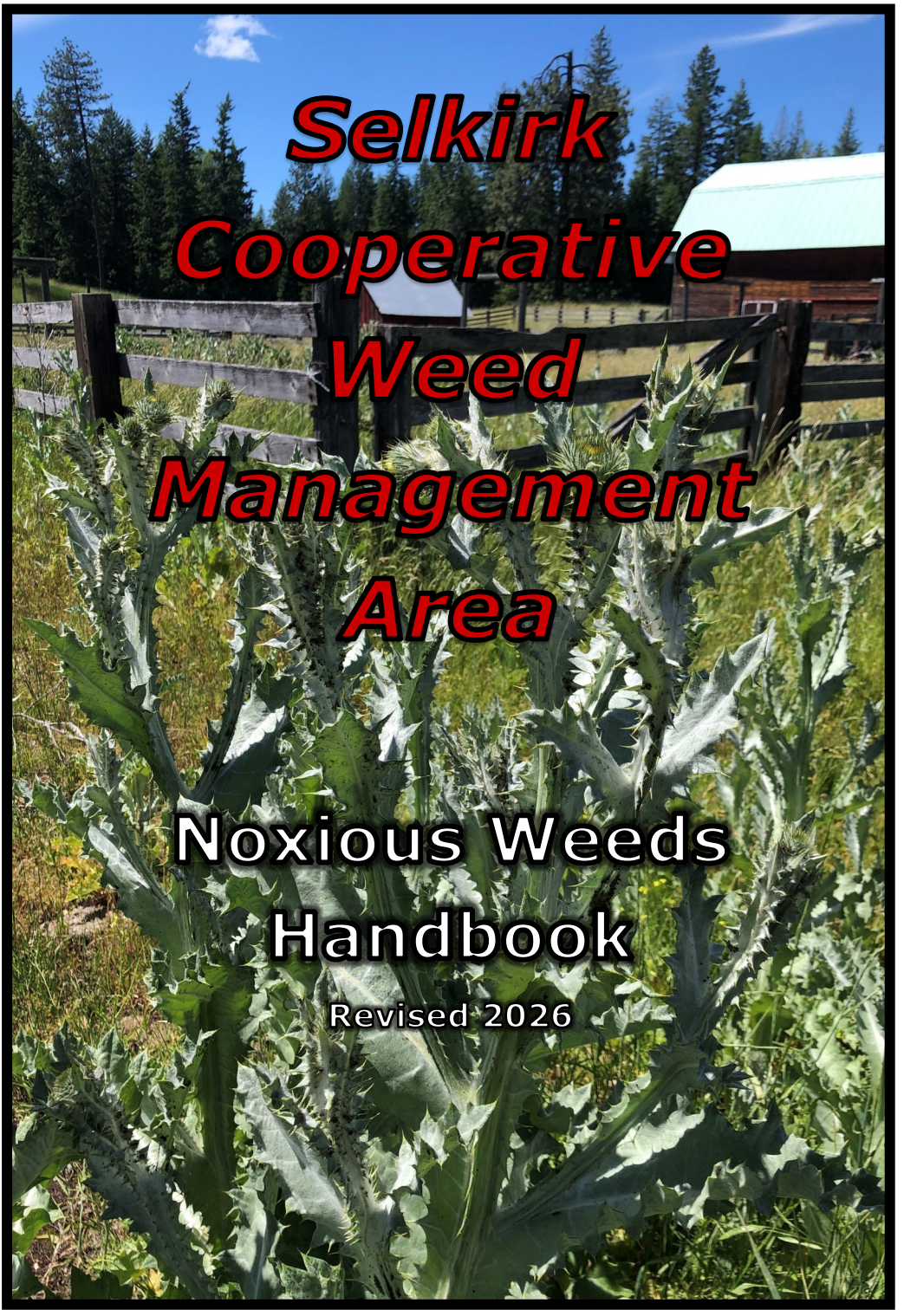
Selkirk
Cooperative
Weed
Management
Area
Noxious Weeds
Handbook
Revised 2026


IDAHO
STATE DEPARTMENT
OF AGRICULTURE


FOREST SERVICE
US
DEPARTMENT AGRICULTURE


IDAHO DEPARTMENT OF LANDS


IDAHO
FISH & GAME


BONNER COUNTY
Idaho
1907


COUNTY of BOUNDARY
EST. 1915


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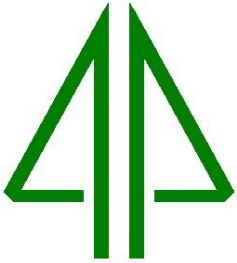

Selkirk Cooperative Weed Management Area—Noxious Weeds Handbook

A locally based resource for citizens of Bonner & Boundary Counties

Purpose

- Educate the public on responsibilities pertaining to noxious weeds, and provide identification & control recommendations for those present in or imminently threatening Bonner & Boundary Counties.

What is a noxious weed?

Noxious weed is defined in Idaho statute as any plant having the potential to cause injury to public health, crops, livestock, land or other property; and which is designated as noxious by the director [of the Idaho State Department of Agriculture].

If you believe a problem weed that meets the above criteria should be on the Idaho Noxious Weed list, there is a petitioning process for negotiated rulemaking with the Idaho State Department of Agriculture to initiate listing discussions with stakeholders in public meetings.

Noxious is a legal designation. While some toxic and/or invasive weeds could interfere with your management objectives, necessitating control, it is not a statutory obligation, rather a personal land management prerogative.

Many noxious weeds are toxic or invasive, but not all toxic and invasive weeds are noxious.

This publication is intended to provide advice and suggestions only. If site specific help is needed, land managers should contact their local noxious weed control agency. Herbicide labels will describe legal use of the product for specific use sites, i.e.— pasture/ rangeland, right-of-way/utility, forest environment, turf/ornamental, etc., and it will document restrictions on reentry intervals and subsequent haying or grazing restrictions, among other restrictions. In some instances, there are several herbicide trade names for the same active ingredient(s). The Selkirk CWMA does not endorse any one brand or manufacturer over another.

READ THE LABEL-The label is the Law

Special thank you to the Idaho Fish & Wildlife Foundation for the grant funding to publish the 2026 revision of this handbook.

Idaho Fish & Wildlife FOUNDATION

Thanks to the following for their contributions to this handbook:

Richard Old, PhD-XID Services

Kim Holzer, PhD-Idaho State Department of Agriculture

Paul Rhoades, PhD-Idaho State Department of Agriculture

Jennifer Roman-Idaho State Department of Agriculture

Bugwood-Invasive Species and Ecosystems Health, University of Georgia

Special thanks to Dr. Richard Old for his time and contribution for reviewing this booklet and providing specimen photos.

Idaho Fish & Wildlife Foundation

Helpful Web Sites

- **weed-id.com-**Identification
- **bugwood.org**-Identification
- **pnwhandbooks.org**-Chemical recommendations
- **ianwcs.org**-Idaho Assn. of Noxious Weed Control Superintendents
- **invasivespecies.idaho.gov**-Idaho State Dept. of Agriculture
- **Idahonoxiousweedcontrol.org**-Idaho Noxious Weed Control Assn.
- **wssa.net**-Weed Science Society of America
- **invasive.org**-Center for Invasive Species and Ecosystem Health
- **nezpercebiocontrol.com**-Biological Control website
- **naisma.org-**North American Invasive Species Management

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SPRAYER RENTALS:

Did you know that Boundary and Bonner Counties have sprayers available for rent? Bonner County has 150-200 gallon tow behind sprayers, Boundary County has 60 gallon three-point tractor hitch sprayers, as well as sprayers for AT-V's. Contact your county Noxious Weed Superintendent to check availability and inquire about cost. Remember...Spread the word, not the problem!

BIOLOGICAL CONTROL:

Boundary and Bonner County Noxious Weed Superintendents are your source for Biological control agents. We have access to agents for Dalmatian Toadflax, Spotted Knapweed, Rush Skeletonweed and others. Agents are supplied by the Nez Perce Biological Control Center at no cost to landowners. Please contact your County Noxious Weed Superintendent for more information and availability.

READ THE LABEL-The label is the law

IDAHO NOXIOUS WEED LAW

IDAHO STATUTE § TITLE 22, CHAPTER24 NOXIOUS WEEDS

What is the purpose of this law?

Declaration of Policy: It is the purpose of this chapter to define noxious weeds; legal requirements, duties, and responsibilities of persons; and to provide the statutory and financial means for the control of noxious weeds, wherever such noxious weeds occur in this state.

What does the law require?

The Idaho Noxious Weed Law requires landowners to control noxious weeds on their land.

Legally, noxious weed control encompasses prevention, eradication, rehabilitation, control or containment efforts. Areas may be modified from the eradication requirement if the landowner participates in a county-approved management plan or cooperative weed management area.

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

The law may be found on the Idaho legislature website, at libraries and county noxious weed offices.

Bonner and Boundary Counties carry out the mandates of the State Noxious Weed Law, Idaho Statute §Title 22, Chapter 24—Noxious Weeds.

Partners include:

- **Bonner County**
- **Boundary County**
- **Idaho Department of Lands**
- **Idaho Department of Fish and Game**
- **Idaho Transportation Department**
- **Idaho Parks & Recreation**
- **United States Fish & Wildlife Service—Kootenai Refuge**
- **Kootenai Tribe of Idaho**
- **United States Forest Service—Idaho Panhandle**
- **Idaho State Department of Agriculture**
- **Stimson Lumber Company**
- **Bonner & Boundary Soil & Water Conservation Districts**
- **City of Sandpoint**
- **US Army Corps of Engineers**
- **The Nature Conservancy**

READ THE LABEL-The label is the law

METHODS FOR NOXIOUS WEED MANAGEMENT

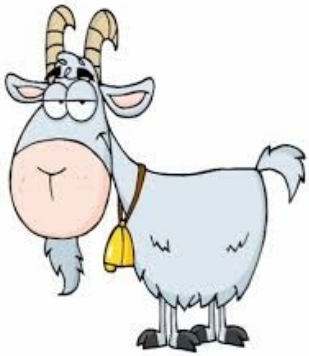
A good weed management plan uses more than one management strategy! The key to successful weed management is to create a favorable situation for desirable plant growth. Tilling, hoeing, hand pulling, mowing, and mulching can be used to deal with weed problems. Always wear gloves when handling weeds. Herbicides are powerful tools, so they must be used with caution. Herbicides can be one component of an Integrated Pest Management (IPM) plan, not the only control method. Biological controls can be a part of your IPM system but will not eradicate the weed.

Prevention is the first line of defense against invasive/noxious weeds. Preventive techniques may include:

- ◊ Education! Knowing how to identify weeds and being a good land steward will prevent weeds from becoming established on your land.
- ◊ Planting high quality, weed free seed crops.
- ◊ Local noxious weed control authorities can help detect new weeds and institute a plan with the landowner before they become established.
- ◊ Keeping weeds from going to seed. This is very important for annual and biennial weeds. Perennials may reproduce from a variety of ways, including by seed, roots, and stem sections.

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

- ◊ Fertilization, which helps desirables to outcompete weeds.
- ◊ Irrigation, enables desirables to outcompete weeds.
- ◊ Planting seed in bare or recently disturbed areas will help to keep weeds from filling the voids.



Mechanical methods physically remove weeds or slow their growth. Mechanical control is the oldest and most often used method. Examples include:

- ◊ 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 the natural enemy of the weed. Examples of biological control:

- ◊ Livestock, such as goats, sheep and llamas. Overgrazing can be extremely damaging to the area and make weeds 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 the roots, stems or leaves.
- ◊ 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 plant growth. The first rule for using herbicides is to **READ THE LABEL.** BEFORE USING ANY PESTICIDE AND FOLLOW ALL DIRECTIONS AND WARNINGS.

READ THE LABEL-The label is the Law

POLLINATOR AWARENESS

Bombus occidentalis

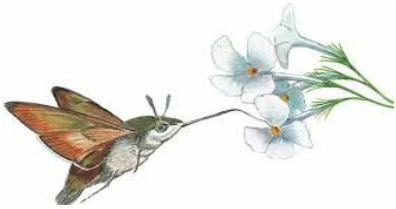
Pollinator Facts

- **Bees contribute over $20 Billion to US crop production.**
- **Bees feed entirely on plant pollen and nectar.**
- **There are over 200 species of bees native to north Idaho.**
- **Bees can be bright green, blue and black as well as yellow.**
- **One queen bee can live up to 5 years.**
- **The "buzz" of a bee is made by the flapping of its wings, about 11,400 times a minute.**
- **Most bees are solitary and live alone.**
- **Animal pollination, mediated mostly by bees, is necessary for 1/3 of the foods we eat.**

POLLINATOR AWARENESS

About every third bite of food you take is thanks to pollinators. Pollinators include organisms like ants, caterpillars, bats, moths, butterflies, wasps, and yes BEES! Over the past couple decades our pollinators have been on the decline. There are many reasons for this including loss of habitat, pathogens, predators, and pesticide use. You can help our pollinators by being a good steward of your land. Controlling noxious weeds helps native plants thrive and thus helps pollinators thrive.

When applying pesticides, apply in early morning or early evening when insects are less active. Most herbicides are safe for pollinators but make sure when reading the label that there are no restrictions to application when pollinators are present.



READ THE LABEL-The label is the Law

Canada Thistle

Canada Thistle

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 seeds. Each plant is capable of producing over 40,000 wind-borne seeds.

⇒ Grows 1-5 feet tall.

⇒ Hollow stems branch near the top. Leaves are wavy, dark green and shiny with sharp spines.

⇒ Flowers are lavender to rose-purple and bloom June through August.

⇒ Can be found in cultivated fields, meadows, pastures and logged or burned sites.

Control Methods

Chemical: Spray when the plants are actively growing, preferably before bloom. Aminopyralid (Milestone®), clopyralid + 2,4-D (Curtail®), dicamba + 2,4-D (Weedmaster®) are good options. Fall application to live foliage before a killing frost provides good control. May take several years to deplete extensive root system.

Non-chemical:

* Cultivation should occur every 2 weeks through the growing season for 2 years to deplete root system.
* Remove flower heads to prevent seed production.
* Repeated mowing is NOT effective.
* Fertilize to promote desirable plants.

Biological: Most animals won't graze on plant but may consume flower heads. Stem gall agents exist, but have shown to be ineffective.

Cogon Grass

Cogon Grass

Imperata cylindrica

⇒ A hearty, rhizomatous perennial.

⇒ Grows approximately 2-5 feet tall.

⇒ The midvein of the leaf blades are offset to one side.

⇒ Foliage is a bright, yellowy-green with red tips.

⇒ The seed heads are white and fuzzy.

⇒ The rhizomes are stout with stiff pointed tips.

⇒ It has the capability of forming dense monocultures on a variety of sites; moist and dry. The foliage contains oils that increase fire hazard and intensity.

⇒ It's ranked by USDA-APHIS as the seventh worst weed in the world.

Control Methods

Chemical control: Spray with imazapyr (Polaris®) or glyphosate while actively growing. Use a high rate of non-ionic surfactant.

Non-Chemical:

* It is difficult to achieve solid control by hand removal due to the rhizomes, but may be necessary in certain landscape situations. Extract a deep and wide berth, and dispose of properly.
* Mowing is not effective.
* Do not move contaminated soil offsite or transplant.

Biological: There are no known biological control agents.

Common Reed

Common Reed

Phragmites australis

⇒ A rhizomatous perennial usually found in aquatic margins.

⇒ Grows to heights of up to 15 feet.

⇒ The leaves are flat, and can reach widths of 2 inches.

⇒ The inflorescence is 6-16 inches in length and has a feathery appearance.

⇒ Capable of altering entire shoreline habitats, reduces native biodiversity and poses an increased risk of fire hazard.

⇒ There are native biotypes that can be difficult to distinguish from the non-native early in the development. It's safest to err on the side of treating each discovered colony as the introduced variety initially, in order to not risk losing ground on control if that's what it turns out to be.

Control Methods

Chemical control: Foliar spraying with imazapyr (Polaris®) in the fall is usually the most effective, but can be done in the summer. Glyphosate products with an aquatic label can also be used. Add a non-ionic surfactant. **NOTE:** If an herbicide application will result in a discharge to public waters, it needs to be performed by a licensed, permitted applicator.

Non-Chemical:

* Mechanical control methods are usually not effective due to the extensive rhizome system. It is rarely possible to remove rhizomes without breaking and fragmenting these tissues.
* Repeated mowing/cutting throughout the growing season may suppress if the site allows.

Biological: No known agents are available.

Dalmatian Toadflax

Dalmatian Toadflax

Linaria dalmatica

This plant is difficult to control due to its waxy leaf cuticles. Was introduced as an ornamental, a snapdragon.

⇒ A perennial plant that spreads by root fragments and seed.

⇒ Grows up to 4 feet tall.

⇒ Leaves are thick and waxy, have no petiole and are blue-green.

⇒ The yellow snapdragon-like flower are often tinged with orange or red and are located along the flower spikes at the top of the plant. Plants flower from late spring till fall.

⇒ An aggressive plant in pastures, roadsides and abandoned fields.

CAUTION: Toxic to animals, causes cyanide poisoning, although large amounts must be ingested in a short period.

Control Methods

Chemical: Dicamba (Banvel®), chlorsulfuron (Telar®), or aminocyclopyrachlor (Method®) will provide control. An MSO surfactant must be used due to the waxy leaves.

Non-chemical:

* Cultivation every 2 weeks during the growing season is effective.
* Small infestations can be hand pulled or dug out.

Biological: There are biological agents available for this plant and they are present in north Idaho.

Field Bindweed

Field Bindweed

Convolvulus arvensis

Also known as morning glory.

⇒ Perennial with extensive root system, often climbing.

⇒ Stems prostrate, 1-4 feet long.

⇒ Leaves alternate, more or less arrowhead shaped, pointed or blunt lobes at base.

⇒ Flowers are bell shaped or trumpet shaped, white to pinkish, approx. 1" in diameter.

⇒ Found in lawns, cultivated fields, waste areas and roadsides. It can even be found in parts of crawlspaces—it needs very little light.

⇒ Flowers late June until frost.

⇒ Seeds can be viable for 50 years.

⇒ Root system can grow to depths of 10'.

Control Methods

Chemical: Spray with 2,4-D + Dicamba (Weedmaster®) early spring for suppression, but may be used any time during the growing season up to a killing frost. Several years of applications will be needed to control. Aminocyclopyrachlor (Method ®) may be more effective, but caution must be used to avoid non-target damage to sensitive trees due to movement in the soil.

Non-Chemical:

* Cultivation every few weeks.
* Mowing is not a viable means of control.

Biological: No known biological agents are known at this time. Sheep are known to graze on bindweed.

Hawkweed

Hawkweed

Hieracium caespitosum (yellow)

Hieracium aurantiacum (orange)

⇒ A perennial that spreads by root, above ground stolon, below ground rhizomes, and by feathery, airborne seeds.

⇒ Grows 1-3 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 late June.

⇒ Found in moist pastures, forest meadows, abandoned fields, clear cuts, and roadsides.

Other Hawkweeds: BOTH NOXIOUS

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

Yellow Devil Hawkweed (Hieracium glomeratum) Upper and lower leaf surfaces are covered with short stiff hairs giving plant a rough surface. Stolons are absent.

Control Methods

Chemical: Treat with aminopyralid (Milestone®), aminopyralid + florpyrauxifen-benzyl (HighNoon®) or clopyralid + 2,4-D (Curtail®). Best results if sprayed before bloom. Surfactants must be used with herbicides.

Non-Chemical: Pastures must be healthy to recover from infestations, so fertilization is important. Mowing is **not** effective since rosettes grow close to ground, and stolons can be further spread.

Biological: Agents are in final stage of approval.

NOTE: There are native hawkweeds in our area that are not invasive. For more information on invasive vs. native hawkweed see: http://msuextension.org/publications/agandnaturalresources/eb0187.pdf

Hoary Alyssum

Hoary Alyssum

Berteroa icana

⇒ Can be an annual, biennial, or short lived perennial that spreads by seed.

⇒ Grows 1-3 feet tall.

⇒ The leaves are covered with fine star shaped hairs.

⇒ The leaves are covered with fine hairs.

⇒ Clusters of white flowers appear May-September.

⇒ Prefers dry, sandy soil and can be found in pastures, roadsides and forest roads.

CAUTION: This plant can be toxic to horses. 

Control Methods

Chemical: Metsulfuron (Escort®), dicamba + 2,4-D (Weedmaster®) or chlorsulfuron (Telar®) will provide control most effectively when applied during spring and fall. A surfactant must be used due to the fine hairs on plant.

Non-Chemical:

* Hand pulling is effective on small infestations.
* Mowing before blooming will reduce seed production.

Biological: No known biological agents at this time.

Houndstongue

Houndstongue

Cynoglossum officinale

⇒ A biennial that spreads by seed.

⇒ Grows 1-4 feet tall.

⇒ 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 sites and roadsides.

CAUTION: Houndstongue is toxic to animals. Animals may live for 6 months or longer after consuming a lethal dose. Sheep are more tolerant to Houndstongue poisoning than cattle or horses.

Control Methods

Chemical: Aminopyralid (Milestone®), aminopyralid + metsulfuron (Opensight®) or dicamba + 2,4-D (Weedmaster®) are effective when applied to actively growing plants. A surfactant should be used.

Non-Chemical:

* Hand pulling can be done on small infestations before plants begin to seed.
* Mowing will reduce seed production. Make sure to mow before blooming.
* Healthy soils help prevent infestations, fertilizing is important.

Biological: Root weevils are present in Boundary and Bonner Counties, however, they migrated out of Canada and are not permitted for intentional release yet.

Knapweed

Diffuse Knapweed

Meadow Knapweed

Spotted Knapweed

Knapweed

Spotted Knapweed (*Centaurea stoebe)*

⇒ A perennial that spreads by seed and taproot fragments.

⇒ Grows 3-5 feet tall.

⇒ Pink to purple flowers and blooms June-October.

⇒ Each flower head has stiff bracts, which are black tipped, giving flower spotted appearance.

⇒ Found on any disturbed site and thrives under a wide range of environmental conditions.

Other Knapweeds: ALL NOXIOUS

Diffuse Knapweed (*Centaurea diffusa)*. Sometimes called tumble knapweed, it spreads by the windblown mature plants. Flowers are white to purplish; bracts are tipped with a spine. Grows 1-2' tall. Flowers July– September.

Meadow Knapweed (*Centaurea pratensis).* Perennial, grows to 3'. Leaves are long-stalked. Flowers are large pink to purplish-red.

Control Methods

Chemical: Spray with aminopyralid (Milestone®), clopyralid + 2,4-D, (Curtail®) or aminopyralid + florpyrauxifen-benzyl (HighNoon®) in the spring when the plant is actively growing but before flowering. In the fall, spray an aminopyralid product before a killing frost.

Non-Chemical:

* Mowing or cutting will eventually promote lower growing plants but may reduce seed production
* Cultivation at regular intervals.
* Hand pulling (extract entire taproot). ***Wear gloves.***

Biological: Root and seed weevils are available and are already present in much of north Idaho.

Large Knotweeds

Large Knotweeds

Because knotweeds have an extensive root system, once established they are difficult to control.

⇒ Woody, upright perennial that spreads from long creeping roots and stem fragments.

⇒ Found along roadsides, ditch banks, waste areas and landscapes.

⇒ Grows 4-10 feet tall.

⇒ Bamboo-like hollow stems are green with red or purple spots.

⇒ Small greenish-white flowers in early autumn.

All 3 of the large knotweeds are noxious weeds.

Japanese Knotweed *(Polygonum cuspidatum):* Small greenish-white colored drooping flower clusters appear at end of stems.

Giant Knotweed (*Polygonum sachalinense)* Distinguished heart shape leaves up to 12 inches long.

Bohemian Knotweed (*Polygonum X bohemicum*) A hybrid of Japanese and Giant knotweed. Green-white upright flower clusters.

Control Methods

Chemical: Triclopyr (Vastlan®), imazapyr (Polaris®) or aminopyralid (Milestone®) can be applied when actively growing and have reached early bud to early flowering stage of growth. Can be sprayed in the fall, but needs to occur early in the season due to plants being very sensitve to the first frost. **NOTE:** imazapyr is non-selective, and will kill all veg.

Non-chemical:

* Never transplant as an ornamental.
* Once rhizomes are established, significant amounts of soil need to be extracted for mechanical control to be effective.
* Cutting back all new growth to ground at least twice a month during the growing season for several years may suppress. Make sure to remove all plant material as plant can re-grow from cuttings.

Biological: Agents are in final approval stage at this time. Goats and sheep may graze on plant.

READ THE LABEL-The label is the Law

Leafy Spurge

Leafy Spurge

Euphorbia esula

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

⇒ An aggressive perennial that spreads by seed and roots.

⇒ Grows 1-3 feet tall.

⇒ Narrow bluish-green leaves up to 4" long.

⇒ Flowers are small and enclosed by yellowish-green heart shaped bracts and bloom from May until frost.

⇒ Seeds capsules often explode when dry, propelling the seeds more than 20 feet.

⇒ Stems, leaves, and flowers contain a toxic milky latex sap.

⇒ It can be found in any type of soil.

CAUTION: Horses & cattle should not graze due to toxic sap.

Control Methods

Chemical: Dicamba (Banvel®), imazapic (Plateau®) or aminocyclopyrachlor (Method®) can be used and may require repeat treatments. Use a surfactant.

Non-Chemical:

* Fertilization and pasture health are extremely important.
* Mow or pull weeds to prevent seed production. The sap of leafy spurge is toxic; **skin and eye protection are needed when handling**.
* Do **not** cultivate, new plants can begin from cut root segments.

Biological: Agents are available and may be present in north Idaho. Sheep and goats are known to graze on plant. Constant grazing will slow the spread and work towards starving out the root system.

Oxeye Daisy

Oxeye Daisy

Leucanthemum vulgare

Also known as Poverty Weed and Field Daisy.

⇒ Short lived perennial that spreads by seeds (2000-4000 per plant) and from the spreading roots.

⇒ Grows 1-3 feet tall.

⇒ The glossy green leaves get smaller as they grow up the stem.

⇒ Daisy-like flowers are made up of white ray flowers with a golden center and bloom from June-September.

⇒ Likes to grow in abandoned fields, meadows, and over grazed pastures. Can be found in "wildflower" seed mixes.

Control Methods

Chemical: Aminopyralid + metsulfuron (Opensight®), clopyralid + 2,4-D (Curtail®) or aminopyralid + florpyrauxifen-benzyl (HighNoon®) are very effective before bloom or in fall after re-growth.

Non-Chemical:

* Dig plants when soil is moist.
* Regular cultivation is effective.
* Applications of fertilizer are effective in encouraging strong grass growth, limiting space for oxeye daisy seeds to germinate (Oxeye Daisy is an opportunist).

Biological: No known biological methods. Goats and sheep are known to graze on oxeye daisy.

Perennial Sowthistle

Perennial Sowthistle

Sonchus arvensis

- ⇒ A perennial that spreads by rhizome-like roots and seed.
- ⇒ Grows 2-4 feet tall and exudes a milky juice.
- ⇒ Leaves have a clasping base and mildly prickly margins which vary from deeply to entirely toothed. Upper leaves are fewer and much smaller than basal leaves.
- ⇒ Flowers are 1-2 inches wide, rich yellow in color. Numerous gland-tipped hairs on bracts and flower stalks help distinguish this species.
- ⇒ Flowers from early June-September
- ⇒ Found in pastures, roadsides and disturbed sites.

Control Methods

Chemical: Aminopyralid (Milestone®), clopyralid + 2,4-D (Curtail®) or aminopyralid + florpyrauxifen-benzyl (HighNoon®) applied to rosettes in the spring prior to flowering is best. Use of a surfactant is important.

Non-chemical:

* Cultivation throughout growing season may control.
* Mowing is not effective.
* Must be cut or pulled before going to seed, and entire root crown needs to be extracted.

Biological: No known agents are available. Cattle and sheep will graze.

Poison Hemlock

Poison Hemlock

Conium maculatum

⇒ An herbaceous biennial.

⇒ Regularly grows to heights of 4-6 feet, but may reach heights of 9 feet.

⇒ Stems are hollow and marked with purple blotching.

⇒ The long-stalked, compound leaves are fern-like.

⇒ Inflorescence is a compound umbel with several small, white flowers.

⇒ Has an unpleasant odor that smells like mouse urine when crushed.

⇒ Grows on numerous sites; including roadsides, pastures, stream banks and woodlands.

CAUTION: Contains highly concentrated alkaloids that are toxic to all domestic animals, with cattle being the most affected. Handling the plant also may cause skin irritation in humans.

Control Methods

Chemical: Triclopyr (Vastlan®), aminopyralid + metsulfuron (Opensight®) or metsulfuron (Escort®) applied to seedlings, rosettes or actively growing plants works well.

Non-Chemical:

* Mowing or cutting before seed production will reduce soil seed bank.
* Small infestations can be hand pulled. Being a biennial, it mainly only spreads by seed, but root crown needs to be extracted to prevent regrowth. ***Wear gloves.***

Biological: A defoliating moth exists, but agent availability is limited for distribution.

Puncturevine

Puncturevine

Tribulus terrestris

Also known as goathead.

⇒ An annual that produces spiny burrs.

⇒ Grows as a sprawling mat up to 8 feet wide.

⇒ The leaves are opposite and divided into 3-8 pairs of leaflets.

⇒ Flowers are yellow and 5-petaled which later form dense-spined fruiting bodies.

⇒ Prefers loose, sandy soils and found along roadsides, trails, fields or pastures and industrial or waste areas.

⇒ The burrs can injure livestock and pets, and damage bicycle tires.

Control Methods

Chemical: Dicamba + 2,4-D (Weedmaster®), fluroxypyr (VistaXRT®) are good options during postemergence when plants are actively growing. Chlorsulfuron (Telar®) applied as a preemergent or during early postemergence is effective.

Non-chemical:

* Hand pulling or digging can be effective on small infestations.
* Mowing is not effective due to the low-growing habit.
* Avoid handling once the spiny fruit develop.

Biological: A seed weevil exists, and is mostly present in California, as the insects are sensitive to prolonged freezing temperatures.

Rush Skeletonweed

Rush Skeletonweed

Chondrilla juncea

⇒ Perennial which spreads by both seed and creeping roots.

⇒ Grows 1-4 feet tall.

⇒ Dandelion-like rosettes. Stems are bare, except lower 4-6 inches which are covered with coarse brown hairs. Stems produce a milky latex juice.

⇒ Flowers are yellow and scattered among branches.

⇒ Found in disturbed areas.

Control Methods

Chemical: Spray with aminopyralid + metsulfuron (Opensight®) or clopyralid + 2,4-D (Curtail®) to rosettes in spring or in fall before a killing freeze. Make sure to use surfactant at high rate.

Non-Chemical:

* Constant hand pulling for several years on small infestations.
* Mowing and cultivation are **not** effective. Cultivation will spread root fragments and increase the population.
* High nitrogen fertilizers assist in desirable plants to outcompete Rush Skeletonweed.

Biological: Control agents may already be present in some areas of north Idaho. Continuous grazing by sheep or goats can reduce densities.

Scotch Broom

Scotch Broom

Cytisus scoparius

Stems remain green year-round. Seed heads resemble pea pods, which snap open at maturity and throw seeds some distance.

⇒ A perennial shrub that spreads by seed. It has an average life span 17 years.

⇒ Grows up to 10 feet tall.

⇒ Stems erect, woody, green to brownish green and five-angled. Leaves are small (1/2 inch) and shed late in the summer and fall.

⇒ Pea like flowers are bright yellow and bloom in June.

⇒ Found in pastures, utility corridors and along roadsides.

⇒ Seeds can live for more than 60 years in soil.

CAUTION: Can be toxic to livestock.

There are four genera of brooms which are prohibited in Idaho. Chamaecytisus (Tagasaste), Cytisus (Scotch Broom), Genista (French Broom) and Spartium (Spanish Broom).

Control Methods

Chemical: Spray with triclopyr (Vastlan®), aminopyralid + triclopyr (Capstone®) or triclopyr + 2,4-D (Crossbow®) at any time outside of consistently freezing temperatures, but most effective when actively growing. Basal bark application with triclopyr is an effective control method. Use a surfactant.

Non-chemical:

* Plants can be dug out.
* Repeated cultivation destroys seedlings.
* Mowing is **not** effective unless an herbicide is applied on the stumps.

Biological: Biological control agents are available, but efficacy is limited. Goats will browse with no ill effects.

Scotch Thistle

Scotch Thistle

Onopordum acanthium

Also known as cotton thistle.

⇒ A biennial that has a thick, fleshy taproot that may extend down 1 or more feet. Only reproduces by seed.

⇒ Grows up to 12 feet tall.

⇒ Leaves are large (up to 2 feet long and 1 foot wide), spiny, and covered on both sides with fine wooly hairs, giving the plant a silvery-gray look.

⇒ Thrives in sunny, moist areas along stream banks, but can be found in fields and pastures. Prefers well-drained, sandy or gravely soils.

⇒ Flowers are purple to occasionally white, globe shaped up to 2 inches in diameter.

⇒ Blooms July through September.

Control Methods

Chemical: Aminopyralid (Milestone®), dicamba + 2,4-D (Weedmaster®) or clopyralid + 2,4-D (Curtail®) applied on rosettes is most effective. Mature plants can be sprayed before flowering. Use a surfactant.

Non-chemical:

* Digging up or tilling rosettes are effective methods, however the entire crown must be removed.
* Mowing is only an effective control method if done before seedbank establishment
* Plants that are cut or pulled while flowering must be removed to prevent future infestations.
* Fertilize to promote desirable plants to outcompete Scotch Thistle.

Biological: Most animals will not graze but occasionally consume the flower heads.

Small Bugloss

Small Bugloss

Anchusa arvensis

⇒ A weedy annual that spreads by seed.

⇒ Grows 6-12 inches tall.

⇒ Leaves and stems are covered with bristly hairs that arise from warty bumps.

⇒ Leafy coil flower stems bear small blue flowers. Blooms from June to September.

⇒ Prefers dry, sand to gravelly soils. Often found in open pastures and roadsides.

Control Methods.

Chemical Control: Spray before bloom with triclopyr+ 2,4-D (Crossbow®), metsulfuron (Escort®) or chlorsulfuron (Telar®). Aminocyclopyrachlor (Method®) may be most effective if appropriate for the site. Fall applications of these products to new rosettes (before a killing frost) provides adequate control. A surfactant is highly recommended to increase effectiveness of any herbicide.

Non-Chemical:

* Bugloss cannot withstand regular cultivation.

* Prevent seed production by cutting and destroying flower heads. Plants may be hand pulled or dug out.

Biological: There are no known biological control at this time.

Tansy Ragwort

Tansy Ragwort

Jacobaea vulgaris

⇒ A biennial or short lived perennial that spreads from fleshy root fragments and by seed. Rosette at base.

⇒ Grows 1-6 feet tall.

⇒ Leaves are dark green on top and a whiteish-green underneath.

⇒ Numerous flowering stems on each branch, showy bright yellow flower, daisy-like at end of each stem.

⇒ Thrives in low-fertility soils, disturbed areas, forest environments and overgrazed pastures.

⇒ Can grow in sun or shade.

CAUTION: This weed is toxic to livestock. 

Control Methods

Chemical: Aminopyralid (Milestone®), dicamba + 2,4-D (Weedmaster®), triclopyr + 2,4-D (Crossbow®) or metsulfuron (Escort®) will control if applied prior to blooming.

Non-chemical:

* Cultivation is moderately effective if repeated throughout the growing season.
* Hand-pulling is effective, but root crown needs to be extracted if second year plants are the target. If in flowering phase, plants need to be removed from site and properly disposed of.

Biological: Do not let animals graze on plant. Biological control may be available.

Viper's Bugloss

Viper's Bugloss

Echium vulgare

Also known as blueweed.

⇒ A biennial or winter annual plant with a thick, black taproot that spreads by seed. Each plant may produce 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. Blooms June to September.

⇒ Grows well in many soil types. Often seen in well drained sandy/ gravely soils, including the gravel of roadsides.

CAUTION: Toxic to horses, cattle and sheep.

Control Methods

Chemical: Spray before bloom with dicamba + 2,4-D (Weedmaster®), metsulfuron (Escort®). A fall application to rosettes of plants before a killing frost is effective. A surfactant must be used.

Non-chemical:

* Cultivation is effective for control.
* Prevent seed production by cutting and destroying flowers, roots will die at end of season.
* Plants may be hand pulled or dug, be sure to remove roots below the crown.
* Mowing is not a good control option.

Biological: There are no known biological agents.

Whitetop

Whitetop

Lepidium draba

Also known as Hoary Cress and Pepperwort.

⇒ A perennial plant spreading by both seed and creeping roots.

⇒ Grows up to 2 feet tall.

⇒ Grayish green leaves are arrow-head shaped and clasp the stem on upper plant and lower leaves are stalked. Leaves may be sparsely to densely hairy.

⇒ Seed pods are heart shaped.

⇒ Grows in cultivated fields, pastures, roadsides and abandoned fields.

CAUTION: Whitetop can cause stomach problems in all animals.

There are 3 genera of Lepidium that are indistinguishable except for their fruits. All 3 should be treated as noxious weeds.

Control Methods

Chemical: Aminopyralid + metsulfuron (Opensight®), metsulfuron (Escort®) or chlorsulfuron (Telar®) are good options. Use a surfactant due to the presence of leaf hairs.

Non-chemical:

* Cultivating will eventually eliminate the weed if repeated every 2 weeks throughout the growing season.
* Mowing close to ground will reduce seed production.
* Hand pulling or digging are effective on small infestations.
* Competitive desirable plants can suppress whitetop.

Biological: A biological agent is in development, but not available for release yet. Do not allow animals to graze.

Yellow Toadflax

Yellow Toadflax

Linaria vulgaris

Similar to Dalmatian toadflax, difficult to control. Also known as butter and eggs.

⇒ A perennial that spreads by creeping roots and by seed.

⇒ Grows up to 3 feet tall.

⇒ Leaves are long, narrow and pale green in color.

⇒ Snapdragon-like flowers are yellow with orange throat, clustered at the top of the stem. The plant flowers June through August.

⇒ An aggressive weed of pastures and roadsides.

⇒ Possibly hybridizing with dalmatian toadflax.

CAUTION: The toadflax's contain toxins which can cause cyanide poisoning, although large amounts must be consumed in a short period of time. 

Control Methods

Chemical: Chlorsulfuron (Telar®), dicamba (Banvel®) or aminocyclopyrachlor (Method®) will provide good control. A surfactant must be used.

Non-chemical:

* Cultivation every 2 weeks through growing season is effective.
* Small infestations may be hand pulled or dug up if caught early. Be sure to remove entire root system.

Biological: There are biological agents available and may be present in north Idaho. Do not allow animals to graze.

AQUATIC NOXIOUS WEEDS

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 primarily propagates through stem fragments.

⇒ Can grow in up to 25 feet of water and fill that volume with plant material creating floating mats of vegetation by late summer.

⇒ Leaves are feather-like and composed of 12-24 pairs of thread like leaflets on each leaf. There are 4 leaves whorled around the stem at each node.

⇒ Stems are often highly branched near the surface.

⇒ Small flowers appear on leafless reddish spikes that emerge from the water.

⇒ Frequently misidentified and confused with other submerged aquatic plants.

⇒ Eurasian Watermilfoil can hybridize with Northern Watermilfoil producing intermediate forms. These plants are considered invasive.

Can be confused with native plants:

Northern Watermilfoil (*Myriophyllum sibiricum*) and Whorled Watermilfoil (*Myriophyllum verticillatum*), Coontail (*Ceratophyllum demersum).*

Curlyleaf Pondweed (*Potamogeton crispus*)

⇒ Perennial that grows in early spring and dies back in summer.

⇒ Color varies from olive green to a reddish-brown.

⇒ Leaves are 3 inches long and have a distinct lasagna-noodle waviness with finely serrate edges. Has a distinct mid-vein.

⇒ Can reproduce through fragmentation and dense winter buds called turions that look like sharp, miniature pinecones.

⇒ Can sometimes co-occur with Eurasian Watermilfoil due to difference in time of year that vegetative parts of the plant grow and fill the water.

AQUATIC NOXIOUS WEEDS

Northern milfoil (native)

Eurasian Watermilfoil

Curlyleaf Pondweed

Coontail (native)

Chemical control: Chemical control of aquatic weeds is usually limited to professional applicators.

Non-Chemical: Submerged aquatic weeds can be raked, pulled, or cut by hand. Be sure to collect any fragments because each one can start a new plant. Dispose of removed plant material by composting well away from water. Use of a pool skimmer helps collect fragments.

Avoid launching at ramps when overrun with Eurasian Watermilfoil or Curlyleaf Pondweed. Weeds trapped between bunks and boat can be extremely difficult to locate and remove. **CLEAN, DRAIN, DRY**

AQUATIC NOXIOUS WEEDS

Flowering Rush (*Butomus umbellatus*)

⇒ A perennial that spreads primarily from root fragments.

⇒ Prefers to grow in permanently or seasonally flooded areas.

⇒ Roots are thick rhizomes, but can be fibrous early in plant establishment.

⇒ Leaves attach directly to the rhizome, may be 40 inches long and are triangular in cross section near the base.

⇒ White to pinkish flowers with 3 petals and arranged in an umbel. Many plants will never flower.

Yellow Flag Iris (*Iris pseudacorus*)

⇒ A perennial with a large underground root system. These plants spread by floating seeds.

⇒ Prefers to grow in moist soils in marshes, stream banks, roadside ditches or along shorelines.

⇒ Once established, these plants can clog small streams and dominate shallow wetlands, wet pastures and ditches.

Purple Loosestrife (*Lythrum salicaria*)

⇒ An erect rhizomatous perennial that can grow to 6-8 feet tall.

⇒ Usually in moist or marshy sites.

⇒ Leaves are opposite or whorled and simple, entire.

⇒ Flowers are rose-purple having 5-7 petals in long vertical racemes.

Chemical control: Chemical control of aquatic weeds is limited to permitted, professional applicators unless it's a private, contained pond.

Non-Chemical: Plants can be dug out or repeated cultivation will destroy seedlings.

Biological: There are biological control agents for Purple Loosestrife, and may already be present in north Idaho. Agents are currently in the development & approval process for Flowering Rush.

Prevention: Humans are primary drivers of inter-lake aquatic plant spread through movements of boats, trailers and other gear with plant fragments attached. Remove all plant fragments, even tiny ones, before relaunching. This can be done on the boat ramp, or at home with a garden hose.

AQUATIC NOXIOUS WEEDS

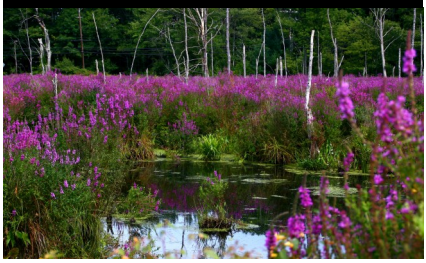
Flowering Rush

Flowering Rush

Yellow Flag Iris rhizome

Yellow Flag Iris

Purple Loosestrife



Purple Loosestrife

Local Weeds Of Concern

These are not on the Idaho Noxious Weed List, therefore not subject to the associated statute & rules. However, the local noxious weed control offices are often queried for advice on control due to widespread invasiveness.

- Common Tansy (*Tanacetum vulgare*) - rhizomatous perennial

⇒ **Chemical Control:** Use metsulfuron (Escort®) + 2,4-D in the spring when plants have reached 12"-18" in height, or in the fall about two weeks after mowing/cutting.

⇒ **Non-Chemical:** Cultivate at regular intervals. Sheep may graze it.

- Marestail (*Conyza canadensis*) - summer annual

⇒ **Chemical control:** indaziflam (Rejurvra®) applied in the fall may provide pre-emergent control for the following year. Fluroxypyr (VistaXRT®) or triclopyr + 2,4-D ester (Crossbow®) applied in the vegetative phase can provide suppression.

⇒ **Non-Chemical:** Mow or cut prior to seed production

Marestail

Common Tansy

Toxic Weeds

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

Fiddleneck

Field Horsetail

Hairy Vetch

Jimsonweed

Mustards (some)

Nightshades

Red/Alsike clover (for horses)

Red Sorrel

Russian Knapweed

Spurges

Sweetclover (if moldy)

Sweet Vernalgrass

Wormwood

Toxic Range & Pasture Plants:

Arrowgrass

Bouncingbet

Brackenfern

Buttercups

Chokecherry

Curly Dock

Death Camas

False Hellebore

Halogeton

Larkspurs

Locoweeds

Lupine

Monkshood

St. Johnswort

Ventenata

Wild Onion

EXERCISE CAUTION WHEN USING HERBICIDES; READ THE ENTIRE 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, disposal and storage requirements. When using any chemical product, **READ THE LABEL** Idaho follows the EPA approved label because the **LABEL IS THE LAW!**

Conversion Table

1 ml	=1 cc	1 oz	=26.4 grams
1 teaspoon	=5 ml	16 oz	=1 pound
3 teaspoons	=1 tablespoon	1 pound	=454 grams
1 tablespoon	=15 ml	2000 pounds	=1 ton
2 tablespoons	=1 oz		
16 tablespoons	=1 cup	Length & Area	
1 cup	=8 oz	1 mile	=5280 feet
2 cups	=1 pint	1 mile	=1.6 kilometer
2 pints	=1 quart	1/2 acre	=21,780 sq. ft
8 pints	=1 gallon	1 acre	=43,560 sq. ft
1 gallon	=128 oz		

Small Quantity Dilution Table

To mix small quantities use the following dilution table.

If dosage on table shows: Use the following amount of chemical for each gallon of water.

2 pints(1 qt) per acre	3/4 oz.
3 pints(1 1/2 qt) per acre	1 1/4 oz.
4 pints(2 qt) per acre	1 1/2 oz
6 pints(3 qt) per acre	2 1/4 oz

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

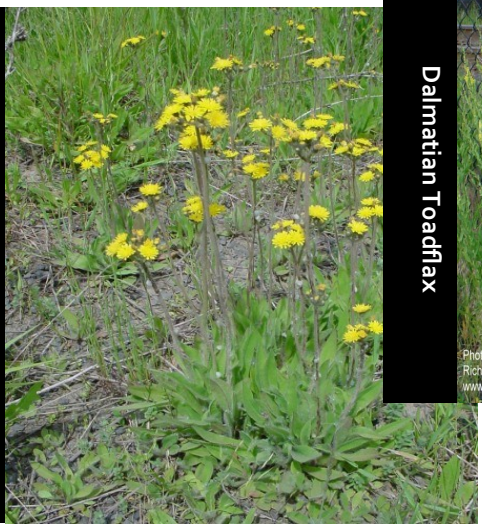
Surfactants:

It is common and usually necessary to use surfactants when applying herbicides. These products increase the effectiveness of the treatment by making the herbicide penetrate the leaf surface, increase coverage, and can make them rain fast. Plants with fine hairs like common mullein, hawkweed, absinth wormwood, bugloss, and others must be sprayed with herbicides mixed with surfactants. Other plants that have waxy stems and leaves or plants with very few leaves also need a surfactant. Use the higher rate of surfactant that is on the label when spraying these plants.

Absinth Wormwood

Dalmatian Toadflax

Yellow Hawkweed



SPRAYER CALIBRATION

Why is sprayer calibration important? You need to know how much chemical your sprayer is applying per acre. If you don't know how much your sprayer is applying you will not know how much chemical to put in the tank. Below is a step-by-step process to help you determine sprayer calibration.

BACKPACK/HANDSPRAYERS

This is an easy method to calibrate your small sprayers. It is based on the following principal: because 1 gallon=128 ounces and the test area to be sprayed is 1/128th of an acre, therefore ounces collected=gallons per acre.

1. Make sure the sprayer is clean and rinsed out. Use straight water-NO herbicide for this test. Make sure sprayer is working properly– good pressure, no leaks, and a clean spray tip.
2. Measure out an area 18.5' x 18.5', this is 1/128th of an acre. Or any measurement that is 340 sq. ft.
3. Record the time it takes you to spray the measured area. Repeat several times and take the average. Be sure to use same speed and pressure each time.
4. Spray into a container for the average time it took you to spray the measured area. Measure the water collected in ounces. The amount collected in ounces equals gallons applied per acre.

Example: it took you 51 seconds to spray the measured area. You then sprayed into a container for the same time and collected 40 ounces. Therefore 40 ounces=40 gallons per acre.

ATV Boom sprayers

1. Make sure the sprayer is clean and rinsed out. Again, use straight water-NO herbicide. Make sure all nozzles are working uniformly.
2. Measure the spray width of one nozzle in feet, or nozzle spacing on the boom in feet, to determine the distance to travel a distance that will cover 340 sq. ft or 1/128th of an acre.
3. Drive the ATV the distance to cover the 1/128th of an acre and time yourself. Drive the speed that you will be spraying at. Repeat several times and get an average time.
4. Catch the spray in a container from one nozzle for the average time it took to travel the distance to cover 1/128th of an acre. Measure the amount collected in ounces. The amount collected in ounces is the same number as gallons per acre.

Example: If your nozzle spacing is 20" (1.67') you will need to travel 204 feet(1.67 x 204=340 sq. ft.). Lets say it took you 31 seconds to cover the 204 feet. Now collect from one nozzle for 31 seconds. If in 31 seconds you collected 25 ounces from one nozzle you would be applying 25 gallons per acre.

How much chemical to add to tank?

1) Read the Label and determine the amount per acre. Remember to change the volume to fluid ounces if given in another measurement (16 oz.=1pint).
2) Divide tank capacity by the gallons per acre (GPA). This tells you how many acres one tankful will cover. Record the number.
3) Multiply the amount of herbicide you want in step #1 by the acres that can be sprayed from one tankful (step #2). This is how much herbicide you will add to tank.

Example: You have determined that your sprayer is calibrated at 64 gallons per acre (GPA). Your backpack sprayer is 4 gallons. 4 divided by 64=.0625. This means you can cover .0625 acres with one tank. The label calls for 1 pint per acre. Change this to ounces (16 oz.). Multiply 16 x .0625=1. So you will put 1 ounce of herbicide in your 4 gallon back pack. Suppose you have a 25 gallon tank that applies 64 GPA: just divide 25 by 64. 25/64=.39. Multiply .39 by the rate on label of 16oz/Acre. So you would add 6.25 oz.

CHEMICAL MIXING GUIDE

Combining herbicides into a spray mixture must follow a standard order so that chemicals will mix into solution and give the best results for controlling your weeds. Many labels will give you directions when mixing.

STEP 1: Fill spray tank 1/3 full of amount of water needed.

STEP 2: Check the label for any incompatibility of combining herbicides.

STEP 3: Use the WALES acronym. It begins with addition of herbicides that start with W or WP (dry formulated wettable powders) and WDG (water dispersible granules) placed in the spray tank. Most types of these products suggest pre-soaking the herbicide in small amounts of water to enable the products to properly dissolve. Chemicals like metsulfuron & chlorsulfuron are WDG's.

STEP 4: Next comes the A in WALES: Agitate. If your tank does not have onboard agitation, you can agitate the tank by adding more water.

STEP 5: Then the L: Liquid herbicides are added.

STEP 6: E in WALES is for emulsifiable concentrates. This will be chemicals like aminopyralid, 2,4-D, glyphosate, dicamba & triclopyr.

STEP 7: The final letter in WALES, S is for your surfactants. Surfactants are the last part of your tank mix. Finally, fill tank to appropriate level of water for your application.

Contact your county Noxious Weed Superintendent if you need any help.

Remember when mixing dry formulations of chemicals that you use the measuring device that comes with the chemical. These are pre-calibrated by weight & density for that specific chemical

How To Read A Pesticide Label

Labels are legal documents providing directions on how to mix, apply, store, and dispose of a pesticide product. The label is the law. Using a pesticide inconsistent with its labeling is a violation of federal law.

What information does the front label contain?

⇒ Brand Name: Different names are used by different manufactures even though their products contain the same active ingredient. The brand name (or trade name) is a unique name used to advertise the product.

⇒ Product Type: Listed under the brand name is what the product will control. Such as; herbicide for the control of woody brush and weeds.

⇒ Active Ingredient: The chemical(s) responsible for controlling the pest. May be listed by common name and/or chemical name with percentage in the product.

⇒ Common Name: a simpler name given by the EPA to a chemical for easier recognition.

⇒ Chemical Name: The complex name identifying the chemical components.

⇒ Inert Ingredients: Not required to be individually listed but their percentage must be.

⇒ Signal Words: Indicate the relative acute toxicity to humans and animals. The statement, KEEP OUT OF REACH OF CHILDREN must also appear. Signal words are CAUTION, WARNING and DANGER.

⇒ Precautionary Statement: Information about possible hazards.

⇒ First Aid or Statement of Practical Treatment: Details what to do if there is an accidental poisoning.

⇒ Directions for Use: What pest the product is registered to control. Where the product can be used. How to apply the product. How much product to use. When the product should be applied. How often to apply the product. How soon the crop can be used or eaten after the application. When people and animals can re-enter a treated area.

⇒ Storage and Disposal: How to best store the chemical and what to do with unused product or an empty container.

READ THE LABEL– The label is the law!

HERBICIDE REFERENCE

The Selkirk CWMA does not recommend any product or manufacturer. All brands and names listed are for reference purposes only

ACTIVE INGREDIENT	BRAND NAME
2,4-D	Weedar® (and generics)
Aminopyralid	Milestone® (and generics)
Aminopyralid + mestsulfuron	Opensight®
Metsulfuron	Escort® (and generics)
Chlorsulfuron	Telar® (and generics)
Dicamba	Banvel® (and generics)
Glyphosate	Roundup® (and generics)
Dicamba + 2,4-D	Weedmaster®/Trimec Classic®
Clopyralid	Transline®/Stinger®
Triclopyr + 2,4-D ester	Crossbow®
Triclopyr	Garlon®/Vastlan® (and others)
Imazapyr	Polaris® (and generics)
Clopyralid + 2,4-D	Curtail® (and generics)
Aminocyclopyrachlor	Method®
Aminopyralid + florpyrauxifen	HighNoon®

If you need help with chemicals contact your County Noxious Weeds office

DIRECTORY OF COOPERATING AGENCIES

County Noxious Weed Control Offices:

Bonner County Noxious Weeds Department……..(208)255-5681 ext. 6
521 S. Division Ave, Ste 216, Sandpoint ID 83864
Bonnercountyid.gov

Boundary County Noxious Weeds Department……(208)267-5341
PO Box 267, Bonners Ferry ID 83805
Boundarycountyid.org

Other Members & Cooperators:

Idaho Panhandle National Forest—North Zone……(208)263-5111
1602 Ontario St, Sandpoint ID 83864

Idaho Department of Lands—Pend Oreille Area……(208)263-5104
2550 Highway 2 West, Sandpoint, ID 83864

Idaho Fish and Game—Panhandle Region……(208)769-1414
2885 W Kathleen Ave, Coeur d'Alene, ID 83815

Idaho Transportation Department……(208)772-1200
600 W Prairie Ave, Coeur d'Alene, ID 83815

Idaho Parks & Recreation—North Region……(208)769-1511
2885 W Kathleen Ave #1, Coeur d'Alene, ID 83815

Kootenai Tribe of Idaho…… ……(208)267-3519
P.O. Box 1269, Bonners Ferry, ID 83805

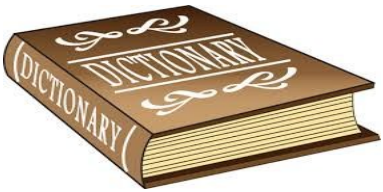
Stimson Lumber Company……(208)765-1414
7600 N. Mineral Dr #106, Coeur d'Alene, ID 83815

City of Sandpoint……(208)263-3158
1123 W. Lake St, Sandpoint, ID 83864

Kootenai National Wildlife Refuge……(208)267-3888
287 West Side Rd, Bonners Ferry, ID 83805

Idaho State Department of Agriculture—Northern Field Office..(208)457-2732
600 N. Thornton St, Post Falls, ID 83854

GLOSSARY OF TERMS



Active ingredient-in an herbicide, the chemical that effectively controls or kills the 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 extremely wet soils.

Axil–the angle formed between the leaf and stem.

Basal-at the base of a plant.

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

Bract-leaf-like structure at the base of leaves or flowers, or an inflorescence.

Clasping leaves-leaves that appear to wrap around the stem.

Contact herbicide-chemical that affects just the part of the weed that was 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 no longer is in the area during the growing season.

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

GPA-gallons per acre.

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

Inflorescence-a group or cluster of flowers arranged on a stem; a flower cluster.

Lanceolate-lanced shaped; much longer than wide.

Lobed-leaf cut into shallow segments.

Margin-the edge, as in the edge of a leaf blade.

Nodding-a flower that is not pointed upward, bent sideways to the stem.

Non-selective herbicide-chemical that will control or kill any green, living plant.

Noxious weed– a weed placed on the noxious weed list by legislation.

Opposite-leaves situated directly across the stem from each other.

Ovate-egg-shaped in outline.

Perennial-a plant that lives more than two years.

Petiole-a leaf stalk.

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

Prostrate-laying flat on the ground.

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 daisy; each ray flower resembles a single petal.

Rhizome-an underground, creeping stem that resembles a root.

Rosette-compact flat cluster of early leaves of a plant, before flower formation.

RTU-ready to use.

Selective herbicide-chemical control that will only affect certain plants.

Spines/prickles-rigid, sharp pointed structures found on various parts of plants.

Spreader-sticker-see 'Surfactant'.

Stamens-flower structure in which pollen forms.

Stolon-a creeping, above ground stem.

Summer annual-an annual that germinates in spring and completes its life cycle that year.

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

Systemic herbicide-chemical that controls or kills the plant by being absorbed through the plant surfaces and moves throughout the roots and leaves.

Taproot-a thick, central root with minimal branching, i.e. dandelions.

Toxic-means the weed can be poisonous or cause chemical injury to human and/or animals.

Whorled-three or more leaves from a single node on a stem.

Winged stem-a flattened out, 'wing like' structure of plant tissue that extends along a plant stem, often from the base of a leaf.

Winter annual-an annual that germinates in the fall and completes its life cycle the following year.

Always clean machinery before moving to new areas as weed seeds and plant fragments can spread weeds.

Don't dump aquarium plants or fish in our waterways.

Always Clean watercraft and trailers of all plant parts before leaving the boat launch.

Before buying or donating plants and seeds be sure you are not **sharing** noxious weeds.

Check **camping/hunting gear** for weed seeds/plant parts before you leave camp site.

Always use Noxious **Weed Free forage** on public grounds and clean animals of weed seeds and plant parts.

Clean recreational vehicles of weed seeds and plant parts before leaving trailhead.

Purchase **noxious weed free** seed and feeds for wild and domesticated animals along with crop and garden seed plantings.