

INVASIVE WATCH

Spotted and Russian Knapweed

(*Centaurea stoebe* L. ssp. *micranthos* [formerly *C. maculosa*] and *Acroptilon repens*)

Spotted knapweed is an aggressive biennial or, occasionally, a short-lived perennial reproducing from seeds. It first appears as a basal rosette, forming deeply lobed leaves up to six inches long. The mature plants grow 1 to 4 feet tall and have alternate pale green leaves 1 to 3 inches long. Stems are erect and rough with slender branches. During the summer, pink to light purple flowers are borne on the tips of terminal stems. The flower petals are surrounded by stiff, black-tipped bracts, giving the flower head a spotted appearance. Spotted knapweed can be distinguished from Russian knapweed on the basis of floral characteristics. Russian knapweed flowers are smaller and do not have black mottling on the flower bracts.

Russian knapweed is an aggressive creeping perennial reproducing from roots and seeds. Leaves of newly emerging plants are toothed and covered with fine hairs, later bolting, and flowers through summer into fall.

The stems are erect, considerably branched and reaching heights of 2 to 4 feet. The lower leaves are deeply lobed, 2 to 6 inches near the base. The middle leaves are generally tooth margined, smaller and narrow near the top of the plant. The light pink to lavender cone-shaped flowers is 1/4 to 1/2 inch in diameter and solitary at the tip of leafy branches.

These are noxious weeds of Eurasian origin that are rapidly spreading from the western to the eastern states. Seed dispersal is primarily by birds, animals, humans, and from hay moved from infested areas.

Commitment

Because of the life of the plants and the longevity of the many seeds in the soil, successful management requires long-term commitment. The goal must be to control the plants and prevent seed production until the seed in the soil is non-longer viable. Treated areas should be checked each year and new plants treated before they flower and produce seeds. Establishing a thick cover of desirable plants helps discourage knapweed invasion.

Treatment Timing

Spotted knapweed:

Apply herbicides when plants are at the rosette to the mid-bolting stage or during fall re-growth up to late October or early November before soil freezes.

Russian knapweed:

Optimal timings for applications of herbicides, range from bud to mid-flower growth stages or on dormant plants in the fall. Successful treatments can be made in the fall or winter even where the foliage is dead and brown.

Pictured Below: Spotted Knapweed



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Recommendations for Control

Foliar broadcast or high volume hand spraying applications:

The most effective treatment for knapweeds is Milestone® herbicide at 5 to 7 fluid ounce/acre. Milestone will provide residual control of plants that try to re-grow and emerge after the initial application and control newly germinating seedlings. With fall or winter applications, Milestone is taken up by the foliage (if green), through the root crown or from the soil.

Use 1- 1 1/3 pints/acre of Transline® herbicide for selective control of knapweeds around and under trees where the possibility for tree root absorption exists. A non-ionic surfactant containing 80% or greater active ingredient, at 1/4 to 1/2 % v/v is often added to improve wetting and penetration. For hand applications, the herbicide should be applied while backing away from the treated areas to avoid contact with the wet herbicide.

Backpack foliage spraying:

The spray mixture, for minor infestations and follow-up spot treatments, for Milestone® herbicide is ½ to 1 teaspoon per gallon of spray solution (please note that Milestone use rates are very low). Transline at 1/4 to 1/3 fluid ounce per gallon of spray solution, can also be used as noted above under desirable trees. Use the appropriate non-ionic surfactant at concentrations listed above.

Use Information:

Milestone and Transline are selective herbicides that do not control grasses and sedges and offer good selectivity to most forbs and shrubs. These desirable plants left to grow and reproduce will become competitors with new knapweed seedlings or re-growth and help to give longer term control of the infestation. Milestone is registered for use on rangeland, permanent grass pastures, Conservation Reserve Program (CRP) acres, non-cropland areas including industrial sites, rights-of-way (including roadsides, electric utility and communication transmission lines, pipelines, and railroads), non-irrigation ditch banks, natural areas (including wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads and trails), and grazed areas in and around these sites without injury to most grasses. Milestone herbicide can be used in seasonally dry wetlands and up to the water's edge.

Pictured Below: Russian Knapweed



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