COMMON MULLEIN

Verbascum thapsis

WHAT IS IT?

Common Mullein (CM) is a biennial forb in the Figwort family that was intentionally introduced from Eurasia in the mid-1700s for medicinal uses. It has been used in traditional medicine for centuries to treat asthma, coughs, migraine headaches and more. Its soft, woolly leaves have earned it the nickname, "backpacker's toilet paper." Despite its uses, it is very invasive, and has spread to all states in the U.S. Its invasiveness is attributed to its prolific seed production and long seed viability.

HOW TO IDENTIFY COMMON MULLEIN

STEM AND LEAVES

The stem and leaves of Common Mullein are covered with dense wooly hairs that give the plant a very soft texture and a greyish-green color. Leaves are up to 12 inches long, ovate, and arranged alternately along the stem. Plants are up to 10 feet tall once flowering stalk is produced.

FLOWERS

Flowers are bright yellow, 5-petaled, and clustered along one or more 12-inch flowering spikes. A few hundred flowers are produced per spike and these bloom a few at a time, from the bottom to the top of the spike.

FRUITS

Once pollinated, flowers become green capsules that turn brown when seeds inside ripen. Each capsule contains dozens of tiny brown seeds.

REPRODUCTION AND SPREAD

SEEDS	CM reproduces only by seed. Each plant can produce up to 240,000 seeds that disperse by gravity when the capsules ripen and dehisce. Most seeds scatter around the parent plant when the fruiting stalk is moved by wind or passing animals. Seeds can remain viable in the soil for up to 100 years.
ROOTS	Common mullein grows from a thick taproot. It cannot spread from its roots.
LIFE CYCLE	Like all biennial plants, Common Mullein produces a taproot and a rosette of leaves its first year. The second year, it sends up a tall flowering stalk. Flowers are pollinated, usually by insects, and then produce fruits and seeds. Once seeds disperse, the plant dies.


CM does not spread from its taproot


The Mullein seed head weevil has minimal impact on CM

HOW TO CONTROL IT

PREVENTION	CM reproduces exclusively by seed, so a successful management program must focus on preventing seed production. Seeds only germinate if they are near the soil surface, so preventing soil disturbance will prevent germination. Maintaining a healthy plant community can also prevent establishment of Common Mullein, as it is intolerant of shade.
MECHANICAL	Small infestations can be removed by hand-pulling or chopping the plant out below the root crown. Any fruiting stalks should be removed and safely disposed of first. Mowing is not effective because it stimulates regrowth of the rosette.
CHEMICAL	*Herbicide can be used when infestations are too large for mechanical removal, but fuzzy leaf surface will prevent absorption of the chemical unless surfactant is used. Herbicides with Metsulfuron as an active ingredient are most effective on this plant.*
BIOLOGICAL	The Mullein Seedhead Weevil has been introduced into North America as a biocontrol agent for this plant. Females lay eggs in the flowers, and larvae feed on the developing seeds inside the fruits. This may reduce the seed production by up to 50%, but due to the high number of seeds produced, populations are not heavily impacted. Due to the woolly texture of the plant, it is not palatable to livestock.
CULTURAL	CM loves sun and cannot grow in shade, so maintaining a healthy plant community will shade it out. Minimizing soil disturbance so existing seeds remain deeply buried can prevent germination of new plants.

Thanks to Teton County Weed and Pest for creating this material.