

RUSSIAN THISTLE

Salsola kali L.

Family: *Chenopodiaceae* (Goosefoot).

Other Scientific Names: None.

Other Common Names: Tumbleweed.

Legal Status: Regional Noxious: Peace River.



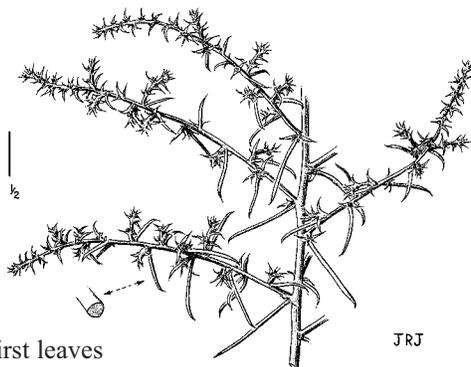
Identification

Growth form: Annual forb.

Flower: Inconspicuous flowers are borne in axils of the upper leaves. Each flower is accompanied by a pair of spiny floral bracts (Whitson et al. 1996).

Seeds/Fruit: Small, one-seeded fruits with winged tips. Seeds are round, black, smooth, and shiny.

Leaves: Leaves are alternate; the first leaves are long, string-like, and soft.



Later leaves are short, scale-like, and tipped with a stiff spine (Whitson et al. 1996).

Stems: Mature plants are 0.1–1.0 m tall and are rounded, bushy, and highly branched. Stems are red or purple striped.

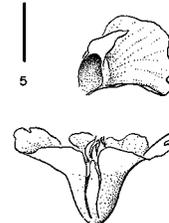
Roots: The root system consists of a taproot that can grow 1 m or more in depth with extensive lateral roots.

Seedling: Seedling plants have long, fleshy leaves.

Similar Species

Exotics: Small kochia (*Kochia scoparia*) plants can sometimes look similar.

Natives: None known.



Impacts

Agricultural: Well adapted to cultivated dryland agriculture but also found on disturbed rangeland and disturbed habitats.

Ecological: Russian thistle colonizes barren desert areas that cannot support other flora and invades many different disturbed plant communities. Since its introduction it has become one of the most common and troublesome weeds in the drier regions of the US

(Whitson et al. 1996). It occurs in many communities and is most common along disturbed grassland and desert communities. In disturbed big sagebrush communities, it dominated for the first 2 years. Plants then became overcrowded and stunted and were replaced by mustards (FEIS 1996).

Human: No information available.

Habitat and Ecology

General requirements: In BC, Russian thistle grows at low- to mid-elevations along roadsides, railroad tracks, fields, and disturbed or unoccupied sites. It grows on well-drained, uncompacted soil with a sunny exposure. It cannot tolerate saturated soil for extended periods.

Distribution: Frequent in southern areas of the province (Douglas et al. 1998), Russian thistle is found throughout central and western North America.

Historical: Introduced from Eurasia.

Life cycle: Russian thistle is capable of germinating over a wide range of seedbed temperatures (FEIS 1996).

Plants usually flower from July through October, depending on geographic location. Seeds mature during August through November. Seedlings are poor competitors and do not establish in communities with high plant density (FEIS 1996).

Mode of reproduction: By seed.

Seed production: One plant can produce up to about 250,000 seeds (Cranston et al. 1996).

Seed bank: Seeds remain viable less than a year.

Dispersal: After seeds mature in the autumn the plant stem separates from the root, and the plant tumbles in the wind.

Hybridization: No information available.

Management

Biocontrol: None available in BC.

Mechanical: Mowing or pulling young plants can be used to manage Russian thistle. Repeated applications over several years may be required for successful management.

Fire: Prescribed burning is not recommended for managing the plant because it colonizes disturbed habitats such as burned areas (FEIS 1996).

Herbicides: Dicamba and glyphosate have been successfully used to manage Russian thistle (Calweed 1997). Numerous herbicides are registered for control in crop situations. Consult the most recent edition of BC Ministry of Agriculture, Food and Fisheries Crop Production Guides for specific recommendations.

Before applying herbicides, read the label for full use and precautionary instructions.

Cultural/Preventive: Prevent the establishment of new infestations by minimizing disturbance and seed dispersal, eliminating seed production, and maintaining healthy native communities.

Integrated Management Summary

Russian thistle only can be managed by eliminating seed production and by depleting the soil seed bank. Cut, pull, or treat plants with herbicide before seed-set. Seed disturbed areas to perennial grasses.

References

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