



Blue Mustard

Chorispora tenella (Pall.) DC

M.D. Butler

Blue mustard (*Chorispora tenella*) is a native of Russia or southwest Asia. It first was documented in this country in Lewiston, Idaho in 1929, and has spread throughout the western plains states, the western portion of the United States, and southern Canada. Blue mustard likely was introduced into the United States by accident in imported seed, as is true with many members of the mustard family. In the Pacific Northwest, blue mustard is a common weed east of the Cascades, but is only rarely seen west of the Cascades. It invades cultivated land from open arid waste areas, reducing crop yield and quality.

Blue mustard has a disagreeable odor that may cause off-flavor milk when dairy animals feed on it. Blue mustard most often germinates in late fall or early winter, but it also germinates in the spring when conditions are right. Spring germination most often occurs following soil disturbance. Alternate names for blue mustard include purple mustard, bead-podded mustard, and tenella mustard.



Figure 1.—Blue mustard.

Identification and Biology

Blue mustard is a leafy, branching annual $\frac{1}{2}$ to $1\frac{1}{2}$ feet tall that has a somewhat spreading habit and shallow taproot. Minute, gland-tipped hairs cover both stems and leaves, making them sticky to the touch. The density of the hair covering varies.

On seedlings, the first pair of leaves are lance-shaped; additional pairs of leaves are broader, with a warty appearance. Occasional hairs are present on the leaf margins, which can vary from entire to deeply lobed.

The alternate leaves on mature plants are narrowed at the base, with wavy or coarsely

toothed margins. Leaf size varies from $\frac{1}{2}$ to 3 inches long, about one-quarter as wide as they are long, with petiole length decreasing from the base to the top of the plant.

Blue mustard has four petals that spread in the form of a Maltese cross, distinctive of the mustard family. The $\frac{1}{2}$ -inch wide pale purple flowers, supported by short, stout stems, bloom from April to June. The smooth, $\frac{1}{4}$ - to $\frac{3}{4}$ -inch long seed pods are elongated, with the broadest portion at the base. The fertile section of the pod resembles a string of beads, while the upper sterile portion narrows to a long beak. Seed pods break apart transversely into two-seeded sections rather than splitting lengthwise down the pods as in many common

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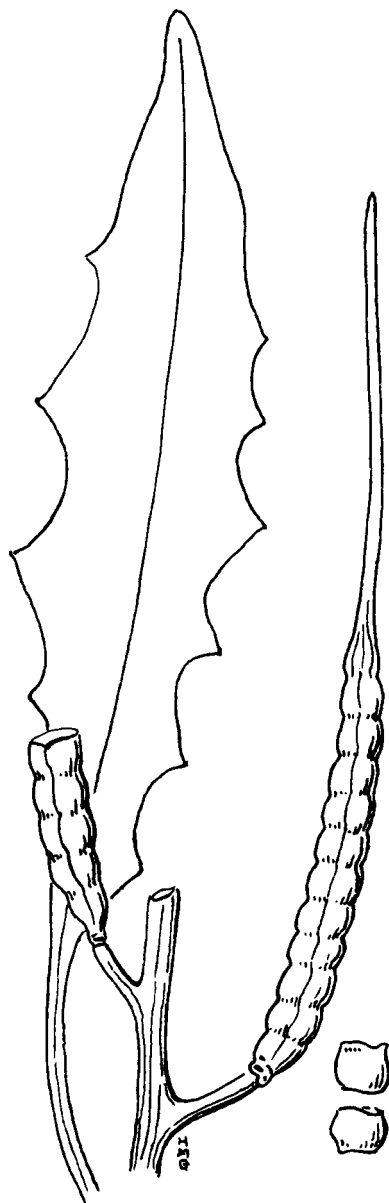
mustards. These sections scatter into new areas, where they establish plants the following season. Seeds remain in the segments of pods which eventually decay, but seeds often germinate while still in the segments. Seeds are nearly round, about $\frac{1}{16}$ inch in diameter, and red to brown.

Blue mustard superficially resembles another mustard, African malcolmia (*Malcolmia africana* (L.) R. Br.), but can be distinguished by the conspicuous beak on the seed pod, the breaking of the seed pod into two-seeded segments, and round rather than star-like hairs on the plant. African malcolmia is found only occasionally in the Pacific Northwest, but new infestations could be mistakenly called blue mustard.

Prevention

Although a single plant may have little impact in non-crop areas or on crop yield, the potential for loss from future infestations that develop from its seed can be disastrous. Preventive weed control measures include the following:

- Learn to identify blue mustard seedlings.
- Plant crop seed that is uninfested with weed seeds.
- Prevent blue mustard plants from producing seed.
- Avoid bringing seeds into uninfested fields on equipment or manure.



Control

Cultural Control

Where possible, and if used properly, crop rotation is one of the most important weed management tools. Blue mustard behaves mostly as a winter annual, so it is helpful to grow a spring-seeded crop to break the cycle of seed production. However, blue mustard is a prolific seed producer, and the seeds remain viable in the soil for many years. Several years in a spring crop are needed to have a meaningful impact.

Chemical Control

Herbicide registrations change frequently; therefore, this publication does not contain specific herbicide use instructions. Registered uses are summarized each year in the *Pacific Northwest Weed Control Handbook*.

In addition, detailed instructions for herbicide use are provided on herbicide container labels and in other literature provided by herbicide manufacturers.

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Published and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914, by the Oregon State University Extension Service, O.E. Smith, director; Washington State University Cooperative Extension, Harry B. Burcalow, interim director; the University of Idaho Cooperative Extension System, LeRoy D. Luft, director; and the U.S. Department of Agriculture cooperating.

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