Growing-Season Burns Hold Potential for Fall and Winter Forage

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The traditional burning season for the Southern Great Plains goes from December to April. However, when land managers limit their burn season to these five months, they often find it difficult to implement the number of burns needed to achieve their goals. Typically, weather during the traditional burn months is somewhat turbulent because of fronts moving in and out of the area. These fronts cause the wind to frequently change direction, leaving small windows for burning. This is one reason why more and more land managers are conducting growing-season burns, during late spring through early fall months, to meet some of their prescribed burning goals. Weather during the summer months is warmer with higher humidity and typically has more consistent wind patterns.

Regardless of the burn season, a major goal of prescribed burning is to improve forage quality for livestock and wildlife habitat.

EXAMPLE OF FORAGE QUALITY AFTER GROWING-SEASON BURN
On Sept. 7, 2017, a Noble Research Institute cooperator conducted a prescribed burn in Murray County, Oklahoma. The main goal for this burn was to control encroaching eastern red cedars in a pasture where little bluestem was the dominant grass. As is typical with good soil moisture, forage regrowth occurred relatively quickly and resulted in greater forage quality.

Out of curiosity, we began collecting forage samples of the regrowth and of the unburned little bluestem every three to four weeks after the September burn to evaluate changes in forage quality over time and into the dormant season. We wanted to learn whether the regrowth of native grasses would provide a nutrition level high enough to meet a mature dry cow’s daily nutrient requirement.

Three weeks post-burn, little bluestem regrowth had a crude protein (CP) concentration of 20 percent while the
unburned samples were 4.8 percent. Crude protein levels of the regrowth remained above 8 percent until December, while the unburned mature little bluestem never exceeded 6 percent during the sampling period.

REDUCING NEED FOR HAY
Data and information collected from Oklahoma State University, The Nature Conservancy and this cooperator has prompted us to learn more about burning native rangeland during the growing-season and its effects on forage quality and yield into the winter.

If adequate yield and forage quality exists during the dormant season, producers may be able to extend the grazing season and shorten the number of days they need to feed hay and/or supplement. However, stocking rate is expected to be lower.

With beef cattle, we have the flexibility to match class of cattle or production stage with available forage quality due to their range of protein and energy requirements. For example, the lowest nutrient demand for maintenance requirements comes from a midgestation, nonlactating mature beef cow where CP requirements are 7 percent and total digestible nutrient (TDN) requirements are 45 percent. However, the highest nutrient demand comes from a lactating first-calf heifer, where CP is 10.8 percent and TDN is 70 percent. Knowing this, a producer could reduce feeding costs by giving the portion of the herd with the highest nutrient demands priority to grazing burned areas. 🐄