

RUSSIAN KNAPWEED



DESCRIPTION

Russian knapweed (*Rhaponticum repens* (L.) Hidalgo) is a perennial forb that was introduced from Asia. It reproduces by roots, rhizomes, and seeds. Stems are up to three feet tall, often branched near the base, ridged, covered with soft white or gray hairs, and develop from a particularly well-developed branching root system. Leaves are alternate and nearly hairless to moderately hairy. Rosette and lower stem leaves are oblanceolate to broadly lanceolate or oblong, up to four inches long, and deeply lobed to nearly entire; upper stem leaves are progressively smaller, oblong, and toothed or entire. Flowers are all tubular, rose to purple or blue, and borne in flask-shaped heads about one-half to three-quarters inches long. The heads are solitary on the ends of leafy branches. The seed-like fruits are an ivory to light brown, about one-eighth inch long, flattened, ovate, longitudinally ridged, and topped with numerous capillary bristles one-quarter to one-half inch long. Flowering occurs from June until August, and fruiting occurs from August until September.

Sources: Kansas Department of Agriculture K.R.A. 4-8-31, Revised May 20, 2020

Photos: Bonnie Million, Bureau of Land Management; John M. Randall, The Nature Conservancy; Joseph M. DiTomaso UC Davis Bugwood.org; John Welborne, Shawnee County; Mike Friesen, Meade County

PREVENTION OF SPREAD

The Kansas Noxious Weed Law (K.S.A. 2-1313a et. seq.) requires all landowners to control the spread of and to eradicate Russian knapweed on all lands owned or supervised by them. Methods used for control must both prevent the production of viable seed and destroy the plant's ability to reproduce by vegetative means. Infestation sites must be monitored after control methods have been implemented to ensure that dormant seeds in the seedbank do not germinate and establish new infestations.

RUSSIAN KNAPWEED CONTROL PRACTICES

Russian knapweed control means that both the roots and the flowers must be destroyed. Because Russian knapweed is a perennial, two or more of the control methods discussed herein must be used together to control Russian knapweed, with the exception that herbicide applications may be used alone as a control.

Cultural Control

Cultural weed control involves land and vegetation management techniques used to prevent the establishment or control the spread of noxious weeds.

While palatability is considered low, grazing by sheep or goats may be utilized to control Russian knapweed during the early vegetative to flowering stage then repeated as necessary, after eight to ten inches of regrowth, to prevent the production of flowers. Repeat grazing each year to deplete the seedbank and provide control.

Frequent surveys of fence lines, roadways, ditches, and other susceptible areas for new infestations and the timely removal of any new plants will prevent Russian knapweed from becoming established.

Mechanical Control

Mechanical weed control involves the physical removal of weeds or the reproductive parts of weeds.

As a perennial species, Russian knapweed is difficult to control mechanically. Hand pulling or hoeing can be effective for small, less established infestations of Russian knapweed if repeated whenever the plant emerges during the growing season, over multiple years. Removal is generally easier and more effective in late spring when soil is moist and plants are beginning to bolt (but before seed set). It is very important to pull up all parts of the plant, especially the roots.

Chemical Control

The herbicides listed below may be used for cost-share with landowners to control Russian knapweed. Other products labeled and registered for use on this noxious weed in Kansas may be used in accordance with label directions but are not available for cost-share. Be sure to follow all label directions and precautions. For additional information, consult the most recent edition of the Kansas State University publication of "Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland."

Any two or more of the herbicides listed below may be available for cost-share as a pre-mix or a tank mix if allowed on the respective labels. Contact your county weed program for availability.

Switching often between herbicides with different modes of action is highly recommended.

Herbicide	Mode of Action
2,4-D LV Ester (<i>LV4, LV6 ester, etc.</i>)	4
aminopyralid (<i>Milestone</i>)	4
chlorsulfuron (<i>Glean, Telar, etc.</i>)	2
dicamba (<i>Banvel, Diablo, Vanquish, etc.</i>)	4
glyphosate (<i>Imitator Plus, Buccaneer Plus, Round-up Pro, etc.</i>)	9
imazapic (<i>Plateau, Panoramic 2SL, etc.</i>)	2
imazapyr (<i>Arsenal, Ecomazapyr, etc.</i>)	2
picloram (<i>Tordon 22K, Grazon, etc.</i>)	4

Biological Control

Biological control refers to the deliberate application of a living organism to control the spread of weeds. These agents will not eradicate their host plant; therefore, other control methods must be used in addition to the use of biological control agents as part of an integrated pest management strategy. The importation of biological control agents is regulated by USDA-APHIS and is allowed by permit only.

The biological control agents listed below are permitted for use on Russian knapweed. Other agents may be available for use if the appropriate permit is obtained.

Aulacidea acroptilonica
Jaapiella ivannikovi
Subanguina picridis

bud gall wasp
bud gall midge
leaf stem gall nematode