

Weed Fact Sheet

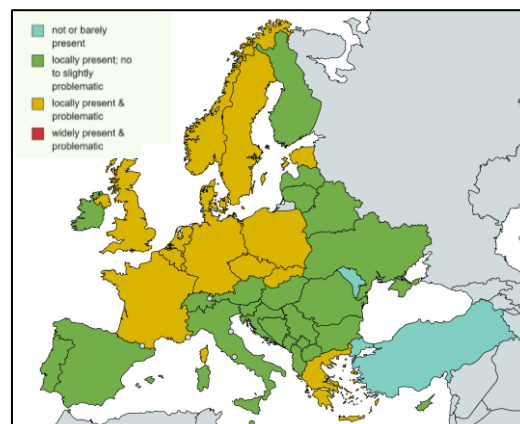
Matricaria chamomilla



Matricaria chamomilla/*Matricaria recutita* (Scented mayweed or chamomile) is a broad-leaved weed and is part of the Asteraceae (daisy) family. It is particularly competitive in winter cereals however it affects a range of cultivated crops.

Although native to parts of Eurasia, *M. chamomilla* has been introduced to other parts of the world including North America, North Africa, Asia and parts of Australasia.

M. chamomilla is not always a weed - it is widely commercially grown as a medicinal plant.



Weed Biology

EPPO-code	MATCH
Life cycle	Annual or biennial
Germination window	Main windows are April-May and August-September. If germination is in Autumn, plant will overwinter as a rosette.
Flowering	May-September (mostly June-July).
Seed set	June-October (20-35 days from flowering to seed dispersal)
Occurrence in crop or cultivation system	In-crop, field margins, headlands, waste areas, pastures.
Yield loss	Competitive in winter wheat, winter oilseed rape and spring crops. 12.5 plants/m ² reported to cause a 5% yield loss in conventional cereal farming

Preferred environmental conditions	Lighter soils neutral to alkaline, fairly rich in nitrate. Lowlands
Ploidy	Diploid (2n=18)
Pollination	Cross-pollination
Pollen dispersal	Insects (flies and bees)
Fecundity (seeds/plant)	5,000 – 17,000
Seed dispersal	By water, contaminated crop seed, animals, farming machinery
Distance of seed dispersal	Naturally seeds fall to ground but can be spread widely by use of agricultural machinery.
Dormancy	Low
Seed bank longevity	>5 years
Seed decline	6.5 year half life in soil

Impact of Agronomic Measures on Occurrence and Spread

Germination and dormancy

As seedlings require light for germination, cultivating in darkness can reduce seedling emergence.

Due to several germination windows scented mayweed can be competitive in both winter and spring crops.

Soil Cultivations

Surface cultivations in spring and summer can help prevent scented mayweed from seeding.

Crop Sowing date and Seed set

Scented mayweed itself may be grown commercially for pharmaceutical or food industry purposes. This can then grow as a volunteer weed in following crops if seed set occurs.

Crop rotation and competitiveness

Inclusion of root crops in rotations can aid management by disrupting the dense root system of scented mayweed.

Control of more competitive weeds in cereals can in turn increase the competitiveness and spread of scented mayweed.

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Identification Tips

- Scented mayweed is very similar to scentless mayweed (EPPO - MATIN). Scented mayweed flowers are slightly smaller and when crushed give off a distinctive chamomile odour.
- By cutting the yellow central flower discs in half you can observe that the receptacle of scented mayweed is hollow, whilst the receptacle of scentless mayweed is solid, forming a useful ID tool in the flowering stage (they are much harder to tell apart vegetatively).



Observed Resistance in Europe

- Herbicide resistance for *M. chamomilla* is not particularly widespread
- Resistance to HRAC Group 2: Acetolactate inhibitors reported in wheat crops across several European Countries (Belgium, Germany, Norway, Poland and Sweden).



Target-site resistance (TSR)

- Due to altered target site of the ALS target site in at least Belgian and German cases.

Non Target-Site Resistance (NTSR)

- No reported cases.

Management practices

- The presence of scented mayweed can increase incidence of beneficial insects and arthropods – it is particularly attractive to ladybirds that prey on aphids. This is important to note when considering management of this weed.
- Primary aim of long-term management is to prevent seed production.

Chemical

- A range of herbicides can be used for scented mayweed in cereals including HRAC Group 2: ALS inhibitors and post-emergent alternatives, such as Clopyralid (HRAC Group 4: Auxin mimics) and metamitron (HRAC Group 5: PSII inhibitor). Rotating modes of action can reduce resistance risk to ALS herbicides. Always check crop compatibility and application timings on the product labels first.

Non-chemical

- As scented mayweed has a taproot, hoeing and other mechanical weed control methods such as hand-pulling can be effective in preventing seed set, although can be time consuming for large infestation.
- Other reported management methods include: cultivating in darkness to reduce seedling emergence, surface cultivations in spring and summer, inclusion of competitive root crops in rotations, using competitive varieties of cereals crops and increasing crop density to out-compete scented mayweed.

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