QUAIL, PHEASANT, & TURKEY BROOD SURVEY – 2025

Performance Report

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QUAIL, PHEASANT, AND TURKEY BROOD SURVEY RESULTS – 2025

Prepared by Jeff Prendergast, Small Game Specialist

INTRODUCTION

The Kansas Department of Wildlife, and Parks (KDWP) collects reproductive data for quail (*Colinus virginianus and Callipepla squamata*), ring-necked pheasant (*Phasianus colchicus*), and wild turkey (*Meleagris gallopavo*) statewide. Northern bobwhites provide nearly all the quail data; however, scaled quail can be found in extreme southwestern Kansas and observations are included in quail estimates (generally < 1% data). Summer brood surveys were initiated in 1986 focusing on pheasant and quail. Turkey data were not collected and reported until 2006 and rabbit and jackrabbits were added in 2024. These summer brood surveys are used to forecast upcoming hunting seasons and to provide consistent monitoring of these important game species. Prairie chickens (greater and lesser; *Tympanuchus* spp.), though recorded opportunistically, cannot be easily assessed using the same methods because they generally do not associate with roads like quail, pheasants, and turkeys.

METHODS

Dates for the 2025 summer brood survey were from July 19 – August 30 (6 weeks). Survey protocol and methodology changed in 2012 to establish permanent brood routes averaging 35 miles (29-49 miles) in 74 randomly selected counties in Kansas (urban counties were removed from the original selection pool). Since the original selection, routes have been added to fill voids where staff has allowed, bringing the current number of routes to 78. Routes were positioned within each county to be representative of the average land cover (rangeland, crop, CRP, etc.) for that county. If public land (e.g., Wildlife Areas) occurred in the county, we attempted to place the route through or adjacent to the property. Routes were sampled 4 times beginning at sunrise, driving the route at a maximum of 25 mph until the entire route was sampled. The 6-week sampling period was separated into 2, 3-week periods where at least 2 samples occurred in each 3-week period. Additionally, observers were asked to have at least one sample completed on a morning with wet vegetation (dew or after a rain the evening/night before). This sampling protocol provides a more stringent standardization of collected data. Indices are reported on a per mile basis (e.g., pheasant/mile, etc.). If a quail or pheasant brood was detected, observers attempted to flush the brood to get the most accurate count of chicks possible. Dogs are permitted to be used to aid in locating chicks. Age of chicks was visually estimated based on aging criteria and recorded in weeks.

Data Analysis

The indices to upland game bird densities were calculated as the mean number of birds observed per mile for each species along routes. Given that observations are recorded on permanently established routes, samples are not independent and thus a paired-sample t-test is used to make inter-annual comparisons. A two-tailed test with an alpha level of 0.10 was used to identify significant differences between years (current vs. previous year). Data was standardized by

reporting counts per mile (e.g., pheasants/mile) for routes and regions. Ratio data (chicks/hen and chicks/brood) can help indicate population productivity, but sample sizes per route are generally limited; as such, ratio data are pooled across each Small Game Region (Figure 1). In considering the brood to hen ratios, broods that are observed without hens are removed to remove bias from the % of hens that successfully hatched broods. While many factors influence these ratios, the broods/hen index is generally an indicator of nest success, while chicks/brood is an indicator of brood survival after hatching. Quail ratio data was reported per adult (male and female) because males also will incubate nests and brood young. Turkey Management Regions (Figure 2) differ from Small Game Regions and data were reported accordingly.

Spatial comparisons were made using an ARC GIS Inverse Weighted Distance technique, which interpolates data across a landscape between known points. Inverse Distance Weighting was used per species by assigning the route-specific index to the centroid of the county sampled. This provides a unique map showing probable densities which are spatially relative. This provides a statewide estimate of upland bird densities but does not account for localized populations and habitats.

RESULTS

Participants sampled all 78 established routes between July 19 and September 3. There were 3 routes that were not able to be completed the 4 runs during the survey period due to weather and associated road conditions (Table1). Results are summarized by Kansas Small Game Regions (Figure 1) or Turkey Regions accordingly (Figure 2).

Pheasants

For 2025, there was a non-significant difference in the statewide roadside index of pheasants (16%) compared to 2024. There was a statistically significant increase in the Smoky Hills, while the South-Central Prairies and Flint Hills also saw some improvement. (Table 2). Pheasants per mile were similar across all 4 of the major primary pheasant regions but was highest in the Southern High Plains, with the highest index in Stevens County (Table 2). No pheasants were detected in the Glaciated plains region again this year, while the Flint Hills region expanded to have detections on 3 routes, up from only 1 route last year. No pheasants were detected in the Osage Cuestas of southeastern Kansas.

Statewide Production indices were similar to slightly improved this year (Table 3). However, the Central regions had very good measures of production. The chicks/hen and broods/hen remained high this year, although brood sizes (chicks/brood) were lower likely due to cool wet conditions during peak hatch (Table 3). There were no broods observed in the Glaciated Plains region. Pheasant hatch peaked statewide in early June but there was a broad peak with several nests hatched between mid-May through June and some hatches continuing into August (Figure 3).

Quail

There was a significant increase in the statewide roadside index of quail (50%) compared to 2024. There were Statistically significant increases in the Southern High Plains (75%) and the Smoky Hills (84%) and non-significant, yet large apparent increases also occurred in the Southcentral prairies (132%) and the Northern High plains (233%). The remaining regions all

saw small non-significant changes (Table 4). As is common with quail, many regional patterns were obscured by large offsetting changes on routes within the regions. Quail densities were greatest in the Southern High Plains and South-central prairies, with the highest index recorded in Kingman County (Table 4). Scaled quail make up a small number of observations and were only recorded on Hamilton and Morton County routes this year.

Statewide nest success (brood/adult) was much improved while other brood sizes were reduced. The Smoky Hills saw the greatest improvement with much improved nest success (e.g. brood/adult) (Table 5). Quail hatch peaked in late June but with a broad peak with several nests hatching between early June through Mid-July (Figure 5).

Turkey

The statewide roadside index of turkey remained similar to 2024. There was a significant regional increase in the southwest region (215%), however the overall densities in the region remain low. The remaining regions all had small non-significant changes from 2024 (Table 6). The Northeast region had the highest regional turkey index with the Northcentral being a close second. (Table 6). Jackson county had the highest roadside index to turkeys this year (Table 6).

Statewide turkey production saw slight declines across all measures this year (Table 7). The Northeast and Southeast regions saw the greatest improvement in regional production this year across all measures (Table 7). Turkey broods saw hatches peak in late May but continue into July (Figure 7). The highest turkey densities will generally be found in northeastern Kansas (Figure 8).

Cottontails and Jackrabbits

Cottontails index trended up in the state this year with increases in every region except the Smoky Hills. The Flint Hills had the highest regional index for rabbits in 2025 although the highest index for a route was Stafford county.

There was no change in the statewide roadside index for jackrabbit this year. Regional indicies in the northern regions increased while the regional indicies for the southern regions decreased. The Southern High Plains had the highest regional index with the highest route index in Morton county.

DISCUSSION

Above average summer rainfall across the high plains in 2024 built on better conditions from 2023 to result in better production for all species in western Kansas last year. Drought recovery was not as good in the central regions in 2024 but was enough to create better conditions coming into 2025. While Kansas was forecasted to be drier and hotter than average in 2025 based on a La Nina cycle, most of the state maintained above average rainfall facilitating better habitat and improved production. Precipitation remained good throughout the summer facilitating a long nesting season with ample habitat and abundant arthropod resources. All this combined for excellent nesting and brooding conditions across the high plains into the central prairies. Below average temperatures paired with the wet conditions during peak pheasant hatch appears to have

reduced chick survival lowering brood sizes. However, with greater nest success and more resnesting attempts this year these smaller brood sizes were offset by greater overall production. Additionally, the active storm season produced several storms with localized flash flooding which may also have localized impacts on brood survival where those storms occurred. Despite much improved precipitation there were 83 counties in the state this year that registered D2 or greater on the drought severity index early in the FY, triggering the release of Emergency use of CRP for forage. So far, the emergency use has not seemed as pervasive, but emergency use is ongoing, and the full extent of this impact won't be realized until later this year.

Pheasants are an important resource to Kansas. Within the last decade, estimated annual harvests have been trending down with the expiration of CRP fields and return of this habitat to traditional agricultural practices and a shift away from small grains toward row crops. With improved pheasant densities in the high plains in 2024, harvest rates and total harvest were increased last year. After good rainfall in 2024 improved habitat and increased production through the high plains last year, conditions were primed for good production this year. The statewide estimate was higher this summer building on last year's gains. This was largely driven by better production in the central regions filling in where they had not recovered in 2024. The High Plains regions remained strong after greatly improving last year, but saw slight declines. While most of the state was well above average on summer precipitation there were a few areas in the high plains that remained below average and pheasant densities declined in response. With improved roadside densities in the central regions, we saw more consistent pheasant densities throughout the primary pheasant range that should facilitate increased harvest in 2025. The Smoky Hills saw large increases and has a similar regional estimate to the Northern and Southern High Plain regions. While the improvements will result in better hunting conditions than we have had in several years, pheasants have been depressed for a number of years, so large improvements in some areas won't neccesarily result in high densities. Quality opportunities should exist across the primary pheasant range this year.

Kansas continues to have one of the strongest quail populations in the country. Recent years have seen improved densities across many of the Great Plains states, including Kansas. This boom was caused by habitat changes associated with recovery from the extreme and expansive drought in the early 2010's. While the benefits of these habitat changes have largely waned, Kansas has maintained above average spring densities compared to the 30 year average. The recent drought conditions and subsequent precipitation have again created conditions that have allowed populations to expereience large increases in some regions. Much of the southern half of our state benefitted from these improved conditions last year. This has expanded now into the northern regions. While the Smoky Hills has not achieved the dramatically high densities that it had coming out of the drought in the 2015-2018 era, it did see major improvements across the region again this year. Heavy rainfall years are typically better for western Kansas and the eastern regions did see some declines, particularly the Osage Cuestas of Southeastern KS. The best increases occurred in the Smoky Hills and South-Central Prairies, but the Southern High Plains saw notable improvement as well. Based on roadside survey estimates, we expect hunters' success rates to increase across much of the western half of the state this year with good hunting also in some portions of the Flint Hills.

After small increases last year, we saw relatively stable indices for turkeys this year. The Southwestern region saw significant increases; however the estimates are always relatively low in this region. There were no significant differences in any of the other regional estimates though. Overall production estimates were down statewide, however the Northeast and Southeast saw generally better measures of production. The current improved indices and better production in some regions is not enough to yet offset the trend that we have seen in recent years with our turkeys struggling to recruit young into the population. Hunting opportunities have become much more restricted as populations have declined for turkeys and there is no fall season in 2025. The northeast region had the highest roadside estimate this year (Figure 8).

Rabbits and Jackrabbits were added to the survey for the first time in 2024 in order to provide standardized data collection that was otherwise lacking. Jackrabbits have become less common in the eastern regions through time and there were no detections throughout the Flint Hills, Glaciated Plains, or Osage Cuestas. The distribution of jackrabbit is primarily held within the Western regions with the highest densities in the Southern High Plains (Figure 10). There was no difference in the statewide index to Jackrabbits in 2025. Cottontail Rabbits can be found across the state. Cottontails exist at high density across the state where the appropriate habitat exists. Cottontails have a more even distribution in eastern regions where the habitat availability is more consistent across the landscape (Figure 9). Cottontails respond to similar habitat types as quail and as such tend to respond in similar ways when habitat is good. As such densities tended to improve across most regions this this. The highest regional index was in the Flint Hills with the several counties in the southern Flint Hills having the highest route indices.

Table 1. Upland game bird brood routes and observers in Kansas, 2025.

Route	Observer	Replicates	Route	Observer	Replicates
Allen	Justin Harbit	4	Logan	Leonard Hopper	4
Atchison	Tim Urban	4	Marion	Jeff Rue	4
Barber	Jake George	4	Marshall	Megan Smith	4
Barton	Jeff Prendergast	4	Meade	Aaron Baugh	4
Bourbon	Justin Harbit	4	Miami	Andy Friesen	5
Brown	Tyler Warner	4	Mitchell	Connor Rolen	4
Butler	Tyler Burt	4	Montgomery	Ryan Lies	4
Cherokee	David Jenkins	4	Morris	Brent Konen	4
Cheyenne	Abby McGuire	4	Morton	Kraig Schultz	4
Cloud	Matt Farmer	4	Neosho	Logan Martin	4
Coffey	Matt Peek	4	Ness	Andy Nelson	4
Comanche	Matt Hanvey	4	Norton	Eric Wiens	4
Cowley	Kurt Grimm	4	Osage	Alex Lyon	4
Decatur	Daniel Howard	4	Osborne	Chris Lecuyer	4
Dickinson	Clint Thornton	4	Pawnee	Kevin Wood	4
Doniphan	Melissa Skelton	4	Phillips	Eric Wiens	4
Elk	Viki Cikanek	4	Pottawatomie	Ben Couchman	4
Ellis	Luke Kramer	4	Pratt	Wes Sowards	4
Finney	Jared King	4	Rawlins	Kevin Klag	4
Ford	Jeff Sutton	3	Reno	Keith Murrow	4
Franklin	Ryan Tewllman	4	Republic	Rob Unruh	4
Geary	Justin Counts	4	Rice	Steve Adams	3
Gove	Matt Schmidt	4	Rooks	Mark Shaw	4
Graham	Jake Brooke	4	Rush	Jason Wagner	4
Gray	Jared King	4	Russell	James Svaty	4
Greeley	Kurt Meier	4	Saline	Pat Riese	4
Greenwood	Caleb Durbin	4	Scott	Camdon Sweet	4
Hamilton	Kurt Meier	4	Seward	Jason Vajnar	4
Harvey	Charlie Cope	4	Sheridan	Kevin Klag	4
Haskell	Kelly Lazar	6	Sherman	Abby McGuire	4
Hodgeman	Dan Haneke	4	Smith	Kirk Andrews	4
Jackson	Tyler Warner	4	Stafford	Jacob Christiansen	4
Jefferson	Brad Rueschoff	4	Stanton	Kraig Schultz	4
Jewell	Brandon Tritch	4	Stevens	Kraig Schultz	4
Kearney	Zerick Kuecker	4	Thomas	Kevin Klag	4
Kingman	Troy Smith	4	Trego	Cale Hedges	4
Kiowa	Jacob Christiansen	4	Wabaunsee	Kyle Abrahamson	4
Labette	Rob Roggin	4	Wallace	Abby McGuire	4
Lane	Jared King	3	Wilson	Cassie Wells	4

Table 2. Annual regional changes in mean pheasants per mile (P/M), 2025.

Route	2024 P/M	2025 P/M	% Δ
	Flint Hills		
Butler	0.00	0.00	NE
Cowley	0.00	0.01	NE
Dickinson	0.26	0.48	81
Elk	0.00	0.00	NE
Geary	0.00	0.00	NE
Greenwood	0.00	0.00	NE
Marion	0.00	0.00	NE
Morris	0.00	0.00	NE
Pottawatomie	0.00	0.01	NE
Wabaunsee	0.00	0.00	NE
Region	**0.03**	**0.05**	**86**
	Glaciated Plains		
Atchison	0.00	0.00	NE
Brown	0.00	0.00	NE
Doniphan	0.00	0.00	NE
Jackson	0.00	0.00	NE
Jefferson	0.00	0.00	NE
Marshall	0.00	0.00	NE
Region	**0.00**	**0.00**	**0**
	Smoky Hills		
Barton	0.17	0.62	271
Cloud	0.33	0.19	-44
Ellis	0.18	0.72	307
Hodgeman	0.24	0.08	-66
Jewell	0.28	0.03	-90
Mitchell	0.03	0.38	1200
Ness	0.02	0.56	2433
Osborne	0.11	0.05	-50
Phillips	0.08	0.00	-100
Republic	0.06	0.01	-88
Rice	0.39	0.47	21
Rooks	0.12	1.00	710
Rush	0.38	0.27	-28
Russell	0.09	0.39	321
Saline	0.00	0.00	0
Smith	0.02	0.14	817
Trego	0.19	0.45	142
Region	**0.16**	**0.32**	**100***

Route	2024 P/M	2025 P/M	% Δ
	Northern High Plains		
Cheyenne	0.88	0.22	-75
Decatur	0.38	0.21	-43
Gove[a]	0.16	0.12	-29
Graham	0.20	0.36	74
Greeley	1.03	0.77	-26
Lane	0.04	0.45	922
Logan	0.18	0.16	-13
Norton	0.21	0.05	-76
Rawlins	0.58	0.31	-47
Scott	1.01	1.04	3
Sheridan	0.17	0.38	123
Sherman	0.20	0.33	63
Thomas	0.00	0.25	NE
Wallace	0.11	0.01	-94
Region	**0.37**	**0.33**	**-10**
	South-Central Prairies		
Barber	0.07	0.21	182
Comanche	0.01	0.01	0
Harvey	0.04	0.05	17
Kingman	0.14	0.01	-90
Kiowa	0.16	0.27	73
Pawnee	0.71	1.11	58
Pratt	0.16	0.13	-18
Reno	0.01	0.00	-100
Stafford	0.13	0.05	-60
Region	**0.16**	**0.21**	**30**
	Southern High Plains		
Finney	0.18	0.09	-52
Ford	0.08	0.13	54
Gray	0.07	0.63	750
Hamilton	0.87	0.23	-74
Haskell	0.05	0.08	60
Kearny	0.21	0.21	0
Meade	0.01	0.29	4525
Morton	0.85	0.99	17
Seward	0.20	0.48	146
Stanton	0.07	0.05	-30
Stevens	1.69	0.50	-70
Region	**0.39**	**0.33**	**-14**
Statewide	**0.21**	**0.24**	**16**

* = Significant difference ($p < 0.1$)

**The Osage Cuestas region is outside of the pheasant range and is removed for analysis.

[a]Route was not sampled in consecutive years and wasn't included in regional or statewide comparisions

Table 3. Annual regional changes in pheasant chicks per hen (C/H), chicks per brood (C/B), and broods per hen (B/H), 2025.

Region	2024C/H	2025C/H	%Δ	2024 C/B	2025 C/B	%Δ	2024 B/H	2025 B/H	%Δ
Flint Hills	4.7	7.3	55	4.7	7.3	55	1.0	1.0	0
Glaciated Plains	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0
Northern High Plains	10.9	7.4	-32	5.6	4.8	-14	0.7	0.7	-11
Osage Cuestas	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0
Smoky Hills	5.6	9.7	75	5.2	5.0	-5	0.6	0.9	39
South-Central Prairies	4.1	5.8	42	4.8	5.0	5	0.6	0.5	-11
Southern High Plains	6.7	6.7	1	4.6	4.0	-15	0.8	0.8	1
Statewide	7.0	7.6	8	5.1	4.7	-8	0.7	0.8	5

Table 4. Annual regional changes in mean quail per mile (Q/M), 2025.

Route	2024 Q/M	2025 Q/M	% Δ
	Flint Hills		
Butler	0.68	0.48	-30
Cowley	0.16	0.38	132
Dickinson	0.16	0.19	23
Elk	0.44	0.69	57
Geary	0.10	0.18	73
Greenwood	0.28	0.40	40
Marion	0.26	0.01	-97
Morris	0.04	0.00	-100
Pottawatomie	0.01	0.01	0
Wabaunsee	0.06	0.01	-75
Region	**0.22**	**0.23**	**7**
	Glaciated Plains		
Atchison	0.04	0.06	33
Brown	0.13	0.08	-39
Doniphan	0.04	0.07	67
Jackson	0.24	0.14	-42
Jefferson	0.02	0.07	350
Marshall	0.01	0.15	950
Region	**0.08**	**0.10**	**16**
	Northern High Plains		
Cheyenne	0.00	0.00	NE
Decatur	0.28	0.08	-71
Gove	0.00	0.01	NE
Graham	0.33	0.37	11
Greeley	0.00	0.00	NE
Lane	0.00	0.00	NE
Logan	0.00	0.01	NE
Norton	0.13	0.05	-59
Rawlins	0.00	0.10	NE
Scott	0.01	0.02	100
Sheridan	0.23	0.01	-97
Sherman	0.00	0.00	NE
Thomas	0.00	0.00	NE
Wallace	0.00	0.00	NE
Region	**0.01**	**0.05**	**233**
	South-Central Prairies		
Barber	0.53	0.24	-55
Comanche	0.14	0.30	110
Harvey	0.00	0.01	NE
Kingman	0.24	1.41	500
Kiowa	0.19	0.59	207
Pawnee	0.06	0.21	263
Pratt	0.03	0.19	550
Reno	0.09	0.21	142
Stafford	0.04	0.22	450
Region	**0.16**	**0.37**	**132**

Route	2024 Q/M	2025 Q/M	% Δ
	Smoky Hills		
Barton	0.23	0.37	61
Cloud	0.18	0.75	314
Ellis	0.18	0.09	-50
Hodgeman	0.35	0.14	-61
Jewell	0.07	0.14	100
Mitchell	0.09	0.09	0
Ness	0.01	0.07	800
Osborne	0.01	0.18	2600
Phillips	0.05	0.20	286
Republic	0.06	0.11	88
Rice	0.17	0.26	50
Rooks	0.01	0.24	4025
Rush	0.16	0.28	70
Russell	0.08	0.23	192
Saline	0.02	0.00	-100
Smith	0.10	0.35	268
Trego	0.14	0.02	-89
Region	**0.11**	**0.21**	**84***
	Southern High Plains		
Finney	0.14	0.03	-79
Ford	0.03	0.08	140
Gray	0.11	0.07	-40
Hamilton	0.66	0.96	47
Haskell	0.00	0.01	200
Kearny	0.00	0.00	NE
Meade	0.29	0.27	-10
Morton	0.72	1.17	64
Seward	0.03	0.40	1225
Stanton	0.14	0.10	-30
Stevens	0.25	1.07	329
Region	**0.22**	**0.38**	**75***
	Osage Cuestas		
Allen	0.03	0.03	25
Bourbon	0.10	0.11	7
Cherokee	0.06	0.05	-25
Coffey	0.09	0.25	182
Franklin	0.00	0.03	NE
Labette	0.01	0.02	200
Miami	0.00	0.00	NE
Montgomery	0.34	0.18	-45
Neosho	0.24	0.04	-83
Osage	0.07	0.09	30
Wilson	0.15	0.06	-62
Region	**0.10**	**0.08**	**-21**
Statewide	**0.13**	**0.20**	**50***

*Values are significant at a $P < 0.10$.

NA = Data Not availiable

NE = Not estimable

Table 5. Annual regional changes in quail chick per adult (C/A), chicks per brood (C/B), and broods/adult, 2025.

Region	2024 C/A	2025 C/A	%Δ	2024 C/B	2025 C/B	%Δ	2024 B/A	2025 B/A	%Δ
Flint Hills	1.9	1.3	-33	8.6	7.4	-14	0.21	0.15	-28
Glaciated Plains	1.0	0.8	-19	8.3	8.8	6	0.09	0.05	-49
Northern High Plains	15.3	1.6	-89	13.6	10.6	-22	0.50	0.15	-70
Osage Cuestas	1.5	0.6	-58	7.5	6.4	-14	0.17	0.07	-59
Smoky Hills	2.2	2.6	19	8.6	8.3	-4	0.12	0.25	107
South-Central Prairies	2.3	2.1	-7	11.0	9.5	-13	0.07	0.19	174
Southern High Plains	5.6	3.4	-40	10.6	9.1	-14	0.22	0.27	25
Statewide	2.6	2.0	-23	9.6	8.7	-10	0.09	0.19	109

Table 6. Annual regional changes in mean turkey per mile (T/M), 2025

Route	2024 T/M	2025 T/M	[a]% Δ	Route	2024 T/M	2025 T/M	% Δ
	Northeast				Northcentral		
Atchison	0.00	0.00	0	Barton	0.05	0.00	-100
Brown	0.06	0.01	-88	Cloud	0.06	0.05	-13
Dickinson	0.01	0.09	1100	Ellis	0.09	0.39	329
Doniphan	0.00	0.04	NE	Jewell	0.28	0.29	3
Franklin	0.17	0.24	38	Mitchell	0.17	0.00	-100
Geary	0.41	0.82	100	Osborne	0.40	0.82	105
Jackson	0.93	1.13	22	Phillips	0.01	0.00	-100
Jefferson	0.19	0.11	-44	Republic	0.17	0.04	-77
Marshall	0.32	0.24	-27	Rooks	0.00	0.00	0
Morris	0.41	0.32	-21	Rush	0.27	0.14	-47
Osage	0.41	0.19	-54	Russell	0.01	0.64	4750
Pottawatomie	0.25	0.37	49	Saline	0.31	0.91	194
Wabaunsee	0.01	0.08	450	Smith	0.52	0.21	-59
Region	**0.24**	**0.28**	**14**	**Region**	**0.18**	**0.27**	**50**
	Northwest				Southcentral		
Cheyenne	0.49	0.24	-51	Barber	0.07	0.00	-100
Decatur	0.07	0.28	322	Comanche	0.00	0.00	0
Graham	0.00	0.00	0	Harvey	0.33	0.28	-13
Norton	0.05	0.11	114	Kingman	0.14	0.00	-100
Rawlins	0.10	0.30	200	Kiowa	0.16	0.04	-78
Sheridan	0.00	0.00	0	Meade	0.00	0.06	NE
Sherman	0.00	0.00	0	Pawnee	0.00	0.00	0
Thomas	0.00	0.00	0	Pratt	0.09	0.00	-100
Region	**0.09**	**0.12**	**32**	Reno	0.71	1.09	53
	Southwest			Rice	0.36	0.14	-61
Finney	0.06	0.14	138	Stafford	0.44	0.42	-4
Ford	0.00	0.00	0	**Region**	**0.21**	**0.18**	**-12**
Gove	0.00	0.03	NE		Southeast		
Gray	0.00	0.00	0	Allen	0.05	0.04	-14
Greeley	0.00	0.00	0	Bourbon	0.01	0.20	1400
Hamilton	0.00	0.00	0	Butler	0.89	0.04	-95
Haskell	0.00	0.00	0	Cherokee	0.00	0.31	NE
Hodgeman	0.00	0.00	0	Coffey	0.04	0.13	220
Kearny	0.00	0.00	0	Cowley	0.17	0.36	113
Lane	0.00	0.00	0	Elk	0.30	0.58	94
Logan	0.05	0.18	243	Greenwood	0.80	0.17	-79
Morton	0.00	0.00	0	Labette	0.28	0.36	31
Ness	0.00	0.11	NE	Marion	0.18	0.12	-35
Scott	0.00	0.00	0	Miami	0.55	0.46	-16
Seward	0.00	0.00	0	Montgomery	0.03	0.05	67
Stanton	0.00	0.00	0	Neosho	0.03	0.10	217
Stevens	0.00	0.00	0	Wilson	0.13	0.15	17
Trego	0.00	0.06	NE	**Region**	**0.25**	**0.22**	**-11**
Wallace	0.06	0.00	0				
Region	**0.01**	**0.03**	**215***	**Statewide**	**0.16**	**0.18**	**13**

*Values are significant at a $P < 0.10$.

NA = Data Not Available

NE = Not estimable

Table 7. Annual regional changes in turkey poults per hen (P/H), poults per brood (P/B), and broods per hen (B/H), 2025.

Region	2024 P/H	2025 P/H	%Δ	2024 P/B	2025 P/B	%Δ	2024 B/H	2025 B/H	%Δ
Northcentral	2.1	1.0	-49	5.7	4.9	-14	0.36	0.21	-41
Northeast	1.6	1.9	17	6.3	6.2	-1	0.25	0.27	10
Northwest	3.0	3.2	8	4.3	7.1	64	0.62	0.36	-41
Southcentral	3.3	2.5	-24	5.9	4.0	-32	0.53	0.57	6
Southeast	1.5	1.9	23	4.6	5.5	22	0.33	0.34	1
Southwest	0.9	1.4	56	3.5	6.5	86	0.25	0.11	-58
Statewide	1.9	1.7	-13	5.5	5.4	-1	0.35	0.29	-16

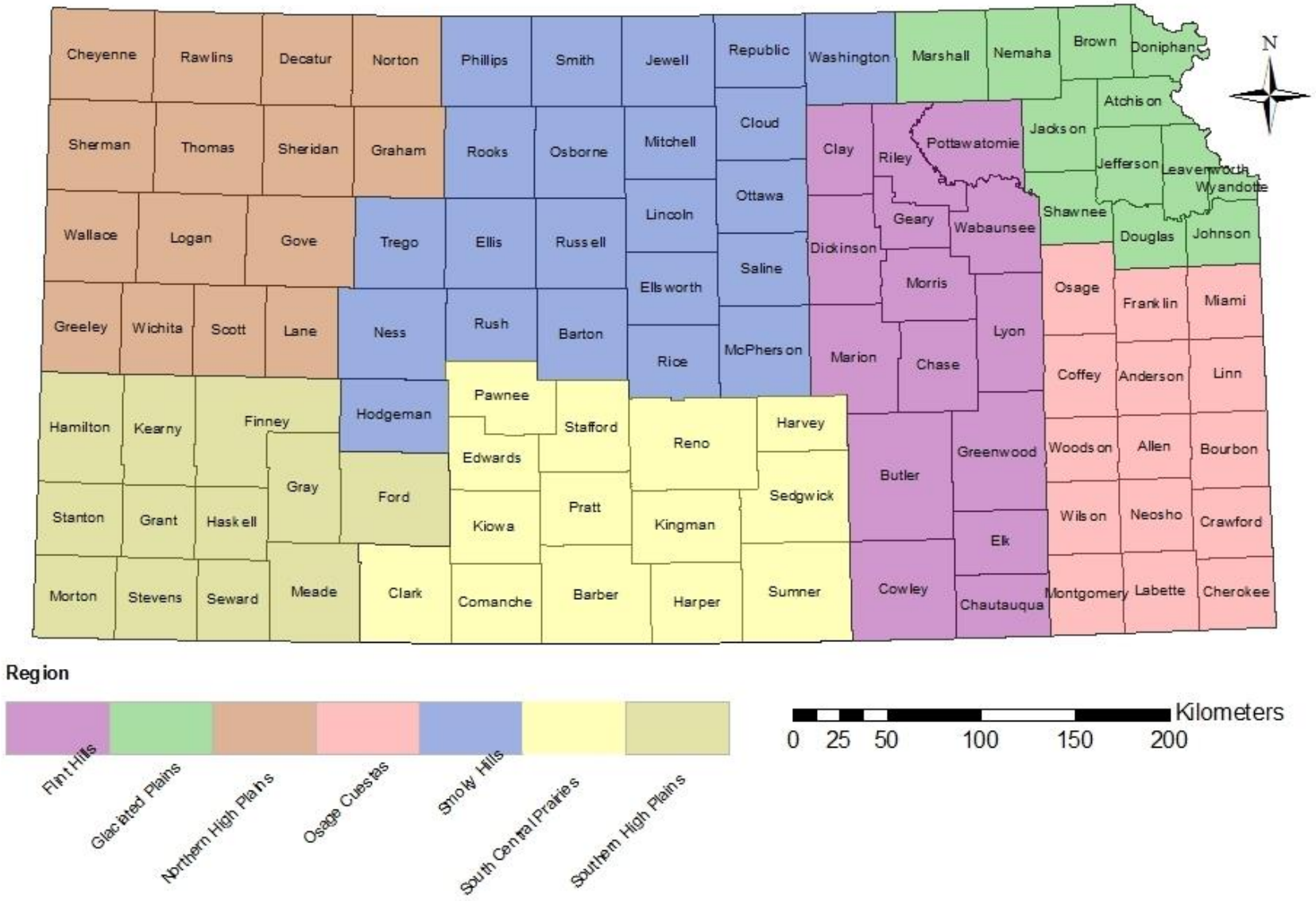

Figure 1. Kansas Small Game Regions.

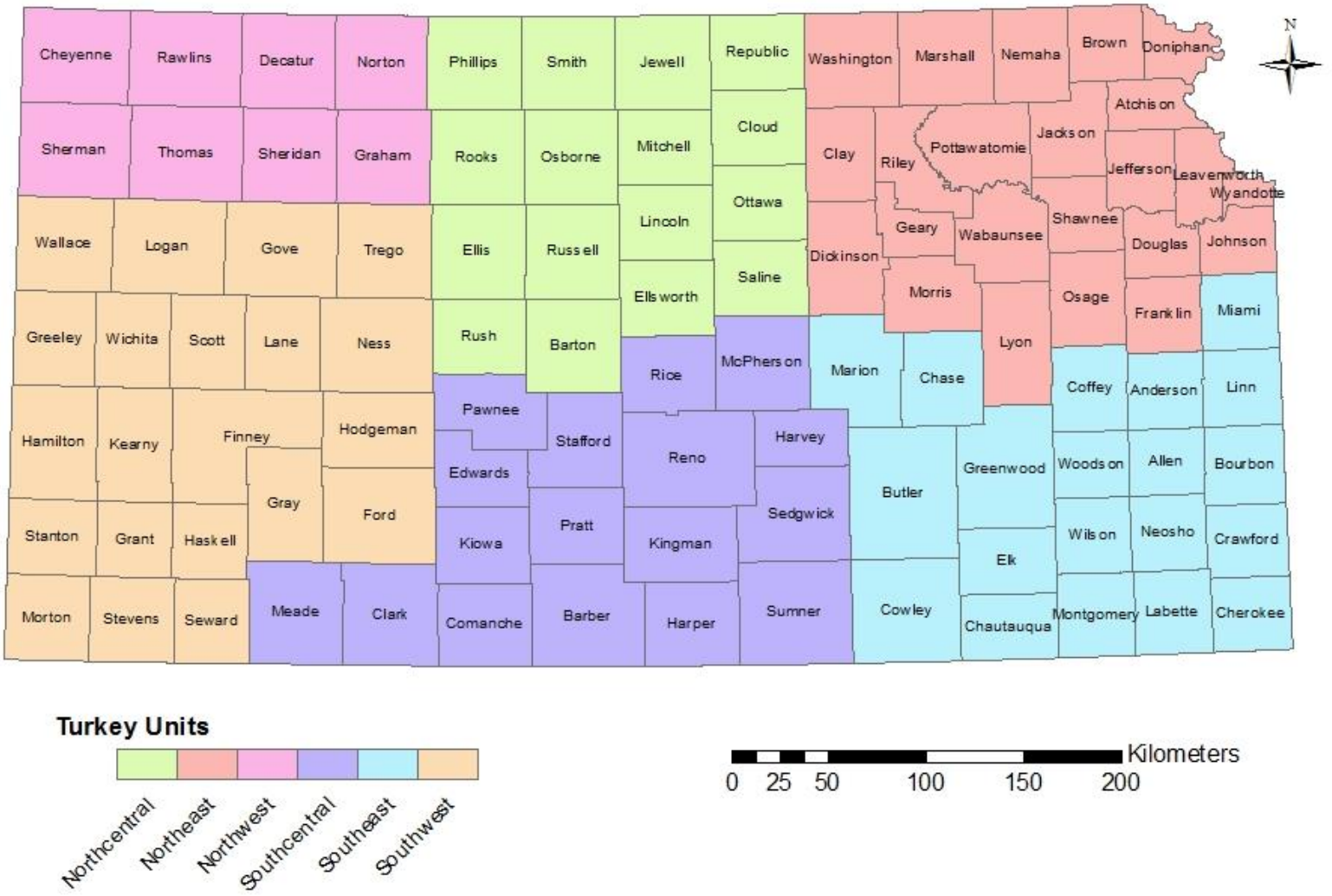

Figure 2. Kansas Turkey Management Regions.

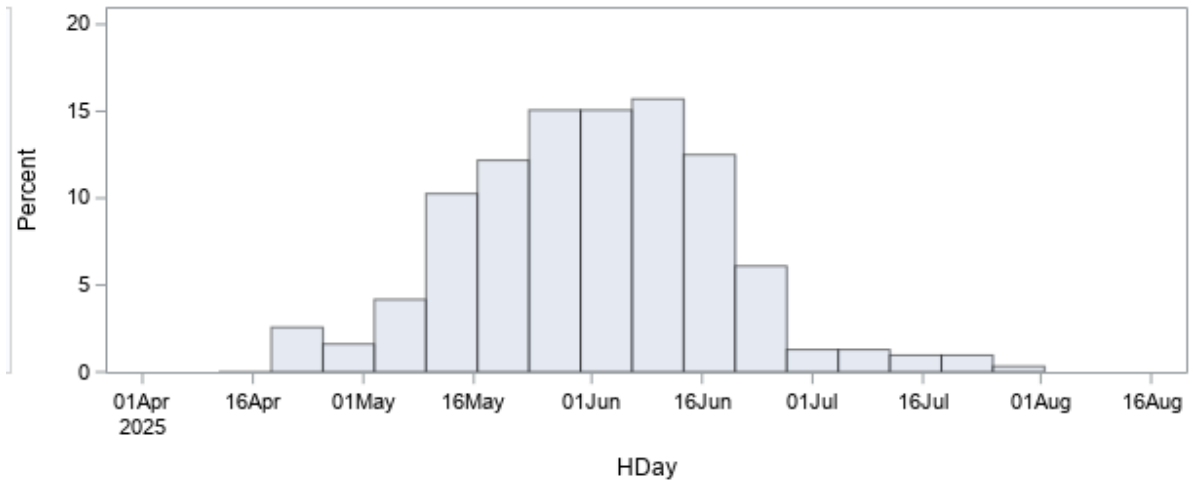

Figure 3. Weekly hatch dates of pheasant broods estimated from age at detection.

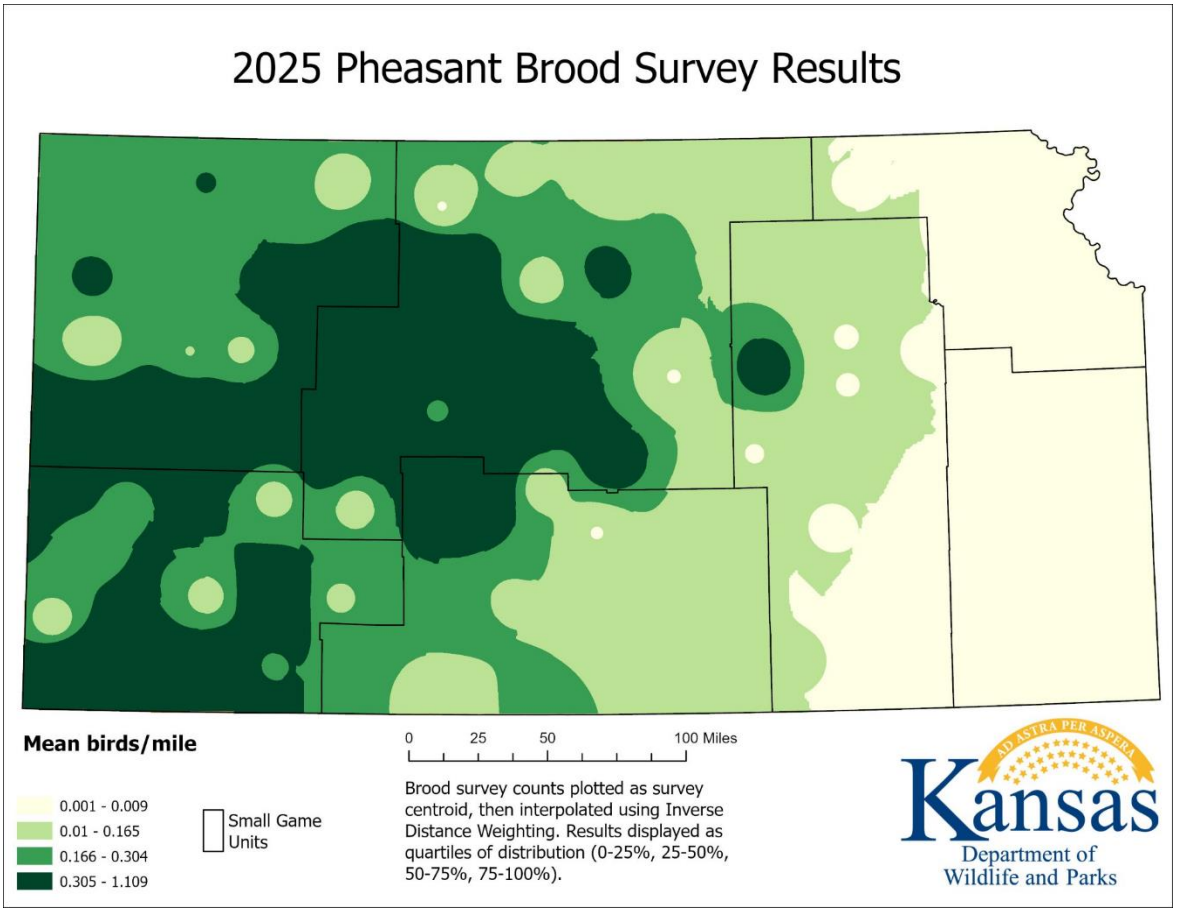

Figure 4. Relative pheasant densities estimated from brood survey routes in Kansas, 2025.

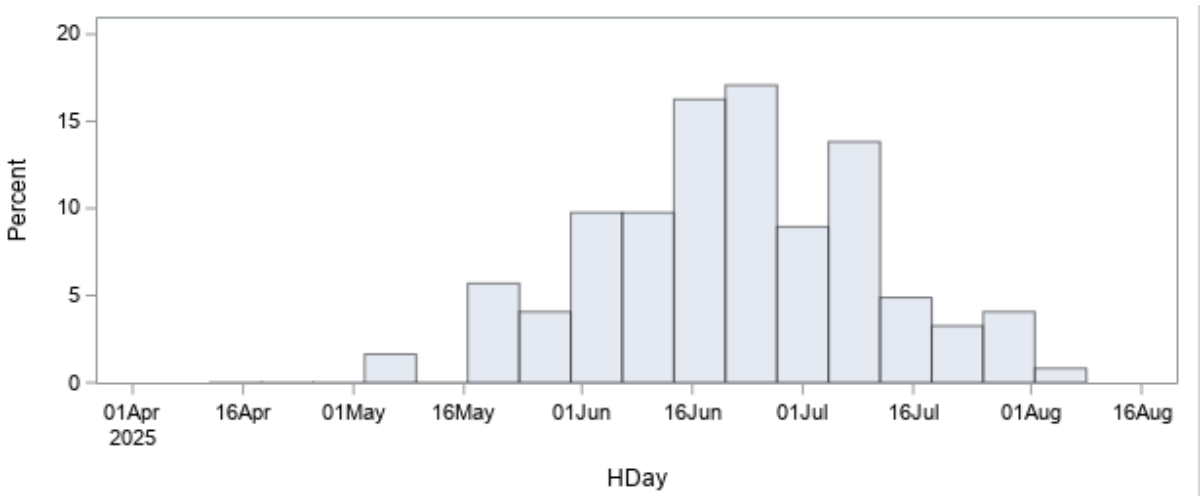

Figure 5. Weekly hatch dates of quail broods estimated from age at detection.

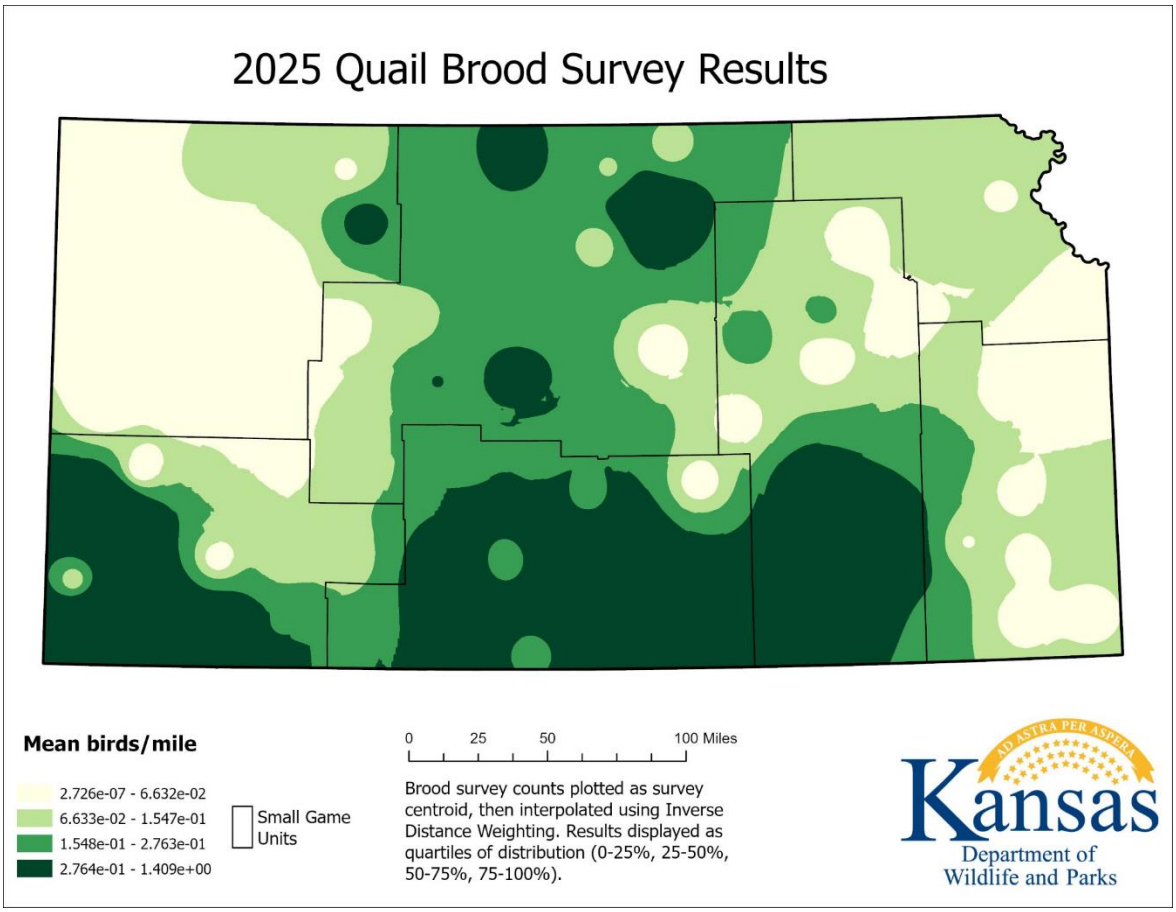

Figure 6. Relative quail densities estimated from brood survey routes in Kansas, 2025.

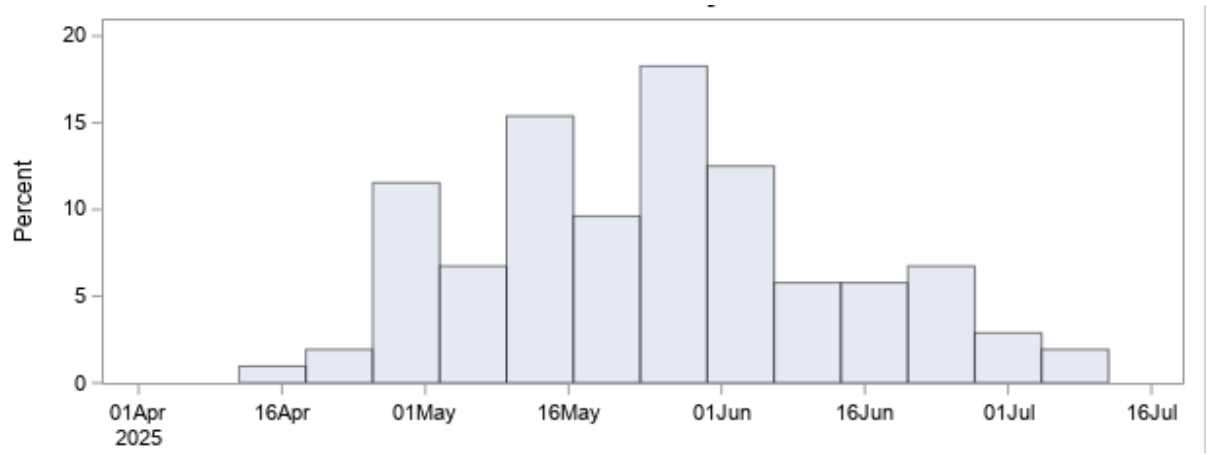

Figure 7. Weekly hatch dates of turkey broods estimated from age at detection.

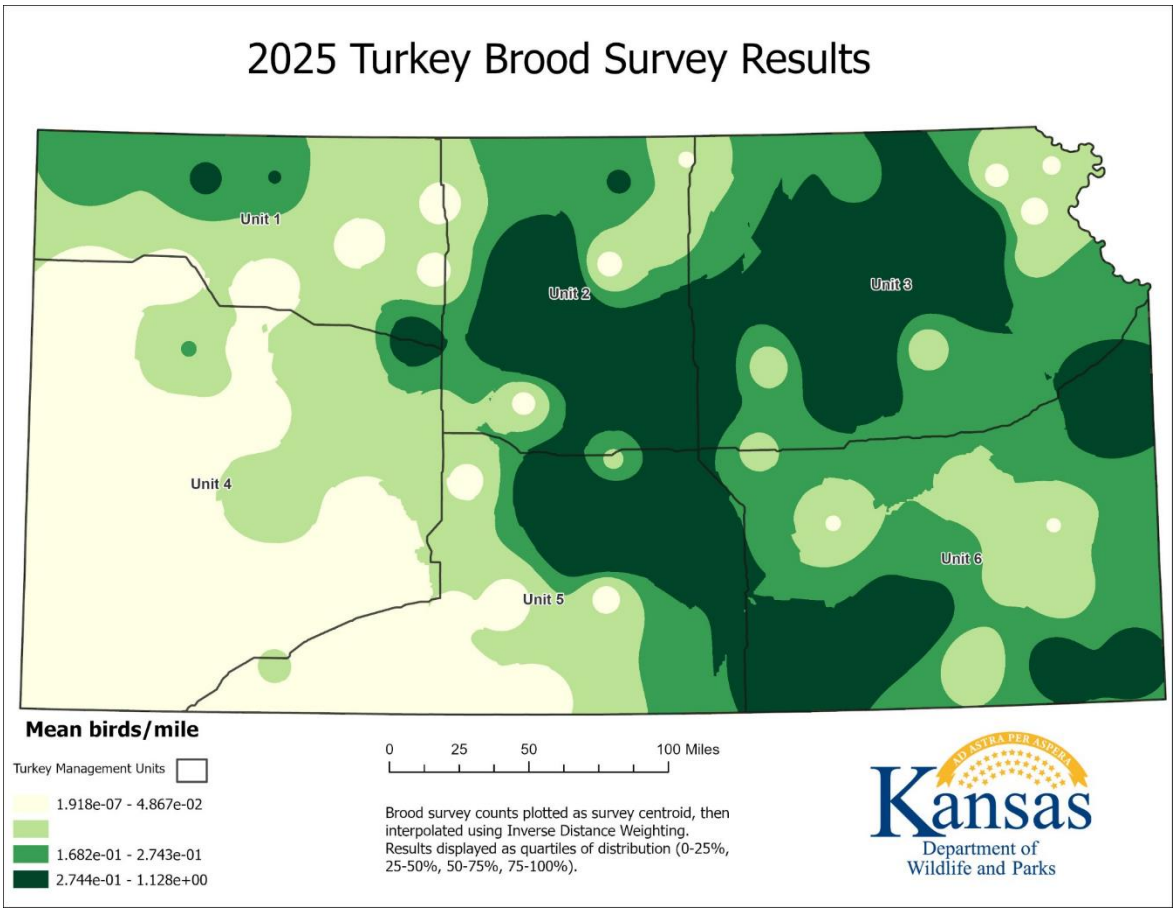

Figure 8. Relative turkey densities estimated from brood survey routes in Kansas, 2025.

Table 8. Annual regional changes in mean rabbit per mile (R/M), 2025.

Route	2024 R/M	2025 R/M	% Δ
	Flint Hills		
Butler	0.065	0.089	38
Cowley	0.103	0.213	107
Dickinson	0.014	0.021	50
Elk	0.071	0.295	318
Geary	0.088	0.088	0
Greenwood	0.027	0.236	775
Marion	0.049	0.007	-86
Morris	0.015	0.015	0
Pottawatomie	0.020	0.007	-67
Wabaunsee	0.107	0.043	-60
Region	**0.056**	**0.101**	**82**
	Glaciated Plains		
Atchison	0.029	0.059	100
Brown	0.000	0.044	NE
Doniphan	0.000	0.015	NE
Jackson	0.101	0.101	0
Jefferson	0.068	0.068	0
Marshall	0.064	0.043	-33
Region	**0.044**	**0.055**	**25**
	Northern High Plains		
Cheyenne	0.021	0.035	67
Decatur	0.000	0.066	NE
Gove	0.133	0.016	-88
Graham	0.000	0.000	0
Greeley	0.063	0.014	-78
Lane	0.000	0.000	0
Logan	0.008	0.008	0
Norton	0.088	0.000	-100
Rawlins	0.050	0.021	-57
Scott	0.091	0.038	-58
Sheridan	0.023	0.078	233
Sherman	0.008	0.045	500
Thomas	0.008	0.172	2100
Wallace	0.000	0.021	NE
Region	**0.035**	**0.037**	**4**
	South-Central Prairies		
Barber	0.095	0.068	-29
Comanche	0.014	0.000	-100
Harvey	0.014	0.007	-50
Kingman	0.036	0.036	0
Kiowa	0.036	0.050	40
Pawnee	0.007	0.021	200
Pratt	0.000	0.007	NE
Reno	0.051	0.093	81
Stafford	0.066	0.329	400
Region	**0.035**	**0.068**	**92**
	Smoky Hills		
Barton	0.118	0.132	12
Cloud	0.010	0.093	875
Ellis	0.053	0.053	0
Hodgeman	0.014	0.014	0
Jewell	0.093	0.043	-54
Mitchell	0.051	0.000	-100
Ness	0.118	0.081	-31
Osborne	0.047	0.027	-43
Phillips	0.022	0.044	100
Republic	0.000	0.000	0
Rice	0.064	NA	NA
Rooks	0.059	0.000	-100
Rush	0.043	0.093	117
Russell	0.033	0.092	180
Saline	0.034	0.009	-75
Smith	0.050	0.000	-100
Trego	0.086	0.000	-100
Region	**0.053**	**0.040**	**-24**
	Southern High Plains		
Finney	0.014	0.000	-100
Ford	0.000	0.000	0
Gray	0.007	0.015	100
Hamilton	0.050	0.029	-43
Haskell	0.024	0.057	140
Kearny	0.000	0.000	0
Meade	0.019	0.031	67
Morton	0.104	0.118	13
Seward	0.045	0.152	233
Stanton	0.000	0.007	NE
Stevens	0.136	0.121	-11
Region	**0.036**	**0.048**	**33**
	Osage Cuestas		
Allen	0.028	0.000	-100
Bourbon	0.079	0.000	-100
Cherokee	0.040	0.129	220
Coffey	0.048	0.048	0
Franklin	0.007	0.000	-100
Labette	0.017	0.051	200
Miami	0.069	0.069	0
Montgomery	0.054	0.033	-40
Neosho	0.066	0.286	331
Osage	0.171	0.050	-71
Wilson	0.229	0.214	-6
Region	**0.074**	**0.078**	**6**
Statewide	**0.048**	**0.058**	**22**

*Values are significant at a $P < 0.10$.

NA = Data Not availiable

NE = Not estimable

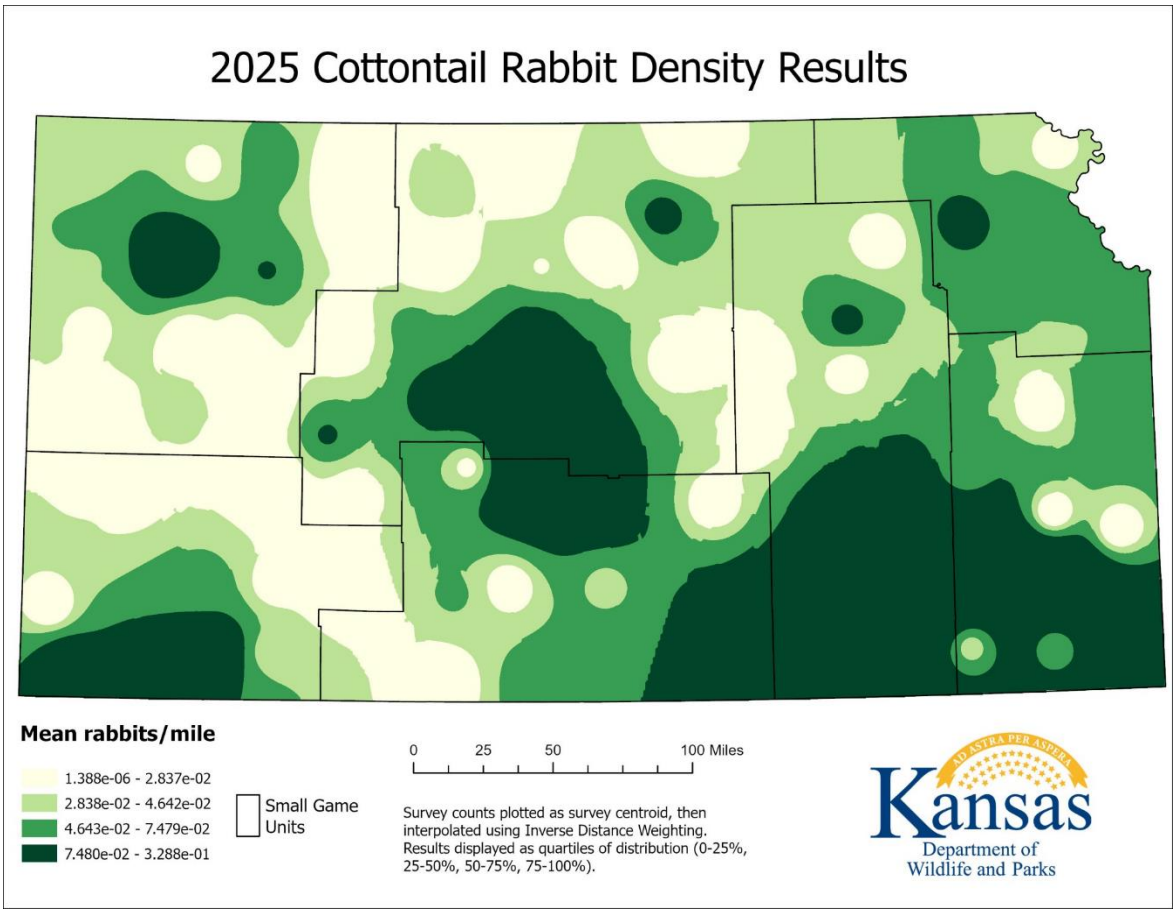

Figure 9. Relative Cottontail densities estimated from brood survey routes in Kansas, 2025.

Table 9. Regional comparision of jackrabbit per mile (J/M), 2025.

Route	2024 J/M	2025 J/M	% Δ	Route	2024 J/M	2025 J/M	% Δ
	Flint Hills				Smoky Hills		
Butler	0.000	0.000	0	Barton	0.014	0.035	150
Cowley	0.000	0.000	0	Cloud	0.010	0.000	-100
Dickinson	0.000	0.000	0	Ellis	0.000	0.039	NE
Elk	0.000	0.000	0	Hodgeman	0.000	0.021	NE
Geary	0.000	0.000	0	Jewell	0.021	0.000	-100
Greenwood	0.000	0.000	0	Mitchell	0.022	0.000	-100
Marion	0.000	0.000	0	Ness	0.015	0.066	350
Morris	0.000	0.000	0	Osborne	0.000	0.007	NE
Pottawatomie	0.000	0.000	0	Phillips	0.015	0.000	-100
Wabaunsee	0.000	0.000	0	Republic	0.000	0.000	0
Region	**0.000**	**0.000**	**0**	Rice	0.000	0.000	0
	Glaciated Plains			Rooks	0.012	0.000	-100
Atchison	0.000	0.000	0	Rush	0.000	0.014	NE
Brown	0.000	0.000	0	Russell	0.000	0.000	0
Doniphan	0.000	0.000	0	Saline	0.000	0.000	0
Jackson	0.000	0.000	0	Smith	0.000	0.000	0
Jefferson	0.000	0.000	0	Trego	0.016	0.000	-100
Marshall	0.000	0.000	0	**Region**	**0.007**	**0.011**	**47**
Region	**0.000**	**0.000**	**0**		Southern High Plains		
	Northern High Plains			Finney	0.014	0.007	-50
Cheyenne	0.021	0.007	-67	Ford	0.000	0.000	0
Decatur	0.007	0.051	600	Gray	0.015	0.007	-50
Gove	0.000	0.000	0	Hamilton	0.057	0.043	-25
Graham	0.000	0.000	0	Haskell	0.024	0.033	40
Greeley	0.049	0.042	-14	Kearny	0.000	0.000	0
Lane	0.000	0.010	NE	Meade	0.063	0.016	-75
Logan	0.000	0.015	NE	Morton	0.035	0.083	140
Norton	0.000	0.000	0	Seward	0.152	0.053	-65
Rawlins	0.000	0.007	NE	Stanton	0.036	0.036	0
Scott	0.008	0.015	100	Stevens	0.014	0.043	200
Sheridan	0.000	0.008	NE	**Region**	**0.037**	**0.029**	**-21**
Sherman	0.038	0.023	-40		Osage Cuestas		
Thomas	0.000	0.047	NE	Allen	0.000	0.000	0
Wallace	0.014	0.000	-100	Bourbon	0.000	0.000	0
Region	**0.011**	**0.016**	49	Cherokee	0.000	0.000	0
	South-Central Prairies			Coffey	0.000	0.000	0
Barber	0.034	0.000	-100	Franklin	0.000	0.000	0
Comanche	0.036	0.000	-100	Labette	0.000	0.000	0
Harvey	0.000	0.000	0	Miami	0.000	0.000	0
Kingman	0.000	0.007	0	Montgomery	0.000	0.000	0
Kiowa	0.093	0.050	-46	Neosho	0.000	0.000	0
Pawnee	0.007	0.014	100	Osage	0.000	0.000	0
Pratt	0.036	0.029	-20	Wilson	0.000	0.000	0
Reno	0.006	0.036	525	**Region**	**0.000**	**0.000**	**0**
Stafford	0.000	0.026	NE				
Region	**0.023**	**0.018**	**-23**	**Statewide**	**0.011**	**0.011**	**0**

*Values are significant at a $P < 0.10$.

NA = Data Not availiable

NE = Not estimable

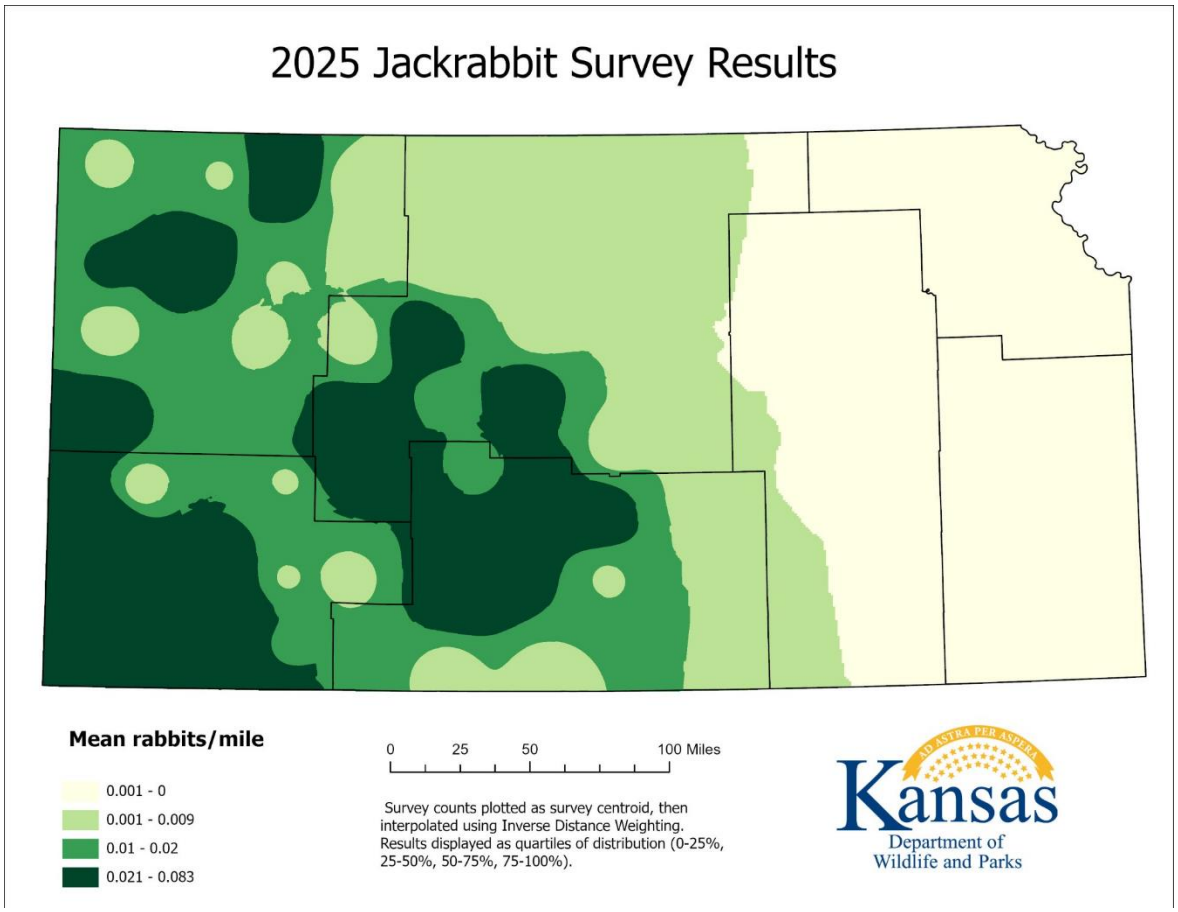

Figure 10. Relative Jackrabbit densities estimated from brood survey routes in Kansas, 2025

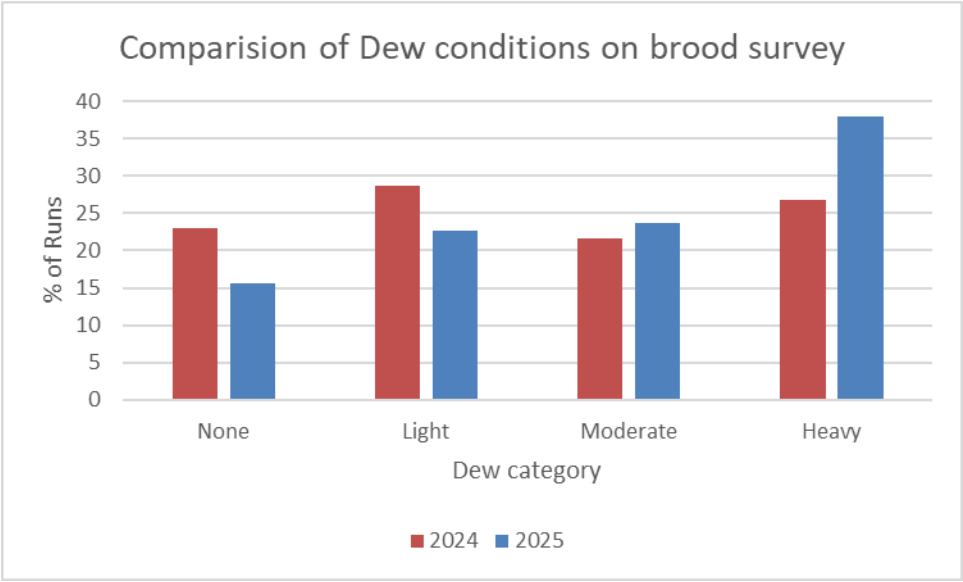

Figure 11. Interannual Comparison of Dew conditions during brood surveys. The presence of dew is one of the largest factors impacting detectability during survey.