

Knapweed Fact Sheet

Spotted and Diffuse Knapweed

Asteraceae Family

Spotted knapweed
Centaurea maculosa



Cindy Roche, Bugwood.org

Diffuse knapweed
C. diffusa



Richard Old, XID Services, Inc., Bugwood.org



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Distinguishing Features:

❶ Flowers:

- Spotted knapweed: Flowers are pink or purple colored. Bract tips have black triangular spots.
- Diffuse knapweed: Flowers are predominantly white, occasionally pink-purple. Bracts end in sharp, rigid spines with the terminal spine being distinctly longer. *Sometimes can have black spots, but will always have a terminal spine.*

❷ **Seeds:** Preventing seed production is imperative to control of all knapweeds! Typically, seeds can remain viable up to eight years. Seeds below depths of one and a half inches will not germinate until the soil is disturbed.

❸ **Leaves:** Leaves are blue-green, deeply lobed, and sparsely arranged along the stem.

❹ **Flowering Time:** June to October.

❺ **Life cycle/ other:** *Both can germinate in the spring and fall.*

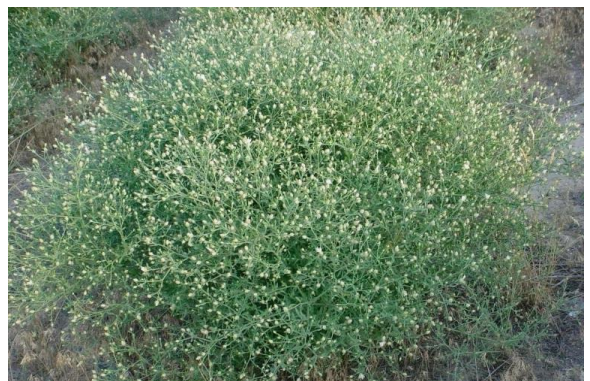
- Spotted knapweed: Biennial or short-lived perennial.
- Diffuse knapweed: Biennial or short-lived perennial. Occasionally an annual.

Impacts:

- Knapweeds are highly competitive plants that can exclude more desirable plants and form large, dense infestations.



Diffuse knapweed rosette (top) and mature flowering plant (bottom).



Both photos by Richard Old, XID Services, Inc., Bugwood.org

- Spotted knapweed threatens wildlife habitat and pastures because of its ability to quickly move from disturbed sites into relatively undisturbed, beneficial plant communities.
- During the winter, knapweed plants will break off at the base of the stem and form tumbleweeds. These tumbleweeds are blown around by the wind therefore spreading seed to un-infested areas.
- Knapweed invasions cause losses averaging up to 63 percent of available grazing forage.

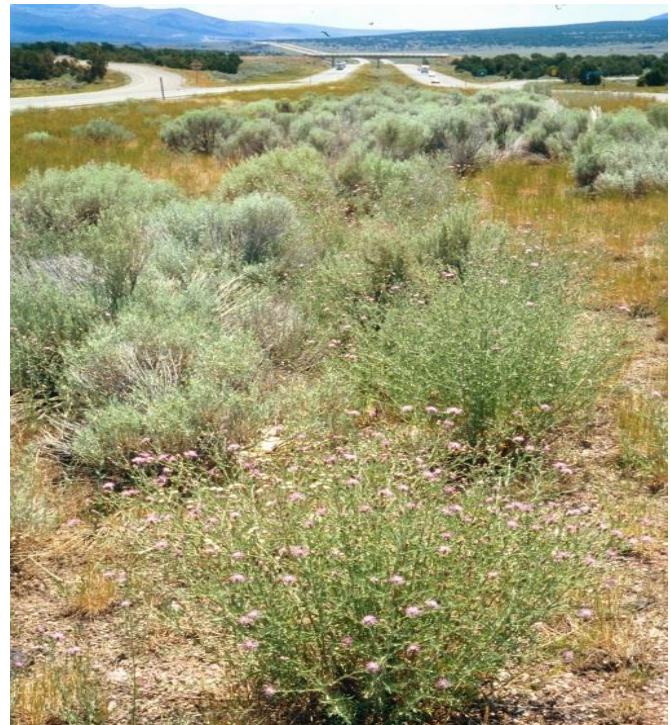
Control:

- Diffuse and spotted knapweed can be managed similarly. They are readily controlled with herbicides. **However, the weeds will reinvade unless cultural techniques are used!**
- **For small sites** with limited distribution, pull or dig up plants and remove as much root as possible so the plant will not re-sprout. Roots tend to break off four to six inches beneath the ground.
- Carefully monitor sites throughout the growing season to remove missed plants. Expect the level of control work to be intensive for the first several years due to seed banks and the soil disturbance that occurs when pulling or digging.
- **Larger infestations** can be treated with an appropriate herbicide for the site. Monitor the site throughout the growing season to catch any missed plants.
- Weed scientists at both Montana State University and Colorado State University indicate that 1 pt/A of Tordon (0.25 lb) controls spotted knapweed for two to three years, but the weed will reinvade the area unless other management techniques are used.
- Irrigation (where possible) may help stimulate grass competition. Diffuse knapweed will not tolerate flooding and shade.
- Livestock (sheep, goats, cattle) will eat diffuse and spotted knapweed. Recent research completed by Colorado State University shows that cattle grazing diffuse knapweed twice in spring decreased seed set by 50 percent.
- Mowing alone is *not recommended* for control. Since the plant has the ability to flower below the mower height, mowing alone will not prevent seed production.



Marisa Williams, University of Arkansas, Fayetteville, Bugwood.org

Spotted knapweed flowering.



Steve Dewey, Utah State University, Bugwood.org

Spotted knapweed will infest dry and arid lands, like this Utah interstate right-of-way.

*Please visit our website for references sourcing this information.



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