



Department of
Primary Industries and
Regional Development

Journal of the Department of Agriculture, Western Australia, Series 3

Volume 6
Number 1 *January-February, 1957*

Article 11

1-1957

Weeds of Western Australia - The Blackberry or Bramble (*Rubus fruticosus* L.)

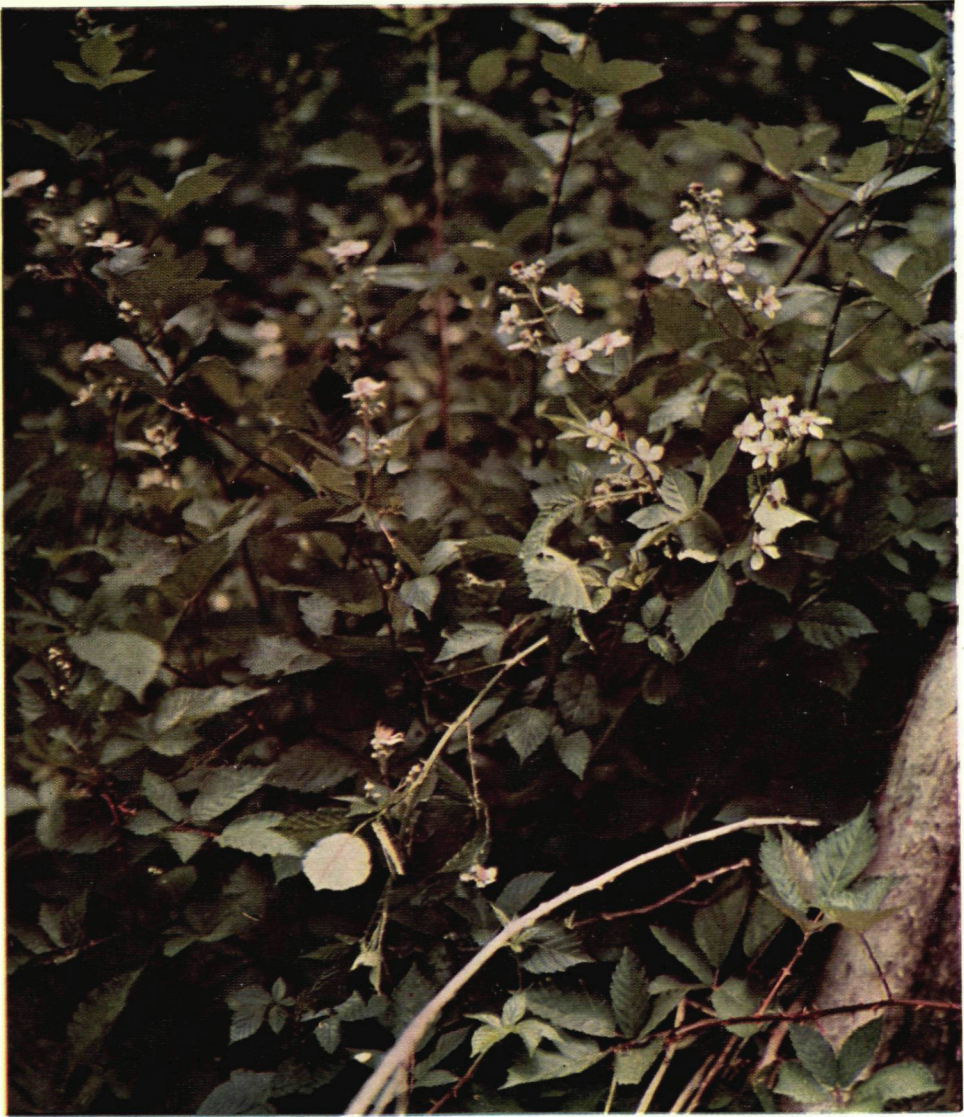
G. R. W. Meadly

Follow this and additional works at: https://library.dpird.wa.gov.au/journal_agriculture3

Recommended Citation

Meadly, G. R. W. (1957) "Weeds of Western Australia - The Blackberry or Bramble (*Rubus fruticosus* L.),"
Journal of the Department of Agriculture, Western Australia, Series 3: Vol. 6: No. 1, Article 11.
Available at: https://library.dpird.wa.gov.au/journal_agriculture3/vol6/iss1/11

This article is brought to you for free and open access by the Agriculture at Digital Library. It has been accepted for inclusion in *Journal of the Department of Agriculture, Western Australia, Series 3* by an authorized administrator of Digital Library. For more information, please contact library@dpird.wa.gov.au.



BLACKBERRY

(*Rubus fruticosus* L.)

The blackberry or bramble is native to Europe but is now naturalised in many countries. At first cultivated for edible fruits, it has now become established on hundreds of acres of good land in the higher rainfall areas of the South-West. Although favouring the fertile valleys, plants also grow vigorously on hillsides.

WEEDS of Western Australia

By **G.R.W. MEADLY** M.Sc.

Officer in Charge, Weeds and Seeds Branch

THE BLACKBERRY OR BRAMBLE (*Rubus fruticosus* L.)

THE blackberry is regarded by many people as the source of a tasty fruit prized for jam-making, but it is a problem to the man on the land in many parts of the world. It occurs extensively in south-eastern Australia, including Tasmania, and is also abundant in parts of New Zealand.

Early establishment in Western Australia was associated with the timber industry. Many large areas correspond with old camps and mill sites where doubtless canes were planted with a view to gathering the fruits. These sites were often located in moist valleys favourable for the growth of the bramble which has spread along the valleys and also up the hillsides until now hundreds of acres of fertile land are occupied.

It is apparent that much of the early spread and even some of the recent distribution has been designed rather than accidental. Most of the spread in latter years, however, has occurred as a result of natural agencies. Propagation by means of seeds is supplemented by vegetative reproduction—both suckering and layering. A single plant can spread to occupy a large area without any seeds being allowed to form. Seeds and canes carried by running water are often deposited under favourable conditions some considerable distance from the parent plant. Birds are fond of the berries and have been responsible for widespread dispersal of seeds. Blackberry is a frequent roadside weed and roots are carried readily by road-grading equipment.

The behaviour of the plant so far indicates that, with the exception of the higher rainfall pockets and moist valleys

such as at Jarrahdale, Dwellingup and Collie, blackberry is not spreading to any great extent in the area north of a line from Bunbury to Albany. Southward, however—especially in the heavier rainfall areas including Manjimup, Bridgetown, Greenbushes, Balingup, Nannup and Margaret River—blackberry has become thoroughly established and only active control measures are preventing it from spreading.

DESCRIPTION

The vernacular name needs no explanation as the berries, which change in colour from red to black when ripe, are well known to most people.

The blackberry, a member of the rose family, is a vigorous perennial reaching a height of ten feet or more and frequently forming a dense thicket with a strongly-developed rooting system. The stems, leaf-stalks and midribs are armed with strong, hooked thorns while the leaves are divided into three, or sometimes five, separate toothed lobes, as shown in the illustration. The flowers have white or pink petals and the appearance of a miniature briar rose. The fruits consist of numerous globular drupes, at first red but finally black in colour.

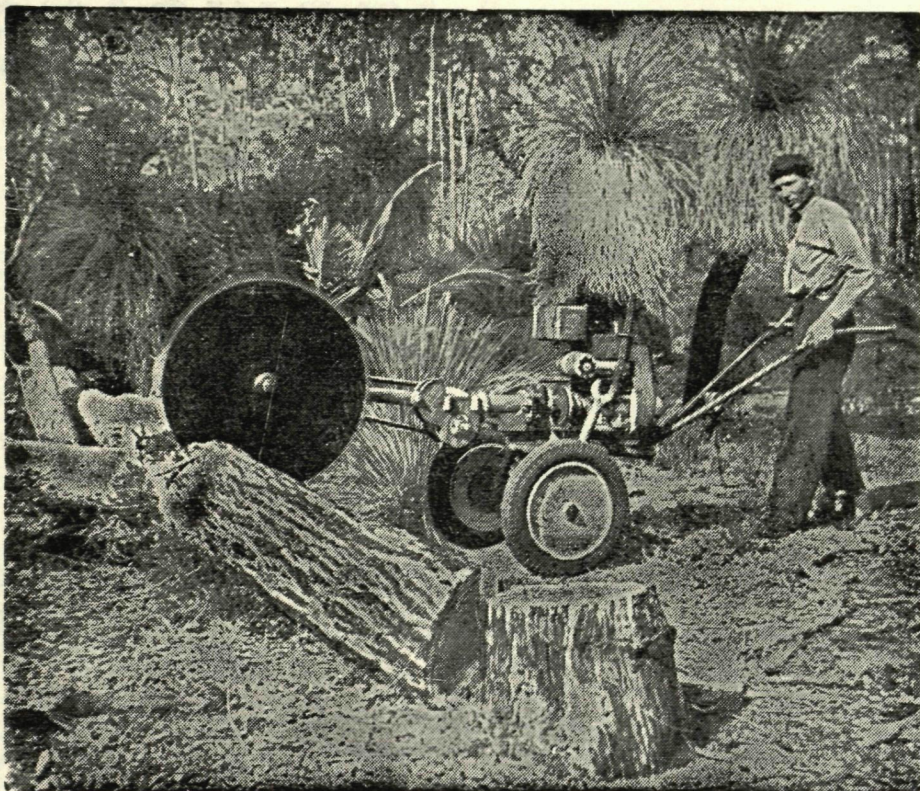
Blackberry is a primary noxious weed for the following road districts—Albany,



BLACKBERRY OR BRAMBLE
(*Rubus fruticosus* L.)

A—Flowering and fruiting branch; B—Leaf; C—Flower; D and E—Fruits

From a pen-drawing by C. A. Gardner, Government Botanist.



NEW DENNIS 10 h.p. TWIN

AUSTRALIA'S MOST MODERN POWER SAW

MOBILE DRIVEN

Has that power, speed and performance required to carry that 42-inch blade so essential to measure requirements of....

TIMBER INDUSTRY :: CONTRACT CLEARING :: FENCING
5 h.p. CIRCULAR Suitable for the farmer

Both have many auxiliary purposes and attachments, including POST-HOLE BORER, POST-HOLE DIGGER and DRAG ATTACHMENT, if necessary

See Demonstrations at Factory,
Maylands

Dennis Power Saws

38 HARDY ROAD, MAYLANDS

Telephones UA 1032, UA 4519

It's FREE

Write now for a coloured brochure on the NEW Dennis Power Saws.

Also gives much valuable information on the handling and maintenance of power saws.

Fill in this coupon.

Please send me New Dennis Saw brochure

Name.....

Address.....

J. of A. Nov./Dec.

Please mention the "Journal of Agriculture, W.A.," when writing to advertisers

The *BIG* Lincwelder 250 BT

COMPARE THESE FEATURES WITH ANY OTHER FARM GENERATOR

1. Easy-to-use, plug-in current control to new-type resistance grid for cool, efficient operation.

2. Voltage output control provides wide welding current range and enables exact voltage selection for 32-volt jobs.

3. Larger welding range (40-250 amps.) enables fast, high-powered cutting and welding of all thick metal sections with deep-penetration 7/32" electrodes as well as welding sheet metal. D.C. output welds all weldable metals.

4. A flick of this switch and 32-volt current is available for operating power tools, lights or charging batteries.

5. Operates at only 2,500 r.p.m. for simple coupling to tractor or engine—same mounting and shaft dimensions as 200 BT.

6. It's the lowest priced farm generator you can buy with a safe rated output of 250 amps. Costs less than most 200 amp. generators.

EASILY TRAILER OR TRACTOR-MOUNTED TO WELD ANYWHERE

Stocked by all Wesfarmers Agents, Branches and Farmers' Co-ops.



*It has all the features
YOU'VE asked for in a
FARM WELDER*

Lincoln developed the new, BIG Lincwelder 250 BT to answer demands from farmers all over Australia for a powerful, big capacity (40-250 amps.) farm generator. Now it's here—full of new features that make it your most useful farm tool. The big Lincwelder 250 BT will produce smooth, sound welds for even a beginner. It can also be used for battery charging, lighting and operating power tools. Look at the features and you will soon see why you should own a BIG Lincwelder 250 BT.

MAIL COUPON FOR FULL DETAILS

Wesfarmers Tutt Bryant Pty. Ltd.,
Railway Avenue, Bassendean.
Please send me details of the BIG Lincwelder 250 BT without obligation.
NAME _____
ADDRESS _____

If required for school project, tick here ☐

WORLD'S LARGEST MANUFACTURERS OF ARC WELDING EQUIPMENT

Please mention the "Journal of Agriculture, W.A.," when writing to advertisers

Augusta-Margaret River, Balingup, Bridgetown, Bunbury, Busselton, Capel, Collie, Dardanup, Drakesbrook, Greenbushes, Harvey, Manjimup, Nannup, Plantagenet, Preston, and Upper Blackwood, along with the municipalities of Albany and Collie. It is also a secondary noxious weed for the Armadale-Kelmscott Road District.

SIGNIFICANCE

As already indicated, the significance of blackberry depends to a large extent on the viewpoint. To those who pick the fruits for eating, it is a desirable plant, but this is not the opinion of many farmers in the South-West who are concerned about the spread, particularly in the past ten years.

The blackberry is capable of taking possession of land, especially moist fertile soils, to the exclusion of all other growth. It remains relatively dormant during the winter but grows rapidly in the spring and summer. Large bushes soon develop from fragments of cane or seedlings, and extensive dense thickets ten feet or more in height are not uncommon. An old stable and loft near Manjimup is clothed in blackberries to a height of 30 feet.

Although much of the growth occurs in forest country and along roadsides, appreciable tracts of cleared land capable of being productive are infested; the grazing area of many pastures has been reduced as the plants have extended and the presence of the weed in orchards is a further problem for the fruit grower.

Blackberry thickets can also harbour vermin and increase the fire hazard, besides being responsible for torn clothing and severe scratches if not approached with care.

CONTROL

Research into control measures has been undertaken in many countries where the plant is a pest. In 1940 a series of experiments involving cultural and chemical methods were commenced at Bridgetown and Greenbushes. The results showed that where land can be brought under the plough and perennial pasture species established, this is the most satisfactory method. The appropriate pasture species depend mainly on the soil moisture

content during the summer months but *paspalum*, *Kikuyu* grass, *Phalaris tuberosa*, perennial ryegrass, white clover and subterranean clover can be used to advantage. The young blackberry shoots must compete with the pasture and are also eaten off to a certain extent by cattle in the course of grazing. Any canes that make progress should be slashed.

This method, although practicable under some conditions, cannot be employed along roadsides, in gullies or on steep hillsides, and for such places, along with timbered country, for many years we have thought in terms of an effective chemical. In 1940 a range of chemicals was tried including sodium arsenite, acid sodium arsenite, arsenic pentoxide and sodium chlorate. Sodium chlorate was the most effective but after a period of three years, materials and labour had cost more than £25 per acre and some weak plants still remained. Chemicals were much more effective on areas which carried perennial grasses such as *paspalum* and where stock were grazing.

No further progress was made with chemical control measures until the advent of the hormone-like herbicides. These manufactured substances have most of the properties of the natural plant hormones including the ability to move through the plant tissue and penetrate to greater depths than herbicides such as sodium chlorate and arsenic pentoxide which have mainly a contact action. The plants react more slowly to the hormone-like substances but the final result is more severe.

The 2,4-D type, the first to become available, caused little permanent effect but when supplemented by 2,4,5-T the reaction was much more severe. Commercial lines for blackberry spraying contain either an ester of 2,4,5-T as the active chemical or, alternatively, mixed esters of 2,4-D and 2,4,5-T. Experimental work and field experience in this State indicate that under our conditions 2,4,5-T alone gives the better results per unit of cost.

The recommended rate of application is three to four pounds of acid equivalent per acre. This is higher than that usually advocated in the Eastern States but is based on quite extensive trials and experi-



Fig. 1. — Blackberry taking possession of a fertile valley near Bridgetown. Spraying to prevent spread in this area has commenced

ence. It has been found that where the water table is high and the plants are shallow rooted, they are killed much more readily than when growing on hillsides and having deep rooting systems. Plants with large soft leaves usually respond more readily than those having small harsh leaves and there is some evidence that dust on the leaves, reduces the effectiveness of the treatment. Plants that have been dwarfed by spraying with other chemicals or have a restricted amount of foliage due to slashing or burning are less susceptible to 2,4,5-T.

For one reason or another much of the blackberry being treated in Western Australia is not highly susceptible and, in the main, the relatively high three to four pound rate of acid equivalent per acre is used.

A complete coverage of the foliage and canes with the solution is most important, and special long "blackberry wands" enable the centres of quite large bushes to be sprayed effectively. This cover can be obtained with 200 gallons of solution per acre of blackberries. For moderate-sized bushes and scattered infestations a knapsack spray pump is satisfactory but with thickets requiring deep penetration, a power unit capable of giving a pressure of 200 lb. per square inch is desirable.

The time of application is important. Best results are usually associated with mid-summer spraying coinciding with

flowering and fruit formation. Presumably this is associated with increased downward translocation. Although February and March could be regarded as the optimum months, good results have also followed January and April application. Where the necessity arises, therefore, a programme can be extended over three to four months. After spraying during this period there is little regrowth before the following spring and no necessity for respraying until the corresponding time the following year. In cases where spraying has been undertaken in November, however, a copious regrowth has appeared by the following February or March.

Only on a few occasions under very favourable conditions have blackberry plants been destroyed with a single treatment. Applications in several successive seasons are usually necessary but each is of lesser magnitude than the preceding. As with other chemical and cultural methods, vigorous pasture species along with grazing by cattle are very useful supplementary factors.

There is a strong tendency to burn the plants soon after they have dried, within a few weeks of spraying. Burning at this stage is most inadvisable and can nullify the effects of the spraying. In many cases, however, it is necessary to destroy the canes in order to facilitate further spraying and a fire is the cheapest and most

Fig. 2.—Dry canes at Manjimup following spraying in March, 1956. Some regrowth could be expected after the photograph was taken in November, 1956. Competition from the pasture and grazing of the young shoots by stock will assist control



practical method. Investigations in progress indicate that burning should not be undertaken before the beginning of November. It would appear that the spray has then taken full effect. Any shoots present are scorched, and subsequent regrowth is usually at an appropriate stage for spraying by the following February.

During the past two years extensive spraying programmes have been undertaken in the South-West, some 200 acres being treated in the Manjimup district alone. These programmes have been based on co-operation between the Department

of Agriculture, Agriculture Protection Board, local authorities, farmers and Government Departments such as Forests and State Saw Mills. Detailed surveys have been undertaken to assess the size of the projects and enable planning to be carried out on a sound basis.

The necessary finance has been provided locally, either by the individual farmers or by local rating. By far the best results have followed a district approach to the problem, the plants being treated on a face irrespective of whether they occur on private, public or government land. Weeds



Fig. 3.—Bushes should not be burnt during the summer spraying. If burning is desirable to facilitate further spraying it should not be carried out before the spring



Fig. 4.—Blackberry to a height of 12ft. extended to a distance of 15ft. each side of this drain. Following spraying in February, 1955, and March, 1956, there was no growth in November, 1956, when the photograph was taken

do not respect boundaries and much of the value of the work is lost if the blackberry is sprayed on one side of a fence and neglected on the other.

The Agriculture Department assisted in an advisory and organising capacity while the Agriculture Protection Board has supplied spraying equipment without charge and made chemical available at a reduced price. In some districts work has been carried out on behalf of farmers, local authorities and Government Department's by the Agriculture Protection Board's mobile spraying units, the cost being met by the parties concerned. These four-wheel-drive vehicles fitted with spraying equipment and towing trailers carrying the 2,4,5-T solution are capable of traversing most of the difficult country on which blackberry occurs.

Control of some of the large thicket areas extending over many acres, at first appeared hopeless, but good progress has been made since tracks for the spraying units have been formed by means of bulldozers, thus enabling penetration by the spray. A few years ago the blackberry held the initiative but during the past two years, in the districts where 2,4,5-T has been used systematically, there has been a substantial decrease.

To conclude with a warning—2,4,5-T is not poisonous, but will affect many cultivated plants, including fruit trees. Tomatoes, grapevines and members of the cabbage family are particularly susceptible. Care should be taken not to allow spray to drift on to such plants and, owing to the difficulty of cleaning spraying equipment, it is advisable to keep a knapsack pump for the use of such chemicals only.

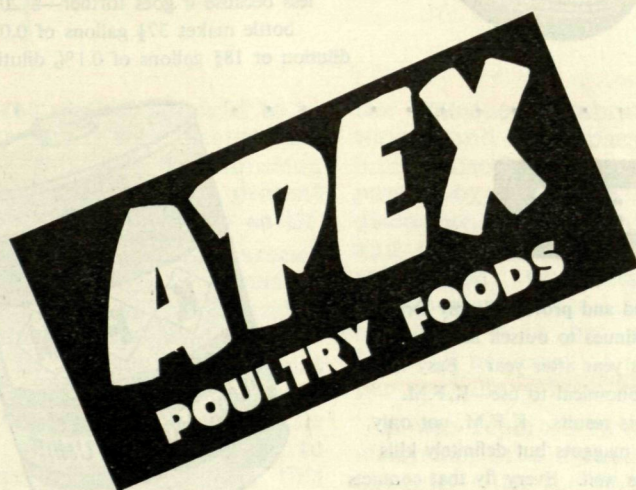
FREE SERVICE TO FARMERS

Do you know that the Department of Agriculture provides a comprehensive service of advice and technical assistance to farmers, free of charge?

When in need of advice, get in touch with your District Officer whose name and headquarters township will be found in the list of Departmental personnel on Pages 2 and 3.

These officers are there to help you and will make personal visits to your property to assist with on-the-spot advice. In addition, they will, where necessary, arrange for the services of specialist officers—all without cost to you.

ALWAYS ON TOP!



Manufactured by:

E. J. FRY & CO. LTD.

W 3354 - - - - - 3 Howard Street, Perth. BA 5933

Deadly Double!

WHEN THE FLY IS ABOUT



DIELSPRAY

15% Dieldrin Concentrate—the most modern, efficient and economical blowfly preventive spray available. Protects sheep for 8-12 weeks. Dielspray costs less because it goes further—a 20 oz. bottle makes 37½ gallons of 0.05% dilution or 18½ gallons of 0.1% dilution.

K.F.M.

This tried and proven Blowfly Dressing still continues to outsell all other fly dressings year after year. Easy to mix—economical to use—K.F.M. really gets results. K.F.M. not only kills the maggots but definitely kills the fly as well. Every fly that contacts a K.F.M. treated area must die.



AVAILABLE FROM YOUR LOCAL DISTRIBUTOR

S.O.S.33.

WILCOX MOFFLIN LTD.

SOUTH TERRACE, FREMANTLE — — BRANCHES AND AGENTS

Please mention the "Journal of Agriculture, W.A.," when writing to advertisers