

10,000
5-2-73

Ground Application Methods To Reduce Woody Plant Densities With 2,4,5-T*

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

The Texas A&M University System

Woody plants in some areas are a normal component of the natural plant ecology but under mismanagement woody plants have changed grassland savannahs to dense brushlands. Plants should be controlled when there is an imbalance between undesirable and economic species. Approved chemicals can be used safely to balance plant communities, improve plant ecology and maintain sustained economic production. Woody plant control is greater on upland sandy loam soils than on clay loam soils.

KIND OF BRUSH	SIZE OF BRUSH	METHOD OF APPLICATION	SEASON OF APPLICATION	CHEMICAL MIXTURE	KIND OF EQUIPMENT NEEDED
Sprouts and seedlings	Sprouts at least 4 yr. old and 6 ft. tall or less	Foliage spray—complete and thorough wetting of foliage	April, May, June—adequate soil moisture and good growth conditions	3 lb. ¹ per 100 gal. water plus 2 to 16 oz. surfactant	Power sprayer or knapsack hand sprayer, 40 lb. of pressure or less
Seedlings	6 mos. or less fully leafed	Foliage spray—broadcast complete coverage	April, May June—adequate soil moisture and good growth conditions	2 lb/a mixed in 20 to 30 gal. water plus 2 to 16 oz. surfactant per 100 gal. solution	Broadcast spray. Boom or boomless nozzle with PSI 40 lb. or less
Ash, blackgum, elm, hickory, pin oak, sweetgum, sycamore, tallow, water oak, white oak	All sizes	Frill Stump	December-March, May-August	16 lb. ² per 100 gal. diesel oil or kerosene 2 to 16 oz. surfactant	Knapsack hand sprayer
Blackjack oak, bur oak, post oak, red oak	Trees up to 5 in. diameter Trees over 5 in. diameter	Trunk base Frill	December-March, May-August Anytime of year	16 lb. per 100 gal. diesel oil or kerosene	Knapsack hand sprayer
Bois d'arc, bitter pecan, cottonwood, gum elastic, hackberry, honey locust, hornbean, prickly ash, red haw, sassafras, sumac, wild chinaberry, willow, yaupon	Trees up to 5 in. diameter Trees over 5 in. diameter	Trunk base Frill Stump	December-March, May-August Anytime of year	8 lb. ³ per 100 gal. diesel oil or kerosene	Knapsack hand sprayer
Live oak	All sizes	Frill Stump Notch	December-March, May-August	8 lb. per 100 gal. diesel oil or kerosene	Knapsack hand sprayer
All woody plant species except mesquite, huisache	All sizes over 1 in. diameter	Frill—cuts 2 in. apart near base	Anytime of year	Undiluted or 32 lbs. per 100 gal. diesel oil or kerosene	Tree injector
Agarito, blackbrush acacia, catclaw acacia, elbow bush, granjeno, huisache, lote, mesquite, whitebrush	Trees up to 5 in. diameter Trees over 5 in. diameter	Trunk base Frill Stump	Anytime when soil is dry and not fused to tree trunk	8 lb. per 100 gal. diesel oil or kerosene	Knapsack hand sprayer, or power sprayer
Cactus (pricklypear, tasajillo, and cholla)	All sizes	Foliage spray—complete thorough coverage of pads, stems, and trunks of plants to point of slight runoff	Anytime during year—temperature above 55° F.	8 lb. per 100 gal. diesel oil or kerosene	Power sprayer or knapsack hand sprayer
Buckeye	Stems less than 2 in. diameter. Stems over 2 in. diameter	Trunk base Notch or frill	April-June Adequate soil moisture	32 lb. per 100 gal. diesel oil or kerosene	Knapsack hand sprayer or power sprayer
Texas Persimmon	All sizes	Trunk base Cut stump	July-February	16 lb. per 100 gal. diesel oil	Knapsack hand sprayer or power sprayer

(Continued on back)

KIND OF BRUSH	SIZE OF BRUSH	METHOD OF APPLICATION	SEASON OF APPLICATION	CHEMICAL MIXTURE	KIND OF EQUIPMENT NEEDED
Coyotillo	All sizes	Trunk base	April-August after effective rainfall	24 lb. per 100 gal. diesel oil	Knapsack hand sprayer or power sprayer
Mescal bean or mt. laurel	All sizes	Trunk base	April-August after effective rainfall	16 lb. per 100 gal. diesel oil	Knapsack hand sprayer or power sprayer
Yucca	All sizes	Crown bud	Anytime during year	8 lb. per 100 gal. diesel oil or kerosene	Knapsack hand sprayer or power sprayer

*2,4,5-T low volatile ester chemical is formulated as pounds acid equivalent per gallon. Acid equivalent varies from 1, 2, 3, 4, and 6 pounds per gallon. Tolerances for 2,4,5-T have been extended for rangeland and pastureland uses at a maximum rate for broadcast application of 4 lbs. acid equivalent per acre per application. No limits have been set for spot treatments as listed in L-414.

SMALL MIXTURES BASED ON 4 LB. A.E. PER GALLON

- ¹/₂ tbsp. per 1 gal. of water
- ²/₃ cup per 1 gal. of diesel oil or kerosene
- ¹/₃ cup per 1 gal. of diesel oil or kerosene

AMOUNT OF CHEMICAL SOLUTION TO APPLY

Frill—until it bubbles out of freshly cut surfaces made near groundline. 1 gal. should treat 30-40 4-in. trees.

Stump—complete coverage of freshly cut surface especially where wood and bark join. 1 gal. should treat 30-40 4-in. trees.

Trunk base—lower 12-18 in. of tree trunk until solution runs down bark channels to groundline. 1 gal. should treat from 15-20 4-in. trees.

HOW TO MAKE CUT SURFACES

Notches—ax blade apart around tree base, two downward ax cuts—one above the other about 3 in. apart with chip knocked out.

Frill—overlapping downward ax cuts around the tree trunk through the bark near groundline.

Stump—use ax or power saw and cut near groundline.

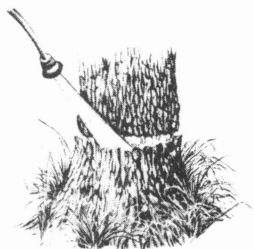
Nozzles—Knapsack hand sprayer—8004, 40 lb. PSI or less. Power Sprayer No. 4 or 6 orifice, 100 lb. PSI or less. Broadcast boom—8002; Boomless—OC 20 jets, 40 lb. PSI or less at nozzle.

Herbicide use suggestions are based upon: effectiveness of material; 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.

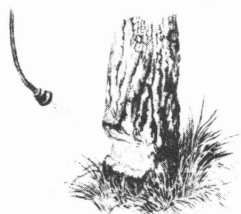
FOLIAGE



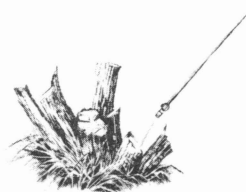
FRILL



NOTCH



STUMP



TRUNK BASE



Suggestions herein for use of herbicides to control brush are based on effective and economical rates. FOLLOW DIRECTIONS ON THE USDA APPROVED LABELS ON THE CONTAINERS. IF THIS PRECAUTION IS OBSERVED THERE SHOULD BE NO DANGER FROM CHEMICAL 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