

2014-15 RABBIT HUNTING COOPERATOR SURVEY REPORT



KENTUCKY DEPARTMENT OF FISH AND WILDLIFE RESOURCES

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METHODS

The 2014-15 Rabbit Hunting Cooperator Survey Report is a summary of two annual surveys conducted by the Kentucky Department of Fish and Wildlife Resources (KDFWR) to estimate rabbit production, hunter effort, and hunter success. First, the Rabbit Hunter Log Survey is a diary-type hunting log used to record information from hunts throughout the season. Hunters were asked to keep the log to date as the hunting season progressed, and at the season's conclusion, logs were mailed to the KDFWR for analysis.

The Mail Carrier Survey represents the second survey used to monitor rabbit populations across the state. Mail carriers recorded rabbit and quail observations as they traveled their rural delivery routes during the last full week of July (6 delivery days). Survey cards provided space for observations of rabbits for each of the survey days. Observers also recorded the number of days surveyed, the length of the route, and the total miles driven. The mail carrier data is used to forecast the upcoming hunting season, monitor the population, and estimate rabbit productivity.

All surveys are strictly voluntary and we strongly encourage all Kentucky rabbit hunters and rural mail carriers to participate in these surveys. Hunter cooperators receive this report, detailing hunting season results, and expectations for the upcoming season. Cooperators also receive a new hunting log for the upcoming season and a small gift of appreciation for their participation. Participating mail carriers receive a subscription to *Kentucky Afield* magazine for their support.

RESULTS AND DISCUSSION

I. Rabbit Hunter Log Survey

Hunting logs were received from 98 hunters who averaged 14 hunting trips each for the season. Data was grouped into weekly and monthly subsets.

“Tidbits” from hunting logs:

- Hunter cooperators logged 1,413 hunts in 2014-15.
- Average size of hunting party = 2 hunters
- Average length of hunt = 3.5 hours
- Average number of dogs used per hunt = 4
- Total number of counties that cooperators hunted in = 93
- Number of rabbits jumped per hunt = 6.5/hunt
- Number of rabbits jumped per hour = 1.8/hour
- Number of rabbits killed per hunt = 2.7/hunt

Hunting pressure declined as the season progressed (Figure 1).

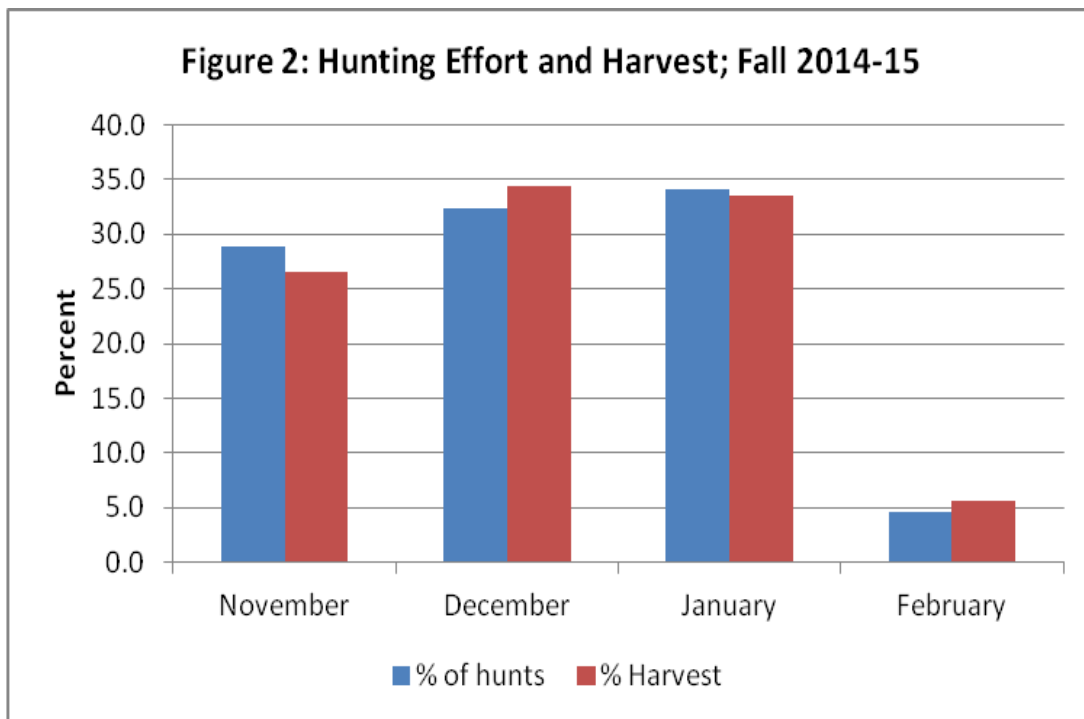
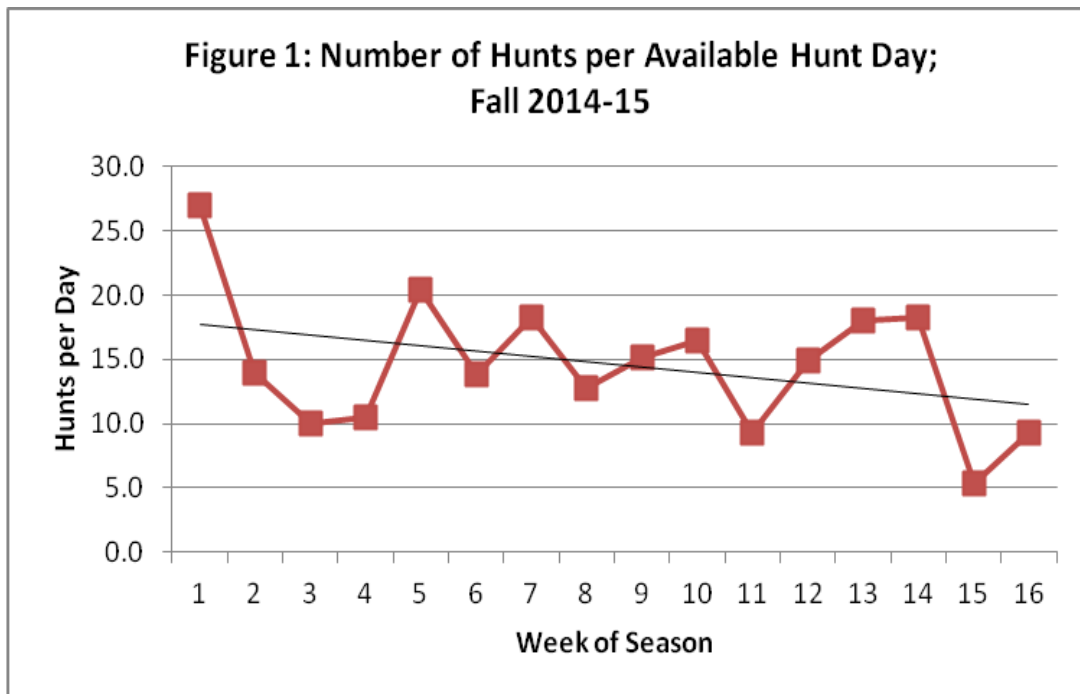


Table 2. Summary Statistics from the Rabbit Hunter Log Survey in Kentucky, 2010-2014 Seasons.

Statistics	2010-11	2011-12	2012-13	2013-14	2014-15
Cooperators	128	114	119	100	98
Hunts	1,667	1,959	1,880	1,406	1,413
Counties	106	105	108	97	93
Hunts/Hunter	13	17	16	14	14
Hours Hunted	6114.4	7393.02	6861.91	4939.58	4983.00
Dogs Used	6,769	8,586	7,958	5,552	5,518
Total Rabbits Jumped	11,163	12,875	12,782	9,726	9,173
Total Rabbits Harvested	4,892	5,702	5,436	3,851	3,797
Total Rabbits Wounded	305	334	387	268	297
Hunting Mortality (%)	46	47	45	42	45

Over the past five hunting seasons, hunting mortality (harvested and wounded individuals) remained less than 50% of the rabbits jumped (Table 2).

Table 3. Rabbit jump and harvest rates in Kentucky, 2011-2014 rabbit seasons.

Year	11-12	12-13	13-14	14-15
Total Hunts	1,958	1,880	1,406	1,413
Jumped/Hunt	6.58	6.80	6.92	6.49
Jumped/Hour	1.74	1.86	1.97	1.84
Harvested/Hunt	2.91	2.89	2.74	2.69
Harvested/Hour	0.77	0.79	0.78	0.76
Wounded/Hunt	0.17	0.20	0.19	0.21

II. Mail Carrier Survey Results

The Mail Carrier Survey provides a glimpse of what we can expect for the upcoming hunting season. The survey is the oldest in the program being completed for 55 years. Although no population estimates can be derived from this data, it does provide valuable trend information showing whether the population is up, down, or stable.

2015 Survey Statistics

- Mail Carriers returned 736 survey cards (49% response rate)
- Total miles driven = 252,785
- Total rabbits seen = 3,669
- Statewide observation rate = 1.45 rabbits/100 miles traveled

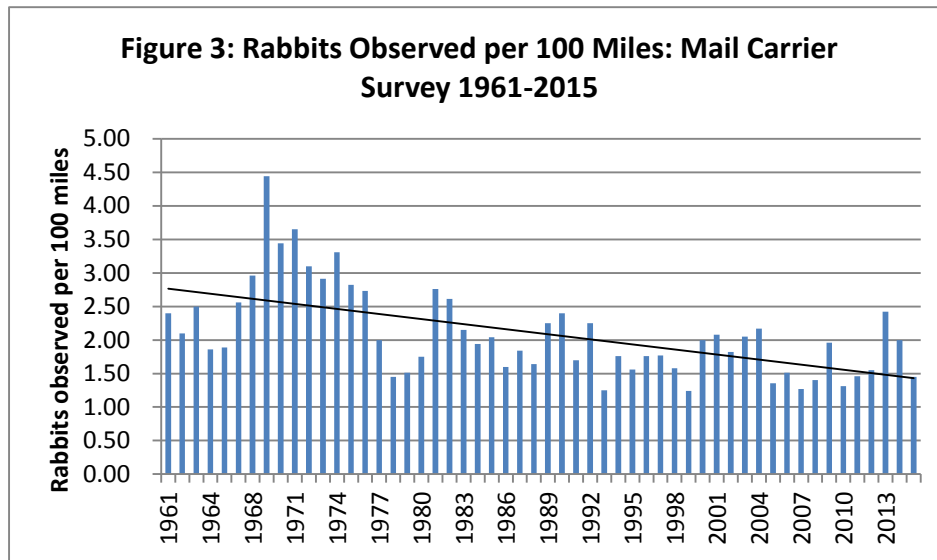
Beginning in 2011, mail carrier data was no longer analyzed across eight different physiographic regions. Analyzing data across eight regions resulted in small sample sizes which can be far less accurate. Data is now grouped into 4 regions; west, central, bluegrass and east (appendix A).

Table 4. Mail Carrier indices and rates of change in Kentucky, 1961-2015.

REGION	TOTAL RABBITS/100 MILES			PERCENT CHANGE	
	MEAN (average)			MEAN (average)	
	1961-2015*	2014	2015	1961-2015	2014 to 2015
West	-	1.10	0.84	-	-23.6%
Central	-	2.09	1.51	-	-27.7%
Bluegrass	-	2.40	1.54	-	-35.8%
East	-	2.63	1.95	-	-25.8%
Statewide	2.10	2.00	1.45	-39.5%	-27.5%

(-) = data was not analyzed by west, central, bluegrass, east until 2011

Over the last 55 years of this survey, the decline in the rabbit population is evident (Figure 3). The severe drop in population levels following the winters of 1977 and 1978 was dramatic and populations have been slow to recover. The overall drop in rabbit numbers since the late 1960's can be generally attributed to habitat loss because of land use changes and cleaner agricultural practices. However, recent years have seen a nice increase in the number of rabbits observed. The decrease between 2014-2015 is likely attributed to harsh winter weather experienced recently.



SUMMARY

The Mail Carrier Survey and the Rabbit Hunter Log Survey appear to be tracking each other well. Therefore, we can make predictions based on the Mail Carrier Survey results. This year, the East Region of the state once again led all regions in the number of rabbits observed, followed by the Bluegrass Region.

Overall, the 2014-15 rabbit season was good. Over the last 20 years, the population has remained fairly stable with bumps up and down. Last year, harvest rates and jump rates remained stable when compared to the previous season. The Mail Carrier Survey shows a 27.5% decrease in the number of observed rabbits statewide between 2014 and 2015. We believe harsh winter weather could be one reason for this decline. There are still plenty of rabbits available and we predict another good rabbit season this fall.

ACKNOWLEDGMENTS

We would like to say a special thanks to all those who have participated in the various small game surveys over the years. Your cooperation provides us with valuable data necessary to make wise management decisions regarding rabbit populations and hunting seasons. With that in mind, we ask that you recruit your friends and neighbors who also rabbit hunt to join you in being a hunting cooperator. **We need many more cooperators to accurately track rabbit populations across the state.**

Hunting logs can be found on the internet fw.ky.gov/Hunt/Pages/Game-Species.aspx or by contacting the Kentucky Department of Fish and Wildlife Resources at #1 Sportsman's Lane, Frankfort, KY 40601 (1-800-858-1549). Thank you to all who participated this year, and we hope to hear from you and all of your hunting partners in next season's surveys.

