1-1-1960

Powdery mildew or oidium of grapes

H L. Harvey

Follow this and additional works at: http://researchlibrary.agric.wa.gov.au/journal_agriculture4

Recommended Citation
Harvey, H L. (1960) "Powdery mildew or oidium of grapes," Journal of the Department of Agriculture, Western Australia, Series 4: Vol. 1 : No. 8 , Article 15.
Available at: http://researchlibrary.agric.wa.gov.au/journal_agriculture4/vol1/iss8/15
IMPORTANT DISCLAIMER

This document has been obtained from DAFWA's research library website (researchlibrary.agric.wa.gov.au) which hosts DAFWA's archival research publications. Although reasonable care was taken to make the information in the document accurate at the time it was first published, DAFWA does not make any representations or warranties about its accuracy, reliability, currency, completeness or suitability for any particular purpose. It may be out of date, inaccurate or misleading or conflict with current laws, polices or practices. DAFWA has not reviewed or revised the information before making the document available from its research library website. Before using the information, you should carefully evaluate its accuracy, currency, completeness and relevance for your purposes. We recommend you also search for more recent information on DAFWA's research library website, DAFWA's main website (https://www.agric.wa.gov.au) and other appropriate websites and sources.

Information in, or referred to in, documents on DAFWA's research library website is not tailored to the circumstances of individual farms, people or businesses, and does not constitute legal, business, scientific, agricultural or farm management advice. We recommend before making any significant decisions, you obtain advice from appropriate professionals who have taken into account your individual circumstances and objectives.

The Chief Executive Officer of the Department of Agriculture and Food and the State of Western Australia and their employees and agents (collectively and individually referred to below as DAFWA) accept no liability whatsoever, by reason of negligence or otherwise, arising from any use or release of information in, or referred to in, this document, or any error, inaccuracy or omission in the information.
Powdery Mildew or Oidium of Grapes

By H. L. HARVEY, B.Sc. (Agric.), Senior Plant Pathologist

POWDERY mildew or oidium, is a disease which is always present to a greater or lesser extent in grapevines in Western Australia. In seasons favourable for its development it stunts the growth of shoots and leaves and may seriously reduce fruit yields and quality. Most of our commonly-grown varieties are quite susceptible to the disease, but for the reason that currants are the most extensively grown variety, the overall losses are greatest in this variety.

In the early stages of infection, small light green to yellow spots may appear on the leaves. Later the disease becomes conspicuous as a dirty white powdery growth on all green parts including leaves (Fig. 1) shoots and fruit (Fig. 2). The mildew may be rubbed off easily and beneath it on the affected part, a dark mark with a web-like pattern may be seen (Fig. 4). Second-year canes often show these dark patches as a result of infection during the previous year. Fruit that is blemished in this way is unattractive on the local market and unacceptable for export. Furthermore, affected fruit may split (Fig. 3) and thus be rendered useless. "Shelling" or the drying up of the pulp may also follow cracking and is especially damaging in dried vine fruits such as currants.

CAUSE

Powdery mildew is caused by the fungus Uncinula necator (Schw.) Burr., (Oidium tuckeri) which spreads rapidly during
showery or overcast weather when conditions are cooler than normal in summer. Fortunately, in our commercial vineyards, this combination of weather conditions occurs only infrequently and consequently the occurrence of powdery mildew in severe form is correspondingly infrequent. This is illustrated by the fact that between the serious outbreaks of 1947-48 and 1959-60, there were 12 years of comparative freedom from disease.

On the other hand it occurs more frequently in home gardens where sheltered conditions and rank growth increase the powdery mildew risk. This is the result of the practice in many cases, of encouraging extensive foliage growth on trellises for shade purposes in the garden.

**CONTROL**

The main method of controlling this disease is by prevention, rather than by attempting to cure the disease after it has become established. Dusting sulphur, or alternatively spraying sulphur (e.g., Wet-sul, Cosan, Spersul, Microtomic sulphur,
Fig. 4.—Dark, web-like marks on a leaf petiole as a result of powdery mildew attack.

etc.), should be applied as a preventive measure commencing early in the season—
(a) when shoots are 2 in. to 4 in. long;
(b) three weeks later;
(c) immediately after fruit set.

Note.—It is convenient to incorporate spraying sulphur with the Ziram or Thiram sprays which are recommended at these stages for the control of black spot (Anthracnose).

(d) Any subsequent applications of sulphur would be dictated by weather conditions. For instance, whenever showery, overcast, relatively cool weather occurs during the summer, applications should be repeated at about ten-day intervals. Spraying sulphur and dusting sulphur are equally effective but in commercial vineyards the foliage has become dense about this time of year and power dusting probably gives better penetration and coverage than sprays. Dustings at 5 to 10 lb. per acre should be made at the first break in the weather, preferably in calm, dry weather.

Sulphur protects vines from powdery mildew, but will not eradicate it, once it has become established. Therefore, it is emphasised that adequate control can only be achieved by adhering strictly to the recommended schedule. To delay the early treatments or to apply sulphur too infrequently during favourable summer weather will increase the powdery mildew risk accordingly. It is pointed out that reliance should not be placed on sulphur acting at a distance and that a complete coverage of all green parts is necessary to give efficient protection. Spraying or dusting methods which do not achieve this should be discarded.

CEMENT WASH FOR HESSIAN

The ubiquitous chaff and cement bag can be turned to good account in the construction of outhouses, chicken sheds, feed rooms, etc. The following method which has been used with every success, is both economical and easy to manipulate.

A framework of timber is first of all built up, after which chaff or cement bags are opened out and stretched very tightly over it, being nailed down with % in. clout tacks. Next a mixture is made up as follows: Water 1½ gallons, cement 12 lb., lime 2 lb., salt 1 lb., alum % lb. (In damp weather use one pint less water). Sift the salt and lime together through a fine sieve to thoroughly mix and get rid of any big lumps, add this to the water, and then follow with the cement—stirring while adding—finally add the alum. Apply this mixture immediately with a fairly stiff brush to the stretched bags, first on the outside and then on the inside. Before the mixture sets, but after the initial wetness disappears, apply a second coat to the outside. When this sets the bags will be quite hard and stiff. Subsequent coatings will, of course, make a stronger board.
SULPHATE OF AMMONIA

The World’s Most Popular Nitrogenous Fertilizer — is **ideal** for use “straight,” or in well-balanced mixed fertilizers for all crops. It is entirely safe and its continued and increasing use over a long period in Australia, has made

*SULPHATE OF AMMONIA*

a powerful influence towards **MORE PROFITABLE** primary production.

*SULPHATE OF AMMONIA*

is made in Australia, and is distributed by all major fertilizer companies or their agents.

Use “straight” SULPHATE OF AMMONIA with confidence, and see that all mixed fertilizers you buy contain adequate nitrogen as *Sulphate of Ammonia*.

---

MURESK AGRICULTURAL COLLEGE

*(Department of Agriculture)*

Parents are reminded that applications for 1962 admission to Muresk Agricultural College close on December 31 of this year. A preliminary selection of 1962 entrants is made after the Junior results are available early in 1961.

The successful applicants then continue with Sub-Leaving, or higher studies, in 1961.

Before the course can be commenced students must have attained:

(a) Sub-Leaving Standard in English, Maths, A, Chemistry and Physics (including Magnetism and Electricity).

(b) Junior Standard Bookkeeping.

Should places still exist for 1962 commencement after the preliminary selection early in 1961, they are filled in order of application during 1961, by qualified applicants.

**Duration of Course.**—Two years.

**Fees.**—Approximately £180 per annum covering full residential charges.

**Scholarships.**—Department of Agriculture (3), the “Countryman,” and J. J. Poynton Memorial (2).

**Boarding Allowance.**—Most Muresk students are eligible for the Education Department Boarding Allowance (£50 per annum).

Full details of the College are obtainable from the Principal, Muresk Agricultural College, Muresk, W.A., or the Department of Agriculture, Perth.

*Please mention the “Journal of Agriculture of W.A.” when writing to advertisers*