

Agricultural Burning in Utah and the Regional Haze Rule

Executive Summary

Survey Conducted July 2003

Utah State University Extension

in Collaboration with the

Utah Farm Bureau Federation

During July 2003, County Agents in Utah collaborated with County Representatives from the Utah Farm Bureau Federation (in some counties there was additional input from farmers and ranchers, county fire marshals, soil conservation district representatives, and Farm Service Agency representatives) to estimate the number of acres of agricultural land that were intentionally burned as part of the cultural practices in 1996 and 2002. Surveyors were asked to estimate the amount of acreage burned as part of the production practices for:

1. Alfalfa Seed Crops
2. All Barley
3. All Hay
4. All Wheat
5. Corn (grain)
6. Corn (silage)
7. Oats
8. Orchards (pruned)
9. Orchards (removed/burned)
10. Private Rangeland

The crop residue most commonly burned in Utah is that from small grains. Wheat is most common and barley second. Alfalfa seed, hay, corn, and oats residue is not often burned throughout the state. After pruning, commercial orchards often burn limbs and full trees if they are diseased. However, there is increased use of chippers to mulch pruning and culling debris and put the organic matter back into the soil. When orchards are permanently removed from production it has been common to burn the trees and stumps. It appears that there is increased use of cutting, splitting, and selling fruitwood as firewood. Only a small portion of private rangeland is intentionally burned.

Based on estimates of burning as a cultural practice for the crops surveyed approximately 0.71% of the private agricultural land in Utah was intentionally burned in 1996. This number was reduced to 0.37% in 2002. A 48% decrease in agricultural burning over a seven-year interval.

There is no obvious single reason for the decrease in burning from 1996 to 2002. However, it is apparent that an increasingly large number of acres that were burned in 1996 were not burned in 2002 because 1) stubble or residue was baled and sold rather than burned, 2) the stubble or residue was mowed or chopped and the organic matter worked back into the soil, and 3) livestock were used to graze the residue or stubble.

An important variable not easily factored into the agricultural burning equation is drought. Utah has been experiencing severe drought conditions for the past five years. Lack of water on the rangeland has reduced the availability of forage for livestock that normally graze native and introduced species. The reduction in forage availability has increased the value of straw for feed, whether it is feed from the bale or off the stump. The extremely dry conditions in Utah have also made it unsuitable to consider a controlled burn of cropland or rangeland because of the threat of escape and the development of a large-scale wildfire.

Not all counties reported emission reduction techniques for 1996 or 2002. However, when emission reduction techniques were reported techniques employed in 1996 were similar to those reported in 2002. The most significant emission reduction techniques for both years are 1) baling and selling stubble and residue, 2) mowing or chopping residue or stubble and incorporating it into the soil, and 3) using livestock to graze stubble for feed.

Although drought may be a factor in the overall interpretation of the 2003 agricultural burning survey, it is still evident that:

- **Intentional burning on agricultural land in Utah has decreased by 48% from 1996 to 2002**
- **Livestock grazed more stubble/residue in 2002 than in 1996**
- **More stubble/residue is being incorporated into the soil in 2002 than in 1996**
- **Stubble/residue is being baled and sold more often in 2002 than in 1996**

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