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“New normal” rainfall expectations endanger production

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The “new normal” can be defined as the period of time from 1981-2010, a span of 30 years, when Oklahoma rainfall was significantly more abundant than it had been in the previous 87 years. Figure 1 depicts yearly rainfall from 1895-2011 for Oklahoma. It also shows us the trends in weather patterns by depicting a five-year rolling average.

Until 1980, wet and dry periods trended in seven- to 10-year cycles with somewhat regular frequency. However, from 1980-2010, the trend remained wet – so much so that if we calculate the average annual rainfall for this period we were 3 inches above our 117-year average of 34 inches. Folks, that is impressive, and I’m not even a climatologist. I first observed this phenomenon occurring back in the 1990s and began writing articles about drought. Just looking at this chart caused me to begin telling people that drought is normal and should be expected 25 percent of the time. What we were experiencing was not “normal” and to prepare to pay the fiddler.

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From a livestock grazing perspective, drought can be defined as “slow ▶

Figure 1. 1981 to 2010 – The “New Normal?” – 30 Years

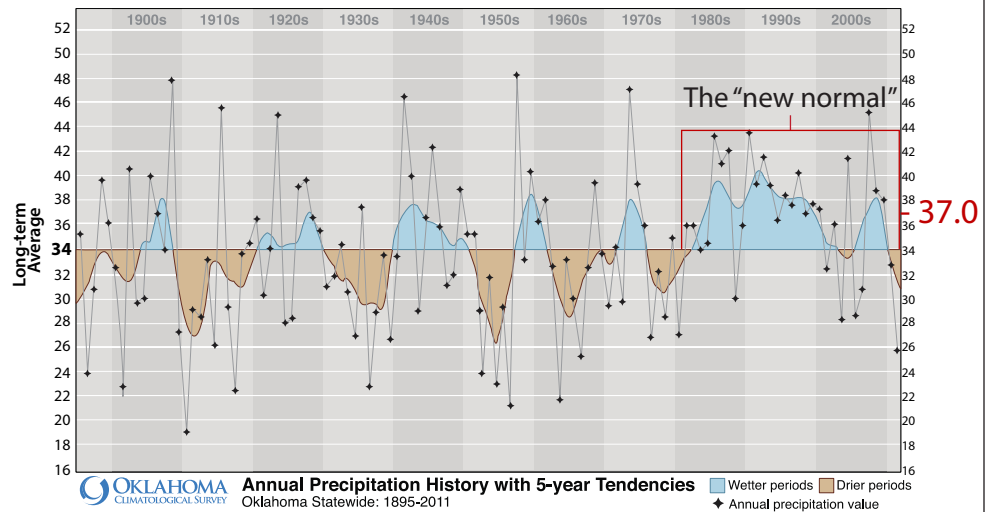
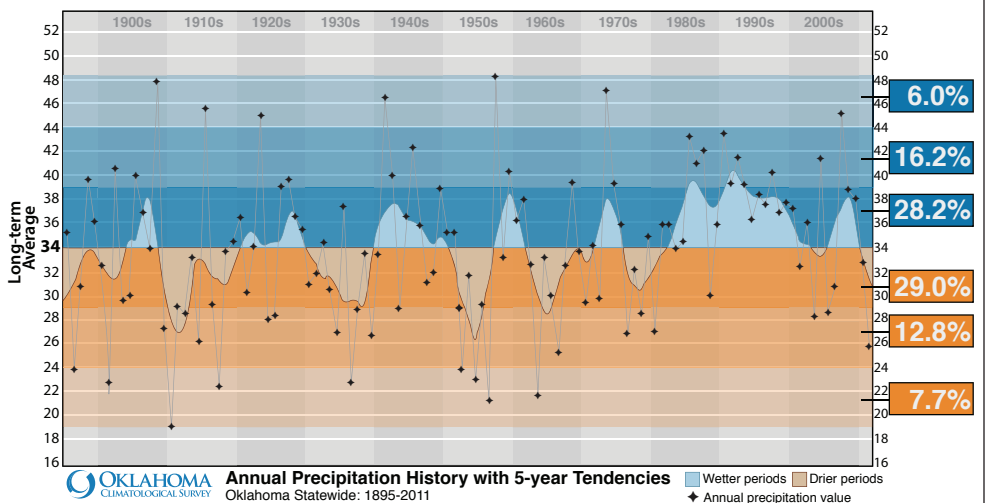


Figure 2. Probability of Rainfall Deviation



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plant growth when you expect fast growth” or “no growth when you expect slow growth.” If we simply define drought as receiving less than 29 inches of rainfall (greater than 5 inches below average) for Oklahoma, then drought has occurred some 20 percent of the time since 1895 (Figure 2). By this definition, I believe we will see the frequency of drought increase over the coming 20 to 30 years.

It is also worth noting that severe drought in Oklahoma – less than

24 inches of annual rainfall or more than 10 inches below average – has occurred 7.7 percent of the time since 1895. We have not seen this happen since 1963. The drought of 2011 came close with just over 25 inches. What made the drought in 2011 so severe is that it began in the fall of 2010 with a dry winter and continued to stay dry through the spring and summer. We started off on the right foot in 2012, but the rains quit when we needed them the most, in May and June.

Simply put, you better quit thinking animal numbers can rival the capacity of the “new normal” time-frame and adjust your stocking rate to match the long-term average of the last 117 years. In the near term, most of us should consider reducing stocking rates even further due to the severity of stress caused by the drought of 2011 to 2012. The “new normal” was not normal; it was a welcome anomaly and may not occur again in our lifetimes. ■