**Scentless Chamomile Weed Profile**

Cultural control of Scentless Chamomile (*Matricaria perforata*)

By Joshua Moats for PLSC 234

**Introduction:** *Matricaria perforata*, commonly known as scentless chamomile is a noxious weed found in the Canadian prairies (Blackshaw 1997). It may have been introduced from Europe through contaminated seed or as an escaped ornamental (Bowes 1994).

There are very few positive attributes associated with scentless chamomile relating to agriculture. It is a noxious weed, capable of colonizing new areas very easily. It has a varied lifecycle that makes controlling it difficult. It is certainly ruderal, a prolific seed producer. Seeds can spread by water, wind, machinery or animals, and it can remain dormant up to 10 years under the right conditions in soil (Juras 2004). It's ability to thrive in waterlogged environments can place it outside the reach of crop competition and human control (Blackshaw 1997). It can be extremely competitive, especially when it survives overwinter as a rosette (Blackshaw 1997).

It tends to spread more in wetter years. It tends to be minimal in annual crops, but found in greater numbers in sloughs and depressions that are seeded less in wet years (Bowes 1994).

Can be confused with wild chamomile, Pineappleweed and Ox-eye daisy.

Image from http://www.agriculture.gov.sk

**Identification**

1. Stem - "Erect with ascending branches . . . range in height from 15 cm to 1 meter" (Juras 2004).
2. Leaves - "Finely divided fernlike" (Al. Ag. and Food 2007).
3. Flowers - Daisy-like flowers
4. Seeds - "Dark brown, 2 mm long, rectangular, and have prominent wing-like ribs that are paler than the kernel" (Al. Ag. and Food 2007).

**Adaptation**

1. Varied Life Cycle - Generally exists as a summer or winter annual, but sometimes exhibits a short-lived perennial lifecycle.
2. Varied Germination - Photoperiod sensitive. Germinates continually throughout the year, and produces seeds continually throughout the year. Each plant produces less seeds as they germinate later. After a certain point, they exhibit winter annual tendencies (Blackshaw 1997).
3. Prolific Seed Producer - Seeds per plant can be 71,000 to 256,000 (Blackshaw 1997).
4. Wide dispersal of seeds - Can spread by wind (In summer or winter), down waterways, or by machinery.
5. Water tolerance - Survives well in poorly drained soils making it a common weed to grow in sloughs, which can be difficult to manage.

6. Highly competitive - Especially when displaying a winter annual lifecycle, scentless chamomile develops a very large amount of biomass, allowing competition with most crop species.

**Cultural Control**

1. Prevention:
    a. Hand weeding: Before the onset of a scentless chamomile infestation, thorough hand picking of the weed can be an effective means of controlling it (Juras 2004).
    **b.** Equipment Sanitization: Scentless chamomile is often found on road boundaries which are mowed. Equipment should be regularly cleaned to impede the spread of the weed down the road boundary.
2. Tillage is an effective means of controlling scentless chamomile on fallow land. Early spring tillage is suggested, because plants that germinate in the spring tend to get the biggest and most competitive, and also produce the most viable seeds. An early tillage application will reduce this (Blackshaw 1997). It is also suggested to till in dry and hot conditions. Large scentless chamomile plants' fibrous roots collect a lot of soil, and can survive the tillage. In moist cool conditions, these plants are effectively transplanted and distributed around the field (Juras 2004).
3. Competition is also effective. Winter wheat can be an especially beneficial choice, because it can compete with scentless chamomile earlier, controlling the most productive plants (Juras 2004).
4. Mowing can be an effective control measure of scentless chamomile. Unfortunately, the plant exhibits indeterminate growth, and mowing it down doesn't stop it from producing flowers below the mow line (Juras 2004).
5. Biological Control: There has been some research into different biological controls of scentless chamomile.
    a. *Colletotrichum truncatum* (Anthracnose) has a particular strain that is selective for scentless chamomile specifically. When used with herbicides, it can offer better control of the weed (Graham 2006). Further research was conducted to prove the specificity of the particular strain of Anthracnose in question to Scentless chamomile, showing that it doesn't actually infect lentils or peas. (Forseille 2009).
    **b.** A particular weevil called *Omphlapion hookeri* (Kirby) has been released into the Canadian prairies as a biological control agent for scentless chamomile. It is effective at reducing the amount of seeds produced per plant when it finds its host (McClay 1999).

**Summary:** Scentless chamomile is a noxious weed of the Canadian prairies with few beneficial qualities. It is a very troublesome member of slough populations, and can become widespread and competitive enough to be a major in crop problem. It tends to spread more and be more prevalent in wet conditions. Management of infestations early can reduce the intensity of the infestation in the future. Pre-seeding or summer fallow cultivation is an effective management tactic for the weed, but only when done in dry hot conditions to reduce transplanting of the weed. Mowing and Competition are also beneficial for control. Biological control is an option that can be effective as well.

## References


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