

Presentation

Burning on Dams: Prescribed Fire

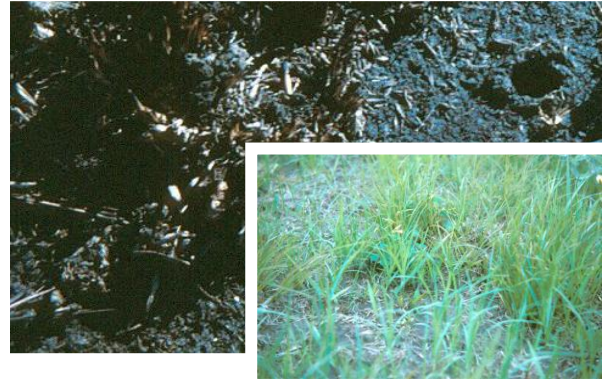
Clenton Owensby, professor, Kansas State University. Kansas Dam Safety Conference, 15 February 2012, Topeka, KS.

A range management scientist, Clenton Owensby has performed extensive research on the use of fire to control or promote vegetation types. Stating that his experience with dams is primarily with pastures, Owensby advocates for prescribed burning to control the increase of woody species. Without it, he said, the tall grass prairie would be a forest. "If you want woody stuff on your dam, first thing you do is close it up [with fencing] and not allow any grazing or burning."

Grass type on the dam influences when optimum burning occurs. "The time that you burn will determine the outcome in terms of vegetation response. You must burn in the low point of the unwanted plant's carbohydrate cycle when it has its lowest amount of food reserves. That's about six weeks after you see the first leaf. Do that three years consecutively to eliminate woody species from the area." This photograph below shows re-growth after initial burning.



He also addressed vegetation size: "The only way you can kill the material is for something to burn. You have to have grass underneath. It is not going to burn through the clump of dogwood:



you burn in from the edge. It takes several tries. If you don't burn, there will be a continual increase in immensity. For instance, red cedar. Get them when they are little and whack them off because the bigger trees are, the harder it is to get a fire intensity to kill them. You can burn trees six to eight feet tall or less. Those big things, 12' to 15' are hard to eliminate."

Factors to consider, Owensby said, when burning include temperature; relative humidity; wind velocity and direction – head fire vs. backfire; fuel (amount, moisture content, continuity); and length of run. "The longer the run, the greater the intensity. You want to understand those things, before you light the match."

For instance, fires differ on a dam's upslope than those on the downslope. "If you are on a dam and want the highest intensity, set it at the bottom of dam. As that fire goes up the hill, it preheats in front of it and gets intense. If you want to control the intensity, you go down the dam face," Owensby said.

In 1970, agricultural burning was prohibited by Kansas Department of Health and Environment regulations. Upon protest, the Kansas Legislature reinstated agricultural burning with certain rules that applied to new burners but without enforcement or penalty provisions. Because of possible smoke-filled highways, current legislation requires notification of local fire control authorities before the burn begins.



Additional requirements include:

- Burning operations shall not create a traffic safety hazard.
- Burning operations shall not create an airport safety hazard.
- Burning is to be supervised until the fire is extinguished.

Some counties and local units of government also have adopted ordinances or resolutions governing agricultural open burning operations. For example, some countries require land owners to inform immediate neighbors as to the intent to burn and when the fire has been extinguished, notify local fire control authority when burn has been completed, obtain an annual permit, and cancel the burn when wind speeds are more than 15 to 20 miles per hour.