**Provincial Designation:**
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# YELLOW STAR-THISTLE

Centaurea solstitalis

## Overview:

Long-lived winter annual that spreads by seed. It invades native plant communities, reducing biodiversity, and wildlife habitat & forage. It is replacing important forage vegetation and reducing rangeland values. Ingestion by horses may result in a fatal nervous disorder known as "chewing disease." Metabolism of chemicals in yellow star-thistle produces a toxin which causes death of nerve centers in the brain controlling normal eating & drinking. Only horses are affected and there is no cure.

## Habitat:

Native to the Mediterranean & North Africa, it prefers dry, full exposure or south facing sites receiving 25 to 150 cm (10-60 inches) of annual precipitation. Usually found below 2100 m (7000 feet). Can even establish dense infestations on rocky, shallow soils. Develops a long taproot to access underground moisture that allows the plant to survive periods of drought. Yellow star-thistle is shade intolerant.

## Identification:

Stems: Erect, branching, rough, up to 1 m tall, forming a bushy looking cluster. Entire plant is grayish to blue-green and covered with fine, white, cottony hairs. Leaves: Lower leaves are deeply lobed, upper leaves have an entire margin and become smaller towards the top of the plant. Leaf bases extend down the stem forming a fringe.

Flowers: Small yellow flowers clustered in a head to resemble a single flower, solitary at ends of branches, sharp yellowish spines up to 2 cm long extend from below the flower head.

Seeds: Seeds are tan with brown mottling and about 3 mm long. Both plumed and un- plumed seeds are produced.

## Prevention:

The weed is spread readily in hay and on vehicle undercarriages. The pappus of plumed seeds is barbed and will adhere to clothing, hair and fur. New infestations often result from Yellow star-thistle contaminated seed mixes.

## Control:

Grazing: Sheep, goats, and cattle graze on yellow star-thistle in the bolting stage but, before the flower's spines develop. Goats will eat the plant even in the

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spiny stages. Grazing reduces biomass and seed production. Overgrazing will reduce the ability of other vegetation to recover and shade out the star-thistle. *Invasive plants should never be considered as forage.*

Cultivation: Generally, star-thistle is not a problem in frequently cultivated areas. Deep ploughing (18 cm) will be adequate control.

Mechanical: Plants can be pulled, hoed, tilled or mowed before bloom. Mowing is effective when the plants are tall, branched and in the early flowering stage. Mowing too early will result in plants blooming below the cutting height. Controlled burns are successful if repeated for 3 consecutive years.

Chemical: Aminopyralid, alone or in a product mix with Metsulfuron-methyl, is registered for use on yellow star-thistle. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Management Regulatory Agency. Always read and follow label directions. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: Six insect natural enemies of yellow star-thistle have been imported into the USA from Greece and are established as biological control agents (Rees et al.1996). Three of these are weevils and the rest are flies. All attack the seed head and reduce seed production.

Rural Municipality of Corman Park

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