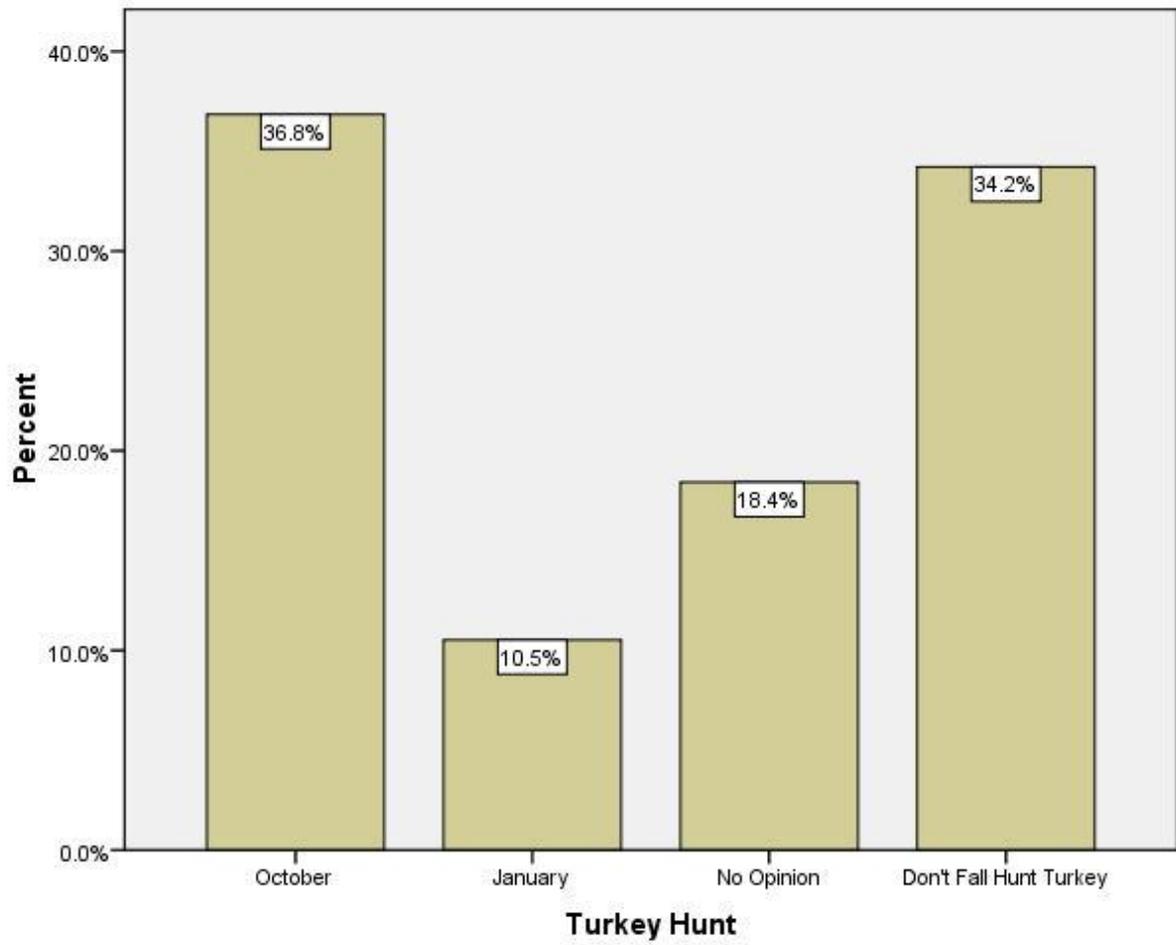
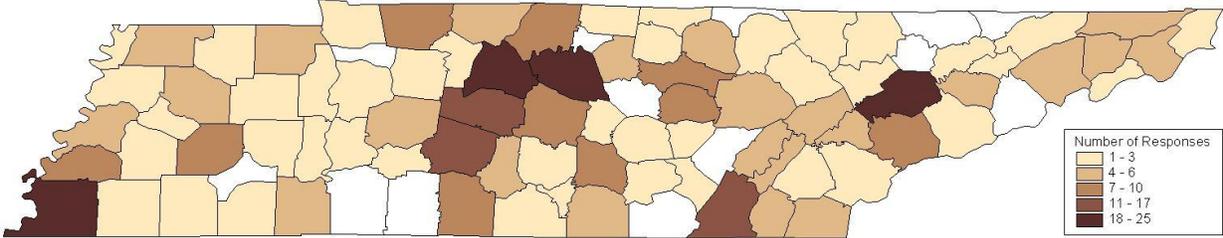


Figure 11. Geographical distribution of responses from sample selection.



Appendix. Raw data used in analyses. Data key:

Question 2: 1= primarily hunt, 2= primarily fish, 3= hunt and fish

Question 3: 1= no change, 2= add 7 days, 3= add 12 days, 4= reduce number of days

Question 4: 1= too long, 2= too short, 3= just right, 4= no opinion

Question 5: 1= October, 2= January, 3= no opinion, 4= Do not hunt fall turkey

Areas with blank spaces have no observations recorded.

Question 2	Question 3	Question 4	Question 5
3	1	3	4
3	1	2	3
3	1	4	2
1	1	3	4
3	1	2	4
3	1	4	4
1	2	2	3
3	1	3	4
3	3	2	1
1	1	4	3
3	3	2	4
3	1	3	4
3	4	3	4
3	3	4	4
3	1	3	1
3	2	2	1
3	2	2	1
2		4	4
3	3	3	4
1	4	1	1
1	1	3	1
3	4	1	3
1	1	3	1
1	3	2	1
3	4	1	1
3	3	2	3
3			
1	3	2	2
3	3	2	1
3	3	2	4
3	1	3	1
3	1	3	1
3	2	2	2
3	1	1	1
2	1	2	4
3	2	2	4

3	3	2	4
3	3	4	1
3	1	1	4
2	1	2	1
1	4	3	4
3	1	1	1
3	1	3	2
1	1	3	3
3	3	2	4
3	3	2	4
3	3	2	1
3	1	3	1
3	4	1	4
3	1	3	1
2			4
3	1	3	1
3	1	3	1
3	3	2	3
1	2	3	4
1	1	3	1
3	1	2	1
3	3	3	3
1	2	2	1
3	4	1	3
2		4	4
3	2	2	4
1			
3	1	2	4
3	2	3	1
3	3	2	4
3	1	3	3
3	1	3	2
1	1	3	4
2	1	3	4
3	2	2	1
3	3	2	1
3	1	3	1
3	1	3	2
3	3	3	4
3	1	2	1
3	3	3	4
3	1	3	1
3	3	4	1
2	1	3	1
3	1	3	1
1	2	2	1
3	1	3	3
1	1	3	4
3	1	3	3
3	1	3	1
1	1	3	3
3	1	3	1
3	1	3	3

3	3	2	1
2	1	3	1
1	1	2	2
3	4	4	4
3	2	4	4
1	2	2	1
3	3	4	3
3	4	1	1
3	1	3	2
3	3	3	3
2	1	4	3
3	2	3	2
3	1	3	1
3	1	3	4
3	1	1	4
1	1	3	4
3	1	2	4
2	1	3	4
3	1	3	1
1	1	3	4
3	1	3	1
3	1	3	4
1	2	3	4
3	1	3	2
3	1	3	4
3	3	3	4
3	3	2	1
1	1	3	1
3	3	2	1
3	3	3	1
3	1	2	4
3	1	3	3
3	1	3	4
3	1	3	4
3	2	3	4
1	3	2	4
3	4	1	1
3	1	4	1
2	3	2	4
2	1	4	1
1	4	1	1
3	2	2	1
3	1	3	2
3	4	1	2

1	1	3	3
3	3	2	2
1	3	2	3
3	3	2	1
3	3	2	4
3	1	3	2
3	3	2	1
3	3	2	2
2	1	4	4
3	1	3	1
3	1	4	1
2	1	3	3
3	3	4	1
1	2	3	3
3	3	2	1
1	3	2	1
3	3	2	1
3	1	3	1
3	4	1	4
3	1	3	2
3	3	2	4
3	3	3	4
3	3	2	4
3	3	2	4
3	2	3	4
3	1	3	4
3	3	2	4
3	3	2	1
3	1	3	3
3	3	2	2
3	4	3	4
3	3	1	4
3	1	2	1
1	1	1	4
3	1	3	1
2	1	3	3
1	1	3	4
3	1	2	3
1	3	2	4
3	1	3	4
1	1	3	2
3	1	3	3
3	3	3	2
1	2	1	4
3	1	3	1
3	1	3	4
3	2	3	1
3	3	4	4

3	4	1	4
3	2	2	1
1	1	4	1
3	1	2	2
3	4	3	1
3	1	3	3
3	2	2	4
3	1	3	1
3	1	3	4
3	3	2	3
2	1	4	4
1	3	4	4
3	3	2	4
3	4	1	2
3	3	2	2
1	3	2	3
3	1	3	1
3	2	2	4
1	1	3	3
3	1	3	1
3	1	3	4
3	2	3	4
3	3	2	2
3	4	4	1
3	1	3	1
3	1	3	4
3	1	4	4
3	3	3	4
3	1	3	4
3	3	3	4
3	1	3	2
1	3	2	4
3	1	2	4
3	2	3	1
1	1	3	4
1	1	2	4
3	1	3	4
3	1	3	3
2	1	4	1
3	4	1	3
3	3	4	1
3	1	3	2
1	1	3	1
3	1	1	1
3	3	3	4
3	1	3	1
3	1	3	2
3	2	4	1
3	1	1	

3	3	2	4
3	3	2	1
3	2	3	1
1	4	1	1
3	1	3	4
3	1	3	4
1	1	3	1
1	3	2	2
3	1	3	3
3	3	3	2
3	3	2	1
3	1	3	4
3	4	3	1
3	4	2	3
1	1	3	4
3	4	1	1
3	4	1	1
1	1	3	1
3	2	2	1
3	1	3	1
3	3	4	3
3	3	2	1
1	3	2	1
3	1	3	4
2	3	4	1
1	1	1	4
3	3	2	1
3	1	3	1
1	3	2	4
1	2	4	1
3	4	1	4
3	3	3	1
3	1	1	1
3	4	3	1
1	1	2	2
3	2	3	2
3	1	3	1
1	3	2	1
3	3	2	1
3	1	3	4
3	3	2	3
3	4	1	2
3	1	3	1
3	3	2	4
3	4	1	3
3	1	3	2

3	2	2	3
1	1	3	1
3	1	3	1
3	1	3	3
1	1	3	2
1	1	3	3
3	1	2	4
3	2	3	1
3	3	2	1
3	1	3	4
3	1	3	4
3	1	3	4
3	3	2	1
1	1	3	2
3	1	3	4
3	4	1	3
3	3	2	2
1	1	3	1
3	1	3	1
3	1	3	1
3	1	2	1
1	3	2	4
3	4	1	4
3	1	3	1
3	2	4	4
3	3	2	1
3	2	4	1
1	3	2	1
3	3	2	4
3	1	3	4
3	3	2	3
3	2	1	1
3	1	3	1
3	2	3	4
3	3	3	1
3	3	2	1
3	2	3	1
2	1	3	4
3	2	3	1
3	1	3	4
3	3	2	1
3	1	3	1
3	3	4	1
1	3	2	1
1	2	4	2
3	3	2	1

1	3	2	4
3	3	2	1
3	2	3	4
3	3	2	4
3	1	3	1
3	1	3	1
3	3	2	1
3	1	3	1
3	1	3	1
3	1	3	1
3	1	3	1
3	1	3	1
3	1	3	1
3	3	2	4
3	1	3	1
1	3	3	1
2	3	2	3
3	3	2	1
3	4	1	1
3	3	2	1
3	3	4	4
1	3	2	1
3	1	3	1
3	1	3	1
1	2	4	1
3	1	2	3
1	1	4	1
3	4	1	2
3	3	2	1
3	2	1	1
3	1	3	4
1	1	2	2
3	3	2	1
3	3	2	2
1	1	1	2
3	1	3	3
3	3	2	1
1	1	3	4
3	3	3	1
3	2	2	1
1	2	1	1
3	3	2	1
3	1	2	1
3	1	2	3
3	2	2	2
1	1	3	4
3	1	3	3
3	3	2	1
1	4	1	4

