

## Dalmatian Toadflax



In addition to being a prolific seed producer, having an extensive root system and possessing an aggressive growth habit, its waxy leaves complicate control of this weed. The waxy leaf surface can prevent herbicides from being taken up by the plant. Herbicides should be applied during the true flower stage, when the wax layer has diminished and has little impact.

**Mechanical:** Begin digging or pulling as soon as it greens up and repeat every 14-21 days until the first frost.

**Cultural:** Russian wildrye, pubescent wheatgrass, thickspike wheatgrass, and crested wheatgrass can be planted to compete with dalmatian toadflax.

**Chemical:** For pastures and rangelands, 1 qt. Tordon per acre with a surfactant when it flowers.

## Leafy Spurge

**Mechanical:** Begin mowing as soon as it greens up and repeat every 7-10 days until the first frost.

**Biological:** *Aphthona nigricutis*, *Aphthona lacertosa* and *Aphthona czwalinae* (flea beetles) all provide excellent long-term control but site conditions can hinder performance.

**Cultural:** Smooth brome, western wheatgrass and crested wheatgrass can compete if they have previously established.

**Chemical:** For sensitive areas, 2# 2,4-D or 7.5 pt. Rodeo/Roundup per acre (spring and fall). For pastures and rangelands, 1 qt. Tordon or 2 qt. Banvel per acre (spring and fall). For areas not grazed, 12 oz. Plateau in the fall (two weeks before frost) with 28-0-0 fertilizer.



Most herbicides are ineffective because the milky, latex sap restricts herbicide movement into the root system. Proper timing of management tools and the use of multiple techniques is required to achieve control, even with small infestations.

## Canada Thistle



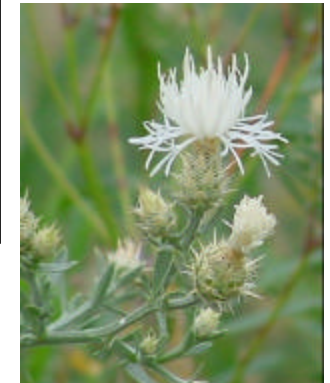
This weed has a very extensive root system, which means it can recover from most control methods. Repetitive mowing and herbicide applications will control this plant, so persistence pays off. There are no known effective biological controls for this plant.

**Mechanical:** Mowing should begin in May and be repeated every 14-21 days until frost. Digging, pulling or cultivating should begin in April and repeated every 14-21 days until frost.

**Chemical:** Sensitive areas, 2 lbs. 2,4-D per acre (spring and fall) Non-sensitive areas, 1 qt. Tordon 22k, or 2 qt. Banvel per acre (spring or fall)

**Cultural:** Alfalfa and Western Wheatgrass compete very well.

## Diffuse Knapweed



**Mechanical:** Dig, pull or cultivate anytime you see it year round.

**Chemical:** Sensitive areas, 2 lbs. 2,4-D per acre spring and fall. Non-sensitive areas, 1 pt. Tordon per acre or ½ pt. Tordon plus ½ pt. Banvel per acre spring and fall.

**Cultural:** Keep native vegetation in good condition by not overgrazing and by practicing good range management techniques.

It is imperative to prevent seed production as a mature plant can produce over 20,000 seeds per plant. This weed responds well to herbicides but even better to mechanical methods. Severing the taproot below the soil surface or continual mowing will successfully control the plant.

## Field Bindweed



Persistence is necessary to control this plant as its extensive root system can store a three-year food supply and its seeds can remain viable in the soil up to 40 years. Multiple weed management tools should be used to continually stress the plant.

**Mechanical:** Begin mowing, cutting or digging in May and repeat every 14-21 days until the first frost.

**Cultural:** Competitive grasses can keep it under control. However, alternative control measures should be considered when grasses go dormant.

**Chemical:** Apply herbicides during full bloom or the first week in September. For sensitive areas, 1.5 to 2 pt. per acre of 2,4-D. For non-sensitive areas, 2 pt. per acre Tordon + 1 pt. per acre 2,4-D.

## Assessing your management goals

When developing a weed management plan, it is important to realistically assess the weed infestation. Starting with correctly identifying the plant(s) that need to be controlled and how many of them there are. Obviously the goal is always to get rid of the weeds, except at some point an infestation can become so large that eradication is no longer an option. Control may not be feasible either, so containment may be the only option. In another scenario, the infestation may be something that is rare to Colorado, therefore no matter what the size, eradication should be the goal. It's okay to set lofty goals when it comes to weed control but know when to be realistic about what can or can't be done.

## Helpful hints and other advice

There are a few rules of thumb to remember when implementing a weed management plan. First, the best times for herbicide applications are during the spring and fall, or during the true flower stage. At these times, weeds are expending food reserves to produce leaves or are transferring food supplies to the root system. These types of activities make the plant vulnerable to herbicides, as the plant is more likely to take up what is being applied. Second, summer applications tend to be ineffective because that is when the weed is most likely to resist herbicides. They're actively growing and will either re-grow damaged tissue quickly or will not take up the herbicide. Third, mowing is an excellent way to prevent the spread of a plant if done before seed production occurs. Finally, healthy stands of grass or alfalfa are a great way to prevent noxious weeds in the first place and are a great way to choke them out. Remembering these tips will help make the control of noxious weeds that much easier to accomplish.

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\*\* By law and purpose, all programs are administered on an equal and non-discriminatory basis. No endorsements of products mentioned is intended nor is criticism implied of products that are not mentioned.

\*\* Read and follow product label instructions thoroughly prior to applying herbicides.

## Integrated Pest Management (IPM)

Integrated Pest Management, or IPM, is the use of multiple weed control methods to control a problem plant. Because most noxious weeds are very persistent, they may require a long-term management plan with annual treatments. Most of them can withstand a single control method which is why using multiple techniques is better. The plant can be attacked through multiple vectors leading to depleted root reserves and a higher chance that natural diseases or pathogens will infect it. Control methods are grouped into four categories; cultural, mechanical, chemical and biological. Cultural control is insuring that existing pastures and rangelands are maintained in proper condition through irrigation and fertilizer applications, not overgrazing, or by planting vegetation that will compete with noxious weeds. Some areas of Arapahoe County have limited resources (irrigation water and fertilizer) when it comes to cultural practices so other methods may be required. Mechanical control is any type of tillage, mowing, or hand removal of weeds. Chemical control is the application of herbicides or other substances. Biological control is the introduction of an insect or disease.

Remember, it is important to choose an IPM plan that that can be accomplished within the limitations of a landowner's available resources. This brochure is meant to help guide property owners in selecting suitable control measures by providing information on what methods are most effective against the various weeds as well as alternate methods.

## For More Information Contact:

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# Managing Arapahoe County's Noxious Weeds

