

# PASTURE AND RANGE WEED CONTROL SUGGESTIONS

Read and follow all label directions before product use.

Trade Name, Formulation, and Application Rate	Active Ingredient(s), Similar Products and MOA Group	Application Timing(s), EPP-early preplant, PPI-preplant incorporated PRE-preemergence, or POST-postemergence	Special Instructions and Remarks
<b>2,4-D Amine</b> 3.8 lb ai per gallon  <b>POST applications:</b> 1 to 2 qt/A	<b>Active Ingredients:</b> 2,4-D  <b>Similar Products:</b> Many  Rates may vary due to formulation.  <b>MOA: 4</b>	<b>POST.</b> Preferably apply when weeds are small and actively growing before the bud stage. Repeated applications may be needed for less susceptible weeds. Refer to label for application rates for specific target weeds.	<b>Do not</b> graze dairy animals for 7 days after application. <b>Do not</b> cut grass for hay for 30 days after treatment. <b>Remove</b> meat animals from treated areas 3 days prior to slaughter. <b>Do not</b> use on alfalfa, clover, other legumes, or newly seeded pastures. <b>Do not</b> apply if rainfall is expected within 1 hour.
<b>2,4-D Ester</b> 3.8 lb ai per gallon  <b>POST applications:</b> 1 to 2 qt/A	<b>Active Ingredients:</b> 2,4-D  <b>Similar Products:</b> Many  Rates may vary due to formulation.  <b>MOA: 4</b>	<b>POST.</b> Preferably apply when weeds are small and actively growing. Repeated applications may be needed for less susceptible weeds. Refer to label for application rates for specific target weeds.	<b>Do not</b> graze dairy animals for 7 days after application. <b>Do not</b> cut grass for hay for 30 days after treatment. <b>Remove</b> meat animals from treated areas 3 days prior to slaughter. <b>Do not</b> use on alfalfa, clover, other legumes, or newly seeded pastures. <b>Do not</b> apply if rainfall is expected within 1 hour. Use with caution as this formulation is volatile.
<b>Amber CustomPak</b> 75% WDG  <b>POST applications:</b> 0.28 to 0.56 oz/A	<b>Active Ingredient:</b> Triasulfuron  <b>Similar Products:</b> Amber Accu-Pak  <b>MOA: 2</b>	<b>POST.</b> Apply to emerged and actively growing weeds. A nonionic surfactant should be included in the spray mixture. Apply the initial application at the standard rate of 0.28 oz/A, followed by a second application not more than 60 days later at up to 0.56 oz/A.	<b>Do not</b> cut for hay for 30 days following application. Grazing may occur immediately following application. <b>Do not</b> apply more than 0.84 oz/A per year.
<b>Banvel</b> 4 lb ai per gallon  <b>All applications:</b> 0.5 pt/A to 2 qt/A	<b>Active Ingredient:</b> Dicamba  <b>Similar Products:</b> Clarity, Overdrive, Sterling  <b>MOA: 4</b>	<b>POST.</b> May be applied to small actively growing weeds as well as established weed growth. Refer to label for application rates for specific target weeds and growth stages. Use rates of 0.5 to 3 pt/A for annual and biennial weeds, and 0.5 to 2 qt/A for perennial weeds and woody brush and vines.	<b>Do not</b> exceed a total of 2 qt/A per season. <b>Do not</b> remove animals from treated areas for slaughter prior to 30 days after last application. <b>See table</b> for lactating animal grazing and haying restrictions. <b>There is no</b> waiting period between treatment and grazing for non-lactating animals.

<b>Banvel timing Restrictions for Lactating Animals</b>		
Rate per Treated Acre	Days before Hay Harvest	
	Days Before Grazing	
Up to 1 pt /A	7 days	37 days
Up to 1 qt /A	21 days	51 days
Up to 2 qt /A	40 days	70 days

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<b>Cimarron Plus</b> 60% DF  <b>POST applications:</b> 0.125 to 1.25 oz/A	<b>Active Ingredient:</b> Metsulfuron methyl  <b>Similar Products:</b> Ally XP Metsulfuron Methyl 60 DF Purestand  <b>MOA: 2</b>	<b>POST.</b> For best results, apply to young, actively growing weeds. The use rate depends upon the weed spectrum and size of weeds at application.	<b>Do not</b> apply more than 1.66 oz/A per year. <b>There are no</b> grazing or haying restrictions for this product. . <b>Refer</b> to label for precautions and restrictions of use in fescue and timothy grass. <b>For sericea lespedeza control, apply 0.4 - 0.5 oz/A Cimarron Plus with 0.5% v/v surfactant in the fall during full bloom stage.</b>
<b>Crossbow</b> 3.0 lb ai per gal  <b>POST applications:</b> 1 to 4 qt/A	<b>Active Ingredients:</b> 2,4-D Triclopyr  <b>Similar Products:</b> None  <b>MOA: 4 &amp; 4</b>	<b>POST.</b> Apply when weeds are actively growing. Re-treatment of hard to control weeds may be necessary. Apply no more than 1 gallon/A per season.	<b>Do not</b> allow lactating dairy animals to graze treated areas until the next growing season following application. <b>Do not</b> harvest hay for 14 days after application. <b>Remove</b> livestock from treated grass at least 3 days before slaughter.
<b>Curtail</b> 2.38 lb ai per gallon  <b>POST applications:</b> 2 to 4 qt/A	<b>Active Ingredients:</b> Clopyralid 2,4-D  <b>Similar Products:</b> None  <b>MOA: 4 &amp; 4</b>	<b>POST.</b> Apply when weeds are actively growing. Apply 2 qt/A rate on light to moderate infestations under good growing conditions. Apply 3 qt/A rate on dense infestations or poor growing conditions such as drought. For control of Russian knapweed, apply 3-4 qt/A at the early bud to mid-flowering stage or on fall regrowth.	<b>Do not</b> use on newly seeded areas until grass is well established as indicated by vigorous growth and development of tillers and secondary roots. <b>Do not</b> graze lactating dairy animals in treated areas for 14 days after application. <b>Do not</b> cut treated grass for hay within 30 days after application. <b>Remove</b> meat animals from freshly treated areas 7 days before slaughter. Withdrawal is not needed if 2 weeks or more have elapsed since application. <b>Do not</b> transfer livestock from treated grazing areas to sensitive broadleaf crop areas without first allowing 7 days of grazing on an untreated pasture.
<b>Curtail M</b> 2.77 lb ai per gallon  <b>POST applications:</b> 2 to 4 qt/A	<b>Active Ingredients:</b> Clopyralid MCPA  <b>Similar Products:</b> None  <b>MOA: 4 &amp; 4</b>	<b>POST.</b> Apply when weeds are actively growing. Apply 2 qt/A rate on light to moderate infestations under good growing conditions. Apply 3 qt/A rate on dense infestations or poor growing conditions such as drought. For control of Russian knapweed, apply 3-4 qt/A at the early bud to mid-flowering stage or on fall regrowth.	<b>Do not</b> use on newly seeded areas until grass is well established as indicated by vigorous growth and development of tillers and secondary roots. <b>Do not</b> forage or graze dairy animals on treated areas for 7days after application. <b>Do not</b> cut treated grass for hay within 30 days after application. <b>Do not</b> forage or graze meat animals on treated areas within 7 days of slaughter. <b>Do not</b> transfer livestock from treated grazing areas to sensitive broadleaf crop areas without first allowing 7 days of grazing on an untreated pasture.
<b>Diuron 80</b> 80% WDG  <b>PRE applications:</b> 1 to 3 lb/A	<b>Active Ingredients:</b> Diuron  <b>Similar Products:</b> None  <b>MOA: 7</b>	<b>PRE.</b> Apply 1 to 3 lb/A after sprigging bermudagrass and before emergence of bermudagrass or weeds. For control of emerged annual weeds up to 4 in height, apply 0.5 to 1 lb/A. If bermudagrass has emerged at time of treatment, temporary burn of exposed plant parts may occur.	<b>Do not</b> graze or feed foliage from treated areas to livestock within 70 days after application. <b>Do not</b> treat areas where sprigs are planted less than 2" deep as crop injury may result.

# PASTURE AND RANGE WEED CONTROL SUGGESTIONS (CONT'D)

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<p><b>Gramoxone Extra<sup>f</sup></b> 2.5 lb ai per gallon</p> <p><b>POST applications:</b> 1.25 to 1.5 pt/A</p>	<p><b>Active Ingredients:</b> Paraquat</p> <p><b>Similar Products:</b> Gramoxone Max Gramoxone Super Tres Cyclone Max</p> <p><b>MOA:</b> 22</p>	<p><b>POST.</b> Apply to native pastures for control of downy and Japanese brome. Apply in spring after 90% node formation of brome species, but before full bloom. Emerged grasses will be burned by application, but application after 90% node formation will allow adequate time for native grasses to recover and attain maximum growth in the use season. Addition of either an NIS or COC is required.</p>	<p><b>Do not</b> apply more than 1.5 pt/A per year. <b>Do not</b> apply to pastures with more than 3 inches of height at time of application.</p>
<p><b>Grazon P+D<sup>f</sup></b> 2.54 lbs ai per gallon</p> <p><b>POST applications:</b> 1 to 4 pt/A</p>	<p><b>Active Ingredients:</b> Picloram 2,4-D</p> <p><b>Similar Products:</b> Galaxy</p> <p><b>MOA:</b> 4 &amp; 4</p>	<p><b>POST</b> Use higher application rates in areas with dense weed populations or for longer residual control. For best results the lower rate should be used only when environmental conditions are favorable for plant growth and when the plants are in the growth stage recommended on the label. Repeat treatments may be applied if necessary as long as 4 qt/A per year is not exceeded.</p>	<p><b>Do not</b> allow lactating dairy animals to graze treated areas within 7 days after application. <b>Do not</b> harvest grass cut for hay from treated areas for 30 days after application. <b>Meat animals</b> must be withdrawn from treated forage at least 3 days before slaughter. <b>Do not</b> exceed 4 qt/A per year. <b>Do not</b> transfer livestock from treated grazing areas to broadleaf crop areas without first allowing 7 days of grazing on untreated grass pasture.</p>
<p><b>Outrider</b> 75% WDG</p> <p><b>POST applications:</b> 1.33 ounces per acre</p>	<p><b>Active Ingredients:</b> sulfosulfuron</p> <p><b>Similar Products:</b> none</p> <p><b>MOA:</b> 2</p>	<p><b>POST.</b> Apply with 0.25% non-ionic surfactant in 10 to 40 gallon per acre. Retreating with 1.33 ounces per acre is permitted, but total annual applications cannot exceed 2.66 ounces per acre. May be grazed immediately after treatment. Delay hay harvest for 14 days following treatment.</p>	<p>Bermudagrass pastures. Apply to actively growing johnsongrass that is at least 18 to 24 inches tall and up to the heading stage. Sedges should be actively growing with sufficient leaf area to intercept the herbicide. See label for spot treatment applications and approved tank mixtures.</p>
<p><b>Overdrive</b> 0.7 lb ae per gallon</p> <p><b>POST applications:</b> 4 to 8 fl oz/A</p>	<p><b>Active Ingredients:</b> Diflufenopyr Dicamba</p> <p><b>Similar Products:</b> Banvel, Clarity, Sterling</p> <p><b>MOA:</b> 4 &amp; 4</p>	<p><b>POST.</b> Apply to small actively growing weeds. Use higher rates within the rate range if treating larger weeds.</p>	<p><b>Do not</b> apply in less than 3 gallons of spray volume per acre. <b>Do not</b> apply within 4 hours of an expected rainfall. <b>Do not</b> apply more than 10 fl oz/A per year. <b>Do not</b> apply aerially. Near desirable vegetation. <b>Do not</b> apply near crops sensitive to growth regulator type herbicides.</p>
<p><b>Pasturegard</b> 2 lb ae per gallon</p> <p><b>POST applications:</b> 1.5 to 4 pt/A</p>	<p><b>Active Ingredients:</b> Triclopyr Fluroxypyr</p> <p><b>Similar Products:</b> None</p> <p><b>MOA:</b> 4 &amp; 4</p>	<p><b>POST.</b> Apply to small actively growing weeds. <b>For sericea lespedeza control, apply 1.5 to 2 pts/A, with surfactant, from late May through July when soil moisture is adequate.</b> New sericea growth should not be grazed and should be taller than the standing old growth from previous year.</p>	<p><b>Do not</b> apply more than 4 quarts per acre per growing season. <b>Do not</b> exceed 0.5 lb ae/A fluroxypyr or 2.0 lb ae/A triclopyr per season. <b>Do not</b> reseed treated areas for at least 3 weeks after application. <b>Do not</b> harvest treated area for hay for at least 14 days after application. <b>Do not</b> feed treated hay or allow livestock to graze treated grass within 3 days of slaughter, if treatment and slaughter occur in the same year.</p>
<p><b>Rave</b> 63.8% WDG</p> <p><b>POST applications:</b> 2 to 4 oz/A</p>	<p><b>Active Ingredients:</b> Triasulfuron Dicamba</p> <p><b>Similar Products:</b> None</p> <p><b>MOA:</b> 2 &amp; 4</p>	<p><b>POST.</b> Refer to label for treatable grasses and specific application rates. For new seedlings of these grasses, do not apply until at least 60 days after emergence of the desirable grasses or 30 days after sprigging of bermudagrass. In addition to the 2 to 4 oz/A rate, applications of 5oz/A may be made to when heavy infestations of the weeds listed in the label exist.</p>	<p><b>Do not</b> cut for hay for 37 days after application. <b>Do not</b> apply within 4 hours of an expected rainfall. <b>Do not</b> make more than one application per year. <b>Do not</b> apply near vegetation that is sensitive to growth regulator type herbicides.</p>

# PASTURE AND RANGE WEED CONTROL SUGGESTIONS (CONT'D)

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<p><b>Reclaim</b> 3 lb ai per gal</p> <p><b>POST applications:</b> 1.33 pt/A</p>	<p><b>Active Ingredient:</b> Clopyralid</p> <p><b>Similar Products:</b> Stinger Transline Rates may vary due to formulation.</p> <p><b>MOA:</b> 4 &amp; 4</p>	<p><b>POST.</b> The herbicidal response of mesquite is strongly influenced by foliage condition, stage of growth and environmental conditions. For best results, apply when new growth foliage has turned from light to dark green, when soil temperature is above 75°F at a depth of 12 to 18 inches, and soil moisture is adequate for plant growth.</p>	<p><b>Do not</b> apply more than 1.33 pt/A per annual growing season. <b>Hay harvest</b> is not considered to be feasible for at least one year following application because of standing woody plants.</p>
<p><b>Redeem R&amp;P</b> 3 lb ai per gal</p> <p><b>POST applications:</b> 1.5 to 4 pt/A</p>	<p><b>Active Ingredient:</b> Triclopyr Clopyralid</p> <p><b>Similar Products:</b> None</p> <p><b>MOA:</b> 4 &amp; 4</p>	<p><b>POST.</b> Apply at a rate of 1.5 to 2 pt/A for control of annuals and up to 4 pt/A for control of deep rooted perennial broadleaf weeds. Refer to the label for suggested application rates for specific target weeds.</p>	<p><b>Do not</b> harvest hay for lactating dairy animals until the next growing season. <b>Do not</b> harvest hay for other livestock for 7 days after treatment. <b>Do not</b> graze or harvest green forage for lactating dairy animals for 14 days after treatment. There are no grazing restrictions for other livestock. <b>Do not</b> transfer from treated areas to sensitive broadleaf crop areas without first allowing 7 days of grazing on an untreated pasture or feeding of untreated hay. <b>Do not</b> apply more than 4 pt/A per year.</p>
<p><b>Remedy</b> 4 lb ai per gal</p> <p><b>POST applications:</b> 1.33 pt/A</p>	<p><b>Active Ingredient:</b> Triclopyr</p> <p><b>Similar Products:</b> Forestry Garlon 4 Garlon 3A Garlon 4 Pathfinder II Remedy RTU Tahoe 3A</p> <p>Rates may vary due to formulation.</p> <p><b>MOA:</b> 4</p>	<p><b>POST.</b> Apply anytime the target weeds or brush is actively growing. Refer to label for application rates for specific target weeds and brush.</p>	<p><b>Grazing and Haying Restrictions (Lactating Dairy Animals): Application of 2 qt/A or less: Do not</b> graze or harvest green forage from treated area for 14 days after treatment. <b>Greater than 2 qt/A: Do not</b> graze or harvest green forage until the next growing season. <b>Do not</b> harvest hay until the next growing season.</p> <p><b>Grazing and Haying Restrictions (Other Livestock): Application of 2 qt/A or less: No</b> grazing restrictions. <b>Do not</b> harvest hay for 7 days after treatment. <b>Greater than 2 qt/A to 4 qt/A: Do not</b> graze or harvest green forage from treated area for 14 days following treatment. <b>Do not</b> harvest hay for 14 days after treatment. <b>Greater than 4 qt/A: Do not</b> harvest hay until the next growing season. <b>Withdraw</b> livestock from grazing treated areas or consumption of treated hay at least 3 days before slaughter.</p>

# PASTURE AND RANGE WEED CONTROL SUGGESTIONS (CONT'D)

Read and follow all label directions before product use.

Trade Name, Formulation, and Application Rate	Active Ingredient(s), Similar Products and MOA Group	Application Timing(s), EPP-early preplant, PPI-preplant incorporated PRE-preemergence, or POST-postemergence	Special Instructions and Remarks
<p><b>Roundup Original Max</b> 5.5 lb ai per gal</p> <p><b>All applications:</b> 8 to 11 fl oz/A</p>	<p><b>Active Ingredient:</b> Glyphosate</p> <p><b>Similar Products:</b> Many Rates may vary due to formulation.</p> <p><b>MOA: 9</b></p>	<p><b>PRE (pasture).</b> May be applied prior to planting or emergence of forage grasses.</p> <p><b>Spot Treatment (pasture).</b> Apply in areas where the movement of domestic livestock can be controlled.</p> <p><b>POST (rangeland).</b> Apply 8 to 11 fl oz/A to control or suppress many weeds. Apply when most mature brome plants are in early flower and before green-up of desired rangeland grasses</p>	<p><b>PRE (pasture).</b> Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.</p> <p><b>Spot Treatment (pasture).</b> Do not treat more than 10% of the total pasture area at one time.</p> <p><b>Remove domestic livestock</b> before application and wait 14 days after application before grazing livestock or harvesting.</p> <p><b>POST (rangeland).</b> Do not make more than one application per year. <b>Grazing</b> of treated areas should be delayed to encourage growth of desirable perennials.</p>
<p><b>RT Master</b> 3 lb ai per gal</p> <p><b>All applications:</b> 12 to 48 fl oz/A</p>	<p><b>Active Ingredient:</b> Glyphosate 2,4-D</p> <p><b>Similar Products:</b> None</p> <p><b>MOA: 9 &amp; 4</b></p>	<p><b>PRE (pastures).</b> May be used to control perennial pasture species listed on the label prior to replanting.</p> <p><b>Spot treatment (pastures).</b> Apply in areas where the movement of domestic animals can be controlled. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting. No more than 0.1 of any acre should be treated at one time.</p> <p><b>POST (rangelands).</b> Apply 12 to 16 fl oz/A to control or suppress many weeds. Apply when most mature brome plants are in the early flower and before the plants including seedheads turn color.</p>	<p><b>Do not</b> use in any counties other than: Alfalfa, Beaver, Blaine, Canadian, Cimarron, Custer, Dewey, Ellis, Garfield, Grant, Harper, Kay, Kingfisher, Logan, Major, Noble, Pawnee, Payne, Roger Mills, Texas, Woods, and Woodward.</p> <p><b>PRE (pastures).</b> Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.</p> <p><b>POST (rangelands).</b> Do not graze lactating dairy animals on treated areas within 7 days after application. <b>Do not</b> harvest grass cut for hay from treated areas for 30 days. <b>Withdraw</b> meat animals from treated forage at least 3 days before slaughter.</p>
<p><b>Spike 20P</b> 0.2 lb ai per gal</p> <p><b>POST applications:</b> Less than 20 inches of annual rainfall: 10 lb/A More than 20 inches annual rainfall: 20 lb/A</p>	<p><b>Active Ingredient:</b> Tebuthiuron</p> <p><b>Similar Products:</b> None</p> <p><b>MOA: 7</b></p>	<p><b>POST.</b> May be applied anytime except when the soil is frozen or is saturated with moisture. Applications should be made prior to the resumption of active seasonal growth in the spring or before expected seasonal rainfall. Dormant season application is recommended to minimize herbicidal effects on desirable forage grasses. Refer to label for application rates for specific target weeds.</p>	<p><b>Do not</b> apply where bedrock is continuously exposed or in areas of bedrock overlain by soils that are shallow or discontinuous. <b>Do not</b> apply in areas adjacent to sinkholes or depressions lacking external drainage which occur in areas of karst topography. <b>Do not</b> apply to high shrink/swell soils which develop deep cracks upon drying. <b>Do not</b> cut hay for livestock feed for one year after a treatment. <b>Do not</b> apply more than once per year. <b>There are no</b> label restrictions which require livestock grazing to be delayed following an application.</p>

# PASTURE AND RANGE WEED CONTROL SUGGESTIONS (CONT'D)

Read and follow all label directions before product use.

<p><b>Surmount</b> 1.34 lb ae per gal</p> <p><b>POST applications:</b> Up to 0.75 to 3 qt/A</p>	<p><b>Active Ingredient:</b> Picloram Fluroxypyr</p> <p><b>Similar Products:</b> None</p> <p><b>MOA:</b> 4 &amp; 4</p>	<p><b>POST.</b> For best results treat when weeds are small and actively growing in the spring before bloom, however, certain weeds may also be treated in late summer to fall. Refer to label for application rates for specific target weeds.</p>	<p><b>Do not</b> apply more than 3 qt/a per year. <b>Do not</b> apply to newly sprigged bermudagrass until runners (stolons) have reached at least 6 inches in length. <b>Do not</b> harvest hay within 7 days after application. <b>Meat animals</b> grazing for up to 2 weeks after treatment should be removed from treated areas three days prior to slaughter. <b>Do not</b> graze lactating dairy animals on treated areas within two weeks after treatment. <b>Do not</b> exceed a total of 2 qt /A per year. <b>Do not</b> transfer livestock from treated areas onto broadleaf crops without first allowing 7 days of grazing untreated grass pasture.</p>
<p><b>Tordon 22K<sup>†</sup></b> 2 lb ai per gal</p> <p><b>POST applications:</b> Up to 2 qt/A</p>	<p><b>Active Ingredient:</b> Picloram</p> <p><b>Similar Products:</b> None</p> <p><b>MOA:</b> 4</p>	<p><b>POST.</b> For best results treat when weeds are small and actively growing in the spring before bloom, however, certain weeds may also be treated in late summer to fall. Refer to label for application rates for specific target weeds. May be applied at up to 2 qt /A for control of noxious weeds.</p>	<p><b>Do not</b> cut grass for feed within two weeks after treatment when applying more than 1 qt /A. <b>Meat animals</b> grazing for up to 2 weeks after treatment should be removed from treated areas three days prior to slaughter. <b>Do not</b> graze lactating dairy animals on treated areas within two weeks after treatment. <b>Do not</b> exceed a total of 2 qt /A per year.</p>
<p><b>Velpar DF</b> 75% DF</p> <p><b>PRE applications:</b> 0.9 – 1.5 lb/A</p>	<p><b>Active Ingredient:</b> Hexazinone</p> <p><b>Similar Products:</b> None</p> <p><b>MOA:</b> 5</p>	<p><b>POST.</b> Make a single application when weeds are actively growing for control of smutgrass and other weeds in bermudagrass/bahiagrass. For control of undesirable woody plants, apply from late winter through summer, pre-budbreak until new growth hardens off.</p>	<p><b>Do not</b> treat newly sprigged or sodden areas. <b>Do not</b> cut treated vegetation for hay or forage nor graze domestic animals on treated areas for 60 days. <b>Do not</b> use on frozen soils.</p>
<p><b>Weedmaster</b> 3.87 lb ai per gal</p> <p><b>POST applications:</b> 4 pt/A</p>	<p><b>Active Ingredient:</b> Dicamba 2,4-D</p> <p><b>Similar Products:</b> Brash KambaMaster Veteran 720 Rates may vary due to formulation.</p> <p><b>MOA:</b> 4</p>	<p><b>POST.</b> Best results will be obtained if applied at the germinating stage of weeds. Retreatments may be made as needed, however, do not exceed a total of 8 pt/A per season. Newly seeded areas may be injured if rates greater than 2 pt/A are applied.</p>	<p><b>Do not</b> apply more than 8 pt/A per season. <b>Do not</b> permit meat animals being finished for slaughter to graze treated fields within 30 days of slaughter. <b>Do not</b> graze lactating dairy animals within 7 days of treatment. <b>Do not</b> harvest dry hay or silage within 37 days of treatment. <b>There is no</b> waiting period between treatment and grazing of non-lactating animals. <b>Do not</b> use on bentgrass, susceptible grass pastures, lesedeza, wild winter peas, vetch, clover, and alfalfa pastures as injury will occur.</p>

<sup>†</sup> Restricted Use.

MOA Group Tables start on page 46 of the handbook.

## BRUSH CONTROL

<b>Estimated Levels of Weed Control Normally Expected with Brush Herbicides<sup>a</sup></b>																										
<b>Herbicide</b>	Black berry	Buckbrush	Black Locust	Cedar	Elms	Greenbriar	Hawthorn	Honey locust	Honey suckle	Mesquite	Multiflora rose	Oak, Blackjack	Oak, Post	Oak, Sand Shinery	Osage Orange	Pecan	Persimmon	Pine	Poison Ivy	Prickly pear	Sagebrush	Salt Cedar	Sumac	Wild plum	Willows	Yucca
2,4-D	N	<b>H</b>	<b>H</b>	N	N	N	<b>H</b>	N	N	--	N	R	--	--	N	--	N	N	N	--	--	--	<b>H</b>	--	--	--
Banvel	R	N	N	N	N	N	N	N	N	--	R	N	--	--	N	--	R	N	N	--	--	--	N	--	--	--
Cimarron	H	R	<b>H</b>	N	R	N	R	<b>H</b>	R	3	R	N	--	--	R	--	N	N	N	--	3	--	H	H	R	--
Cimarron Max	H	R	<b>H</b>	N	R	N	R	<b>H</b>	R	R	R	N	--	--	R	3	N	N	3	--	R	3	H	H	R	3
Crossbow	R	R	R	N	R	N	R	R	R	--	N	R	--	--	N	--	N	N	R	--	--	--	R	--	--	--
glyphosate	<b>H</b>	N	R	N	R	N	R	R	<b>H</b>	--	<b>H</b>	R	--	--	N	--	N	N	<b>H</b>	--	--	--	N	--	--	--
Grazon P+D <sup>r</sup>	R	R	R	N	R	R	R	<b>H</b>	R	--	R	R	--	--	N	--	R	N	N	--	--	--	R	--	--	--
Remedy	<b>H</b>	R	R	N	R	R	R	R	R	--	N	R	--	--	<b>H</b>	--	N	R	R	--	--	--	R	--	--	--
Spike	R	R	R	R1	<b>H</b>	N	R	R	<b>H</b>	--	<b>H</b>	R	--	--	N	--	N	<b>H</b>	R	--	--	--	N	--	--	--
Surmount	R	--	R	R1	R	N	R	R	R	N	R	N	N	N	R	N	R	<b>N</b>	N	--	R	--	R	R	N	N
Tordon 22K <sup>r</sup>	R	N	N	R	N	N	N	<b>H</b>	N	--	R	N	--	--	N	--	R	R	N	--	--	--	N	--	--	--
Velpar	R	R	R	H	R	N	R	<b>H</b>	<b>H</b>	R	<b>H</b>	R	R	--	R	R	R	N	R	--	--	--	R	R	R	R
Weedmaster	R	R	N	N	R	N	R	R	R	--	N	R	--	--	N	--	N	N	R	--	--	--	R	--	--	--

a. **H** = Highly recommended, has been shown to be effective if used properly. <sup>r</sup> Restricted Use.

H = Highly recommended, has been shown to be effective if used properly.

R = Recommended, intermediately susceptible or listed on company label.

N = Not recommended, has not performed in research or is not listed on the label.

1 = Small red cedar

2 = September application

3 = Suppression only

4 = Soil application

## SUGGESTED HERBICIDES FOR BRUSH CONTROL

WEEDS	TIME OF APPLICATION	AMOUNT OF HERBICIDE PER ACRE	COMMENTS
<u>Yucca</u>	April-May	Velpar L (hexazinone)	Resistant to most herbicides used on rangelands. Some control with Velpar applied to individual plants. Spot apply 2 cc/plant on up-hill side.
<u>Brush</u> Blackberry	Flowering through September	Roundup or Touchdown (glyphosate) (1 to 1.5%) solution with hand-held equipment	Plants must be actively growing and thorough coverage is necessary. Treat spots (less 10% of area) and there is a 14 day grazing restriction. Grass in treated spot is also killed. Various formulations of glyphosate require different additives, so read label.
	July after next year's canes have developed	Remedy (triclopyr) (1 to 2 pt product/A)	One application will control 85 to 90% of plants. Important that plants are actively growing and fruiting canes fully developed before spraying. Respraying is often necessary to get satisfactory kill of established plants. Control of blackberry after burning has been variable with control often being unsatisfactory.
Buckbrush	May	2,4-D LV ester (1.5 to 2 lb/A)	Treat as soon as leaves fully expanded and plants actively growing. Treatment only effective for a two week period and treatments made after May are often ineffective.
	Spring (soil application)	Spike (20P) (tebuthiuron) (10 to 20 lb product)	Rate depends on soil type. Refer to label for correct rate.
Cedars	March to May	Tordon 22K <sup>†</sup> (picloram)  Velpar L (hexazinone)	Tordon 22K is the current formulation being marketed for rangeland use. Effective as individual tree treatment by applying at base of tree. See label for rate and use restriction.  Can be effective as spot treatment of individual trees. Herbicide is applied at base of tree and rate depends on tree size. See label for rate and use.
Elms	Fall to Spring (soil application)  March to May	Spike (20P) tebuthiuron (10 to 20 lb product)  Tordon 22K <sup>†</sup> (picloram) (2 qt product/A)	Rate depends on soil texture. Not effective on fine textured clay soils.  For individual trees, use 1 cc of undiluted Tordon 22K per inch of stem diameter.
Greenbriar	May and June	Tordon 22K <sup>†</sup> (picloram) + Remedy (triclopyr)	Mixture as foliage wetting spray gives some control. Respraying will be necessary. Burning, mowing, and grazing will help control.
Hawthorn	May and June	2,4-D LV ester (2 lb/A)	Retreatment is usually necessary to obtain tree kill.
Locust, Black	June and July	2,4-D (1 lb/A)	Some respraying may be necessary to control resprouts.
Locust, Honey	June and July	Remedy (triclopyr) (1 qt/A)	Best results with spraying individual trees. Mix 2 qts Remedy with 100 gallons water and spray to wet leaves. Some respraying may be necessary to control resprouts.
Mesquite	June	Remedy (triclopyr) (1 pt product/A) or Reclaim (1.33 pt/A)	For best results, spray during the period 40 to 90 days after green growth appears in spring and when soil moisture is adequate and soil temperature at 12 inches is 75°F. One good way to get good tree kill is to individually treat the base of each tree with 20% Remedy and 80% diesel fuel mix applied as low volume basal application. Applications can be made from May through October and will cost about 15¢/1-inch diameter tree.

<sup>†</sup> Restricted Use Pesticide

## SUGGESTED HERBICIDES FOR BRUSH CONTROL (CONT'D)

WEEDS	TIME OF APPLICATION	AMOUNT OF HERBICIDE PER ACRE	COMMENTS
Oak, Blackjack and Post	June	Remedy (triclopyr)	Spray only if conditions are desirable for good tree growth. Refer to label for rate and other information.
	Early Spring (soil application)	Spike (20P) (tebuthiuron) (10 to 20 lb product/A)	Rate depends on soil texture. Do not use on fine textured clay soils. See label for detailed instructions.
Oak, Sand Shinnery	June	Remedy (triclopyr) (0.5 to 1 pt product/A)	Spray in years of good soil moisture. A bad basal resprouter so retreatment will be necessary. This rate will give fair to good top control of oaks, but little root-kill. Increasing rate helps some on top kill, but doesn't really help root-kill that much.
Oak, Sand Shinnery (cont'd)	Early Spring	Spike (20P) (tebuthiuron) (5 to 15 lb product/A)	The results with Spike on sand shinnery oak have not been as predictable as with the other oaks. It is very difficult to get good root-kill of shinnery without getting grass damage. Sometimes there is adequate root-kill at the low rate while on other sites it takes the high rate. Some of this variation is probably due to variations in amount and depth of sand deposited. However, part of the variation may also be due to past management practices. It is very difficult to get adequate root-kill on areas that have been burned, sprayed, or mowed recently.
Osageorange	June-July	Remedy (triclopyr) (1 to 2 pt product/A)	Easy to control if adequate soil moisture.
Pecan	June	2,4-D (2 to 4 lb/A)	Retreatment will be necessary.
Persimmon, Common	June-Feb.	Banvel (injected) (1 cc product/injection)	Injection cuts made every 3 inches around the base of the tree. Cuts must penetrate the bark. This treatment is very effective on undisturbed larger trees. For sprouts, 1 inch and smaller, one cc of Banvel applied in early spring or September at the base of each sprout has given good control.
		Banvel (conventional basal spray) (4 to 8 lb/100 gal of water)	Apply to ground under tree as basal treatment using 1/8 to 1/4 pint of spray mix per inch of stem diameter.
	May-June	Tordon 22K <sup>†</sup> (picloram) (basal spray) 2 cc/inch diameter	On stems 2 inches or less in diameter, apply 2 cc per inch of stem diameter. Apply undiluted herbicide at base of plants. Applications can also be made in September if moisture conditions are adequate. Applications made directly on the stem at ground level have been very effective on sprouts. On larger trees, stems must be injected with 2 cc of product every 3 inches around the base of the tree.
	June-July	Remedy (triclopyr) 1 pt/A broadcast or 1 pt/100 gal and spray to wet leaves to point of run-off	Expect good brown-out and top kill of persimmons with resprouting from roots 1 and 2 years after treatment with only 50% reduction in stem density 2 years after treatment. Will require retreatment every 4 to 5 years. Probably a better option than mowing since some stem reduction results.
Plum, Wild	June	2,4-D (1 to 2 lb/A)	Retreatment will be necessary.
Poison Ivy	When foliage full leaf	Roundup or Touchdown (glyphosate) 2% solution with hand-held equipment	Thoroughly wet all foliage. Repeated applications may be required to maintain control. There is a 14 day grazing restriction after spot treating.

<sup>†</sup> Restricted Use Pesticide

## SUGGESTED HERBICIDES FOR BRUSH CONTROL (CONT'D)

WEEDS	TIME OF APPLICATION	AMOUNT OF HERBICIDE PER ACRE	COMMENTS
Brush (cont'd) Rose, Multiflora	Early spring (soil application)	Tordon 22K <sup>†</sup> (picloram)	Tordon 22K is very effective. See label for rate and use restrictions.
	Early Spring (soil application)	Spike (20P) (tebuthiuron) (10 to 20 lb product)	Rate depends on soil texture.
Sagebrush	May and June	2,4-D (0.5 to 1 lb/A)	Spray only in year of adequate rainfall.
Salt cedar	When leaves fully developed	2,4-D (0.25 to 0.5 lb/A)	For suppression but very little tree kill with this treatment. Repeat applications every time trees releaf. May require several treatments each year.
Sumac	June	2,4-D LV ester (1 lb/A)	Usually easy to control.
		Grazon P+D <sup>†</sup> (1 qt/A)	
	Spring (soil application)	Spike (20P) (tebuthiuron) (10 to 20 lb product)	Rate depends on soil texture.
Willows	Summer	2,4-D (1 lb/A)	Usually easy to control.

<sup>†</sup> Restricted Use Pesticide

**Footnote:** All uses of atrazine on pastures and rangelands have been discontinued.

**For additional information the following may be helpful:**

Pest Plants of Oklahoma Grazing Lands at <http://www.pestplants.okstate.edu>  
 Weed Control in Pastures Fact Sheet 2771  
 Ecology and Management of Sericea Lespedeza Fact Sheet 2874  
 Thistles in Oklahoma and Their Identification Fact Sheet 2776  
 Integrated Control of Musk Thistles in Oklahoma Fact Sheet 7318

Response of Selected Woody Plants in the United States to Herbicides  
 ARS Agriculture Handbook No. 493

## SUGGESTED HERBICIDES FOR BRUSH CONTROL (CONT'D)

Herbicides	Rates	Lactating Dairy Animals	Beef and Non-Lactating Dairy Animals				
	Product	Ib/ai	Before Grazing	Before Hay Harvest	Before Grazing	Before Hay Harvest	Removal Before Slaughter
CIMARRON (Metsulfuron, Methyl)	0.10 to 0.40 oz	0.06 to 0.24 oz	0	0	0	0	0
AMBER	0.28-0.56 oz		0	30 days	0	30 days	0
BANVEL 4L (Dicamba)	Up to 1 pt Up to 2 pt Up to 4 pt	0.5 1.0 2.0	7 days 21 days 40 days	37 days 51 days 70 days	0 0 0	0 0 0	30 days 30 days 30 days
CROSSBOW 3S (Triclopyr + 2,4-D)	1 to 6 qts	0.75 to 4.50	14 days	N.G.S.	0 <sup>5</sup>	7 days <sup>5</sup>	3 days
CURTAIL (2,4-D + Clopyralid)	2 to 4 qts	1.19 to 2.38	14 days	30 days	0	30 days	7 days <sup>11</sup>
CYCLONE MAX <sup>r</sup> (paraquat)	0.7 to 1.3 pts	0.25 to 0.47	1 month <sup>2</sup>	1 month <sup>2</sup>	1 month <sup>2</sup>	1 month <sup>2</sup>	0
GRAZON P+D <sup>r</sup>	1 to 8 pts	0.32 to 2.54	7 days	30 days	0	30 days	3 days
REMEDY (Triclopyr)	2 qts or less 2 to 4 qts over 4 qts	.0 or less 2.0+ -4.0 4.0+ -6.0	14 days N.G.S. N.G.S.	N.G.S. N.G.S. N.G.S.	0 14 days <sup>10</sup> 14 days <sup>10</sup>	7 days 14 days N.G.S.	3 days 3 days 3 days
ROUNDUP/RASCAL/ RULER/ TOUCHDOWN (Glyphosate) Spot or Wiper <sup>1</sup> Broadcast	Any labeled rate Any labeled rate	-- --	14 days 8 weeks	14 days 8 weeks	14 days 8 weeks	14 days 8 weeks	0 0
SPIKE 20 P (Tebuthiuron)	0.5 oz/14 sq ft 3.75-20 lbs/A	-- 0.75 to 4.0	0 <sup>7</sup> 0 <sup>7</sup>	1 year <sup>7</sup> 1 year <sup>7</sup>	0 <sup>7</sup> 0 <sup>7</sup>	1 year <sup>7</sup> 1 year <sup>7</sup>	0 <sup>7</sup> 0 <sup>7</sup>
STINGER 3E (Clopyralid)	0.66 to 1.33 pt	0.25 to 0.5	0	0	0	0	0 <sup>9</sup>
TORDON 22K <sup>r</sup> (Picloram <sup>3</sup> )	0.5 to 2 pts	0.125 to 0.5	14 days	14 days	0	0	0
2,4-D/MCPA <sup>4</sup>	--	0.5 to 2.0	7-14 days	30 days	0-7 days	0-30 days	3 days
WEEDMASTER/ CIMARRON MAX (Dicamba + 2,4-D)	1 to 4 pts	0.48 to 1.93	7 days	37 days	0	37 days	30 days
WILFARM 2,4-D	--	1.0 to 2.0	7 days	30 days	0	30 days	3 days

N.G.S. = Not until the next growing season.

<sup>1</sup>Do not treat more than one-tenth of any given acre at one time with spot or wiper applications. Remove livestock before application.

<sup>2</sup>Restrictions based on the degree of new seedling establishment before grazing. Suggested at least 6 inches of grass or legume seedling growth which is approximately one month. Late fall seeding may require 3 to 5 months before the suggested 6-inch height is reached.

<sup>3</sup>Remove livestock to untreated grass pasture for 7 days before transferring livestock to broadleaf crop or pasture areas. Removal before slaughter statement only applies to animals grazing treated forage for a period of up to 2 weeks after application. Use only west of the Mississippi.

<sup>4</sup>Be sure to check individual product labels for restrictions and use rates due to the large number of formulations available.

<sup>5</sup>14 days if more than 2 gal/A rate used.

<sup>7</sup>If no more than 20 lbs per acre used, in areas receiving greater than 20" rain/year--areas less than 20" rain/year if no more than 10 lbs per acre used.

<sup>9</sup>Remove livestock to untreated grass pasture for 7 days before transferring livestock to broadleaf crop or pasture areas.

<sup>10</sup>If less than 25% of a grazed area is treated; no restrictions.

<sup>11</sup>Withdrawal not needed if 2 weeks or more elapsed since application.

<sup>r</sup> Restricted Use Pesticide