SOIL CONSERVATION SERVICE
KENTUCKY

BRUSH MANAGEMENT (Ac)[1]
(314)

STANDARD

- Definition -

Managing and manipulating stands of shrubs and short, scrubby trees on rangeland, pastureland, and recreation and wildlife areas by mechanical, chemical, or biological means or by prescribed burning.

- Purpose -

To improve or restore a quality plant cover to (1) reduce sediment and improve water quality, (2) increase the quality and production of desirable plants for livestock and wildlife, (3) maintain or increase wildlife habitat values, (4) enhance aesthetic and recreation qualities, (5) maintain open land, and (6) protect life and property.

- Conditions Where Practice Applies -

(1) On brush-infested land having the potential to produce desirable native or adapted forage plants; (2) where adjustments in grazing management alone will not restore the kind of plant cover needed to attain conservation objectives within a reasonable time; (3) where brush management will improve areas for wildlife, recreation, or natural beauty.

- Planning Considerations -

Brush management objectives and procedures may be different for different kinds of land and for different uses of the land. For example: (1) The objective on native pasture may be to maintain a plant community that is not natural to the site but that provides soil protection and benefits the uses planned for the land. (2) It is usually desirable to exclude all brush on pastureland except for odd areas left for shade, wildlife, or aesthetic value. (3) Brush on land where wildlife is a primary or important use should be manipulated to provide optimum wildlife habitat and to facilitate wildlife management. (4) Rangeland is not a recognized landuse in Kentucky. By the same token, biological control and prescribed burning of brush are not accepted procedures for brush control on privately owned lands in the state and are not discussed in the following specifications.

It is the policy of the Soil Conservation Service to encourage the use of pest-control methods having the least potential hazard to man, animals, and the environment. Nonchemical methods of brush management shall be recommended whenever feasible.

Conservationists are to (1) encourage cooperators to fully consider present and future land use opportunities in relation to brush management, including expected effect on wildlife habitat, potential recreation use, and attractiveness of the landscape; (2) determine that the landowner understands the technical requirements, possible hazards, and costs of the practice and that the landowner will apply the kind of grazing management and maintenance measures that will insure success; and (3) help land users understand the environmental impacts of brush management, both positive and negative, onsite and offsite.

SPECIFICATIONS GUIDE

1. Methods of brush control - Brush is controlled manually, mechanically, or chemically. Brush control often requires the application of one or more of these methods.

   a. Manual control - Start reducing woody plant populations at the beginning of their invasion. At this early stage, effective control can be accomplished by ordinary grubbing with a hoe, mattock, or other hand tools. Operations of this kind may need to be repeated annually. Large woody plants may be killed by girdling which requires cutting a band completely around the tree from one to six inches wide through the bark and cambium layers. Girdle as close to the ground as practical to reduce sprouting.

   b. Mechanical control - Mechanical devices for controlling brush include mowers, bush hogs, power saws and bulldozers using an array of attachments including shearing blade, harrow, rolling chopper, etc. Woody growth should be cut as close to the ground as possible.

      Brush management on pastureland, recreation land and wildlife land will require mowing as needed to keep areas from being invaded by woody plants. See the standard and specifications for Wildlife Upland Habitat Management and Pasture and Hayland Management.

   c. Chemical control

      (1) Foliar spraying - Apply a pesticide while plants are in full leaf and actively growing. Ammate, Banvel and Tordon 101 are effective on most trees, shrubs and vines. Apply the pesticide with a sprayer, mist blower or by aerial spray. (Caution - mist blower should be equipped with a low pressure guage and the herbicide applied at 10-15 pounds pressure to reduce atomizing of spray materials.)

      (2) Frill treatment - Make a ring of overlapping ax cuts around the tree at a convenient height, penetrating the sapwood at least one-fourth inch. Apply the chemical in the frill or cut, using a handgun or sprayer. Ammate, 2,4-D (full strength), Tordon 101R and Banvel are effective any time of the year on most woody species.

(3) Injection - Tools available to inject chemicals into trees are the hypo-hatchet and various tree injectors. Space injections about one inch apart around the tree as close to the ground line as practical. 2,4-D (full strength), Tordon 101R and Banvel are effective any time of the year.

(4) Soil application - The pesticide, generally in a pellet form, is placed on the ground over the root zone of an individual plant or broadcast over a large target area. Best results are obtained by application of the pesticide in the spring before growth begins. Tordon 10K is effective on multiflora rose, hawthorn, kudzu, sumac, etc. Velpar Gridballs is another pesticide for control of hard to kill species such as dogwood, cherry, hickory, elm, hawthorn, wild plum, maple, etc. This chemical is not usually harmful to pine species so it is being used to control hardwoods spew in pine plantations.

(5) Reference - For additional information on pesticides to use, species controlled, etc. consult the University of Kentucky's Chemical Control of Weeds in Farm Crops in Kentucky.

2. Brush may be piled to create cover for wildlife. One brush pile per acre at least 10x10x6 feet, with large material on the bottom will make an effective wildlife cover.

3. Use of pesticides - If pesticides are handled or applied improperly or if unused portions are not disposed of safely, they may be injurious to humans, domestic animals, desirable plants, fish or other wildlife and they may contaminate water supplies. Drift from aerial spraying can contaminate nearby crops and other vegetation. Follow the directions and heed all precautions on the container label.

4 Filter strips - Leave strips of undisturbed vegetation (filter strips) along perennial streams, lakes and ponds to trap sediment from areas where there is considerable soil disturbance from brush removal activities. See standard and specifications for Woodland Site Preparation for widths of filter strips.

[1]"Brush" as used in this standard includes shrubs, trees and vines which invade lands on which they are not part of the natural (climax) plant community or which occur in amounts significantly in excess of that which is natural to the site.