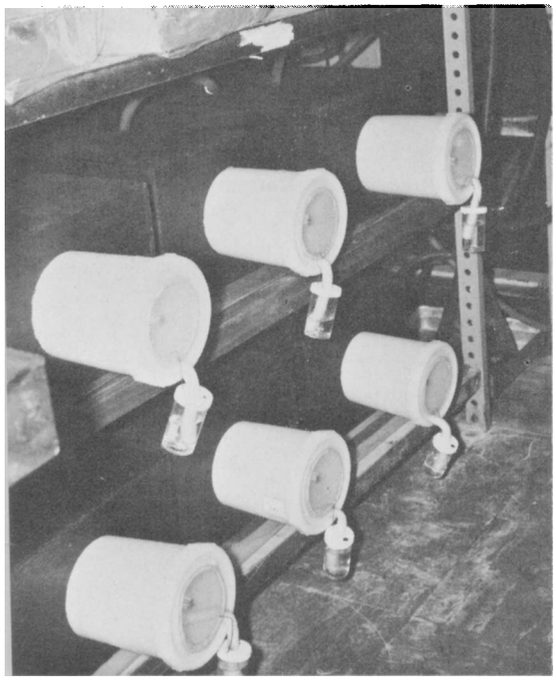
CODLING MOTH RESEARCH

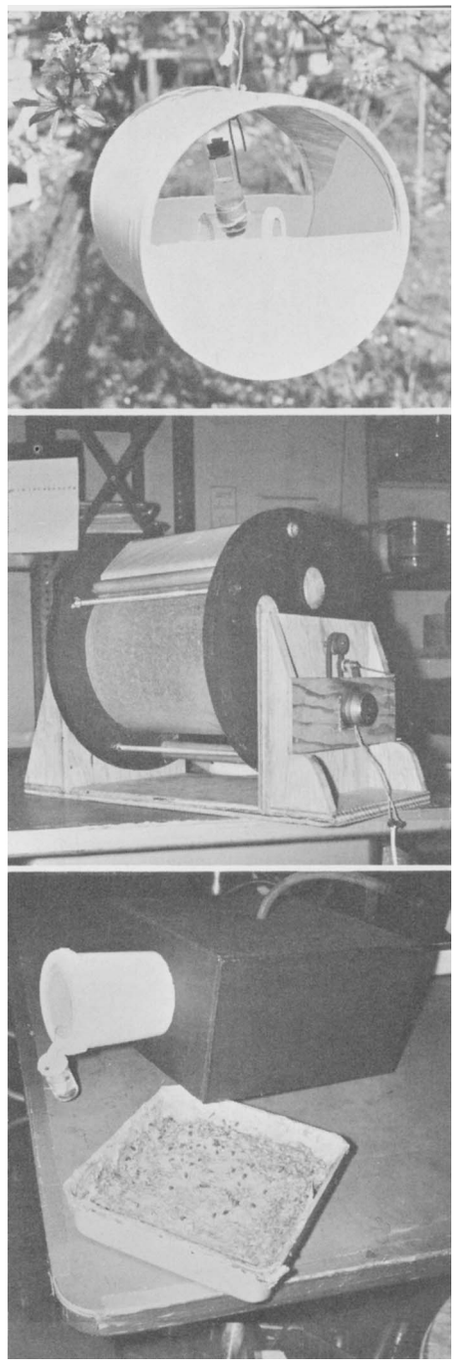
THE CODLING MOTH is an important and persistent pest of deciduous fruits particularly apples, pears and walnuts. It is the universal "worm in the apple." Damage from the pest is direct, with the larvae feeding into the fruit. If not sprayed with pest control materials, up to 100 per cent of the fruit can be wormy.

W. C. Batiste and L. A. Falcon, Department of Entomology, University of California, Berkeley are participating in the Western Regional Research Project, "Codling Moth Population Management in the Orchard Ecosystem." One phase of the research at Berkeley is concerned with the development of the sex pheromone trap for monitoring moth abundance and seasonal activity. Such monitoring is essential to the development of a less costly and less ecologically disruptive integrated control program.



Studies have shown that dosage or number of applications can be reduced where timing of sprays is based on moth catch. The sex pheromone trap is especially well suited to individual grower use from the standpoint that it is highly sensitive (as effective as a light trap) and selective (traps only codling moths). The major obstacle to its commercial implementation is the availability of living female moths which are held in the trap as the attractant source. A basic aim of the research at Berkeley is to develop methods of producing the insect on a mass-rearing scale for eventual commerical use by growers.

The apparatus pictured in the photo to the left and to right was developed for the rearing program. Photo to right, center, shows the oviposition cage with continuous wax paper inside the cylinder, on which the moths lay their eggs. Eggs are collected by advancing the paper roll, tearing it off, and transferring it to pans (photo right and left) containing a medium for the larvae to grow in. When the adults are about to emerge from the media, the pans are placed in darkened boxes and the moths are collected at a light source. The moths are sexed and the females are placed in holding cages. The sex pheromone trap with a holding cage in place is shown in the top right photo.



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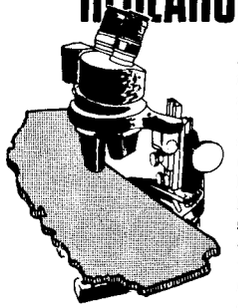
RESEARCH PREVIEWS



A continuing program of research in many aspects of agriculture is carried on at University campuses, field stations, leased areas, and many temporary plots loaned by cooperating landowners throughout the state. Listed below are some of the projects currently under way, but on which no formal progress reports can yet be made.

DESERT SOIL STUDIES

Soil scientists from Berkeley are studying the effects of airborne dusts and salts in the development of desert soils. Specially built dust collectors at a number of desert sites, together with soil profile samples are being used in the work.

NITROGEN VS MITES ON STRAWBERRIES

Entomologists and plant nutritionists working together at Berkeley found that heavy applications of nitrogen to strawberries tended to increase the incidence of two-spotted mites, suggesting that mite control measures and nitrogen fertilization should go hand in hand for this crop.

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TABLE WINE VARIETIES FOR SAN JOAQUIN VALLEY

Testing is in the final stages for wine grape varieties that will grow well in the San Joaquin Valley, yet produce superior table wines. This could prove to be a boon at a time when the traditional table wine areas can no longer supply the ever-increasing demand for such wines.