What are noxious weeds?

Noxious weeds are non-native plants that disrupt native vegetation because they have no natural controls and are able to adapt to varied conditions. As a result of the Colorado Noxious Weed Act, these weeds have been placed on three separate lists (weed names are color-coded corresponding to the list they are on):

- **List A plants:** Eliminated everywhere
- **List B plants:** Spread should be stopped
- **List C plants:** Control is recommended

Effective management occurs over time and requires repeated exposure to the recommended techniques and control methods. After years of investment in mitigating the weeds on your property, the plant will eventually be destroyed.

This brochure is not meant to be all inclusive or restrictive, but offers guidelines and recommendations. References for this guide are thanks to the following sources:

- CO Dept. of Ag - Noxious Weed Management Program [http://www.colorado.gov/pacific/CDAG/1167928159176](http://www.colorado.gov/pacific/CDAG/1167928159176)

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Weed Control Methods

- **Preventive:** Prevention is the first and, perhaps, the most important step in a weed control program. Methods include: maintaining healthy pastures, using weed-free crop seed, weed-free manure and hay, and clean harvesting and tillage equipment, as well as the elimination of weed infestations in areas bordering cropland, and in irrigation ditches and canals.

- **Cultural:** Methods include, and are not limited to: Establishing and managing an adequate population of desirable vegetation to compete with the weeds; utilizing livestock (cattle, goats, sheep) when possible; mulching; burning; and even plastic weed barriers.

- **Mechanical:** Methods include, and are not limited to: Hand-pull, hoe, mow and tillage.

- **Biological:** Biological weed control involves the utilization of natural enemies for the control of specific weed species. Biological weed control is never 100% effective, and can take 5 to 10 years for success. However, this method can be successful especially when combined with other control methods.

- **Chemical:** Always read the label before using any herbicide! Weed control with herbicides is an effective tool for many target weed species. However, there are several aspects to consider when choosing a chemical program. These include: ID of target weed; herbicide selection; timing of application; desirable crops or plant species near control areas; the number of applications per year, and the number of years for treatment.

Sprayer calibration methods can be obtained from your local Extension office. ([Sprayer Calibration Fundamentals](http://www.ext.colostate.edu/pubs/farmngl/05003.html))

Always add a nonionic surfactant @ 0.32 oz/gal (1qt/100 gal) unless otherwise noted.

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This brochure was created to increase awareness of Noxious Weeds, the importance of identification, the importance of a weed management program, and some methods of weed control based on local, state and national research-based information.

**How do I control weeds on my property?**

1. Identify the weeds on your property.
2. Once a weed is identified, understand the life cycle of the weed:
   - winter or summer annual
   - biennial
   - simple or creeping perennial
3. Understand the types of controls:
   - Preventative
   - Biological
   - Cultural
   - Mechanical
4. Develop a weed management plan:
   - planning saves money and increases effectiveness
   - include long term monitoring to address any reinfestations.
   - timing is a critical part of successful weed control. Regardless of which combination of control methods are used, implementing those control methods at the correct stage of weed development will increase the chances for successful weed control in the shortest period of time, with the least cost.

It takes consistent persistence to win the war on weeds!
**Bull thistle**
*Cirsium vulgare (Savi) Tenore*

**Keys to Id**
- Leaves are prickly-hairy above and cottony below.
- Heads cobwebby-pubescent.
- Flowers are composite and purple.

**Identification**
- Lifecycle: Biennial
- Growth form: Forb/herb
- Flower: Flowers are 1.5-2 in wide and clustered at the ends of branches. The flower bracts are somewhat tapered and covered with spines (Whiston et al. 1996).
- Seeds/fruit: Seeds are covered with a circle of plumelike white hairs.
- Leaves: Leaves are alternate. Bulbous are composed of purple or occasionally white. Flowers are subtended by broad, spined-tipped bracts. May-July.
- Seeds/fruit: One-seeded oblong fruit (achene) about 0.2 inches long, shiny, yellowish-brown with a plumelike (pappus) of white hair-like bristles. 
- Leaves: Alternate, dark green, deeply lobed, and spiny margined. The leaves extend onto the stem and have a large, fleshy taproot. Stems are numerous, branched, and have broad spiny wings.
- Roots: Thick fleshy taproot
- Seeding: Forms rosette

**Control**
- Mech: Mowing can be effective if done every 10 to 21 days throughout the growing season.
- Bio: Cattle, goats, and sheep will graze when plants are young and succulent in the spring.

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**Canada thistle**
*Cirsium arvense (L.) Scop.*

**Keys to Id**
- Purple flowers form in clusters of 1-5 per branch.
- Floral bracts are spineless.
- Small heads, vanilla scent.

**Identification**
- Lifecycle: Perennial
- Growth form: Perennial forb
- Flower: Flowerheads are purple and borne in clusters of 1-5 per branch. Heads are only about 3/4 in wide. June-Oct.
- Seeds/fruit: One-seeded fruits (achenes) are straw or light brown, straight or slightly curved.
- Leaves: Leaves are spiny, alternate, oblong or lance-shaped, with the base leaves stalkless and clasping, or extended down along the stem.
- Stems: Mature plants range from 2-4 ft tall.
- Roots: Two types of roots, horizontal and vertical.
- Horizontal roots produce numerous shoots, while vertical roots store water and nutrients in their many small branches.
- Seedling: Early spring growth appears as rosettes with spiny-tipped, wavy leaves.
- Other: The floral bracts are spineless.

**Control**
- Mech: Mowing can be effective if done every 10 to 21 days throughout the growing season.
- Bio: Urophora stylata, a fly predator, can be used to help control this thistle.

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**Musk thistle**
*Carduus nutans* L.

**Keys to ld**
- Broad, spine-tipped bracts located under the flower.
- Flowering heads are terminal, solitary, and usually nodding.
- Grows up to 6 feet tall.

**Identification**
- Lifecycle: Biennial or sometimes winter annual
- Growth form: Forb
- Flower: Heads are terminal, solitary, 1 1/2-3 in wide, and usually nodding. Deep rose, violet or purple, occasionally white. Flowers are subtended by broad, spined-tipped bracts. May-July.
- Seeds/fruit: One-seeded oblong fruit (achene) about 0.2 inches long, shiny, yellowish-brown with a plumelike (pappus) of white hair-like bristles. 
- Leaves: Alternate, dark green, deeply lobed, and spiny margined. The leaves extend onto the stem and have a large, fleshy taproot. Stems are numerous, branched, and have broad spiny wings.
- Roots: Thick fleshy taproot
- Seeding: Forms rosette

**Control**
- Mech: Mowing can be effective if done every 10 to 21 days throughout the growing season.
- Bio: Cattle, goats, and sheep will graze when plants are young and succulent in the spring.

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**Scotch thistle**
*Onopordum acanthium L.*

**Keys to Id**
- Flower heads cluster 2-5 and are purple.
- Leaves are alternate, stalk-less and hairy underneath.

**Identification**
- Lifecycle: Biennial
- Growth form: Forb
- Flower: Heads are numerous, 1-2 inches in diameter, with spine-tipped bracts.
- Seeds/fruit: One-seeded fruit (achene) is wrinkled, brown to grayish-black, tipped with a plumelike (pappus) of slender bristles.
- Leaves: Leaves are alternate, large, irregularly lobed, and have sharp yellow spines. Rosette leaves may be up to 2 feet long and 1 foot wide. Upper and lower leaf surfaces are covered with a thick mat of cotton-like or woolly hairs, giving the foliage a gray-green color.
- Stems: Mature plants can grow up to 12 feet tall, and have a large, fleshy taproot. Stems are numerous, branched, and have broad spiny wings.
- Roots: Thick fleshy taproot
- Seeding: Forms rosette

**Control**
- Mech: Mowing can be effective if done every 10 to 21 days throughout the growing season.
- Bio: Cattle, goats, and sheep will graze when plants are young and succulent in the spring.

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**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Clopyralid + 2,4-D (Curtil) | 0.2 + 1.0 to 0.3 + 1.5 oz | Apply to rosettes in spring or fall.
Dicamba (Banvel, Ampac, or Clarity) | 0.5 + 1.0 oz | Apply to rosettes in spring or fall.
2,4-D or 2,4-D + dicamba (Rangerst) | 1.5 + 2.0 to 2.0 + 0.5 oz | Apply to rosettes in spring.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Aminopyralid (Milestone) | 5-7 ounces/acre 1.1 gal water | Spring at the pre-bud growth stage and/or to fall regrowth.
Chlorsulfuron (Telar) | 1-3 ounces/acre 0.50 gr/1 gal water | Spring during bud to bloom stage and/or to fall regrowth.
Clopyralid + 2,4-D (Redeem) | 3 pints/acre 1.25 oz/gal water | Apply from rosette to bud stage when all plants have emerged.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Aminopyralid (Milestone) | 5 fl. oz./acre | Spring rosette to early bolting or in fall to rosettes.
Metsulfuron (Escort XP) | 1 oz. product/acre | Spring from rosette to early bolting or in fall to rosettes.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Picoluron (Tordon 22K) *Restricted Use | 1 pint/acre | Apply spring or fall in the rosette stage.
Aminopyralid (Milestone) | 7 fl. oz./acre | Apply spring or fall in the rosette stage.
Metsulfuron (Cimarron X-Ira) | 2 oz./acre | Apply rosette to early bolting stages of growth. (Spring)
### Meadow Knapweed
**Centaraea pratensis**

**Keys to Id**
- **Flowers** are pink to purple; nickel size;
- **Leaves** 6” long, 1” wide;
- **Fringed margins on bracts.**

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: Solitary at tips of branches, 3/4” in size.
- Seedlings have finely divided leaves.

**Control**
- **Mech:** Hand pulling or digging of small populations; remove entire root system. Monitoring for long term is essential to prevent recurrences.
- **Bio:** Inappropriate, as eradication is the goal in CO.

**HERBICIDE**
- **Aminopyralid (Milestone) 7 oz/acre**
- **Clopyralid (TRANLINE) 1 pint/acre**
- **Picolamid (Tordon 22K) + Triclopyr (Redeem R&P) 1 quart/acre**

**TIMING**
- Spring to early summer for rosettes.
- Spring to early summer for growth stages or fall.

**RATE**
- 5-7 oz/acre
- 1 qt/acre
- 0.75 oz/gal

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### Diffuse Knapweed
**Centarea diffusa Lam**

**Keys to Id**
- **Floral bracts** have yellow spines with teeth like a comb and a distinct terminal spine
- **Flowers** are white or lavender
- **Seedlings** have finely divided leaves

**Identification**
- Lifecycle: Biennial or short-lived perennial
- Growth form: Forb
- Flower: Broadly urn-shaped, 0.6-0.8 in tall, terminal solitary or in clusters of 2-3. Floral bracts are yellowish with a brownish margin, fringed on the sides, and terminating in a slender bristle or spine. The heads contain two types of flowers, ray flowers (white, rose-purple, to lavender) around the edges surrounding tubular disk flowers. June-Aug.
- Seeds: Seeds are light brown to black.

**Control**
- **Mech:** Sever the root below the soil surface. Mowing is most effective when plants are at full-bloom.
- **Bio:** Livestock, seedhead weevil (Larinus minutus), where present.

**HERBICIDE**
- **Aminopyralid (Milestone) 5-7 oz/acre**
- **Clopyralid + Aminopyralid (Milestone) 1 qtl/acre**
- **Chlorsulfuron (Telar) 1 oz/gal**

**TIMING**
- Spring to early summer for rosettes.
- Spring to early summer for growth stages or fall.

**RATE**
- 1 qt/acre
- 0.75 oz/gal
- 3 oz/acre

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### Russian Knapweed
**Acroptilon repens (L.) Des Candeille**

**Keys to Id**
- **Distinguished** by the pointed papery tips of the floral bracts.
- **The roots** are dark brown and have scale leaves.

**Identification**
- **Growth form:** Perennial forb
- **Flower:** Heads are urn-shaped, solitary, and composed of disk flowers. Floral bracts are broad, ovoid, entire, and greenish at the base with papery, finely hairy edges. The petals are pink or purple.
- **Seeds:** Oval, grayish or ivory, with long white bristles (pappus) at the tip when young.
- **Leaves:** Alternate. Lower stem leaves are narrowly oblong to lance-shaped, and deeply lobed. The upper leaves are oblong, toothed, and become progressively smaller. Rosette leaves are lance-shaped, tapering at both ends, broadest at the tip.
- **Stems:** Mature plants are between 18-36 inches tall. The stems are erect, thin, stiff, branched, and when young are covered with soft, short, gray hair.
- **Roots:** Well-developed, recognizable by their black color and the presence of small scale leaves.
- **Seedling:** The seed leaves are oval, with shallow toothed or smooth edges. The surfaces of the leaves looks grayish-green, but not hairy.

**Control**
- **Mech:** Mowing repeatedly before the plants bolt during the summer, then herbicide in the fall.
- **Bio:** Gall midge (Japyxia ivanikovii)

**HERBICIDE**
- **Aminopyralid (Milestone) 4-6 ounces/acre**
- **Picolamid (Tordon 22K) + Triclopyr (Redeem R&P) 1/2 oz/gal**
- **Chlorsulfuron (Telar) 1 oz/gal**

**TIMING**
- Spring to early summer for rosettes.
- Spring to early bolting stage and/or fall to blooming.

**RATE**
- 1.0-1.25 gr/gal water
- 0.75 oz/acre
- 2.5/4 oz/acre

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### Spotted Knapweed
**Centarea maculosa L.**

**Keys to Id**
- **Floral bracts** have black tips, with comb-like spines of equal length.
- **Flowers** are pink to purple, but rarely white.
- **Leaves** are pinnately divided.

**Identification**
- **Growth form:** Perennial forb
- **Flower:** Heads are urn-shaped, solitary, and composed of disk flowers. Floral bracts are broad, ovoid, entire, and greenish at the base with papery, finely hairy edges. The petals are pink or purple.
- **Seeds:** Oval, grayish or ivory, with long white bristles (pappus) at the tip when young.
- **Leaves:** Alternate. Lower stem leaves are narrowly oblong to lance-shaped, and deeply lobed. The upper leaves are oblong, toothed, and become progressively smaller. Rosette leaves are lance-shaped, tapering at both ends, broadest at the tip.
- **Stems:** Mature plants are between 18-36 inches tall. The stems are erect, thin, stiff, branched, and when young are covered with soft, short, gray hair.
- **Roots:** Well-developed, recognizable by their black color and the presence of small scale leaves.
- **Seedling:** The seed leaves are oval, with shallow toothed or smooth edges. The surfaces of the leaves looks grayish-green, but not hairy.

**Control**
- **Mech:** Remove all roots below the soil surface. Mowing is most effective when plants are at full-bloom.
- **Bio:** Seed head and Root weevils (Larinus minutus and Cyphochiloicus achates)

**HERBICIDE**
- **Aminopyralid (Milestone) 5-7 ounces/acre or 1 gal/liter water**
- **Clopyralid (TRANLINE, Stinger) 2-3/1 pint/acre**
- **Clopyralid + Chlorsulfuron 2-3 qts/acre**

**TIMING**
- Spring to early bolting stage and/or fall to blooming.
- Apply to spring/fall rosettes - before flowering stalk lengthens.
- Apply to bloom to bloom.

**RATE**
- 5-7 gr/gal
- 1 oz/gal
- 2 oz/gal
Euphorbia esula L.
Leafy spurge

Identification
- Lifecycle: Perennial, short-lived
- Growth form: Forb
- Seeds: Oblong, grayish to yellow in capsule.
- Leaves: Alternate, narrowly oblong, slightly serrated, can reach 3 ft tall.
- Foliage: Smooth, without hairs.
- Roots: Extensive lateral root system.

Control
- Mech: Mowing will reduce seed production, repeat every 2 to 4 weeks during the growing season.
- Bio: Both sheep and goats can be effective grazers. Flea beetles (Aphthona spp.) are effective especially when combined with grazing and/or herbicidal treatments.

Oxeye daisy
Chrysanthemum leucanthemum L.

Identification
- Lifecycle: Perennial, short-lived
- Growth form: Forb
- Flowers: Numerous small clusters of small yellowish flowers arranged in long vertical racemes. Heads are 5-7 petals arranged in long vertical racemes. Seeds/fruit: Fruits are many-seeded capsules, seeds are small and ovoid.
- Leaves: Simple, entire, opposite or whorled
- Stems: Annual stems arise from a perennial rootstock. Stems are erect, 1.5-8 feet tall. Plants become taller and bushier as the rootstock matures.
- Roots: Short rhizomes and taproots.
- Other: Sometimes confused with fireweed (Epilobium spp.), which have 4-petaled flowers.

Control
- Mech: Hand removal, prior to seed set, of isolated individuals on small infestations. Remove the entire rootstock. Flowerheads must be cut and disposed of properly before a herbicide is applied.
- Bio: Inappropriate, as eradication is a goal, a root feeding weevil (Hylobius transversovittatus)

Purple loosestrife
Lythrum salicaria L.

Identification
- Lifecycle: Perennial
- Growth form: Forb or woody sub-shrub
- Flower: Numerous small clusters of small yellowish flowers arranged in long vertical racemes.
- Seeds: Seeds are small and ovoid.

Control
- Mech: Hand removal, prior to seed set, of isolated individuals on small infestations. Remove the entire rootstock. Flowerheads must be cut and disposed of properly before a herbicide is applied.

Cardaria draba
Hoary Cress

Identification
- Lifecycle: Perennial
- Growth form: Forb
- Flower: Numerous white flowers with four petals, plant has white, flat-topped appearance. May-June.
- Seeds/fruit: Seed capsules are heart-shaped and contain two reddish-brown seeds.
- Leaves: Alternate, blue-green, and lance-shaped. Lower leaves are stalked, while the upper leaves come taller and bushier as the rootstock matures.
- Stems: Mature plants reach 2 ft tall with erect stems.
- Roots: Rhizomatous; 29-32 inches deep.

Control
- Mech: Mowing several times before the plants bolt stresses it and allows for better chemical efficacy.
- Bio: None currently available.
Dalmatian toadflax
Linaria dalmatica

**Keys to Id**
- Yellow flowers that are like snapdragons with deep orange centers.
- Thick, waxy, bluish heart-shaped leaves that wrap the stem.

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: Bright yellow and resemble snapdragons, singly or in clusters, sharp thorns below.
- Seeds: Capsules are round-ovate and two-celled. Seeds are brown or black, circular, and surrounded by a notched wing.
- Leaves: Alternate, broad, clasping but crowded.
- Stems: Mature plants are up to 3 ft tall. A single toadflax plant contains from 1-25 vertical, floral stems, which are thick-walled and semi-woody.
- Roots: May penetrate 3 ft into the soil. Horizontal stems are thick and woody. Roots may grow to be several yards long, and can develop adventitious buds.

**Yellow toadflax**
Linaria vulgaris P. Miller

**Keys to Id**
- Yellow flowers that are like snapdragons with deep orange centers.
- Stems that are woody at the base and smooth to the top.

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: Bright yellow and resemble snapdragons, singly or in clusters, sharp thorns below.
- Seeds: Capsules are round-ovate and two-celled. Seeds are brown or black, circular, and surrounded by a notched wing.
- Leaves: Alternate, broad, clasping but crowded.
- Stems: Mature plants are up to 3 ft tall. A single toadflax plant contains from 1-25 vertical, floral stems, which are thick-walled and semi-woody.
- Roots: May penetrate 3 ft into the soil. Horizontal stems are thick and woody. Roots may grow to be several yards long, and can develop adventitious buds.

**Control**
- Mech: Hand pulling, digging, or tilling is NOT recommended because of the weed's ability to reproduce by stolons, rhizomes, and root fragments. This often renders mechanical control obsolete. Maintain healthy native populations to ensure this plant can not take hold.
- Bio: Inappropriate, as eradication is the goal.

<table>
<thead>
<tr>
<th>HERBICIDE</th>
<th>RATE</th>
<th>TIMING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picloram (Tordon 22K*) *Restricted</td>
<td>1.5 qt/acre</td>
<td>Apply at mid-flowering to late fall</td>
</tr>
<tr>
<td>Chlorsulfuron (Telar)</td>
<td>1 oz/gal</td>
<td>Apply at mid-flowering to late fall (Aug thru Sept)</td>
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</tbody>
</table>

**Orange Hawkweed**
Hieracium aurantacium.

**Keys to Id**
- Red-orange flower head; petals are strap-shaped and notched.
- Hairy leaves and stems.
- Reproduces by runners and by seed.

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: Orange; groups of 13 at the end of stem. June-July.
- Seeds/Fruit: With papus.
- Stems: Fine, leafless, 1-2 ft tall. With stiff hairs.
- Roots: Fibrous spreading with stolons at nodes.
- Seeding: Seedling leaves have bristly hairs.
- Other: Similar look to native hawkweeds and false dandelion, but this plant will form dense infestations.

**Control**
- Mech: NOT recommended because of the weed’s ability to reproduce by stolons, rhizomes, and root fragments. This often renders mechanical control obsolete. Maintain healthy native populations to ensure this plant can not take hold.
- Bio: Inappropriate, as eradication is the goal.

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<tr>
<td>Amiproxyld (Milestone)</td>
<td>4-6 oz / acre</td>
<td>Apply in rosette to bolting stages</td>
</tr>
<tr>
<td>Picloram (Tordon 22K*) *Restricted</td>
<td>2, 4-D</td>
<td>2 qts / acre</td>
</tr>
<tr>
<td>Picloram (Tordon 22K*) *Restricted</td>
<td>1 qt / acre</td>
<td>Apply in rosette stage</td>
</tr>
<tr>
<td>Clopyralid + 2,4-D (Curtail)</td>
<td>3-4 qt / acre</td>
<td>Apply in rosette stage</td>
</tr>
</tbody>
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**Houndstongue**
Cynoglossum officinale

**Keys to Id**
- Panicles of reddish-purple flowers with 5 petals and 5 soft, hairy sepals.
- Velloco-like seeds with 4 nutlets.

**Identification**
- Lifecycle: Biennial
- Growth form: Forb
- Flower: Flowers are reddish-purple, with 5 petals, arranged in panicles in the upper leaf axis.
- Seeds/Fruit: The fruit is composed of four prickly nutlets each about 1/3 inch long
- Leaves: Alternate, 1-12 inches long, 1-3 inches wide, rough, hairy, and lacking teeth or lobes. Basal leaves are elliptical and tapered at the base.
- Stems: Produces a single flowering stem. Stem is erect, stout, heavy, 1.5-3 ft tall, branched above.
- Roots: Thick, black, woody taproot.
- Seedling: Forms a rosette in the first year

**Control**
- Mech: Cut or pull, and remove entire root crown when in the rosette stage. Remove the accumulated dense litter layer to stimulate germination of desired plants. Mow or cut flowering stems before seed nutlets develop.
- Bio: none currently available in Colorado

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<tr>
<td>Metsulfuron, Methyl + Chlorsulfuron (Cimarron X-tra)</td>
<td>2.0 oz / acre</td>
<td>Apply in spring rosette to early bud growth stages</td>
</tr>
<tr>
<td>Picloram + 2,4-D (Grazon P+D) *Restricted Use</td>
<td>4 pints / acre</td>
<td>Apply in spring rosette stage</td>
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</tbody>
</table>
Poisonous Plants
These plants are poisonous to domestic livestock

Low Larkspur
Delphinium nuttallianum

Keys to Id
- Erect weak stem, flowers occur in top third of plant.
- Light to dark purple-blue flowers with a long spur at the rear.
- Flowers have five sepals, four petals, bicolor appearance.
- Leaves are alternate, deep, narrow lobes.
- Begin growing just after snowmelt.

Tall Larkspur
Delphinium occidentale

Keys to Id
- Erect hollow stem, 3 to 8 feet tall, flowers occur in dense clusters at top of the plant.
- Spurred blue flowers, looks like dunce cap.
- Flowers later in summer (July-August).
- Deep woody taproot.
- Occupy sites with deep moist soils, often found near aspen stands.

Control
- Cultural: Graze sites with sheep or goat - non-toxic. Cattle are highly impacted by the toxicity until after bloom.
- Mech: Hand pull, dig, to remove all parts of plant, combine with chemical treatment.
- Chemical: (rate in ae)
  - Tall: Picloram (Tordon). Rate: 2.2 lb/ac
  - Short: Picloram + 2,4-D Rate: 4.5 lb/ac

Showy Milkweed
Asclepias speciosa

Keys to Id
- Opposite elliptical leaves
- Pink/white crown like flower
- Erect stem can reach 5 ft.
- Milky latex sap

Control
- Cultural: Maintain healthy pasture land, avoid allowing areas to develop space cover, maintain desirable vegetation.
- Mech: Hand pulling, digging, to remove all parts of plant when found in grazing pasture land, combine with chemical treatment option.
- Chemical:
  - Dicamba (Banvel, Oracle, Clarity) with any 2,4-D Amine product.
  - Rate: 1 oz/gal

Water Hemlock
Cicuta douglasii

Keys to Id
- Stems are purple striped or spotted and reach 3-6’ tall.
- Leaves: Alternate, pinnate, and have toothed margins.
- Leaf veins terminate at the bottom of leaf serrations, not at the tips.

Control
- Cultural: Reduce grazing pressure in wet areas, avoid grazing when ground is soft.
- Mech:
  - Hand pull, dig, grub to remove all parts of plant, especially roots - highly toxic.
  - Repeated mowing close to the ground.
  - Wear protective clothing, plant is highly toxic to humans in addition to livestock.
  - Chem: Apply in late spring/early summer
    - Picloram, 2,4-D, or glyphosate
    - Rate: 2.0 lb/ac (ae)

Poisonous Plants
These plants are poisonous to domestic livestock

Backyard Weed Control Tips
Weeds (or undesirable vegetation) are a concern anytime they compete with the desired vegetation of your landscape or garden area. Weeds are opportunistic and will occupy any space that they can readily invade. Know that tolerating a few weeds can allow a healthy, functioning, attractive sustainable system.

Proper management, whether it be healthy turfgrass, adequate native plantings, or adequate mulch depth, can help to severely limit the impact that invasive and weed plants have.

The best weed control is prevention!

An integrated management approach to weed prevention will allow for the best results to reduce any weed concerns on your property. This takes time and attention over the long term to achieve successful results.

Some Additional Resources:
- CMG Garden Notes #351, Weed Management http://www.cmg.colostate.edu/gardennotes/351.pdf
- CSU Ext, Weed Management for small rural acreages http://www.ext.colostate.edu/pubs/natres/03106.pdf
- UNL Extension, Backyard Farmer Weed ID and Control http://byf.unl.edu/weeds
- Utah State University Extension - Yard and Garden http://extension.usu.edu/yardandgarden/
  (970) 879-0825 GBrown@co.routt.co.us
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