ground and anything that will lead to nutrient enrichment, e.g. leaving hay to rot in the field. Cutting is generally not an effective method of control. Digging up nettle rhizomes (roots) during the winter can be a satisfying job which reduces the density of growth. In cases of severe infestation, spot treatment with a weed killer may be necessary. Glyphosate (Roundup) is not considered to be very effective in the treatment of nettles.

Broad-leaved and curled dock

Dock infestation can occur wherever there is bare or disturbed ground especially where fertility is high from excessive animal dunging. Dock acts as host for a variety of insects including moth larvae. The plant's size and spread means that it suppresses the growth of wild flowers and grasses and reduces hay yields. The deep tap root makes digging it up impractical. Repeated topping through the growing season to prevent flowering will reduce the vigour of docks but they may regenerate vigorously from the stem base. Toppings should be removed to prevent nutrient enrichment and smothering of other plants. On sites favoured by ground nesting birds, mechanical topping is not an option between March and July. The poor performance of weed killers used on dock is usually because the large leaves of mature dock shade seedlings. Locating and spot treating any seedlings before spraying the mature plants might improve overall effectiveness. MAFF-funded research found that asulam gives good control of both species of dock but expect to repeat the treatment for several years. If early control to prevent seeding is missed, apply weed killer later in the season but while the plant is still green (i.e. August).

This leaflet is intended as a basic, introductory guide to managing weeds in grassland. Much of the information has been extracted from English Nature's 'The Lowland Grassland Management Handbook'. For more in-depth information and details on further reading, you can consult the PGP's copy of this handbook which is available from Peter Chard, 01594 530513 or view it online at www.english-nature.org.uk.

Parish Grasslands Project HT02 Jan/2005

St Briavels, Hewelsfield & Brockweir

Parish Grasslands Project

Grassland Weed Control

A basic guide to managing weed species in wild flower-rich grassland

One could argue that no plant is a "weed", given that the Parish Grasslands Project aims to encourage species-rich grassland and natural diversity. However, any field that has been poorly managed in the past is likely to have an unacceptably high percentage of certain dominant or poisonous plant species. This leaflet offers a basic guide to the options available to control their spread or reduce their numbers.

Note: for information on controlling bramble and bracken see PGP leaflet Field Restoration.

The weed species

The most common weed species found in semi-natural grassland are creeping thistle *Cirsium arvense*, spear thistle Cirsium vulgare*, common ragwort Senecio jacobaea*, broad-leaved dock Rumex obtusifolius*, curled dock Rumex crispus** and stinging nettle *Urtica dioica. From a nature* conservation perspective, they are all beneficial plants providing food for a variety of insects, beetles, moths, butterflies and birds and may support nationally scarce species. The reason they are undesirable in pasture and hay meadows is because they reduce the amount of grass available for livestock, reduce hay yields, can be toxic to livestock and - where wild flower proliferation is a management objective - they shade out and suppress the growth of less robust species.

If weeds are a problem in your fields, it is important to consider how the plants got established in the first place and correct the problem.

The most important preventative measure is to avoid creating large patches of bare ground which provide opportunities for weed invasion. Bare ground can result from overgrazing, driving on the field causing rutting, spoil dumping from ditching or building work, bonfires, animals congregating in one area for feed and deep shade from tall, overhanging hedges.

Control methods fall into three categories:

- hand control by cutting or pulling
- mechanical control by topping (cutting)
- chemical control.

Non-chemical methods are preferred whenever possible.

If resorting to weed killers always read the label, protect livestock and don't forget to deal with the cause of the problem, i.e. poor management.

* Listed as injurious under the Weeds Act 1959. This means that measures to prevent the spread of this species may be required if there is a threat to agricultural production.

Ragwort

More than 200 insect species feed on ragworts but common ragwort is poisonous to livestock - particularly horses[1] and cattle - and is especially dangerous in hay. Avoid cutting since it encourages side shoots. The plant is relatively easy to pull up and should be uprooted just before flowering. Wait until the soil is damp, this will help you get as much of the root as possible. Dispose of the plants away from the field and livestock because it becomes much more palatable when wilted. The optimum time for spot chemical treatment is in late April or May when plants are still at the rosette stage.

Creeping and spear thistles

Thistles support a significant range of invertebrates and some seed-eating birds. They thrive on disturbed and overgrazed swards. Hand control methods include pulling; "spudding" (cutting with a hoe or spade just below ground level, just before flowering); "topping" (cutting off the tops) by hand or machine before flowering to leave a minimum height of 150mm (6"). According to Defra[2], cutting any lower will encourage vigorous re-growth. To control re-growth and prevent seeding, a second cut as low as 40mm (1.75") and even a third cut may be necessary. All cuttings must be removed otherwise they could set seed where they lie. No selective herbicide eradicates creeping thistle by a single spot treatment; it will take several years. Application is best carried out prior to the flower bud stage when the weeds are growing vigorously. Take care that other species of thistle are not damaged by the weed killer, e.g. musk thistle which is associated with the nationally scarce weevil *Ceutorhynchus trimaculatus.*

Stinging nettles

Nettles love bare, nutrient-rich ground caused by overgrazing, stock feeding, dumping of soil from elsewhere, old bonfire sites or septic tank run-off. Nationally, they provide a habitat for over 100 insect species. Nettles are usually avoided by livestock although they will often eat them when cut and wilted. To control nettles avoid the creation of bare

[1] See the British Horse Society website www.bhs.org.uk

[2] Countryside Stewardship management guidelines