

Fall is a Good Time to Control Weeds

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Fall is the safest time to control weeds with herbicides.

In addition to obtaining excellent control on the target weeds with a fall treatment, the potential for herbicide drift damage to non-target species is lessened in the fall. Most field crops and gardens are finished producing by the end of September and the current year's growth on perennial shrubs and trees is hardened off for winter making them less susceptible to damage as well.

Perennial Thistle Species

Fall is an excellent time to control perennial thistle species in pastures and waste areas. The most common thistles in eastern Nebraska classified as perennial plants include **Canada thistle^N**, **Platte thistle**, and **wavyleaf thistle**.



Canada thistle flowers

The tops of all species of perennial herbaceous plants are killed by hard freezes, but the roots and rhizomes survive the winter and grow new tops the next spring. Perennial plants translocate much of the products of photosynthesis out of the upper plant parts into the root system in the fall, building food reserves which keep the below-ground structures alive through the winter months and to be a ready source of energy to produce new top growth next spring.

Systemic herbicides applied when the plants are translocating from the leaves and stems into the root system, readily move into the roots as well, greatly improving the effectiveness of the herbicide. Even if the herbicide doesn't completely kill the plant, it goes into winter in a weakened condition and is much more susceptible to winter kill. Fall treatments can be made anytime after mid-September but before hard freezes occur. Treatments can even be made after a light frost has occurred as long as the plants are still active and growing. Daytime temperatures in the 50's are satisfactory for effective control. Since perennial thistles reproduce from seed as well as rhizomes, fall herbicide treatments will provide very effective control of seedling plants as well.

Biennial Thistles

Fall is also the best time to control biennial thistle species (**musk thistle^N**, **plumless thistle^N**, **tall thistle**, **yellowspine thistle** and related species).



Musk thistle rosette



Musk thistle flowers and seed heads

Biennial thistles reproduce only by seeds. Most plants germinate from seed in the summer months and will have a rosette form in the fall (a round cluster of leaves that lies nearly flat on the soil). They overwinter in the rosette form and those with sufficient growth then shoot up (bolt) in spring (May and June), form blossoms and go to seed in June through August. After producing seed, the plant dies. Fall is a good time to control biennial thistles because the newly germinated plants are small with a shallow root system and more easily killed. As with the perennial plants, biennial plants not killed outright go into winter in a weakened condition and are much more susceptible to winter kill.

Herbicide products recommended for fall thistle control (in alphabetical order) include: CimarronTM, (MaxTM, PlusTM or X-traTM) CurtailTM, GrazonTM, OverdriveTM, RedeemTM, TelarTM, TranslineTM, TordonTM, 2,4-D either alone or in combination with dicamba (BanvelTM, ClarityTM, SterlingTM).

Winter Annual Broadleaf Plants

A third category of plants that respond well to fall herbicide treatments are the winter annuals.

Winter annual broadleaf plants germinate and begin growth in the fall months, overwinter and begin growing again in the early spring. Examples of common winter annual broadleaf plants are **henbit**, **shepherd's purse** and **pennycress**. Growth hormone type



Pennycress

herbicides (2,4-D and dicamba, or a combination of 2,4-D + dicamba), do a good job of controlling emerged broadleaf plants in pastures, given conditions conducive to weed growth (adequate soil moisture and daytime temperatures above 50 degrees F).

Winter annual broadleaf plants have become more prevalent in no-till crop fields. A fall application of 2,4-D and/or dicamba provides excellent control of shepherd's purse, pennycress and henbit.

Fall applied glyphosate or a glyphosate + 2,4-D mix provides good control of henbit, shepherd's purse, pennycress, downy brome and fair to good control of **field bindweed** in crop fields following harvest.

For best control of weeds using glyphosate, add 17 pounds of ammonium-sulfate per 100 gallons of water and agitate to dissolve prior to adding the glyphosate to the tank. Glyphosate should be applied during bright daytime hours for best results. In the fall, apply between the hours of 10 a.m. and 3 p.m. for best control.

Controlling Winter Annual Grasses in Pastures

Winter annual grass weeds like **downy brome**, and **Japanese brome** can be a big problem in pastures. They reduce pasture quality and carrying capacity and without extra care and management, the annual



Downy brome



Japanese brome

brome spots are guaranteed to get larger year by year because the cattle or horses will eat the palatable forages and leave the annual bromes, once the heads start to appear. This puts extra pressure on the desirable species while the annual bromes go to seed.

Warm-Season Pastures

In pastures dominated by warm-season grasses (big bluestem, little bluestem, indiangrass, switchgrass, etc.) one control option is to spray one pint of glyphosate, like RoundupTM, per acre on the newly emerged winter annual grasses in mid- to late-October after the warm-season grasses have gone completely dormant and the weedy grasses have some top growth. Note: This treatment will also kill perennial cool-season grass species like smooth brome and Kentucky bluegrass, so only use this treatment if you want to reduce or eliminate the cool-season grasses in your warm-season pasture

along with the annual bromes. For best control, pick a day with temperatures in the 60's. Studies have shown the level of control achieved by glyphosate is directly related to the time of day it is applied. The brighter the sunshine the better the control.

Cool-Season Pastures

Getting control of grassy weeds in cool-season grass pastures is trickier than in warm-season pastures. Since the cool-season grasses don't go dormant, you can't use glyphosate without killing most or all of the cool-season species in the sprayed area. GramoxoneTM is a better herbicide choice in cool-season pastures because it only kills the plant tissue it comes in contact with. Wait until spring to spray GramoxoneTM when the weedy grasses are about to form seed heads. Since the weedy bromes are nearing the end of their life cycle, killing the top at this growth stage should keep them from producing seed. The top growth of the perennial grass species will be killed as well, but these species should regrow from the crowns in two to three weeks (about like regrowing following a controlled burn).

Non-Chemical Control

Downy brome and Japanese brome will be utilized by grazing animals early in the spring. The annual bromes also make acceptable grass hay when cut early — before the seedheads appear. Since the goal is to reduce the weedy brome invaders and increase the desirable species, it makes sense to get as much utilization from the weedy species as possible while letting the desirable species grow as long as possible. You likely will need to put up temporary electric fences to confine the animals to the weedy brome areas in early spring. On small acreages consider staking your cow or horse to confine their grazing to the weedy brome spots.

The weedy bromes will become less palatable as they mature. Once the seedhead emerges they are essentially worthless as a forage. When the winter annuals start to head out, allow the animals to graze the entire paddock and begin mowing the weedy spots to prevent seed production. Mow the weedy area whenever the plants start to produce a head. You might need to mow a couple of times.

Be Diligent

The seed of these grasses can last several years in the soil, which means you should plan to continue your treatment regimen for several years. After preventing seed production for two years, consider inter-seeding the affected areas with a mixture of desirable grasses.

Practice Good Pasture Management

Be sure to graze the pasture properly to maintain the vigor and competitiveness of the desired grasses. A best management practice, no matter the size of the pasture, is to cross-fence the pasture creating two or more paddocks. Confining the animals to a smaller area results in better utilization of all species of plants. It also allows the most palatable species an equal chance to recover when the paddock is not being grazed.

FOR MORE INFORMATION

For more recommendations on specific weeds in crops, pastures and non-crop areas, consult the "2009 Guide for Weed Management in Nebraska" (EC 03-130-D) available for \$5 when picked up at the extension office.

^N indicates the weed is on the Nebraska noxious weed list.