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FARMING TO BENEFIT WILDLIFE

# Managing marsh ragwort

**Marsh ragwort *Senecio aquaticus* can be a common plant of wet grassland, usually occurring in unimproved wet hay meadows but it can also occur in more improved wet grassland. It is not so toxic to livestock as other ragwort species but can still cause problems for livestock farming. However, in many situations, using herbicides to control marsh ragwort is not appropriate as this could destroy the flower-rich meadows. The RSPB and Natural England recently commissioned an investigation by the Open University into how the marsh ragwort abundance can be reduced through implementation of some commonly used farming practices. The field trials took place in the Somerset Levels and Moors. This advice leaflet pulls together the findings from this work and other general information and advice about marsh ragwort.**

## BENEFITS FOR WILDLIFE

Control to prevent heavy infestation will ensure that species-rich wet hay meadows have some value in extensive cattle systems and if a low input late haying regime is maintained these species-rich hay meadows will be preserved.

However, the ragwort family is beneficial to a large number of insects including being an important nectar source. Marsh ragwort is a native and natural component of species-rich wet hay meadows. Complete eradication would therefore not be beneficial to wildlife.

## GUIDELINES OVERLEAF

## HOW CAN I MANAGE MARSH RAGWORT?

### In hay meadows

- If your flower-rich hay meadows have a history of dense marsh ragwort, and it is not practical to hand pull or spot spray, consider cutting hay in mid-June for two years in succession. Remember, if you are in an SSSI or Stewardship/ESA agreement, you will need to get consent from Natural England. If cutting is followed with hand pulling or spot spraying, densities should remain low in future years.
- Early hay cuts can destroy nests and chicks of late-nesting bird species, such as snipe and skylarks; ensure there are none present before cutting.
- If you are concerned about the quantity of ragwort in the hay, consider using it for bedding but take care to ensure the manure is well rotted before spreading and consider spreading on higher dry ground.
- When at low densities, marsh

ragwort can be hand pulled prior to cutting to remove it from the hay. If it is pulled when flowering and not before, broken stems and roots will not re-grow. It is recommended to use rubber gloves if hand pulling or dig out with a 'rag-fork'.

### When grazing

- If grazing a field with flowering marsh ragwort, be aware that cattle sometimes eat it. Remove the cattle if you are concerned about the quantity being eaten.
- Following grazing, cutting and removing the standing marsh ragwort by mid-June may have the same effect as the early hay cut. However, if the cattle have broken the stems or eaten the growing tip before flowering, the plants will attempt to flower again.
- In the spring and autumn, ensure that your grazing is not causing excessive poaching as this creates germination opportunities for ragwort.



Ellie Sargent

## KEY POINTS

- Controlling marsh ragwort by boom spraying with herbicide will destroy many flowering plants of species-rich hay meadows.
- Cutting hay in mid-June for two successive years can dramatically reduce marsh ragwort in species-rich hay meadows.
- Return to a traditional late cut after two years to ensure the species-richness does not decline.
- Ensure there are no nesting waders or their chicks in the field before cutting hay in June (if necessary get expert advice).
- Do not create large amounts of bare ground through poaching or heavy grazing.
- If you are in an SSSI or have a Stewardship agreement consult Natural England before undertaking early hay cuts.

The advice in this document is derived from E Sargent 2008, *The non chemical control of marsh ragwort* (*Senecio aquaticus* Huds.)

You can get further information on this and other ways of managing your farm for wildlife from:



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The RSPB, UK Headquarters  
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The daisy-like flowers of marsh ragwort

Elle Sargent



Loose flower heads of marsh ragwort on branched stems with few leaves

Elle Sargent



Common ragwort's growth form is significantly different to marsh ragwort

Mike Dodd



Leaf rosette in spring, with purple stem bases and glossy, faintly lobed leaves

RSPB



The foreground was cut for hay in mid-June in the previous two years and virtually no marsh ragwort is present; the far end of the field was cut in July and the bright yellow flowers of dense marsh ragwort are easily visible.

RSPB

### Identifying marsh ragwort

Marsh ragwort is often confused with other yellow flowering members of the daisy family but is usually easily distinguished from common ragwort by the fact that it grows in wet meadows and common ragwort prefers dry soils, often sandy or chalky. Marsh ragwort grows two to three foot in height and has widely spread branches with broad loose clusters of flowers. The stem and branches usually have very few leaves and it flowers from late May/early June. Indication of future problems can be given by looking for the low growing rosette of leaves in winter or spring prior to the growth of the main stem. The leaves are often glossy with a purple base to the stem.

### Features and habits

Marsh ragwort is one of many flowering plants that can be found in unimproved wet hay meadows.

Its seeds germinate in bare ground in the spring or autumn. It then over-winters as a low-growing rosette of leaves, flowering in late May and June of the following year and setting seed in July. If plants are cut before they flower they will attempt to flower again that or the following year.

Marsh ragwort is usually avoided by grazing animals but occasionally cattle have been known to selectively graze the flowers, and sheep will eat the leaves when they are in the low-growing rosette form.

It is thought that when dried in hay ragwort becomes more difficult for livestock to selectively avoid.

### Toxicity

Ragwort contains compounds (pyrrolizidine alkaloids) that when broken down in the intestines and liver of livestock causes damage to cells.

Tests undertaken on samples of marsh ragwort collected from West Sedgemoor in Somerset showed it to have half of the amount of this compound compared with amounts found in common ragwort, *Senecio jacobaea*, and it occurred mostly in the flowers. It is thought that ingestion of 5 to 40% of body weight of common ragwort can cause death in horses. Although very large amounts of marsh ragwort would need to be eaten to cause problems in cattle, if this does occur death may result. These toxic compounds pose no threat to humans, however the sap in ragwort stems can cause an allergic reaction in some people.

### Marsh ragwort research undertaken by The Open University

Marsh ragwort can occur in high density when there is an abundance of seed and conditions are ideal for germination. Where this occurs on species-rich hay meadows, spraying could cause significant damage to other plants and hand pulling is very time consuming. A research programme was commissioned to investigate how effective some common farming practices were at reducing density of marsh ragwort but without affecting the overall species-richness of the hay meadows.

Applying manure (20 tonnes per ha annually), applying lime (to increase the soil pH to 6.5), cutting hay in mid-June and increasing drainage by installing surface gutters were all tested alone and in combination.

The findings showed that cutting hay in mid-June for two successive years reduced marsh ragwort abundance dramatically. The species-richness of the meadows was not affected and is unlikely to be if the earlier cuts are limited to two or three years.

The graph (bottom) and photo (bottom left) show that marsh ragwort abundance is reduced considerably in following years.

It appears that the mid-June hay cut prevented seed drop but was late enough so that the ragwort plants died and did not try to flower again. The marsh ragwort has a short-lived seed bank, the early cutting regime only has to be continued for a few years, but the time taken for marsh ragwort to recolonise after early cutting ceases has not yet been tested.

Where the hay contained large amounts of marsh ragwort it was used for bedding. Although the marsh ragwort seed in the subsequent manure may not be viable, it is advisable to ensure the manure is well rotted before spreading and if it is spread on dry ground marsh ragwort will not grow.

If marsh ragwort is cut earlier than mid-June it may attempt to grow and flower again in the same year or the following year. The earlier hay cut can destroy nests and chicks of late-breeding ground-nesting bird species, such as the snipe, and so should be avoided where they are known to be nesting.

Applying manure also reduced marsh ragwort but, owing to increased grass growth, reduced species-richness.

Applying lime had no effect on density of marsh ragwort and initial analysis of the drainage treatment showed no significant effect overall, but further analysis is needed as results were very dependent on site and on year.

