

Management Guidelines for Attwater's Prairie Chicken

Habitat for the Attwater's Prairie Chicken consists of open tall grass coastal prairie dominated by bunchgrasses such as little bluestem, Indiangrass, switchgrass, and big bluestem, along with various flowering plants. Preferred habitat is characterized by high plant diversity and variations in grass height.



Control of Chinese tallow and baccharis with hydroax
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Prescribed burn
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Management for Attwater's Prairie Chicken involves good grazing management and carefully planned prescribed burning and brush management. Range management practices aimed at achieving and maintaining Good and Excellent Range Condition (i.e., greater than 50% climax vegetation present) will benefit the prairie chicken, as well as other plants and animals that share its habitat, including livestock.

Grazing Management

The tall grass prairie evolved under grazing by bison and other herbivores. Carefully managed livestock grazing is a beneficial tool for maintaining healthy and diverse tall grass prairie habitat for prairie chickens. Cattle recycle nutrients, break up homogeneous grass stands, and provide trails. Prairie chickens are known to nest in proximity of these trails and other openings. Grazing also produces a patchy, open cover, and a diversity of forbs; which provide the bulk of the adult prairie chicken's diet.

Prairie chickens need rangeland in Good to Excellent Condition, with a high percentage of decreaser plants (plants which decrease with continued heavy grazing pressure) such as little bluestem and Indiangrass in the plant composition. Proper stocking and periodic deferment are the keys to preventing overuse of the range and a decline in range condition. Animal numbers should be managed to maintain the proper degree of use (i.e., no more than 50% use of annual forage production). Grazing pressure should also be balanced with soil types and rainfall. Flexible stocking and timely responses to changing environmental conditions are necessary. Implementation of rotational grazing is desirable to prevent decline of highly desirable plants through selective grazing. These desirable tall grasses and forbs provide nesting habitat and food for prairie chickens. In summary, good range management which achieves maintenance and restoration of tall grass prairie (i.e., rangeland in Good to Excellent Condition) will benefit sustained livestock production and prairie chickens.

Prescribed Burning

The coastal tall grass prairie evolved under the influence of natural and man-caused fires. Prescribed burning, therefore, is an excellent management tool for maintaining healthy grassland and improving prairie chicken habitat. Periodic burning keeps woody plant invasion under control. It also reduces rank growth of vegeta-

tion, which is unpalatable for cattle and too dense for prairie chickens. Burned areas are often used for booming grounds, especially if short grass areas are in short supply. Prescribed burning also improves plant diversity and, in the case of winter burns, provides succulent food for prairie chickens during the winter and early spring. Prescribed burning in occupied habitat should be completed by late February; however, when prairie chickens are absent, summer burns may be helpful in restoring prairie that has been heavily invaded by woody species.

Pastures generally need to be rested following a prescribed burn to allow vegetation to recover without selective grazing pressure. It may also be necessary to rest a pasture prior to the planned burn to accumulate enough grass fuel to accomplish the burn objectives. The key to a successful prescribed burning program is to have a detailed written plan and help from experienced people. Technical assistance with prescribed burning is available by contacting the Texas Parks and Wildlife Department, USDA Natural Resources Conservation Service, the U.S. Fish and Wildlife Service, The Nature Conservancy of Texas, or Texas Cooperative Extension.

In summary, prescribed burning can be used to improve grazing distribution and forage quality for livestock; reduce brush encroachment and maintain productive grassland; improve range condition and plant diversity; and improve availability of food, nesting sites, and booming grounds for prairie chickens.

Brush Management

Mechanical or chemical brush management techniques are often needed to provide initial control in areas of dense, large brush. Prescribed burning is not an option in many of these areas because there is not enough grass to carry the fire or brush is too large to be effectively controlled by

fire. Each brush problem is unique, and technical assistance from knowledgeable people is helpful. Factors such as type, density and size of target species, range site and soils, past history of brush management, and surrounding land use must be considered.

The right kinds, amounts, and application techniques for herbicide treatments are important in achieving good control of target species. Many herbicides are very selective, so choosing the correct formulation of one or more herbicides is very important for successful treatment of a particular brush problem. Precise application also saves money and reduces the risk of environmental contamination. In some cases, timing of application can make the difference between good and poor results. As with any chemical, label directions should be strictly followed, including those concerning disposal of rinse water and used containers.

Combining methods of brush management, such as herbicide or mechanical control and prescribed burning, is often very effective. For example, on rangeland infested with Macartney rose, herbicide application followed by periodic prescribed burning can provide good results in reducing brush and restoring grassland. Mechanical methods such as dozing, roller chopping, or shredding can be

followed by prescribed burning or herbicide application, depending on the target species. Prescriptions need to be carefully designed to achieve the best results at the lowest cost. As with any range management practice, good grazing management (i.e., proper stocking and rotational grazing) is vital to achieving cost effective treatment and improvement in range condition. Technical assistance in brush management is available from the Texas Parks and Wildlife Department, USDA Natural Resources Conservation Service, the U.S. Fish and Wildlife Service, and Texas Cooperative Extension.

Additional Management Practices

The following management practices are suggested as ways to further enhance habitat quality. However, the benefits they may provide are definitely secondary to the primary goal of providing large areas of high quality prairie habitat for nesting and brood rearing.

Food plots or weedy areas of three to five acres scattered throughout pastures provide an easily available food source, although food plots probably do not add much to habitat quality if good prairie habitat is available. When planning food plots, it is best to locate them in areas that have

already been farmed or otherwise disturbed, rather than plowing additional grassland. Crops planted should be those normally recommended for the local area, and could possibly include native forbs and legumes, rice, grain sorghum, annual legumes, and cool season small grains. Narrow strip plantings are desirable to maximize prairie chicken use and minimize waterfowl depredation.

Mixtures of native mid and tall bunchgrasses, along with perennial forbs such as Illinois bundleflower, Maximilian sunflower, and Englemann daisy, should be used if needed for range seeding following mechanical brush removal or to revegetate former cropland fields. Mulching with native hay can also help reestablish native species. The goal is to use plants, preferably native species, which are commercially available and locally adapted, to approximate the species composition and structure of the tall grass prairie.

Finally, mowing can be used to provide feeding areas and brood habitat, and to control undesirable plant growth. Shredding during the nesting and brooding season (March through July 1) should be avoided to prevent destruction of nests and young chicks unable to fly.