

Kootenai County



2013-14 Calendar

Noxious Weed Control

COMMON TANSY



Common tansy (*Tanacetum vulgare*)



Flower



Last years seed head.

Common tansy has small button-like yellow flowers in flat-topped clusters and fern-like leaves which emit a strong odor when crushed. It blooms from June until heavy frost. Dried flower stalks remain through the winter. Kootenai County has designated this a noxious weed.

CONTROL: Best to control small young infestations.

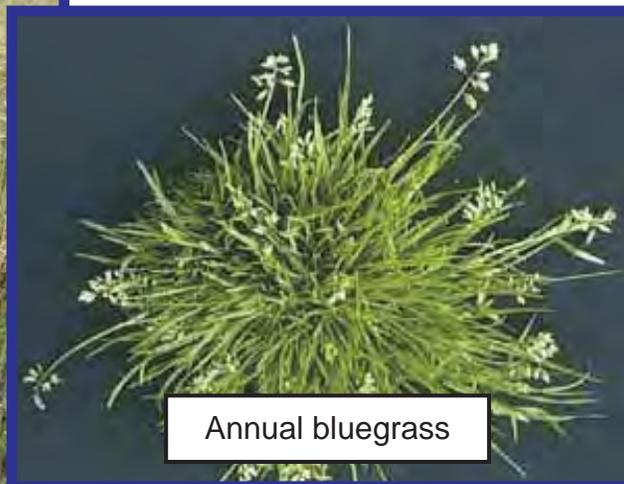
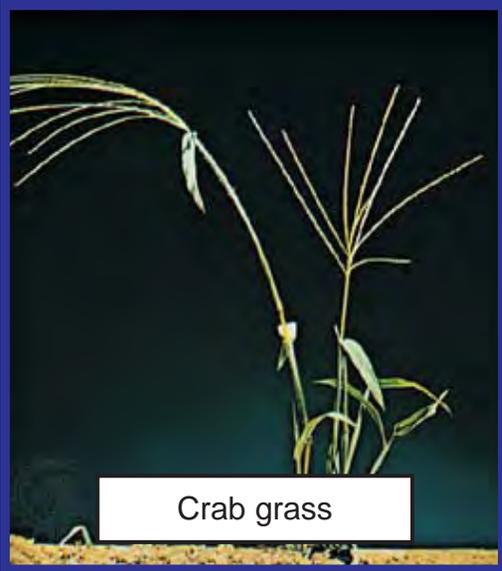
NON-CHEMICAL CONTROL:

- Cut and destroy the flower heads before they go to seed.
- Encourage desirable vegetation to grow in problem areas. Overseeding and fertilizing in the fall will help crowd out this weed.
- Mowing or weed-eating works best in summer.

CHEMICAL CONTROL:

- Use 2,4-D; clopyralid + 2,4-D; dicamba + 2,4-D; chlorsulfuron; or picloram before the plants reach the bud stage. A fall treatment before a killing frost can also be effective if seed heads are removed.

WEEDY ANNUAL GRASSES



Annual grasses are difficult to control when they overtake your pasture or lawn. Most herbicides that will kill them will also kill the perennial grasses that you want. Good cultural management of fertility, soil and water will make your perennial grasses more competitive and less likely to be invaded by annual grasses.

Preemergence herbicides (kill seeds at germination) are very effective in controlling grasses such as crabgrass, barnyard grass and foxtails. Some annual grasses that germinate in the fall, such as downy brome and ventenata, can be controlled by an application of imazapic after the grass has emerged.

In controlling annual grasses, it is important to positively identify the grass before acting, to avoid wasting time and chemicals treating perennial grasses or treating at the wrong time of year.

HERBICIDES & HOW THEY WORK



Herbicides are applied either as a preemergence or postemergence. Some are selective, only killing certain plants but leaving others unharmed; others are non-selective, killing all types of plants. Some herbicides move (translocate) within the plant, others do not move after they enter the plant and are called contact herbicide. Some products can be either contact or systemic; depending on the way they are applied.

Mode-of action refers to the effect a herbicide has on a plant. Herbicides work in many different ways.

- ✓ **Growth regulators - (2,4-D, MCPA, MCPP, dicamba, picloram, clopyralid and triclopyr):** These herbicides are widely used to control broadleaf weeds in grass. They upset the normal hormonal balance that regulates processes such as cell division. The most common symptoms for these herbicides are leaf and stem malformations.
- ✓ **Photosynthesis inhibitors - (hexazinone, bromoxynil, diuron):** Herbicides in this category inhibit the process by which all green plants convert light energy from the sun into sugars. They are broadleaf herbicides, but also control annual grasses to some extent. Symptoms include speckling, spotting, and yellowing or bronzing that may kill affected tissue.

- ✓ **Pigment inhibitors - (amitrole):** Herbicides classified as pigment inhibitors destroy the green pigment in leaf tissue. Injured leaves turn yellow or white, then often translucent.
- ✓ **Seedling growth inhibitors – (oryzalin, pendimethalin, trifluralin):** These herbicides act on seedling weeds shortly after they germinate and before they emerge. The growth inhibitor herbicides have no postemergence activity; therefore, the timing of application is critical.
- ✓ **Cell membrane disruptors & organic arsenicals – (diquat):** These herbicides control both grasses and broadleaf weeds by destroying cell membranes and causing rapid desiccation of the plant. Plants rapidly turn yellow or pale and may look water soaked; then they dry up.
- ✓ **Lipid synthesis inhibitors – (clethodim, sethoxydim, fluazifop-P):** These are unique because they act only on annual and perennial grasses, not on broadleaf plants.
- ✓ **Amino acid synthesis inhibitors – (imazapic, imazapyr, chlorsulfuron, sulfometuron):** These can be used at extremely low rates, controls both grasses and broadleaf plants, has soil and foliar activity, and is essentially non-toxic to mammals and most non-vegetative life forms.



HERBICIDES & TREES

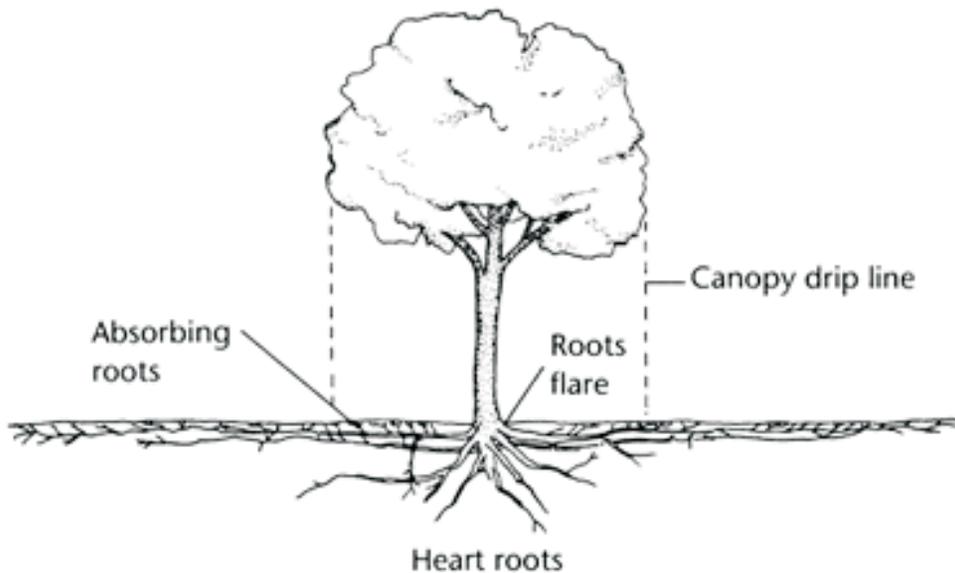


Know where it's okay to spray

When used improperly, herbicides can have unintended consequences on trees and shrubs. Always **read the label** before applying herbicides to be sure you are not applying around susceptible plants.

Root zone areas of desirable trees or shrubs can extend beyond the tree canopy. Injury or loss of desirable trees or vegetation may result when some herbicides are applied on or near the root zone or in locations where the treated soil may be washed or moved into contact with the roots.

Draining or flushing equipment on or near the root zone may also cause injury or loss of vegetation.





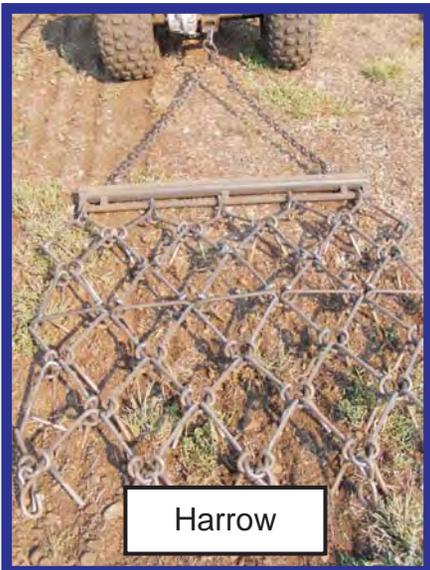
NOXIOUS WEED CONTROL



25 Gallon tank sprayer



4 Gallon backpack sprayer



Harrow



Fertilizer spreaders

Our services include:

- Free site inspections
- Herbicide and application advice
- Weed identification and control information
- Loan-out backpacks, 15 or 25 gallon tank sprayers, seed and fertilizer spreaders
- Leafy Spurge Cost Share Program
- Various Brochures Available

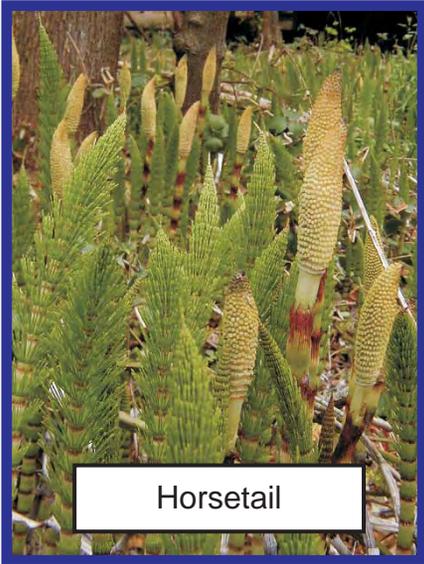
★ **\$50 Reward** offered for new sightings of these weeds!
★ dyers woad, ★ musk thistle, ★ puncture vine, ★ scotch thistle, ★ tansy ragwort, ★ yellow starthistle.

New weeds we want to know about when you find them:
kochia, common bugloss, small bugloss, plumeless thistle, and wild four o'clock.

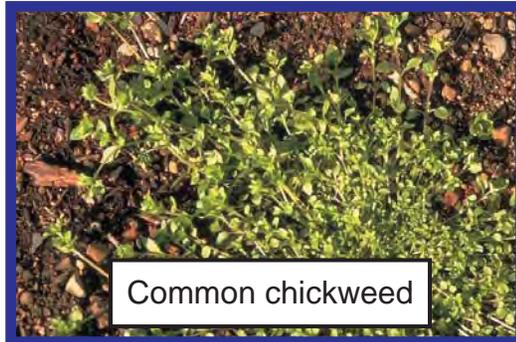
We can be contacted at:

10905 N RAMSEY ROAD
Hayden, ID 83835
208-446-1290
TTY 208-446-2145
kcnoxiousweeds@kcgov.us

WEEDS AS INDICATORS



Horsetail



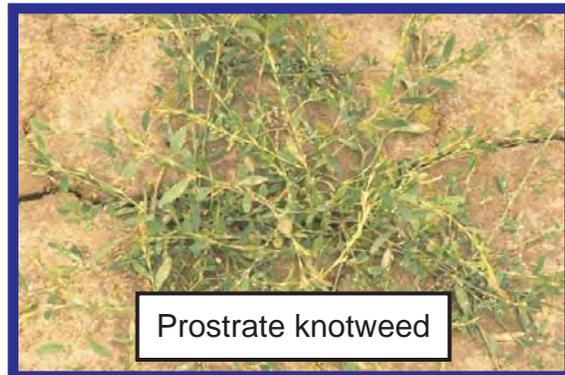
Common chickweed



Redroot pigweed



Sheep sorrel



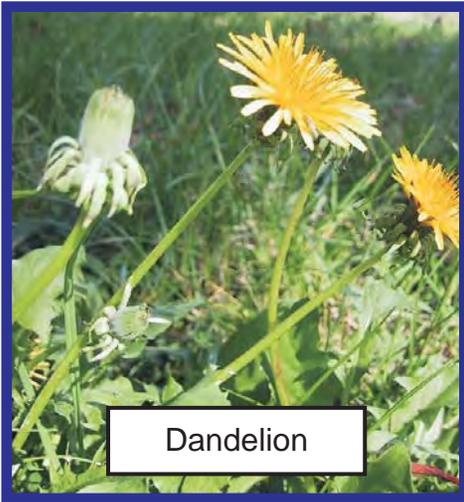
Prostrate knotweed

Plants voluntarily grow in locations that they are well suited to. Scientists can often tell the soil conditions by the plants that are growing in the area. One plant is not an indicator, but many plants that are growing robustly can be a sign of a soil problem.

Weeds associated with different soil problems:

- **Acid soil:** sorrel, sow thistle, prostrate knotweed, lady's-thumb, wild strawberries, plantain, cinquefoils, hawkweeds, knapweeds
- **Alkaline soil:** field peppergrass, goosefoot, gromwell, true chamomile, bladder campion
- **Wet or poorly drained soil:** horsetail, sedges, lady's-thumb, joe-pye weed, silvery cinquefoil, curly dock, mosses, tall buttercup, creeping buttercup, sheep sorrel, goldenrod, annual bluegrass, common chickweed, crabgrass, ground ivy, violets
- **Dry soil:** rough cinquefoil, yarrow, black medic, red sorrel
- **Compacted or heavy soil:** dandelion, broadleaf dock, creeping buttercup, plantain, annual bluegrass, common chickweed, prostrate knotweed, prostrate spurge
- **Soil with a hardpan or hard crust:** horse nettle, pennycress, quack grass, field mustard, morning-glory, pineapple weed
- **Previously cultivated soil:** Lamb's-quarters, plantain, ragweed, purslane, dandelion, chickweed, pigweeds
- **High fertility soil:** chicory, pigweeds, purslane, dandelion, lamb's-quarters, burdock, annual bluegrass, bentgrasses, henbit, woodsorrel, crabgrass, mallow, purslane
- **Low fertility soil:** plantains, sheep sorrel, white clover
- **Shaded soil:** annual bluegrass, common chickweed, ground ivy, mouse-ear chickweed, violets

LAWN WEEDS



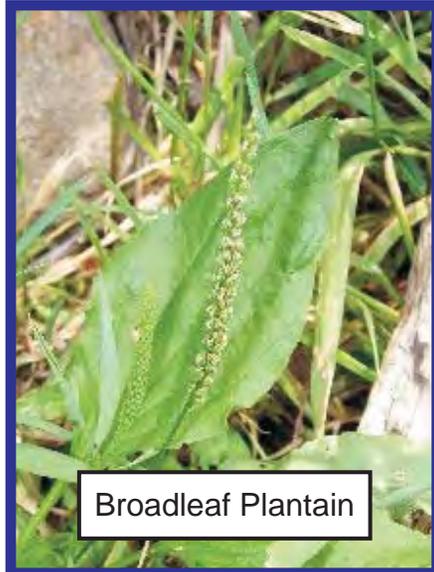
Dandelion



Mouse-ear Chickweed



Black medic or yellow trefoil



Broadleaf Plantain

Poor turf maintenance is a major reason for weedy lawns. Any effort to control weeds in turf should start with improving cultural practices. One goal of cultural weed control is to maximize turf density and maintain healthy, disease-free turf for a major part of every year. Some of the most important cultural practices are listed below.

- **Mowing** – regular mowing at the proper height is critical to maintaining good turf density. Mowing too short increases the invasion of weedy grasses and desirable grasses may not do well if continually mowed low.
- **Irrigation** - excess irrigation is a primary reason annual bluegrass invades many lawns. Proper irrigation means thoroughly wetting the root zone, then allowing soil to dry until desirable grasses begin to wilt. Lack of irrigation causes turf to go dormant to survive; turf density decreases, which allows weeds to invade once fall rains come or irrigation begins.
- **Fertilization** – The primary goal of any long-term fertilization program should be to use the least amount of fertilizer necessary to maintain quality turf. Many home lawns can perform reasonably well with 2 to 4 pounds of available nitrogen (N) per 1,000 sq ft of lawn annually, depending on soil type. Removal of clippings during mowing significantly increases fertilizer requirements.

To Do List:

- Get equipment ready – Clean and calibrate
- Fertilize and/or seed
- Survey your land for weeds
- Start digging rosettes
- Contact contractors

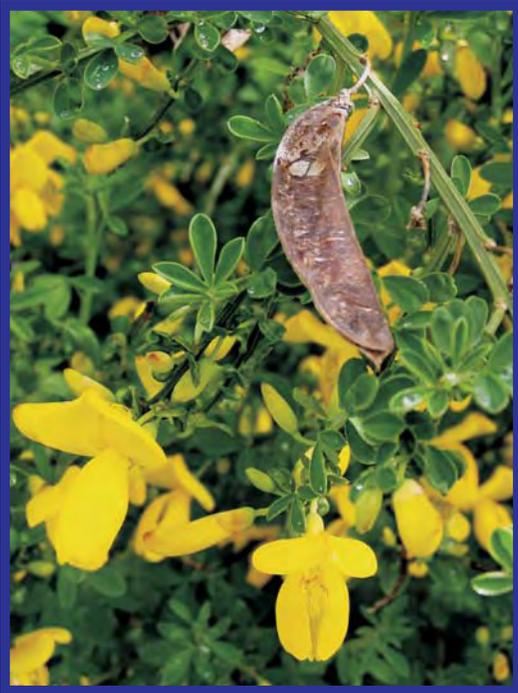
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March 2014

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SCOTCH BROOM



SCOTCH BROOM seed pods resemble pea pods, which snap open at maturity and throw seeds for some distance. It is a **perennial** shrub that spreads by seed. It has an average life span of 17 years and can grow to 10 feet tall. Stems are erect, woody, **green to brownish green and five-angled**. Leaves are small (1/2 inch) and fall off in times of stress. Pea-like flowers are **bright yellow** and bloom in June. It is found in pastures, waterways and along roadsides.

Caution: Goats will browse the plants with no ill effect; however, it has been reported as toxic to other livestock.

NON-CHEMICAL CONTROL:

- ✓ Plant crowns can be dug out.
- ✓ Repeated cultivation will destroy seedlings.
- ✓ Mowing and burning are not effective.

CHEMICAL CONTROL:

- ✓ Spray with triclopyr ester or amine, or with glyphosate, any time the plants are actively growing. Basal bark application is an effective control method.

Biological: There are biological control agents available for this plant and they may already be present in North Idaho infestations, these include the gorse or broom tip moth, which feeds on flower buds and leaves; the Scotch broom seed weevil which feeds on seedpods, flowers and leaves and the Scotch broom twig miner which eats the stems of this plant.

YELLOW FLAG IRIS



Yellow flag iris (*Iris pseudacorus*)



Seed pods



Dense stand of plants

Yellow Flag Iris (*Iris pseudacorus*) is a perennial plant that reproduces from rhizomes and seed. It is often grown as an ornamental for the large, pale to deep yellow flowers. Mature plants are less than 4 feet tall and can survive drought periods of longer than 3 months. Fruits are cylinder-shaped and can be 4 inches long. Short, fleshy rhizomes create dense clumps of plants. It grows along waterways, including irrigation ditches, and forms dense stands in wet areas.

Non-Chemical Control:

- ✓ Plant crowns can be dug out.
- ✓ Repeated cultivation will destroy seedlings.

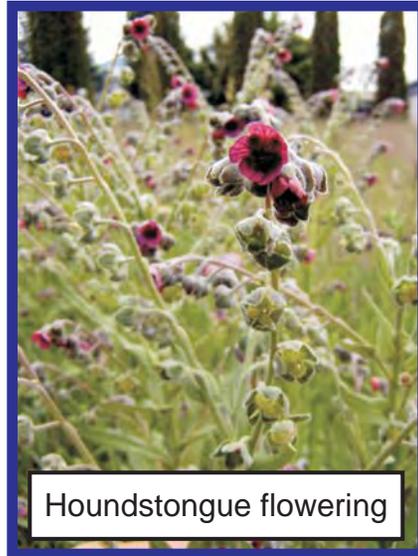
Chemical Control:

Chemical control is limited to herbicides labeled for aquatic use. Report any suspected infestation in a public waterway to your County Noxious Weed Department. **Aquatic herbicides can only be applied to public waterways by government agencies with permits.**

HOUNDSTONGUE



Houndstongue rosette



Houndstongue flowering



Houndstongue seeds



How seeds travel

Houndstongue (*Cynoglossum officinale*) is a biennial plant that spreads by seed. Leaves are **hairy**, have distinct veins and are shaped like a hound's tongue. **Reddish-purple** flowers are small and develop a Velcro™-like seed that sticks to almost anything it touches. The seeds easily attach to animals and are spread to new sites. It is found in pastures, disturbed areas and roadsides.

Caution: Houndstongue is toxic to animals. It contains pyrrolizidine alkaloids, causing liver cells to slowly die. Animals may live for six months or longer after consuming a lethal dose. Sheep are more resistant to houndstongue poisoning than are cattle or horses.

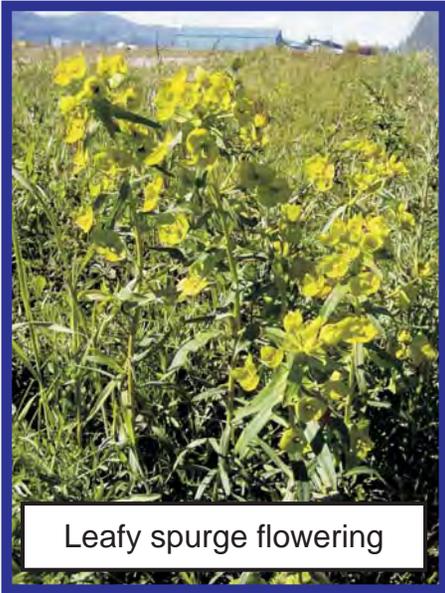
Non-Chemical Control:

- ✓ Hand pulling can be done on small sites in the spring before the plants produce their seeds. Always wear gloves.
- ✓ Mowing will reduce seed production. Make sure to mow before the plant blooms.
- ✓ Pasturelands must be healthy to recover from infestations and treatments, so fertilization is important.

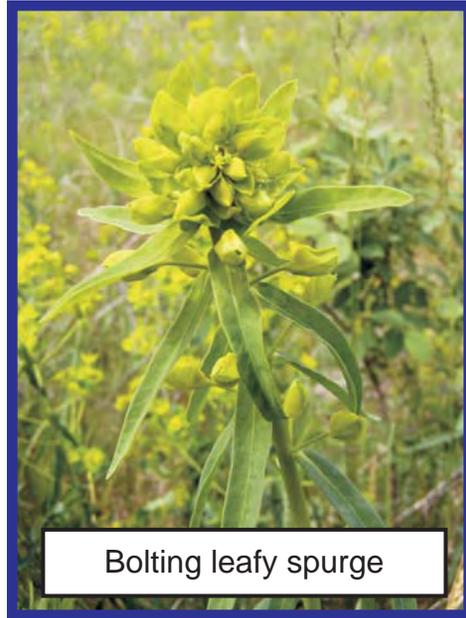
Chemical Control:

Apply aminopyralid, aminopyralid + metsulfuron, 2,4-D LV ester or metsulfuron in early spring while plants are actively growing but before bloom stage. A surfactant is recommended to increase the effectiveness of any of the herbicides used. **These products not recommended for home landscapes.**

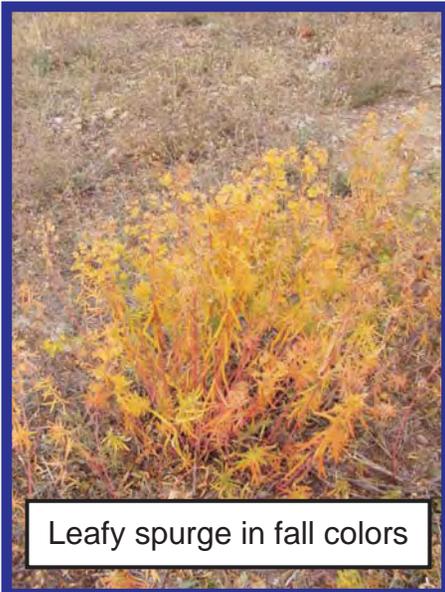
LEAFY SPURGE



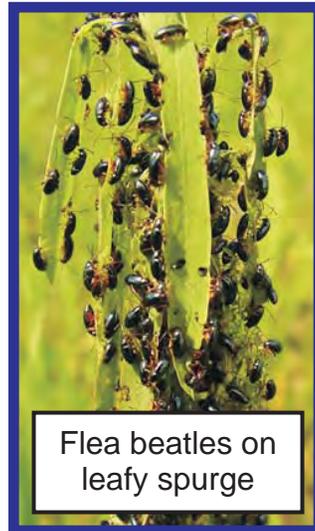
Leafy spurge flowering



Bolting leafy spurge



Leafy spurge in fall colors



Flea beetles on leafy spurge

Leafy spurge (*Euphorbia esula*) begins flowering in May and continues into the fall. It has bluish-green narrow leaves and showy yellowish green, heart-shaped leaves which surround a small flower.

CONTROL: The key to controlling leafy spurge is to exhaust the food supply in the root, causing it to collapse. Constant control is necessary during the growing season. The *Aphthona* flea beetle is the only bio-control agent that has shown some success in Kootenai County.

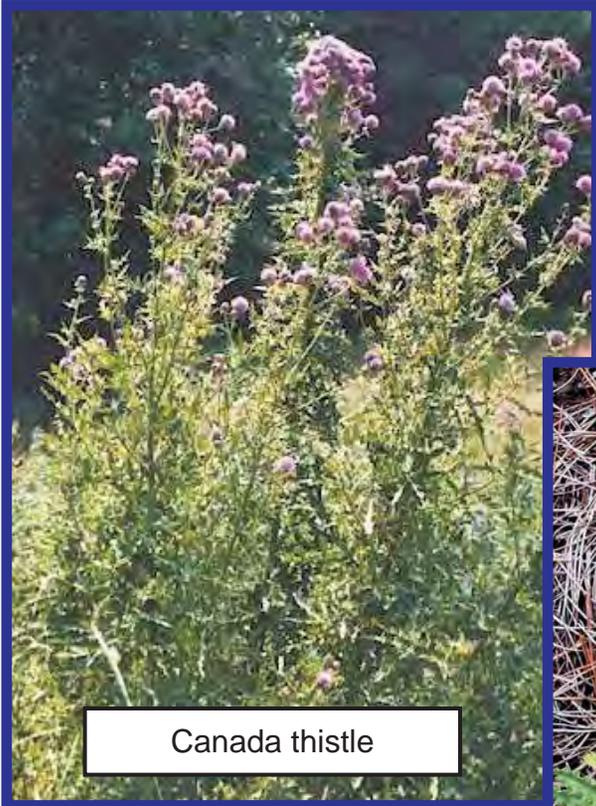
NON-CHEMICAL CONTROL:

- ✓ Encourage desirable grasses to grow by fertilizing and watering.
- ✓ Mowing will reduce seed production but will not kill the plant.
- ✓ Grazing by sheep and goats has been shown to control leafy spurge top growth. Grazing can be started early in the spring when the plant first emerges.

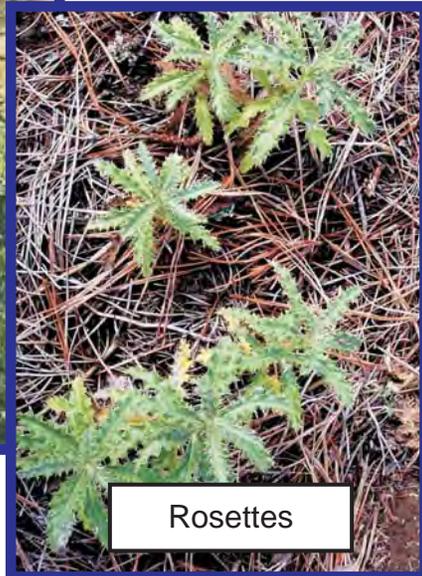
CHEMICAL CONTROL:

Spring or fall applications using 2,4-D or dicamba + 2,4-D are most effective when flowers emerge. Glyphosate (Roundup) is most effective when applied on a monthly basis starting in June. Remember that glyphosate will also kill grasses.

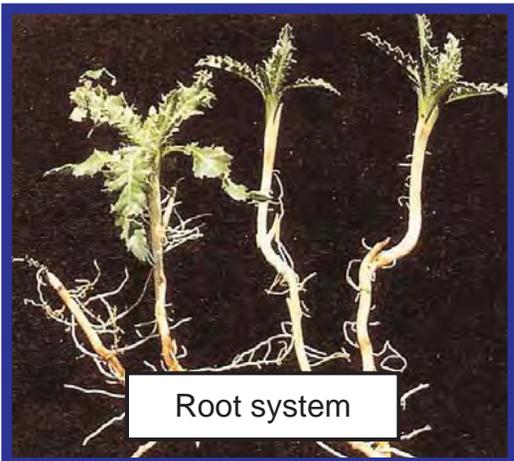
CANADA THISTLE



Canada thistle



Rosettes



Root system

THISTLE, CANADA (*Cirsium arvense*) This plant is difficult to control due to its extensive root system which may extend up to 20 feet across and 15 feet deep.

- A **perennial** that spreads by horizontal roots and by seed. Each plant is capable of producing more than 40,000 wind-borne seeds.
- Grows 1 to 5 feet tall.
- **Hollow stems** branch near the top. Leaves are wavy, **dark green** and shiny with **sharp spines**.
- Flowers are **light lavender** to **rose-purple** and bloom June through August.
- Can be found in cultivated fields, meadows, pastures and waste areas.

NON-CHEMICAL CONTROL:

- ✓ Cultivation should occur every 10 days through the growing season for two years. Remove flower heads to prevent seed production.
- ✓ Tilling or mowing will stress the plant and force it to draw upon stored root nutrients. The key to control perennials is to exhaust stored up nutrients in the roots, regardless of the control procedure used.
- ✓ Improve fertility to favor grass or other desirable plant growth.

CHEMICAL CONTROL: Spray while plants are actively growing but before development of buds with 2,4-D, dicamba + 2,4-D, clopyralid (alone or with 2,4-D), chlorsulfuron, aminopyralid or glyphosate. Fall application to green leaves before a killing frost gives good control.

To Do List:

Early August -

- Mow to stop seed production
- Survey for fall spray

Late August -

- North Idaho Fair – August 20th-24th, 2014
Come see us at the Fair!

July 2014						
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August 2014

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September 2014

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October 2014

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Information for this guide came from the
Idaho Panhandle Noxious Weed Handbook

November 2014

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December 2014

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Design and Printing:

Ron Harbison of Kootenai County Reprographics Center; Weed specialists Linda Ely, Merry Ruth Dingman and Bill Hargrave of Kootenai County Noxious Weed Control.

CAUTION WHEN USING HERBICIDES:

READ THE ENTIRE HERBICIDE LABEL CAREFULLY.

Any time herbicides are used, the applicator is legally required to follow the directions and precautions stated on the label. Note what safety equipment is needed; where, when and how the herbicide can be applied; the plants it can be used on; mixing rates and disposal and storage requirements. When using any chemical product, **READ THE LABEL!** Idaho follows the Environmental Protection Agency (EPA) approved label because **the label is the law!**

ADJUVANTS AND SURFACTANTS:

It is common to use adjuvant/surfactants mixed with herbicides. These products increase the success of the treatment. They do this by better penetration, increasing coverage, and extra absorption on the plants being sprayed.

CONVERSION TABLE

1 ml	=1 cc	1 oz	= 28.4 grams
1 teaspoon	=5 ml	16 oz	= 1 pound
3 teaspoons	= 1 tablespoon	1 pound	= 454 grams
1 table spoon	= 15 ml	1 kilogram	= 2.2 pounds
2 tablespoons	= 1 oz	2000 pounds	= 1 ton
16 tablespoons	= 1 cup		
1 cup	= 8 oz	Length & Area	
2 cups	= 1 pint	1 mile	= 5,280 feet
2 pints	= 1 quart	1 mile	= 1.6 kilometer
8 pints	= 1 gallon	½ acre	= 21,780 sq ft
1 gallon	= 128 oz	1 acre	= 43,560 sq ft

SMALL QUANTITY DILUTION TABLE

To spray small areas use the following dilution table.

IF Dosage on Label
shows:

Use this Amount
for each Gallon of Water:

2 pints (1 quart) per acre	¾ ounces
3 pints (1 ½ quart) per acre	1 ¼ ounces
4 pints (2 quarts) per acre	1 ½ ounces
6 pints (3 quarts) per acre	2 ¼ ounces

If there are any questions about the use of an herbicide product, **please call your local weed control agency for guidance.**

CHEMICAL SUGGESTIONS

This noxious weed calendar does not recommend any product or company. All brand names listed are for resource purposes only.

CHEMICAL	NON-CROP LANDS	HOME LANDSCAPES
2, 4-D	Hi-Dep; LV4; Amine 4; 2-4-D Amine	Hi-Dep; Vigero; Basic Solutions
2, 4-D + dicamba	Weedmaster; Range Star; Brash	All in One Weed Killer; Weed Stop 2X; Turf Plus 2; Lawn Weed Killer
2, 4-D + clopyralid	Curtail; Commando	
Aminopyralid	Milestone	
Picloram	Tordon RTU; Tordon 22K (restricted use)	
Glyphosate	Roundup; Eraser; Buccaneer; Honcho	Roundup; Eraser and other generic brands
Clopyralid	Stinger; Transline	
Dicamba	Banvel; Vanquish	
Chlorsulfuron	Glean; Telar	
Metsulfuron	Escort; Ally	
Imazapyr	Arsenal; Habitat; Polaris	
Triclopyr	Garlon 3A	Brush-B-Gon; Weed-B-Gon Chickweed, Clover & Oxalis; Seed-B-Gon Poisonivy/Brush Killer; Blackberry-Brush Killer; Brush Plus
Triclopyr + Clopyralid	Brazen; Redeem	Confront