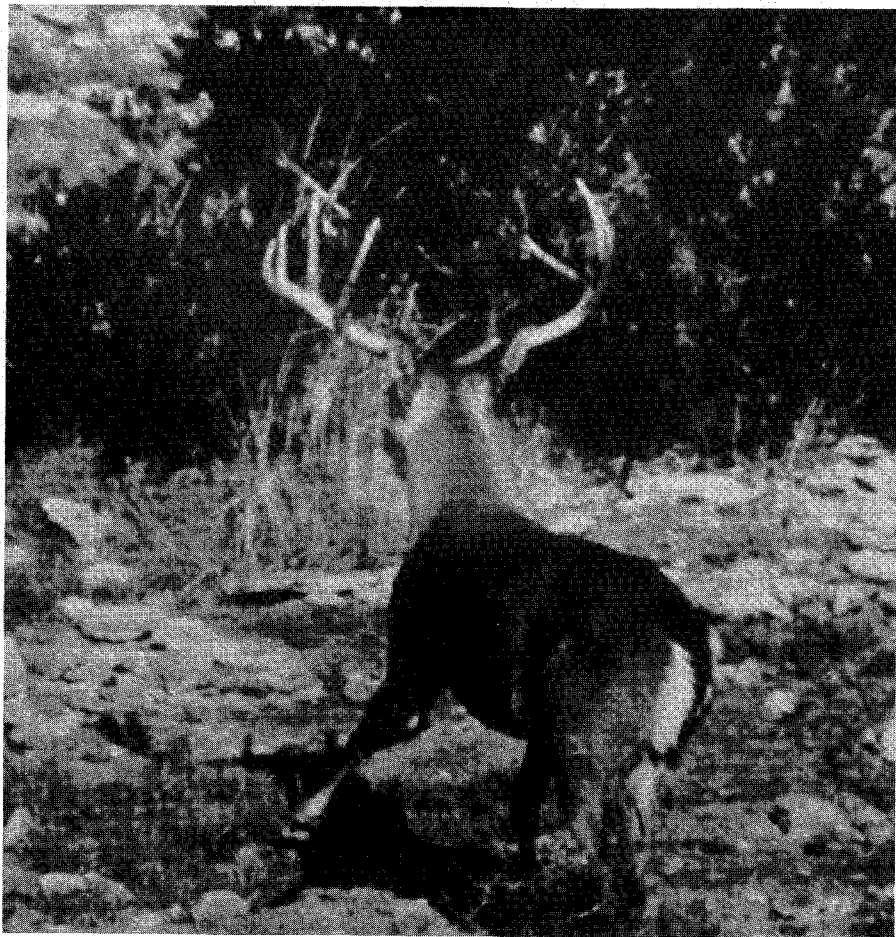


# **Basics of Brush Management for White-tailed Deer Production**

By  
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BRUSH MANAGEMENT  
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## BRUSH MANAGEMENT FOR WILDLIFE PRODUCTION

There are approximately 4 million white-tailed deer in Texas. This rather remarkable statistic is even more remarkable when one considers that there were relatively few deer in the state at the turn of the century.

The rise of the white-tailed deer has spawned a multi-million dollar recreational industry, furnishing thousands of hours of hunting recreation each fall. This abundance of deer in the past few decades is the result of radical changes in the state's ecology since the advent of the white man.

However, the ecological changes which ushered in this boom for whitetails now appear to be heading the other way.

To understand why the white-tailed deer expanded its range so rapidly, one needs to consider that most of Texas 100 years ago was dominated by grassland. Periodic range fires allowed the fast-growing grasses to dominate, keeping woody shrubs and trees confined to bottomland areas. As crops and livestock grazing became primary land uses in Texas, the grasslands were converted and as a result range fires were virtually eliminated. This opened the door for the entry of weeds and woody species of plants which provided the basic food and cover requirements of white-tailed deer.

Of course, protective hunting laws, elimination of large predators and management contributed to the meteoric rise of the whitetail as well.

But now biologists believe the danger signs are becoming increasingly apparent for the whitetail. Deer have overpopulated many areas, becoming too numerous for the available food and cover.

Increasing competition from livestock for forage and constantly encroaching civilization are easily documented as negative factors. Another problem which appears to be growing is that of brush clearing, both with machinery and more effective chemicals. Brushland areas of suitable deer habitat are being converted to pure grasslands or to farms, neither of which can sustain deer populations. Total eradication of brush simply means a total loss of deer habitat.



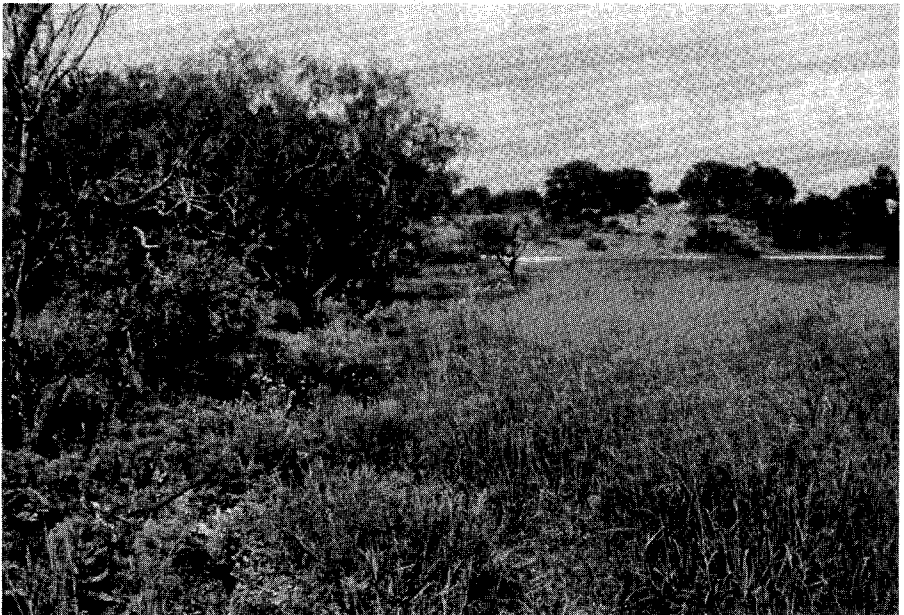
*Excessive brush clearing results in an area which is unsuitable for wildlife species.*

The economic benefits of brush control on productive soil sites are proven facts in most areas of the state, but total removal of all brush species on a ranch is disastrous to existing wildlife populations. In recent years, the value of ranch lands which have sufficient brush cover to support wildlife populations has increased at a faster rate than the value of those lands which are void of brush or woody vegetation. Multiple uses of the land for livestock production and outdoor recreation are major factors when considering land values. Many small tracts of land are being purchased for outdoor recreation with livestock production being given secondary consideration.

One of the questions often asked is, "Can I manage for both livestock and wildlife on a profitable basis?" The answer is most definitely, "Yes," and this is especially applicable on ranges where wildlife habitat and wildlife populations already exist. One of the primary objectives of a sound management program is to assure that plans provide for leaving adequate food and cover for wildlife during brush control operations. Wildlife will succeed only where their basic requirements of food and cover are satisfied.

Deer are primarily browsing ruminants. Browse such as stems, leaves, buds and bark of woody plants (both trees and brush) make up the bulk of the deer's diet during most of the year. Weeds, grass, seeds and fruits also are important food items. However, it should be pointed out that grasses in general constitute only a small percentage of a deer's total diet; therefore, a total grassland climax is not conducive to deer management.

Deer have adapted to various forms of cover requirements. Herbaceous vegetation generally does not provide sufficient cover. Some type of woody cover must be readily available. Cover must furnish protection and security from man and weather as well as provide food.



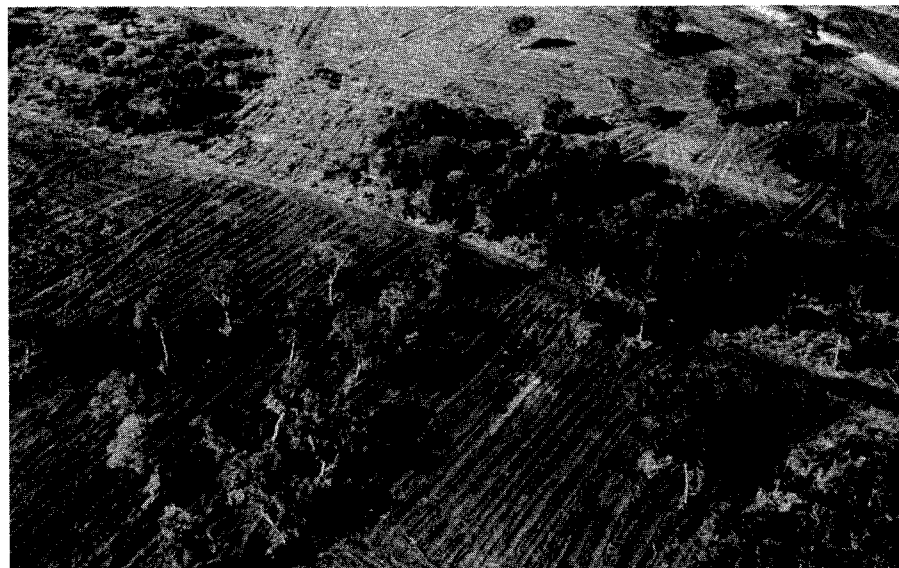
*Excellent edge effect created by properly planned or controlled clearing creates quality wildlife habitat.*

In many instances, brush cleared from better soil types results in higher forage production at a lower rate of initial investment. The steeper slopes usually are rockier with thinner soils and do not respond readily to brush-control practices.

The types of brush-control patterns used will depend upon the terrain in the area to be treated. To a great degree, natural terrain features will dictate the types and conformation of patterns.

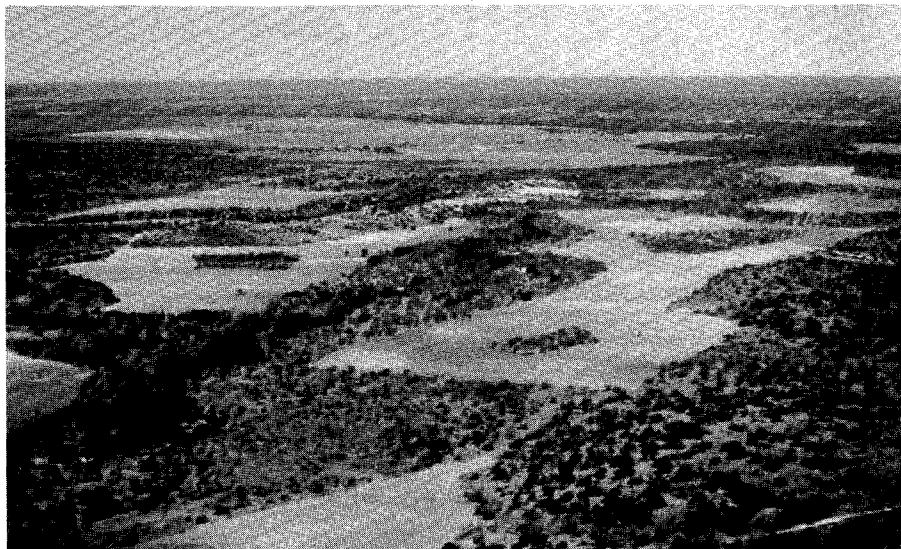


*Before treatment - Dense brush area prior to clearing.*



*After treatment - This type of clearing blends in with the surrounding terrain and does not look as artificial as the straight strips.*

Sufficient brush cover must be left along water courses which usually serve as wildlife travel lanes. The width of the strips to be left for most wildlife can be determined by visual inspection. The strips of brush to be left should be wide enough to prevent seeing through them at most points from December through February when most species have lost their leaves. All natural wildlife travel ways, which would include water courses, saddles between ridges, headers or canyon beginnings, extension of ridges and any unusual high-quality wildlife food plants should be left.



*Drainages left in native cover to provide travel lanes, escape cover, resting areas and feeding sites.*

When cleared strips extend for great distances, a belt or block of brush should be left every 200 to 300 yards to break up the open spaces and provide covered travel lanes for wildlife connecting these strips.

In South Texas where the terrain is relatively flat with no prominent features, alternate strips of cleared areas and brush produce good results, although clearing in an irregular pattern is more desirable. The strips can be established on a 1:1 ratio, such as clearing 300 feet and leaving 300 feet of brush if the strips provide sufficient cover and food. In large areas the strips can be established in gently curving patterns to block excessive views, and belts or blocks of brush can be left at desirable intervals across cleared areas. Brush strips should be left along drainage areas or draws used as natural travel ways by wildlife.

Where cleared areas tend to be excessively large, islands of brush should be left interspersed within the cleared areas to provide escape cover. As with brush strips, the islands should be large enough that they cannot be seen through from December through February.

Where islands do not provide sufficient escape cover, extensions or necks of brush can be left for escape cover and travel ways to prominent terrain features frequented by wildlife.





*Islands of brush left in cleared areas to provide escape cover, resting areas and feeding sites.*



*Extension or neck of brush left in cleared area to provide escape cover, resting areas and feeding sites.*

During the initial planning of a brush-control operation, extreme care should be taken to retain the many different types of woody food and cover plants necessary to maintain a resident wildlife population of all species. For example, woody plants or brush species are necessary to wild turkey populations, not only as food-producing plants, but also as cover and roosting timber. All existing winter roost timber should be left standing. In association with this, brush and smaller trees under or adjacent to the roosting areas must be retained. Turkeys require cover as they enter and depart the roost and also while loafing under the roost trees. Sufficient quantities of food-producing woody species such as chittum, hackberry, lote bush, oak, pecan and elm, which play an important role in the diet of the wild turkey, also should be maintained.

The improvement of range conditions through brush management will increase the available food supply for wildlife and domestic livestock. This additional food supply will improve the quality of the animals being produced. Brush should be managed only in conjunction with sound range management practices. Brush-control measures without proper range management often prove to be more detrimental to the land and animals than no brush control at all.

Although some basic rules for brush management may be applied to all treated areas, the topography, types of vegetation and wildlife species present on each ranch unit and even from pasture to pasture within a ranch will be different. Therefore, an on-the-ground inspection of the entire ranch is necessary, prior to formulating sound management plans. A wildlife technical assistance specialist is stationed in each of the four wildlife administrative regions of the state, along with wildlife biologists located throughout Texas who are available to work directly with landowners in helping to plan and apply sound wildlife programs.

For further information contact Herbert G. Kothmann, Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, Texas 78744 (Phone 512-389-4770).



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