

at a glance

- Curlycup gumweed has alternating, bright green leaves.
- It produces bright yellow flowers.
- The plant reaches heights of 1–3 ft.
- Leaves and flower heads have many glands (secretory organs), which secrete a gummy substance, hence the name “gumweed.”
- Native to North America and commonly found on poorly managed lands.
- Control efforts are more successful when several integrated pest management practices are combined.

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Curlycup Gumweed

Introduction

Curlycup gumweed (*Grindelia squarrosa*) Dunal is native to North America except in the southeastern United States. This forb (herbaceous broadleaf plant) is commonly found along roadsides, in mismanaged pastures, arid areas, idle fields, rangeland, and waste areas (Figure 1). It is adapted to disturbed sites receiving 9–20 inches of annual precipitation and grows in rocky, gravelly ground and in silt clay loam to sandy loam soils. It is also able to survive in moderately saline soils. A very drought-tolerant plant, curlycup gumweed can increase in population after dry, hot periods because there is less competition from less drought-tolerant plants.

Some chemical compounds (alkaloids, tannins, resins, and glucosides) found in curlycup gumweed make it undesirable as a forage and unpalatable to livestock. This plant can also accumulate toxic levels of selenium when growing in high-selenium soils. While most Idaho soils are deficient in selenium, high-selenium soils are commonly found in or near existing and abandoned phosphate mines located in southern Idaho.

Historically, Native Americans, homeopathic practitioners, and others have used curlycup gumweed to treat asthma, bronchitis, colic, and skin rashes. Gumweed extracts are also used in modern medicine to treat respiratory ailments, including asthma and whooping cough. Green and yellow dyes can be obtained from flowers and seedpods. The plant is also attractive to native bee species.



Figure 1. Curlycup gumweed growing along a county road in eastern Idaho.



Figure 2. The rosette leaves are long and narrow, with a light midrib.

Description

Curlycup gumweed is a biennial (completes its life cycle from growth to seed production in two growing seasons) or a short-lived, herbaceous perennial (regrows from the same roots year after year). It begins growth with oblong cotyledons (seed leaves), then develops into a low-growing rosette (circular arrangement of leaves) arising from a stout taproot (Figure 2). In the second growing season, mature plants reach heights of 1–3 ft.

The plant produces numerous branching, semiwoody stems with alternating, bright green, stem-clasping leaves. The leaves have a gland at the apex and the surfaces are dotted with glands that secrete a gummy, resin substance, which gives the leaves a dewy appearance and sticky feel. Leaves also have serrated edges and are 1–4 inches long.

The one-inch flowers are bright yellow and disk-shaped. There is one flower at the end of each stem branch. The curved bracts (Figure 3) also secrete a sticky, resin substance, hence the name “gumweed.” Flowers produce small (2.5–3 mm long), oblong, and cream-colored seeds. Flowering occurs in mid- to late summer and lasts through the fall.



Figure 3. Curlycup gumweed’s bracts (scaly structures around the flower’s base) curve back on themselves (reticulated) and, like the leaves, secrete a sticky resin. Courtesy of Steve Dewey, Utah State University, Bugwood.org.



Figure 4. Curlycup gumweed skeletons remaining upright in the snow.

Dead and dried curlycup gumweed plants can be found still upright the following spring (Figure 4). This plant also has the potential to become weedy or invasive with overgrazing or other poor land management practices.

Integrated Pest Management (IPM) Options

Curlycup gumweed is generally not aggressive in good growing conditions. As a result, it does not usually warrant control efforts. However, if the plant becomes weedy and is spreading, consider the following control options:

Prevention

Do not transport weed seeds on clothing or equipment; feed weed-free hay; keep ditch banks and roadsides free of seed-producing plants; do not allow young plants to establish.

Mechanical

Dig, hoe, pull, or till young plants, removing as much root as possible; tilling may need to be repeated; plants that are mowed or broken off will regrow. Mature plants are difficult to pull, so it is best to implement this control when plants are young.

Cultural

Establish healthy, competitive plant communities that are desirable and well adapted to your soil and climate; fertilize pastures to stimulate desirable forage growth to outcompete curlycup gumweed; eliminate overgrazing in infested areas.

Biological

None known.

Chemical

Broadleaf herbicides such as 2,4-D (included in many homeowner broadleaf herbicide mixes) or dicamba (Banvel, Rifle, Clarity) are labeled for curlycup gumweed control in landscapes, rangelands, pastures, and roadsides. Picloram (Tordon, Grazon, Pathway), a restricted-use herbicide, and metsulfuron (Escort, Ally) may be used in pasture, rangeland, and noncrop sites. These herbicides provide excellent control when applied to rosettes in the fall or early in the growing season (May–June). Late-season (July and after) treatments on flowering plants do not yield satisfactory control results. In addition, some active ingredients such as 2,4-D and dicamba are volatile during hot temperatures (80°F and higher), so summer application increases the risk of herbicides drifting to nontarget plants. Read and follow the label for proper use and safety instructions and required personal protective equipment.

Best results are obtained when more than one IPM practice is implemented.

Further Reading

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Whitson, T. D., L. C. Burrill, S. A. Dewey, D. W. Cudney, B. E. Nelson, R. D. Less, and R. Parker. 2012. *Weeds of the West*. 11th ed. Laramie, WY: Western Society of Weed Science. <http://www.wyoextension.org/agpubs/pubs/wsws-1.pdf>.

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