

Yellow Clover Aphid in State

pest of alfalfa discovered in California this year
found to be spreading rapidly in Imperial Valley

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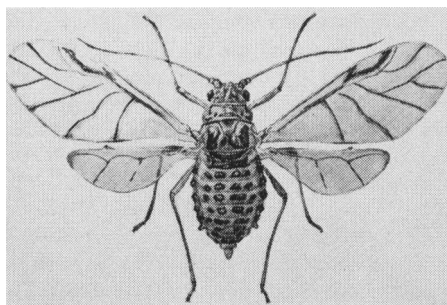
A new pest of alfalfa, the yellow clover aphid — *Therioaphis ononidis* (Kalt.)—has arrived in California. It was first found in the state at San Diego on February 7, 1954 on burr clover. It then appeared early in May at Yuma, Arizona, was found at Bard, California on June 17 and in the Orita district of the Imperial Valley on June 24. At that time it had already injured about a thousand acres of alfalfa. The aphid was found in the Palo Verde Valley about July 1.

While the yellow clover aphid has never before been found in California, it has been reported from many places in Europe, Asia, and Africa, and from northeastern and Middle Western United States. It has not been a serious pest in most of these locations and has been confined to clovers, mostly to red clover. Any injury from it has been overshadowed by pea aphid injury. It has not been reported on alfalfa in the Middle West.

Appearance

This insect is rather small, even for an aphid, and is pale yellow in color, with four rows of black spots on its back. The wings have conspicuously darkened veins. Like most other aphids, the yellow clover aphid has both winged and wingless adult females which produce young without mating. In 1914, a research worker in Lafayette, Indiana reported that this aphid had as many as 17 generations each summer and began reproducing as soon as seven days after birth and produced from 25 to 100 young apiece.

Yellow clover aphids are found chiefly on the lower surfaces of the alfalfa leaves, although individuals may be located on the upper leaf surfaces, in the buds, or even on the stems. Initial attack takes place on the lower

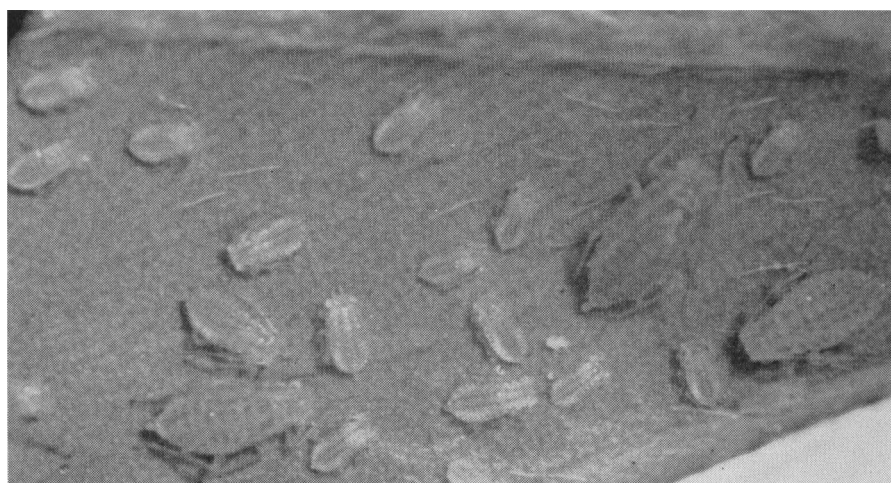


The yellow clover aphid. Drawing reproduced from Illinois Natural History Survey.

Per Cent Reduction of Yellow Clover Aphid, as Compared with the Check, Following Application of Various Insecticides to Infested Alfalfa at Brawley, California, July 8, 1954.

	Permissible to use on alfalfa		Dosage oz. per acre	% reduction 4 days after application
	Hay	Seed		
Systox	No	Yes	3.2	97
Parathion	Yes	Pre-bloom only	3.2	93
Endrin	No	No	3.8	92
Toxaphene	No	Yes	37.8	92
Malathion	Yes	Pre-bloom only	11.3	82
DDT	No	Yes	19.2	61
Perthane	Yes	Yes	19.2	41
Nicotine 40%	Yes	Yes	12.8	25

The yellow clover aphid on an alfalfa leaflet. Greatly magnified.



leaves which soon dry up and fall from the plants, leaving bare stems blackened by the sooty mold fungus that grows on the copious honeydew secretions. Hay made from alfalfa heavily infested with yellow clover aphid is of very low quality.

In mid-July, the yellow clover aphid was found damaging alfalfa in California only in the Bard district, in the Palo Verde Valley, and in the north and east portions of the Imperial Valley.

Commercial control to date has chiefly been by parathion sprays or, on seed crops only, by dust containing 15% toxaphene, 5% DDT, and 40% sulfur.

The aphid is spreading rapidly over the remainder of the Imperial Valley, and its recent rapid rate of spread makes it probable that this aphid will soon be found in other agricultural areas in California.

Back in 1899, a research worker reported that in India this aphid injured alfalfa but did not attack clover. It would seem that in the Imperial Valley, there is a similar condition to the one found in India, with no way to predict whether this insect will be a serious alfalfa pest in other parts of the state or will revert to the condition found in most parts of its range, where it is a minor pest of clovers.

Preliminary results obtained with various insecticides for the control of the yellow clover aphid are shown in the accompanying table. Although a good reduction was obtained with some of these compounds, reinfestation was rapid and none of them held the aphids down for a satisfactory period of time.

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