

August 2016 Weed of the Month:
Knapweed (Spotted and Russian)
Centaurea stoebe and *Acroptilon repens*

Fun Fact: Long-term grazing by sheep and goats has been found to control spotted knapweed. Burning, cultivation, and fertilization typically are not effective on spotted knapweed unless combined with other methods of control.

Provincial Designation:

Prohibited Noxious – MUST be destroyed.

Reproduction:



Above: A spotted knapweed infestation in mid- July on a roadside shoulder

Spotted Knapweed: Spotted knapweed generally is a short-lived perennial, reproducing solely by seeds. It is a prolific seed producer with 1,000 or more seeds per plant. Seed remains viable in the soil five years or more, so infestations may occur a number of years after vegetative plants have been eliminated. The seeds can germinate from spring through early fall. Seedlings emerging in the fall often overwinter as a rosette of leaves, resuming growth again in the spring.



Above: A Russian Knapweed infestation mid- July near the Red Deer River

Russian Knapweed: Russian knapweed is a long-lived, deep-rooted perennial with growth characteristics similar to Canada thistle. The weed emerges in the spring from roots and grows 1 to 3 feet tall. Once established, Russian knapweed spreads mainly by underground root stocks as seed production is limited compared to other knapweed species.

Environment

Spotted knapweed is an aggressive, introduced weed species that rapidly invades pasture, rangeland, and fallow land and causes a serious decline in forage and crop production. Spotted knapweed has few natural enemies and is not preferred by livestock as forage. Russian Knapweed, unlike Spotted Knapweed, is adapted to poorly drained and saline/alkaline soils. It is often found in areas with a supplemental water source. Russian knapweed will also infest roadsides, pasture, and rangeland and is the only knapweed in the state that causes significant losses in cropland.

Both Spotted and Russian varieties have been identified within the Special Areas.

Identification



Above: Spotted Knapweed with dark tipped bracts

Right: Spotted Knapweed with deeply lobed rosettes

Spotted Knapweed

Spotted Knapweed seedlings emerge in the fall often overwinter as a rosette of leaves, resuming growth again in the spring. Rosette leaves are deeply lobed. The plant grows 2 to 4 feet tall and can have one or more stems with pale green leaves which are 1 to 3 inches long. The surfaces of the upper leaves and stems are rough. Flower heads are solitary and produced from early July through August. Flowers are pink to light purple (rarely cream colored) and the petals are surrounded by stiff, black-tipped bracts, giving the flower head a spotted appearance. The black tipped brackets found below the flower petals are the key feature to distinguish Spotted Knapweed from other Knapweed species.



Above: Russian Knapweed with transparent bracts (not dark in color like Spotted)

Russian Knapweed

Two key characteristics distinguish Russian knapweed from spotted and diffuse knapweed. First, the flowers have rounded bracts with transparent tips. Second, the root of this perennial is dark brown to black in color, scaly as if the plant had been burned, and can grow to depths of greater than 20 feet. The flowers of Russian knapweed vary from light pink to lavender. Flowering occurs from June to September.

Right: Rosette of Russian Knapweed



Control Methods

Spotted Knapweed confined to small, well-defined areas should be pulled by hand or treated with a herbicide as soon as detected to avoid spread of the weed. First, all visible Knapweed plants should be removed and destroyed by burning or mulching. Then the areas should be treated with a herbicide to prevent reinfestation from seedlings.

Treat an extra 10 to 15 feet around the knapweed patches to control roots and seedlings. A careful follow-up program is necessary to control missed plants and seedlings. Many attempts to control knapweed have failed because follow-up treatments were not applied.

Spotted Knapweed is generally easy to control with herbicides. However, a treated area must be monitored for several years and retreated as necessary for seedling control.

Russian knapweed is one of the most difficult perennial weeds to control. If the plant is found in cropland, then a combination of cultivation and herbicide treatments will suppress the plant. However, herbicides at labeled rates for cropland use will not control Russian knapweed.

Russian knapweed is best controlled when herbicides are applied following several hard frosts (usually mid-October). The plants will look dormant with grey stems and no leaves, but control the following growing season has been excellent with herbicides applied very late in the growing season. Application in mid-September or during flowering in mid-summer generally provides shorter-term control.

SEEN THIS WEED? Give your local Ag Fieldman a call!

Special Areas 2: Jesse Williams (403) 854-1114 (or send a text!)

Special Areas 3: Don Hogan (403) 664-3618

Special Areas 4: Justine Simpson (403) 577-3523