

## Vegetation Control in Farm Forestry



# Vegetation Control

Vegetation control is normally required in farm forestry during the early years following planting, usually up to year 4. It is an essential requirement for the management of young farm forests.

Inadequate vegetation control can result in poorer tree growth, increased tree mortality, slower forest establishment and potential longer term loss in timber yield and value.

Vegetation control is necessary to:

- Suppress competition from potentially damaging vegetation such as grasses, broadleaved weeds and woody scrub
- Provide sufficient light to maintain vigorous early tree growth
- Ensure adequate soil moisture
- Prevent damage to stems and foliage
- Achieve successful forest establishment to Forest Service (DAFM) standards



Effective vegetation control promotes:

- Vigorous height growth and increased stem diameter
- Improved tree survival rates
- Reduced tree replacement costs
- Lower risk of frost damage



The extent of vegetation control will depend on a number of factors. These include vegetation type, type of ground preparation, tree species and stage of tree growth.

Fertile sites, often planted with broadleaves, will normally have more lush vegetation growth and will require additional vegetation control.

Ripped or ploughed sites need more vegetation control than mounded sites and pre-planting chemical vegetation control is recommended.

# Chemical Vegetation Control

Chemical vegetation control involves the sustainable use of herbicides to control vegetation that is competing directly with young trees.

## *Chemical vegetation control techniques*

### **Spot spraying**

This is the most commonly used technique in which herbicide is applied to control vegetation in a 1-metre diameter spot around the base of the trees.



*Effective vegetation control  
using spot spraying.*



*Effective vegetation control  
using band spraying.*

### **Band spraying**

The herbicide is applied to control vegetation in a 1-metre wide band centred over the planting line on ripped or ploughed sites.



### *Common spraying equipment used in forestry*

The knapsack sprayer is the most commonly used method of herbicide application in farm forestry although other herbicide applicators such as Controlled Droplet Applicators (CDAs) are also used.

When applying herbicide using a knapsack sprayer, it may be necessary to fit the nozzle with a cowl or spray shield to prevent damage by spray drift onto the trees and other non-target vegetation.

## *Selection of herbicides*

Chemical control involves the use of an appropriate herbicide:

- The choice of herbicide depends on the type of weeds, the tree species, site type and the time of year (See Table 1).
- Broadleaves are usually more susceptible than conifers to damage from herbicide drift, so careful application is essential. Use a cowl or guard.
- Chemical control can lead to a boost in tree growth, especially for species such as oak and sycamore.

<b>Vegetation</b>	<b>Herbicide* * active ingredient</b>	<b>Timing of application</b>
Grasses, Rush & Bracken	Glyphosate	May – Oct
Gorse	Triclopyr	Aug – Dec
Woody scrub	Triclopyr	Aug – Nov
Rhododendron	Triclopyr	June – Sep

*Table 1: Types of vegetation and herbicides*

To be most effective in terms of control and cost, vegetation control should be carried out at the start of the growing season and in accordance with the manufacturer's recommendations.

The application of herbicides is now subject to rules set down under the Sustainable Use Directive (SUD). Please see the SUD section on page 7 for more information.

Please note that the use of herbicides is governed by the Health and Safety at Work Act 2005, and all users/operators should be familiar with the manufacturer's instructions.



## *Herbicide application – the importance of Personal Protective Equipment*

Herbicides are dangerous to human health. Safeguarding personal health when handling herbicides is essential. The main risk from both concentrated and diluted herbicide products is from splashes and skin contact and inhalation.

Suitable Personal Protective Equipment (PPE) should be worn when handling herbicides to minimise the risk of contamination. The essential items of PPE are:

- Gloves
- Face protection
- Spraying suit
- Footwear
- Respirator equipment



All PPE should carry the CE mark indicating the product(s) conform with the appropriate EU Health, Safety and Environmental Health regulations.

**NEVER WEAR DAMAGED OR TORN PPE.**

## *Sustainable Use Directive (SUD)*

From 26 November 2015, only a registered professional user can apply pesticides authorised for professional use.

A professional user is any person who applies/sprays professional use products, regardless of quantity or method of application, including operators, technicians, employees and self-employed people, both in the farming and other sectors.

This and other relevant information may be viewed at the following link:

<http://www.pcs.agriculture.gov.ie/sud/>



SUD promotes the use of Integrated Pest Management (IPM) – essentially good, sound farming practises such as growing competitive, healthy crops, choosing the correct variety, applying pesticides to get the most from them, practising a good rotation, etc. resulting in long term prevention of pests or their damage.

## ***Environmental Protection***

Herbicides must be used with great care to ensure a balance between their effective use and the safety of the public and the wider environment. Always follow due diligence procedures in relation to the safe use of herbicides.

Serious pollution incidents can occur when the herbicide is sprayed, or drifts, or flows onto non-target areas such as water bodies, wells or springs, hedgerows or neighbouring farms and crops.

### **DO**

- read the product label instructions and warnings carefully, including health and safety instructions.
- inform yourself and your contractors of all nearby water bodies especially drinking water sources.
- perform handling operations (filling, mixing or washing the sprayer) at least 50 metres from the nearest water body.
- inform the relevant Local Authority of any accidental contamination by herbicide which threatens an aquatic zone.
- have appropriate first aid facilities available.

### **DO NOT**

- spray in windy or wet conditions.
- spray within aquatic buffer zones.
- allow spray drift onto hedges and ditches to damage flora and fauna.



*Don't spray within aquatic buffer zones.*

Protection of the environment and especially water quality during spraying operations is a requirement of the Forestry and the Environment Guidelines published by the Forest Service (DAFM).

### **READ THE LABEL!**

***All herbicide containers should display a manufacturer's label. The label will tell you all you need to know to be able to use the product safely including hazard warnings and identifying environmental hazards.***



# Manual Vegetation Control

Manual vegetation control is the physical control of vegetation competing directly with young trees for light, water and growing space.

Manual control is used to remove tall vegetation such as rushes, nettles, thistles, briars, bracken, other tall grasses and woody weeds where trees are in danger of being smothered or other forms of physical damage.



Non-woody vegetation should be pulled away from around the tree rather than cut. Cutting the vegetation should be avoided as it can stimulate vigorous regrowth resulting in increased competition for soil and moisture.

Woody vegetation such as gorse, blackthorn, willows, etc. needs to be cut back for effective control with follow-up chemical or manual control of regrowth.

On reforestation sites, manual control is likely to be required as a range of woody and non-woody weeds, including Willow herb, can rapidly establish and cause potential damage to the new trees.

Manual vegetation control can be carried out effectively using basic tools such as a slash hook or bill hook.



# Teagasc's Forestry Services



## Research

Teagasc's forestry research focuses on supporting the developing farm forestry sector.



## Advice

Your local Forestry Adviser provides private landowners with independent and objective advice.



## Training

Teagasc's Forestry Development Department provides FETAC-certified, forestry-related courses.

### Further information:

- Contact your local Forestry Adviser
- [www.teagasc.ie/forestry](http://www.teagasc.ie/forestry) provides up to date info on forestry grants, upcoming events, technical advice, forestry research, staff contact details and much more
- Subscribe for Teagasc Forestry e-News: forestry news emailed directly to you
- Follow us on Twitter: [twitter.com/teagascforestry](https://twitter.com/teagascforestry)
- Scan this QR code with your smartphone:



This leaflet can be read in conjunction with:

- Teagasc Farm Forestry Series No. 7: Establishing a Farm Forest – How do I get the work done?
- Teagasc Farm Forestry Series No. 16: Management of Young Forests
- Teagasc Farm Forestry Series No. 20: Reforestation following Clearfell
  
- Forest Service (DAFM): Forestry and the Environment Guidelines
- Forest Service (DAFM): Code of Best Forest Practice, Ireland

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