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Common Weeds in Oregon Container Crops

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Common Weeds in Oregon Container Crops

Weeds compete with commercial crops for nutrients, water, and light. Competition from weeds is particularly important in container crops due to the crop's limited root volume. Weeds also harbor insects, disease organisms, and vertebrate pests. Marketable nursery crops must be free of weed, insect, and pathogen pests.

Effective weed management involves a combination of sanitary and cultural practices, along with proper use of preemergence herbicides. For a thorough description of weed control practices, see OSU Extension publication EM 8823, *Weed Control in Container Crops*.

Sanitation

Weed control in container production must be preventive. A common characteristic of weeds in containers is their ability to produce seed prolifically. Practices that minimize the number of weed seeds in the production system will improve weed control. The most effective weed management is provided by using sanitation to reduce weed seed numbers in the production system, while maintaining an effective chemical herbicide barrier to prevent growth of the few seeds that elude sanitation efforts.

Herbicide use

For instructions on safe herbicide use, consult your local OSU Extension agent or refer to the *Oregon Pesticide Safety Education Manual: A Guide to the Safe Use and Handling of Pesticides* (EM 8850).

Weed control in container production is achieved primarily through use of preemergence herbicides. Preemergence herbicides are applied before weed emergence to prevent weed growth, in contrast to postemergence herbicides, which kill weeds after they have emerged and are growing. Herbicide selection should be based primarily on three criteria: the crop to which the herbicide will be applied, target weed species, and herbicide solubility.

How to use this guide

The images in this guide will help you identify weeds of container crops. Most weeds in containers can be identified by physical characteristics such as leaf shape, flower structure, and plant habit.

This guide presents cultural and sanitary control options for each species. It describes life cycle, reproduction, and morphology in the context of how these factors affect control. By understanding these factors and by manipulating the container/greenhouse environment, you can reduce weed vigor and the degree of infestation. Where appropriate, supplement these cultural and sanitation practices with labeled chemical herbicides.

Cardamine hirsuta, hairy bittercress

Brassicaceae, mustard family

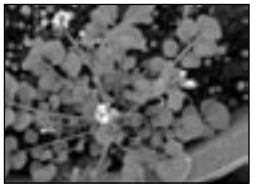
A—Seedlings

B—Rosette

C—Mature plant

D—Flowers

E—Seed pods



Hairy bittercress is a winter annual that reproduces by seeds. It typically germinates throughout fall and winter. In cool environments created by overhead irrigation, however, bittercress can germinate year-round.

A—Seedlings. Bittercress cotyledons are small and round, while first true leaves are simple and slightly lobed. Fertilizer prills provide a size scale.

B—Rosette. Bittercress initially forms a rosette with deeply lobed foliage.

C—Mature plant. Mature habit is a small clump 6 to 8 inches tall and wide. During warm summer months, bittercress generally is smaller than in cool winter months.

D—Flowers. Flowers occur in clusters called racemes. Individual flowers are white with four petals. There is confusion in distinguishing between *C. hirsuta* and *C. oligosperma*. *C. hirsuta* flowers have a variable number of stamen. Most flowers have four stamen (80 percent), some have five (18 percent), and a few have six (2 percent). *C. oligosperma* always has six stamen.

E—Seed pods. Seed pods are called siliques. Siliques are dry, two-sided, dehiscent fruit. Bittercress siliques are cylindrical and up to 1 inch long and 1/16 inch wide. Bittercress can project seeds several feet from the mother plant.

Control

One bittercress plant can produce up to 5,000 seeds in just 5 weeks (Bachman and Whitwell, 1995). Ability to project seeds several feet from the mother plant makes sanitation paramount. Eliminate bittercress and other weeds from gravel and surrounding areas.

Bittercress is most problematic from fall through early spring.

Preemergence herbicides provide effective control; however, they must be applied prior to seed germination. Preemergence herbicides applied prior to overwintering will prevent severe infestations. Apply herbicides at least 3 weeks before covering plants with plastic or placing them in overwintering structures. (See labels for specific details.)

For more information

Oregon Pesticide Safety Education Manual: A Guide to the Safe Use and Handling of Pesticides (EM 8850)

*Weed Control in Container Crops (*EM 8823)

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