
In This Issue

Low-Cost Aerial Photography for Agricultural Management

4

Because of the tremendous advantage of perspective and one's ability to view whole fields at once from an airplane, low-cost aerial photography has become invaluable in education; evaluating land for future vineyards or orchards; compiling crop histories; monitoring experimental plots; and diagnosing plant problems.

Computer Model Aids in Weevil Control

8

A computer simulation model of crop/pest weather interactions has enabled researchers to examine the workings of the alfalfa ecosystem. A model built for the Egyptian alfalfa weevil and alfalfa predicts the developmental course of both the weevil population and the alfalfa crop, making possible optimum timing and quantity of pesticide applications.

Club Root Control in Brussels Sprouts Using Lime for pH Adjustments

10

Club root, a serious disease of plants of the crucifer family which can destroy an entire crop before maturity, is spreading, primarily through the movement of infected plants and soils. The use of lime to adjust pH levels seems to be an effective alternative to more expensive and time-consuming control programs.

Durado--A New Fresh Market Plum

12

An early maturing Japanese plum developed by agricultural scientists at the Kearney Field Station, the Durado, is now

being made available to qualified nurserymen for propagation and sale under a University of California patent. The new variety, which ripens as much as four weeks earlier than other leading types, is recommended as an early maturing, high-quality dessert plum.

Blue Alfalfa Aphid--A New Pest in the Imperial Valley

14

A new aphid which closely resembles the pea aphid was discovered in abundance on alfalfa, its favorite host, in the Imperial Valley in 1975. Tentatively identified as the blue aphid, it was first collected in China about 40 years ago. Although it was thought to be resistant to insecticides, researchers have found it easy to kill with most materials used on alfalfa for aphid control.

Monitoring Pear Scab

16

Preliminary findings suggest that considerable savings in spray materials to control pear scab could be made in some Bartlett pear districts of California by utilizing a monitoring system which helps predict heavy infection periods.

Control of Hillside Seepage in Avocado and Citrus Orchards

20

The rapid drainage experienced in the several orchards using upslope interceptor drainage tile and field drains in lower, flatter areas allows growers to plant orchards successfully near slopes subject to seepage. Several established orchards which developed seepage problems have been successfully replanted after the tile drains were installed.

Alfalfa Seed Underground Drip Irrigation

22

Evaluation of five underground drip irrigation systems for alfalfa seed production in the Imperial Valley showed the highest yields can be expected from a continuously porous system. Surface drip irrigation systems had previously produced excellent yields but were subject to sunlight and mechanical damage.

Research Briefs

Short Reports on Current Research in Agricultural Sciences

SUPPLEMENTAL SALT MAY BE UNNECESSARY

Salt as an additive to livestock diets may be overrated, says a U.C. animal nutritionist who has developed a quick and reliable way to measure the salt in an animal's system by checking the saliva. His research shows that steers in feedlots need only about three grams of sodium a day. Cows on Sierra foothills range needed no supplementation except during lactation.

TIMBER SHORTAGE

About 35 percent of the land in California now classed as commercial forest appears to be permanently submarginal for

timber growing, according to U.C. forestry research. Harvesting old growth on such land during the next two decades would reduce economic incentives to increase the intensity of timber management on understocked high-site cutover land, which in turn would intensify the scarcity of merchantable growing stock available for harvest in 1985 to 2020, the researchers say.

LOWEST FARM POPULATION

A Davis campus Extension economist, compiling statistics on California, reports that this state, with the greatest farm income in the nation has less than one percent of its population living on farms—the lowest proportion of any state. Although the number of farms continues to decrease, the average farm size shows a corresponding increase. Leading counties in production are Fresno, Kern, Imperial, Tulare, and Riverside.

MEADOWFOAM AS A NEW OIL CROP

The oil obtained from seeds of the meadowfoam plant is very unusual and can be used in place of sperm whale oil in numerous industrial products, according to U.C. agronomists. Meadowfoam is found in many areas of California and is being collected and studied to determine its oil yield potential and how best to grow the plant.