

● Are you concerned about invasive perennial weeds in your wood
 what 'field of use' means on a product label? ● Not sure which herbi
 yet more information on herbicid
 If you find yourself answering 'yes' to any of

Trees & AN UPDATE

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Most new woodlands require weed control to enable trees to establish successfully, and although research continues into alternatives, the use of herbicides is currently the only cost-effective option in many situations. However, to the busy forest manager, the changeable and seemingly complex nature of herbicide use in forestry can make the subject seem inaccessible.

The Forestry Commission (FC) have aimed to help by producing practical guidance in the form of Field Books - Field Book 8 '*The use of herbicides in the forest*', Field Book 14 '*Herbicides for farm woodlands and short rotation coppice*', and Field Book 15 '*Weed control in Christmas tree plantations*'. Then we offered further help by publishing research results in journals and by issuing leaflets and Information Notes. You can't read everything, so how do you keep up-to-date? With this in mind the FC have recently published a new Technical Paper (No. 28) called '*Herbicide update*'. This update aims to act as a one-stop source of guidance for managers by:

- summarising recent research findings
- providing guidance on new herbicide approvals
- detailing recent relevant regulatory changes.

It acts as an update of the Field Books, and has a quick reference guide

which tells you which information has been updated. It is designed to be used in conjunction with the Field Books, and we suggest you keep a copy nearby.

SOME OF THE RESEARCH FINDINGS

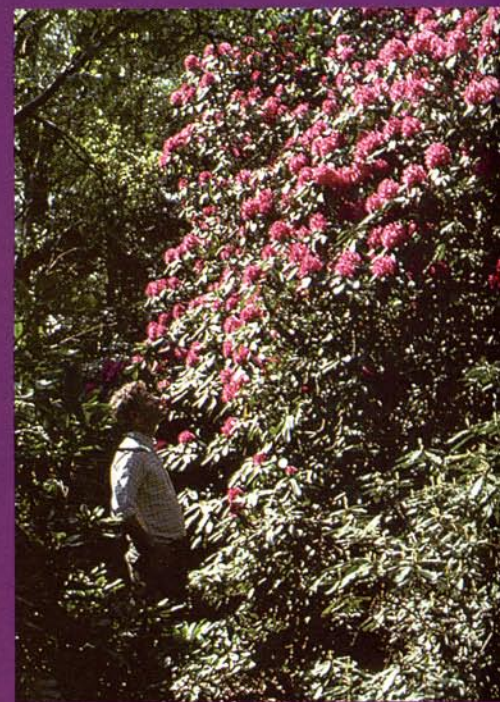
Examples of some of the research findings summarised in the new Technical Paper are as follows.

The perennial problem

In new woodlands, on better quality land, perennial weeds that germinate from seed often invade the site after trees have been planted for a year or two. We have plenty of information on how to use soil acting residual herbicides to control *annual* weeds, but not much on their effect on *perennial* weeds. In agriculture many perennials can be destroyed by repeatedly ploughing but in woodlands we don't have that luxury, and the best way to deal with these perennials is to stop them establishing. *Herbicide update* summarises the results of three years of trials on pre-emergent herbicides for clover, creeping buttercup, spear thistle, ragwort, nettle and dock.

For example, atrazine at five litres per hectare plus cyanazine at five litres per hectare works particularly well, but only on well-planted trees on heavy soils. Used in conjunction with a low

productivity grass sward between weed-free bands, residual herbicides can delay the influx of perennial as well as annual weeds, and are often easier to apply and safer to use than repeatedly applying foliar acting herbicides to established weeds.



Rhododendron - an extremely attractive, introduced woody ornamental species, but also a particularly problematic invasive weed that prevents natural regeneration and suppresses native woodland flora. Recommendations for control are given in Field Book 8 and Technical Paper 28.

(FOREST RESEARCH PHOTOGRAPHIC LIBRARY)

lands? ● Is creeping thistle a real problem? ● Ever wondered exactly how herbicides are approved and how to use them? ● Not sure what to do with weeds from the Forestry Commission? ● If you have any of these questions we just might be able to help.

Weeds AND HERBICIDES

Creeping thistle - an encroaching menace

Creeping thistle is a particularly problematic weed on new planting sites on better quality farmland. It is invasive, spread mainly by root fragments, and is difficult to control.



Weeds compete for moisture and nutrients, and hence reduce tree growth and survival. However, some vegetation cover can be beneficial for amenity or wildlife, particularly between weed free spots, and when trees become established. This 3-year-old poplar would still benefit from spot weeding.

(FOREST RESEARCH PHOTOGRAPHIC LIBRARY).

Cutting and ploughing are a waste of time. We summarise the results of trials looking at susceptibility of creeping thistle to various different herbicide treatments.

Particularly effective is the sequential application of clopyralid - 0.5 litres per hectare Dow shield applied to extending shoots from rosettes in the spring, followed by 1.0 litres per hectare 3 weeks later. It is also highly selective and offers good crop tolerance.

Regulatory changes/revised herbicide approvals

In addition, the Technical Paper gives guidance on recent relevant regulatory changes. For example, definitions of fields of use for pesticides and disposal of waste products. It also gives practical guidance on the use of three new forest approved herbicides (atrazine with cyanazine, cycloxdim, dichlobenil) and five new farm woodland approved herbicides.

Always remember though, this is not a substitute for reading the product label. The format of the guidance follows that in Field Book 8 for easy reference. Since the Technical Paper was produced, the Long Term Off Label Arrangements for pesticide use have been renewed and remain essentially as detailed in Field Book 14. However, under the new arrangement explicit reference to 'brownfield' (reclaimed sites for woodland) is included.

WHAT'S NEXT?

Forest Research is continuing to investigate specific weed problems and

alternatives to the use of herbicides. Currently we are providing a first draft of decision support guidance for pesticide use on behalf of the United Kingdom Woodland Assurance Scheme (UKWAS). As new research findings are produced we will summarise them in new Information Notes and Technical Papers and provide full information in revisions of Field Books.

FOR FURTHER INFORMATION

- Willoughby, I. and Clay, D. (1996). *Herbicides for farm woodlands and short rotation coppice*. Forestry Commission Field Book 14. HMSO, London
- Willoughby, I. and Dewar, J. (1995). *The use of herbicides in the forest*. Forestry Commission Field Book 8. HMSO, London.
- Willoughby, I. and Palmer, C. (1997). *Weed control in Christmas tree plantations*. Forestry Commission Field Book 15. The Stationery Office, London.
- Willoughby, I. and Clay, D. (1999). *Herbicide update*. Technical Paper 28. Forestry Commission, Edinburgh.

Field Books 8, 14 and 15 and Technical Paper 28 are available by mail order from: Forestry Commission, PO Box 100, Fareham, Hampshire, PO14 2SX (tel: 01329 331345, fax: 01329 330034) e-mail: reception@telelink.co.uk