



Department of
Primary Industries and
Regional Development

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

Volume 3
Number 1 *January-February, 1955*

Article 11

1-1954

Insect pest - vine leaf blister mite

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Recommended Citation

Jenkins, C F.H (1954) "Insect pest - vine leaf blister mite," *Journal of the Department of Agriculture, Western Australia, Series 3*: Vol. 3: No. 1, Article 11.
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INSECT *Pests* AND THEIR CONTROL

By C. F. H. JENKINS, M.A., Government Entomologist

VINE LEAF BLISTER MITE

(Vine Erinose) *Eriophyes vitis* (Pgst.)

THE vine leaf blister mite has been recorded in Western Australia for a number of years, but in the last two seasons it has become very common on backyard vines in the metropolitan area and has appeared in some commercial vineyards. This mite is of European origin, but it has now become established in the United States of America and various other grape-growing countries. It is believed to have reached Australia from America some time during the decade 1910 to 1920 (Froggatt, 1920) and since then it has gradually spread over the continent.

DESCRIPTION AND LIFE HISTORY

The mites are very small and not visible to the naked eye. Under the microscope they appear whitish in colour and quite unlike the better known eight-legged garden mites in structure. Like all mites belonging to this particular family (Eriophyidae), they are elongate in form with only two pairs of legs. The feeding of the mites on the under-surfaces of the vine leaves produces yellowish areas

which soon become raised into blister-like swellings, the cavities on the under-side being filled with felt-like patches of hairs.

These patches are often mistaken by inexperienced growers for some type of fungal disease. The economic importance of the blister mite or the associated erinose (hairy felting) in this State cannot yet be judged, but in other States it has proved of minor importance, especially where routine treatments with sulphur

are applied for fungal diseases (Coombe, 1950) (Anon, 1950) Queensland Agric. & Past. Hand Bk., 1951).

Breeding continues during the spring, summer and early autumn, so that several generations of mites may develop. Before the winter many migrate under the bud scales and there they remain protected until

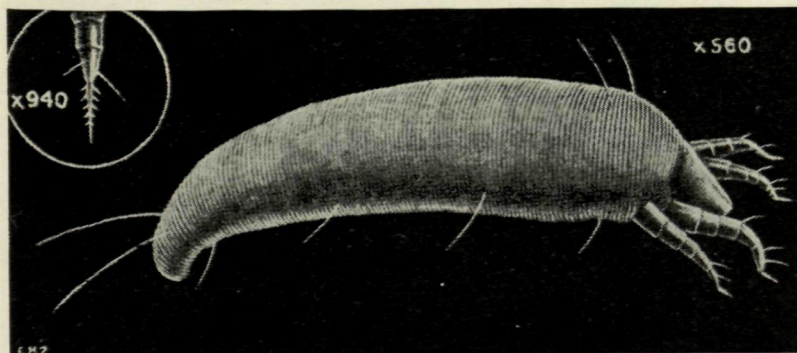


Fig. 1.—The Vine Leaf Blister Mite, greatly magnified. Inset—The underside of the foot

—(Agricultural Gazette of N.S.W.)

it is time to attack the next season's spring growth.

The blister mite should not be confused with the grape rust mite (*Calepitrimerus vitis*) (Nal.) which is prevalent in this State but produces no blister-like formations. The feeding is done mainly on the upper surfaces of the leaves and results in general russetting of the foliage but appears to have little effect upon the health of the vine or the fruit yield.

CONTROL

The general recommendation for dealing with both the mites referred to in this article is the use of lime sulphur spray late in the winter but just before the buds begin to swell. The dilution recommended is lime-sulphur 1 gallon to 10 gallons of water (1 pint to $1\frac{1}{4}$ gallons). After the vines have broken into leaf, control becomes more difficult but dusting with flowers of sulphur when the shoots are a few inches long has proved helpful. Lime-sulphur at 1 gallon to 70 gallons of water and colloidal sulphur 1 lb. to 50 gallons of water have also proved useful in the early stages of attack. Sulphur treatments should not be applied during heat waves as foliage burning may result.

No carefully planned trials have been carried out with the new organic phosphates* such as H.E.T.P. (sold locally as "Hexone"), Parathion ("Phosphone", "Folidol") but these are powerful miticides and may be useful for spring treatments.

Experience in this State has been insufficient to determine varietal susceptibility under local conditions, but the muscats are generally regarded as a particularly susceptible group and currants and sultanas are relatively resistant.

REFERENCES

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Coombe, B. G., 1950, Journ. Dept. Agric. S. Aust., Vol. LIII, No. 7, p. 285.
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Queensland Agricultural and Pastoral Handbook 1951, Vol. III, p. 75.

* Warning.—Organic phosphates are highly toxic to humans and care should be taken not to inhale the spray mist or allow the concentrate to splash on the bare skin. Should this occur, it should be washed off immediately with soap and water.

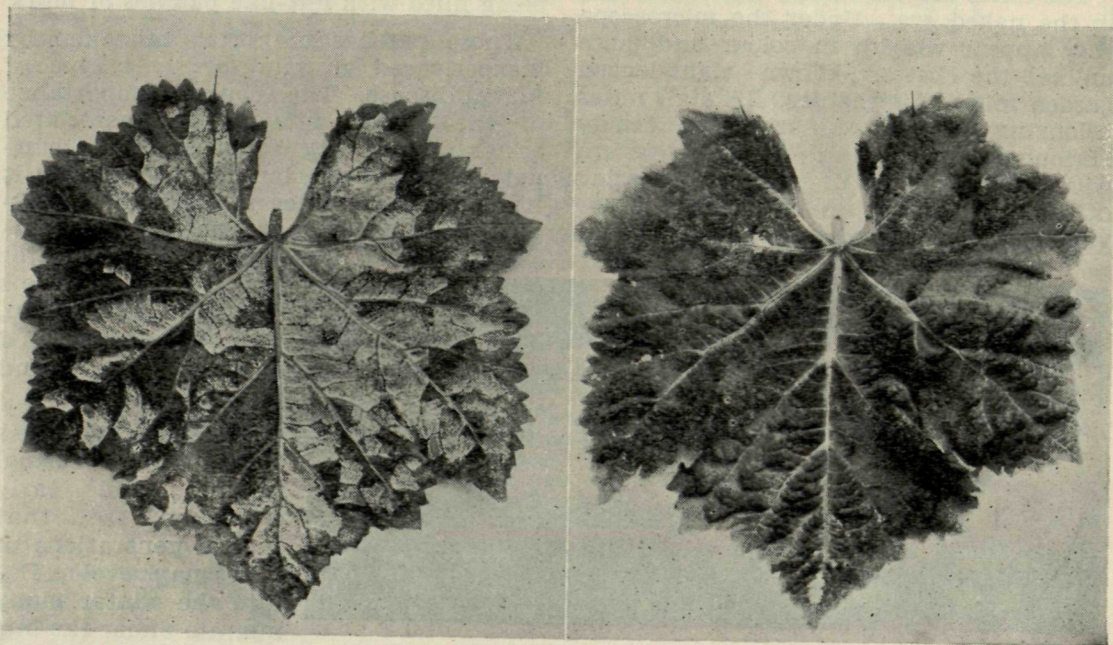


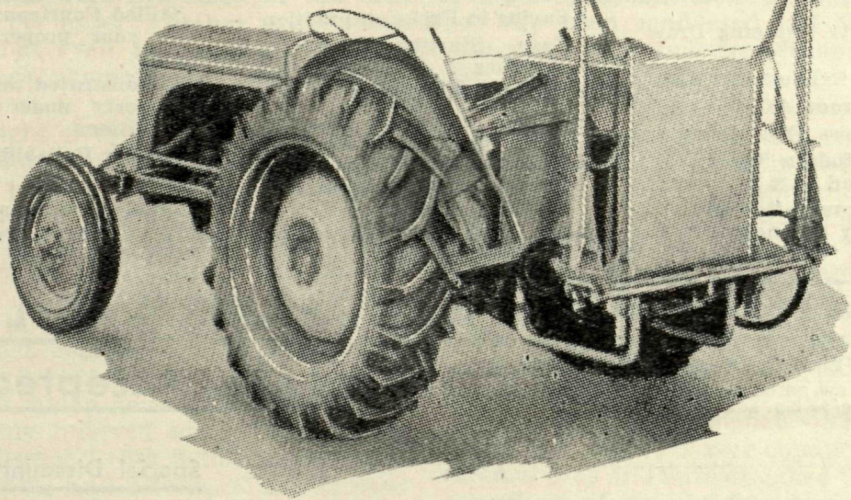
Fig. 2.—Results of infestation by vine leaf blister mite. Left—Felt-like masses of hairs on under-surface of vine leaf. Right—Blistered appearance of upper surface

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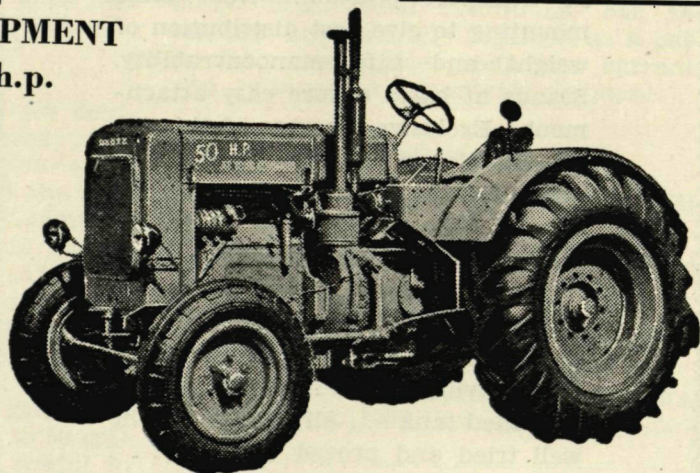
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