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**What is Prescribed Burning?**

AGRI-VIEWS

by Chuck Otte, Geary County Extension Agent

I'm sure that many people think that land owners/managers just head out into the pastures in the spring and start setting fires to the dry grass without much thought of anything else. While a few may do that, most pasture managers are practicing what we call "prescribed burning". As it's name suggests, this is burning done to fulfill a certain prescription. A prescription is created to address certain issues, in this case, issues that pertain to the health of the prairie.

The principle grasses that make up the native pastures are far different than the bluegrass or fescue that most of us have in our yards. Our lawn grasses are cool season grasses. They grow best in the spring and early summer and then again in the fall. They are greening up and growing right now. The grasses in the native prairies are primarily warm season grasses. These grow best in the heat of the summer. Our lawn grasses grow best under high fertility, meaning lots of nitrogen and phosphorus. The warm season native grasses have evolved over the centuries to do very well on much lower nitrogen and phosphorus levels.

Because the native grasses evolved under periodic fire, they are very well adapted to recovering from fire at almost any time of the year. We once thought that fires other than mid spring would reduce forage production or open up the soil to more erosion. But we have since found out that this is not correct. In fact, most of the erosion controlling ability of grasses comes from the roots, not the leaves. However, burning at different times of year will impact groups of plants differently.

If a pasture is burned just as the warm season grasses are starting to grow, they will be most favored as they were just starting to grow anyway. Burning earlier in the season, February or March, will favor greater diversity of plant species and encourage forbs (wildflowers) to grow better. For control of woody species, the most damage can be done by burning right after they are fully leafed out. Unfortunately this is later than most managers want to burn. Recent studies have also shown that a late summer burn (around September 1) is extremely damaging to the invasive weed sericea lespedeza as well as some of the woody invasive plants. Don't be surprised to start seeing more late summer burns! And cedar trees, well cedar trees are well controlled by fire at anytime of the year as they are a non-sprouting species.

So vegetation control is one reason for burning. Another is to encourage uniform grazing. Cattle will go back to areas that were recently grazed as new shoots are more tender than older leaves. So some parts of a pasture will be grazed regularly during the summer and other areas not grazed at all. Periodic burning resets the pasture, so to speak. By removing old growth, cattle are also more inclined to graze as they aren't having to stick their face into a bunch of old stiff stems to try to get to the new grass.

There have also been studies that show that yearlings will gain more weight grazing on burned pastures than on unburned pastures. While the difference of 25 pounds of gain for the summer may not sound like much, in times of tight profit margins, it can be very important. Much of this research needs to continue though to look at other management aspects. The research has also shown that cow-calf herds do not show any difference in performance between burned and unburned pastures.

So burning is a tool that helps managers maintain pasture condition. But as the name implies, it is prescription burning and there needs to be an indication of what is being addressed by the burn!

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