

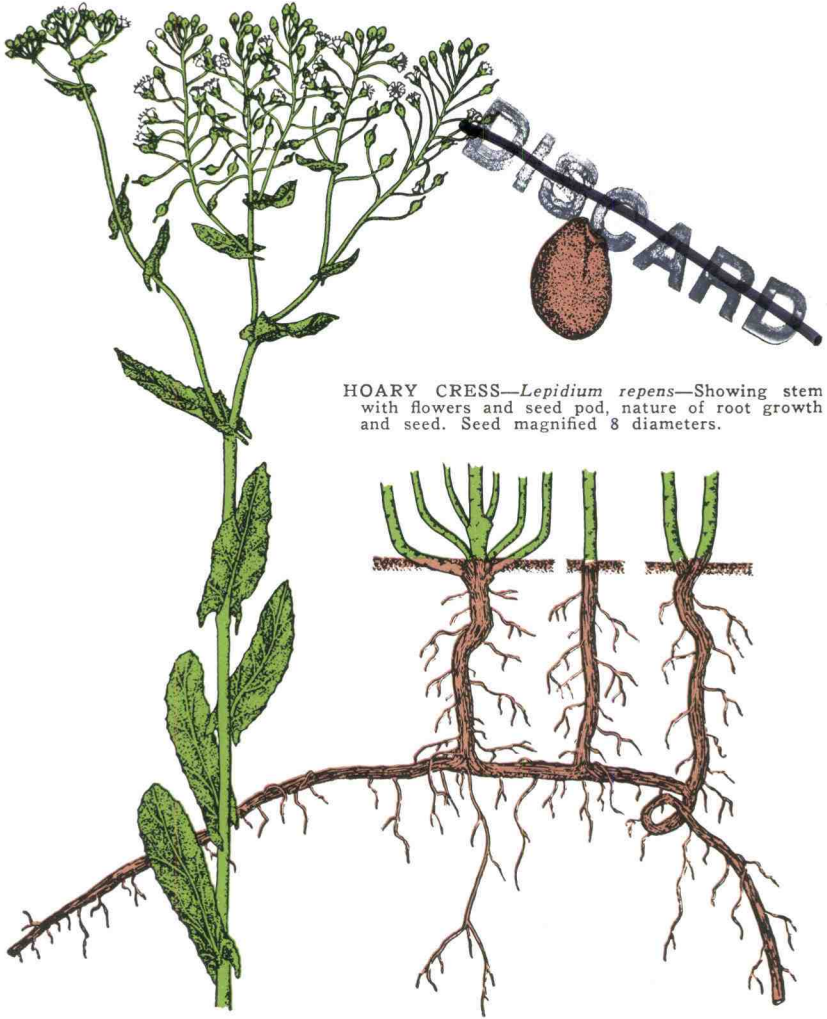
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Hoary Cress

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HOARY CRESS—*Lepidium repens*—Showing stem with flowers and seed pod, nature of root growth and seed. Seed magnified 8 diameters.

PNW 116

March 1974

A Pacific Northwest Extension Publication
Oregon Washington Idaho

Hoary Cress

Lepidium draba, *Lepidium repens*, and *Hymenophysa pubescens*

Other common names: White top and perennial peppergrass

In the Pacific Northwest there are three distinct plants called white top. Though similar in general appearance, they differ slightly in the shape of the seed pod. One (*Lepidium draba*) has a heart-shaped, broad, flat pod containing two seeds; another (*Lepidium repens*) has a lens-shaped pod that is flat and round and has two or four seeds; the third (*Hymenophysa pubescens*) is lower growing, and is distinguished by its small, purplish, globe-shaped seed pod. Its pod somewhat resembles that of *Lepidium repens*, except that it is smaller and "blown up." It also has two or four seeds to the pod. The habits of these three white top plants are very similar, so the information following will apply to all.

The plant is a perennial, has grayish white foliage, and grows erect from 10 to 18 inches high. The leaves are oval or oblong, generally between 1/2 inch and 3 inches long, with toothed or almost unbroken edges. The weed produces numerous white flowers which are about 1/4 inch broad, borne in large groups at the tops of the stems. A field in bloom has a solid, snowy-white appearance; hence, the name "white top." Young plants have a rosette appearance before blooming and closely resemble fan weed.

Seed of hoary cress is reddish-brown and about the same size as alfalfa seed. It is difficult to clean from alfalfa or clover seed and is often carried in these seeds as an impurity.

Some livestock will eat young plants, but the foliage becomes coarse, bitter, and woody as the plant matures. It has a disagreeable mustard taste.

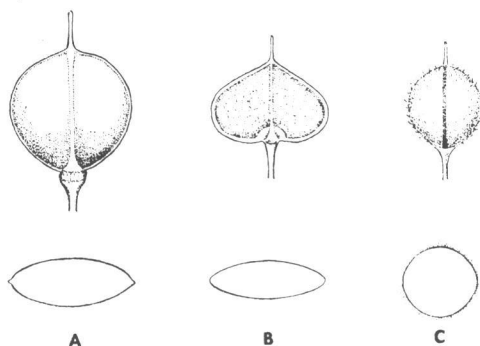
Hoary cress roots have been found as deep as 30 feet under ground. They send out numerous lateral roots which

send up shoots at frequent intervals. Each of these shoots can develop into a plant, and a small piece of root, if broken off, may start a new patch. Unlike field bindweed, hoary cress increases the size of its patches in alfalfa but increases only slowly in sod-forming grasses. In time, it will choke out a field of alfalfa.

Hoary cress has been noted in several western counties and in all eastern counties of Washington and Oregon and in Idaho. It seems to prefer slightly alkaline soils but apparently will thrive in almost any kind of soil. It finds its real home on irrigated lands, but will grow on land much too dry for alfalfa. Most of the patches in the state were originally started by sowing alfalfa or clover seed that contained hoary cress seed, or by using hay with mature hoary cress. It is one of the few perennial weeds that ripen before the first cutting of alfalfa for hay, so first-cutting alfalfa as well as second is likely to carry the seed.

Control by Cropping and Cultivation

Hoary cress normally starts growth in the fall and makes a rapid growth early the following spring, maturing its seed in the early summer. Because of this early spring growth and early seed maturity, it is possible to accomplish good control by early spring plowing and planting the field to a spring crop. Cereals are more suited for this type of cropping than are legumes or grasses. By repeating the spring plowing and seeding to spring crops, hoary cress can be ultimately eradicated. Crops best adapted for spring planting are wheat, oats, barley, sudangrass, or corn. Biennial or perennial legumes should not be planted



Enlarged views of seed pods from side and top of three different white tops. A. *Lepidium repens*. B. *Lepidium draba*. C. *Hymenophyssa pubescens*. All enlarged 3 diameters.

because of the impossibility of reploting the field each spring.

2,4-D and cultivation. Properly timed 2,4-D spraying can shorten the control program when followed with timely cultivation. Best results have been obtained by using 2 to 3 pounds of acid equivalent per acre. Fields should not be plowed for at least 8 to 10 days after spraying. Over 90 percent control of hoary cress has been obtained by spraying and spring cropping over a 2-year period.

2,4-D sprays and cultivation can be used in a winter wheat production program. Best results are obtained by spraying the infested area in the spring, plowing the land 2 weeks later, and

summer following the area the remainder of the summer. The sprayed and cultivated area is fall seeded to wheat which is selectively sprayed in the spring with 1 pound acid equivalent of 2,4-D.

Hoary cress appearing in fields following the production of winter or spring wheat can be controlled with after-harvest cultivation and supplemented with 2,4-D spraying. It is important to continue the cultivation and 2,4-D spraying and cereal production until all hoary cress is eradicated in the field.

Control with 2,4-D

Hoary cress is more easily controlled with 2,4-D than most other common perennial weeds such as Russian knapweed, field bindweed, Canada thistle, or leafy spurge. Cropping to cereals, as previously mentioned, is one of the more practical control methods. Hoary cress can be controlled in non-crop areas with 2,4-D sprays without cultivation. It should be sprayed in the early bud stage with 2 or 3 pounds acid equivalent of 2,4-D per acre. Best control has been obtained by applying 25-40 gallons of water per acre. Respraying will be needed to control missed plants and new seedlings from previously ungerminated seeds.



White top along a highway. This has probably been spread by grading operations.

Control with amitrol

Amitrole, sold as Amino Triazole, Weedazol, Cytrol, or Amitrol T, is effective for the control of hoary cress, but is not registered for use on crop or grazing lands. Amitrole should be used at the rate of 4 pounds of active chemical (8 pounds of the powdered material, 2 gallons of the liquid form) per acre.

Hoary cress should be sprayed from the bud to bloom stage. One spray application usually gives about 90 percent control of hoary cress. It is practical for spot spraying small infestations. Amitrole should be applied in a spray solution containing a commercial wetting agent. Follow instructions on the wetting agent container regarding rates to use.



Published and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914, by the Oregon State University Extension Service, Joseph R. Cox, director; the Washington State University Extension Service, Arthur W. Peterson, acting director; the University of Idaho Agricultural Service, James L. Graves, director; and the United States Department of Agriculture, cooperating. OSU—4M; WSU—10M; I—2M.