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Understanding Prescribed Burning, Part 1

AGRI-VIEWS
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It isn't going to be much longer before plumes of smoke in the sky will be a routine sight. Starting in March and continuing on through April is the time of year that we traditionally practice prescribed burning of the tall grass prairies in the Flint Hills. This week we'll focus on why burning is so important to the prairie. Next week we'll discuss some of the challenges we face with prescribed burning.

The grasses of the prairie evolved under thousands of year of periodic wild fire. The grasses adapted by keeping their growing points below ground so after a fire burned everything off above the surface, new growth was quickly initiated from the below ground growing points. This is in contrast to a cedar tree which has all of its growing points above ground and a good fire will kill it!

Fire developed the grasslands. Take a grassland, just about any where, remove fire - human caused or natural - and over time it will slowly convert to woodland. It's a natural progression. In much of the Flint Hills, removing fire is first noted by an explosion in cedar trees. While many people think this is the extent of it, cedar trees are the early invaders. Eventually, 20 to 30 years into the removal of fire, various hardwoods start to become well established and after 50 years or more it'll turn into an oak, walnut and hickory woodland. While trees are nice, and we all appreciate trees, cattle don't generally graze on trees. They need grass. Grass needs sunshine, grass needs fire!

In the historical evolution of the prairies, fires were not a regular occurrence. They were irregular in their timing. Parts of the prairie may have gone several years without a fire. Or there may have been multiple fires in the same year. One year a fire may occur in March, the next year September. It didn't bother the grasses because they would just start to regrow when it happened. But for the woody plants, the irregular nature of the fires made it difficult for them to get well established and limited them to riparian areas. Once the trees became established, the grasses died out due to the lack of sun and large hardwood trees are pretty fire resistant.

Now days we use fire to control cedar trees and to give us a little bit of an edge in controlling other woody species. Fire won't control all brushy species but it helps keep them in check so we can control them with herbicides or other management options. We use fire to maintain grass and forb (what many people call wildflowers) diversity. We burn to even out livestock grazing distribution. For yearling cattle we even find that a late April burn can improve gains by 30 to 40 pounds through the summer.

But we also find that too much burning isn't a good thing. Annual burning isn't necessary. In well managed pastures without a brush problem, burning once every three years is probably much more preferred. Or, going to patch burning where you burn one third of a pasture every year and that area goes unburned for two years. Burning every year at the same time will cause shifts in vegetation composition.

I'd be a liar if I said that burning wasn't fun. I think there is a certain natural fascination that most humans have with fire. It is amazing to watch it happen and especially how the grasslands spring to life following the burn. Fire is one of the cheapest and most crucial tools we have for grassland management. But there are challenges ahead of us and we'll talk about that next week!

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