

PERENNIAL SOW THISTLE

(Creeping sow thistle, field milk thistle)

What does it look like?

Perennial sow thistle (*Sonchus arvensis* L.) is a creeping perennial with an extensive horizontal root system. This differentiates it from annual sow thistle that has a small tap root and is easily pulled.

The deep yellow flowers are similar to dandelion and usually 2.5 - 5 cm across. Below the flower heads, the stem will have yellow hairs. There is also a smooth variety of sow thistle in which these hairs are absent. The smooth perennial sow thistle is also found in Alberta. Leaves clasp the stem and are alternate with slightly spiny, toothed margins. Stems can grow up to 1.5 m and leaves are found mainly at the base. The entire plant contains a milky juice, thus the name milk thistle.



Its weedy nature

Perennial sow thistle is a non-native plant of Eurasian origin. It is a very effective competitor due to its expansive underground root system that grows well below the average depth of cultivation. Buds are numerous all along the roots, and shoots sent up from these buds cause the infestation to spread. High moisture is needed for seed germination and this explains why this weed is so prevalent in low, wetter areas and along streams and ditches where water fluctuations occur. This weed is found in cultivated fields where it can cause severe yield reductions. It is found in conventional and reduced tillage situations, forage crops, hay fields, irrigation areas and roadsides.

Each plant can produce up to 4,000 seeds that can remain dormant in the soil for several years. Distribution of this weed is broad, and it is considered noxious in many U.S. states and Canadian provinces including Alberta.



Its Control

The key to cultural control of perennial sow thistle is through root starvation. For this reason, tillage is far more effective than mowing. Successful tillage will depend on the depth of root burial and the degree of root breakage during the tilling process. Increased root breakage will increase the number of root portions which will bud out, however the smaller the root pieces, the less vigorous the resulting plants will be. Any tilled material should be left exposed on the soil surface where it will dry out. Where soil erosion is a major concern, some or all of the cultivation should be substituted with a herbicide treatment.

Because dry conditions are not favourable for perennial sow thistle, the weed will be less of a problem in dry years. Any physical or chemical control measure applied during this dry time will have a greater impact on plant populations, provided the plants are still healthy and actively growing. There are several herbicides registered for use on perennial sow thistle.

Competition

Alfalfa or perennial grasses provide strong competition to perennial sow thistle. Some helpful hints to keep in mind to increase the competitive ability of crops include:

- drilling fertilizer with the seed, or banding it to make it more available to the crop
- planting solid crop stands instead of rows
- planting tall crop varieties rather than semi-dwarf varieties.



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