

# NOXIOUS AND POISONOUS RANGE PLANT CONTROL

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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.

KIND OF PLANT	METHOD OF APPLICATION	SEASON OF APPLICATION	CHEMICAL MIXTURE AND KIND OF EQUIPMENT NEEDED
Bitterweed, bitter sneezeweed, careless weed, cocklebur, common broomweed, croton, Russian thistle, ragweed, snow-on-the-mountain, snow-on-the-prairie, sunflower, threadleaf groundsel, all annual weeds	Foliage spray — ground or aerial, to obtain complete coverage on all plants, wind less than 8 mph and temperatures 55 to 85 degrees F.	Spring—when young plants are 4-6 in. tall, with good growth and soil moisture conditions, before plants bloom	Power sprayer with boomless nozzle or boom type Use 2,4-D low-volatile ester at 1 lb. per acre in 15 to 25 gal. of water in areas receiving less than 25 in. of rainfall. In areas with more than 25 in. of rainfall, use 2,4-D amine, salt or acid at same rate and volume. Use 30 psi. Livestock sprayer with hand nozzle Use 2,4-D low-volatile ester or amine at 2 lb. per 100 gal. of water with surfactant. Use less than 100 psi, and a No. 6 orifice. Airplane Use 2-4-D low-volatile ester, amine, salt or acid at 1 lb. with water at 4 gal. per acre. Use less than 40 psi.
Jimmyweed or rayless goldenrod	Basal stem wetting spray, thorough coverage	Spring or early summer—when plants are growing vigorously	Power sprayer Use 2,4-D low-volatile ester at 8 lb. per 100 gal. of diesel oil. Use less than 100 psi, and a No. 4 orifice. Knapsack handsprayer Use 2,4-D low-volatile ester at 8 lb. per 100 gal. diesel oil. Use No. 8004 jet. Use 40 psi.
Horehound	Foliage spray — ground or aerial, to obtain complete coverage on all plants, with wind less than 8 mph and temperature 55 to 85 degrees F.	At any time prior to flowering when plants have sufficient soil moisture to produce vigorous growth	Power sprayer with boomless nozzle Use 2,4-D low-volatile ester at 1 lb. per acre in 15 to 25 gal. of water at 30 psi. Livestock sprayer with hand nozzle Use 2,4-D low-volatile ester at 3 lb. per 100 gal. water with surfactant.
Perennial locos—Earle, woolly, yellow-flowered	Foliage sprays — to obtain complete coverage on all plants, with wind less than 8 mph and temperatures 55 to 85 degrees F.	October — March — when plants are growing vigorously, before plants bloom or mature seed	Power sprayer with boom or boomless nozzle Use 2,4-D low-volatile ester at 1 lb. in 15 to 25 gal. water per acre at 30 psi. Livestock sprayer with hand nozzle Use 2,4-D low-volatile ester at 8 lb. per 100 gal. water, less 100 psi, with a No. 4 or a No. 6 orifice. Knapsack handsprayer Use 2,4-D low-volatile ester at 8 lb. per 100 gal. water, less than 40 psi, with a No. 8004 jet. Airplane Use 2,4-D low-volatile ester at 1 lb., with 4 to 5 gal. water per acre. Use less than 40 psi.
	Hand grubbing, 2 to 3 in. below soil surface	At any time during year	Grubbing hoe

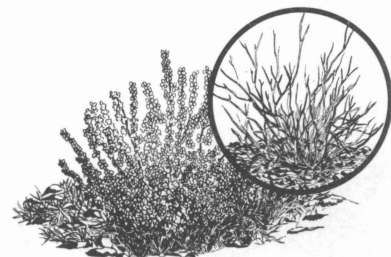
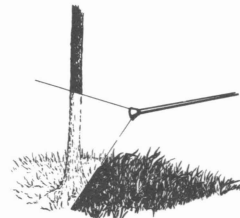
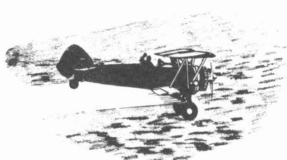
AERIAL

HIGH VOLUME OR FOLIAGE

FOLIAGE

TRUNK BASE

SOIL SURFACE



KIND OF PLANT	METHOD OF APPLICATION	SEASON OF APPLICATION	CHEMICAL MIXTURE AND KIND OF EQUIPMENT NEEDED
Annual locos— Garbancillo, peavine	Foliage sprays — to obtain complete coverage on all plants with wind less than 8 mph and temperatures 55 to 85 degrees F.	Spring — when plants are growing vigorously, before plants mature seed	Power sprayer with boomless nozzle Use brush killer at 2 lb. per 15 to 25 gal. of water per acre at 30 psi. Livestock sprayer with hand nozzle Use brush killer at 8 lb. per 100 gal. water, less 100 psi, with a No. 4 or a No. 6 orifice.
	Hand grubbing, piling and burning	At any time before plants mature seed	Grubbing hoe
Macartney rose— scattered stands undisturbed or with a top growth 3 years or older	High-volume spray to obtain complete coverage to the point of runoff on all leaves, stems, canes and trunks to groundline; do not treat waterlogged plants	Spring or fall—when plants are growing vigorously, fully leafed, few yellow leaves; before susceptible crops are planted or after harvest. Repeat treatment of sprouts 18 to 24 months after initial spraying; do not disturb dead top growth for 2 to 2½ years	Livestock sprayer with hand nozzle Use 2,4-D amine at 4 lb. per 100 gal. of water, plus 2 to 8 oz. of surfactant at 150 to 300 psi, with a No. 6 or a No. 8 orifice. Use 2,4-D amine at 3 lb., plus dicamba at 1 lb. per 100 gal. of water, plus 2 to 8 oz. of surfactant at 150 to 300 psi, with a No. 6 or a No. 8 orifice.
Macartney rose—dense stands undisturbed, or with top growth 3 years or older	Foliage spray to obtain complete coverage with wind less than 10 mph and temperatures 55 to 85 degrees F.	Spring or fall—when plants are growing vigorously, fully leafed; before susceptible crops are planted or after harvest	Airplane Use 4 lb. of 2,4-D amine per acre in the spring, or 3 lb. of 2,4-D low-volatile ester per acre in fall in 5 to 15 gal. of solution per acre in 21-ft. swaths.
Macartney rose— disturbed growth with tops less than 3 years old	Foliage spray to obtain complete coverage with wind less than 10 mph and temperatures 55 to 85 degrees F.	Spring or fall—when plants are growing vigorously, fully leafed; before susceptible crops are planted or after harvest	Power sprayer with boomless nozzle Use 2,4-D amine or low-volatile ester at 2 lb. in 15 to 25 gal. of water per acre at 30 psi. Airplane Use 2,4-D amine or low-volatile ester at 2 lb. in 5 to 15 gal. of water per acre in 21-ft. swaths. Use 2,4-D amine until May 1; use 2,4-D low-volatile ester after May 1.

Aerial applications (in regard to sprayer pressure, wind velocity and direction, air temperature, distance to remain from susceptible crops and droplet size of spray solution) should be made in accordance with Texas Herbicide Regulations administered by the Texas Department of Agriculture.

Suggestions for herbicide use are based upon the following: 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. Rates for herbicide use in Texas are usually below rates on EPA-approved labels. However, the **herbicide user is always responsible** for the effects of residues on his own forage crops 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 the current label status of any approved herbicide, contact your county Extension agent or the range specialists of the Texas Agricultural Extension Service, The Texas A&M University System.

Tolerances for 2,4,5-T and 2,4-D have been extended for rangeland and pastureland 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. **Meat** animals are not to be grazed in freshly treated pastures within 30 days before slaughter, but forages used for **dairy** animals have specific time limits for grazing and for hay. (Refer to EPA-approved label.)

FOLLOW DIRECTIONS ON APPROVED LABELS ON HERBICIDE CONTAINERS. IF THESE PRECAUTIONS ARE OBSERVED, THERE SHOULD BE NO DANGER OF EXCESS RESIDUES.

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