



THE

QUAIL-TECH

ALLIANCE



2019 SPRING WHISTLE COUNT

By Rowdy White, Q.T. staff biologist

Starting on May 13th, the staff of the Quail – Tech Alliance stretched out across the rolling plains of Texas to conduct our spring whistle counts. Nearly a month, 5,800 miles, and untold inches of rain later, we are finally finishing spring counts. It has been a muddy spring, and we are glad to report it! Anyone who lives or works on the rolling plains knows it has been wet lately, but before we dive into this year’s spring whistle count data, I would like to compare previous years with this year. Bobwhite populations are built and sustained by high reproductive output (large clutches of eggs and multiple nests). I will explain the influences that made the 2018 reproductive season a bust.

The winter of 2017-2018 was dry. There was a period where some sites received no measurable precipitation for nearly 100 days. There was a noticeable absence of early forbs, which are an important food source during late winter. Furthermore, sometime in late 2016 or early 2017 cotton rat populations crashed. This removed an important alternate prey source of bobwhite predators, leaving bobwhites more vulnerable to increased predation as cover quality decreased due to the drought. While nest success in the Rolling Plains fluctuates around 40% (and after a high of 54% during the boom of 2016) nest success in 2017 fell to 29%, roughly halving the number of chicks hatched from the year before) All these factors plus age ratio data (from both our trapping efforts and hunter harvested wings) clearly indicated bobwhite populations across the plains were still in for a bumpy ride (For more info, see our e-bulletins from 5 December 2017 and 8 June 2018.)

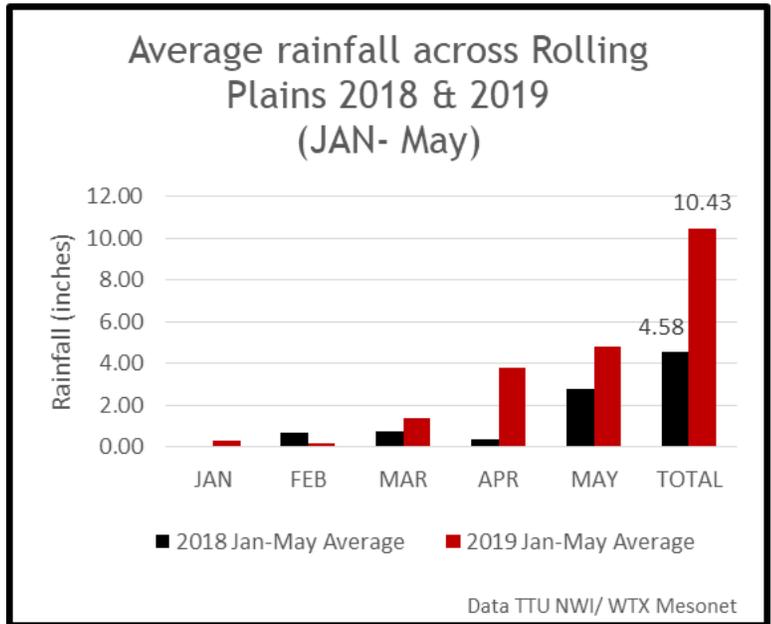


Figure 1: Rainfall comparison, 2018 and 2019

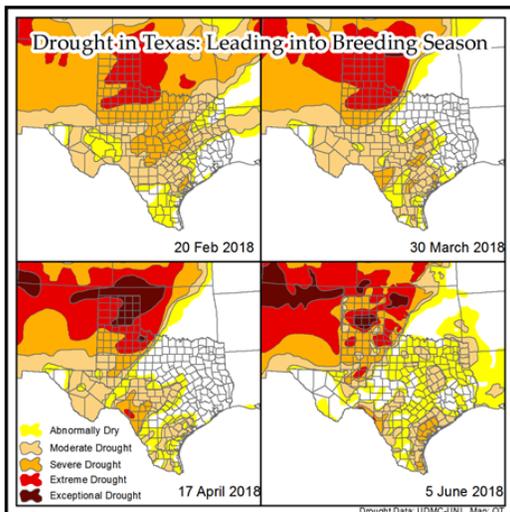


Figure 2: Drought Jan-May 2018

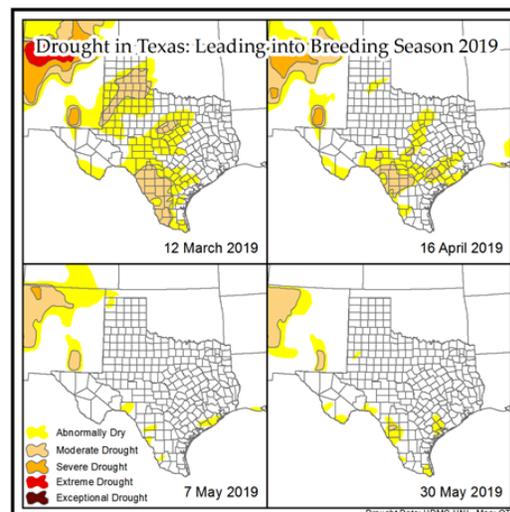


Figure 3: Drought Jan-May 2019



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Then summer of '18 hit hard, fast and dry. During our spring call counts last year much of the rolling plains experienced days of over 100° F temperatures and prolonged temperatures above 100° F has been documented to hinder overall nest success. Kelton Mote, a QT graduate researcher, recorded decreased nest success and average clutch sizes of 10-11 eggs where the average is normally 12-13 eggs per clutch during 2018. Some of the rolling plains got a little rain in early fall, but the hot and dry summer had already sealed the fate of the 2018 nesting season.

Rainfall across the Rolling Plains of Texas Jan-May

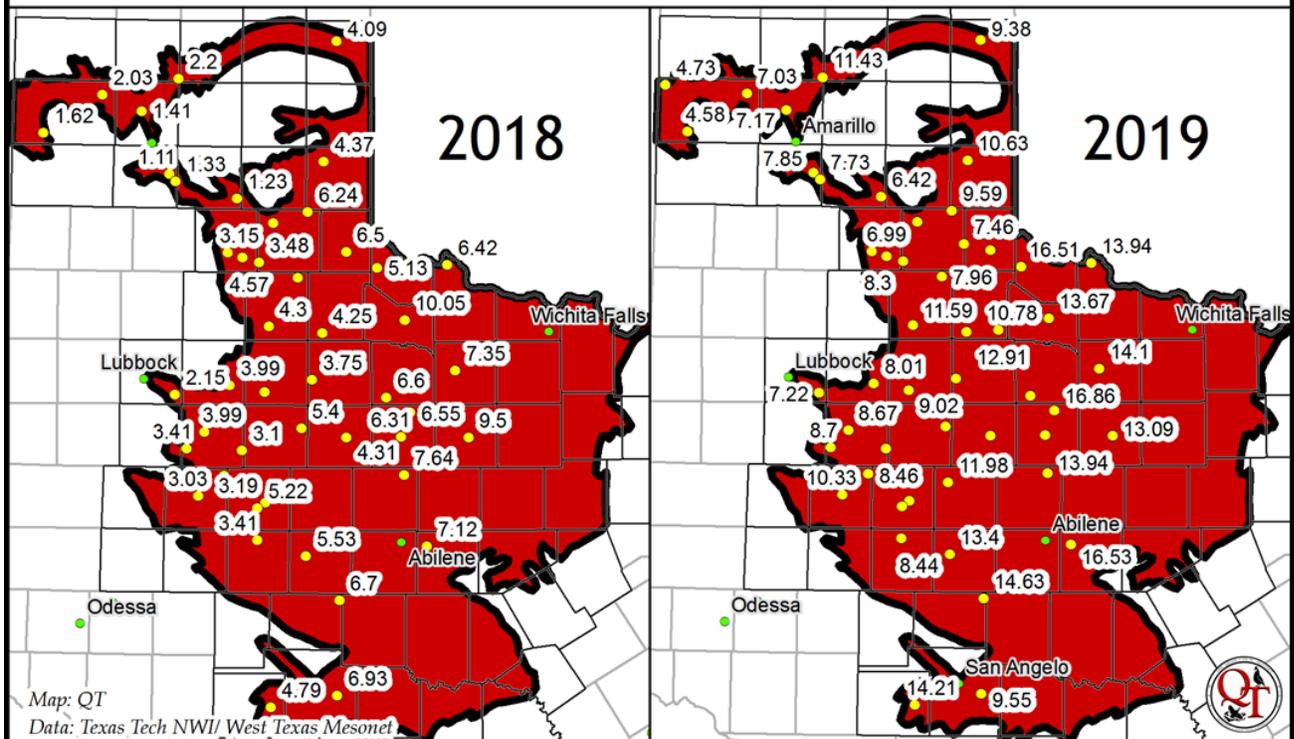


Figure 4: Rainfall comparison 2018, 2019 across the Rolling Plains. Since then, some sites have received over 4 additional inches of rain not recorded on this map. Yellow dots are Texas Mesonet Stations and the numbers are inches of rain.

Thankfully, 2019 has been more kind than 2018. Regionwide, we have had more than double the amount of rainfall than during the same period last year. Some sites across the ecoregion have received four times the amount of rain than they did from January to May of last year. Last year we entered nesting season with widespread drought that persisted over the entire summer. This year the rolling plains is entering nesting season completely free of drought. Where there was dry bare ground last year, this year has been flush with forbs. Last year our radio marked hens laid their first eggs sometime in the middle of May, but this year nests were initiated in the third week of April and we have been finding nests with 17-19 eggs. This highlights the differences in conditions between this and last year. (See Figures 8 and 9 of chicks already on the ground in 2019.)

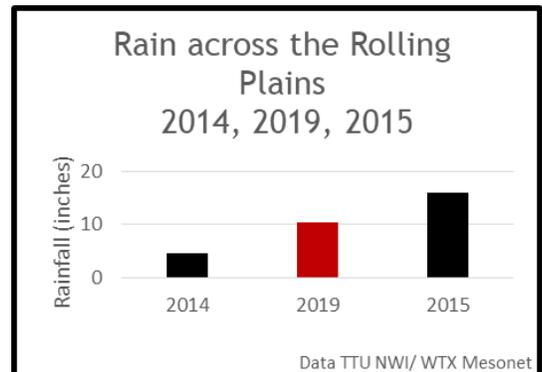


Figure 5: 2019 rain compared to 2014 and 2015



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Continuing the comparison to previous years, the 2019 average of 3.13 males/point is slightly above 2014 and below 2015. A look at rainfall during the first four months of those years is interesting as well. Precipitation across the rolling plains this year ranges somewhere between 2014 and 2015 (See figure 5).

We foretold a decrease from 2018 to 2019, and it happened, but we may see some light at the end of the tunnel. Despite the decrease in reproductive capital from last spring to this spring, conditions currently exist to have larger than average hatches. Nothing is ever certain, but we are going into nesting season this year with more hope than last year.

Our spring counts reflect the decrease I mentioned earlier. Across the alliance this year, we averaged 3.13 males heard per point:

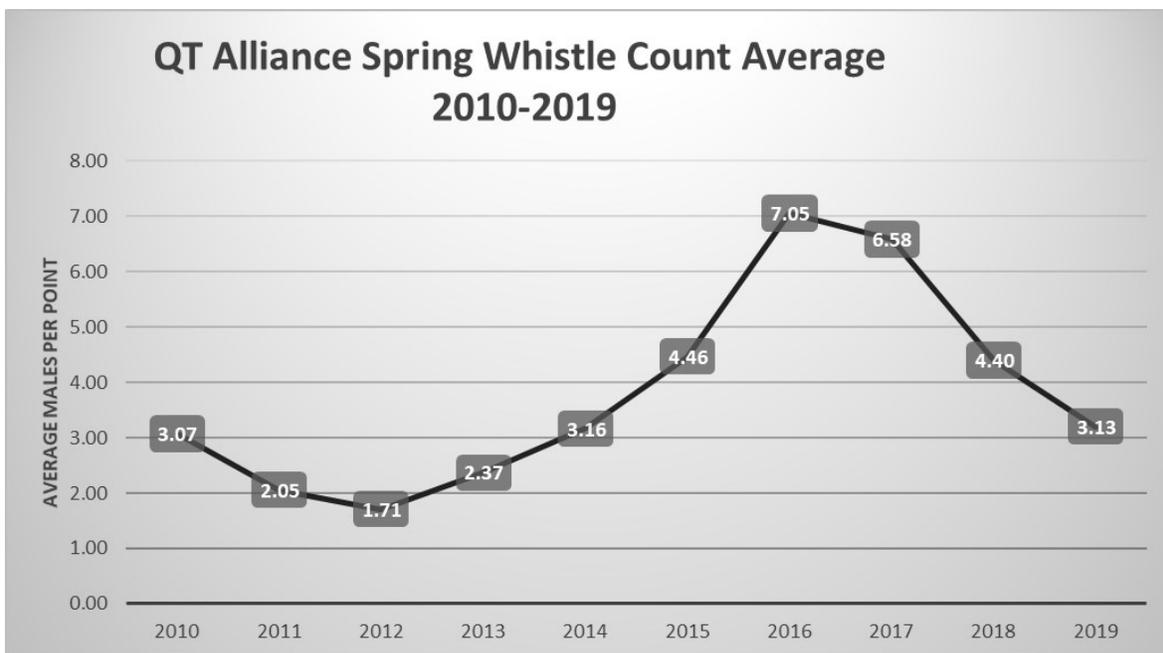


Figure 6: QT Spring whistle count history

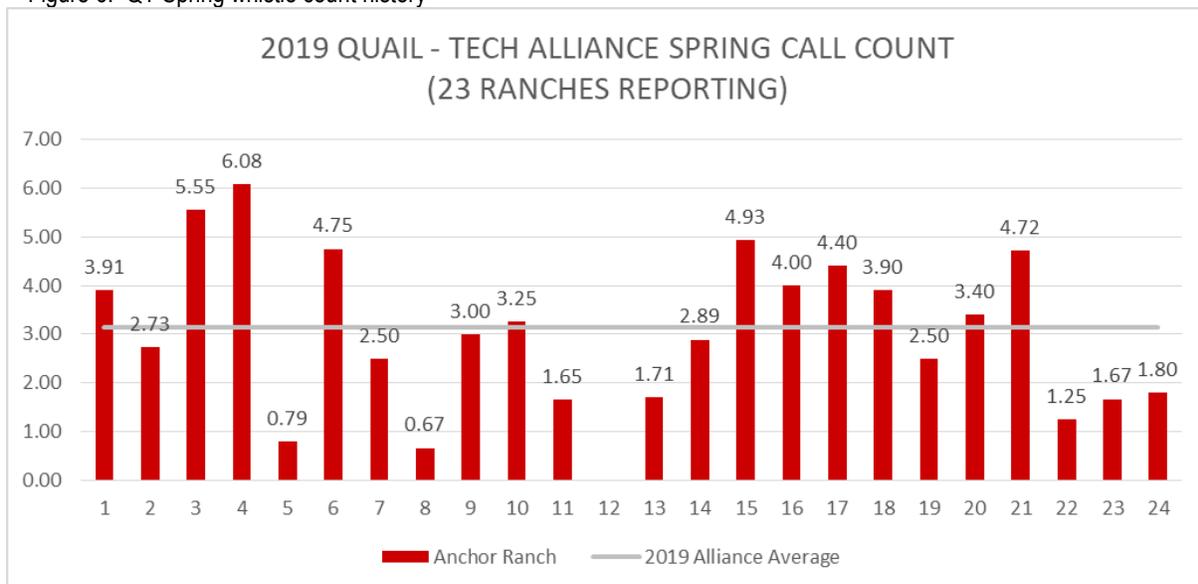


Figure 7: 2019 Spring whistle count results



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The general trend across the alliance was downward; however, we had four ranches experience an increase from last spring ranging from 0.18 to 1.23 birds per point. While this could simply be a difference between weather conditions during this and last year, variability in calling, or observer hearing, each of these ranches intensively manage for bobwhites in some fashion. Two of the ranches broadcast feed, use prescribed fire and manipulate soil disturbance, and all of them have set conservative stocking rates. Whether these ranches had a slightly more successful nesting season last year than our other ranches or their management has enticed the neighbor's bobwhites to come visit, we know that all five cover types (nesting, brooding, loafing, escape, and roosting) must be present in sufficient quantities to provide bobwhite habitat. Simply put, landowners who consciously provide enough of these five cover types across their property are more likely to have bobwhites than those who do not. For those landowners who have promoted bobwhite habitat, intensive management, such as broadcast feeding, further helps bobwhites.



Kelton Mote

Figure 8: Bobwhite chick captured as part of our ongoing chick survival study during June 2019. Photo courtesy of Kelton Mote



Kelton Mote

Figure 9: Bobwhite hen protecting chicks during June 2019 on the 6666 Ranch. Courtesy of Kelton Mote

To summarize: it was another year with a decrease, and while that is always disheartening, the weather this spring and the vegetation response should give us all a cautious hope for a better autumn. Nesting season has barely begun, and while anything can happen between now and October, those practicing active management will be better prepared whether it continues to rain or not. Look for future e-bulletins in the coming weeks concerning our ongoing research studies.

The Quail – Tech Alliance (emphasis on alliance) would not exist without the fantastic support and collaboration of our anchor ranches. Thank you for your support and friendship over the years. As an organization, we hope to continue to serve you and the rolling plains ecoregion for years to come. We also thank the Burnett Foundation, and Cross Timbers and Park Cities Chapters of the Quail Coalition who generously support our research efforts. “United we stand, divided we fall.”

(Special thanks to J. Reid, I. Young and K. Mote as well as the rest of the Q.T. research staff for providing data for this report.)