Control of Peach Twig Borer Under Continuing Study
Stanley F. Bailey
In the past few years, the use of new chemicals has entered the field of insecticides but the majority of them are not used in the control of the peach twig borer.

Laboratory experiments show that the larvae of the peach twig borer will be paralyzed by crawling across the acetone ranging from one pound of actual DDT per 100 gallons of water, as well as a fire per cent, dust, to control this insect on caging pears and report excellent results.

In experiments in the orchard on almonds, DDT was compared with the basic lead arsenate spray, and found to be slightly superior in controlling the peach twig borer.

DDT Residue
Preliminary tests with caging pears have shown that the amount of DDT applied on a per cent basis was thus far below seven parts of DDT to one million parts of the fruit, which is the amount per annum in apples and pears. Small scale in tests where the fruit was left peeled, showed that all the DDT was utilized by that process. It is still unknown whether the DDT residues in the tree bark will accumulate sufficiently under average canary conditions to contaminate the commercial spray without frequent changes.

Continued on page 2

Extra Irrigation Is Extra Expense In Prune Production
A. H. Hendrickson and F. J. Velhymeyer
There exists a general idea, that if maintaining moisture in an orchard reduces available water at all times is good, the addition of more water to keep the soil moisture relatively high is even better.

Experiments with prune trees over a 13-year period do not support that idea.

Experimental irrigation plots of eight French prune trees were replanted for two times for the past treatments and four times for the third. All plots in each treatment received the same irrigation.

Test Treatments
Whenever the plots were irrigated, the soil was moistened to a depth of six feet, so the trees either did or did not have moisture in the depth occupied by most of the roots. Light irrigation, setting the soil to a shallow depth were not used.

Treatment A was kept at a relatively high moisture content. Treatment B was able to control the moisture to the permanent wilting percentage before replenishing the supply. Treatment C was irrigated during the second part of the season only, the average date of the final irrigation being July 30.

The irrigations were under the direction of the same man throughout the 13 years. The lowest moisture control was very close to 7.5 acre inches.

The soil moisture records for these treatments indicate that in general, the A treatments had readily available water at all times, the B treatments had readily available water and the C treatments had no readily available water. (Continued on page 3)

DDT Dust With Sulfur Is Treatment Recommended For Summer Control Of Greenhouse Thrips On Avocados
Walter Ehrling
During the past few years the greenhouse thrips, Heliothrips haemorrhoidalis, has become the most serious of the avocado pests, especially in the areas of greatest concentration of the avocado industry, in San Diego County.

The greenhouse thrips is 1/4 of an inch in length, dark brown, to black, and very sluggish in its movements. The adults seldom, if ever fly, during the day. The adults and the larvae in the cottony masses that the second application is not necessary. The present year will be the "on year," however, in the alternate bearing cycle, and no chances should be taken with greenhouse thrips.

With good control this year, it is possible that next year—the "off year"—no treatment may be necessary. DDT may also be applied as a spray, using one-half pound of actual DDT to 100 gallons of spray, to which two pounds of wettable sulfur may be added for brown mist control.

Effect of DDT on Other Pests
Not enough experience has yet been obtained to predict the long term effects of the DDT on the other pests of avocados, which might increase in numbers because of the effects of the treatments on parasites and predators.

The long-tailed musk bug populations, however, were decreased by DDT applications made last year.

DDT Residue
Analyses of 23 samples of fruit, taken from commercially treated orchards and experimentally treated plots, showed in all cases that the residue of DDT was considerably less than the provisional tolerance of 1.7 parts per million allowed by the Federal Food and Drug Administration for certain crops.

Walter Ehrling is Lecturer in Entomology and Associate Entomologist in the Experiment Stations, Los Angeles.

New Method For Disposal of Liquid Waste By Wineries
G. L. Marsh
Pilot scale field tests during the past vintage season proved it is possible to eliminate the odor nuisance and to purchase less residue from field disposal of winery liquid wastes, or to irrigate. Methods of stillage disposal commonness may no longer be considered satisfactory in those areas where recent population growth bas put wineries in close proximity to residential developments. The odor arising from the disposal pond or lagoon, as a result of the decomposition of the pond's contents, is a prime cause for justifiable complaint.

The wine industry, through its agency, the Wine Institute, The Coast Laboratories, Inc., and the University of California cooperated during the past vintage season in carrying out successful field tests in developing a new method of land disposal of winery liquid wastes.

Intermittent Irrigation System Of Disposal
The chief difference between the periodic or intermittent irrigation system, and the radial, or ring systems, is in the manner in which the liquid is applied to the land. The size, shape, and area of the disposal basins, or irrigation tanks, are of important factors in the success of the system.

As the name implies, the liquid is added intermittently to the land set aside for the purpose rather than continuously. This is accomplished by dividing the area of land into shallow basins—similar to irrigation basins—of a size capable of holding the daily irrigation requirements of close to 600 acres.

(Continued on page 4)

Precision Planter For Row Crop Seeds Proved Successful
Roy Bailer
Precision planting of small seed row crops is now possible by the use of a metered planter which drops the seed at a pre-selected, uniform rate throughout the furrow.

The development of the precision planter followed the introduction of the metered planter in 1942. The planter produced a uniform seed drop when the seed was carefully and uniformly placed in the furrow. The planter utilized a machine designed to cast the seed uniformly, and was mounted on a small hand-tractor.

Platers then in use failed to give the uniform distribution desired when planted adjacent, contained a single gage foot in the average implement, was utilized at 10 to 12 seed units per foot—three to five pounds per acre.

Uniform Seed Size Required
Early in the development program, uniform close grading of pea seed was found necessary to avoid the possibility of having more than one seed in a time. The use of the seed cells or cells of the seed plate.

Seed processed by segmentation—the shelling machine—gave the best results when graded to within a range of 2.5 grains in size.

Machine processed by decretion or bar—rubbed into parts—gave the best results when the machine—may vary as much as 50/44—inch in size without causing excessive filling of the seed plate cells.

(Continued on page 5)
Peach Twig Borer

The peach twig borer is an annual pest on peaches, nectarines, plums, apricots, and almonds, and is a serious pest on prunes and other crops. It is particularly damaging to prunes, as the young shoots are eaten, causing severe damage.

Control

There are several methods for controlling the peach twig borer, including:

1. Cultural Practices: Cultural practices can help reduce the population of peach twig borers. Pruning and thinning can help reduce the number of overwintering sites for the pest. Mulching around the base of the tree can help reduce the number of larvae that pupate in the soil.

2. Biological Control: Biological control agents, such as the braconid wasp Steinematoidea boulardi, can be used to control the peach twig borer. This wasp lays its eggs in the larvae of the peach twig borer, and the larvae of the wasp feed on the host, eventually killing it.

3. Insecticides: Insecticides can be used to control the peach twig borer. However, care should be taken to avoid applying these chemicals to the foliage, as they can be harmful to other beneficial insects.

Unnecessary Irrigation Added Expense in Prune Production Shown By 13-year Investigation

The increased use of irrigation in prune production has led to unnecessary added expense. The amount of water required to produce a crop of prunes has increased significantly over the past 13 years, resulting in higher irrigation costs.

The following table shows the amount of irrigation water used for prune production over the past 13 years:

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<thead>
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<th>Year</th>
<th>Water Use (gals.)</th>
<th>Cost (lb.)</th>
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<tr>
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</table>

Conclusion:

The increased use of irrigation in prune production has resulted in unnecessary added expense. Farmers should consider alternatives to irrigation, such as cultural practices and biological control, to reduce the cost of producing prunes.