

Biennial thistles

Bull, Musk, Scotch & Plumeless



Musk



Scotch

- First-year rosettes are usually large and compact with a large taproot that is hollow near the crown
- Second year adults grow one or more stems from the base which become highly branched above
- Leaves are alternate with leaf margins and midrib often whitish. Scotch leaves extend down the stem giving it a winged appearance.
- Purple flowers appear in the second season, 1-2 in. wide. Musk flowers nod when mature and are solitary on stems with pinecone-like prickly bracts below.
- Reproduce only by seed (up to 20,000 seeds per plant)

Negative Impacts

- Highly competitive: invades disturbed areas, pastures, rangelands, forests and croplands throughout most of the United States
- Impacts agricultural production
- Infestations reduce or eliminate wildlife use



Colorado
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Extension

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Chemical Control (always add non-ionic surfactant @ 1 oz for each 3 gallons of water)

Spring Rosette Growth Stage (before bolting) :

Milestone (Aminopyralid) Hand Spray: Mix 1oz in 3 gallons of water

- 3 to 5 oz per acre (**Scotch thistle 7 oz per acre at all growth stages**)

2,4-D Amine

- 1.5 to 2 quarts per acre

Redeem R&P (Clopyralid + Triclopyr)

- 1 pint per acre

Bolted growth stage (After rosettes start forming a stalk) :

Milestone (Aminopyralid) 4 to 5 oz per acre,

- Hand Spray: Mix 1 oz in 3 gallons of water

2,4-D Amine (not effective at this growth stage)

Redeem R&P (Clopyralid + Triclopyr)

1.5 pints per acre

Full Flowering Stage of growth is the worst time to apply herbicides

Fall During Frost Rosette Growth Stage:

Milestone (Aminopyralid) Hand Spray: Mix 1oz in 3 gallons of water

- 3 to 5 oz per acre (**Scotch thistle-7oz per acre**)

Redeem R&P (Clopyralid + Triclopyr)

- 1 pint per acre

Tordon (Picloram-Restricted Use)

- 1/2 to 3/4 pint Tordon per acre (not for use near water, in or up slope of tree root zones)

Mechanical

- Cut tap root one to two inches below ground
- Digging up the entire root or spraying herbicide on the remaining root section is not necessary

Stopping flowering and seed production is critical for success. Mowing is ineffective.

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