

Broadleaf Weed & Brush Control in Cool Season Grass Forages



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Simple Demonstration for controlling broadleaf weeds in a pasture/hayfield.

Listed below are some ways to do a low cost demo plot that can show the real value of pasture weed control.



- ✓ Take some bale feeders and use 1 as untreated check and 1-2 as treated.
- ✓ Spray weeds with correct product and timing method.
- ✓ Observe the growth that occurs throughout the season in the feeders.

Correct Identification - Weeds

Annuals



Biennials



Perennials



There are different types of weed species in a typical forage setting. Correctly identifying the species present is critical to understanding which herbicide product may be used and when to apply it. Also understand that follow up treatments will be needed.

Annual Weeds

Annuals



A plant that lives one year or less and reproduces by seeds. Generally annual weeds will be either considered winter annuals or summer annuals.

Winter annuals germinate in the fall, over winter, then flower, set seed and die the following spring. Controlling winter annuals should be done in the fall prior to plants over wintering or early in the spring before the plants start to flower.

Summer annuals germinate in the spring and complete growth by the fall. Controlling summer annuals should be done in the spring or early summer when the weeds are germinating and are small. Always try to spray before flowering.

Problem Weeds: Summer Annuals

- ✓ **Black Nightshade**
- ✓ **Cocklebur**
- ✓ **Croton**
- ✓ **Ragweed species**
- ✓ **Redroot pigweed**
- ✓ **Spiny Amaranth**



RAGWEEDS

SUMMER ANNUALS



LANCELEAF



GIANT



COMMON

Growth regulators work very well on all of these species but the key is to spray early on seedling plants and before reproductive stage.

Products with some residual activity (like Grazon P+D) can provide longer season control.

- ✓ Grazon P+D (2 pts/ac)**
- ✓ Weedmaster (2 pts/ac)**
- ✓ 2,4-D (3 pts/ac)**

PIGWEEED FAMILY

SUMMER ANNUALS



REDROOT



WATERHEMP



SPINY AMARANTH

Growth regulators work very well on all of these species but the key is to spray early on seedling plants and before reproductive stage.

Products with some residual activity (like Grazon P+D) can provide longer season control.

✓ Grazon P+D (2 pts/ac)

✓ Weedmaster (2 pts/ac)

✓ 2,4-D (3 pts/ac)

Biennial Weeds

Biennials A plant that lives no more than two years and reproduces by seed.

Controlling biennial type of weeds should be done when the plants are emerging or while they are still in a rosette form prior to rapid stem elongation and flowering.

Generally best time frame for control will occur in the fall or early spring.



Common Biennial Weeds



- ❖ **Common Mullein**
- ❖ **Bull Thistle**
- ❖ **Musk Thistle**
- ❖ **Poison Hemlock**
- ❖ **Teasel**
- ❖ **Wild Carrot**
- ❖ **Wild Parsnip**

✓ **Biennial weed.**

✓ **Best control is in the fall of year on new seedlings or early in spring before bolting occurs.**

✓ **Best products are: Tordon, Grazon or Forefront.**

✓ **Tordon 22K (8-12 oz/ac) + 2,4-D (2 pts/ac)**

✓ **Grazon P+D (2-3 pts/ac)**

✓ **Forefront (1.5 – 2.0 pts/ac)**

✓ **Whatever product is used include a non ionic surfactant (Astute 2 pts/100 gal.)**

Musk & Bull Thistle



✓ **Biennial weed.**

✓ **Best control is in the fall of year on new seedlings or early in spring before bolting occurs.**

✓ **Banvel (12 oz/ac) + 2,4-D (2 pts/ac)**

✓ **Weedmaster (3 pts/ac)**

✓ **Tordon 22K (12 oz/ac) + 2,4-D (2 pts/ac)**

✓ **Grazon P+D (3 pts/ac)**

✓ **Whatever product is used include a non ionic surfactant (Astute 2 pts/100 gal.)**

Poison Hemlock



Teasel

- ✓ **Biennial weed.**
- ✓ **Best control is in the fall of year on new seedlings or early in spring before bolting occurs.**
- ✓ **Grazon P+D (3 pts/ac)**
- ✓ **Tordon 22K (12 oz/ac) + 2,4-D (2 pts/ac)**
- ✓ **ForeFront (2-2.6 pts/ac)**
- ✓ **Whatever product is used include a non ionic surfactant (Astute 2 pts/100 gal.)**



Perennial Weeds

Perennials



A plant that may live for several years reproducing from seed and or vegetative plant parts called roots, stolens and or rhizomes.

Adequately controlling perennial type of weeds is often difficult. Best time to try to control is when bud stage is initiated and plants start building root reserves. By spraying herbicides that can translocate to the root reserves will lead to the best control approach. Seedling plants that are in their first year of growth can be sprayed prior to bud stage.

Common Perennial Weeds

- ❖ **Broadleaf & Curly Dock**
- ❖ **Canada Thistle**
- ❖ **Chicory**
- ❖ **Dandelion**
- ❖ **Goldenrod**
- ❖ **Hemp Dogbane**
- ❖ **Horsenettle**
- ❖ **Ironweed**
- ❖ **Johnsongrass**
- ❖ **Milkweed**
- ❖ **Prickly Pear Cactus**



Curly Dock and Broadleaf Dock



- ✓ Perennial weed.
- ✓ Best control usually in the fall or early spring before up right seed head growth stage.
- ✓ Tordon 22K (12 oz/ac) + 2,4-D (2 pts/ac) or Grazon P+D (3 pts/ac)
- ✓ Banvel (12 oz/ac) + 2,4-D (2 pts/ac) or Weedmaster (3 pts/ac)
- ✓ Cimarron (.4 oz/ac)
- ✓ Cimarron Max (Rate 2) (Cimarron .5 oz/ac & 1 qt/ac Weedmaster)
- ✓ Whatever product is used include a non ionic surfactant (Astute 2 pts/100 gal.)

Chicory

- ✓ Perennial weed.
- ✓ Best control usually in the summer at late bud to early flowering stage when moisture and temperature conditions are favorable.
- ✓ Tordon 22K (12 oz/ac) + 2,4-D (2 pts/ac)
- ✓ Grazon P+D (3 pts/ac)
- ✓ Banvel (12 oz/ac) + 2,4-D (2 pts/ac)
- ✓ Weedmaster (3 pts/ac)



- ✓ Cimarron (.4 oz/ac)
- ✓ Whatever product is used include a non ionic surfactant (Astute 2 pts/100 gal.)

Horsenettle

- ✓ Perennial weed.
- ✓ Best control usually in the summer at late bud to early flowering stage when moisture and temperature conditions are favorable.
- ✓ Tordon 22K (12 oz/ac) + 2,4-D (2 pts/ac)
- ✓ Grazon P+D (3 pts/ac)
- ✓ Cimarron (.3-.4 oz/ac) + 2,4-D (1 pt/ac)
- ✓ Whatever product is used include a non ionic surfactant (Astute 2 pts/100 gal.)



Goldenrod

- ✓ **Perennial weed.**
- ✓ **Best control usually in the summer at late bud to early flowering stage when moisture and temperature conditions are favorable.**
- ✓ **Tordon 22K (12 oz/ac) + 2,4-D (2 pts/ac)**
- ✓ **Grazon P+D (3 pts/ac)**
- ✓ **Banvel (8-12 oz/ac) + 2,4-D (2 pts/ac)**
- ✓ **Weedmaster (2-3 pts/ac)**



- ✓ **Whatever product is used include a non ionic surfactant (Astute 2 pts/100 gal.)**

Ironweed

- ✓ Perennial weed.
- ✓ Best control usually in the summer at late bud to early flowering stage when moisture and temperature conditions are favorable.
- ✓ Tordon 22K (12 oz/ac) + 2,4-D (2 pts/ac)
- ✓ Grazon P+D (3 pts/ac)
- ✓ ForeFront (2-2.6 pts/ac)
- ✓ Whatever product is used include a non ionic surfactant (Astute 2 pts/100 gal.)



Maypop Passion Flower

- ✓ **Perennial weed.**
- ✓ **Best control usually in the summer at late bud to early flowering stage when moisture and temperature conditions are favorable.**
- ✓ **Extremely difficult to control.**
- ✓ **Cimarron .4 oz/ac + Grazon P+D (2-3 pts/ac).**
- ✓ **Include a non ionic surfactant (Astute 2 pts/100 gal.)**



Sericea Lespedeza

- ✓ **Perennial weed.**
- ✓ **Best control usually in June or early July with Remedy based products and at early bud to early flowering stage with Cimarron based products. Always apply when moisture and temperature conditions are favorable.**
- ✓ **Remedy (1-1.5 pts/ac)**
- ✓ **PastureGard (2-2.67 pts/ac)**
- ✓ **Cimarron (.4 oz/ac)**
- ✓ **Whatever product is used include a non ionic surfactant (Astute 2 pts/100 gal.)**



Trumpet Creeper

- ✓ Perennial weed.
- ✓ Best control usually in the summer at late bud to early flowering stage when moisture and temperature conditions are favorable.
- ✓ Cimarron Max at rate 2 (.5 oz/ac Cimarron & 1qt/ac Weedmaster).
- ✓ Add Astute, non ionic surfactant at 2 pts/100 gallon spray solution.



Prickly Pear Cactus

- ✓ Perennial weed.
- ✓ Best control usually in the summer at late bud to early flowering stage when moisture and temperature conditions are favorable.
- ✓ Tordon 22K (24-32 oz/ac)
- ✓ For spot spraying with Tordon 22K use .75 ounces in .5 -2.5 gallon of water to treat 1,000 square feet.
- ✓ Very slow process to kill this plant.



- ✓ Add Astute, non ionic surfactant at 2 pts/100 gallon spray solution.

Wild Blue Indigo

- ✓ **Perennial weed.**
- ✓ **Best control usually in the summer at late bud to early flowering stage when moisture and temperature conditions are favorable.**
- ✓ **Cimarron (.4 oz/ac) + 2,4-D (1 pt/ac)**
- ✓ **Include a non ionic surfactant (Astute 2 pts/100 gal.)**



BROOMSEDGE



USE FERTILITY MANAGEMENT TO CONTROL BROOMSEDGE. ALWAYS INDICATOR OF LOW SOIL P & OFTEN INDICATOR OF NEED FOR LIME.

Correct Identification - Brush

Briars/Brambles



Scrub



Trees



There are different types of brush species in a typical forage setting. Correctly identifying the brush species present is critical to understanding which herbicide product may be used and when to apply it. Also the method of application (foliar, basal bark or cut stump treatment) is critical in controlling brush species. Also understand that follow up treatments will be needed.

Briars, Brambles & Vines

❖ **Multiflora Rose**

❖ **Blackberries**

❖ **Dewberries**

❖ **Poison Ivy**



Blackberry

✓ **Best control for foliar spray is usually at early to mid bloom stage. This will occur in May.**

✓ **Broadcast spray with Remedy 1 pt/ac + 2,4-D 2 pt/ac**

✓ **Broadcast spray with PastureGard (2.5 pts/ac)**

✓ **Spot spray with Crossbow (1.5% solution = 1.9 oz/gallon of water)**

✓ **Include a non ionic surfactant (Astute 2 pts/100 gal.)**



Dewberry

✓ **Best control for foliar spray is usually at early to mid bloom stage. This will occur in May.**

✓ **Broadcast spray with Remedy 1 pt/ac + 2,4-D 2 pt/ac**

✓ **Broadcast spray with PastureGard (2.5 pts/ac)**

✓ **Spot spray with Crossbow (1.5% solution = 1.9 oz/gallon of water)**

✓ **Include a non ionic surfactant (Astute 2 pts/100 gal.)**



Multiflora Rose

- ✓ **Best control for foliar spray is usually at early to mid bloom stage. This will occur in May.**
- ✓ **Broadcast spray with Remedy 1 pt/ac + 2,4-D 2 pt/ac**
- ✓ **Spot spray Crossbow (1.5% solution = 1.9 oz/gallon of water)**
- ✓ **Spot spray Super Brush Killer (.75 – 1% solution = 1-1.2 oz/gallon of water)**
- ✓ **Whatever product is used include a non ionic surfactant (Astute 2 pts/100 gal.)**



Scrub Brush

❖ Sumac

❖ Sassafras

❖ Buckbrush



Buckbrush

✓ **Best control for foliar spray is right as full leaf out is occurring in the spring. But before full leaf expansion has occurred.**

✓ **Broadcast spray with Remedy 1 pt/ac + 2,4-D 2 pt/ac**

✓ **Spot spray with Crossbow (1.5% solution = 1.9 oz/gallon of water)**

✓ **Spot spray Super Brush Killer (.75 – 1% solution = .9 – 1.2 oz/gallon of water)**

✓ **2,4-D (2-3 pts per acre broadcast) or a (2% solution = 2.5 oz/gallon of water spot spray) can be used if timing is just right! Need to target early stages of full leaf out.**

✓ **Whatever product is used include a non ionic surfactant (Astute 2 pts/100 gal.)**



Brush / Trees

❖ Oak

❖ Hickory

❖ Locust

❖ Cedar

❖ Hedge / Osage Orange



Cedar Trees

- ✓ **Cut down below the lowest crown bud.**
- ✓ **Fire will destroy cedar trees if the fire consumes the entire tree. Any green areas left on the tree will enable it to continue to grow on that area of the tree.**

✓ **Best control is cut stump treatment.**

✓ **Preferred products for cut stump treatment are Tordon RTU or Pathway**

✓ **Crossbow (4% solution with diesel fuel) may also be used for cut stump treatment**

✓ **Basal bark treatment may also be used with Crossbow (4% solution with diesel fuel)**

✓ **For foliar treatment apply when full leaf out has occurred and apply Surmount (4 pts/ac) plus Astute non ionic surfactant at 1 qt / 100 gallon spray solution.**

Hedge / Osage Orange



Honey Locust

- ✓ **Best control is cut stump treatment.**
- ✓ **Preferred products for cut stump treatment are Tordon RTU or Pathway**
- ✓ **Crossbow or Super Brush Killer (4% solution with diesel fuel) may also be used for cut stump treatment.**
- ✓ **Basal bark treatment may also be used with Crossbow or Super Brush Killer (4% solution with diesel fuel).**
- ✓ **For foliar treatment apply when full leaf out has occurred and apply Surmount (4 pts/ac) plus Astute, non ionic surfactant at 1 qt / 100 gallon spray solution.**



Hickory

- ✓ **Best control is cut stump treatment.**
- ✓ **Preferred products for cut stump treatment are Tordon RTU or Pathway**
- ✓ **Super Brush Killer (4% solution with diesel fuel) may also be used for cut stump treatment.**
- ✓ **Basal bark treatment may also be used with Super Brush Killer (4% solution with diesel fuel).**
- ✓ **Foliar spot spray with 1% solution of Super Brush Killer (use water as the carrier also include Astute, non ionic surfactant at 1 qt / 100 gallons of spray solution)**



✓ **Best control is cut stump treatment.**

✓ **Preferred products for cut stump treatment are Tordon RTU or Pathway**

✓ **Super Brush Killer (4% solution with diesel fuel) may also be used for cut stump treatment.**

✓ **Basal bark treatment may also be used with Super Brush Killer (4% solution with diesel fuel).**

✓ **Foliar spot spray with 1% solution of Super Brush Killer (use water as the carrier also include Astute, non ionic surfactant at 1 qt / 100 gallons of spray solution)**

Oak

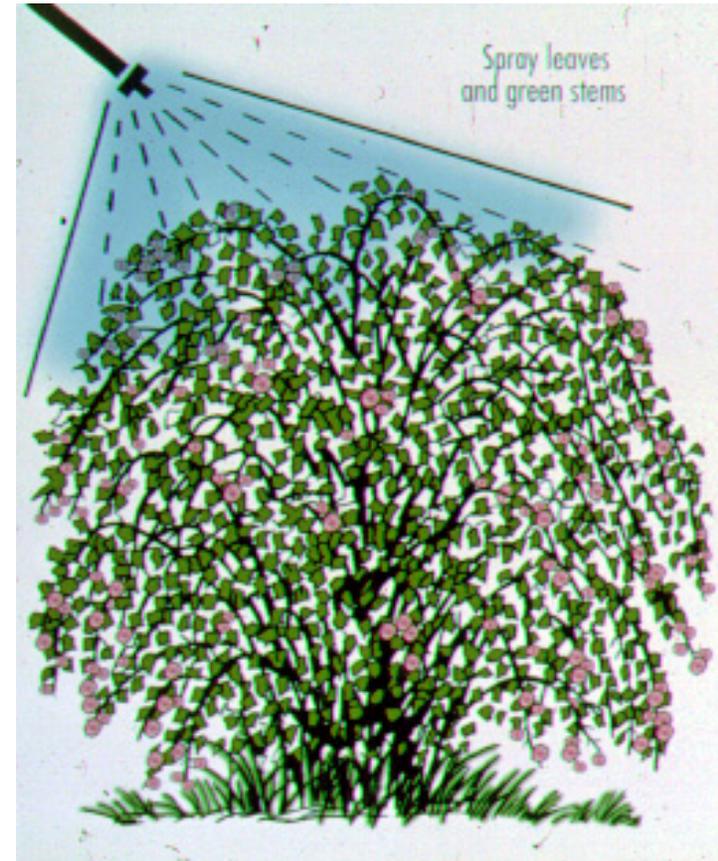


Foliar Spray Treatment

When Green and Growing.

Through coverage – wetting all leaves & green stems to drip point.

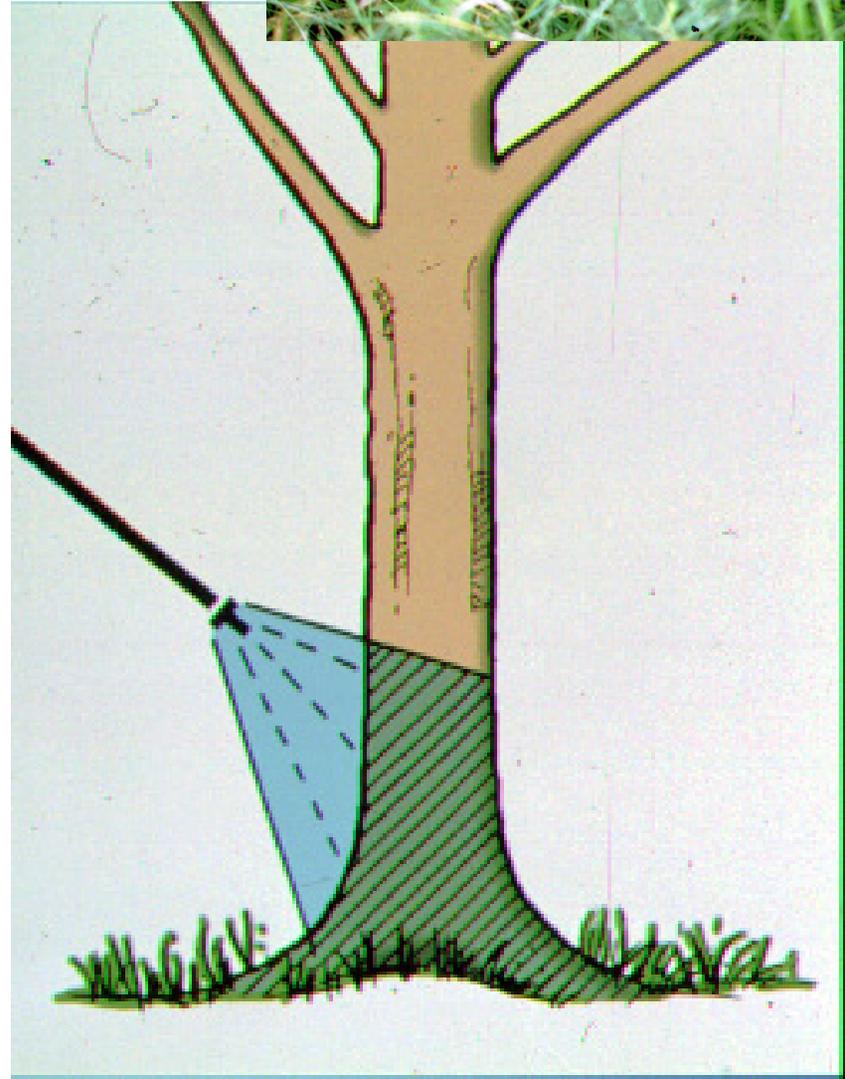
- **Period after full leaf in spring to early summer when moisture and temperature are favorable.**
- **Large brush over 8 feet tall difficult to treat effectively.**
- **Only use water as spray carrier.**
- **Always add Astute, non ionic surfactant at 1 qt / 100 gallon spray solution.**



Basal Bark Treatment

Up to 6” diameter brush.

- **Spray from ground up to 15-24”.**
- **Spray area including crown buds and ground sprouts – spray area should wet ground at base of stem and trunk.**
- **Can be done throughout the year but do not do when ground is frozen. Also may want to hold off in a dry summer until after the leaves have dropped from the tree.**



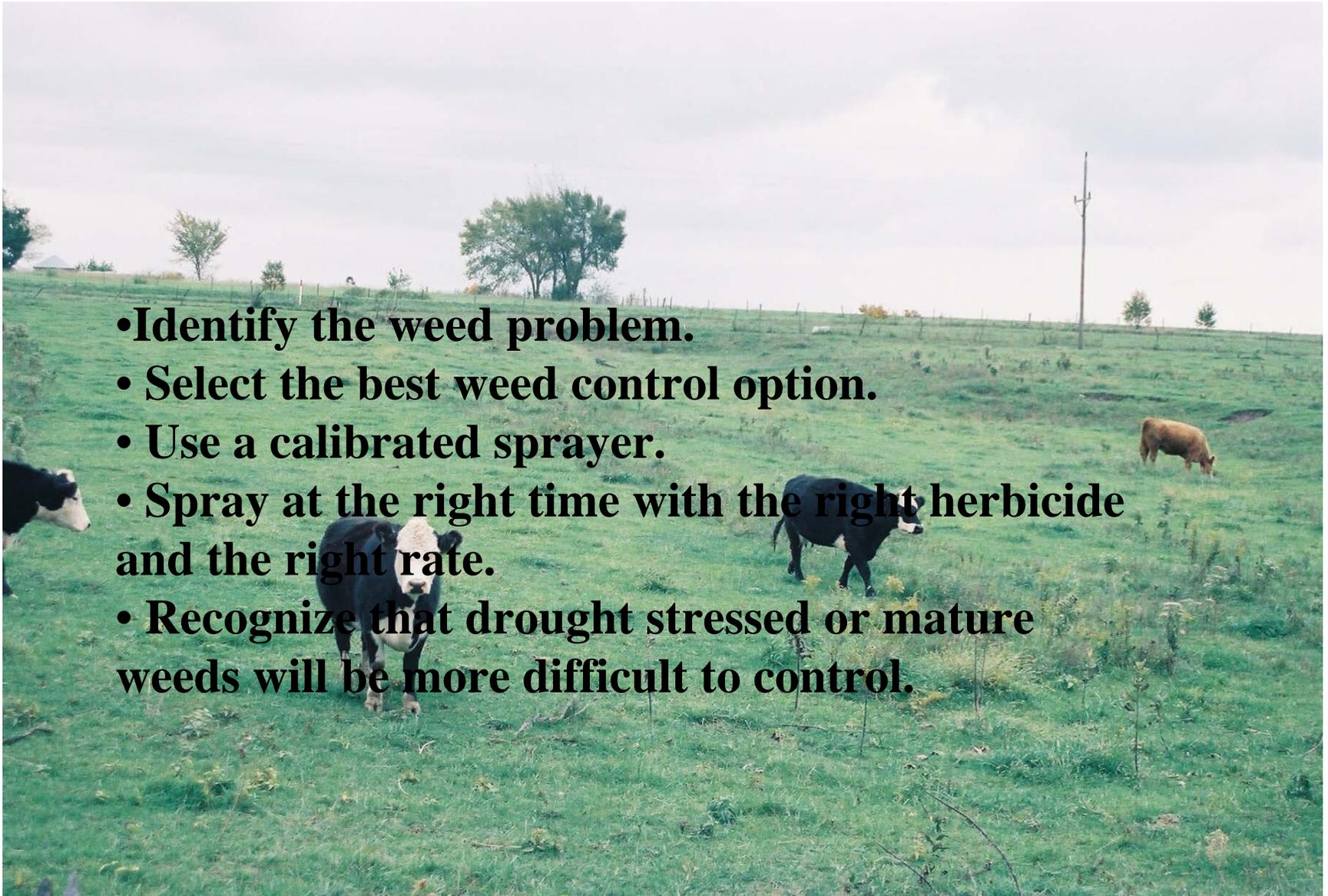
Cut Stump Treatment

- Any size of stump.
- Fresh Cut.
- Really only need to treat the cambium layer if using Tordon RTU or Pathway.
- Treat cambium layer and rest of stump when using products such as Crossbow or Super Brush Killer. Do not use these products when ground is frozen.



Improving & Striving for Better Forages

- **Identify the weed problem.**
- **Select the best weed control option.**
- **Use a calibrated sprayer.**
- **Spray at the right time with the right herbicide and the right rate.**
- **Recognize that drought stressed or mature weeds will be more difficult to control.**



Improving & Striving for Better Forages Continued

- 
- Follow the label directions for application & mixing of the herbicide.
 - Follow the haying/grazing restrictions of the herbicide.
 - Follow crop rotation guidelines of the herbicide.
 - Understand that retreating may be necessary.