ECOPLUG®MAX

Contents

For further information on Ecoplug,
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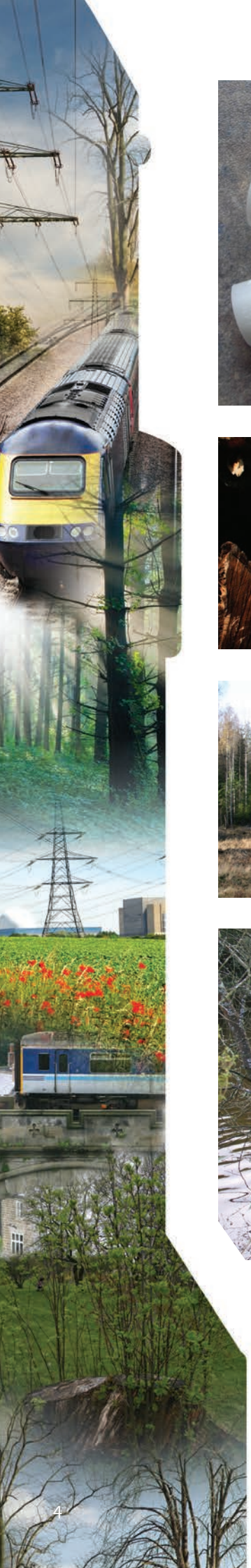
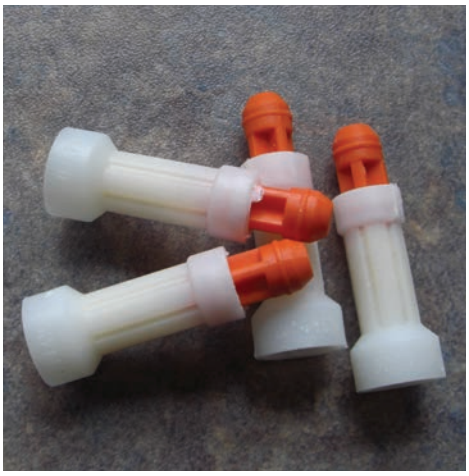
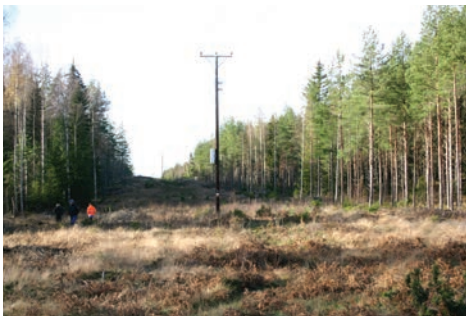
Each Ecoplug contains 283mg formulated glyphosate herbicide.
Ecoplug is a registered trademark of Ecoplug Sweden AB.
Ecoplug Max is distributed in the UK by Bayer Crop Science Ltd

USE HERBICIDES SAFELY. ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE.







Introduction

When a tree is felled or a bush sawn down the stump is left alive. Soon it will shoot new sprouts and within a few years after harvesting, there will be new growth on and around the stump. This growth increases quickly and, if no action is taken, within a short time there will be several trees where previously there was just one.

Novel technology:

Ecoplug Max is a patented tree stump control application method. It was developed in Sweden and designed to deliver more efficient forestry clearance. It has been used in the Nordics for more than 10 years and its use extended to other industrial and amenity areas e.g. under power and telephone lines, Utility and MOD properties, railways, bridges, golf courses, road sides, heritage sites and graveyards.

Outstanding performance:

The unique plug acts as a delivery device for glyphosate. Each plug contains 283mg of granular glyphosate which is released inside the tree stump ensuring all the active ingredient is carefully targeted where it is needed.
The glyphosate is translocated through the stump and down to the roots preventing new growth sprouting and leaving the stump to gradually rot away.

Use in the environment

Besides providing outstanding control of stump regrowth, Ecoplug was developed with a commitment to safety and the environment.
Both the design and the application method offer minimal risk of the operator coming into contact with chemical or of chemical spillage. There is also no risk of damage to surrounding trees and vegetation.

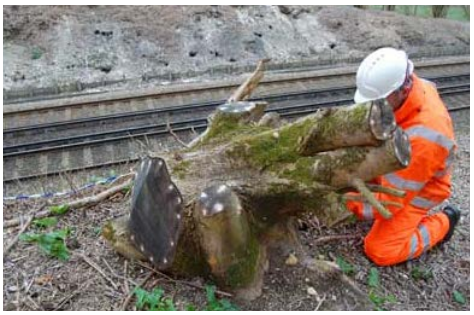
Areas of use

Ecoplug Max is authorised by the Chemicals Regulation Division, (CRD), for use in ,'All situations, (stump).'
The new formulation can be used on tree stumps in forests or amenity vegetation; on land immediately adjacent to aquatic areas as well as stumps within the aquatic zones of rivers or lakes described by CRD as Open and Enclosed waters.

NOTE: As for any pesticide use in aquatic situations users must consult the appropriate water regulatory body (Environment Agency/Scottish Environment Protection Agency) before using Ecoplug Max in or near water.

For use in aquatic situations, the overall application rate should be limited to a maximum of 10,500 plugs per hectare.

Ecoplug Max delivers high standards and levels of efficacy



- Kills the entire root system of the treated stump
- High efficacy – normally between 95-100% on treated stumps
- 100% selective keeping the use of herbicide to a minimum and removing the risk of collateral damage that may occur with traditional foliar and liquid application methods
- Can be used in any weather and at any time of the year
- Extends the interval between clearings compared with cutting alone

Ecoplug Max and the environment

Ecoplug Max application supports the requirements of the Sustainable Use Directive to minimise the use of pesticides and the Water Framework Directive to prevent contamination of waterways with pesticides
The unique plug design reduces the risk of chemical spillage, and the application method reduces the risk of chemicals getting into water or potential overdosing.
Ecoplug Max contains glyphosate which degrades into natural compounds

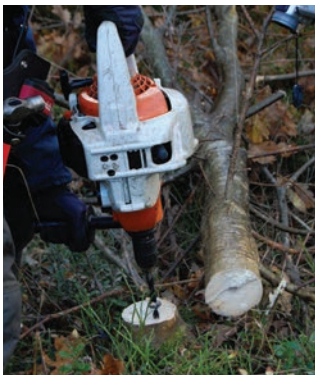
How to use Ecoplug Max

Equipment needed:

Drill and Ecoplug drill bit.
Ecoplug Max.
Hammer

Step 1: Cut the tree as close to the ground as possible. Treat within 2 days for optimum performance.

Step 2: Using the Ecoplug Max drill bit make the appropriate number of holes (see Page 7) in the living part of the stump just inside the bark. Each hole should be 25-30mm deep, 13mm wide. The Ecoplug drill bit has been adapted to ensure precise depth control.



Step 3: Place an Ecoplug Max in each hole with the narrow end first. The top of the plug will protrude by about 10mm.

Step 4: Using a hammer, hit each Ecoplug Max until the head is flush with the stump. This will force out the sides of the plug and release the glyphosate

Number of Ecoplug Max per stump

Step1: Identify which group the tree stump to be treated falls into (see Dose rate table below)

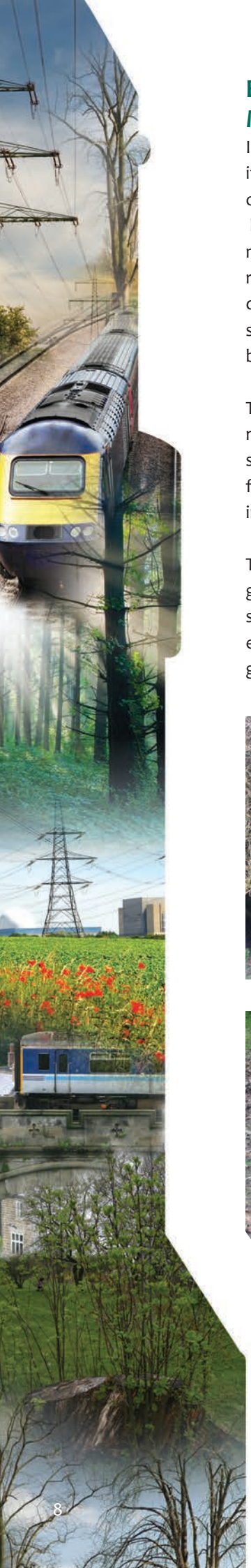
Step 2: Measure the diameter of the cut face

Step 3: Buttress roots must be treated individually with 1-2 Ecoplug Max per root

Step 4: Work out how many plugs to use from the table below (also on the label).

Table: Ecoplug Max Dose Rate

Tree species	Stump diameter in cm	Number of Ecoplug Max
Group 1	3-6cm	1
Alder, Aspen, Beech,	6-10cm	2
Birch, Elm, Lime, Maple,	10-14cm	3
Mountain Ash,	14-18cm	4
Willow	>20cm	6-8cm between plugs
	Each buttress root	1
Group 2	3-6cm	2
Ash, Cherry,	6-10cm	3
Bird Cherry, Oak	10-14cm	4
	14-18cm	6
	>20cm	5-6 cm between plugs
	Each buttress root	2
Group 3	3-6cm	2
Poplar, Rhododendron,	6-10cm	4
Elder, Tree of Heaven	10-14cm	6
	14-18cm	8
	>20cm	3-4cm between plugs
	Each buttress root	2

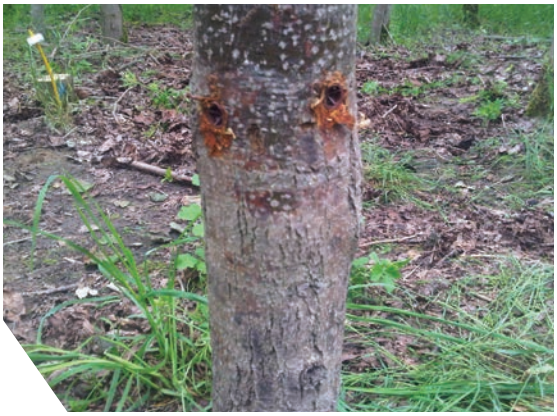


Extension of Authorisation for Minor Use in standing trees

In some situations where felling is not possible it may be preferable to insert plugs from the side of standing trees and leave them in situ. The label recommendation does not include this method, but this is now allowed at the user's risk under EAMU 2070195. Users should download a copy of the EAMU from https://secure.pesticides.gov.uk/offlabels/search.asp before using Ecoplug Max in standing trees.

This method is particularly useful for thinning, removal of invasive species, halo thinning and sanitation felling (for control of diseases), and felling where traditional logging methods are impractical or uneconomic.

The application rates are exactly as for stumps given in the table on page 7, however the plugs should be inserted from the side of the tree, evenly spaced around the trunk just above ground level.



Operator certification

Although the operator exposure is effectively reduced because of the enclosed delivery system, the product is still a pesticide and comes under all the same regulations as other forms of herbicide. This means that operator certification is required for use in public or amenity areas by professional users. Check with City and Guilds for module details.

COSHH assessment

The Control of Substances Hazardous to Health (COSHH) 2004 comes under the Health and Safety at Work Act 1974 and as such gives a legal duty to anyone working with hazardous substances to evaluate the risk to health and to eliminate or adequately control such risks.

Hazard: The intrinsic potential of a substance to cause harm
Risk: The likelihood of harm being caused in the actual circumstances of use.

Ecoplug Max must be evaluated under COSHH

A full Material Safety Data Sheet is available from Ecoplug Max distributors or from Monsanto website: www.monsanto-ag.co.uk
Select amenity.

Personal Protection

The design of the plug integrates engineering controls, thus replacing the need for PPE normally advised when in contact with the herbicide as indicated on the MSDS. However the Code of Practice for using Plant Protection Products suggests the following basic PPE should always be used as good hygiene practice when using any PPP:
Coverall, suitable protective gloves and boots

The herbicide granules are not classified as hazardous to either the operator or the environment so no special precautions are required.

Other considerations

Standard precautions to protect the operator should be taken when using the drill and hammer. Protective boots, trousers, gloves and safety glasses would normally be required for the use of chainsaws on site. Such PPE would also be suitable when using the Ecoplug.

Frequently asked questions

1. ***What if I don't treat the stump within 2 days of felling?***
   For optimum performance 2 days is best, however stumps can be treated for up to one month after felling but translocation may be slightly slower. After this time it is advisable to take another slice off the top of the stump to leave a freshly cut surface and treat as recommended. Where sprouting has already started the Ecoplug should be inserted from the side of the stump underneath the shoots to ensure success.

2. ***How can I tell what is the living part of the stump? Why do the plugs have to be inserted here?***
   Trees grow out from the centre. As new growth is produced on the outside of the trunk the centre slowly dies. Therefore the area near the bark is the live part containing the phloem vessels which will transport the glyphosate to the roots.

3. ***Why does the depth of the hole have to be 25-30mm?***
   This depth is slightly less than the length of the Ecoplug Max so the plug will remain slightly proud. The impact of the hammer on the Ecoplug will then force it down causing the plug to split and release the glyphosate.(N.B If the hole is drilled too deep the plug will not release the glyphosate)

4. ***What if the tree stump I want to treat is not in the groups 1 -3?***
   The trees in the groups represent those with proven success in the registration trials . This does not mean that other species will not respond to treatment. If in any doubt, adopting the rate for group 3 should be effective although this cannot be guaranteed.

5. ***What can go wrong and reduce performance?***
   There are two main reasons for poor performance:
   a) Dose rate too low. Due to incorrect species identification or using insufficient plugs. It is important to follow the dose rate guidelines.
   b) Incorrectly placed plugs. Placing the plugs in the centre (dead area) of the stump will also restrict any translocation. Position the plugs at regular intervals around the circumference of the stump either from the top or the side to ensure translocation.

6. ***Can I treat the stump if it is raining/ frosty/ snowing?***
   It is possible to treat the stump in all weather conditions including frost and even snow. The application method ensures rainfastness as the glyphosate is retained within the stump and not exposed to run off.

7. ***How long does the treatment take to work?***
   With treatment over winter when the tree is dormant there will be no re-growth for several months until the following spring. However once the sap starts to rise shoots that emerge, discolour and dieback as the glyphosate takes effect. Treatment during the growing season will lead to this effect in just a few weeks.
   The stumps will take several years to naturally rot away.

8. ***What is the best way to clear under power or telephone lines?***
   Ideally work to a 10 year programme. Cut and treat all trees >3cm in diameter at first pass, leaving the smaller saplings to develop a greater trunk area. Go back after 4 years and repeat the process when the saplings are large enough to treat. The area should not need a further treatment for 6 years as new growth will be from seed.

9. ***Are there Grants available to remove trees?***
   There may be Grants available for Landowners in Scotland to remove non-native species. For efficiency Ecoplug treatment can be carried out on individual trees while the land is being surveyed – but ensure the Grant has been confirmed first.

ECOPLUG®MAX

- 95-100% efficacy on treated stumps, preventing regrowth
- 100% selective with no effect on surrounding trees or vegetation
- Extends the interval between clearings compared with cutting alone
- Effective on a wide range of tree species
- Reduces the risks of operator contact with chemical
- No risk of damage to surrounding trees and vegetation
- Reduces the risk of chemical wash off or spillage
- No risk of over dosing
- Supports the requirements of the Sustainable Use Directive to minimise herbicide use
- Supports the requirements of the Water Framework Directive to prevent contamination of waterways with pesticides

Distributor details

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