IDAHO STATE FORESTRY CONTEST

NOXIOUS WEEDS

A **noxious weed** is defined by the Idaho State Department of Idaho as any plant that may create a "public hazard" or "serious economic loss" to agriculture and the people of Idaho.

Noxious weeds are almost always plants that have been introduced (either accidentally or purposely) into areas where they were not originally found. Since noxious weeds are not native to these areas, there are few natural controls present, and so they tend to spread rapidly, crowd out native plants, and be very difficult to control.

NOXIOUS WEED CONTROL

Developing a basic weed control strategy begins with:

1. *Identifying the weed*

2. *Determining what makes it a problem. For example:*

   Toxicity to Humans and Livestock is one of the most common problems. Poisonous plants can cause loss of life, serious health problems, and costly animal care services. Toxic weeds in feeds are an animal's nightmare.

   Allelopathy: Some noxious weeds produce chemicals that inhibit growth or even kill adjacent plants. Weeds with this ability are said to be ***allelopathic***.

3. *Determining why it's hard to control. The reasons can include:*

   → **Life Cycle** – It's important to know whether the weed is ***perennial***, ***biennial*** or ***annual***. A perennial weed is likely to be the most difficult and costly to manage. Biennial and annual weeds have a shorter life, making them vulnerable to more control options than perennials.

   → **Ability to Reproduce and Spread** by seeds, rhizomes, roots or other parts. The quantity of seeds produced annually per plant and the life of those seeds in the environment are very important factors. Weeds that produce hundreds or thousands of seeds per plant each year create the need for years of expensive management. Some weeds produce a few seeds that may survive in the environment for 60 years or more, making it nearly impossible to totally eliminate them.

   Some perennial weeds can sprout from cut-up plant parts, so cultivating, mowing or pulling can actually increase their populations and rate of spread. Cutting or burning some weeds stimulates the roots to sprout more seed producing stalks.

CONTROL METHODS

All of the factors listed above must be considered when developing a management plan for weed control. In addition, we must keep in mind that each plant species will express its own particular characteristics in relation to its environment. Much like people, the reactions of individual plants of a single species will vary under various conditions. Thus, depending on climate or other variations in growing conditions, the same weeds often must be managed in different ways in different areas.

A good weed control plan involves using more than one strategy and more than one control method. The control methods selected must be affordable while preserving or helping to create the desired environment. The most common methods for weed control include:

→ **Cultural and organic control methods** such as fertilization, irrigation and planting crops to compete with the weeds

→ **Mechanical control methods** that physically disrupt weed growth, such as tilling, hoeing, pulling, mowing, burning, or mulching

→ **Biological control methods** such as insect or plant pathogens and livestock grazing

→ **Chemical control methods** involving herbicides to disrupt weed growth

→ **Non-biological control methods** such as boiling water, vinegar or lemon juice

CONTEST TIP - For the Forestry Contest, you should be able to:

1) Identify the weeds listed on the chart [see next page] *and their impacts on people, animals and/or the environment*

2) Define the terms ***noxious weed****,* ***allelopathic****,* ***toxic****,* ***perennial****,* ***biennial****, and* ***annual***

3) List the 5 major categories of control methods and give examples of each

4) List the kinds of problems that noxious weeds cause to people, animals, and/or the environment

NOXIOUS WEEDS TO KNOW

The following chart lists 16 of Idaho's noxious weeds (or groups of weeds). More information about these noxious weeds, their effects, and their control can be found in the references listed below. These publications can be obtained from the Idaho Department of Lands (local area offices or the IDL Forestry Assistance office in Coeur d'Alene), the U.S. Forest Service IPNF offices in Coeur d'Alene or Sandpoint, or the Boundary and Bonner County weed supervisors.

IDAHO NOXIOUS WEEDS

WEED NAME	LIFE CYCLE	TOXIC or HAZARDOUS TO	ECONOMIC THREAT	PRIMARY CONTROL PROBLEMS
Canada Thistle	P	n/a	Rapid spread	A, C, D
Dalmation Toadflax	P	L	Resists herbicides	A, B, C, D
Eurasian Watermilfoil	P	H, L	Clogs boat props, drowning hazard	C, E
Giant knotweed / Japanese Knotweed	P	n/a	Rapid spread	C
Houndstongue	B	L	Rapid spread, long-distance dispersal	D
Knapweeds	B & P	H, L	Rapid spread	A, C, D
Leafy Spurge	P	H, L	Resists herbicides	B, C
Orange Hawkweed	P	n/a	Rapid spread	A, C, D
Poison Hemlock	B	H, L	Medical bills and death	B, C
Purple Loosestrife	P	n/a	Plugs waterways	A, B, C, E
Rush Skeleton Weed	P	n/a	Resists herbicides	A, D
Scotch Broom	P	H, L	Long-term seed life	B, C
Tansy ragwort	B	H, L	Long-term seed life	B, D
Yellow Star Thistle	A	L	Rapid spread	A
Yellow Toadflax	P	L	Resists herbicides	B, C

KEY TO IDAHO NOXIOUS WEEDS CHART

Life cycle	P = perennial; B = biennial; A = annual
Toxic or Hazardous to	L = livestock; H = humans; P = other plants
Economic Threat	Why it's expensive to control; "Resists herbicides" means few choices of chemicals & very costly to use
Control Problems	A = mass seed production; B = seed life exceeds 10 years; C = plant parts & cut roots re-grow; D = wind or animals disperse seed; E = control methods limited

References

Prather, T., Robins, S., and Morishita, D. (2008). *Idaho's noxious weeds* (4th ed.). Moscow, ID: University of Idaho Extension.

Selkirk Cooperative Weed Managament Area (2005). *Regional noxious weeds: What they are…How to kill them.* Sandpoint and Bonners Ferry, ID: Spud Press Printing.