



Weed Control in Pastures

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Introduction

Weed control in pastures can be a very difficult challenge.

Plant species are unique in livestock grazing systems.

Focus on the plants that animals avoid eating and those containing low nutritional value.

Good weed control takes dedication and utilization of several weed control methods.

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Weed Control Options

- Cultural controls
 - Desirable plant growth
 - Proper grazing management
 - Irrigation, Fertilization
 - Competitive desirable plant species

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Weed Control Options

- Mechanical Control
 - Physically disrupts weed growth
 - Tillage
 - Mowing
 - Mulching
 - Burning
- Chemical Control
 - The use of herbicides



Weed Control Options

- Biological control
 - Uses organisms to disrupt weed growth
 - Insects
 - Disease organisms
 - Sheep
 - Goats
 - Cattle
 - Or other large herbivores

Basic Principles of Chemical Weed Control

- Know your weeds
- Choose the right herbicide
- Match equipment with needs
- Calibrate your sprayer
- Spray at the proper time
- Read and FOLLOW label instructions



Weed Identification

- Plant Type
 - **Broadleaf**
 - Dicots
 - Net Vein
 - **Grass and Grass-like**
 - Monocots
 - Parallel veins
 - Lance-like leaf



Weed Identification



- Life cycle
 - **Annual**
 - Grow from seed, mature, and produce seed in one year or less.
 - **Biennial**
 - 2 year life cycle. Grow from seed and develop a rosette 1st year. 2nd year mature, produce seed and die.

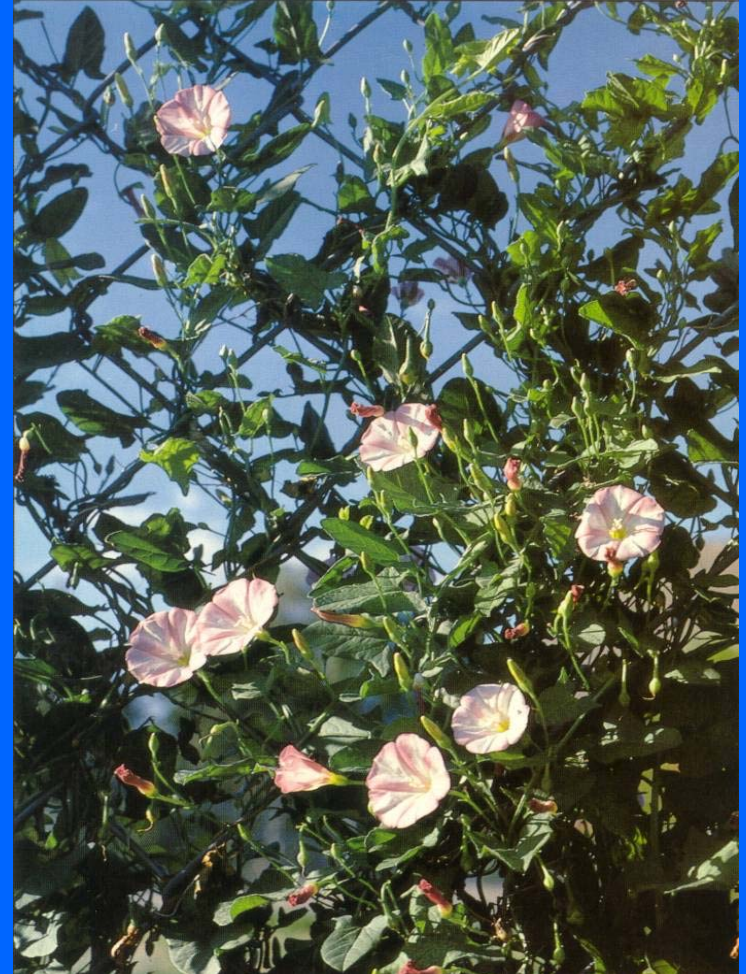
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Weed Identification

– Perennial

- Plants that live more than 2 years. Most plants mature and reproduce in the first year and then repeat the vegetative, seed production and maturity stages for several following years.
- Growing season
 - Cool
 - Fall - Spring
 - Warm
 - Spring - Fall



Lambsquarter, annual, rapid growth and high water use. Reproduced by seed.



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Down brome, is an annual or winter annual.
Reproduced by seed.



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Foxtail barley, perennial.
Reproduces by seed.
Common in wet alkaline
soils, meadows, and pastures.



Dan Busemeyer, Illinois Natural History Survey

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Field bindweed is a perennial which has an extensive root system. Seeds remain viable up to 50 years.



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Russian knapweed, perennial
spread by black deep growing
roots. Forming dense colonies.



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Musk thistle, biennial or sometimes a winter annual. Forms extremely dense stands.



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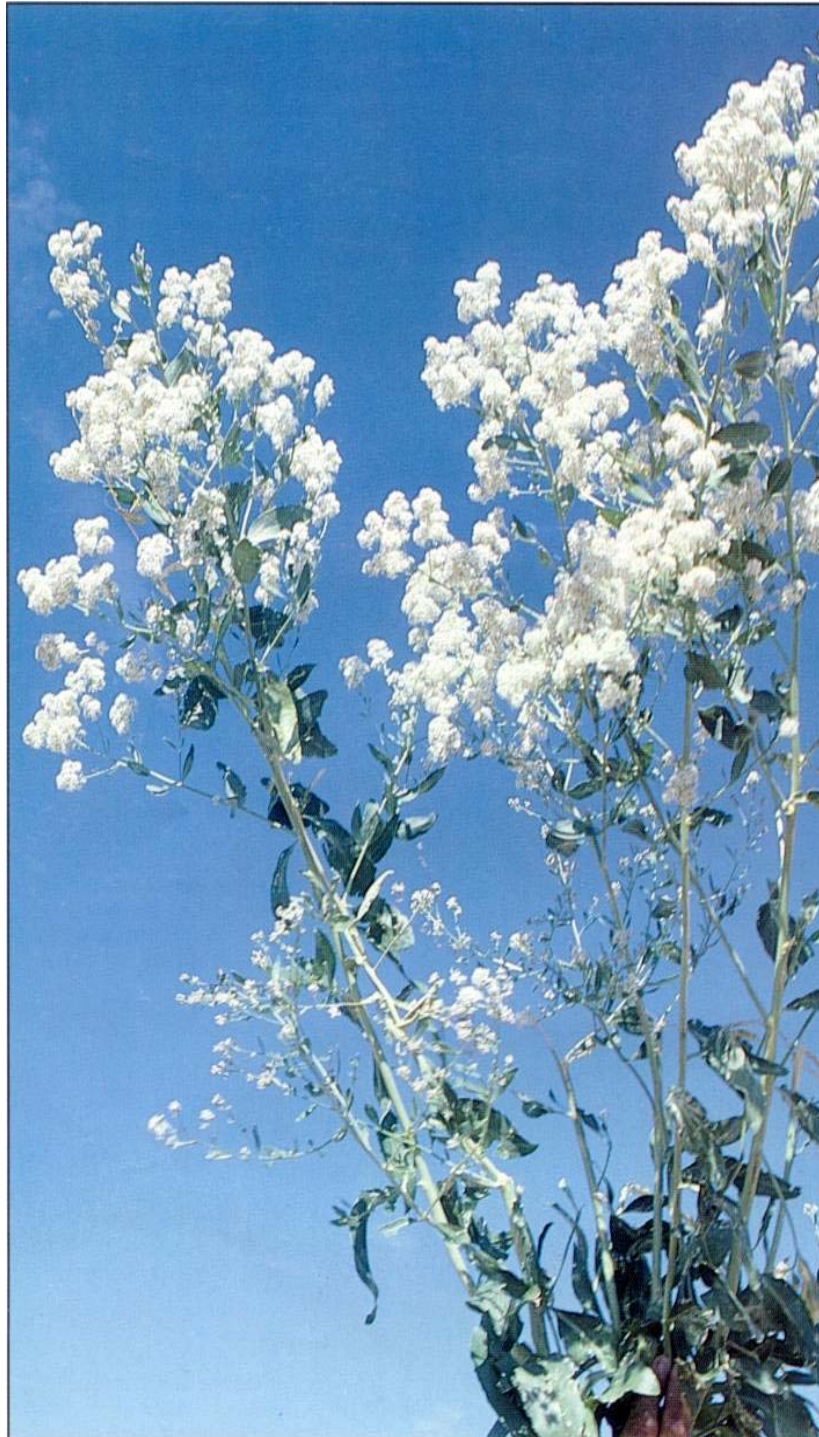
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Scotch Thistle, Grows up to 8ft tall. Flower is pale purple to violet. Leaves are spiny edged and form wings around the stalk.



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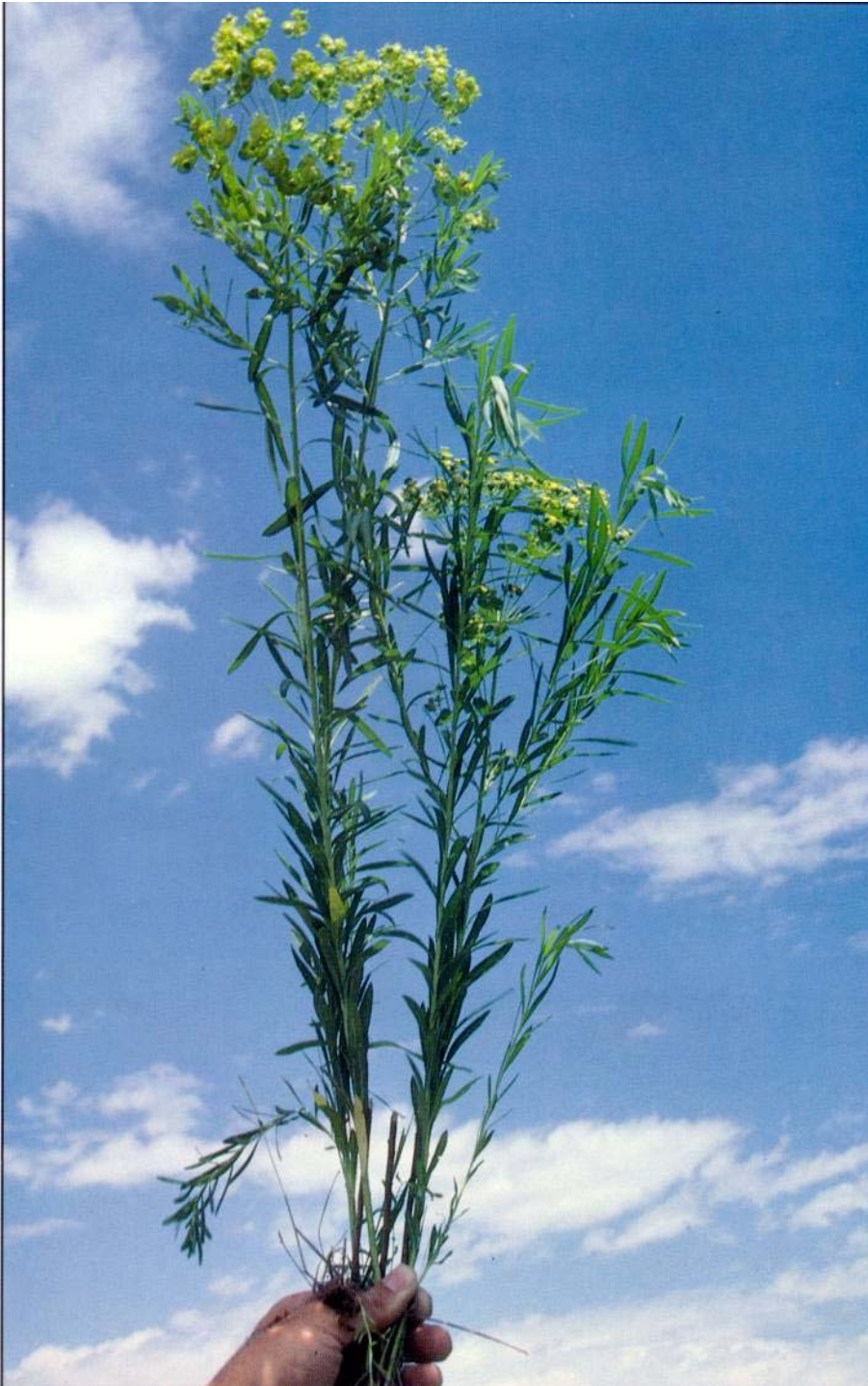
Perennial pepperweed, perennial.
Also referred to as tall whitetop.
Deep seated rootstock.



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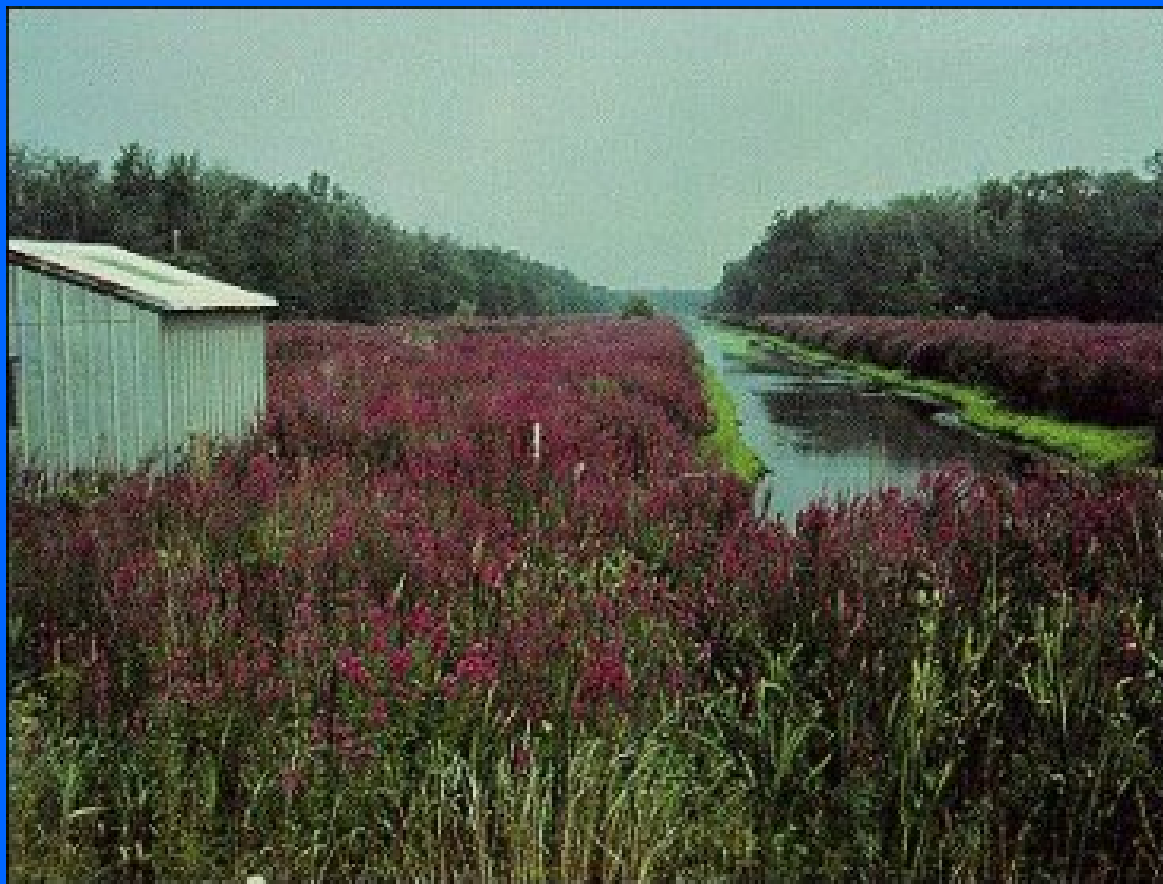
Leafy spurge, perennial. Plant contains a milky juice. Seed capsules explode projecting seeds as far as 15 feet.



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Purple loosestrife, is a prolific seed producer and has a perennial root system. Each plant can produce 2 million seeds.



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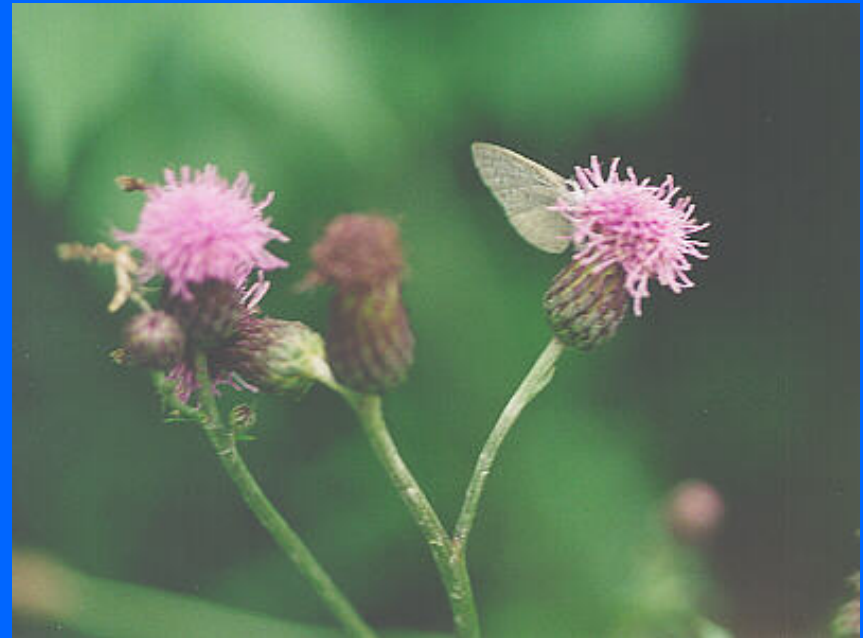
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Common burdock is a biennial, producing a rosette of large, thickly hairy leaves the first year and an erect, much branched, coarse stem 3 -10 feet tall the second year.



Canada thistle is a colony forming perennial from deep and extensive horizontal roots. Flowers are purple. Flowering occurs during June through August.



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Common cocklebur, an annual 2-4 feet tall with the stem erect, branches ridged, potted and very rough. The burs are irritating both to humans and animals.



Curly dock is a robust tap-rooted perennial growing 2-5 feet tall. Inflorescences and even entire plant turns reddish-brown at maturity.



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Hoary cress is a deep rooted perennial up to 2 feet tall. Sometimes called whitetop.



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Kochia is an annual, 1-6 feet tall, stems much branched, round, slender, usually soft-hairy, but occasionally smooth, often red-tinged. Sometimes contains high nitrate levels and can be toxic.



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Curlycup gumweed or rosinweed, biennial or short-lived perennial. Reproduces by seeds and grows 1 – 3 feet tall.



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Herbicide labels

- Before using a herbicide check and read the label carefully.
- Each of the recommended herbicides has benefits and risks associated with its use.
- Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by Cooperative Extension is implied.

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- 2,4-D

Several products Rate: 0.71 to 2 lb ae/A

Time: Spray when annual weeds are young, succulent, and actively growing. Treat perennial weeds at the specific growth stage(s) described on the label.

Remarks: Controls many annual, biennial, and perennial broadleaf weeds in rangeland and grass pastures. Also controls certain brushy species. Deep-rooted perennial weeds and woody plants usually require repeated applications for maximum control. See label for rates for various weed species and for proper application timing.

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2,4-D

Caution: Do not apply if spray drift may contact nearby crops or desirable plants or contaminate water for irrigation or domestic use.

Do not graze meat animals within 3 days of slaughter.

Do not graze dairy animals within 7 days after application.

Do not cut hay within 30 days after application.

Do not use on bentgrass, alfalfa, clover or other legumes, or on newly seeded pasture. When grass seed production is desired do not apply after heading begins or when grass is in the boot to milk stage.

Kills legumes.

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- dicamba

Banvel, Vanquish, or Clarity; Rate: 0.25 to 2 lb ae/A

Timing: Apply after weeds emerge. Treat annuals when small and actively growing. See label for proper timing and rates on perennials.

Remarks: Controls many annual, biennial, and perennial broadleaf weeds and many woody brush and vine species. Rate depends on weed species and growth stage at time of treatment. Can be applied using water, oil—water emulsions, or sprayable fluid fertilizer as the carrier. May also be applied as a cut-surface treatment to control unwanted trees or to prevent sprouts on cut trees.

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dicamba

Caution: No waiting period between treatment and grazing for nonlactating animals (see label for timing restrictions on dairy animals). Meat animals must be removed from treated areas 30 days before slaughter. Rates over 2 lb ai/A may temporarily injure many grass species. Newly seeded grasses (see label) may be injured at rates exceeding 0.75 lb ai/A. Do not exceed 8 lb ai/A per season. Kills legumes.

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- glyphosate

Rate 0.1875 to 3.75 lb ae/A

Time: Annual weeds are best controlled when small and actively growing. Apply to actively growing perennial weeds at or beyond full flower. Results are best if applied in late summer or fall after seed forms. Fall treatments must be before a killing frost.

- glyphosate

Remarks: Controls many annual and perennial weed species before renovating pastures. Rates depend on weed species, stage of growth, and density. Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. May also be applied as a spot treatment or by wiper application to established pastures, but no more than 0.1 of any acre should be treated at one time. Further applications may be made to the same area at 30-day intervals.

- glyphosate

Caution: A nonselective herbicide that kills forage plants contacted. Total of all treatments must not exceed 8 lb ai/A per year. Remove domestic livestock before application. Wait 8 weeks after broadcast application and 14 days after spot or wiper application before grazing or harvesting. Some glyphosate products if application is 2 qts/A or less no waiting period between treatment and feeding or livestock grazing is required. Check label for specifics.

- clopyralid + 2,4-D

Curtail Rate: 2 to 4 quarts product/A

Time: Apply when weeds are young and actively growing.

Remarks: Use 2 quarts on light to moderate infestations of Canada thistle and knapweeds (spotted and diffuse) in good growing conditions. Use 3 quarts for dense infestations or under poor growing conditions. On Russian knapweed, use 3 to 4 quarts.

Curtail

Caution: Do not plant grasses for 30 days after application. Do not use on newly seeded grass areas until grass is well established. Do not use on bentgrass. Do not spray pastures containing desirable forbs, especially legumes, unless injury can be tolerated. Do not use hay or straw from treated area for composting or mulching on susceptible broadleaf crops. Do not graze dairy cattle in treated area for 14 days after application. Remove meat animals from area 7 days before slaughter if pasture was treated less than 2 weeks earlier. Do not cut for hay within 30 days after application. Do not use straw or manure from treated areas for compost or mulch.

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- metsulfuron

Escort, Ally, or Cimarron

Rate: 0.33 to 2 oz product/A Escort

0.1 to 0.4 oz product/A Ally

0.1 to 1 oz product/A Cimarron

Time: Apply postemergence to actively growing weeds.

Remarks: Controls a wide range of broadleaf weeds.
For best results, use a nonionic or organosilicone
surfactant.

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Escort, Ally XP, or Cimarron Max

Caution: Consult labels for each product; labels differ significantly. Note restrictions on labels for use on fescue, timothy and ryegrass pastures. Note recropping restrictions on label.

Ally XP, no grazing restrictions.

Cimarron Max, Remove meat animals from treated area 30 days prior to slaughter. No grazing restriction for non-lactating animals.

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Other products labeled for pastures

- Tordon – restricted-use herbicide
- Crossbow
- Spike
- MCPA – several products
- Plateau
- Gramoxome
- Stinger
- Transline
- Remedy
- Redeem R&P
- Touchdown

Summary

- Provide proper nutrients and management for desired forage species.
- Identify weed problems and locations.
- Select which options or combination of options you plan to use for control
- Perform the practices.
- Evaluate outcome

Credits

- University of Minnesota Extension, Weed Control in Pastures – Lesson 4
- Colorado State University Extension, Range and Pasture Weed Management by K.G. Beck
- Small Pasture Management Guide for Utah, Project Coordinator: James Barnhill, USU Extension Agent, Weber County.
- PNW Weeds – Pasture and Rangeland Weed Control Guide.
- Weeds of the West.



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