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Conservation Reserve Enhancement Program (CREP)
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Factsheet
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Managing Common Teasel

Common teasel (Dipsacus fullonum) is a biennial plant that invades open, disturbed areas. It is adapted to various soil types, but is especially problematic in wet sites. Teasel forms dense patches of rosettes, then slowly enlarges its footprint by dropping seed in close proximity to the parent plant. Seeds are also retained in the spiny flower head (Figure 1), which is readily transported by water, equipment, animal fur, or by 'collectors' who use the distinctive flower head for decorative purposes. A teasel infestation thins existing desirable plants, and has little cover or food value itself, reducing the habitat value of infested areas.

The Problem with Teasel

Teasel has been a part of the U.S. landscape since European settlement, but seemingly has become more of a problem in the last few decades. One contributing factor may be interstate highway system, which provided acres and acres of connected, low-maintenance, disturbed areas tailor-made for teasel.

Teasel does not spread rapidly, but it is capable of persisting and continuing to expand its footprint once it's on a site. Teasel plants produce up to 3,000 seeds per year, and the seeds are viable in the soil for several years. Seed may fall near the parent plant or be moved through a variety of methods, often by mechanical equipment. Following germination a rosette of large, oblong, prickly leaves develop during the spring or fall of the initial year

Photo: Steve Dewey, Utah State University

Figure 1. The distinctive flower head of common teasel. Teasel plants can produce up to 3,000 seeds. Many seed fall near the parent plant, but some seeds stay in the flower head and can be transported to other sites to begin a new infestation.

Photo: Steve Dewey, Utah State University

Figure 2. A 'patch' of common teasel, showing the dense arrangement of overwintering rosettes. The overlapping leaves crowd out existing vegetation, creating an ideal setting for the next generation of teasel seedlings.

(Figure 2). These rosettes feature several overlapping layers of leaves, making it almost impossible for existing plants to persist. Teasel remains in the rosette stage through the winter and spring of the second growing season. In early summer of the second growing season the stem elongates to a height up to 7 ft and forms flowers at the terminal. Flower heads are ovate-shaped, about the size of a small chicken egg, with four or five long spiny bracts emerging from the base. Tiny lavender flowers, one quarter inch long, begin developing in the middle of the flower head and continue blooming towards each end. Each flower produces a small grey-to-black seed. This results in hundreds of seeds per head. Seeds mature in fall and the parent plant dies.

Teasel seed germinates throughout the year, but most commonly in spring and fall. The fall crop takes advantage of space provided by dying teasel plants that have shed their seed, prolonging and expanding the population. If left unchecked, teasel can form large dense patches and severely impact a habitat planting.

Common Teasel Control Measures

Teasel can be very difficult to manage because once established it pollutes the soil with durable seed that can germinate throughout the growing season. Eliminating the current plants isn't enough. You have to limit the opportunity for the next wave to become established.

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Therefore, the key to managing teasel is understanding how it got a foothold in your field, eliminate the teasel you have, and make it very difficult for more teasel to get started. This will be an ongoing process, and it is unlikely that one operation will solve the problem. A successful approach will reduce the effort needed to suppress teasel over time.

Techniques to reduce existing teasel include mowing, tillage, and herbicide application. Mowing will have little effect on the rosettes primarily because they are very low-growing and unlikely to be cut. Mowing is an effective way to prevent seed production. Cutting the stalks as flowering is beginning will force the plant to use its dwindling energy reserves to produce a new stalk. Even if you do not mow again, the number of flowering heads and seeds will be reduced. Mowing the regrowth before flowering will all but eliminate seed production. In CREP acres, mowing is a limited option.

Tillage effectively uproots teasel, which is why teasel is much less common in tilled fields than pasture and meadow settings. However, tillage is not an option is CREP lands.

The biennial growth habit of teasel lends itself to herbicide treatment because it's always above ground and does not go dormant. Teasel is actively growing in the late fall and early spring – times when many desirable species are dormant and therefore not susceptible to herbicide treatment.

In cool-season grass stands, teasel can be selectively treated almost any time with selective ('broadleaf') herbicides such as 2,4-D and other similar growth regulator type herbicides. Applying in the late fall or early spring has the advantage of treating when desirable native forbs such as goldenrods and asters are not actively growing, and unlikely to be injured. The same holds true for warm-season grass (WSG) stands, but you can also consider using the non-selective herbicide glyphosate. If cool-season grasses are a problem in WSG stands, you can apply glyphosate to eliminate teasel *and* cool-season grasses in the late fall or early spring windows.

It is essential to be as selective as possible so the desirable species in the stand can grow vigorously to fill the space vacated by the treated teasel. Teasel seedlings will fill available space after the teasel rosettes are eliminated. Having your desired grasses and forbs fill this space first will limit teasel reinfestation, and therefore limit the number of follow-up treatments needed to reduce teasel to an acceptable level.

Table 1. To successfully manage common teasel, you need to eliminate the current population, and promote growth of the desired plant community to limit space for teasel seedlings to re-establish. Significant teasel infestations will likely require occasional follow-up, but effort will be reduced if the desired plant community has an opportunity to fill in and limit teasel germination. The treatment recommendations below emphasize selectivity to maximize growth of the desired plants after treatment.

timing	treatment	comments
spring	broadleaf herbicide	Teasel rosettes are not dormant during the winter, and could be treated during spells of above-freezing weather. Therefore the 'spring' window is quite wide – anytime up to bolting. However, treating early provides the potential advantage of reducing injury to desirable forbs such as goldenrods or asters. 2,4-D alone at a rate of at least 1.0 lb ae/ac, or in combination with other growth regulator herbicides is effective. Using the combination of 2,4-D amine and 'Garlon 3A' can be thought of as an aquatic-labeled form of 'Crossbow', a commonly used 2,4-D plus triclopyr product for use in pasture and non-crop areas.
spring	glyphosate	Especially useful in warm-season grass (WSG) plantings, as undesirable cool-season grasses can be suppressed as well. This treatment should be applied before May, before active growth of WSG begins. Use at least 1.5 lb/ac on an acid equivalent basis. This will translate to 42 to 64 oz product/ac, based on the formulation. Earlier applications will preserve desirable forbs such as goldenrods and asters.
summer	mowing	Mowing will have little effect on teasel rosettes, but mowing the newly-bolted flower stalks before seed can set will reduce seed production. After establishment, CREP lands can only be mowed after July 31, and only 1/3 of the acreage can be mowed per year. Therefore, mowing may not be a viable option in CREP settings.
fall	broadleaf herbicide	Teasel (and other biennials and perennials) is actively growing in the late fall. Delaying applications to the October/November window will allow desirable forbs such as goldenrods and asters to senesce, reducing risk of injury. This application is a balance between waiting for desirable broadleaves to die back and taking advantage of spells of mild weather.
fall	glyphosate	Best suited to warm-season grass (WSG) plantings, after they go dormant and desirable forbs such as goldenrods and asters die back for the season. Glyphosate can be used to target teasel and other biennials, problem perennials such as crownvetch and Canada thistle, and undesirable cool-season grasses. Apply at least 1.5 lb/ac on an acid equivalent (ae) basis, which would be 42 to 64 oz/ac, depending on formulation. Time this treatment for mild spells after WSG go dormant.