

Fire's Place in Nature

AGRI-VIEWS

by Chuck Otte, Geary County Extension Agent

As a child growing up in the 1960s I saw and heard plenty of “only you can prevent forest fires” from Smokey the Bear. We all learned the lessons well and an all out campaign of nearly 30 years was very effective at getting lots of forest fires extinguished before they could burn very many acres. But there was a flaw in this cause. The flaw was that fire is a crucial natural element in virtually every ecosystem around the world. The frequency of fire isn't the same. Some grassland ecosystems need to be burned every few years while some forest ecosystems only need to be burned once per decade or so.

But fire was important and too late Smokey and his caretakers figured it out. If you listen closely to their messaging today it's been subtly changed to address prevention of WILDfires. Unfortunately many people still view fire as a bad thing and subsequently have trouble understanding why we burn off the pastures regularly in the spring. The heart of the fire season is going to run from the end of March through the end of April. Whether we see as much grassland burning this spring as most springs is going to depend a lot on how much precipitation we receive in the next couple of months. But let's take some time to understand why we burn the pastures.

Our tallgrass prairies evolved under regular burning thanks to lightning strikes or indigenous people starting fires to drive wildlife or even attract wildlife to an area. Grassland species (grasses and forbs) tend to keep their growing points below ground. If a fire burns the above ground portion off, the plant simply generates new growth. Invasive woody plants were kept on the edges of the prairie because of these regular fires. Cedar trees are native and in the absence of fire they can take over a grassland. But a cedar tree has it's growing point above ground. Cut the tree off at the soil line and it dies. Have a fire burn off all the green vegetation, and it dies. A simple pasture burn once every three years keeps cedars out of a pasture. In the absence of fire we would have to use manual cutting of these cedar trees or use herbicides that could wind up in the surface waters or groundwater. Once in the water it is very hard to clean up the contamination.

Many of the woody brushy species that move into pastures got well established when fire was removed by early land managers. Once these brushy species get established fire frequently won't kill them, but it will keep them from spreading so we sometimes have to use herbicides to control the old established woody plants. Once they are controlled, future burns will make it harder for them to get re-established.

When herbivores feed on grasses in the spring they tend to patch graze which means they come back to the same areas through the remainder of the year to feed. Plants that are grazed keep putting up new growth, just like your lawn does when you mow it. The new grass is more nutritious, it's tastier, and the grazing animals don't have to stick their head down in that older grass that is taller and tends to poke you in the face and eyes. By burning all that old growth off in the spring, the pasture is reset and the patches that are grazed are likely in a new location. So some plants are grazed heavily in any given year and others have an opportunity to rest.

Fire does create smoke which can cause problems to people with respiratory issues. But we are working on burning at different times of year to spread this smoke out or burning on days that will keep the smoke away from populated areas. Yes, the smoke can be an issue for a few days a year, but the end result is a healthy functioning grassland ecosystem.