Missouri Wild Turkey Harvest and Population Status Report 2019

Missouri Department of Conservation – Resource Science Division

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POPULATION STATUS

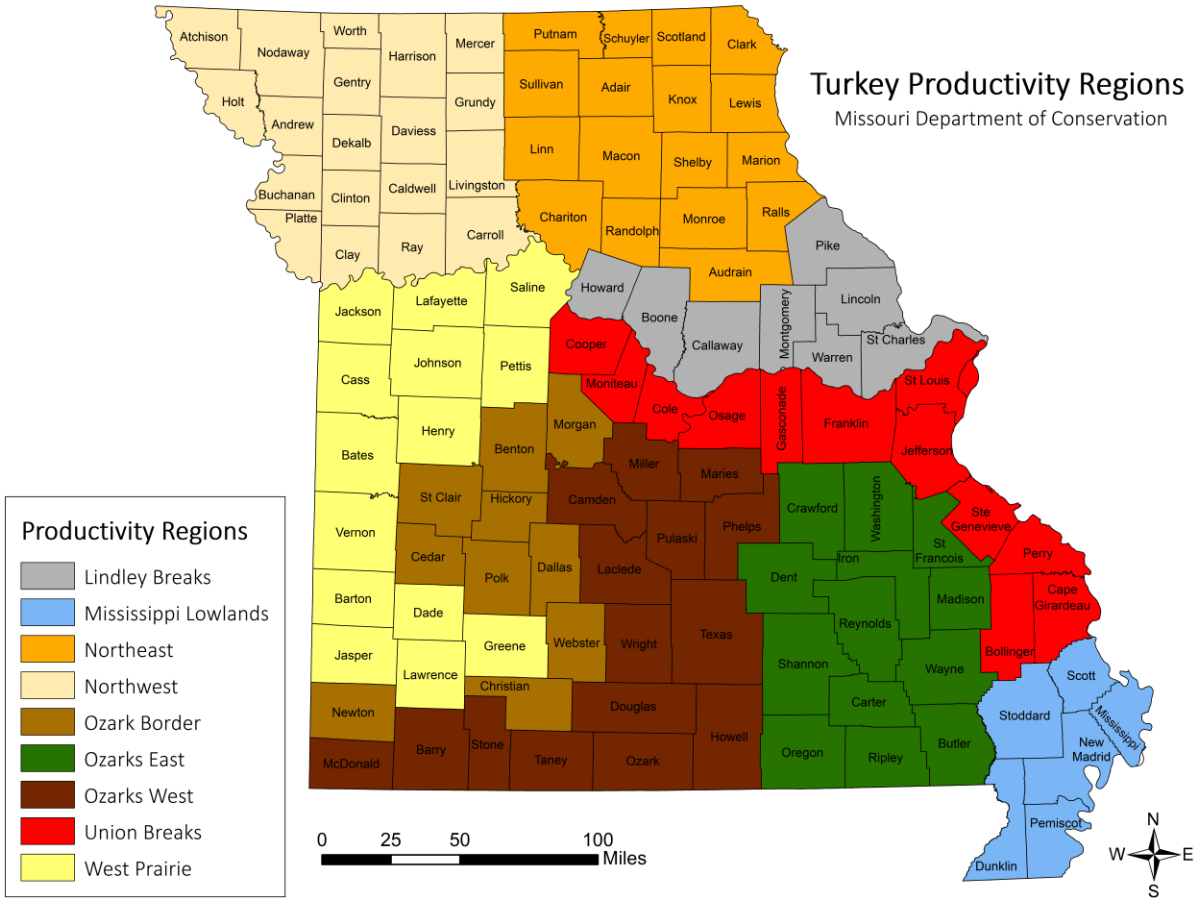
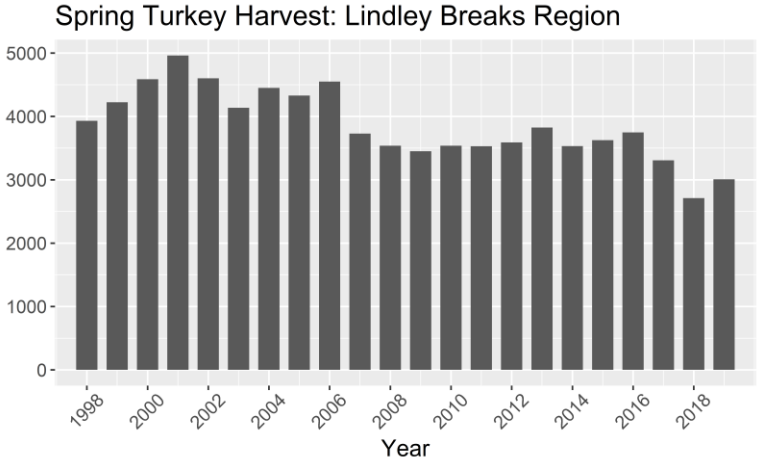
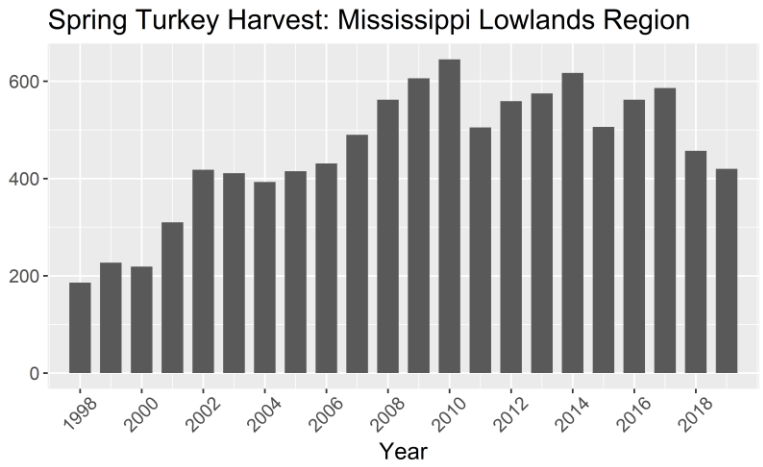


Figure 1. Turkey Productivity Regions in Missouri. Regions consist of counties grouped by similar land cover composition.

Lindley Breaks Region

Turkey numbers in the Lindley Breaks Region (Figure 1) peaked in the early 2000s before declining by approximately 30% from 2001-2009. Harvest data suggest stable population numbers from 2009-2016, however, the five-year spring turkey harvest trend (2015-2019) indicates a declining population.



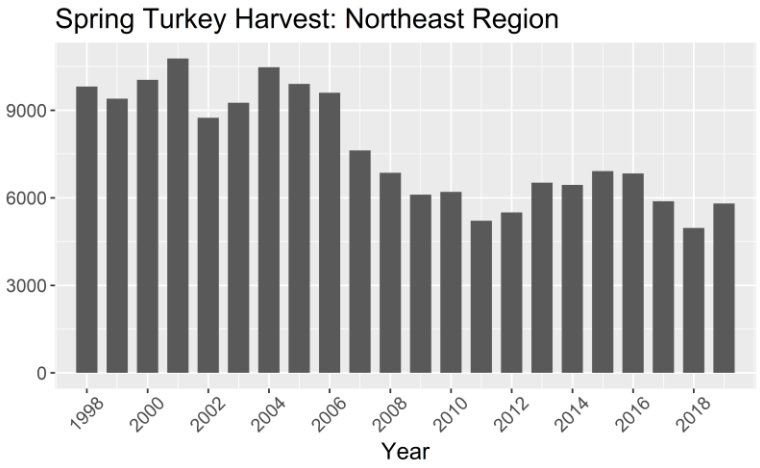


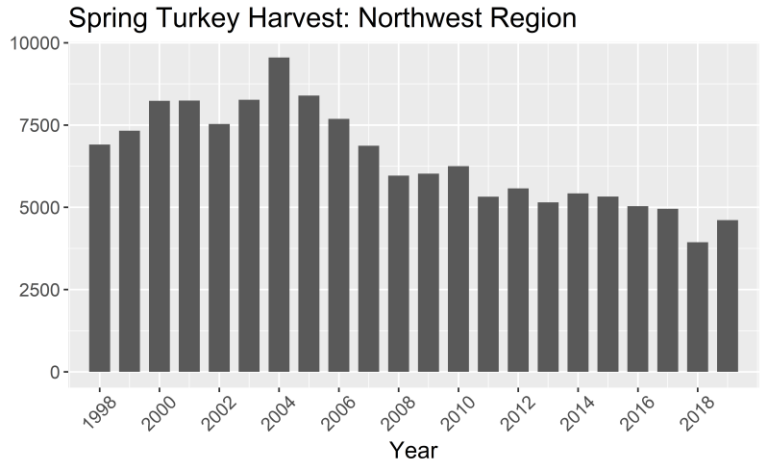
Mississippi Lowlands Region

Turkey numbers in the Mississippi Lowlands Region (Figure 1) increased during the 2000s; however, the five-year spring turkey harvest trend (2015-2019) indicates a declining population. Turkey habitat within the region is limited, resulting in lower turkey abundance and more variable harvests compared to other regions.

Northeast Region

Six consecutive years of poor production caused turkey numbers in the Northeast Region (Figure 1) to decline by approximately 40% during the late 2000s. Following two years of improved production in 2011 and 2014, harvest data suggested an increase in regional populations. Poor production the last several years, however, has resulted in a declining harvest trend over the past five years (2015-2019).



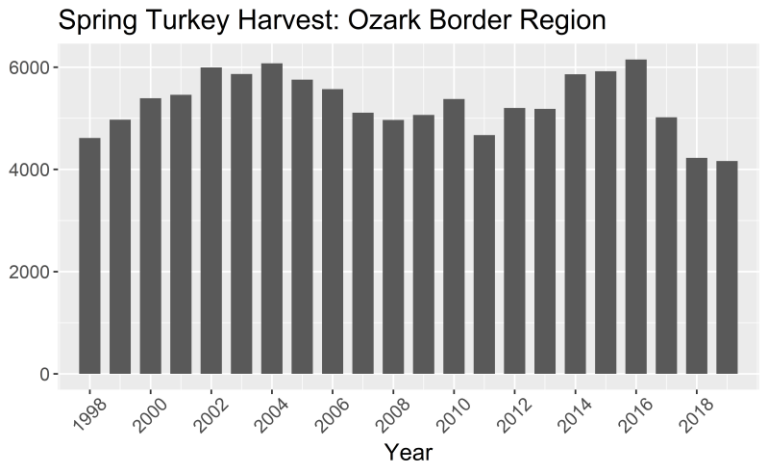


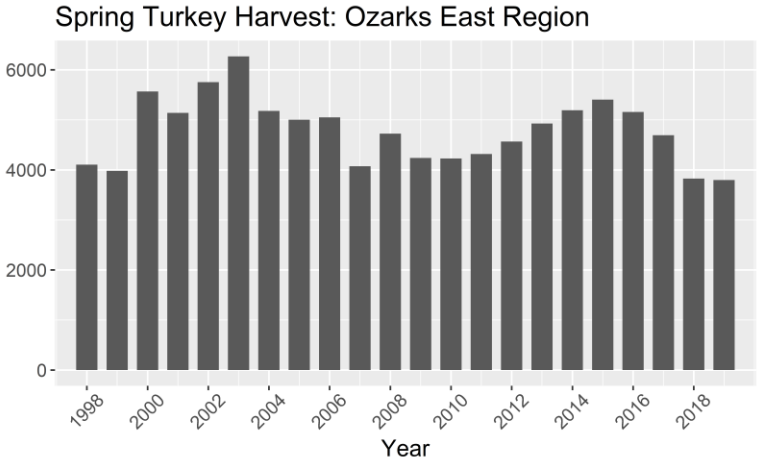
Northwest Region

Similar to the Northeast Region, poor production caused turkey numbers to decline sharply in the Northwest Region (Figure 1) during the late 2000s. Although spring harvest data displayed a trend towards stabilization from 2011-2015, the five-year spring turkey harvest trend (2015-2019) indicates a declining population.

Ozark Border Region

Turkey numbers in the Ozark Border Region (Figure 1) peaked in the early 2000s, as they did in most of the state before declining during the mid-to-late 2000s. Spring harvest data suggest a population increase within the region from 2011-2016 before abundance dropped sharply the past three years due to poor production in the region.



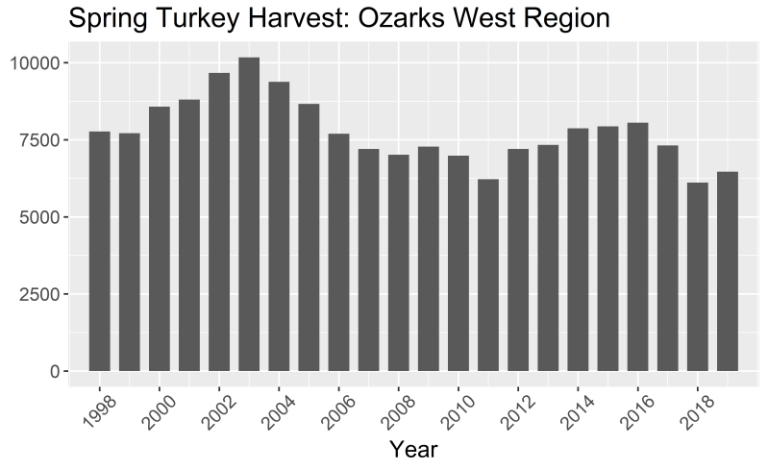


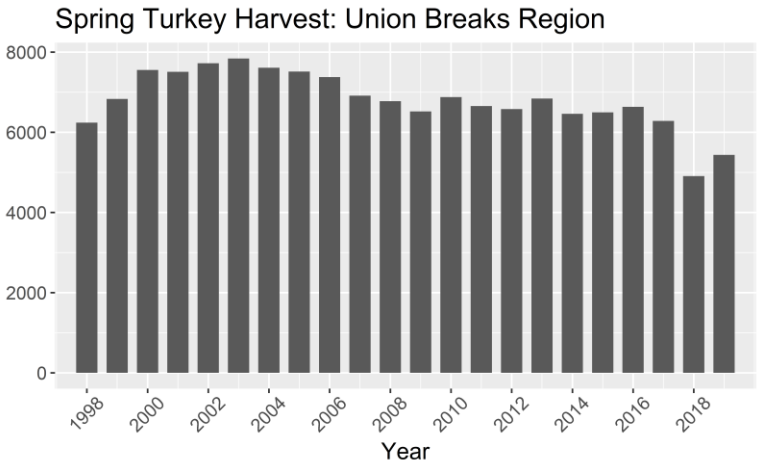
Ozarks East Region

Spring harvest data indicate that turkey numbers in the Ozarks East Region (Figure 1) peaked in 2003 and then declined during the late 2000s. Following several years of improved production, spring harvests increased markedly from 2011-2015 before declining over the last four years.

Ozarks West Region

Following a population peak that occurred during the early 2000s, turkey numbers in the Ozarks West Region (Figure 1) declined sharply during the mid-to-late 2000s. Improved production resulted in a stable-to-increasing trend in spring harvest from 2011-2016. However, the five-year spring turkey harvest trend (2015-2019) in the Ozarks West Region indicates declining abundance.



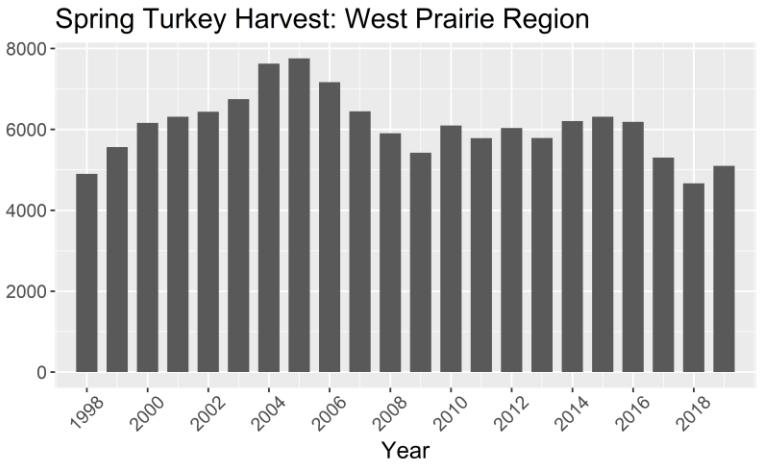


Union Breaks Region

Following a peak in the early 2000s, turkey numbers in the Union Breaks region (Figure 1) declined during the mid-to-late 2000s. Harvest data suggest stable numbers from 2009-2017, however, the five-year spring turkey harvest trend (2015-2019) indicates declining abundance.

West Prairie Region

Similar to the population trend in the Northwest region, turkey numbers in the West Prairie region (Figure 1) peaked during the early-to-mid 2000s. Spring harvest data suggest a population increase from 2009-2015. However, the five-year spring harvest trend (2015-2019) indicates declining abundance due to several years of poor production.



REPRODUCTION – WILD TURKEY BROOD SURVEY

The Missouri Department of Conservation (MDC) has been conducting a Wild Turkey Brood Survey annually since 1959. During the survey, Department staff and citizen volunteers record observations of hens, poults, and gobblers during June, July, and August. Turkey sightings are recorded on observation cards, which the MDC mails to participants at the beginning of each survey month. By recording observations of hens and poults, survey participants provide information that serves as an index to turkey production. It is through this survey that the MDC determines the success of each year's turkey hatch. Turkey observations are collected at the county-level and analyzed by Turkey Productivity Region (Figure 1), which are counties grouped by similar land cover composition.

Conservation Department staff determines the percentage of hens observed with and without poults, and the average number of poults per hen for those hens observed with a brood. Observations of hens and poults are used to determine the poult-to-hen ratio (PHR), which is the average number of poults per hen. The PHR includes observations of hens with a brood and those observed without a brood.

In 2019, MDC staff and citizen volunteers recorded observations of over 70,000 turkeys during the three-month survey. At the statewide scale, 34% of hens were observed with a brood (Table 1), which was down from 36% in 2018 and was 13% less than the 5-year average. The percentage of hens observed with a brood ranged from 25% in the Northeast Region to 57% in the Mississippi Lowlands Region. Statewide, the average brood size was 3.7 poults (Table 1), which was down from 3.8 in 2018 and 7% less than the five-year average. Average brood size ranged from 3.3 in the West Prairie Region to 4.4 in the Mississippi Lowlands Region. The 2019 statewide PHR of 0.9 was equal to the 2018 ratio and 21% less than the previous five-year average (Figure 2, Table 2). The 2019 PHR was 29% less than the 10-year average and 38% less than the 20-year average (Table 2). Among Turkey Productivity Regions, PHRs ranged from 0.7 in the Ozarks Border Region to 1.7 in the Mississippi Lowlands Region (Table 2).

Table 1. Wild Turkey Brood Survey data by Turkey Productivity Region (Figure 1). Data were obtained from Missouri's Wild Turkey Brood Survey conducted in June, July, and August, 2019.

Productivity Region	% Hens w/ Brood	Average Brood Size	Poult-to-Hen Ratio	Gobbler-to-Hen Ratio
Lindley Breaks	36%	3.5	0.9	0.6
Mississippi Lowlands	57%	4.4	1.7	0.6
Northeast	25%	3.8	0.8	0.8
Northwest	33%	3.8	0.9	0.8
Ozark Border	28%	4.1	0.7	0.7
Ozarks East	37%	3.6	1.0	0.5
Ozarks West	35%	4.0	0.9	0.6
Union Breaks	39%	3.7	1.0	0.6
West Prairie	31%	3.3	0.8	0.9
Statewide[a]	**34%**	**3.7**	**0.9**	**0.7**

[a]Statewide totals include observations where Productivity Region was not recorded on the survey form.

Table 2. Index (poult-to-hen ratio) of Missouri turkey production by Turkey Productivity Region (Figure 1). Data were obtained during the 2019 Wild Turkey Brood Survey and are compared to previous years. For each interval value, the percent change indicates how the 2019 index compares to the previous year or the average for periodic intervals.

Productivity Region	2019 Index	1-Year (2018) Change	5-Year (2014-2018) Change	10-Year (2009-2018) Change	20-Year (1999-2018) Change
Lindley Breaks	0.9	-31%	-28%	-35%	-43%
Mississippi Lowlands	1.7	+42%	+25%	+12%	-21%
Northeast	0.8	-38%	-37%	-40%	-45%
Northwest	0.9	-36%	-38%	-34%	-41%
Ozark Border	0.7	-13%	-35%	-39%	-50%
Ozarks East	1.0	+25%	-19%	-35%	-41%
Ozarks West	0.9	+29%	-11%	-25%	-36%
Union Breaks	1.0	+11%	-14%	-20%	-31%
West Prairie	0.8	No Change	-15%	-26%	-36%
Statewide[a]	**0.9**	**No Change**	**-21%**	**-29%**	**-38%**

[a]Statewide totals include observations where Productivity Region was not recorded on the survey form.

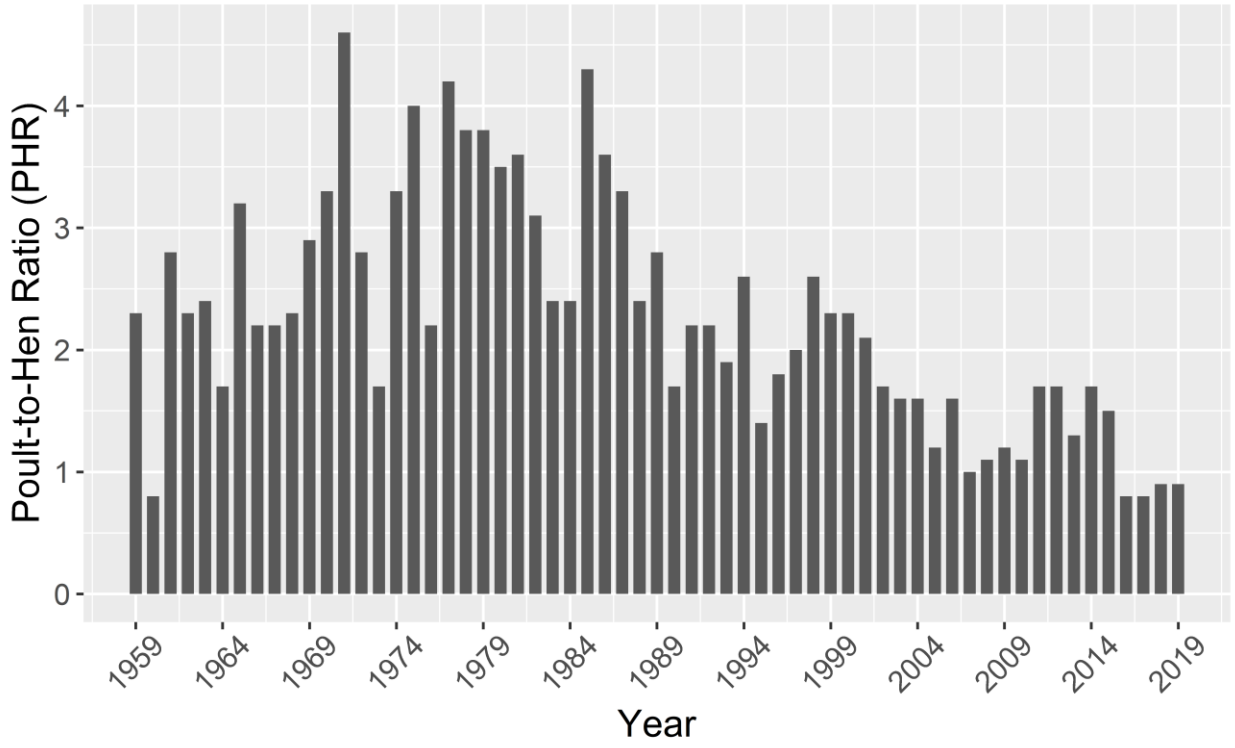


Figure 2. Missouri statewide poult-to-hen ratios derived from the Wild Turkey Brood Survey conducted in June, July, and August, 1959-2019.

HARVEST

2019 Spring Turkey Season

During the 2019 youth spring turkey season, which took place April 6-7, hunters harvested 2,546 turkeys. This harvest total represented a 47% increase from the 2018 youth season where a record-low 1,723 turkeys were harvested due to unseasonably cold weather that blanketed the state during the two-day hunt. The 2019 youth season harvest was 37% less than the previous five-year average.

Hunters harvested 36,249 turkeys during the 21-day regular spring turkey season, which occurred April 15-May 5. The regular season harvest was 6% more than the 2018 harvest. Juvenile male turkeys represented 20% of the regular season harvest (Figure 3), which was 17% more than the previous five-year average. The total 2019 spring harvest, including both the youth and regular seasons was 38,803. This harvest total was 8% more than the 2018 harvest total, but was 13% less than the previous five-year average. Counties with the highest total spring harvest were Franklin, Texas, and Callaway, where 847, 781, and 719 turkeys were harvested, respectively (Figure 4).

Total permit sales for the 2019 spring turkey season (93,472; excluding no-cost landowner permits) were 4% less than in 2018 and 11% less than the previous five-year average (Figure 5). Spring turkey permits sales in 2019 included 85,370 (91%) resident permits and 8,102 (9%) nonresident permits. An additional 35,879 no-cost permits were distributed to landowners. The total number of spring turkey hunters in Missouri in 2019 was 123,383, which was 5% less than in 2018 and 13% less than the previous five-year average. Note that the total number of hunters does not equal the permit sales total because some hunters purchase a permit in addition to receiving a no-cost landowner permit.

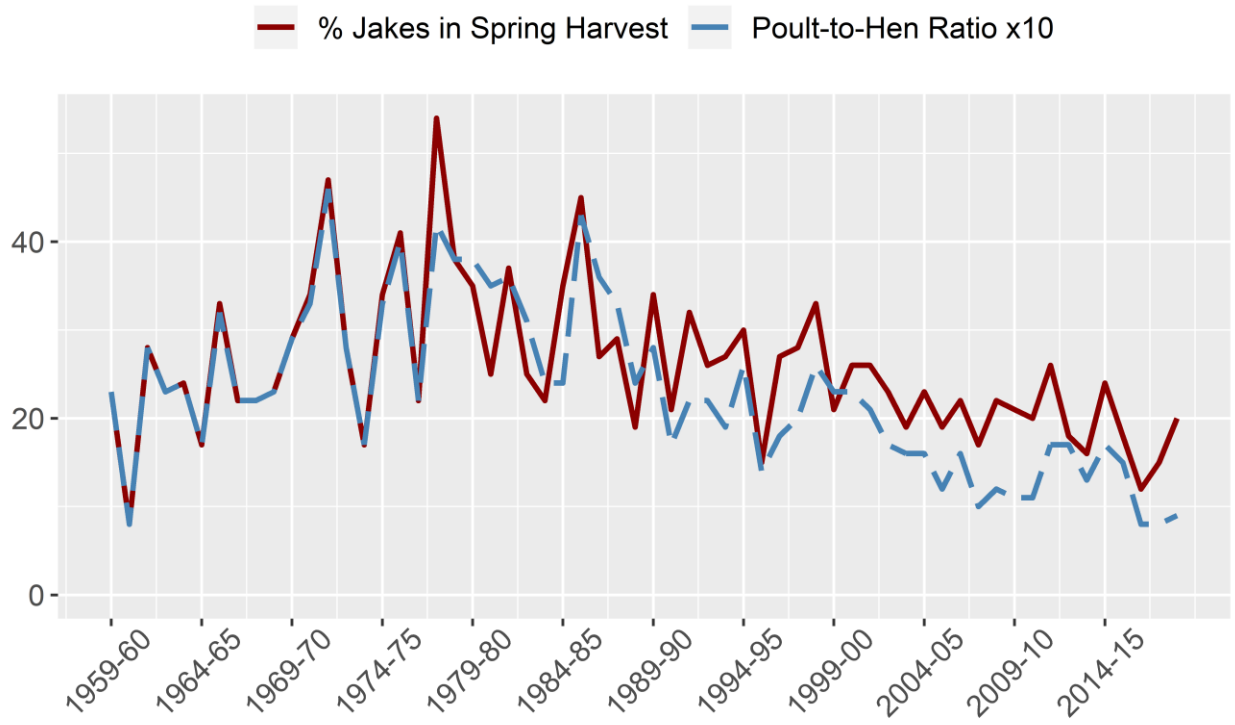


Figure 3. Missouri's statewide poult-to-hen ratio multiplied by 10, compared with the percentage of jakes in the following year's regular season spring harvest, 1959-2019.

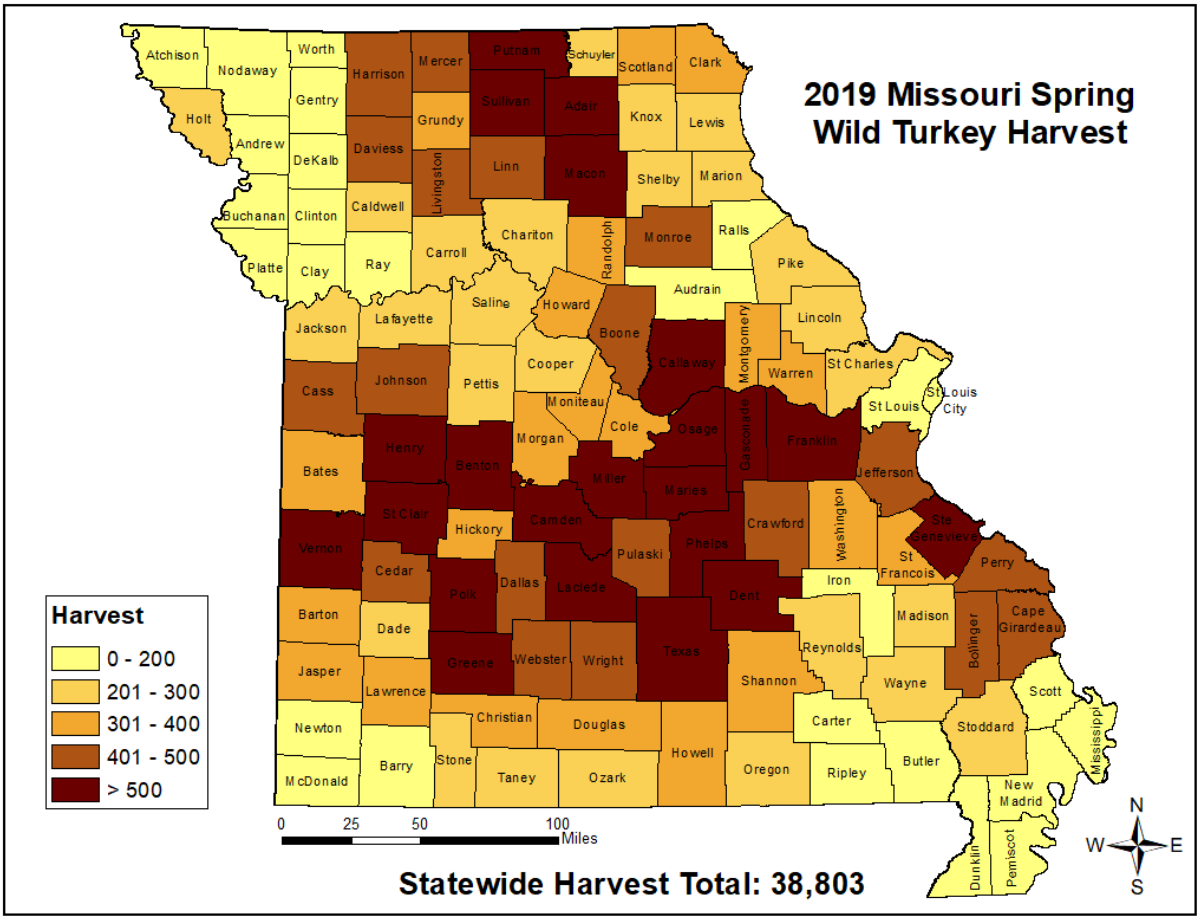


Figure 4. Total (youth and regular season) spring wild turkey harvest in Missouri, 2019.

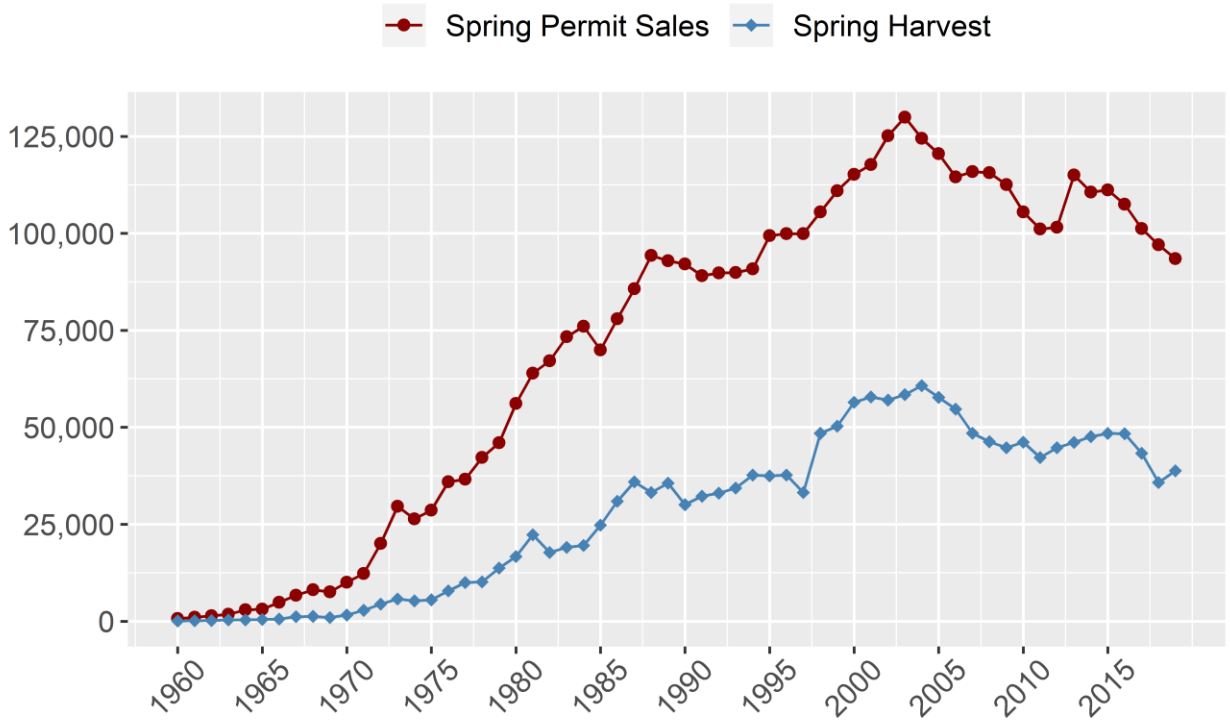


Figure 5. Number of wild turkeys harvested during the spring season (youth and regular season) in Missouri and the number of turkey hunting permits sold for the spring season, 1960-2019. Permit sales do not include no-cost landowner permits.

2019 Fall Firearms Turkey Season

The 2019 fall firearms turkey harvest total of 1,952 was 10% less than the 2018 harvest total and was 53% below the previous five-year average. The majority of the fall firearms harvest occurred in southern Missouri (Figure 6). The top harvest counties were Crawford (61) and Greene (61) followed by Laclede (59) and Phelps (58).

Fall firearms turkey permit sales in 2019 (9,195) were 10% lower than in 2018. Fall firearms turkey hunting in Missouri has been declining in popularity since the late 1980s when over 50,000 permits were sold and more than 28,000 turkeys were harvested during the 14-day season (Figure 7).

Although the novelty of the fall firearms turkey season may have worn off for some of Missouri's hunters, the increasing popularity of the archery deer and turkey season is likely to be partially responsible for the declining interest. Additionally, declining turkey numbers during the mid-to-late 2000s, and in recent years, are likely to have reduced hunter participation in the fall season. Missouri is not alone in experiencing a declining trend in fall firearms turkey hunting participation, as a number of other states are seeing similar trends.

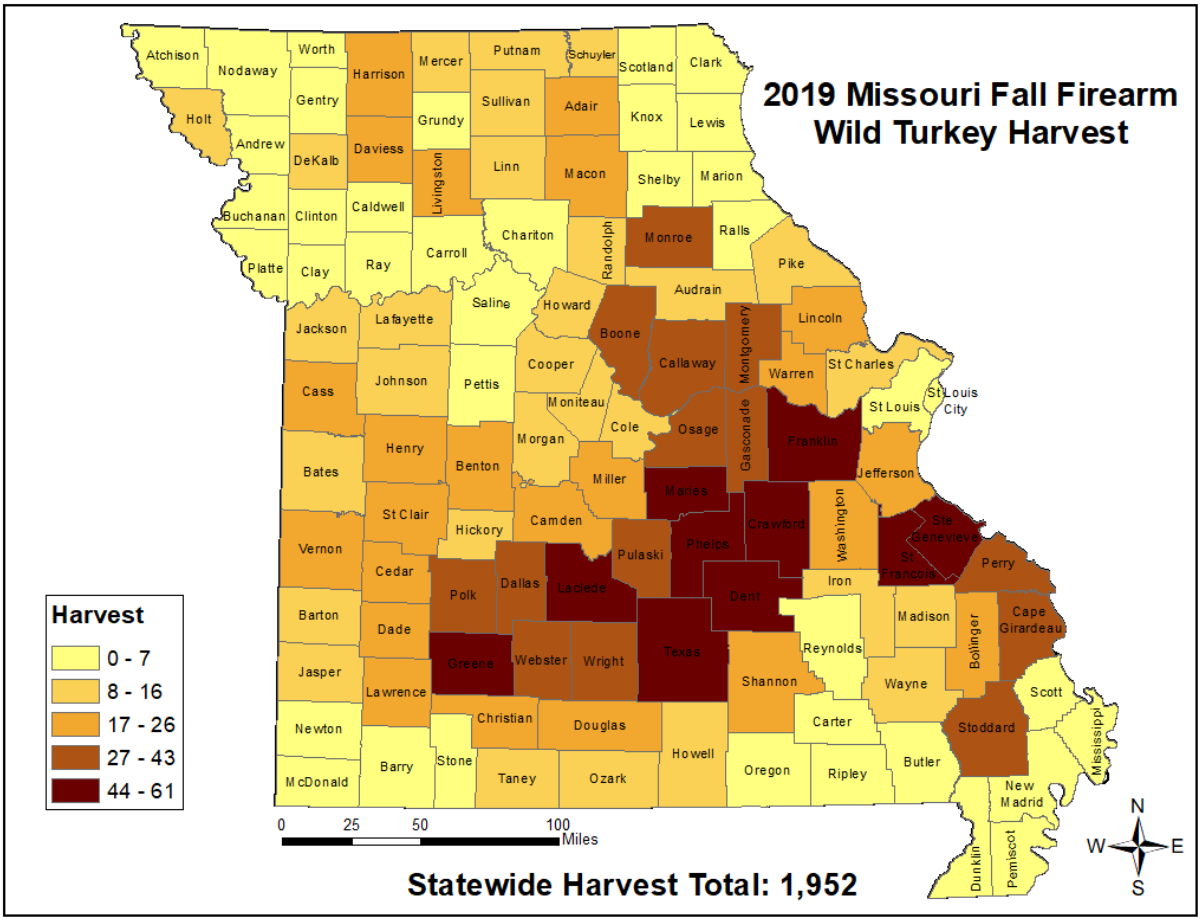


Figure 6. Missouri fall firearms wild turkey harvest, 2019.

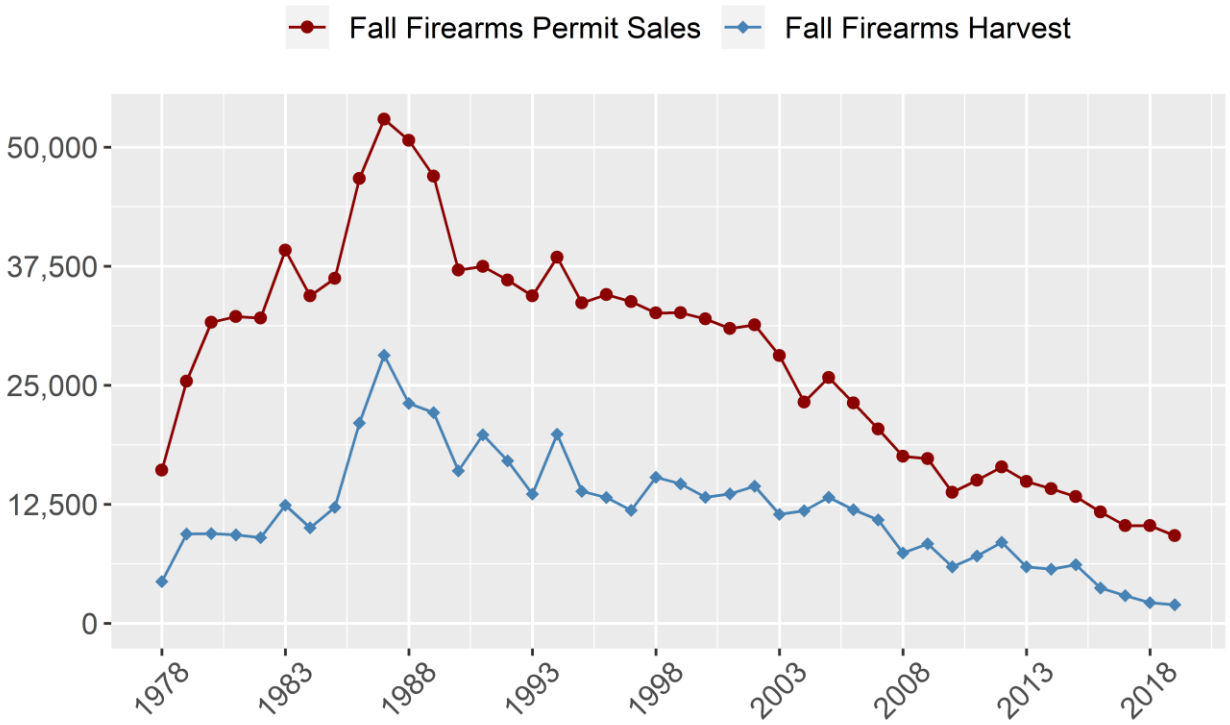


Figure 7. Number of wild turkeys harvested during the fall firearms turkey season in Missouri and the number of fall firearms permits sold, 1978-2019. Permit sales do not include no-cost landowner permits.

2019 Fall Archery Turkey Season

Hunters harvested 2,406 turkeys during the 2019 fall archery deer and turkey seasons (Figures 8, 9). The 2019 archery turkey harvest total was 15% greater than the 2018 harvest total but 3% lower than the previous five-year average. The top three harvest counties were Callaway (69), Greene (63), and Franklin (62) (Figure 8). Unlike the fall firearms turkey harvest, which has shown a declining trend since the late 1980s (Figure 7), the fall archery harvest increased until the mid-2000s. Since 2005, archery turkey harvests have fluctuated substantially on an annual basis, while exhibiting a declining trend over the last several years (Figure 9).

Although archery permit sales were relatively stable from the mid-1990s through the mid-2000s, sales have since shown an increasing trend (Figure 9). In 2019, 130,281 fall archery hunting permits were sold, the highest number since the season's inception, and a 5% increase from the 2018 permit sales total.

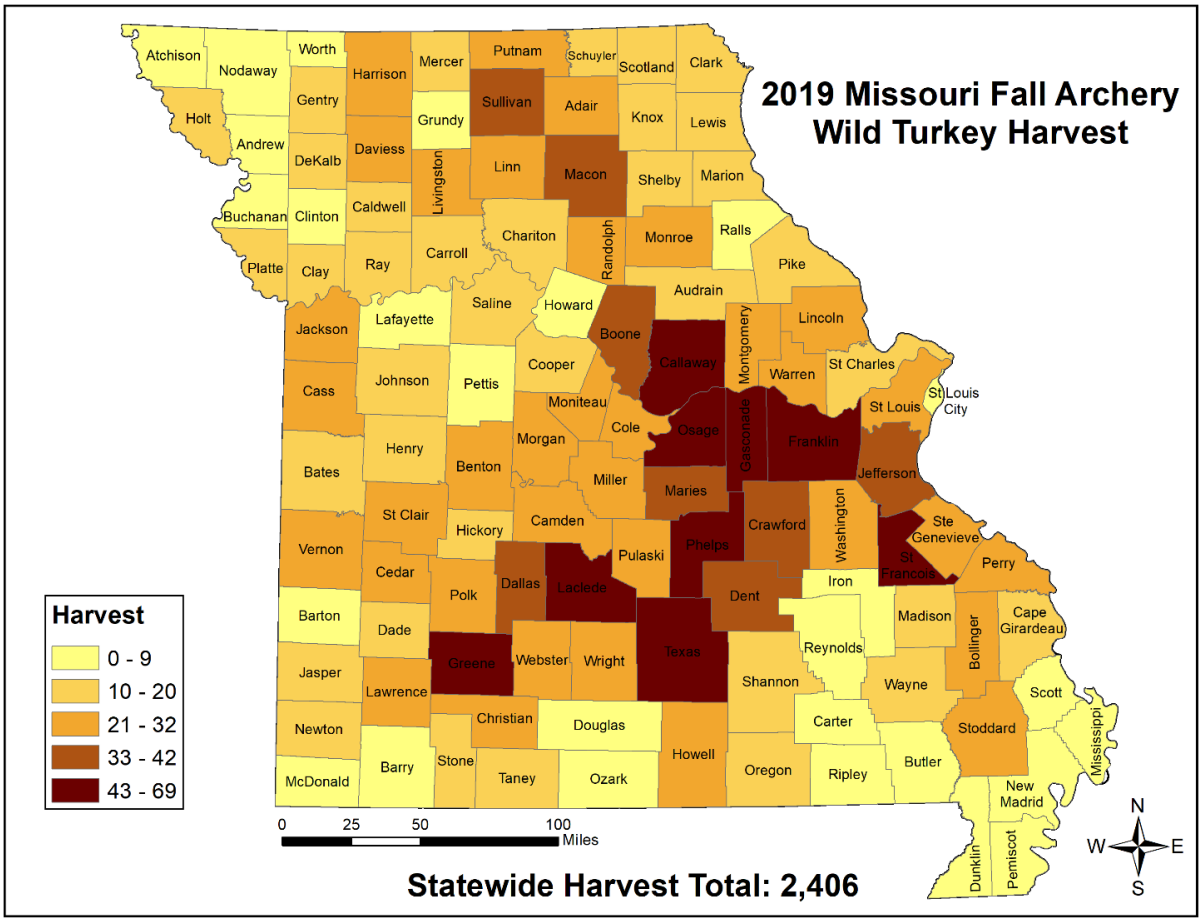


Figure 8. Wild turkey harvest in Missouri during the 2019 fall archery season.

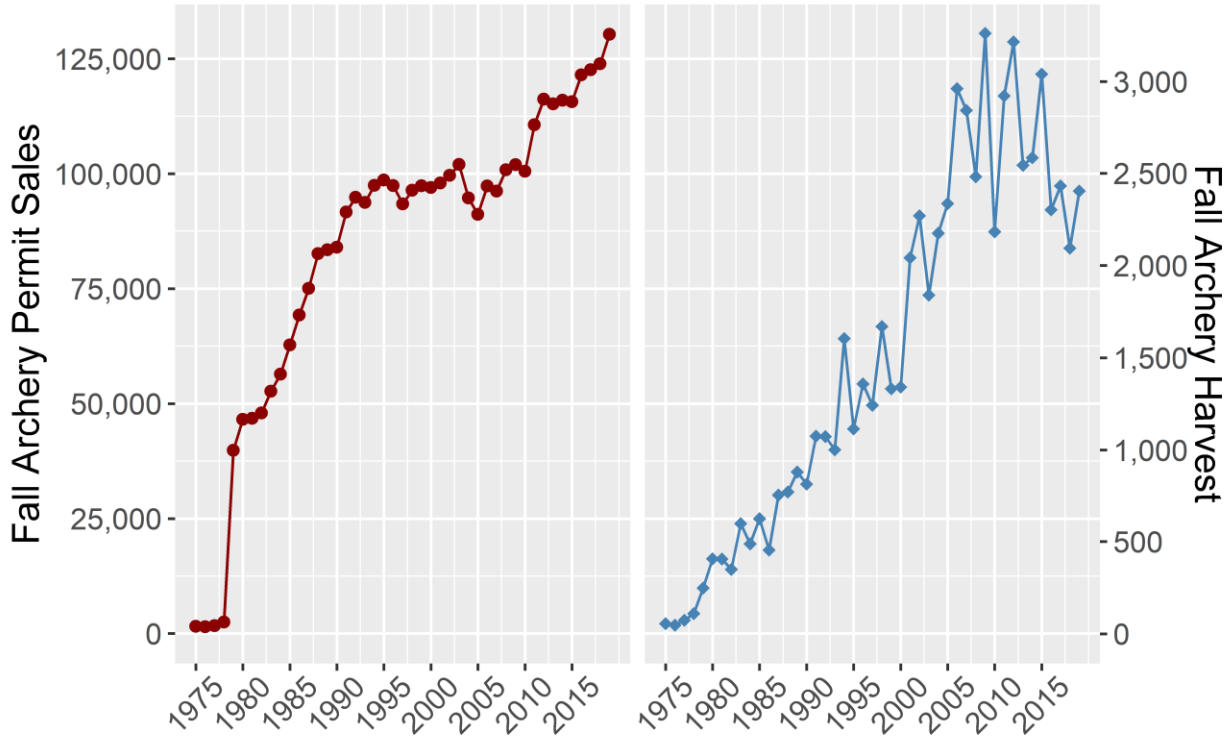


Figure 9. Missouri fall archery permit sales, 1975-2019, compared to fall archery turkey harvest 1975-2019. Permit sales do not include no-cost landowner permits. In 1979, the archery deer and archery turkey permits were combined into one permit.

HUNTING INCIDENTS

There were no hunting incidents during the 2019 spring turkey season. The number of spring turkey hunting incidents in Missouri has declined considerably over the course of the last three decades. During the late 1980s, more than 30 incidents occurred annually for every 100,000 permits sold. During the last five hunting seasons, the average number of incidents per 100,000 permits sold is 1.7 (Figure 10).

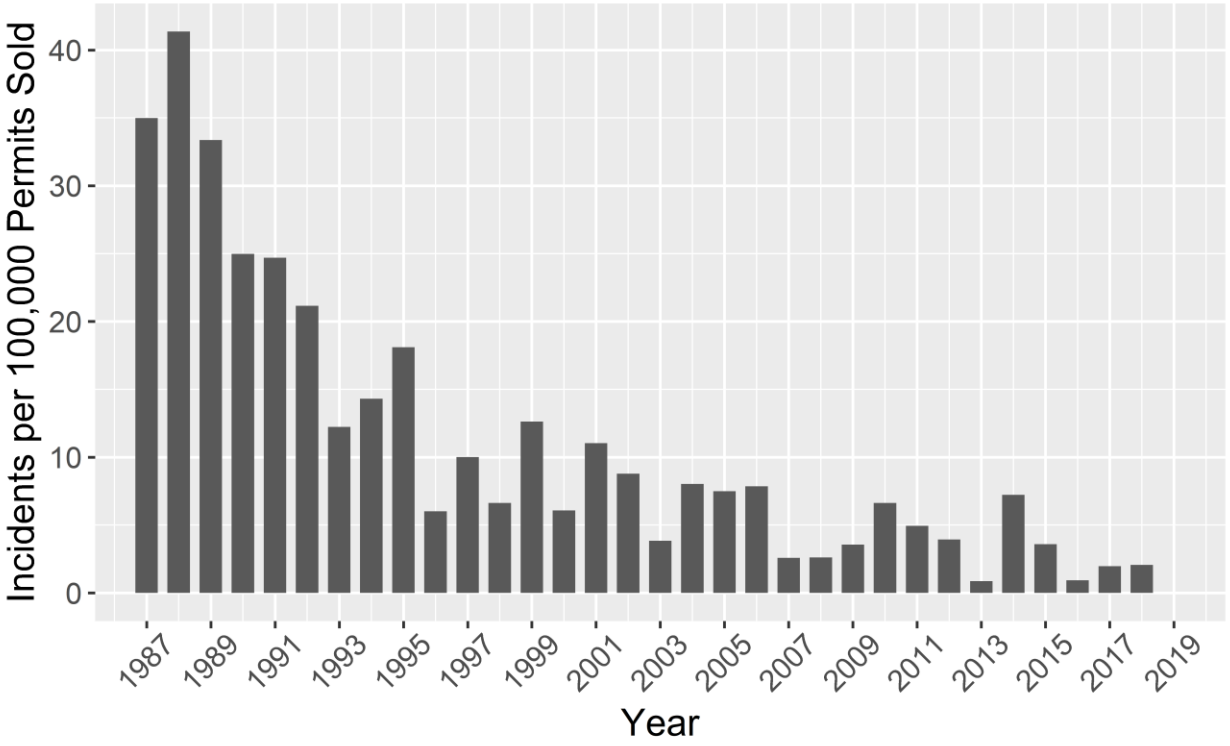


Figure 10. Hunting incidents during the spring turkey season in Missouri per 100,000 permits sold, 1987-2019.

RECENT REGULATION CHANGES

Other than changes to some Conservation Area regulations and managed spring turkey hunts, no turkey hunting regulation changes occurred in 2019.

NORTHEAST MISSOURI WILD TURKEY RESEARCH PROJECT

Introduction

In 2013, the MDC began a five-year wild turkey research project in north Missouri in partnership with the University of Missouri and the University of Washington. The study was conducted in Putnam, Schuyler, Monroe, and Marion Counties. Funding for the project was provided by the MDC and grants from the U.S. Fish and Wildlife Service's Wildlife Restoration Program and the George Clark Missouri State Chapter of the National Wild Turkey Federation. The research project will provide information that will be used by the Conservation Department's Wild Turkey Management Program to monitor the turkey population and assist with making decisions about hunting regulations. The Conservation Department uses a science-based approach to manage the state's wild turkey population and this research project is just one of the many ways that the Department obtains the information used in its program.

The goal of the research project is to develop population models, which will provide annual estimates of turkey population size, survival rates, harvest rates (percentage of the population shot by hunters), recruitment (number of young produced that enter the population), and the growth rate of the turkey population. A computer software program will also be developed to facilitate use of the population models. During the field-based portion of the project, researchers captured, banded, and radio-tagged turkeys throughout the four-county study area. All turkeys were released in the same fields where they are captured. The field-based portion of the research project will provide the Conservation Department with estimates of seasonal and annual survival for adult gobblers, jakes, and hens, as well as harvest rate estimates during the spring and fall hunting seasons.

Fitting wild turkeys with radio-transmitters allowed researchers to track the birds and monitor their survival throughout the year, in addition to identifying the various sources of mortality. Of central importance was determining what percentage of adult gobblers and jakes are harvested during the spring hunting season. To allow harvest rates to be estimated, a toll-free phone number was inscribed on each turkey band. For hunters that shoot a banded turkey, in addition to reporting their bird through the Telecheck Reporting System, the Conservation Department asked that they call the toll-free number on the band. The information gained from band returns is critically important to the success of the project.

In addition to determining the percentage of adult gobblers and jakes that are harvested during the spring hunting season, researchers will also determine the percentage of banded turkeys that are harvested during the fall season. Researchers also monitored hens closely during the nesting and brood-rearing seasons. The study will allow researchers to answer some basic questions about turkey reproduction, including: What proportion of hens attempt to nest each year? What percentage of hens nest successfully? Of those hens that nest successfully, what is the survival rate of their poults? Although previous research projects have shed light on the answers to these questions, brood survey results indicate considerable declines in turkey production since the last turkey research project was conducted in Missouri, and having updated information is important.

Project Summary

Researchers captured nearly 1,700 turkeys during the five winter field seasons including 458 males and 1,218 hens. All males were banded and radio-tagged; 160 hens were banded and radio-tagged, and 1,058 hens were marked only with bands. The following paragraphs provide a summary of project results.

Annual survival rates of radio-tagged hens have ranged from 53-71%. Spring and summer survival rates have ranged from 81-90% and from 75-92%, respectively. Fall and winter survival rates have ranged from 84-97% and from 90-98%, respectively. Annual survival of adult gobblers (27-46%) was lower than that of hens and jakes (69-83%). Spring survival of adult gobblers and jakes has ranged from 56-69% and from 85-94%, respectively. Survival rates of adult gobblers and jakes during summer have ranged from 83-96% and from 91-98%, respectively. During fall, survival rates of adult gobblers and jakes have ranged from 90-94% and from 89-100%, respectively. Lastly, winter survival rates of adult gobblers and jakes have ranged from 89-98% and from 90-96%, respectively.

Predation was the leading cause of death of female turkeys, accounting for 87% of mortalities where cause could be determined (40 of 46 deaths). Predation was also the leading cause of death of jakes. Of the 62 jakes that died where cause could be determined, 36 (58%) were suspected to have been killed by predators. Hunter harvest has been the leading cause of death for adult gobblers, accounting for 58% of mortalities where cause could be determined (94 of 162 deaths). The percentage of adult gobblers harvested during the spring season has ranged from 15-31%. Not surprisingly, the percentage of jakes harvested during the spring season (0-6%) has been considerably lower than that of adult gobblers. Fall harvest rates of radio-tagged male turkeys have ranged from 0–3%. Fall harvest rates of radio-tagged hens have also ranged from 0–3%. With banding data included, the fall harvest rate of hens over the first four years of the project has been about 1%.

Of the hens radio-tracked during the first four years of the project, the median date of initial nest incubation initiation has ranged from May 7th-16th. Most radio-tagged adult hens (69-88%) have initiated incubation of at least one nest, whereas only 20-60% of juvenile hens have initiated incubation. Of the adult hens that failed their initial nesting attempt, 30-60% initiated incubation of a second nest. Renesting rates of juvenile hens have been highly variable, with anywhere form 0-67% of juvenile hens attempting a second nest each year. The percentage of hens that have been successful at hatching poults (female success) has ranged from 17-33%. Female success has been greater for adult hens (19-33%) than for juvenile hens (0-20%). Average first nest clutch size has ranged from 10-12 eggs, respectively. Of the eggs laid in successful nests, the percentage that have hatched has ranged from 82-97%. Poult survival has been highly variable, ranging from 6-47% across the 5-year project.

APPENDIX A.

2019 Missouri spring turkey harvest (youth and regular seasons combined).

County	Adult Males	Juvenile Males	Bearded Hens	Total	Rank[a]
Adair	420	85	3	508	20
Andrew	161	25	1	187	94
Atchison	95	20	0	115	106
Audrain	111	60	5	176	97
Barry	98	37	1	136	101
Barton	233	83	8	324	57
Bates	269	70	8	347	53
Benton	429	86	5	520	19
Bollinger	322	93	8	423	37
Boone	356	96	3	455	30
Buchanan	89	26	1	116	105
Butler	70	21	2	93	109
Caldwell	178	48	2	228	81
Callaway	534	173	12	719	3
Camden	507	96	4	607	9
Cape Girardeau	336	115	6	457	28
Carroll	226	71	2	299	63
Carter	134	12	1	147	100
Cass	316	121	4	441	34
Cedar	360	89	7	456	29
Chariton	207	54	2	263	69
Christian	307	69	6	382	44
Clark	295	37	2	334	54
Clay	95	22	1	118	104
Clinton	83	39	1	123	103
Cole	267	85	4	356	49
Cooper	187	64	2	253	71
Crawford	408	83	4	495	23
Dade	205	71	4	280	66
Dallas	342	102	6	450	31
Daviess	352	86	11	449	32
Dekalb	155	37	0	192	91
Dent	553	78	8	639	6
Douglas	296	81	4	381	45
Dunklin	5	2	0	7	113
Franklin	619	217	11	847	1
Gasconade	422	129	7	558	14
Gentry	153	38	1	192	92
Greene	520	96	5	621	8
Grundy	289	40	4	333	55

County	Adult Males	Juvenile Males	Bearded Hens	Total	Rank[a]
Harrison	383	99	3	485	24
Henry	380	119	5	504	22
Hickory	291	62	4	357	48
Holt	190	31	1	222	84
Howard	243	68	4	315	62
Howell	242	84	3	329	56
Iron	164	36	0	200	89
Jackson	152	69	3	224	83
Jasper	235	81	5	321	58
Jefferson	351	121	5	477	26
Johnson	322	97	1	420	39
Knox	202	36	2	240	75
Laclede	535	150	6	691	4
Lafayette	154	64	1	219	86
Lawrence	313	77	5	395	42
Lewis	189	25	3	217	87
Lincoln	200	86	7	293	64
Linn	349	84	6	439	35
Livingston	338	80	3	421	38
Macon	457	106	5	568	12
Madison	192	54	4	250	73
Maries	434	108	14	556	15
Marion	175	50	1	226	82
McDonald	53	20	1	74	110
Mercer	378	61	5	444	33
Miller	440	131	2	573	10
Mississippi	20	3	0	23	112
Moniteau	281	69	3	353	50
Monroe	305	103	8	416	40
Montgomery	237	103	11	351	51
Morgan	295	79	6	380	46
New Madrid	18	9	0	27	111
Newton	90	31	3	124	102
Nodaway	140	47	3	190	93
Oregon	196	37	0	233	79
Osage	494	145	9	648	5
Ozark	190	38	2	230	80
Pemiscot	2	0	0	2	114
Perry	325	103	4	432	36
Pettis	194	59	3	256	70
Phelps	553	79	6	638	7
Pike	204	75	9	288	65
Platte	139	54	4	197	90

County	Adult Males	Juvenile Males	Bearded Hens	Total	Rank[a]
Polk	405	121	3	529	18
Pulaski	399	74	5	478	25
Putnam	471	94	7	572	11
Ralls	131	50	4	185	96
Randolph	235	78	4	317	61
Ray	136	49	2	187	95
Reynolds	207	26	3	236	78
Ripley	112	50	3	165	98
Saint Charles	180	56	3	239	76
Saint Clair	475	82	7	564	13
Saint Francois	258	59	3	320	59
Saint Louis	68	24	2	94	108
Sainte Genevieve	415	118	5	538	17
Saline	144	91	3	238	77
Schuyler	218	49	1	268	68
Scotland	281	35	2	318	60
Scott	112	33	4	149	99
Shannon	351	41	2	394	43
Shelby	176	42	3	221	85
Stoddard	147	63	2	212	88
Stone	199	44	4	247	74
Sullivan	455	78	7	540	16
Taney	233	39	3	275	67
Texas	673	102	6	781	2
Vernon	383	108	17	508	21
Warren	267	72	9	348	52
Washington	321	50	3	374	47
Wayne	188	62	2	252	72
Webster	300	93	8	401	41
Worth	80	30	0	110	107
Wright	350	110	8	468	27

[a]Rank based on total harvest in Missouri's 114 counties.

APPENDIX B.

2019 Missouri fall turkey harvest (firearms and archery seasons combined).

County	Adult Males	Adult Females	Juvenile Males	Juvenile Females	Total	Rank[a]
Adair	12	9	12	17	50	34
Andrew	4	3	0	1	8	104
Atchison	2	4	1	1	8	106
Audrain	1	13	0	11	25	67
Barry	1	5	0	2	8	107
Barton	3	5	4	5	17	83
Bates	8	5	3	5	21	74
Benton	14	17	4	14	49	35
Bollinger	12	14	10	18	54	28
Boone	19	22	8	17	66	16
Buchanan	2	3	3	2	10	100
Butler	2	2	3	3	10	101
Caldwell	3	7	3	6	19	81
Callaway	29	32	15	22	98	7
Camden	11	11	7	14	43	42
Cape Girardeau	22	17	4	11	54	25
Carroll	6	5	6	6	23	73
Carter	1	3	1	4	9	103
Cass	15	12	8	6	41	46
Cedar	16	17	7	8	48	37
Chariton	7	3	3	2	15	87
Christian	22	17	5	7	51	31
Clark	8	7	4	4	23	71
Clay	4	8	1	2	15	89
Clinton	7	2	3	0	12	96
Cole	11	13	7	12	43	43
Cooper	8	8	4	4	24	69
Crawford	9	35	22	34	100	6
Dade	9	10	2	8	29	58
Dallas	14	25	9	30	78	14
Daviess	14	10	3	14	41	48
Dekalb	0	8	2	9	19	82
Dent	8	29	17	33	87	11
Douglas	5	10	2	10	27	63
Dunklin	0	0	0	0	0	114
Franklin	31	36	15	27	109	3
Gasconade	22	29	21	24	96	9
Gentry	7	1	1	4	13	94
Greene	33	48	16	27	124	1
Grundy	7	2	2	2	13	93

County	Adult Males	Adult Females	Juvenile Males	Juvenile Females	Total	Rank[a]
Harrison	16	19	4	7	46	38
Henry	20	9	5	11	45	39
Hickory	8	10	3	6	27	62
Holt	5	10	5	4	24	70
Howard	7	5	1	2	15	88
Howell	8	21	7	4	40	49
Iron	4	2	3	7	16	86
Jackson	13	17	4	4	38	51
Jasper	14	6	4	3	27	61
Jefferson	17	29	6	11	63	17
Johnson	9	10	3	4	26	65
Knox	3	6	0	6	15	90
Laclede	32	31	12	42	117	2
Lafayette	3	6	2	6	17	84
Lawrence	18	20	0	7	45	40
Lewis	3	3	5	1	12	97
Lincoln	13	13	6	10	42	45
Linn	19	12	4	9	44	41
Livingston	8	10	2	20	40	50
Macon	16	17	8	12	53	30
Madison	2	8	4	15	29	59
Maries	18	24	16	39	97	8
Marion	8	9	1	1	19	79
McDonald	0	1	0	1	2	113
Mercer	14	6	2	4	26	64
Miller	17	13	6	17	53	29
Mississippi	2	0	1	2	5	109
Moniteau	11	9	7	10	37	52
Monroe	14	19	5	16	54	26
Montgomery	20	20	6	12	58	20
Morgan	15	11	4	11	41	47
New Madrid	3	0	0	0	3	111
Newton	9	2	8	0	19	78
Nodaway	3	1	1	3	8	105
Oregon	5	9	2	4	20	76
Osage	24	26	6	27	83	12
Ozark	1	5	3	5	14	92
Pemiscot	1	1	0	0	2	112
Perry	10	19	17	16	62	19
Pettis	3	3	3	3	12	98
Phelps	28	31	19	30	108	4
Pike	7	7	6	8	28	60
Platte	7	7	4	2	20	75

County	Adult Males	Adult Females	Juvenile Males	Juvenile Females	Total	Rank[a]
Polk	19	15	8	15	57	21
Pulaski	15	17	11	19	62	18
Putnam	17	13	5	7	42	44
Ralls	1	4	1	6	12	99
Randolph	15	14	3	4	36	53
Ray	4	8	5	3	20	77
Reynolds	0	7	2	4	13	95
Ripley	2	2	0	1	5	110
Saint Charles	12	6	9	7	34	54
Saint Clair	13	23	8	10	54	27
Saint Francois	16	19	17	44	96	10
Saint Louis	8	13	7	3	31	55
Sainte Genevieve	12	24	14	29	79	13
Saline	2	2	1	9	14	91
Schuyler	17	4	0	3	24	68
Scotland	6	5	2	3	16	85
Scott	1	3	0	2	6	108
Shannon	6	9	4	12	31	56
Shelby	7	4	6	6	23	72
Stoddard	9	21	11	15	56	22
Stone	4	11	2	2	19	80
Sullivan	26	13	6	10	55	24
Taney	2	15	11	3	31	57
Texas	20	30	17	37	104	5
Vernon	15	14	10	11	50	33
Warren	16	16	7	11	50	32
Washington	8	10	8	23	49	36
Wayne	7	5	6	7	25	66
Webster	21	23	11	12	67	15
Worth	2	6	0	1	9	102
Wright	6	15	10	25	56	23

[a]Rank based on total harvest in Missouri's 114 counties.