

# BRIEFS

Short reports on current agricultural research

Possible

## VIRUS DISEASE in European red mite

Examination of diseased European red mites from walnut trees in the San Jose and Linden areas produced no evidence that bacteria, fungi, or protozoa were responsible for the disorder. However, electron micrographs did reveal the presence of particles that appear to be a noninclusion-type virus. No similar particles were found in preparations from healthy mites.—*Edward A. Steinhaus, Insect Pathology, Dept. of Biological Control, Berkeley.*

Problem of control of

## CYCLAMEN MITE on strawberries, complicated

Search for pesticide materials effective against the relatively resistant cyclamen mite on strawberries is complicated in California by the long harvest season—weekly from April till November—as it is impractical to apply materials which leave a toxic residue on the strawberries. A satisfactory pesticide must give a high degree of control, because the cyclamen mite population can build up explosively

from a few individuals surviving under the protective cover of the folded leaves and crowns of the plants. In addition, the pesticide also must be harmless to humans and relatively so to natural enemies of the cyclamen mite.—*William W. Allen, Dept. of Entomology and Parasitology, Berkeley.*

Weighing tank measures

## WATER USE BY CROPS under changing conditions

Minute losses of moisture from soil and plant surfaces in a 20' diameter plastic tank are automatically recorded by a 50-ton scale in an underground chamber. The open top of the tank is set flush with the ground in a cropped field at Davis. Instruments adjacent to the tank and under nearly identical soil conditions record temperature and moisture changes at various depths. Other instruments above the cropped surface measure radiant heat energy, wind movements, and temperature and moisture gradients in the air. The three sets of records for certain hourly periods are correlated for the study of the basic processes involved in the use of water by plants.—*William O. Pruitt and David E. Angus, Dept. of Irrigation, Davis.*

## YOUNG REDWOODS in coastal fog belt

Stands of young redwood trees throughout the commercial area in the northern Coast Range are being sampled for growth rates by measuring the widths of annual rings on cores extracted from trees by an increment borer. Also some permanent sample plots are remeasured periodically. A table of expected growths is being constructed, on the basis of density of stand, number and kinds of trees, and the heights of the trees in relation to their age.—*Marshall N. Palley, School of Forestry, Berkeley.*

Study of

## SCALE INSECT PESTS directed toward improved control

An extensive taxonomic study under way in Davis has a dual objective: to assist biological control measures against scale insects—including the armored scales, the soft scales, and the mealybugs—now in California; and to give a basis for protective quarantines against the introduction of destructive species.—*Howard L. McKenzie, Dept. of Entomology and Parasitology, Davis.*

More BRIEFS on next page

## COOPERATIVES

Continued from preceding page

effective. But if the second price offer is rejected, a new phase of the bargaining is entered.

The association contract with canneries provides that in the event a price has not become effective by harvest time, the crop is to be picked and orchard or field deliveries made to canneries; and that canners shall pay and the association receive a reasonable price. It is not specified in dollars and cents in the contract but is in accordance with a reference to the California Agricultural Code. In effect, the reasonable price would be subject to determination by the court of laws—a procedure that suits neither the growers nor canners and is considered as a last resort, which has not yet been used. In practice, if the price is not agreed upon through the contract specified num-

ber of association offers, the association accepts the best price it can receive.

In accordance with its contract with each canner, the cooperative agrees that if it sells at a lower price to another canner, the lower price will also apply to the former canner; correspondingly, the contract with a canner specifies that if he pays a higher price to any party other than the cooperative, the cooperative also will receive the higher price. This reciprocal contractual arrangement, in effect, results in the bargaining cooperative being the industry-wide price leader if its price offer becomes effective.

For a bargaining cooperative to operate effectively, it must be realistic, be well possessed of the necessary economic marketing information and have bargaining know-how. Its management must have the confidence of the membership and of the canners. It must attract and hold a sufficient number of growers and

control an adequate proportion of the industry tonnage. These requirements are met in differing degrees by various bargaining cooperatives. Some have attained success, while others are still struggling.

The growth in cooperative bargaining is part of the current movement toward increased integration in agriculture as well as in other parts of the economy. Although many growers continue to prefer to sell their own crop and deal directly with canners, other growers view cooperative bargaining as a means of improving their price and income position in the changing market and distribution system.

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