

COMMON RAGWEED

(Ambrosia artemisiifolia)

SEEDLING DESCRIPTION

The seedling stem (hypocotyl) and seed leaves (cotyledons) of common ragweed are green and often splotted with purple. Seed leaves are about 1/4 inch (6 mm) long, spoon-shaped or nearly round, somewhat thickened, and have no visible veins. Leaf stalks (petioles) are nearly as long as the seed leaves. The distinct ragweed shape is evident in the first pair of

true leaves. These leaves have one or two deep clefts in each margin, forming lobes that are rounded or slightly pointed at the tips. Short, whitish hairs cover the leaves and stem. Hairs are most dense on the lower leaf surfaces.

BIOLOGY

Common ragweed is an annual broad-leaved weed and a member of the com-

posite or daisy family. It has a shallow, fibrous root system and grows 2 to 4 feet (60 to 120 cm) high. Its stems vary from unbranched to bushy. Stems may be hairless, but usually they are densely covered with stiff erect hairs about 1/8 inch (3 mm) long. Mature leaves are 6 to 12 inches (15 to 30 cm) long and 4 to 6 inches (10 to 15 cm) wide and are deeply indented. On the second and subsequent leaf pairs, the veins are visible as depressions on the upper surface and as ridges on the lower surface.

Male and female flowers of common ragweed are in separate flower heads on the same plant (monoecious habit). The female flower heads are green, stemless, and inconspicuous. They are borne singly or in small clusters in the crooks (axils) of the upper leaves. The male heads are more clustered; 10 to 100 flowers are



1. First true leaves are deeply indented.
2. Fernlike mature leaves.
3. Stems are usually covered with velvety hairs.
4. Male and female flowers of mature common ragweed.
5. Common ragweed (right) and giant ragweed (left).

August and continues through September. Although each female flower produces only one seed, a plant that emerges in mid-May can easily have 30,000 to 62,000 seeds. Seeds are dispersed by water (through rain-wash channels or gulleys), birds, burrowing animals, and humans. During summer and fall, wind plays a minor role in dispersal, but in winter it may roll the seeds for long distances over the surface of crusted snow.

Buried seeds can survive in the soil for thirty-nine years or more, remaining viable until conditions are favorable for germination. Soil temperature is the most important factor in germination. Optimum soil temperature fluctuates between 50° and 80° F (10° to 27° C). Optimum soil moisture for seed germination is 14 to 22 percent. Seeds usually begin germinating in May. By the end of the first week in June germination is 90 percent complete.

Common ragweed is extremely competitive, partly because it can accumulate large quantities of trace elements. Corn studies show that common ragweed generally absorbs much more boron, copper, magnesium, zinc, tin, galium, vanadium, bismuth, nickel, chromium, potassium, and calcium than do corn leaves harvested at tassel stage. Ragweed grows well on soils containing enough zinc to be toxic to other plants. When corn and ragweed were grown in soil with a heavy concentration of zinc, ragweed absorbed about seven times more zinc than corn did. A severe ragweed problem causes extreme nutritional deficiencies in crops.

Common ragweed is widespread on arable land and is found in cultivated fields, gardens, vacant lots, and waste places, and along roadsides and fence rows. It can grow in clay, silt, and sand mixtures but prefers heavier, moist soils with a pH between 6.0 and 7.0. Ragweed is a typical after-harvest cover in grain and hay fields. It is also abundant in cereal crops and cultivated row crops. Peak growth occurs from mid-July to mid-August. Seed production begins in late August and continues through September.

Common ragweed are fernlike. Giant ragweed has large, three-lobed (occasionally five-lobed) leaves that are opposite each other on the stem. Leaves of mature common ragweed are alternately arranged.

Western ragweed (*Ambrosia psiloata-chya*) prefers dry prairies and plains. It is common throughout the western, mid-western, and eastern United States except for the Pacific northwest corner, Maine and the Great Lakes region. This weed grows 1 to 7 feet (0.3 to 2.5 m) tall and is characterized by its bushy, dense growth habit and hairy stems. Western ragweed can reproduce by creeping rootstocks as well as seeds, whereas common ragweed is strictly a shallow-rooted annual.

Skeletonleaf bursage (*Ambrosia tomentosa*) is a perennial that reproduces by deep creeping rhizomes and seeds. It grows 1 to 2 feet (30 to 60 cm) tall. The burlike fruit surrounding the female flower bears one to three seeds that are covered with sharp spines when mature. Common ragweed has no burlike structure or creeping rhizomes.

NATURAL HISTORY

A native of North America, common ragweed is found throughout the United States except for the northernmost Great Lakes region and northern Maine. It has since spread and is now common throughout Europe, Asia, and South America.

The genus name *Ambrosia* means "food of the gods." While it may be fit for the gods, it causes nausea and sore mouths in livestock. Fortunately, the bitter taste of ragweed makes livestock poisoning infrequent.

Ragweed produces huge amounts of pollen in the fall, afflicting millions of people who have allergies. Destroying the plants before they flower lessens the severity of allergic reactions.

Common ragweed is also known as Roman wormweed, annual ragweed, wild tansy, and hogweed.

CONTROL

Ragweed can tolerate much abuse, including mowing, trampling, and grazing.

Control of common ragweed by mowing or plowing the soil decreases but does not eradicate the ragweed population. However, proper cultivation and/or chemical application can kill most of the ragweed seedlings in row crops.

Most preemergence herbicides are effective in controlling common ragweed in corn and soybeans. Postemergence applications of Banvel in corn and Basagran in soybeans are recommended for cleaning up escape weeds.

For control in small grains, Bifenox (Modown 4F) is often recommended for preemergence control, and MCPA or 2,4-D for postemergence control. The exact treatment, however, depends on the cropping system.

For specific recommendations, consult your county extension agent or the most recent *Weed Control Manual and Herbicide Guide*, available through Meister Publishing Company, 37841 Euclid Avenue, Willoughby, Ohio 44094. Follow label instructions for all herbicides and observe restrictions on grazing and harvesting procedures.

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Where trade names appear, no discrimination is intended, and no endorsement by the Cooperative Extension Service is implied.

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