

# Idaho Panhandle NOXIOUS WEED HANDBOOK



**Boundary**

**Bonner**

**Kootenai**

**Benewah**

**Latah**

**Shoshone**



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WE THANK ALL THESE DONORS FOR THEIR GENEROSITY  
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Noxious Weed Control**



**Boundary County  
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**Kootenai County  
Noxious Weed Control**



**Shoshone County  
Noxious Weed Control**

# IDAHO PANHANDLE WEED IDENTIFICATION AND CONTROL HANDBOOK

*A Citizen's Guide for Control of Noxious and Invasive Weeds Found in Benewah, Bonner, Boundary, Kootenai, Latah and Shoshone Counties in the Panhandle of North Idaho*

## PURPOSE

- Educate the public about the seriousness of noxious and invasive weeds.
- Facilitate the identification of noxious/invasive weeds on properties in North Idaho
- Assist the landowner in controlling noxious/invasive weeds on their property.

## WHAT IS A NOXIOUS WEED?

Noxious weeds are non-native plants that were brought into Idaho through human actions. Because they grow aggressively and have no natural enemies in our area, these species of plants can be destructive to wildlife habitat, competitive with crops and difficult to control.

'Noxious' is the legal description for 64 weeds found throughout the State of Idaho. This is determined by the weeds potential threat to the environment and economics of crop production.

'Toxic' (described by the symbol ☠ ) means the weed can poison or cause injury to humans and/or animals. Many noxious weeds are toxic, but not all toxic plants are noxious weeds.

These guidelines are not recommendations. If site-specific help is needed, land managers should contact their local weed control agency. The label will describe legal use of the herbicide for pasture, right-of-way, rangeland, etc., and it will document restrictions on reentry intervals and subsequent haying or grazing restrictions. Herbicide trade names are representative of only a minority of the total products available for purchase.

**Help protect our natural resources, prevent noxious weeds from going to seed.**

# CONTRIBUTIONS TO THIS GUIDE

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(Front & Back) Designed by Ron Harbison and Bill Hargrave

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Information for this guide came from many sources: IECWMA Noxious Weed Identification and Control Handbook; Idaho One Plan; Idaho State Department of Agriculture (ISDA); Idaho Weed Awareness Campaign (IWAC); Spokane County Noxious Weed Control Board; Washington Noxious Weed Control Board; USDA-Natural Resource Conservation Service (NRCS); University of Idaho Extension; XID Services; Idaho Firewise.

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# IDAHO WEED LAW

## IDAHO STATUTE TITLE 22, CHAPTER 24 NOXIOUS WEEDS

- **What is the purpose of the Idaho Noxious Weed Law?** The purpose of the Idaho Noxious Weed Law is to protect lands within the state from invasion by noxious weeds.



- **What does the law require?** The Idaho Noxious Weed Law requires landowners to eradicate noxious weeds on their land.

Legally, eradication means: the elimination of a noxious weed based on the observation that the weed is no longer in the area during the growing season (even though weed seeds will last much longer in the area).

A provision of the law is that the counties are required to enforce that weed law, and the State of Idaho is required to ensure that counties do so. The Idaho Noxious Weed Law has many other provisions.

The law may be found in the Idaho Code, available at libraries, city and county courthouses, from county weed superintendents, and the Idaho State Department of Agriculture website:

[www.agri.state.id.us/Categories/LawsRules/sub\\_laws/lawstitle22.php](http://www.agri.state.id.us/Categories/LawsRules/sub_laws/lawstitle22.php)

**North Idaho Panhandle** is comprised of Benewah, Bonner, Boundary, Kootenai, Latah and Shoshone counties which carry out the mandates of the State Noxious Weed Law, Idaho Statute Title 22, Chapter 24 Noxious Weeds.

Partners include:

- ✦ Federal, State, County and Tribal government agencies.
- ✦ Highway districts and city street departments.
- ✦ Local businesses.
- ✦ Private landowners.
- ✦ Environmental and civic organizations.
- ✦ Elementary and secondary schools, college and universities.

### **The purpose of this book is:**

1. Educate the public about the seriousness of noxious and invasive weeds.
2. Facilitate the identification of noxious/invasive weeds on properties in North Idaho
3. Assist the landowner in controlling noxious/invasive weeds on their property.

# METHODS FOR NOXIOUS WEED MANAGEMENT

A good weed management plan uses more than one management strategy. The key to successful weed management is to create a favorable situation for desirable plant growth. Tilling, hoeing, hand pulling, mowing or mulching (mechanical methods) can be used to deal with weed problems. Herbicides are powerful tools, so they must be used with care. Herbicides can be one component of an integrated pest management (IPM) plan, not the only control method. Biological controls can be part of an IPM system, but they seldom eliminate the weed.

**Prevention** is the first line of defense to keep weeds from occurring or increasing in an area. Preventive techniques may include

- ✚ Education! Knowing how to identify weeds and being a good land steward will prevent weeds from entering your property.
- ✚ Planting high-quality, weed-free crops or grass seed.
- ✚ Laws, such as the Noxious Seed Act and Noxious Weed law, help stop weed problems before they start or spread.



- ✚ Keeping weeds from going to seed. This is particularly important for annual and biennial weeds which only reproduce by seeds. Perennials may reproduce in a variety of ways, including by seed, root stock, stolons or stem sections. Preventing weeds from reproducing reduces new weed infestations.

**Cultural control** methods improve desirable plant growth which helps them resist weed invasion. Some cultural methods are:

- ✚ Fertilization, which help desirable plants out-grow the weeds.
- ✚ Irrigation, or proper watering, enables vegetation to out-compete weeds.
- ✚ Planting seed to fill in a bare area will not allow weeds to grow.



**Mechanical methods** physically slow or kill weed growth. Mechanical weed control is the oldest and most often used method worldwide. Examples of mechanical control

- ✦ Tilling
- ✦ Hoeing
- ✦ Hand-pulling
- ✦ Mowing
- ✦ Burning
- ✦ Mulching



**Biological control** uses a living organism to slow weed growth. Often the organism is an insect, grazing animal or plant disease which is a natural enemy of the weed. Examples of biological control agents are

- ✦ Livestock, such as cattle, goats, sheep and llamas. However, improper livestock management (overgrazing) can be extremely damaging to the environment and make weed problems worse.
- ✦ Insects that chew various parts of a weed can damage or kill the plant over time. Usually the immature stage of the insect does the most damage. Insects may do damage to a plant by eating flower seed heads or leaves, tunneling in stems and boring into roots.
- ✦ Plant diseases, or pathogens, may also damage or kill weeds. Pathogens can be fungi, bacteria or viruses.



**Chemical spraying** involves herbicides, chemicals used to slow or kill weed growth. The first rules of using herbicides are to **READ THE LABEL** before using any pesticide and follow all directions and warnings.



# ABSINTH WORMWOOD

Photo by  
Richard Old  
www.xidservices.com



Photo by  
Richard Old  
www.xidservices.com



# ABSINTH WORMWOOD

## ABSINTH WORMWOOD (*Artemisia absinthium*)

- ✠ A semi-woody, clump-forming **perennial** that spreads by seed.
- ✠ Grows 3 feet tall and up to 2 feet wide.
- ✠ Leaves and stems of the plant are covered with **fine silky hairs** that give the plant a **grayish** appearance.
- ✠ Numerous **yellow** flower heads appear July through September.
- ✠ Prefers dry, sandy to gravelly soils in disturbed sites. Often found in open pastures and roadsides.

## CONTROL METHODS

**Chemical:** Spray when the plant is at least 12 inches tall with Milestone® (aminopyralid), Chaparral® (aminopyralid + metsulfuron), or Banvel® (dicamba). Use of a spreader-sticker is essential due to the fine hairs covering the plant. **These products not recommended for home landscapes.**

**Non-Chemical:**

- Pasture health and fertilization are important factors in preventing wormwood infestations
- Minimize soil disturbance from vehicles and machinery
- Mowing or cutting plants 3 to 4 times a season will reduce seed production.
- Small infestations can be dug or hand pulled when the soil is moist.

**Biological:** There are no known biological control methods being used at this time.

# BUGLOSS



Common Bugloss



Common Bugloss



Small Bugloss



Small Bugloss

# BUGLOSS

## BUGLOSS, COMMON (*Anchusa officinalis*) On the Kootenai County Noxious Weed List

- ✦ A **perennial** plant with a deep taproot. Spreads by seed.
- ✦ Grows 1 to 3 feet tall.
- ✦ Leaves and stalks are covered with bristly hairs that arise from warty bumps on the leaf surface.
- ✦ **Blue to purple** flowers are arranged along the ends of the tightly curled branch ends. The flower stem straightens as the flowers bloom. Flowers appear May through July.
- ✦ Prefers dry, sandy to gravelly soils. Often found in open pastures and roadsides.

## BUGLOSS, SMALL (*Anchusa arvensis*)

- ✦ A weedy annual that spreads by seed.
- ✦ Grows 6 to 12 inches tall
- ✦ Both leaves and stems appear rough and wrinkled and are covered with bristly hairs that arise from warty bumps.
- ✦ Leafy coiled flower stems bear small blue flowers June to September.
- ✦ Found in pastures, along roadsides, and cultivated fields.

## CONTROL METHODS

**Chemical:** Spray before bloom with Weedmaster® (dicamba + 2,4-D), Escort® (metsulfuron), or Telar® (chlorsulfuron). Fall application of these products to new rosettes (before a killing frost) gives good control. A surfactant is recommended to increase the effectiveness of any of the herbicides used. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- ✦ Bugloss cannot withstand regular cultivation.
- ✦ Prevent seed production by cutting and destroying flowers. Plants may be pulled or roots dug out - take special care to sever the roots below the root crown.

**Biological:** There are no known biological control methods being used at this time.



# COMMON TANSY



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# COMMON TANSY

## COMMON TANSY (*Tanacetum vulgare*)

**Originally introduced as a garden ornamental.**

**A noxious weed in Kootenai County**

- ✂ A **perennial** plant that spreads by seed and root stalk.
- ✂ Grows to 6 feet tall.
- ✂ The leaves are **fern-like** and emit a **strong odor** when crushed.
- ✂ Clusters of **small yellow, button-like flowers** bloom from June until heavy frost.
- ✂ A problem in pastures, roadsides, abandoned property and along stream banks.

**Note:** Sheep and goats may graze young plants, although common tansy is not very palatable

## CONTROL METHODS

**Chemical:** Use Chaparral® (aminopyralid + metsulfuron), Escort® (metsulfuron), or Weedmaster® (dicamba + 2,4-D) before the plants reach the bud stage. A fall treatment before a killing frost can also be effective if seed heads are removed. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- ✂ Seed dispersal can be prevented by mowing or pulling plants before they bloom.
- ✂ Dig roots out or cultivate at regular intervals.

**Biological:** There are no known biological control methods being used at this time.



READ THE LABEL - The Label is the law.

# HAWKWEED



Orange Hawkweed



Hawkweed Rosette



Yellow Hawkweed



Field of Hawkweed

# HAWKWEED

## YELLOW (*Hieracium caespitosum*)

## ORANGE (*Hieracium aurantiacum*)

- ✠ A **perennial** that spreads by root, above ground stolon and by feathery, airborne seeds.
- ✠ Grows 1 to 3 feet tall.
- ✠ The single stalk and leaves are hairy.
- ✠ Flowers are **yellow/orange**, look similar to a dandelion flower, but slightly smaller and in clusters. They bloom late May to mid June.
- ✠ Found in moist pastures, forest meadows, abandoned fields, clear cuts and roadsides.

### Other Hawkweeds of Concern:

**Tall Hawkweed** (*Hieracium piloselloides*) There are no stolons on this hawkweed. Upper and lower leaf surfaces are smooth or with only few simple hairs. Yellow flowers bloom June through September.

**Yellow Devil Hawkweed** (*Hieracium glomeratum*) upper and lower leaf surfaces are covered with short stiff hairs giving the plant a rough texture. Stolons are absent in this hawkweed.

**Note:** There are native hawkweeds that grow in our region. These hawkweeds are **not** invasive. If you are unsure, please call your Noxious Weed Control Office for assistance.

## CONTROL METHODS

**Chemical:** Treat with Milestone® (aminopyralid), Curtail® (clopyralid + 2,4-D), Chaparral® (aminopyralid + metsulfuron), Brazen® (clopyralid + triclopyr) or Hi-Dep® (2,4-D) before bloom. **These products not recommended for home landscapes.**

### Non-Chemical:

- Pasturelands must be healthy to recover from infestations and treatments, so fertilization is important.

**Biological:** There are no biological controls available in Idaho at this time. Hawkweeds are unpalatable, although sheep or goats may eat the plant.

# HOARY ALYSSUM



# HOARY ALYSSUM

## HOARY ALYSSUM (*Berteroa icana*) ☠

- ✂ Can be an **annual**, biennial or short lived perennial that spreads by seed.
- ✂ Grows to 3 feet tall.
- ✂ The leaves are covered with fine, **whitish hairs** giving the plant a gray-green appearance.
- ✂ Clusters of **white flowers** appear May through September.
- ✂ This plant prefers dry, sandy soil and can be found in pastures, on road shoulders and along railroad tracts.

**Caution:** This plant can be toxic to horses. Consumption of large quantities can cause diarrhea, leading to dehydration, and can cause abortions in pregnant mares.

## CONTROL METHODS

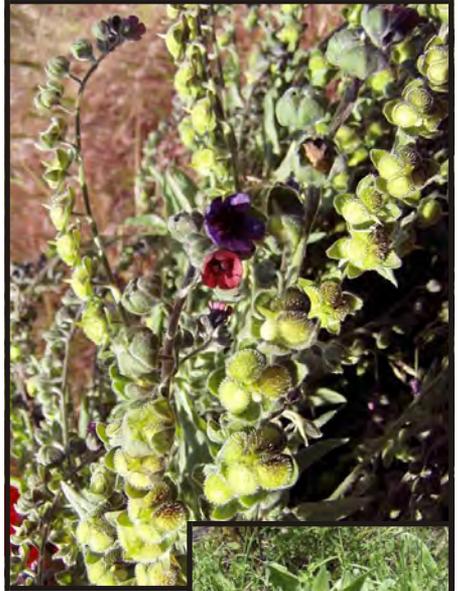
**Chemical:** Chaparral® (aminopyralid + metsulfuron), Weedmaster® (dicamba + 2,4-D), Escort® (metsulfuron), and Telar® (chlorsulfuron) have shown acceptable control when applied individually. Applications are most effective when done during spring and fall. A surfactant is recommended to increase the effectiveness of any of the herbicides used. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- Hand pulling is effective on small infestations; plants should be pulled before they go to seed.
- Hoary alyssum can be mowed when the plants are in flower to help control seed production.

**Biological:** There are no known biological control methods being used at this time.

# HOUNDSTONGUE



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# HOUNDSTONGUE

## HOUNDSTONGUE (*Cynoglossum officinale*)

- ☠ The Velcro™-like seeds easily attach to animals and are spread to new sites.
- ✂ A **biennial** plant that spreads by seed.
- ✂ Grows 1 to 4 feet tall the second year.
- ✂ 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.
- ✂ 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.

## CONTROL METHODS

**Chemical:** Apply Milestone® (aminopyralid), Chaparral® (aminopyralid + metsulfuron), or Escort® (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.**

### **Non-Chemical:**

- 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.

**Biological:** No effective biological control is available at this time.



READ THE LABEL - The Label is the law.

# KNAPWEEDS



Spotted Knapweed



Diffuse Knapweed



Meadow Knapweed



Knapweed Rosette

# KNAPWEEDS

## KNAPWEEDS ☠

### SPOTTED (*Centaurea stoebe*)

- ✦ A perennial plant that spreads by seed.
- ✦ Grows 3 to 5 feet tall
- ✦ **Pink to purple flowers** and blooms from June to October.
- ✦ Each flower head has stiff bracts, which are **black tipped**, giving the flower head its 'spotted' appearance.
- ✦ Found on any disturbed site and thrives under a wide range of environmental conditions.

### OTHER KNAPWEEDS OF CONCERN:

**DIFFUSE KNAPWEED** (*Centaurea diffusa*) Sometimes called tumble knapweed, it is spread by the tumbling of windblown mature plants.

**MEADOW KNAPWEED** (*Centaurea pratensis*) Flowers are large pink to purplish-red heads at the end of the branches.

**Caution:** Animals will not typically graze the plant due to the unpleasant taste. Horses may develop brain, respiratory, or liver damage due to carcinogenic compounds.

## **CONTROL METHODS**

**Chemical:** Spray with Milestone® (aminopyralid), Curtail® (clopyralid + 2,4-D), Brazen® (clopyralid + triclopyr) or Hi-Dep® (2,4-D) in the spring when the plant is actively growing but before flower heads form. In the fall, spray newly emerging rosettes before a killing frost. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- Mowing or cutting plants will produce low-growing flowers, although the potential seed production is reduced.
- Knapweed does not survive cultivation at regular intervals.
- The plant may be pulled (***be sure to wear gloves***) to remove most of the taproot; it is easiest after a soaking rain.

**Biological:** Biological control agents are available for this plant and may already be present in North Idaho infestations including seed head flies, weevils and moths and root feeding weevils.

# KOCHIA



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# KOCHIA

**KOCHIA** (*Kochia scoparia*) This plant breaks off and becomes a tumbleweed as it dies in the fall. A noxious weed in Kootenai County.

- ✂ A bush-like **annual** that spreads by seed.
- ✂ Grows 1 to 6 feet tall depending on growing conditions.
- ✂ Leaves turn purplish-red as the plant ages.
- ✂ **Small green flowers** produce up to 14,000 seeds per plant.
- ✂ This drought tolerant plant can be found along roadsides and other dry areas.
- ✂ Also known as: Mexican Fire Weed

## CONTROL METHODS

**Chemical:** Chaparral® (aminopyralid + metsulfuron), Telar® (chlorsulfuron), Weedmaster® (dicamba + 2,4-D), or Crossbow® (triclopyr + 2,4-D) can be effective when the plants are very small. As the plant ages, it becomes resistant to chemical treatment. **These products not recommended for home landscapes.**

**Non-Chemical:**

- Pulling the plant can be effective in small areas.
- Mowing will prevent seed production and spread.
- Tilling several times per season will reduce seed production.

**Biological:** There are no known biological control methods being used at this time.

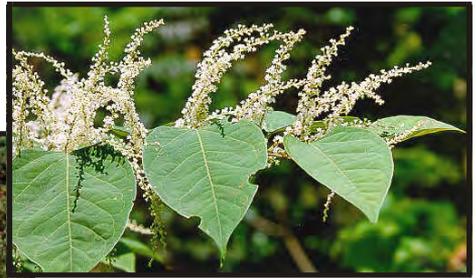
# LARGE KNOTWEEDS



Giant



Giant



Japanese



Bohemian



Bohemian

## LARGE KNOTWEEDS

Because of knotweeds extensive root system, once this weed is established it is difficult to control.

- ✂️ Woody, upright **perennial** that spreads from long creeping roots and stem pieces.
- ✂️ Found along roadsides, ditch banks, waste areas and pastures.
- ✂️ Grows from 4 to 9 feet tall.
- ✂️ **Bamboo-like stems** are green with **red or purple** spots.
- ✂️ Small **greenish-white flowers** in early autumn.
- **JAPANESE KNOTWEED** (*Polygonum cuspidatum*)
  - Small, greenish-white to cream colored drooping flower clusters appear at the end of stems and in leaf axils.
- **GIANT KNOTWEED** (*Polygonum sachalinense*)
  - Distinguished by large heart-shaped leaves up to 12 inches long.
- **BOHEMIAN KNOTWEED** (*Polygonum X bohemicum*)
  - A hybrid of Japanese and giant knotweed.
  - Greenish-white to cream upright flower clusters.

## CONTROL METHODS

**Chemical:** Garlon 4® (triclopyr), Arsenal® (imazapyr) or Banvel® (dicamba) can be applied when the knotweeds are actively growing and have reached the bud to early flowering stage of growth. **These products not recommended for home landscapes.**

### **Non- Chemical:**

- Never transplant pieces of knotweed into your home landscape.
- Digging is a good option when the plant is small.
- Cutting it back to the ground at least twice a month during the growing season for several years may control it. It is best to remove, rake or carefully dry all knotweed vegetation you cut because stems or stem fragments can sprout creating new plants.

**Biological:** No effective biological control is available at this time.



READ THE LABEL - The Label is the law.

# LEAFY SPURGE



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# LEAFY SPURGE

## LEAFY SPURGE (*Euphorbia esula*) ☠

Because of the ability to store nutrients in its root system for several years, leafy spurge is a difficult plant to control.

- ✂ An aggressive **perennial** that spreads by rootstalks and seeds.
- ✂ Grows 1 to 3 feet tall.
- ✂ Narrow **bluish-green** leaves are up to 4 inches long.
- ✂ Flowers are small and enclosed by **yellowish-green, heart-shaped bracts** and bloom from May into the fall.
- ✂ Stems, leaves and flowers contain a **toxic milky latex sap**.
- ✂ It can be found in any type of soil and is commonly found in rangeland, pastures, roadsides, waste areas and wetland sites.

**Caution:** Horses and cattle should not graze the plants; the toxic sap causes blisters or ulcerations.

## CONTROL METHODS

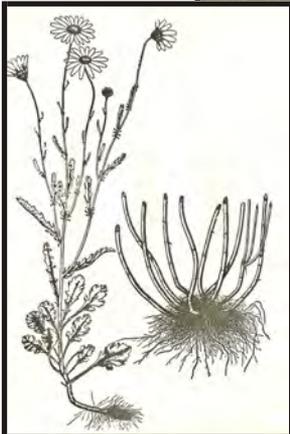
**Chemical:** Tordon® (picloram) applied in late spring or fall will give season-long suppression of leafy spurge. Hi-Dep® (2,4-D), Weedmaster® (dicamba + 2,4-D) or Crossbow® (triclopyr + 2,4-D) will provide some control, but must be applied 2 to 4 times each growing season. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- **Fertilization** and pasture health are extremely important.
- **Mow and pull** to prevent seed production. The sap of leafy spurge is **toxic**; skin and eye protection are needed when handling this plant.
- **DO NOT CULTIVATE**; new plants can begin from the cut root segments.

**Biological:** Several insect biological control agents are available for this plant and may be present in North Idaho infestations including flea beetles whose adults feed on leaves and flowers and the larvae feed on root hairs or roots. Sheep, goats, and hogs will graze leafy spurge. It is not only satisfactory forage for these animals, but they actually prefer it. Constant grazing slows the weed's spread and starves out the root system.

# OXEYE DAISY



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# OXEYE DAISY

## OXEYE DAISY (*Leucanthemum vulgare*)

Also known as Field daisy, Marguerite daisy and Poverty weed.

- ✦ A short-lived **perennial** that spreads from seeds (2,000 to 4,000 per plant) and from the spreading roots.
- ✦ Grows 1 to 3 feet tall.
- ✦ The **glossy green** leaves get smaller as they grow up the stem.
- ✦ Daisy-like flowers are made up of **white petals** with a golden center and blooms appear June through September.
- ✦ Likes to grow in abandoned meadows and overgrazed pastures.

## CONTROL METHODS

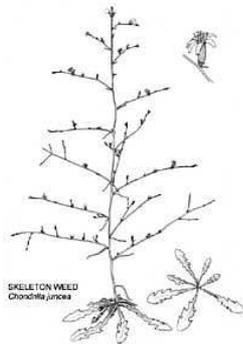
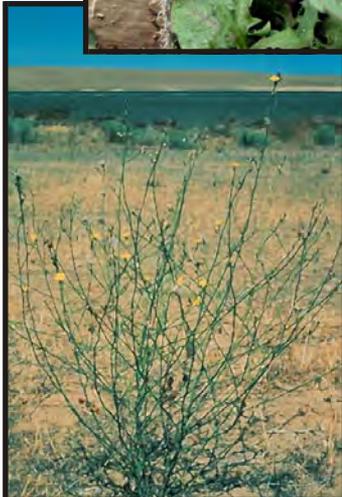
**Chemical:** Milestone® (aminopyralid), Escort® (metsulfuron) or Curtail® (clopyralid + 2,4-D) are effective before bloom. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- Dig plants when the soil is moist.
- Grazing - sheep, goats and horses may eat oxeye daisy.
- Applications of nitrogen fertilizer are effective in encouraging strong grass growth leaving no room for oxeye daisy seeds to germinate.

**Biological:** There are no known biological control methods being used at this time.

# RUSH SKELETONWEED



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# RUSH SKELETONWEED

## RUSH SKELETONWEED (*Chondrilla juncea*)

The large, deep root system makes skeletonweed difficult to control.

- ✦ A **perennial** which spreads primarily by seed, but also by creeping roots.
- ✦ Grows 1 to 4 feet tall.
- ✦ Leaves at the base look like a dandelion rosette. Stems are bare, except the lower 4 to 6 inches which is covered with **coarse brown hairs**. Stems and leaves produce a **milky latex juice**.
- ✦ Flower heads are **yellow** and scattered among the branches.
- ✦ Found in disturbed areas.

## CONTROL METHODS

**Chemical:** Spray with Milestone® (aminopyralid), Chaparral® (aminopyralid + metsulfuron), Escort® (metsulfuron) or Brazen® (clopyralid + triclopyr) preferably to rosettes in spring or fall. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- Constant hand pulling or digging two to three times per year for 6 to 10 years can be effective for small infestations.
- Mowing and cultivation are ineffective; mowing does not prevent root spread and cultivation actually spreads root fragments.
- High nitrogen fertilizer assists in minimizing the effects of rush skeletonweed.
- Competitive legume plantings, such as alfalfa, may reduce rush skeletonweed through increased soil fertility and competition for soil moisture, as well as shading the rush skeletonweed plants.

**Biological:** Control agents may already be present in North Idaho infestations including the skeletonweed gall midge, which feed on leaves and stems. The skeleton gall mites feed on auxiliary and terminal buds. Rush skeletonweed rust attacks the leaves, stems, buds, and flowers of these plants. Continuous moderate grazing by sheep can reduce densities.

# SCOTCH BROOM



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# SCOTCH BROOM

## SCOTCH BROOM (*Cytisus scoparius*)<sup>☞</sup>

Seed pods resemble pea pods, which snap open at maturity and throw seeds for some distance.

- ✠ A **perennial** shrub that spreads by seed. It has an average life span of 17 years.
- ✠ Grows 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.
- ✠ 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.

## CONTROL METHODS

**Chemical:** Spray with Garlon 4® (triclopyr), Milestone VM Plus® (aminopyralid + triclopyr), or Crossbow® (triclopyr + 2,4-D) any time the plants are actively growing. Basal bark application is an effective control method. **These products not recommended for home landscapes.**

### **Non-Chemical:**

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

**Biological:** Biological control agents are available for this plant and may already be present in North Idaho infestations including the gorse or broom tip moth, Scotch broom seed weevil and the Scotch broom twig miner.

# ST. JOHNSWORT



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# ST. JOHNSWORT

## ST. JOHNSWORT (*Hypericum perforatum*)

Also known as Klamath weed or common goatweed NOT on the Idaho State Noxious Weed list but a weed of CONCERN in the Idaho Panhandle

- ✠ A **perennial** that spreads by underground rhizomes, above ground creeping stems and by seed.
- ✠ Grows 1 to 3 feet tall.
- ✠ Each tiny leaf is **spotted** with translucent dots.
- ✠ Flowers have **bright yellow petals** and deep purple dots along the jagged edges.
- ✠ St. Johnswort prefers poor soil and full sun and can be found mostly in fields, dry pastures and roadsides.
- ✠ The **rust colored stems** of St. Johnswort can be seen during the winter sticking above the snow.

**Caution:** Animals that eat St. Johnswort, and then are exposed to direct sunshine, develop severe sunburns that are seen as skin irritation in bald or white areas. Young cattle and sheep are most often affected.

## CONTROL METHODS

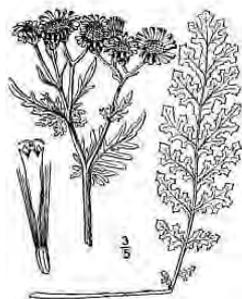
**Chemical:** Spray with Milestone® (aminopyralid), Escort® (metsulfuron) or Hi-Dep® (2,4-D) in the spring prior to bloom. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- Pulling or digging can be effective on new or small infestations.
- The use of fertilizer and good watering habits has been shown to control the spread of St. Johnswort.
- Cut and bag flower heads, if possible, to prevent plants from going to seed.

**Biological:** The leaf eating beetle (*Chrysolina hyperici*) has been very successful in controlling large infestations of St. Johnswort.

# TANSY RAGWORT



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# TANSY RAGWORT

## TANSY RAGWORT (*Senecio jacobaea*) ☠

Once this weed is established, it will grow in sun or shade.

- ✦ A **biennial** or short-lived perennial that spreads from fleshy **root fragments** and by **seed**.
- ✦ Grows 1 to 6 feet tall.
- ✦ Leaves are **dark green** on top and a **whitish-green** underneath and have a **ruffled** look.
- ✦ Numerous flowering stems on each branch, showy **bright yellow**, daisy-like flowers appear at the ends of each stem.
- ✦ Thrives in low-fertility soils, disturbed areas, forests and overgrazed pastures. Tansy ragwort can grow in sun or shade.

**Caution:** This weed is toxic to livestock, causing irreversible liver damage.

## CONTROL METHODS

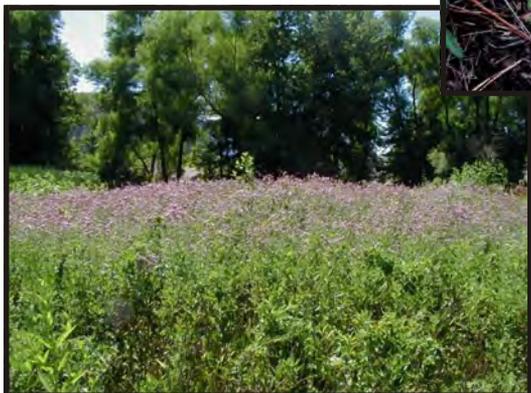
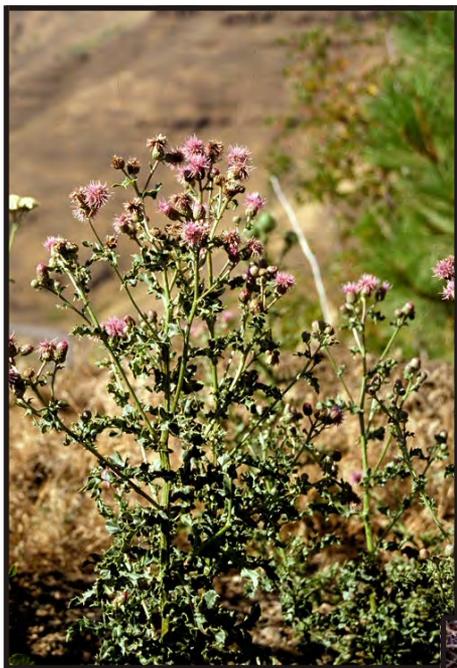
**Chemical:** Spraying should be done in the spring before the flowers appear and in the fall to new rosettes. Effective herbicides include Hi-Dep® (2,4-D), Milestone® (aminopyralid), Weedmaster® (dicamba + 2,4-D) or Crossbow® (triclopyr + 2,4-D). **These products not recommended for home landscapes.**

### **Non-Chemical:**

- Cultivation is moderately effective if done repeatedly through the season.
- Hand pulling is effective before flowering; plants need to be removed from the site. Gloves should be worn because of lasting odor of plants.

**Biological:** Biological control agents are available for this plant and may already be present in North Idaho infestations including the ragwort flea beetle and the Cinnabar moth. Animals should not be allowed to graze the plant.

# THISTLE, CANADA



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# THISTLE, CANADA

## 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.

## CONTROL METHODS

**Chemical:** Spray while plants are actively growing but before development of buds with Brazen® (clopyralid + triclopyr), Milestone® (aminopyralid), Curtail® (clopyralid + 2,4-D) or Banvel® (dicamba). Fall application to green leaves before a killing frost gives good control.

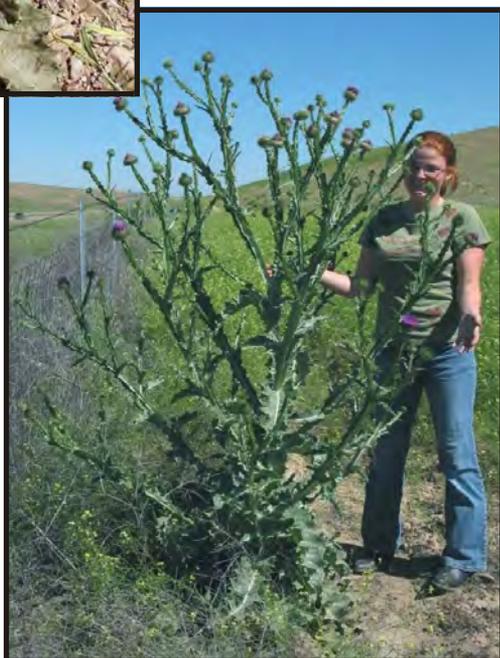
**These products not recommended for home landscapes.**

### **Non-Chemical:**

- 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 Canada thistle 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.

**Biological:** Biological control agents are available for this plant and may already be present in North Idaho infestations including a stem weevil, a bud weevil and a stem gallfly. Most animals will not graze thistles, although some will occasionally consume flower heads.

# THISTLE, SCOTCH



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# THISTLE, SCOTCH

## THISTLE, SCOTCH (*Onopordum acanthium*)

Also known as cotton thistle.

- ✠ A **biennial** that has a thick, fleshy taproot that may extend down 1 foot or more. Scotch thistle reproduces only by seed.
- ✠ Grows to 12 feet tall
- ✠ Leaves are large (up to 2 feet long and 1 foot wide), spiny, and covered on both sides with fine woolly hairs, giving the plant a **silvery-gray look**.
- ✠ **Purple** flowers appear July through September.
- ✠ Thrives in sunny, moist areas along rivers and streams but can also be found in pastures, fields, and along roadsides. It prefers light, well-drained, sandy or stony soils.

## CONTROL METHODS

**Chemical:** Spray with Milestone® (aminopyralid), Banvel® (dicamba), Brazen® (clopyralid + triclopyr), or Curtail® (clopyralid + 2,4-D) in the spring before flower stalks lengthen or in the fall on rosettes. **These products not recommended for home landscapes.**

**Non-Chemical:** This thistle is biennial. The key to successful management is to prevent seed formation.

- Digging up or tilling the rosettes are effective methods, however, it is important to remove the entire crown.
- Mowing is not a good option and may actually add a year to their life span.
- Plants that are cut or pulled while flowering must be removed from the site to prevent the seeds from reintroducing new plants.
- Fertilize pastures to keep them in optimum condition so grasses can compete.

**Biological:** Biological control agents are available for this plant and may already be present in North Idaho infestations including the thistle seed head weevil. Most animals will not graze thistles, although some will occasionally consume flower heads.

# TOADFLAX, DALMATIAN



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# TOADFLAX, DALMATIAN

## TOADFLAX, DALMATIAN (*Linaria dalmatica*) ☠

It is difficult to control due to its extensive root system.

- ✂ A perennial plant that spreads by **creeping roots** and by **seed**.
- ✂ Grows to 4 feet tall.
- ✂ Leaves are **thick and waxy**, have no stems and are **blue-green**.
- ✂ The **yellow snapdragon-like flowers** are often tinged with orange or red and are located along the flower spikes at the top of the plant. Plants flower from midsummer to fall.
- ✂ An aggressive weed of pastures, roadsides and abandoned lots.

**Caution:** Toadflaxes contain cyanogenic glucosides which can cause cyanide poisoning if grazed, although large amounts must be ingested in a short period of time.

## CONTROL METHODS

**Chemical:** Escort® (metsulfuron), Banvel® (dicamba), Tordon® (picloram), or Telar® (chlorsulfuron) gives control when applied before bloom. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- Cultivation at 10-day intervals can be a viable control method.
- Small infestations can be pulled and the root systems dug out.

**Biological:** Biological control agents are available for this plant and may already be present in North Idaho infestations including the toadflax flower-feeding beetle; the defoliating toadflax moth; the toadflax capsule weevil and the toadflax stem mining weevil.



# TOADFLAX, YELLOW



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# TOADFLAX, YELLOW

## TOADFLAX, YELLOW (*Linaria vulgaris*) ☠

This plant is difficult to control due to its extensive root system.

- ✦ A **perennial** plant that spreads by **creeping roots** and by **seed**.
- ✦ Grows to 3 feet tall.
- ✦ Leaves are **long, narrow** and **pale green** in color.
- ✦ **Snapdragon-like flowers** are **yellow** with an orange throat, clustered at the top of the stem. The plant flowers June through August.
- ✦ An aggressive weed of pastures and roadsides.

**Caution:** The toadflaxes contain cyanogenic glucosides which can cause cyanide poisoning if grazed, although large amounts must be ingested in a short period of time

## CONTROL METHODS

**Chemical:** Escort® (metsulfuron), Banvel® (dicamba), Tordon® (picloram), or Telar® (chlorsulfuron) gives good control when applied before bloom. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- Cultivation at 10-day intervals can be a viable control method.
- Small infestations can be pulled and the root systems dug out.

**Biological:** Biological control agents are available for this plant and may already be present in North Idaho infestations including the toadflax flower-feeding beetle, the toadflax moth and the toadflax capsule weevil.

## VIPER'S BUGLOSS



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# VIPER'S BUGLOSS

## VIPER'S BUGLOSS (*Echium vulgare*) ☠ Also known as blueweed

- ✂ A **biennial** plant with a thick, black taproot that spreads by seed. Each plant may produce up to 2,800 seeds.
- ✂ Grows to 5 feet tall.
- ✂ The leaves and stems are covered with **stiff hairs**.
- ✂ **Bright blue flowers** with hot pink-colored stamens bloom June to September.
- ✂ Grows best in open meadows, overgrazed pastures and poorly drained slopes and roadsides.

**Caution:** Animals will normally not graze the plant; chronic ingestion (whether fresh or in hay) can cause liver failure in horses, cattle and sheep.

## CONTROL METHODS

**Chemical:** Spray before bloom with Weedmaster® (dicamba + 2,4-D), Escort® (metsulfuron), or glyphosate. Fall application of these products to new rosettes (before a killing frost) provides good control. A surfactant is recommended to increase the effectiveness of any of the herbicides used. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- Blueweed cannot withstand regular cultivation.
- Prevent seed production by cutting and destroying flowers; roots will die out after the second season.
- Plants may be pulled or roots dug out - take special care to sever the roots below the root crown.
- Mowing is not a good control option because taproots are still viable and regrowth usually occurs.

**Biological:** There are no known biological control methods being used at this time

# WHITETOP



SEE CHEMICAL SUGGESTIONS ON PAGE 61

# WHITETOP

## WHITETOP (*Cardaria draba*) ☠

Also known as hoary cress and pepperwort.

- ✚ A **perennial** plant spreading both by **seed** and **creeping roots**.
- ✚ Grows 3 feet tall.
- ✚ **Grayish green** leaves are arrow-head shaped and clasp the stem.
- ✚ **White** flowers bloom in April and May and grow in dense clusters.
- ✚ Seed pods are **heart-shaped**.
- ✚ Grows in cultivated fields, pastures, waste areas and roadsides

**Caution:** Hoary cress, as with all mustards, can cause stomach problems in all class of animals.

## CONTROL METHODS

**Chemical:** Spray with Escort® (metsulfuron), Telar® (chlorsulfuron), or Hi-Dep® (2,4-D), in the spring prior to bloom. Escort® (metsulfuron), or Telar® (chlorsulfuron) may be applied in the fall to rosettes. **These products not recommended for home landscapes.**

### **Non-Chemical:**

- Cultivating will eventually eliminate this weed if repeated within 10 days of weed emergence.
- Close mowing will reduce seed production.
- Roots may be dug out.
- Competitive crops will assist in suppressing hoary cress.

**Biological:** There are no known biological control methods being used at this time.



# YELLOW STARTHISTLE



# YELLOW STARHISTLE

## YELLOW STARHISTLE (*Centaurea solstitialis*) ☠

- ✂ An **annual** that reproduces by seed.
- ✂ Grows 2 to 3 feet tall.
- ✂ Very rigid branches covered with fine, soft hairs.
- ✂ Flower heads are **yellow**, located singly on the ends of branches and armed with outwardly pointed **stiff yellow spines** up to 1 inch long.
- ✂ Found along roadsides and in waste areas.

**Caution:** Plant causes "chewing disease" in horses and may also cause liver and brain damage due to carcinogenic compounds

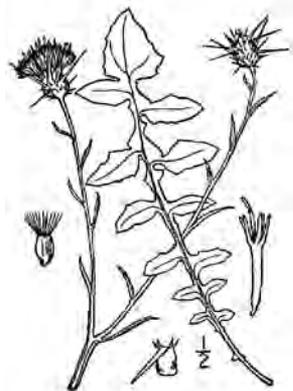
### CONTROL METHODS

**Chemical:** Spray in the rosette stage or before bud formation with Milestone® (aminopyralid), Chaparral® (aminopyralid + metsulfuron), Brazen® (clopyralid + triclopyr), or Curtail® (clopyralid + 2,4-D). **These products not recommended for home landscapes.**

#### Non-Chemical:

- It is possible to control small infestations by hand pulling and cultivation. This weed is difficult to handle, so good gloves and tools will make this task easier.
- Mowing can help stop seed spread over a wide area, but it usually has a negative effect. When mowed, yellow starthistle becomes denser.

**Biological:** Biological control agents are available for this plant and may already be present in North Idaho infestations including the yellow starthistle bud weevil, the yellow starthistle peacock fly, the yellow starthistle hairy weevil, the yellow starthistle flower weevil and the yellow starthistle gall flies.



READ THE LABEL - The Label is the law.

## WATERWEEDS, SUBMERGED

### EURASIAN WATERMILFOIL (*Myriophyllum spicatum*)

An aquatic, underwater plant that can be confused with native milfoils. The time to identify Eurasian watermilfoil is mid-June through September.



- ✎ A **perennial** plant that grows 35 feet, creating mats of floating vegetation. It reproduces by **roots, seed and fragment** (the fragmentation occurs in late summer and fall).
- ✎ Leaves are **feather-like** and tend to collapse around stem if removed from the water (native milfoil leaves do not collapse when removed from the water).
- ✎ Small flowers appear on leafless, **reddish spikes** that stand above the water surface by a few inches.
- ✎ Found in water shallower than 25 feet deep, depending upon light penetration.

### CURLYLEAF PONDWEED (*Potamogeton crispus*) Introduced as an aquarium plant.

- ✎ A **perennial** plant that starts to grow in early spring and usually dies back in midsummer.
- ✎ The leaves are **reddish-green**, oblong, and about 3 inches long, with distinct **wavy edges**. The stems are flat, reddish-brown and grow from 1 to 3 feet long.



## CONTROL METHODS

**Chemical:** 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.**

### **Non-Chemical:**

- All water weeds can be raked, pulled or cut and disposed of on dry land.

**Biological:** No effective biological control is available at this time.

## WATERWEEDS, MARGINAL

- (1) **Flowering Rush** (*Butomus umbellatus*) Whitish-pink flower. Brought in as an ornamental.
- (2) **Common Reed** (*Phragmites australis*) 6 to 15 foot tall grass.
- (3) **Purple Loosestrife** (*Lythrum salicaria*) This plant is often mistaken for fireweed or pink spirea.
- (4) **Yellow Flag Iris** (*Iris pseudacorus*) Brought in as an ornamental



1



2



3



4

### Common characteristics:

- ✂ Perennial plants with a large underground root system. These plants spread from broken stem or root pieces which have the ability to develop roots and start new plants.
- ✂ Prefers to grow in moist soils in marshes, stream banks, roadside ditches or along shorelines.
- ✂ Once established, these plants can clog small streams and irrigation systems and dominate shallow wetlands, wet pastures and ditches.

## CONTROL METHODS

**Chemical:** 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.**

### **Non-Chemical:**

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

**Biological:** Only purple loosestrife has biological control agents available including the black-marginal loosestrife beetle and the golden loosestrife beetle. Both feed on the buds and the foliage, while the loosestrife root weevil larvae feed on roots, the adults on the foliage. The blunt loosestrife seed weevil reduces seed production and the loosestrife seed weevil feeds on unopened flower buds.

## WEEDS OF CONCERN

In addition to the weeds in our region, there are a few additional weeds that the County Weed Superintendents encourage landowners to look for and control if they find them.

- Jointed Goatgrass (*Aegilops cylindrica*)
- White Bryony (*Bryonia alba*)
- Puncturevine (*Tribulus terrestris*)
- Poison Hemlock (*Conium maculatum*)



Jointed Goatgrass



White Bryony



Poison Hemlock



Puncturevine

## TOXIC PLANTS

Most poisonous plants have an unpleasant taste that animals avoid if they have other food to eat. Ensure that your animals have plenty of hay and/or healthy pasture to graze. If you suspect a poisoning, call a veterinarian as quickly as possible.

### Toxic in Hay:

|                 |                                |
|-----------------|--------------------------------|
| Dogbane         | Nightshades                    |
| Fiddleneck      | Poison or Water hemlocks       |
| Field Horsetail | Red/Alsike clover (for horses) |
| Jimsonweed      | Russian knapweed               |
| Johnsongrass    | Spurges                        |
| Milkweeds       | Sweetclover (if moldy)         |
| Mustards        | Yellow starthistle             |

### Toxic Range Plants:

|                 |                |
|-----------------|----------------|
| Arrowgrass      | Kochia         |
| Bouncingbet     | Larkspurs      |
| Brackenfern     | Locoweeds      |
| Buttercups      | Lupine         |
| Chokecherry     | Monkshood      |
| Curly dock      | Ponderosa pine |
| Death camas     | Puncturevine   |
| False hellebore | Tall fescue    |
| Halogeton       | Wild Onion     |

### ***Websites with pictures and more information:***

[www.spokanecounty.org/weedboard](http://www.spokanecounty.org/weedboard)

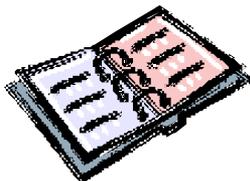
[www.horseforcleanwater.com](http://www.horseforcleanwater.com)

[www.ansci.cornell.edu](http://www.ansci.cornell.edu)

[www.mtwow.org](http://www.mtwow.org)

[www.vet.purdeu.edu](http://www.vet.purdeu.edu)

## GLOSSARY OF TERMS



**active ingredient** -in an herbicide, the chemical that effectively controls or kills a weed.

**alternate** – leaves that are arranged singly up the stem, not opposite each other.

**annual** - a plant that completes its life cycle in one year.

**aquatic weed** - a weed that grows in the water or on the edge of soils that are next to water, for example, weeds on a riverbank.

**axil** - the angle formed between a leaf and a stem.

**basal** - at the base of a plant.

**biennial** - a plant that completes its life cycle in two years.

**bract** - leaflike structure at the base of flowers or leaves.

**clasping leaves** - leaves that appear to wrap at the leaf base around the stem.

**contact herbicide** -chemical that affects just the part of the weed that is sprayed.

**disk flower** - tiny flowers in the central portion of flower head of certain composite plants, such as daisy.

**dissected** - deeply and repeatedly divided into smaller parts.

**elliptic** - narrowly oval, broadest at the middle and narrower at the two ends.

**eradication** -the elimination of a noxious weed based on the observation that it is no longer in the area during the growing season.

**fragmentation** - a part broken off or detached. Some weeds break into sections and those pieces can grow into more weeds.

**inert ingredient** -in an herbicide, the carrier or substance that contains the active ingredient, for example clay, oil or water.

**inflorescence** - a group or cluster of flowers arranged on the stem; a flower cluster.

**lanceolate** - lance-shaped; much longer than wide.

**lobed** - leaf cut into shallow segments.

**nodding** - a flower that is not pointed upward, bent sidewise to the stem.

**non-selective herbicide** -chemical that will control or kill any green, living plants.

**opposite** - leaves situated directly across the stem from each other.

**ovate** - egg-shape in outline.

**perennial** - a plant that lives more than two years.

**plant competition** -when many different grasses and weeds live in a particular area, they all struggle for room, food and water.

**pubescence** - the hairs on a leaf, stem, or flower.

**ray flower** - flower at the edge of a flower head of certain composite plants, such as the daisy; each ray flower resembles a single petal.

**rhizome** - an underground, creeping stem that resembles a root.

**rosette** - compact cluster of early leaves of a plant, before flower formation.

**RTU** -ready to use.

**selective herbicide** -chemical control that will only effect a particular plant or weed, not all plants.

**spines** - a sharp pointed modified leaf.

**spreader-sticker** - see 'surfactant'.

**stamens** - flower structure in which pollen forms.

**stolon** - a creeping, above ground stem.

**surfactant** - a material, that when added to herbicide can improve the spreading/sticking properties of the liquid or slow evaporation.

**systemic herbicide** - chemical that controls or kills a weed by being absorbed through the plants system (leaves or roots).

**taproot** - a thick, central root with minimal branching.

**whorled** - 3 or more leaves from a single node on a stem.

**winged stem** - a flattened out, 'wing like' structure of plant tissue that surrounds a plant stem.

**winter annual** - an annual that germinates in the fall and completes its life the following year.

# DIRECTORY OF COOPERATING AGENCIES

## County Weed Control Offices:

- Benewah County Noxious Weed Control . . . . . (208) 245-2234  
376620 Highway 95, Desmet ID 83824  
damweeds@smgazette.com
- Bonner County Noxious Weed Control . . . . . (208) 263-3175  
1500 Hwy 2, Ste 101, Sandpoint ID 83864  
bbluemer@co.bonner.id.us
- Boundary County Noxious Weed Control . . . . . (208) 267-5341  
PO Box 267, Bonners Ferry, ID 83805  
tguthrie@boundarycountyid.org
- Kootenai County Noxious Weed Control . . . . . (208) 446-1290  
10905 N Ramsey Road, Hayden ID 83835  
kcnoxiousweeds@kcgov.us  
www.kcweeds.com
- Latah County Noxious Weed Control . . . . . (208) 882-7210  
220 E. Fifth Street Rm 339, Moscow ID 83843  
amartinson@latah.id.us
- Shoshone County Noxious Weed Control . . . . . (208) 753-5475  
603 Cedar Street, Ste. 202, Wallace ID 83873  
grapp@co.shoshone.id.us  
www.shoshoneweeds.com

## ***Agriculture and Natural Resource Conservation, Water Quality, Forestry and the Farm Program:***

- Rural Development Farm Service Agency (FSA), Natural Resource Conservation Service (NRCS), Panhandle Lakes RC&D,  
Kootenai-Shoshone Soil & Water Conservation District (KSSWCD)  
. . . . . (208) 762-4939
- Bonner Soil & Water Conservation District . . . . . (208) 263-5310
- Idaho Department of Lands, Bonners Ferry . . . . . (208) 267-5577
- Idaho Department of Lands, Coeur d'Alene. . . . . (208) 769-1525
- Idaho Department of Lands, Deary. . . . . (208) 877-1121
- Idaho Department of Lands, Kingston . . . . . (208) 282-4611
- Idaho Department of Lands, Sandpoint . . . . . (208) 263-5104
- Idaho Department of Lands, St. Maries . . . . . (208) 245-4551
- Idaho Department of Environmental Quality  
Coeur d'Alene . . . . . (208) 769-1422  
Lewiston . . . . . (208) 799-4370

- U of I / Benewah County Extension Office . . . . . (208) 245-2422
- U of I / Bonner County Extension Office . . . . . (208) 263-8511
- U of I / Boundary County Extension Office . . . . . (208) 267-3235
- U of I / Kootenai/Shoshone Extension Office . . . . . (208) 446-1680
- U of I / Latah County Extension Office . . . . . (208) 883-7161

***North Idaho Firewise Program Contacts:***

- Benewah County BeFireSafe . . . . . (208) 245-5122
- Bonner County BONFire . . . . . (208) 265-8867
- Boundary Board of County Commissioners . . . . . (208) 267-7723
- Kootenai County Firesmart . . . . . (208) 446-1779
- Latah County Emergency Manager . . . . . (208) 883-2265
- Shoshone County Fire Mitigation Program . . . . . (208) 752-1264

***Pesticide Licensing and Education:***

- Idaho Department of Agriculture . . . (208) 762-9586 Or (208) 762-9598  
<http://www.idahoag.us/index.php>

***Noxious Weed Free Forage and Straw Program:***

- Noxious Weeds Program Specialist . . . . . (208) 334-2840  
[www.agri.idaho.gov/](http://www.agri.idaho.gov/)

***Idaho State Weed Law:***

- Idaho Noxious Weeds Program . . . . . (208) 332-8667  
[www.agri.state.id.us/Categories/LawsRules/sub\\_laws/lawstitle22.php](http://www.agri.state.id.us/Categories/LawsRules/sub_laws/lawstitle22.php).

**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         | <b>Length &amp; Area</b> |                 |
| 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 mix small quantities use the following dilution table.

IF Dosage on Label shows:

Use this Amount of Chemical  
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 handbook 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 <sup>®</sup> and other generic brands                           | Hi-Dep <sup>®</sup> ; Vigero <sup>®</sup> ; Basic Solutions <sup>®</sup>   |
| 2, 4-D + dicamba          | Weedmaster <sup>®</sup> ; Range Star <sup>®</sup> ; Brash <sup>®</sup> | All in One Weed Killer <sup>®</sup> ; Weed Stop 2X <sup>®</sup> ; Turf Plus 2 <sup>®</sup> ; Lawn Weed Killer <sup>®</sup>                 |
| 2, 4-D + clopyralid       | Curtail <sup>®</sup> ; Commando <sup>®</sup>                           |  |
| Aminopyralid              | Milestone <sup>®</sup>   |  |
| Aminopyralid+ metsulfuron | Chapparal <sup>®</sup>   |  |
| Aminopyralid+ triclopyr   | Milestone VM <sup>®</sup>  |  |
| Picloram                  | Tordon RTU <sup>®</sup> ; Tordon 22K <sup>®</sup> (restricted use)     |  |
| Glyphosate                | Roundup <sup>®</sup> and other generic brands                          | Roundup <sup>®</sup> ; and other generic brands  |
| Clopyralid                | Stinger <sup>®</sup> ; Transline <sup>®</sup>                          |  |
| Dicamba                   | Banvel <sup>®</sup> ; Vanquish <sup>®</sup>                            |  |
| Chlorsulfuron             | Telan <sup>®</sup>   |  |
| Metsulfuron               | Escort <sup>®</sup> and other generic brands                           |  |
| Imazapyr                  | Arsenal <sup>®</sup> ; Habitat <sup>®</sup> and other generic brands   |  |
| Triclopyr                 | Garlon 3A <sup>®</sup><br>Garlon 4 <sup>®</sup>                        | Weed-B-Gon Chickweed, Clover & Oxalis <sup>®</sup> ; Ortho Max Poison Ivy/Brush Killer <sup>®</sup> ; Blackberry-Brush Killer <sup>®</sup> |
| Triclopyr + Clopyralid    | Brazen <sup>®</sup> ; Prescott <sup>®</sup> ; Redeem <sup>®</sup>      | Confront <sup>®</sup>  |
| Triclopyr + 2, 4-D        | Crossbow <sup>®</sup>  |  |

## Protect your Home & Community

### Become Firewise

#### **WILDFIRES ARE A FACT OF LIFE IN IDAHO. BEING PREPARED IS YOUR BEST DEFENSE.**

Protecting your property from wildfire is a matter of planning ahead and taking the following steps to reduce your risk. While no home is fireproof, these precautions will greatly increase the chances that your property will survive a wildfire.

**Make sure your roof is fire resistant.** The roof is the most vulnerable part of your home in a wildfire. Your roof should be made of fire resistant materials (I.e. slate or clay tile, asphalt shingles, metal, or any other Class A roofing material).

**Determine how much defensible space is recommended for your home.** Defensible space is the area around a structure that has been maintained and designed to reduce fire danger. Defensible space should be at least 30 feet.

**Create a 5-foot non-flammable area immediately adjacent to your home.** Aside from the roof, this area presents the highest wildfire risk. Limit this area to low-growing, well watered, fire-resistant plants. Keep this area free of combustible materials such as wood bark and leaf/needle litter.

**Replace hazardous vegetation with more fire-resistant plants.** Plants that are considered “fire-resistant” are those that have a high moisture content in their leaves, little seasonal buildup of dead vegetation, a low and compact growth form, high soap or salt content, green stems, and are drought tolerant.

**Provide adequate horizontal and vertical spacing between trees and shrubs.** Space trees and shrubs far enough apart to slow the spread of fire. Spacing between two shrubs should be twice the height of the shrub. Remove “ladder fuels” by removing low tree branches and shrubs under trees.



**Your home and property don't have to burn! There are many simple steps that you can take to reduce the threat of fire.**

**Maintain landscaping, including regular irrigating, pruning, mowing, raking, weeding, and dead plant removal.** Fire moves rapidly in tall, dry grass and dead vegetation. Water your vegetation regularly and remove dead or dry vegetation.

**Remove all combustible materials from roofs and gutters, as well as under decks, stairways, and overhangs.** This will help prevent heat from getting trapped and embers from entering these areas.

**Store firewood well away from your home or any other structure.** Firewood should be stored at least 30 feet from structures and fuel tanks.

**Make sure your home's address is visible and made of non-combustible, reflective materials.** This will assist firefighters in locating your property.

**Keep a fire extinguisher and fire tools handy at all times.** A shovel, rake, ladder, and 100 feet of hose can be used to extinguish fire brands and spot fires.

**To learn more, visit:**

**[WWW.IDAHOFIREWISE.ORG](http://WWW.IDAHOFIREWISE.ORG)**



**This information is brought to you by  
Idaho Firewise and Bonfire:**





## Did you know...

that the closed burning season in Idaho is May 10th through October 20th? If you plan to burn, you must obtain a permit from your local fire office. Permits are free of charge.

## Think Before You Light

Wildland fires caused from people burning in barrels, pits, slash piles, or agricultural burning is a common problem in Idaho. On average, about one out of every five human-caused wildfires is started by someone burning debris and trash. Many escaped fires are illegally started due to people violating burn restrictions enforced during high fire danger months.

In order to avoid costly fines and citations, make sure you know where and when burning is allowed. It is also important to call your local fire department before you burn to get all the facts and information you need to conduct your burn safely. If you live outside a fire district, contact your county sheriff's department for further instructions on how to obtain a burn permit. Failure to get a burning permit beforehand may result in an unnecessary response from your local fire department. Also, know what is OK to burn and what is NOT OK to burn.

### OK to burn

- Natural vegetation
- Grass, leaves, needles
- Garden waste,
- Shrub and tree trimmings
- Stubble
- Logging/thinning slash
- Some household waste (i.e. paper/cardboard)

### NOT OK to burn

- Plastics
- Rubber
- Paint
- Petroleum products
- Vehicles or materials from vehicles
- Treated lumber or timbers
- Railroad ties

**Please, consider recycling or composting before burning these items.**

**Think green, recycle!**



**Never leave any fire unattended! Anyone starting a fire is responsible for that fire until it is out. If your fire gets away, you can be held responsible and liable for any property damages and fire suppression costs.**

## **Burning Guidelines**

There are specific guidelines for agricultural, debris, and burn barrel/incinerator burning that you will need to be aware of, but whatever type of burning you are considering, think before you light:

1. Obtain a burn permit when needed and comply with the conditions of that permit.
2. Make sure you will be in compliance with local air quality regulations.
3. Watch the weather. Avoid burning on windy, hot, and dry days. Wait to burn if: winds are over 8mph, temperature is above 80 degrees, and thunderstorm activity is predicted.
4. Have tools, shovels and a supply of water or fire extinguisher on hand.
5. Be prepared to stay and monitor your fire until it is out.

**Remember the steps you take before you light a fire make all the difference. There are simple precautions that you can take to prevent escaped fires.**



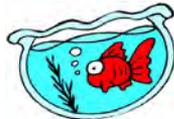
To learn more, visit:

**[WWW.KEEPIDAHOGREEN.ORG](http://WWW.KEEPIDAHOGREEN.ORG)**



**Always** power wash heavy machinery, i.e. mowers, tractors, excavators to remove weed seeds/parts before moving to other sites.

**Don't dump** aquarium plants or fish in our waterways!



**Check** camping/hunting gear for weed seeds/parts, before you leave camp site!

**Always clean** boats and trailers of all plant parts before leaving the boat launch.



Before buying/donating plants and seeds at garden club plant sales: be sure you're **not sharing** noxious weeds!

Always **Use** Noxious Weed Free Forage on Federal lands to stop the spread of weeds!



**Purchase** Noxious Weed Free feeds and seeds for wild and domesticated animals along with crop and garden seed plantings!