

Prescribed Fire, Wildfire & Vegetation

By Paul D. Ohlenbusch

Fire is always a possibility with vegetation. Natural fires such as those started by lightning, arson fires, and prescribed fire to meet management goals are related. An interesting relationship you say?

Fire is the major natural factor in maintaining the grassland prairie and plains vegetation types. Without fire, the grassland will move toward a woody vegetation type. Also, if grazing by herbivores is removed, the process occurs faster. Without fire, grasslands disappear. Today, this is happening in many parts of Texas.

The recent wildfires in Texas have been declared "disasters." The real disaster is the destruction of capital and physical improvements, loss of livestock, loss of forage, and loss of wildlife habitat. The last two should be temporary and improve with appropriate management.

Prescribed fire, properly timed and conducted for management goals, is the most desirable. The process after a burn is similar whether it is a prescribed fire or a wildfire.

When a fire occurs, how the vegetation responds depends on two factors: precipitation (or lack of) and management. Rarely is the permanent vegetation (perennial grasses, etc.) killed by fire. The plant crowns are at or below the soil surface which protects them from the fire. After a wildfire, two responses are predictable: "weeds" and reduced grass production. If the soil stays dry, dust will blow and little or no plant growth occurs except for deep rooted perennials.

Nature will not allow the soil to stay bare if moisture is available. Annual and perennial plants, often broadleaf, usually respond first. A manager's immediate response is "control those weeds!" Actually, the "weeds," or forbs are protecting the soil and plants below. They provide shade which reduces soil temperatures. In addition, as the "weeds" grow,

they keep the wind above the soil surface. This combination of shade and wind protection creates a cooler, more moist environment at the soil surface allowing grasses and other permanent vegetation to recover more quickly. Woody plants are often "top" killed by fire, but will begin regrowing from ground level.

From a grazing management perspective, stocking rate should be lowered to allow the grasses to recover and to provide some use of forbs. Full recovery of the permanent vegetation will normally take 1-3 years under average weather conditions. Recovery is fastest in the higher precipitation areas and slower as precipitation decreases.

For habitat characteristics, recovery will depend on the wildlife species present. Like recovery for grazing management, initial recovery will depend on when and how much precipitation occurs. Since many bird species can easily survive the fire, their survival will depend on food availability. Often seeds and insects are exposed by the fire and wind which helps. Cover may be the greatest need for protection from predators. Larger animals will have similar needs. The forbs or "weeds" can supply deer with nutrition and maybe cover. Regrowth from woody plants can also provide browse.

Management after any fire must insure adequate growth of the desirable perennial plants. This can be aided by the initial flush of annual "weeds" that provide a better environment for growth. Reduced use of the forage by grazing animals is also required. *///*

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