The Agricultural Situation And The Outlook In Mid-'47
H. R. Wellman

Pre-emergence Spray For Weed Control In Sugar Beets Seeded In Undisturbed Soil Successful
W. W. Robbins and Roy Bainter

Pre-emergence spray offered promise as one method of controlling weeds in sugar beets. The method may be applicable to other crops.

Control of weeds is to be found in the demand for higher returns and the desire to increase yields. Pre-emergence spraying offers promise in this direction.

The Agricultural Situation

In this year's experience, the agricultural situation is the current high level of farm income. Prices are rising well ahead of those of last year. In 1945, prices of California increased more rapidly than in the rest of the country. In California, the cost of living and livestock products; cash receipts from crops were much more than in the rest of the country. In 1946, for example, 35% of California's cash receipts from farm marketings come from fruits; in all other states combined only 4% of total cash receipts come from fruits. The increase in the index of prices received by farmers in the United States reached a new high in 1946. In the first four months of 1946, prices rose about three times larger than in the corresponding period of 1945. This gain occurred in livestock and livestock products; cash receipts from crops were slightly below last year.

Despite the major classes of agricultural products, fruits alone are bringing less money this year than last. But fruits are a very important component of California's agriculture, much more so than in the rest of the country. In 1946, for example, 12 cents of California's cash receipts from farm marketings came from fruits; in all other states combined only 5 cents of total cash receipts come from fruits. In March of this year the index of prices received by farmers in the United States reached a new high: 1946 average and 1945 average of 35% above the 1941 average.

Price Result of Demand

The explanation of high farm prices is to be found in the demand situation. Domestic demand is exceptionally strong with national income and employment at record high levels. Foreign countries are eager for our exportable surplus.
The 1941 farm output in this country is 20% above bringing high prices. Thus far in 1946, total cash receipts from farm marketings have run well ahead of those of 1945. Farmers are in an excellent financial position; in the aggregate they have accumulated liquid assets.

The Outlook

Despite the highly favorable situation farmers are somewhat apprehensive as to the future. This apprehension stems in part from the experiences of the past two years.

Cirrus Orchard Cost Study And Analysis Made In Orange County Over 21-Year Period Is Reported
Harold E. Wahlberg

Water Infiltration Rates Into Yolo Loam Studied To Determine Irrigation Efficiency Factors
Arthur F. Pillsbury

Control Measures In Trichomoniasis Abortion By Cows
H. S. Cameron

Water infiltration rates into Yolo loam during irrigation were measured in 96 basins in a series of experiments conducted in Los Angeles County over a period of five years. Several different treatments were carried on, permitting the isolating of a number of factors which influence the rate of water entry into the soil.

Organic Matter

Organic matter is known to improve soil structure and infiltration rates, but the belief often persisted that to do it must be incorporated into the soil.

Applications of straw or other crop residue as a mulch were found to be at least as valuable on the surface as when incorporated in the soil—provided they were kept relatively dry and open to the weather. Generally, there was insufficient oxygen through the summer to cause appreciable mineralization rate increases. After a mulch had been in place for six months, increased in the rates of water infiltration more than eight times greater than the rates in plots without mulch.

Benefits from organic matter are largely from the products of the rotting material which are carried into the soil by the water.
Pre-emergence Spray For Weed Control In Sugar Beets Seeded In Undisturbed Soil Successful

(Continued from page 1)

There was no disturbance of the seedling bed which condition was not drilled in through the weeds. It is known that with most weed species a significant survival rate is maintained which are within the upper one-half inch and soil. If, as is the usual practice, the field was prepared and cultivated by hoeing, it is the surface and soon another crop of weeds appears.

2. Pre-emergence Sprays

Prior to emergence Sprays for weed control were sprayed with several different general contact weed killers.

Average Results of Pre-emergence Sprays (All depths of planting)

<table>
<thead>
<tr>
<th>Spray Treatment</th>
<th>Germination</th>
<th>Field emergence</th>
<th>% of germination</th>
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<tbody>
<tr>
<td>Control</td>
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</tr>
<tr>
<td>1. Dowd oil and Dow General 300</td>
<td>4.8</td>
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<td>82.2%</td>
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<td>4. Dowd oil and Dow General (1 pt. per 100 gal of emulsion)</td>
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*Active ingredient, dimethoate secondary butyl phenoxy. (The same test was run for economic reasons. Further field tests this coming season will aim at reducing costs, time of spraying and methods of application of pre-emergence sprays. There are indications that if pre-emergence sprays were to be practiced, beet seeds should be planted deeper than usual—soil and weather conditions permitting—in order to delay their germination and to secure a greater percentage of "singles." W. W. Robbins is Professor of Botany in the Experiment Station, Davis.

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Bull-Hunting Of Milk In California

Bulk handling of milk has developed.

California, as a whole, is producing more milk than was produced in any other state prior to the war. The state's bulk milk production was approximately 200 million gallons in 1940; this year, it is expected to reach 250 million gallons. In 1941, California ranked second in milk production; this year, it is expected to rank first.

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