

BRUSH MANAGEMENT WITH CHEMICALS

Aerial Broadcast Application

G. O. HOFFMAN, EXTENSION RANGE PRUSH & WEED CONTROL SPECIALIST

The Texas A&M University System

Mesquite and other undesirable woody plants have increased and changed the plant composition of grassland savannahs to dense brushlands. Plant communities can be restored economically to their natural condition with chemical and mechanical methods properly used to improve herbaceous plant cover and forage production. Woody plant control is greater on upland sandy loam soils than on clay loam soils when herbicides are applied by broadcast methods.

KIND OF BRUSH	SIZE OF BRUSH	METHOD OF APPLICATION	SEASON OF APPLICATION	CHEMICAL MIXTURE
Mesquite				
Tree type	All trees or sprouts at least 4 ft. tall or more and 4-6 years old with dense foliage.	Foliage, air spray—swath widths adequate to insure complete coverage for effective control.	Spring, under good growth conditions, 40 to 90 days after first green growth appears at the bud with dark green foliage and soil temperatures of over 70°F to begin spray operations.	2,4,5-T at 1/2 lb/acre in West Texas and 1 lb/acre in other areas in Texas. 1 gal. diesel oil and water to make 4 to 5 gal/acre solution. Picloram + 2,4,5-T at 1/2 lb/acre in West Texas. In other areas of Texas 1 lb/acre. Use 1 gal. diesel oil + special emulsifier and water to make 4 to 5 gal/acre solution for both rates. Dicamba + 2,4,5-T at 1/2 lb/acre in West Texas and 1 lb/acre in other areas of Texas. Any time heavy infestation of ragweed, use dicamba + 2,4,5-T mixture at either strength instead of straight 2,4,5-T.
Creeping type	All growth forms—original and sprouts with dense foliage.	Foliage air spray—swath widths to insure complete coverage for effective control. Usually 2 to 3 applications are necessary in successive years, limited to South Texas Plains.	Spring, under good growth conditions, 40 to 90 days after first green growth appears at the bud.	2,4,5-T at 2/3 lb/acre in 1 gal. diesel oil and water to make 5 gal/acre solution. Use picloram + 2,4,5-T at 2/3-1 lb/acre for second and third sprayings if site contains cactus, huisache, granjeno, twisted acacia, or other susceptible mixed-brush species.
Post oak	All sizes. At least 4 yr. old.	Foliage spray—swath widths to insure complete coverage for effective control. 2 applications necessary, usually in succeeding years.	Spring, after leaves become full size and before summer dormant period begins.	1ST SPRAYING—2 lbs. 2,4,5-T or silvex, 1 gal. diesel oil and water to make 4 gal. solution per acre. 2ND SPRAYING—1-1/2 lbs 2,4,5-T or silvex with water-oil mixture same as 1st spraying.
Undesirable hardwoods in established pine	All sizes. At least 4 yr. old.	Foliage spray—swath widths to insure complete coverage for effective control. 2 applications necessary.	Spring, after leaves become full size and before summer dormant period begins.	1ST SPRAYING—2 lbs. 2,4,5-T, 1 gal. diesel oil and water to make a minimum of 5 gal. solution per acre. 2ND SPRAYING—1-1/2-2 lb. 2,4,5-T with oil water emulsion same as 1st spraying.
Whitebrush	All sizes with no overstory of larger brush. Sprouts at least 1 yr. old and mesquite sprouts at least 4 ft. tall.	Foliage spray—uniform coverage in swath widths to insure complete coverage for effective control.	Spring or fall, plants fully leafed and in full bloom. Stop spraying when whitebrush begins shedding flower petals.	1/4 lb. MCPA with 1 gal. diesel oil and enough water to make 8 gal. solution per acre. Spring only, with mesquite overstory use 1 lb. picloram + 2,4,5-T, 1 gal. diesel oil + special surfactant and water to make 4 to 5 gal. solution per acre.
Sand Shinnery Oak	All sizes.	Foliage spray—swath widths to insure complete coverage for effective control. 2 or 3 applications as necessary, usually in successive years.	May 1-June 15 under good growth conditions with plants fully leafed. Do not spray following late freezes.	1/2 lb. silvex or 2,4,5-T with 1 gal. diesel oil and water to make 4 gal. solution per acre.

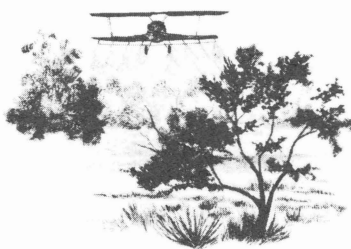
KIND OF BRUSH	SIZE OF BRUSH	METHOD OF APPLICATION	SEASON OF APPLICATION	CHEMICAL MIXTURE
Limestone Shinnery Oak	All growth forms less than 3 ft. tall with dense foliage.	Foliage spray—swath widths to insure complete coverage for effective control. 2 or 3 applications as necessary, usually in successive years.	May 1-June 15 under good growth conditions with plants fully leafed. Do not spray following late freezes.	1 lb. 2,4,5-T with 1 gal. diesel oil and water to make 4 gal. solution per acre.
Sand Sage Brush	All sizes.	Foliage spray—swath widths to insure complete coverage for effective control.	May 1-June 15 under good growth conditions with plants fully leafed.	1 lb. 2,4-D low volatile, 1 gal. diesel oil and water to make 4 gal. solution per acre.
Yucca	All sizes with no overstory of other brush.	Foliage spray—swath widths to insure complete coverage for effective control.	May 15-June 30	2/3 lb. silvex, 1 gal. diesel oil and water to make 4 gal. solution per acre.

Make aerial application concerning sprayer pressure, wind velocity and direction, air temperature, distance to remain from susceptible crops, and droplet size of spray solution in accordance with Texas Herbicide Regulations administered by Texas Department of Agriculture.

Herbicide use suggestions are based upon: effectiveness of materials; avoiding residues in excess of allowable tolerances; avoiding toxicity to economic plants, animals and humans; and avoiding detrimental side effects to the environment of the treated area. Herbicide use rates for Texas are below rates on approved labels usually. The herbicide user is always responsible for the effects of residues on his own forage crop or livestock as well as for problems caused by drift or movement of the herbicide from his property to other properties. Should questions arise concerning current label status of any approved herbicide, contact your county Extension agent or range specialists of the Texas Agricultural Extension Service.

Tolerances for 2,4,5-T and silvex low volatile esters have been extended for rangeland and pasture land use at a maximum rate for broadcast application of 4 lbs. acid equivalent per application. Tolerance for dicamba amine has been set at 40 ppm that can remain on forage and be consumed by grazing animals. Do not graze meat animals in freshly treated pastures within 30 days before slaughter. Forages used for dairy animals have specific time limits for grazing and for hay. Refer to label. Tolerance for picloram amine has been set at 80 ppm that can remain on forage and be consumed by grazing animals. Do not slaughter meat animals grazing on treated area within 14 days following application.

FOLLOW DIRECTIONS ON APPROVED LABELS ON THE CONTAINER. IF THESE PRECAUTIONS ARE OBSERVED THERE SHOULD BE NO DANGER OF EXCESS RESIDUES.



Educational programs conducted by the Texas Agricultural Extension Service serve people of all ages regardless of socio-economic levels, race, color, sex, religion or national origin.

Cooperative Extension Work in Agriculture and Home Economics, The Texas A&M University System and the United States Department of Agriculture cooperating. Distributed in furtherance of the Acts of Congress of May 8, 1914, as amended, and June 30, 1914.
10M-5-73, Revised

RM3-1