For Release March 7, 2015

Understanding Prescribed Burning, Part 2

AGRI-VIEWS
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Last week we talked about why we burn. Working with a natural ecosystem that developed under periodic burning it is critical that we keep periodic fire (though not necessarily annual fire) in the management of those grasslands. But there can be some issues anytime that you have large scale burning.

One thing that many people worry about is soil erosion following a burn. Fortunately, other than a little soot or ash in the early runoff water, there is little soil erosion immediately following the burn. The soil stabilization is done by the massive fibrous root system. Since this root system is still very much alive it does a good job of holding the soil in place. We also often see very rapid greenup of vegetation following the burn.

The bigger issue is smoke. In the immediate vicinity of the burn there can be short term visibility issues that are an issue on roadways. There are many state regulations regarding agricultural burning. The individual that starts the burn is responsible for it, and the smoke it produces. Smoke plumes are not supposed to be sent towards airports or highways. Many times pastures can only be burned with the wind in a very specific direction.

Many counties, like Geary, also have specific burning requirements. In Geary County, landowners must have burning permits and obtain permission to burn before lighting a fire. If wind speeds are too high, or forecast to be too high, the landowner can not burn. By state law low cloud cover is not acceptable for burning and burns are not to be initiated within two hours of sunset or until one hour after sunrise. Burns are also not to be conducted, according to state regulations, if the wind speed is under 5 mph. While some landowners feel that these restrictions are excessive, they are actually in place to protect all parties and are critical to maintaining our ability to burn.

Perhaps the biggest problem comes from the smoke plume that get's into the atmosphere and moves miles and miles. When smoke, warm temperatures and sunlight interact, ozone is produced. If a large smoke plume goes towards a large city, ozone levels from vehicle exhaust and other combustion in that city, are added to the ozone created by the smoke plume and ozone levels can become elevated to a point where health advisories and warnings have to be issued.

It behooves all of us needing to keep fire as a management tool to do everything possible to keep large smoke plumes from going towards large urban areas. Ozone monitors are generally turned on around April 1st. So burning that can be done prior to April 1, such as burning to control cedar trees, should be done in that earlier time frame. If burning is conducted in April, there are computer programs on the internet that will help predict where smoke plumes will go from a certain sized burn in a certain part of the Flint Hills. The Flint Hills region also comes under special smoke management regulations during April. Only grassland burning can be conducted in the Flint Hills counties during April. No brush pile burning by homeowners or other types of burn that may add extra smoke to the equation. If you have a brush pile to burn, get it done now or wait until May!

Without fire, landowners have to resort to expensive herbicides to control much of the brush. These herbicides can ultimately end up in surface waters. Manual brush removal becomes very expensive which impacts profitability. The grasslands need fire to stay as grasslands. But landowners need to continue to manage that fire, and its resulting smoke, to minimize short term impacts downwind.

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