BERMUDAGRASS MANAGEMENT IN A DRY SUMMER?

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Webster’s defines drought as a prolonged period of dryness or a chronic shortage. In practical terms, a drought generally means it rains less, not that it will not rain at all. The challenge is having a plan that will make maximum use of a reduced amount of moisture.

Rainfall patterns tend to be cyclical and during the 1980’s and 90’s northeast Oklahoma was fortunate to have an extended wet spell. As a result of this 20 year wet spell, some newcomers to the industry and even some experienced livestock producers may have increased stocking rates based on consistently higher than normal forage production. Based on what we are currently experiencing and long range forecasts, it would appear that perhaps we should adjust stocking rates and pasture management to weather an extended dry spell.

During a dry cycle, some inputs may be adjusted downward to compensate for lower yield expectations but many things recommended during the wet spell become more critical. Added emphasis will be placed on the timing of inputs to take maximum advantage of available moisture.

In east central Oklahoma, spring season rainfall has exceeded 8 inches in all but 6 of the past 111 years. Summer season rainfall has exceeded 6 inches except for 7 of the 111 years. Together, you would expect to get at least 14 inches of rainfall during the spring and summer even during an exceptionally dry year. The average spring and summer rainfall for east central Oklahoma is about 25 inches.

Most eastern Oklahoma producers expect unfertilized bermudagrass pastures to normally yield about 1 ton of forage per acre. The reason, bermudagrass needs about 20 inches of available moisture to produce a ton if it was not fertilized. If rainfall is reduced to 14 inches, which is about 60% of normal, you could expect bermudagrass to yield about 1200 pounds in a dry year instead of the normal 2000 pounds per acre.

If adequately fertilized, bermudagrass can yield about 1 ton of forage with 4 inches of water. In a dry spring and summer season, with only 14 inches of moisture, bermudagrass still has the potential to produce 3 tons per acre if fertilized with 150 pounds of actual nitrogen per acre. In 1977 and ’78 rainfall at the Eastern Research Station near Haskell was 8.76 inches and 14.33 inches below the long term average. Yet, in 1978 bermudagrass fertilized at 200 pounds of nitrogen per acre produced 7,438 pounds per acre. Timing is critical because to achieve this yield in the dry years you must have adequate nitrogen available when moisture is available.

In summary, fertilizing bermudagrass could be more important in a dry year than in a wet year. Old recommendations such as concentrating efforts on the most productive soils that have the greatest water storage capacity and fertilizing according to soil test recommendations still apply. And remember, waiting for it to rain before you fertilize might be a costly missed opportunity in a dry year.