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** 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

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

CONTEST TIP - At the Forestry Contest, you will be expected to be able to:

1) **Define the term "noxious weed"**

2) **Identify the 14 weeds listed on the chart (see next page) and their impacts on people, animals and/or the environment**

3) **Know the 5 common types of control methods and give examples of each type**

4) **Know the best control methods for each weed**

NOXIOUS WEEDS TO KNOW

The following chart lists 14 of Idaho's noxious weeds. You can learn more about these noxious weeds, their effects, and their control in the reference listed below. Download it from the Idaho Department of Lands website on the Forestry Contest page, or obtain it at local IDL area offices, 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 superintendents.

IDAHO NOXIOUS WEEDS

WEED NAME	LIFE CYCLE	TOXIC or HAZARDOUS	ECONOMIC THREAT	PRIMARY CONTROL PROBLEMS
Hawkweeds	P	n/a	Rapid spread	A, C, D
Leafy Spurge	P	H, L	Resists herbicides	B, C
Poison Hemlock	B	H, L	Medical bills and death	B, C
Purple Loosestrife	P	n/a	Plugs waterways	A, B, C, E
Scotch Broom	P	H, L	Long-term seed life	B, C
Knapweeds	B & P	H, L	Rapid spread	A, C, D
Yellow Star Thistle	A	L	Rapid spread	A
Canada Thistle	P	n/a	Rapid spread	A, C, D
Dalmation Toadflax	P	L	Resists herbicides	B, C
Yellow Toadflax	P	L	Resists herbicides	B, C
Rush Skeletonweed	P	n/a	Resists herbicides	A, D
Eurasian Watermilfoil	P	H, L	Clogs boat props, drowning hazard	C, E
Scotch Thistle	B	n/a	Rapid spread	A, B, D
Bohemian Knotweed	P	n/a	Rapid spread, plugs waterways	C, E

Life cycle	P = perennial; B = biennial; A = annual
Toxic or Hazard to	L = livestock; H = humans; P = other plants
Economic Threat =	Why it's so costly to control, e.g. "Resists herbicides" means there are few choices of chemicals that will work & these are very costly to use
Control Problems	A = mass seed production; B = seed life exceeds 15 years; C = plant parts & cut roots re-grow; D = wind carries seed, E = control methods limited

References

Goodnow, V., Frymire, K., Dingman, M. R., Hargrave, W., Ely, L. (Eds.) (n.d.) *Idaho Panhandle Noxious Weed Handbook*. Multiple agencies, counties, donors, and programs contributed to publication. Printing by Kootenai County Reprographics Center. (Free copies are available by contacting the Bonner Soil and Water Conservation District office (208-263-5310) or IDL Pend Oreille Area office (208-263-5104) in Sandpoint.)

Prather, T., Robins, S., and Morishita, D., 2004. *Idaho's Noxious Weeds, 4th Edition.* Bulletin 816. University of Idaho Extension, Moscow, Idaho. First edition 1994.