1-1-1963

Weeds in lawns. 2. The control of weeds in lawns

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2. The Control of Weeds in Lawns

By G. A. PEARCE, M.Sc. (Agric.), Adviser, Biological Services Division

Most lawns have weeds growing in them at some time during the year and in some lawns weed control becomes a major problem.

To the many people who like to keep a weed free turf it is therefore encouraging to know that nearly all weeds can be controlled with herbicides.

While herbicides can usually give good weed control it should be remembered that an unthrifty lawn usually becomes a weedy lawn. The importance to weed control of practices which produce a vigorous turf cannot be over-emphasised.

During the winter conditions are less favourable for lawns and the rate of growth slows considerably. Because of the reduced competition, weeds are able to establish themselves more easily and it is noticeable that nearly all lawn weeds are winter growing.

The vigorous competition of weeds such as winter grass can stop the growth of the lawn grass completely. After the weeds have died, bare patches appear and provide ideal conditions for establishment of summer growing weeds.

The idea of using a chemical to kill weeds in lawns is not new. For many years chemicals such as sulphate of ammonia, copper sulphate, arsenic pentoxide and sulphide of iron have been used, often to the disadvantage of the lawn. The herbicides now available are much more effective and are rarely recommended if the turf is likely to suffer.

Identification of Weeds

Because of the wide range of herbicides which can be used, it is essential to know the name of the weed present before undertaking control measures. The identification of lawn weeds is discussed in another article in this issue.

Fig. 1.—Weeds in a lawn, even when mown regularly are unsightly. The fast growth made at flowering time presents this type of picture.
to encourage the germination of weed seeds, and then destroy the seedlings as soon as they are through the ground. This can be done by spraying with kerosene, although the use of a rake has the additional advantage of inducing a further germination. If this procedure is repeated several times before the lawn is planted, the soil should be relatively free of weed seeds. Lawns planted in the autumn are invariably faced with this problem.

With established lawns, weed seeds are continually being brought onto the turf in topdressing soil or animal manures, or on machinery (particularly mowers), animals or people. Moreover wind carried seeds are continually blowing from neighbouring infestations.

**Effect of Herbicides on Lawn Grasses**

There are a number of grasses used for lawns and because of their different characteristics the problem of weeds is not always the same. Similarly their reaction to herbicides differs widely.

With all lawn grasses damage can be caused if higher rates of application are used than those recommended. For this reason it is better to give a second application of herbicide 21 days after the initial spraying, if necessary, than to attempt to obtain complete control with a single treatment.

**Buffalo**

Buffalo is the most common grass used for household lawns. The wide coarse leaves form a dense turf in which weeds do not easily establish themselves. It is probably the only lawn grass which, when kept in good condition, will check the growth of vigorous weeds like crabgrass. All the herbicides mentioned can be used on buffalo, but in the case of DSMA some slight scorching may be experienced. However, this is usually not noticeable 10-14 days after spraying.

**Couch (Bermuda)**

Most playing fields and a large number of household lawns are grassed with couch. This withstands hard wear, and because of its vigorous summer growth, under proper management, provides keen competition for weeds. However, its lack of growth during the winter allows weeds to readily establish themselves. Its ability to persist under adverse conditions often means it is neglected, and this allows weeds to invade the turf.
Herbicides can be used with greater safety on couch than any other lawn grass. When growing under highly artificial conditions, however, such as in a bowling green, great care must be exercised to avoid causing damage. Under this situation the rooting system is often very shallow and therefore vulnerable, while the rapid growth of the foliage renders the leaf liable to contact damage.

Couch (Queensland Blue)
This more recently available turf grass spreads from stolons on the surface of the soil rather than shooting from the root system. The root system is shallower and generally speaking is not as resistant to herbicides. This only means that the usual care should be taken when spraying weeds present.

Bent, Fescue and Kentucky Blue
These grasses are often planted in association with couch because they make active growth during the winter. Their root system is very shallow and they are readily damaged by herbicides. Unless a weed infestation is very serious chemicals should not be used on them. Where it is felt necessary to treat the weeds, several applications of a weak mixture of the herbicide should be used rather than one at the normal rate of application.

Kikuyu
In heavy soils, or where water is not available during the summer, kikuyu is often planted. Under these conditions its spread can be restricted, and weeds are not often a problem. Selective herbicides can readily be used where required.

Eradication of Lawns
Occasionally it is desired to kill a lawn and replant with a different grass. A common method of doing this is simply to cease watering. Eventually when this is not completely successful, consideration is given to using a herbicide.

A better approach is to use the herbicide immediately. It should be remembered that an actively growing, well watered lawn, is more susceptible to herbicides than an uncared for turf. For this reason watering should be continued even after the herbicide has been applied. This also induces any dormant runners to shoot after most of the grass has been killed. Any new growth should be treated as it appears. Once the grass appears completely dead the remains of the turf should be removed. This can be done by rotary hoeing which will mix the organic matter into the soil, and also induce growth of any dormant runners and seed.

A suitable herbicide for this purpose is 2,2-DPA applied at the rate of two ounces.
of 85 per cent. material in one gallon of water per 30 square yards. The addition of a wetting agent helps the chemical stick to the leaf.

**RESISTANT WEEDS**

There are still some weeds found in lawns which cannot be controlled selectively with herbicides.

1. **Guildford Grass** reproduces from seed and also from corms formed at the base of the growing plant. Picking the flowers, and thus preventing the formation of seed, will not therefore control this weed.

   Mowing regularly at weekly intervals and preventing the formation of both seeds and corms, will control guildford grass. However, the leaf must be cut at ground level each time rather than rolled over. A rotary type mower is ideal for this purpose.

   Guildford grass can also be controlled by spraying with an oil such as kerosene. This treatment discolours the lawn completely, and to be effective should be applied six weeks after the general emergence of the weed in the autumn. A second application is often required five or six weeks after the initial spraying to control any later germination. Following the treatment the turf usually remains dormant during the winter but makes a complete recovery during the spring. *This oil treatment for guildford grass is very severe and is only recommended for extreme cases.*

2. **Native Wood Sorrel** (often called soursob), a species of oxalis, is a winter growing perennial which roots from the joints.

   Repeated spraying is required to kill this species under any situation, and when growing in a lawn, a herbicide cannot be recommended for its control which would not seriously affect the lawn grass. Repeated short mowing will keep the weed from spreading rapidly but will not lead to eradication.

3. **Nut Grass** cannot be controlled selectively with herbicides. The true nut grass has "nut" like structures along the root system and these can remain dormant...
Pig. 5.—Typical damage on a grapevine caused by 2,4-D or 2,4,5-T. Note the narrowing, feathering and curling of the leaves. Great care should be taken when using these sprays near garden plants.

for a number of years. Unless the root joining the “nuts” is broken, each one will not germinate until the one closer to the parent plant has sprouted.

Hand pulling can be quite effective for small infestations provided this is done regularly and persisted with until the supply of dormant nuts is exhausted.

Some degree of control can be obtained with regular applications of 2,4-D, but the repeated spraying required usually proves detrimental to the lawn.

The other species of Cyprus scaly sedge, which does not have the “nuts,” is more readily handled. This should be cut out with a sharp implement just below ground level, and provided the crown is removed the plant will not grow again. This method is too tedious for large areas, and only the regular application of 2,4-D can be suggested for its control.

4. Kyllinga Weed is a perennial sedge which has become common in lawns in the metropolitan area. Because of its strong root system and active growth during the whole year it spreads readily through lawns and is difficult to control.

Where it occurs as small patches, complete removal and returfing is advisable. There is no chemical treatment which can be applied to the lawn to kill the weed without affecting the turf grass.

CHEMICALS

The use of chemicals for the control of weeds in lawns is not new. Sulphate of ammonia, copper sulphate, arsenic compounds and many more dubious substances have been used for many years with varying degrees of success, often at the expense of the lawn.

The modern herbicide is more effective against weeds and is seldom recommended, if damage to the turf is likely. Despite this, care is needed to ensure that the spray is correctly mixed, and that it is used at the proper rate of application.

Damage to Gardens

All the chemicals recommended will cause damage to garden plants, particularly annuals, if sprayed directly onto the foliage. For this reason care must always be taken to prevent the spray drifting onto garden areas.
Any spray equipment used should be thoroughly washed, immediately after use, with a warm soapy solution.

Hormone Damage

When using the hormone-like herbicides 2,4-D or 2,4,5-T, extra care should be taken to avoid spray drift damage. It is desirable to keep a special spray for applying this type of herbicide. When this is not practical it is essential to replace the rubber or plastic parts of a spray before using the equipment for other garden spraying.

1. Mercury Compound—Moss

The presence of moss in a lawn often indicates a soil condition which should be rectified at the same time as the chemical control treatment is applied. Moss is most likely to become a problem in areas which are shaded and poorly drained.

A suitable mixture for controlling moss is made by mixing two parts of calomel (mercurous chloride) with one part of corrosive sublimate (mercuric chloride). One ounce of this mixture dissolved in one gallon of water is sufficient to treat 30 square yards. The corrosive sublimate kills the growing plants while the calomel helps prevent reinfection.

The soil surface should be vigorously raked before the treatment is applied.

2. DNOC—Annual birdsfoot trefoil

- Annual clovers
- Burr trefoil
- Capeweed
- Carrot weed
- Funnel weed

This yellow dye material (sodium dinitro-orthocresylate) is the safest herbicide which can be used on lawns. Although messy to handle, DNOC has the advantage of faintly colouring the lawn so that the area treated is quite obvious. The weeds listed above are readily controlled but other annual and perennial weeds are unaffected. A number of applications can be made, if necessary, at weekly intervals without damaging the lawn.

Fig. 6.—Small patches of perennial grasses in a lawn are often most easily handled by completely removing the area and returfing. Painting the individual leaves with a 2,4-DPA solution is also effective but the herbicide must be kept away from the turf.
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PROBLEM
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**Mixture.**—Six fluid ounces of 30 per cent. DNOC dissolved in 3 gallons of water is sufficient to treat 100 square yards. The addition of a teaspoonful of sulphate of ammonia per gallon of solution increases the effectiveness of the treatment.

3. 2,2-DPA—Kikuyu
   - Paramatta
   - Paspalum
   - Water couch

2,2-DPA is harmful to all grasses, and cannot be used selectively on a lawn. Where only small infestations are present the affected area can be carefully treated with a solution made by dissolving two ounces of 2,2-DPA (85 per cent.) in one gallon of water. An old paint brush is ideal for this purpose and where the weeds stand above the turf the chemical can often be applied without touching the lawn grass. A second application is often required, particularly with paspalum.

The alternative to this treatment is to remove the affected area completely and returf.

4. D.S.M.A.—Crabgrass

D.S.M.A. has proved effective for the control of crabgrass in lawns. It only acts on plants present at the time of spraying, and seedlings which appear later will not be affected by the treatment. For this reason more than one spraying is usually required during the summer period.

A suitable mixture is made by dissolving one ounce of 80 per cent. D.S.M.A. in one gallon of water and this is sufficient to treat 30 square yards. (This is equivalent to an application of 12 pounds of 80 per cent, D.S.M.A. per acre). The addition of a small quantity of wetting agent, such as a household detergent, helps the chemical stick to the leaf.

Young plants are more readily killed than well established plants, so that control measures should be undertaken as soon as a general emergence has taken place. The area treated should be inspected three weeks after the initial application, and if the plants have not been killed, or have commenced to make new growth, a second treatment should be applied.

For well established plants, a second application is often needed.

A number of advantages are obtained if the chemical is applied through a high volume boom spray unit. However careful hand spraying can give the same results. Because the chemical acts against the leaf of the plant, it is not advisable to spray immediately after mowing. It is also best to water the lawn the day before the herbicide is applied, so that the treatment will have the maximum time possible to take effect before the next watering.

Spraying during the heat of the day increases the effect on the weed but the lawn is also likely to be scorched. On the other hand spraying during early morning or late afternoon is less likely to affect the turf even though the reaction of the crabgrass to the chemical is slower.

When the weeds are large it may be an advantage to spray in the heat, accepting the fact that the lawn will be scorched but will be back to normal in 10 to 14 days.

D.S.M.A. can be used on couch, buffalo and Queensland blue lawns but is very severe on bent, fescue and Kentucky blue grasses.

5. Simazine—Winter grass
   - Annual clovers

Simazine has given very good pre-emergence control of a number of annual winter growing weeds, particularly winter grass. A thin layer of herbicide is applied to the soil surface and this kills the weed seeds as they germinate. A suitable mixture is made by dissolving one ounce of 50 per cent. Simazine in 3 gallons of water; this is sufficient to treat 100 square yards. Great care is required to obtain an even application and it is well worthwhile to mark off convenient areas with string. The treatment should be applied immediately the first plants of winter grass are seen, this is usually during April or early May.

Mowing immediately before the chemical is applied makes it easier for the material to reach the soil surface.

The herbicide is gradually washed out of the surface layer and a second treatment is often desirable 10 to 12 weeks after the initial application. This should be made wherever a general germination of the weed is seen.

Simazine should not be applied to bent, Queensland blue couch, fescue and Kentucky blue grasses.
6. 2,4-D—Annual clovers
Annual birdsfoot trefoil
Capeweed
Burr trefoil
Flatweed
Funnel weed
Onehunga weed
White clover
Starwort
Fleabane

There are two common types of 2,4-D used for weed spraying. These are the amine and ester derivatives, and although the latter type is the more effective, some caution must be exercised when using it, because of its volatility.

Where weeds growing near garden areas are to be sprayed, the amine should be used, while for areas such as playing fields, the ester type is preferred.

Rate.—Three gallons of water containing 1 fluid ounce of 50 per cent. 2,4-D is sufficient to treat 100 square yards. If the plants are not dead within two or three weeks a second application can be given. Care should be taken to prevent the spray drifting into garden areas. Spray equipment should be thoroughly washed immediately after use.

7. 2,4,5-T—Annual clovers
White clover

Clovers are most readily killed with 2,4,5-T. However it is not as effective as 2,4-D against other common lawn weeds. The same rate of application as with 2,4-D is used, namely 1 fluid ounce of 50 per cent. in three gallons of water for each 100 square yards of lawn. The same precautions mentioned in relation to hormone-like herbicides must be exercised when using 2,4,5-T.

IN BRIEF
• Know the name of the weed. This can be obtained from “Identification of Weeds in Lawns” (see p. 447) or by forwarding a specimen to the Department of Agriculture.
• Check Table 1 for the herbicide recommended for the control of the weed involved.
• Read the section of the text describing the use of the recommended herbicide. Precautions and rates of application are given.
• Read Table 2 to find out where the herbicide can be obtained and the trade name under which it is sold.

TABLE 1
COMMON WEEDS FOUND IN LAWNS AND THE RECOMMENDED HERBICIDE FOR THEIR CONTROL. THE TEXT SHOULD BE CONSULTED CONCERNING PRECAUTIONS IN APPLYING THE TREATMENT. IN COLUMN 3 THE HERBICIDES ARE LISTED IN ORDER OF PREFERENCE

<table>
<thead>
<tr>
<th>WEED</th>
<th>BOTANICAL NAME</th>
<th>HERBICIDE</th>
<th>TIME TO SPRAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual birdsfoot trefoil</td>
<td>Lotus spp.</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Annual clovers</td>
<td>(Trifolium spp.)</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Burr trefoil</td>
<td>Medicago denticulata</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Capeweed</td>
<td>Cryptostemma calendula</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Carrot weed</td>
<td>Cotula australis</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Crabgrass</td>
<td>Digitaria sanguinalis</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Flatweed</td>
<td>Hypochaeris spp.</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Fleabane</td>
<td>Erigeron spp.</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Funnel weed</td>
<td>Cotula turbinate</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Guildford grass</td>
<td>Romules rosea</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Kikuyu grass</td>
<td>Pennisetum clandestinum</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Kyllinga weed</td>
<td>Kyllinga intermedia</td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Moss</td>
<td></td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Native wood sorrel</td>
<td></td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Nut grass</td>
<td></td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Autumn or winter.</td>
</tr>
<tr>
<td>Onelunga</td>
<td></td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Winter.</td>
</tr>
<tr>
<td>Parramatta grass</td>
<td></td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Winter.</td>
</tr>
<tr>
<td>Paspalum grass</td>
<td></td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Winter.</td>
</tr>
<tr>
<td>Scaly Sedge</td>
<td></td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Winter.</td>
</tr>
<tr>
<td>Starwort</td>
<td></td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Winter.</td>
</tr>
<tr>
<td>Water couch</td>
<td></td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Winter.</td>
</tr>
<tr>
<td>White clover</td>
<td></td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Winter.</td>
</tr>
<tr>
<td>Winter grass</td>
<td></td>
<td>DNOC, 2,4,5-T or 2,4-D</td>
<td>Winter.</td>
</tr>
</tbody>
</table>

Not selective.
TABLE 2

The distributors shown have indicated that the herbicides listed are available in small packs suitable for home garden use. Column 5 shows the amount of chemical which should be dissolved in three gallons of water to spray 100 square yards.

<table>
<thead>
<tr>
<th>HERBICIDE</th>
<th>TRADE NAME</th>
<th>DISTRIBUTOR</th>
<th>CONCENTRATION</th>
<th>QUANTITY TO 3 GALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNOC .....</td>
<td>Nocweed D</td>
<td>Dawson Harrison Ltd.</td>
<td>%</td>
<td>6 fl. oz.</td>
</tr>
<tr>
<td>2,2-DPA</td>
<td>Nocweed D</td>
<td>Lanes Pty. Ltd.</td>
<td>30</td>
<td>6 fl. oz.</td>
</tr>
<tr>
<td></td>
<td>Dowpon</td>
<td>Dawson Harrison Ltd.</td>
<td>85</td>
<td>6 oz.</td>
</tr>
<tr>
<td></td>
<td>Dowpon</td>
<td>Lanes Pty. Ltd.</td>
<td>85</td>
<td>6 oz.</td>
</tr>
<tr>
<td></td>
<td>Graypon</td>
<td>David Gray &amp; Co.</td>
<td>85</td>
<td>6 oz.</td>
</tr>
<tr>
<td></td>
<td>Propon</td>
<td>Agricultural Products</td>
<td>85</td>
<td>6 oz.</td>
</tr>
<tr>
<td></td>
<td>Terrapon</td>
<td>Barrow Linton &amp; Co.</td>
<td>85</td>
<td>6 oz.</td>
</tr>
<tr>
<td></td>
<td>Wilpon</td>
<td>Terra Trading Co.</td>
<td>85</td>
<td>6 oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wilcox Mofflin Ltd.</td>
<td>85</td>
<td>6 oz.</td>
</tr>
<tr>
<td>DSMA</td>
<td></td>
<td>David Gray &amp; Co.</td>
<td>80</td>
<td>3 oz.</td>
</tr>
<tr>
<td>Mercury Compound</td>
<td>David Gray’s Crabgrass Killer</td>
<td>Dawson Harrison Ltd.</td>
<td>22</td>
<td>6 fl. oz.</td>
</tr>
<tr>
<td>2,4-D ester</td>
<td>Mothar 20</td>
<td>Chemicals</td>
<td>2 oz. plus 1 oz.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blue Cross 2,4-D ester</td>
<td>Agricultural Products</td>
<td>40</td>
<td>1 1/2 fl. oz.</td>
</tr>
<tr>
<td></td>
<td>Clover Killer</td>
<td>David Gray &amp; Co.</td>
<td>40</td>
<td>1 1/2 fl. oz.</td>
</tr>
<tr>
<td></td>
<td>Ester 40</td>
<td>Dawson Harrison Ltd.</td>
<td>40</td>
<td>1 1/2 fl. oz.</td>
</tr>
<tr>
<td></td>
<td>Lawn Weedkiller</td>
<td>Lanes Pty. Ltd.</td>
<td>50</td>
<td>1 1/2 fl. oz.</td>
</tr>
<tr>
<td>2,4-D amine</td>
<td>Nocweed E</td>
<td>Agricultural Products</td>
<td>50</td>
<td>1 1/2 fl. oz.</td>
</tr>
<tr>
<td></td>
<td>Blue Cross 2,4-D amine</td>
<td>Wilcox Mofflin Ltd.</td>
<td>50</td>
<td>1 1/2 fl. oz.</td>
</tr>
<tr>
<td></td>
<td>Hormex</td>
<td>Lanes Pty. Ltd.</td>
<td>50</td>
<td>1 1/2 fl. oz.</td>
</tr>
<tr>
<td></td>
<td>Nocweed A</td>
<td>Dawson Harrison Ltd.</td>
<td>50</td>
<td>1 1/2 fl. oz.</td>
</tr>
<tr>
<td>2,4,5-T</td>
<td>Blackberry Killer</td>
<td>Dawson Gray &amp; Co.</td>
<td>40</td>
<td>1 1/2 oz.</td>
</tr>
<tr>
<td></td>
<td>David Gray’s 2,4,5-T</td>
<td>Lanes Pty. Ltd.</td>
<td>80</td>
<td>1 1/4 fl. oz.</td>
</tr>
<tr>
<td></td>
<td>Nocweed 2,4,5-T</td>
<td>Wilcox Mofflin Ltd.</td>
<td>40</td>
<td>1 1/4 fl. oz.</td>
</tr>
<tr>
<td></td>
<td>Super Trimex</td>
<td>Barrow Linton &amp; Co.</td>
<td>50</td>
<td>1 oz.</td>
</tr>
<tr>
<td>Simazine</td>
<td>Gesatop</td>
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EXPORT LAMB COMPETITION

The Royal Agricultural Society is again conducting an Export Lamb competition in conjunction with the Australian Meat Board this year.

Some variations have been made to the conditions of last year’s competition. The main one is that the second division for lambs delivered to the killing works from October 1 to December 31 has been deleted and the competition is now for lambs submitted from July 1 to September 30.

The number of lambs per entry has reverted to three, and as before, the grower may submit five, the best three to be selected at the works.

The classes are similar to those of last year:

Class 1.—Lambs sired by Southdown rams.

Class 2.—Lambs sired by other British breed rams.

There will again be no champion or State awards and after judging here the lambs will be shipped to London for display in conjunction with the Meat Board’s sales promotion campaign.

Pamphlets with full particulars and entry forms are available from the Royal Agricultural Society, the Australian Meat Board, stock agents and the regional and central offices of the Department of Agriculture.
insect control plus crop protection

where pest problems are complex, Rogor 40 is the insecticide of choice controlling a wide range of insect pests including aphids, mites and fruit fly. The effectiveness of Rogor 40 has been proved in widespread commercial use throughout the world.

fewer applications are needed to maintain insect control. The double action of Rogor 40 ensures both initial control and prolonged systemic protection.

safety nearer harvest and safety in use have been established over four years successful field experience.

systemic action for better control
Rogor 40 is absorbed and carried to all parts of the foliage. This systemic action not only ensures control of those parts of the plant not covered by the spray but also gives protection to new growth formed after spraying.

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