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
   - Chemical
   - Mechanical
4. Develop a weed management plan:
   - planning saves money and increases effectiveness
   - include long term monitoring to address any reinfections
   - 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.

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 and photographs for this guide are thanks to the following sources:

- US Department of Agriculture: [http://plants.usda.gov/java/search](http://plants.usda.gov/java/search)
- Colo. Dept. of Ag - Noxious Weed Management Program: [www.colorado.gov/ag/weeds](http://www.colorado.gov/ag/weeds)

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Ornamental Noxious Weed Management Pocket Guide

Colorado State University, U.S. Department of Agriculture and Colorado Counties cooperating. Cooperative Extension programs are available to all without discrimination. To simplify technical terminology, trade names of products will be used. No endorsement of products named is intended nor criticism implied of products not motioned.

It takes consistent persistence to win the war on weeds!

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) [www.ext.colostate.edu/puts/farming/05003.html](http://www.ext.colostate.edu/puts/farming/05003.html)

Always add a nonionic surfactant @ 0.32 oz/gal (1qt/100 gal) unless otherwise noted.
**Lythrum salicaria L.**
*Purple loosestrife*

**Keys to Id**
- Showy pinkish-purple flowers bloom in long vertical racemes
- Smooth Lance-shaped leaves
- Four sided stem.

**Identification**
- Lifecycle: Perennial
- Growth form: Forb or woody sub-shrub
- Flower: Purple/magenta with 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 taproot.
- 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 rootstalk. Flowerheads must be cut and disposed of properly before a herbicide is applied.
- Bio: Inappropriate, as eradication is the goal. A root feeding weevil (*Hylobius transversovittatus*).

**HERBICIDE**

<table>
<thead>
<tr>
<th>HERBICIDE</th>
<th>RATE</th>
<th>TIMING</th>
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<tbody>
<tr>
<td>Triclopyr (Garlon 3A)</td>
<td>1-2 qts./acre</td>
<td>Summer. If plants are flowering, cut and properly dispose of flower heads before applying Rodeo.</td>
</tr>
<tr>
<td>Glyphosate* (Rodeo - aquatic safe)</td>
<td>1-2 qts./acre</td>
<td>Summer during the flowering stage. Cut and properly dispose of flowerheads before applying Rodeo.</td>
</tr>
</tbody>
</table>

**Euphorbia myrsinites**
*Myrtle Spurge*

**Keys to Id**
- Low growing, blue green weed
- Flowers are yellow-green pedal like bracts;
- Contains milky sap.

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: Yellow-green bracts that bloom in the early spring.
- Seeds/Fruit: Hard, round
- Leaves: Alternate, blue-green, fleshy, trailing stems.
- Stems: Mature plants are 4-6" tall and can reach 18" laterally along the ground.
- Roots: Taproot.
- Other: The plant exudes a milky sap that can be irritating to the skin.

**Control**
- Mech: Hand removal, with care, avoid milky sap. Remove the entire rootstalk. Remove any seed source.
- Bio: Inappropriate, as eradication is the goal.

**Tordon 22K**

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<tr>
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<tbody>
<tr>
<td>2,4-D Ester</td>
<td>2 qts./acre</td>
<td>Spring/fall regrowth; 4.0 lbs. active ingredient/acre.</td>
</tr>
<tr>
<td>Diacamba + 2,4-D</td>
<td>1 pint Diacamba + 2-3 pints 2,4-D</td>
<td>Spring/fall regrowth; 4.0 lbs active ingredient/gallon.</td>
</tr>
<tr>
<td>2,4-D (amine or ester)</td>
<td>1 quart Diacamba + 2-3 pints 2,4-D</td>
<td>Flowering growth stage during spring or fall regrowth.</td>
</tr>
</tbody>
</table>

**Polygonum x bohemicum**
*Bohemian knotweed*

**Keys to Id**
- Stems zig-zag, are hollow, have purple spots, and are swollen at the nodes
- Small showy green-white flowers.
- Large spade shaped bright green leaves.
- Bamboo like perennial, can reach 16 ft tall.

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: Tiny, lime green to white; clustered in small, cup-like structures. May-Sept.
- Seeds: The three-capsuled fruits explode at maturity, ejecting the seeds.
- Leaves: Alternate, stalkless, narrow.
- Stems: Mature plants are about 1-1.5 feet tall.
- Roots: Long indeterminate roots, spread in horizontal and vertical planes, and short determinant roots, spread strictly horizontal.
- Other: The entire plant exudes white, milky sap that can be irritating to the skin. Handle with protective clothing, sap is an irritant.
- Exotics: Distinguished from leafy spurge by its slender stems with numerous, crowded, narrow leaves.

**Control**
- Mech: Dig or hand pull entire plant. Tillage not effective, it may only encourage spread.
- Bio: Inappropriate, as eradication is the goal. Do not graze with livestock, plant is toxic (sheep can tolerate grazing this plant).

**EPICHLORHYDINOL**

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<tr>
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<tbody>
<tr>
<td>Picloram (Tordon 22K) <em>Restricted Use</em></td>
<td>2-4 pints/acre</td>
<td>Apply to blooming. Apply to wet, not dripping.</td>
</tr>
<tr>
<td>Dicamba + 2,4-D</td>
<td>1 qt Dicamba + 2 qts 2,4-D</td>
<td>Apply in the flowering stage.</td>
</tr>
</tbody>
</table>

**Japanese knotweed**
*Polygonum cuspidatum*

**Keys to Id**
- Broad spade shaped bright green leaves with bumps on underside.
- Flower clusters are longer than Bohemian.
- Bamboo like perennial, can reach 16 ft tall.

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: Tiny, lime green to white; clustered in small, cup-like structures. May-Sept.
- Seeds: The three-capsuled fruits explode at maturity, ejecting the seeds.
- Leaves: Alternate, stalkless, narrow.
- Stems: Mature plants are about 1-1.5 feet tall.
- Roots: Long indeterminate roots, spread in horizontal and vertical planes, and short determinant roots, spread strictly horizontal.
- Other: The entire plant exudes white, milky sap that can be irritating to the skin. Handle with protective clothing, sap is an irritant.
- Exotics: Distinguished from leafy spurge by its slender stems with numerous, crowded, narrow leaves.

**Control**
- Mech: Dig or hand pull entire plant. Tillage not effective, it may only encourage spread.
- Bio: Inappropriate, as eradication is the goal. Do not graze with livestock, plant is toxic (sheep can tolerate grazing this plant).

**Imazapyr**

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<tr>
<td>Glyphosate* (Rodeo, or other aquatic safe product)</td>
<td>3.2 to 3.8 oz / gal water</td>
<td>Spring, pre-bud to blooming. Apply to wet, not dripping.</td>
</tr>
<tr>
<td>Dicamba + 2,4-D</td>
<td>1 quart Dicamba + 2 qts 2,4-D</td>
<td>Apply in the flowering stage.</td>
</tr>
</tbody>
</table>
Keys to Id

- Very small yellow flowers.
- Distinctive dark purple seedpods.
- Blue-green leaves with white vein on top.

Identification

- Lifecycle: Winter annual or biennial.
- Growth form: Forb
- Flower: Bright yellow and clustered. Late spring.
- Seeds: Seedpods are black or purplish green. Plant can develop rootstocks.
- Roots: Fibrous roots and lateral rhizomes
- Stems: Reaches 1-1.5 ft tall with one to several stems growing from well-developed rootstocks.
- Leaves: Alternate, palmately compound with 5 toothed leaflets on each leaf. Stalks have conspicuously glandular hairs
- Seeds/Fruit: Each flower produces numerous small seeds (.05 in long) that are slightly flattened. Prebud / early flower.
- Flower petals are shorter than scentless.
- Looks similar to mayweed but is odorless when crushed.
- Bio: Goats or sheep can be effective. There are no insect biological controls currently available.

Control

- Mech: Hand pull or dig when soil is moist and infestations are small, be sure to pull up all roots. Mowing is not effective, stop seed spread by removal.
- Bio: Animals dislike due to high tannin content. There are no insect biological controls currently available available.

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<tr>
<td>Chlorsulfuron</td>
<td>0.33 oz/ac</td>
<td>Apply in rosette or bolting growth stage.</td>
</tr>
<tr>
<td>glyphosate*</td>
<td>1.5% solution (Direct on foliage)</td>
<td>Active growth stage.</td>
</tr>
<tr>
<td>imazapic*</td>
<td>4-6 pts/ac</td>
<td>Wet foliage. Active growth stage.</td>
</tr>
<tr>
<td>Metsulfuron</td>
<td>0.33 oz/ac</td>
<td>Apply in rosette or bolting growth stage.</td>
</tr>
<tr>
<td>Picloram (Tordon 22K*)*Restricted</td>
<td>1 pint/acre</td>
<td>Surfactant is absolutely necessary. Apply in summer or at fall regrowth.</td>
</tr>
<tr>
<td>Aminopyralid (Milestone)</td>
<td>7 fl oz/ac</td>
<td>Apply in rosette growth stage.</td>
</tr>
</tbody>
</table>

Dyer’s woad

*Isatis tinctoria*

Keys to Id

- Leaves are blue-green.
- Can reach 20 ft tall.
- 3 ft long seed heads.

Identification

- Lifecycle: Perennial
- Growth form: Grass
- Flower: Dense plume at top of tall stalk.
- Seeds: Rarely produces, mostly inerfite.
- Leaves: Blue-green with heart shaped base, elongate, 1-2 inches wide and 1 ft long.
- Stems: Resemble corn stalk, hollow.
- Roots: Rhizomatous, fibrous, forms dense mat.
- Seedling: can sprout from very small root fragment.
- Cul: Maintain healthy riparian plants.

Control

- Mech: Dig or pull, and remove entire root system of smaller plants. Combine with herbicide treatments to obtain effective control. Monitor for any new infestations over long term.
- Bio: Inappropriate, as eradication is the goal.

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Giant reed grass

*Arundo donax*

Keys to Id

- Leaves are blue-green.
- Can reach 20 ft tall.
- 3 ft long seed heads.

Identification

- Lifecycle: Perennial
- Growth form: Forb
- Flower: Dense plume at top of tall stalk.
- Seeds: Rarely produces, mostly inerfite.
- Leaves: Blue-green with heart shaped base, elongate, 1-2 inches wide and 1 ft long.
- Stems: Resemble corn stalk, hollow.
- Roots: Rhizomatous, fibrous, forms dense mat.
- Seedling: can sprout from very small root fragment.

Control

- Mech: Hand pull or dig when soil is moist and infestations are small, be sure to pull up all roots. Mowing is not effective, stop seed spread by removal.
- Bio: Inappropriate, as eradication is the goal.

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<td>Glyphosate*</td>
<td>1.5% solution (Direct on foliage)</td>
<td>Active growth stage.</td>
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<tr>
<td>imazapic*</td>
<td>4-6 pts/ac</td>
<td>Wet foliage. Active growth stage.</td>
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<tr>
<td>Metsulfuron</td>
<td>0.33 oz/ac</td>
<td>Apply in rosette or bolting growth stage.</td>
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<tr>
<td>Picloram (Tordon 22K*)*Restricted</td>
<td>1 pint/acre</td>
<td>Surfactant is absolutely necessary. Apply in summer or at fall regrowth.</td>
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Scentless Chamomile

*Matricaria perforate*

Keys to Id

- Flowers have a yellow center disk, with white petals around.
- Odorless when crushed.
- Leaves are alternate, finely divided.

Identification

- Lifecycle: Perennial
- Growth form: Forb
- Flower: Dense plume at top of tall stalk.
- Seeds: Rarely produces, mostly inerfite.
- Leaves: Blue-green with heart shaped base, elongate, 1-2 inches wide and 1 ft long.
- Stems: Resemble corn stalk, hollow.
- Roots: Rhizomatous, fibrous, forms dense mat.
- Seedling: can sprout from very small root fragment.
- Cul: Maintain healthy riparian plants.

Control

- Mech: Dig or pull, and remove entire root system of smaller plants. Combine with herbicide treatments to obtain effective control. Monitor for any new infestations over long term.
- Bio: Inappropriate, as eradication is the goal.

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Giant reed grass

*Sulphur Cinquefoil*

*Potentilla recta*

Keys to Id

- Leaves - palmately compound, 5-7 toothed leaflets.
- Flowers are light yellow with five petals.
- Leaf stalks have perpendicular hairs.

Identification

- Lifecycle: Perennial
- Growth form: Forb
- Flower: Light-yellow with 5 petals, deeply notched.
- Seeds: Each flower produces numerous small seeds (.05 in long) that are slightly flattened.
- Leaves: Alternate, palmately compound with 5-7 toothed leaflets on each leaf. Stalks have conspicuously perpendicular hairs.
- Stems: Reaches 1-1.5 ft tall with one to several stems growing from well-developed rootstocks.
- Roots: Fibrous roots and lateral rhizomes
- Cul: Maintain healthy riparian plants.

Control

- Mech: Hand pull or dig when soil is moist and infestations are small, be sure to pull up all roots. Mowing is not effective, stop seed spread by removal.
- Bio: Inappropriate, as eradication is the goal.

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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 on ends of branches, sharp thorns below.
- Seeds: Capsules are round-ovate, and two-celled. Seeds are brown or black, circular, and surrounded by a notched wing.
- Leaves: Soft, lance-shaped, and pale green. Mainly alternate; lower leaves appear to be opposite.
- Stems: Mature plants are 1-3 feet tall with 1-25 smooth erect floral stems covered with cottony hairs.
- Roots: Deep taproot, long horizontal roots that can develop adventitious bud sprouts.
- Other: Closely related to Dalmatian toadflax (whos roots develop adventitious bud sprouts).

**Control**
- Mech: Hand pulling, digging, or tilling is NOT recommended for eradication.
- Bio: Calophasia lunula, a predatory noctuid moth, Eleobata intermedia, a root boring moth and Mecinus janthinus, a stem boring weevil are currently available in Colorado.

**HABITICIDE**
- Glyphosate
- Clorpyralid
- Dicamba

**HERBICIDE**
- Picloram
  - 1.5 pts/acre
  - Apply at mid-flowering to late fall
- Chlorsulfuron
  - 1.25 oz/acre
  - Apply at mid-flowering to late fall (Aug thru Sept)

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: Small, yellow, inconspicuous, numerous 1/4 in wide. July - August.
- Seeds: One seeded fruit, 1/16 in long, smooth, flat and light gray-brown in color.
- Leaves: Divided into deeply lobed leaflets, light green to olive green color, 2-4 in long.
- Stems: 20 or more stems grow from woody crown. Covered with fine silky hairs.
- Roots: Taproot to 2 in diameter with shallow lateral branching stems up to 6 ft long.
- Other: Strong sage-like odor.

**Control**
- Mech: Hand pull or dig, remove all parts of plant. Repeated short mowing can stress plant.
- Bio: None currently available in Colorado.

**HERBICIDE**
- Picloram (Tordon 222)*
  - 1 pint / acre
  - Apply at spring, after reaches 12", before flowering.
- 2,4-D + Clopyralid (Curtail)
  - 2 qt / acre
  - Apply at spring, after reaches 12", before flowering.
- Dicamba (Banvel, Clarity, or Vanquish)
  - 1 qt / acre
  - Apply at spring, after reaches 12", before flowering.

**HERBICIDE**
- Chlorsulfuron (Tender)
- 1 oz / acre
- Apply at bolting to bud growth stage. (Late Spring to Mid Summer)

**Hersel's Rocket**
Hesperis matronalis

**Keys to Id**
- Flowers are white or purple with four petals.
- Leaves are lanced shaped with toothed margins and 2-4" long.

**Identification**
- Lifecycle: Biennial or short-lived perennial; member of the mustard family.
- Growth form: Forb
- Flower: White or purple with 4 petals. Flowers are clustered in loose terminal stalks. May-Sept.
- Seeds/Fruit: Fruits are many seeded, long and narrow and cylindrical. Seeds are small (3-4 mm long), angular, grooved and dark reddish-brown.
- Leaves: Alternate, 2-4 in long, lance-shaped, with finely toothed margins.
- Stems: Mature plants range from 4 in to 3 ft tall.
- Roots: Shallow fibrous root system.
- Impact: Commonly planted as an ornamental

**Control**
- Mech: Hand pull/dig when soil is moist, remove flowers before the plant sets seed.
- Bio: None currently available in Colorado.

**HERBICIDE**
- Roundup Ultra* non-selective herbicide
- Glyphosate* nonselective
- Roundup Ultra* non-selective herbicide

**HERBICIDE**
- 4 oz/gal
- Apply during flowering stage until full-bloom before seed production.
- 1.25 oz/gal
- Summer during the flowering stage.

**HERBICIDE**
- 1-2.5 oz/gal water
- Apply at early plant growth (Spring)
Chinese clematis

**Tzanacetum vulgare**

**Keys to Id**
- Bright yellow flowers are button shaped, no petals.
- Aromatic when crushed.
- Narrow leaflets.

**Identification**
- Lifecycle: Biennial
- Growth form: Forb
- Flower: Yellow; numerous; flat-topped flower heads. July to September.
- Seeds/Fruit: Seed capsules are heart shaped, contain reddish-brown seeds.
- Leaves: Alternate, deeply divided into numerous toothed leaflets.
- Stems: Can reach 6 ft tall. Stems are often purplish-red and extensively branched towards the top.
- Roots: Rhizomatous.
- Other: Foliage emits a strong odor when crushed.

**Control**
- Mech: Hand pull or dig when soil is moist and infestations are small, be sure to pull up all roots. Mowing is not effective, stop seed spread by removal.
- Bio: Goats or sheep can be effective. There are no insect biological controls currently available.

**HERBICIDE**
- **Metsulfuron (Escort XP)**
  - RATE: 1 oz/acre
  - TIMING: Apply at the early bud growth stage; (Early Spring to Early Summer)

**HERBICIDE**
- **Chlorsulfuron (Toler)**
  - RATE: 1 oz/acre
  - TIMING: Apply at the early bud growth stage; (Early Spring to Early Summer)

**Oxeye daisy

**Chrysanthemum leucanthemum L.**

**Keys to Id**
- Lifecycle: Perennial, short-lived
- Growth form: Forb
- Flower: Heads are solitary at the ends of branches. Heads are white ray flowers & yellow disk flowers.
- Seeds/Fruit: Fruits have about 10 ribs.
- Leaves: Alternately arranged leaves become stalk-less and toothed. Basal and lower stem leaves are 5-6” long, spoon-shaped. Stem leaves: Mature plants are 10-24” in tall with erect, smooth to sparsely hairy stems.
- Roots: Shallow, branched rhizomes.
- Other: Oxeye daisy is easily confused with the ornamental Shasta daisy which has a root ball and is a more robust plant with larger flowers.

**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, contain reddish-brown seeds.
- Leaves: Alternate, deeply divided into numerous narrow, individual leaflets.
- Stems: Can reach 6 ft tall. Stems are often purplish-red and extensively branched towards the top.
- Roots: Rhizomatous.
- Other: Foliage emits a strong odor when crushed.
- Control
- Mech: Mowing several times before the plants bolt stresses it and allows for better chemical efficacy
- Bio: None currently available

**Control**
- Mech: Hand pull or dig when soil is moist and infestations are small, be sure to pull up all roots. Mowing is not effective, stop seed spread by removal.
- Bio: Goats or sheep can be effective. There are no insect biological controls currently available.

**HERBICIDE**
- **Metsulfuron (Escort XP)**
  - RATE: 1 oz/acre
  - TIMING: Apply at the early bud growth stage; (Early Spring to Early Summer)

**HERBICIDE**
- **Chlorsulfuron (Toler)**
  - RATE: 1 oz/acre
  - TIMING: Apply at the late flower post-flower growth stage; (Late Spring to Mid Summer)

**Common tansy

**Tanacetum vulgare**

**Keys to Id**
- Bright yellow flowers are button shaped, no petals.
- Aromatic when crushed.
- Narrow leaflets.

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: Yellow; numerous; flat-topped flower heads. July to September.
- Seeds/Fruit: Seed capsules are heart shaped, contain reddish-brown seeds.
- Leaves: Alternate, deeply divided into numerous toothed leaflets.
- Stems: Can reach 6 ft tall. Stems are often purplish-red and extensively branched towards the top.
- Roots: Rhizomatous.
- Other: Foliage emits a strong odor when crushed.

**Control**
- Mech: Hand pull or dig when soil is moist and infestations are small, be sure to pull up all roots. Mowing is not effective, stop seed spread by removal.
- Bio: Goats or sheep can be effective. There are no insect biological controls currently available.

**HERBICIDE**
- **Metsulfuron (Escort XP)**
  - RATE: 1 oz/acre
  - TIMING: Apply at the late flower post-flower growth stage; (Late Spring to Mid Summer)

**HERBICIDE**
- **Chlorsulfuron (Toler)**
  - RATE: 1 oz/acre
  - TIMING: Apply at flowering growth stage. (Summer)
Downy brome (Cheatgrass)
*Bromus tectorum*

**Keys to Id**
- Drooping seedhead
- Densely hairy leaves
- Green-up in early spring
- Changes to purple/tan in early summer

**Identification**
- Lifecycle: Summer/Winter Annual.
- Growth form: Grass
- Flower: panicles (loose, irregularly compound flowering part of plant with flowers borne on individual stalks).
- Seeds: Spikelets including awns are 0.8-2” long, nodding, with 2-8 florets.
- Leaves: Light-green and hairy. Lower sheaths are conspicuously hairy, upper sheaths are smooth.
- Stems: Erect, slender, glabrous, or slightly hairy.
- Roots: Fibrous root system.

**Control**
- Cultural: Maintain healthy stand of natives/desired perennials, carefully manage grazing to ensure protection of desired plant species.
- Mech: Cutting, mowing, or pulling has a negligible effect, repeated hand pulling or grazing before seed set.

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: bell or trumpet-shaped, white to pink in color, and are about 1 inch long, small bracts below.
- Seeds/Fruit: Seeds can remain viable for 40 years.
- Leaves: Alternate, arrowhead shaped.
- Stems: Prostrate, many feet in length.
- Roots: Rhizomatous with deep taproot.

**Control**
- Mech: Cutting, mowing, or pulling has a negligible effect unless the plants are cut below the surface in the early seedling stage.
- Bio: The bindweed gall mite, Aceria mahlerbae, and bindweed moth, Tyta lactuca are effective in Colo.
- Herbicide: Clarity + 2,4-D Amine (temp must be below 85°) 1 qt/acre
- Control: Apply just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Clarity + 2,4-D Amine | 1 qt/acre | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Tordon 22k* | 1 qt/acre | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

Field Bindweed
*Convolvulus arvensis*

**Keys to Id**
- Flowers are funnel-shaped, white to pink, and have two small bracts one inch below the flower base.
- Leaves are shaped like arrowheads.

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: bell or trumpet-shaped, white to pink in color, and are about 1 inch long, small bracts below.
- Seeds/Fruit: Seeds can remain viable for 40 years.
- Leaves: Alternate, arrowhead shaped.
- Stems: Prostrate, many feet in length.
- Roots: Rhizomatous with deep taproot.

**Control**
- Mech: Cutting, mowing, or pulling has a negligible effect unless the plants are cut below the surface in the early seedling stage.
- Bio: The bindweed gall mite, Aceria mahlerbae, and bindweed moth, Tyta lactuca are effective in Colo.
- Herbicide: Clarity + 2,4-D Amine (temp must be below 85°) 1 qt/acre
- Control: Apply just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Clarity + 2,4-D Amine | 1 qt/acre | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Tordon 22k* | 1 qt/acre | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Tordon 22k* | 1 oz/gal water | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

Poisonous Plants

**Western Whorled Milkweed**
*Asclepias subverticillata*

**Keys to Id**
- Whorled linear leaves
- Greenish white flower
- Slender seed pod
- Milky latex sap

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: funnel shaped, white to pink in color, and have two small bracts below the flower base.
- Seeds/Fruit: Seeds can remain viable for 40 years.
- Leaves: Asymmetrical, arrowhead shaped.
- Stems: Prostrate, many feet in length.
- Roots: Rhizomatous with deep taproot.

**Control**
- Mech: Cutting, mowing, or pulling has a negligible effect unless the plants are cut below the surface in the early seedling stage.
- Bio: The bindweed gall mite, Aceria mahlerbae, and bindweed moth, Tyta lactuca are effective in Colo.
- Herbicide: Clarity + 2,4-D Amine (temp must be below 85°) 1 oz/gal water
- Control: Apply just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Tordon 22k* | 1 qt/acre | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Tordon 22k* | 1 oz/gal water | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Tordon 22k* | 1 oz/gal water | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Tordon 22k* | 1 oz/gal water | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Tordon 22k* | 1 oz/gal water | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Tordon 22k* | 1 oz/gal water | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

Showey Milkweed
*Asclepias speciosa*

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

**Identification**
- Lifecycle: Perennial
- Growth form: Forb
- Flower: bell or trumpet-shaped, white to pink in color, and are about 1 inch long, small bracts below.
- Seeds/Fruit: Seeds can remain viable for 40 years.
- Leaves: Asymmetrical, arrowhead shaped.
- Stems: Prostrate, many feet in length.
- Roots: Rhizomatous with deep taproot.

**Control**
- Mech: Cutting, mowing, or pulling has a negligible effect unless the plants are cut below the surface in the early seedling stage.
- Bio: The bindweed gall mite, Aceria mahlerbae, and bindweed moth, Tyta lactuca are effective in Colo.
- Herbicide: Clarity + 2,4-D Amine (temp must be below 85°) 1 oz/gal water
- Control: Apply just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Tordon 22k* | 1 oz/gal water | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
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Tordon 22k* | 1 oz/gal water | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

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Tordon 22k* | 1 oz/gal water | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

**HERBICIDE** | **RATE** | **TIMING**
--- | --- | ---
Tordon 22k* | 1 oz/gal water | Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability.

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.

Additional Resources:

- Melissa Werkmeister
  Mesa County Weed and Pest Coordinator
  (970) 255-7121
  melissa.werkmeister@mesacounty.us

- Tri River Area Extension Website http://www.extension.colostate.edu/TRA/
- CMG Garden Notes #351, Weed Management www.cmg.colostate.edu/gardennotes/351.pdf
- Preparation of small spray quantities of pesticides www.ext.colostate.edu/pubs/garden/07615.pdf
- CSU Ext. Weed Management for small rural acreages www.ext.colostate.edu/pubs/natres/03106.pdf

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