



BUL 1138

Western Salsify Management

Danielle Gunn

Area Extension Educator (Livestock)
University of Idaho Extension,
Aberdeen, Idaho

Ron Patterson

Extension Educator,
University of Idaho Extension,
Bonneville County

Contents

- 1 Introduction
- 2 Characteristics
- 2 Management Options
- 3 Acknowledgments
- 4 Further Reading

Key Points

- Consists of long, linear, narrow leaves similar to grass.
- Produces yellow, ray-type flowers.
- Reaches heights of 1–3 feet.
- Leaves and stems contain a white, milky juice.
- Native to Eurasia and Africa.
- Found in rangelands, pastures, lawns, idle fields, roadsides, and disturbed areas.
- Typically flourishes in full sunlight and well-drained soil.

Introduction

WESTERN SALSIFY (*Tragopogon dubius* Scop.) is native to Eurasia and Africa and is now found throughout most of North America. The plant (Figure 1) is also commonly called “goatsbeard.” It was introduced by settlers in the early 1900s as a food source and ornamental plant.

The leaves and roots of some salsify species are considered edible and were used as a food source during the Middle Ages. Hence, western salsify is sometimes called the “vegetable oyster” due to the oyster-like flavor of its



Figure 1. Western salsify in full bloom.

cooked root. Roots can be harvested in the spring but develop a better flavor when harvested after a fall freeze. The leaves can be used in soups and salads.

The word *salsify* means “a plant that follows the sun.” The term suits this plant well. Open flowers of salsify point toward the sun and follow it across the sky during the day. Flowers generally close by early afternoon and during cloudy weather.

The plant is typically not a serious problem, but can be weedy in rangelands, pastures, Conservation Reserve Program lands, idle fields, lawns, roadsides, and any other disturbed areas. Large infestations are uncommon, since the plant is not aggressive and generally does not outcompete native vegetation. However, under favorable conditions, western salsify forms dense stands and displaces desirable forage species.

Salsify rosettes (circular leaf arrangement) (Figure 2), have an erect growth pattern, which helps the plant colonize within existing plant communities, leading to decreased forage production. Some wildlife species, including upland birds, deer, squirrels, rabbits, pocket gophers, and others, use western salsify as a food source.

Characteristics

Western salsify grows as a biennial or an annual plant. Biennials need two growing seasons to complete their life cycle. Western salsify typically produces a grass-like rosette in the first year and flowers in the second. Early germinating plants may complete their life cycle in a single year. Regardless of the life cycle, western salsify is **monocarpic** (it dies after producing seed). Peak germination occurs in the fall and spring.

Western salsify grows upright and reaches heights of 1–3 feet. It produces long, linear, narrow, green to bluish-green leaves that clasp the stem at the base and resemble grass, although the leaves are smoother and have a rubber-like texture. Leaves taper at the tips and grow 2–12 inches long and up to ¼-inch wide. Leaves and stems contain a white, milky juice.

The plant arises from a long, fleshy taproot. Single yellow, ray-like flowers develop from the ends of hollow, stem-like structures called **peduncles** that



Figure 2. Western salsify rosette.



Figure 3. Western salsify seed head.

reach 12–40 inches in length. There may be 1–14 flowering stems per plant. Flowering occurs from mid-June through early September. Long, green **bracts** (leaf-like structures), extend beyond the flower. Flower heads mature into large (3–4 inches in diameter), fluffy, spherical seed heads (Figure 3) that resemble oversized dandelion seedballs. Each flower head produces 20–120 brown seeds. The heavier outer seeds disperse locally, while lighter central seeds may travel up to 800 feet in the wind. Seeds remain viable in soil for 1–2 years.

Management Options

Successful weed management includes routine monitoring during the growing season and accurate identification. Base management decisions on the species that are present, the infestation level, and available resources. A combination of prevention, mechanical, cultural, biological (if available), and chemical methods generally yields the best results.

Prevention

- Avoid transporting weed seeds on clothing, equipment, or animals
- Use certified weed-free seed
- Use weed free soil, amendments, and other landscaping materials
- Feed weed-free hay to horses and livestock
- Control weeds before seed set
- Prevent seedling establishment and treat plants before they produce seeds
- Apply mulch at least three inches deep to reduce seed germination
- Inspect newly purchased sod and plants for contamination before planting

Mechanical

- Hand pull small infestations from moist soil before seeds mature
- Dig or hoe plants, cutting the taproot 2–3 inches below the crown, to prevent regrowth
- Only use tilling if followed by reseeding with desirable vegetation.
- Mowing is not recommended, because it does not significantly reduce flowering or density and must be repeated frequently
- If pulling plants after seed heads form, use caution to contain the seeds; in addition, bag the plants to prevent dispersal.

Cultural

- Establish healthy, competitive plant communities that are well-adapted to local conditions
- Fertilize lawns and pastures when appropriate to stimulate desirable forage growth that outcompetes western salsify
- Avoid overgrazing
- Reseed disturbed areas to reduce establishment of opportunistic weeds

Chemical

Table 1 provides herbicide options for western salsify management in home landscapes and small acreages and pastures. Prior to any herbicide use, read and

Table 1. Herbicide options for home landscapes and small acreages and pastures.

Home Landscapes	
General-Use Herbicides	Comments
Glyphosate (Roundup, Kill-Zall)	Nonselective herbicide, kills all grass and broadleaf plants it contacts
2,4-D + Dicamba	Selective, generally will not harm grasses
Small Acreages and Pastures	
Metsulfuron methyl + aminopyralid (Chaparral)	Apply to rosettes, provides residual broadleaf control
Chlorsulfuron + metsulfuron methyl (Cimarron Plus and X-tra)	Effective on young plants, follow grazing restrictions
Metsulfuron methyl (Escort)	Mix with a nonionic surfactant for best uptake

follow the label and check for any site restrictions to avoid off-target damage. For home landscapes such as lawns, spot treat western salsify with glyphosate (Roundup) or use a 2,4-D–based product combined with dicamba. These herbicides are most effective when applied to rosettes in the fall or early in the spring (May–June). Active ingredients, like 2,4-D and dicamba, may volatilize at temperatures 80°F and higher, increasing drift risk. Glyphosate is a nonselective herbicide and kills any plants it contacts.

For pastures and rangeland, spot treat with herbicides such as metsulfuron methyl plus aminopyralid (Chaparral); chlorsulfuron plus metsulfuron methyl (commonly found as Cimarron Plus or X-tra); or metsulfuron methyl (Escort). These products work best when applied during the rosette stage. Read and follow all label instructions, safety requirements, and site restrictions. Best results are achieved when herbicides are combined with other management practices. Avoid spraying near water sources unless the product is explicitly labeled for aquatic safety.

Acknowledgments

Funding for this publication was provided, in part, by United States Department of Agriculture–National Institute of Food and Agriculture Federally Recognized Tribes Extension Program.

Further Reading

- Mangold, J., and A. Lansverk. 2017. "Western Salsify." Montana State University Extension MontGuide (MT201113AG). https://www.montana.edu/extension/invasiveplants/documents/publications/extension_publications/Western%20Salsify_revised%202017.pdf.
- Peachy, E. ed. 2019. *Pacific Northwest Weed Management Handbook*. Corvallis, OR: Oregon State University. <https://pnwhandbooks.org/weed>.
- University of Arizona Cooperative Extension. n.d. "A Northern Arizona Homeowner's Guide to Identifying and Managing Salsify." <https://azinvasiveplants.arizona.edu/sites/azinvasiveplants.arizona.edu/files/2024-01/Salsify.pdf>.
- Utah State University Plant Health Extension. n.d. "Western Salsify *Tragopogon dubius*." https://extension.usu.edu/pests/ipm/ornamental-pest-guide/weeds/w_western-salsify.
- Whitson, T. D., L. C. Burrill, S. A. Dewey, D. W. Cudney, B. E. Nelson, R. D. Lee, and R. Parker. 2012. *Weeds of the West*. 11th ed. Las Cruces, NM: Western Society of Weed Science. <http://www.wyoextension.org/agpubs/pubs/wswws-1.pdf>.

ALWAYS read and follow the instructions printed on the pesticide label. The pesticide recommendations in this UI publication do not substitute for instructions on the label. Pesticide laws and labels change frequently and may have changed since this publication was written. Some pesticides may have been withdrawn or had certain uses prohibited. Use pesticides with care. Do not use a pesticide unless the specific plant, animal, or other application site is specifically listed on the label. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

Trade Names—To simplify information, trade names have been used. No endorsement of named products is intended nor is criticism implied of similar products not mentioned.

Groundwater—To protect groundwater, when there is a choice of pesticides, the applicator should use the product least likely to leach.

Issued in furtherance of cooperative extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Barbara Petty, Director of University of Idaho Extension, University of Idaho, Moscow, Idaho 83844. It is U of I policy to prohibit and eliminate discrimination on the basis of race, color, national origin, religion, sex, sexual orientation and gender identity/expression, age, disability, or status as a Vietnam-era veteran. This policy applies to all programs, services, and facilities, and includes, but is not limited to, applications, admissions, access to programs and services, and employment.

U of I is committed to providing reasonable accommodations to qualified individuals with disabilities upon request. To request this document in an alternate format, please contact CALS Extension Publishing at 208-885-7982 or calspubs@uidaho.edu.

