

Spotted Knapweed

Description, Location and Control Options

Spotted knapweed (*Centaurea stoebe micranthos*), a weed native to Europe and introduced to the U.S. in the late 1800's, has made its way to Missouri. First spotted in southwest Missouri in 2002, this noxious weed is now found throughout southwest and south-central Missouri south of Interstate 44, as well as two multi-county areas of east-central and north-central Missouri.

Spotted knapweed is a short-lived perennial plant that grows 2-4 feet tall. It forms a rosette the first year and then sends up a flower stalk the second year. The leaves, which are rather sparse on a hard and woody stem, have a pale green color. The weed blooms in mid-summer, and the flowering bud is about 3/4 inch long. The blooms are pink to purple in color and rather attractive. The roots of this weed produce a toxin that kills other plants within its root zone. The weed reproduces solely by seeds, and the weed is a prolific seed producer, with 1000 or more seeds per plant. Once established, seeds accumulate in the soil, often exceeding 5000 per square foot. The seeds remain viable for at least eight years.

Landowners are advised to be watchful for spotted knapweed, and keep it in check while it is only along roads and not out in pastures. If not controlled, it can rapidly invade pastures and fields and cause a serious decline in forage and crop production.

Herbicides in the table at right are effective at controlling spotted knapweed when used in a timely manner. All are best applied at the bud stage in the spring or at the rosette stage in the fall.

Once the plant blooms, herbicides are rather ineffective. The plants should then be pulled up and burned, but landowners are advised to wear gloves to avoid skin irritation from the weed contact.

Herbicide (in order of effectiveness)	Rate
GrazonNext HL	2 pints/acre
Milestone	5-7 ounces/acre
Redeem R&P	1.5-2 pints/acre
Stinger/Transline	0.7-1.3 pints/acre
Tordon 22K (restricted-use)	1 pint/acre

Biological control, begun in 2008 and expanded in 2009, involved the release of two weevils that are host-specific to the spotted knapweed. Seedhead weevils (*Larinus minutus/obtusus*) were released in June-July, and root borer weevils (*Cyphocleonus achates*) were released in August. These releases were made by the Missouri Department of Transportation, Missouri Department of Conservation, and University of Missouri Extension. Knapweed seedhead flies (*Urophora quadrifasciata*) that feed on spotted knapweed are already present in Missouri.

It will take several years for populations of these insects to grow enough to begin providing significant control of the spotted knapweed.

For more information, contact one of the following University of Missouri Extension agricultural specialists:

Name	County	E-mail	Phone
Jill Scheidt	Barton	scheidtjk@missouri.edu	417-682-3579
Sarah Kenyon	Howell	kenyons@missouri.edu	417-256-2391
Eldon Cole	Lawrence	colee@missouri.edu	417-366-3102
Tim Schnakenberg	Stone	schnakenbergc@missouri.edu	417-357-6812
Bob Schultheis	Webster	schultheisr@missouri.edu	417-859-2044

Spotted Knapweed Identification



Spotted knapweed from a distance in June



Rosette stage in early November



Plant size in late April



Flowering stage in late June
(Note black-tipped flower bracts)



Cyphocleonus (root borer weevil)



Larinus (seedhead weevil)



Close-up view of flower size