



Oxeye Daisy

Leucanthemum vulgare, Chrysanthemum leucanthemum

Provincial Designation:
Noxious



Overview:

Oxeye Daisy and the very similarly flowered Scentless Chamomile can be considered conspicuous, as there are no native white-flowered daisies in Alberta. Often perceived to be a 'pretty' wildflower, this non-native is an aggressive invader. Oxeye daisy is a perennial that spreads primarily by seed, but also by shallow, creeping roots (rhizomes). Individual plants can produce over 500 seeds that are viable in the soil for 2-3 years or more.

The greatest impact of oxeye daisy is on forage production in pastures and meadows. Cattle avoid oxeye daisy and therefore any pasture infested with dense stands of oxeye daisy will decrease forage available for grazing. Dense stands of oxeye daisy can decrease plant diversity and increase the amount of bare soil in an area.

Habitat:

It grows in a wide variety of habitats, and flourishes in nutrient poor soils.

Identification:

Stems: Grow up to 1 m tall and are smooth, frequently grooved and sometimes branch near the top (although more frequently unbranched).

Leaves: Progressively decrease in size upward on the stem. Basal and lower leaves are lance-shaped with "toothed" margins and petioles that may be as long as the leaves. The upper leaves are alternately arranged, narrow and often clasp the stem with wavy margins.

Flowers: Are borne singly at the end of stems and can be up to 5 cm in diameter, with yellow centers, and 20 to 30 white petals radiating from the center. The petals are slightly notched at the tip.

Prevention:

The availability of closely related plants through the nursery and seed trade contradicts the perception of Oxeye as an invasive plant, and subsequent control. Shasta daisy is a cultivar (originated from) of Oxeye sold through nurseries and as seed in wildflower

mixes. This fact makes public awareness critical to prevention and control. The two plants can cross breed, resulting in an invasive hybrid that is extremely difficult to distinguish from either parent. Invasive ornamentals can be very difficult to contain and should be avoided. Consumers should carefully read the contents of so-called 'wildflower' seed mixes and avoid those containing invasive ornamentals.

Control:

Grazing: Oxeye Daisy is avoided by cattle and therefore capable of dominating pastures and rangeland. Horses, sheep and goats, however, will readily graze oxeye daisy and can be used in companion grazing situations to control oxeye daisy. Switching to higher stock densities and shorter grazing periods does encourage cattle to eat and trample more of the plant. Intensive grazing and trampling slightly reduces the number of seeds produced, and presumably injures younger rootstalks. Trampling also brings dormant seeds to the surface and removes the canopy cover so those seeds will germi-

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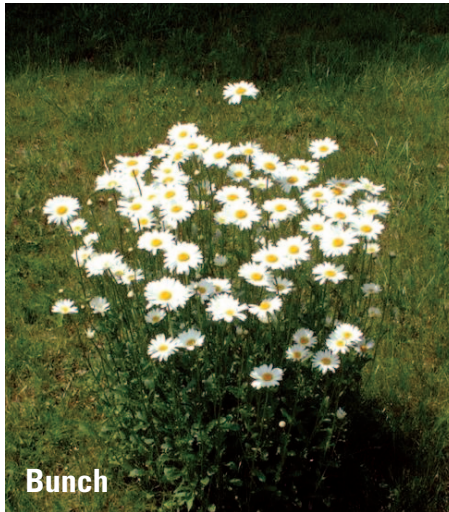
Oxeye Daisy (Continued)

nate with mid-summer rain showers. In normal years, those seedlings will dry-out and die before becoming established, further reducing the number of seeds in the seed bank. It should be noted, however, that intensive grazing in wet summers may increase the number of successful seedlings. As many as 40% percent of the seeds consumed by cattle may remain viable after passing through the digestive tract, so care should be taken to avoid spreading the seeds when moving stock.

Mechanical: Repeated mowing prevents seed production, but also can stimulate re-sprouting of stems. Hand-pulling or digging before seed production is effective, but it is important to remove as much of the fibrous roots and rhizomes as possible. Ground disturbance while digging should be kept to a minimum. Hand removal will have to be continued for several years because seeds may remain viable in the soil for a long time. Because of its shallow root system, oxeye daisy is easily killed by intensive cultivation.

Chemical: Aminopyralid alone or in a product mix with Metsulfuron-methyl or 2,4-D is registered for use on oxeye daisy. 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: In 2008 a literature study was conducted to investigate European insect species that feed on oxeye daisy. Studies on ploidy analysis, to be conducted by CABI, and molecular analysis, to be conducted by USDA-ARS, are underway with field collected and commercially available Shasta daisy cultivars to determine the relationship with the target oxeye daisy and assist in host range understanding of potential biocontrol agents. An international consortium, including the Alberta Invasive Species Council, is funding research at CABI¹.



REFERENCES

¹ <http://www.for.gov.bc.ca/hra/plants/biocontrol/screenagents.htm#Oxeyedaisy>