

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
BRUSH CONTROL				
Imazapyr @ 0.25 to 0.75 lb/A	Persimmon, sassafras, oak, hickory, sweetgum.	Arsenal 1% solution.	May to September.	Add 0.5% surfactant. No grazing restrictions. Will kill grass. Do not exceed 48 oz per acre.
metsulfuron + chlorsulfuron @ 0.0011 + 0.0038 + 0.012 + 0.038 lb/A	Blackberry, buckbrush, dewberry, multiflora rose, honeysuckle, kudzu.	Cimarron Plus 1.5 oz per 100 gal water.	At full leaf out in May. Blackberry flowering, leaves should be fully developed.	May be applied with hand equipment. Add 1 oz per 100 gallons of water and 0.25% nonionic surfactant. Spray to runoff. Do not exceed 75 gallons per acre. Ally is not a broad spectrum brush control material.
2,4-D + picloram @ 2 + 0.54 lb/A	Buckbrush, honeylocust, multiflora rose, some oaks, persimmon, prickly pear cactus.	Grazon P+D 4 qt/A.	At full leaf out in May or June.	Use high rate for prickly pear control. Results are very slow. Evaluate one year after application. Add 0.5% nonionic surfactant. Tank mix Grazon P+D with 1 qt/A or 0.5% Remedy or for broad spectrum mixed brush control. Adding Remedy may improve honeylocust control. Use 1 to 2% solutions for hand held equipment.
picloram @ 0.25 to 0.5 lb/A	Prickly pear cactus, persimmon, honeylocust.	Tordon 22K 1 to 2 pt/A.	Treat prickly pear in early May. Treat persimmon or honeylocust in May or June.	Read the entire label carefully before using picloram. We recommend that it be used as a spot treatment (see label) rather than broadcast application. Do not exceed 1 quart of Tordon 22K per acre per season. Picloram is a chemical which can travel (seep or leach) through soil and under certain conditions has the potential to contaminate groundwater which may be used for irrigation and drinking purposes. Users are advised not to apply picloram where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local county Extension office can provide further information on the type of soil in your area and the location of groundwater.
picloram + fluroxypyr @ 0.22 + 0.18 to 0.9 to 0.72 lb/A	Horsenettle, hemp dogbane, ragweed, thistles, etc., and also for many brush species, including blackberry and multiflora rose. Will not control any grass weeds or sedges.	Surmount 1.5 to 2 pts for general broadleaf control. 3 to 6 pts for brush control.	During active weed growth. Blackberry and multiflora rose are best controlled when they have not been mowed for at least one year.	New legume seedlings may not be successful if planted within 1 year after applying herbicide. Consult label for specific recommendations. Using a surfactant will improve the performance of this herbicide.

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triclopyr @ 0.75 to 1.5 lb/A	Blackberries, buckeye, oaks, willow, pine, sumac, osage orange, sweetgum, mixed brush.	Remedy, Tahoe 4E 1.5 to 3 pt/A.	Apply during good growing conditions. Blackberries: flowering through mid-July, leaves must be fully developed on fruiting canes. May through June for general foliar use. Treat cut stumps when fresh, make basal bark applications during dormant season.	Use a 0.5 to 1% solution for hand equipment applications. Add 0.5% nonionic surfactant. Follow-up applications will be needed for control of most species. Tank mix with 1 gallon per acre or 2% Grazon P+D for broader spectrum brush control.
triclopyr	Most woody species.	Pathfinder II Triclopyr + oil.	Basal bark and cut stumps; anytime, streamline basal bark: late spring-early summer.	Apply undiluted with a backpack or knapsack sprayer to bark or cut stumps. Use low pressure and a flat fan or solid cone nozzle. See label for detailed instructions covering the various application methods.
triclopyr + fluroxypyr @ 0.12 + 0.38 to 1.5 + 0.5 lb/A	Blackberry and multiflora rose. Controls unwanted trees by individual plant treatment. Broadleaf weeds controlled include ironweed, hemp dogbane and <i>Sericea lespedeza</i> . Will not control any grass weeds or sedges.	PastureGard 2 to 3 pts for general broadleaf control. 3 to 8 pts for brush control.	During active weed growth. Apply as a broadcast treatment after brush has leafed out. For blackberry, application after fruit drop will provide the best control.	Clover and other legumes will be controlled, but can be replanted any time following the application. PastureGard herbicide can be volatile in warm weather and precautions to avoid spray drift must be followed. Follow all label instructions. PastureGard is mainly for brush control in pastures and fencerows. Consult label for specific recommendations. Using a surfactant will improve the performance of this herbicide.
glyphosate @ 2 to 5 lb/A	Blackberry, honeysuckle, kudzu, multiflora rose, poison ivy, trumpet creeper.	Glyphosate (4 lb/gal formulations) See table on page 23 for specific glyphosate conversions and surfactants. 2 to 5 qt/A.	Late fall to early summer before leaf color changes. Do not apply to drought stressed or dusty brush.	Use a 2% solution for spot treatment. Add 0.5% nonionic surfactant. Follow-up treatment will be needed. Will kill grass.
tebuthiuron @ 2 to 4 lb/A	Buckbrush, red cedar, elms, hickory, honeylocust, honeysuckle, oaks, pines, sweetgum.	Spike 20P 10 to 20 lb/A.	Can be applied any time. Late winter and early spring applications perform the best. Needs rainfall for activation.	Soil applied only. May take up to 3 years for complete kill. Do not use on soils with a high clay content. Persimmon and sassafras are not controlled. Do not apply where the roots of desirable vegetation extend. Root spread of trees may be triple the crown width. Will injure grass. Apply during the dormant season Do not apply when the soil is frozen or snow covered. Do not apply to red cedar over 6 feet tall.

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hexazinone @ 0.66 lb/A	Red cedar, elms, honeysuckle, hickory, oaks.	Velpar L 2 to 4 milliliters per stem up to 1/3 gal/A.	Can be applied any time. Late winter and early spring applications perform the best. Needs rainfall for activation.	Soil applied only. Do not use on soils with a high clay content. Persimmon and sassafras are not controlled. Do not apply where the roots of desirable vegetation extend. Will injure grass. Apply during the dormant season Do not apply when the soil is frozen or snow covered. Do not apply to red cedar over 6 feet tall. Apply to soil at base of stem with a spotgun. Do not exceed 1/3 gal per acre per season or treat more than 709 brush plants per acre per season.
2,4-D + dicamba @ 1.4 + 0.5 lb/A	Buckbrush, hawthorn, black locust, sumac, willows.	KambaMaster, Brash, Weedmaster, Range Star 2 qt/A.	At full leaf out in spring.	Effective on a limited number of brush species. Contains amine 2,4-D. Follow-up treatments are usually needed. Use 2% solution for hand equipment applications. add 0.5% nonionic surfactant.
2,4-D ester @ 2 to 4 lb/A	Buckbrush, black locust, hawthorn, sumac, willows.	2,4-D 2 to 4 qt/A.	At full leaf out in spring.	Ester formulations more readily penetrate the leaves of brush species. Effective on a limited number of brush species. Follow-up treatments are usually needed. Use 2% solution for hand equipment applications. Add 0.5% nonionic surfactant. Some studies have shown the amine formulation to be more effective on buckbrush.
Alfalfa				
Postemergence				
2,4-DB amine @ 1 lb/A	Broadleaf weeds.	Butyrac 200/Butoxone 2.3 qt of 1.75 lb/gal 2,4-DB or 2 qt of 2 lb/gal.	When alfalfa seedlings are 3 inches or following hay harvest before new growth starts.	AVOID DRIFT. Best applied to very small weeds, 2 to 6 leaves.
bromoxynil @ 0.25 to 0.375 lb/A	Seedling broadleaf weeds.	Buctril 2E 1 to 1.5 pt/A. Use higher rate for less susceptible weeds.	Apply when seeding alfalfa is in the 2 to 4 leaf stage. Weeds should be 4 leaf or less than 2 inches tall.	Crop leaf burn can occur following application. Do not add a surfactant or crop oil. Do not treat when temperatures exceed 70°F. Do not apply to alfalfa under stress. Do not feed or graze for 30 days following treatment. May be tank mixed with 2,4-DB.
imazethapyr 0.047 to 0.094 lb/A	Foxtails, chickweed, cocklebur, mustards, shepherdspurse.	Pursuit 70 DG 1.08 to 2.16 oz/A.	Postemergence to seedling alfalfa when the weeds are in the 1 to 3 inch size range.	Apply to alfalfa that has reached the second trifoliate or later. Pursuit may be tank mixed with other herbicides. Add crop oil concentrate and UAN at 1 qt/A.