Chemical control of eucalypts: standing timber, stumps, sucker regrowth

Geoffrey A. Pearce

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CHEMICAL CONTROL OF EUCALYPTS

— Standing timber

Stumps

Sucker regrowth

By G. A. PEARCE, Adviser, Biological Services Division

The eucalypt is particularly well adapted to withstand long periods without rain. The characteristics which make this possible also make the tree difficult to kill, without removing the stump and part of the root system.

Ringbarking, cutting close to ground level or pushing the tree over usually results in generous regrowth which is often more difficult to handle than the original tree.

The use of chemicals is a method of overcoming the problem of regrowth and techniques have been developed to cover the various situations.

Standing timber

Where it is desired to kill trees and leave them standing for some time, a frill ring or trunk injection can be used.

The specially shaped blade of this Tree Injector makes a cut which retains the chemical placed in the slit. The trigger releases the correct quantity after each stroke.

The frill is cut with downward strokes of the axe through the bark and just penetrating the sap wood to form a lip completely surrounding the tree at a convenient height above the ground. The lip retains the chemical and allows it to be absorbed into the sap stream over a period of time. The chemical recommended is 2,4,5-T dissolved in oil such as kerosene or diesel fuel.

The concentration to be used depends on the species of eucalypt because some are more

<table>
<thead>
<tr>
<th>Method</th>
<th>Time of application</th>
<th>Species</th>
<th>Chemical</th>
<th>Mixture</th>
<th>Approx. cost to treat tree 12 in. diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut stump and frill ring</td>
<td>Spring or autumn</td>
<td>Marri</td>
<td>2% 2,4,5-T</td>
<td>4 fl oz 2,4,5-T to 1 gallon oil*</td>
<td>4 cents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jarrah</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Karri</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wandoor</td>
<td>4% 2,4,5-T</td>
<td>8 fl oz 2,4,5-T to 1 gallon oil*</td>
<td>8 cents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yorkgum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mallee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trunk injection</td>
<td>Any time</td>
<td>All species</td>
<td>20% Tordon 105-T</td>
<td>4 fl oz Tordon 105 to 16 fl oz water</td>
<td>2 cents</td>
</tr>
</tbody>
</table>

* A suitable oil is power kerosene or diesel fuel.

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easily killed than others. For marri, jarrah and karri a suitable mixture is made by dissolving 4 fluid ounces of 2,4,5-T in one gallon of oil. One half pint of this mixture would treat a tree 12 inches in diameter. The quantity should be increased for larger trees.

For the harder-to-kill types, mallee, wandoo and yorkgum, the concentration should be doubled.

An easier method than the frill ring is to use a trunk injector which makes a cut shaped to retain the chemical. A trigger releases the correct quantity after each cut is made. The cut made with an ordinary axe allows the chemical to run out the ends, thus wasting the solution and making the treatment less effective. Injections should be spaced 6 inches apart around the trunk leaving strips of undisturbed sapwood between the pockets. Tordon 105 is diluted with water in the ratio of 1 : 4 and 2 cubic centimetres of this mixture is placed in each cut. The use of the tree injector ensures the right quantity is applied without waste.

**Stumps**

Where it is desired to prevent regrowth on the stump of a tree which has been cut down, the surface of the stump can be treated. As soon after cutting as possible the surface should be swabbed with a solution made by dissolving 4 fluid ounces of 2,4,5-T (80 per cent) in one gallon of kerosene or diesel oil. One half pint of this solution is sufficient to treat a stump 12 inches in diameter. Application should be concentrated on the bark and sapwood.

Where the stumps to be killed are from mallee, wandoo or yorkgum, the concentration of the 2,4,5-T should be doubled.

**Sucker Regrowth**

The regrowth on some species of eucalypts is easier to control with chemicals than others. Marri (red gum) is the most susceptible, followed by karri, jarrah, wandoo (white gum), yorkgum and mallee in that order.

Best results are obtained by spraying the regrowth when it is 4 to 8 ft. tall. All leaves and stems should be sprayed to the point of run-off, so that the taller the sucker the more solution is required and the higher the cost.

To enable a good cover of the foliage to be obtained, a pressure of at least 150 lb. should be used.

The addition of oil to the emulsion enables the sprayed suckers to be readily identified and increases the effectiveness of the treatment.

For suckers which are more than 8 ft. tall the trunk injection method described for standing timber can be used more economically.

**Availability of materials**

Tordon 105 is obtainable from Amalgamated Chemicals.

2,4,5-T is a common herbicide available from most agricultural chemical firms.

The only tree injector obtainable in Western Australia is the Marino Tree Injector, sold by Wrights Ltd.

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**Chemical control of eucalypt suckers—foliage spray**

<table>
<thead>
<tr>
<th>Species</th>
<th>Time of Application</th>
<th>Chemical</th>
<th>Amount per 100 gal of water</th>
<th>Cost per 100 gal solution</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marri (redgum)</td>
<td>January to May</td>
<td>Tordon 105</td>
<td>(pints) 8</td>
<td>$19.40</td>
<td>Very effective on Marri and Karri</td>
</tr>
<tr>
<td>Karri</td>
<td></td>
<td>Tordon 105</td>
<td>3 + 8</td>
<td>$7.50</td>
<td></td>
</tr>
<tr>
<td>Jarrah</td>
<td></td>
<td>+ oil</td>
<td></td>
<td></td>
<td>Follow-up needed on other species</td>
</tr>
<tr>
<td>Wandoo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yorkgum</td>
<td>March to May</td>
<td>2,4,5-T (80%)</td>
<td>3 + 8</td>
<td>$7.00</td>
<td></td>
</tr>
<tr>
<td>Mallee</td>
<td></td>
<td>+ diesel**</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Summer spraying oil.
** Diesel fuel to be mixed with herbicide.