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The Bureau of Migrant Education, the California Mini-Corps, and UC Cooperative Extension have been working together for 4 years developing techniques for outdoor education of migrant children.

Influencing Growth of Dwarf Eugenia 7

Experiments showed that growth of the Dwarf Eugenia plants was influenced by the soil mixture and that the use of GA₃ was actually detrimental, considering the type of growth obtained.

Drip and Furrow Irrigation of Fresh Market Tomatoes on a Slowly Permeable Soil: Pt. 1. Production 8

A high frequency of furrow irrigation on a Vista sandy loam soil has been shown to "seal" soil surface. Production is best with a drip hose placed at the base of plants in a row or by less frequent irrigation.

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A drip irrigation system maintains not only a desirable soil moisture distribution, but also the cultural advantage of a dry foot traffic area.

Control of Biting and Annoying Gnats with Fertilizer 14

Naturally breeding field populations of *Hippelates* eye gnats and *Leptoconops* biting gnats were reduced with granular and spray applications of urea to the soil.

Preventive Medication for Feedlot Replacement Calves 18

Of the two million stocker and feeder cattle shipped into California each year, 2 to 5 percent will die or be culled. Preventive medication during the first three days after arrival will reduce individual animal sickness but is not satisfactory as group therapy.

Drip Irrigation for Plants Grown in Containers 20

Drip irrigation offers horticulturists a way to control precisely the irrigation of plants grown in containers, but studies show this system poses some problems in control of salinity. Periodic leaching of the soil is necessary.

Rind Necrosis in Watermelon Cultivars 22

Bacteria have often been implicated as causal agents of rind necrosis, a perennial disorder of watermelon in Imperial Valley to which all cultivars are susceptible.

Research Briefs

Short Reports on Current Research in Agricultural Sciences

RESEARCHERS CRACK BLUE EGG CLAIMS

Blue-shelled eggs from Arucana chickens—a South American breed popular in many small flocks—contain just as much cholesterol as ordinary chicken eggs, according to recent UC, Davis research. The Arucana eggs have been promoted as low cholesterol eggs and sold for a premium price, but there is no evidence that they have healthful attributes not shared by ordinary eggs.

REMOVING COMPETITION BOOSTS TREE GROWTH

Growth of Douglas fir and redwood on logged or burned areas of the northern Coast Range can be seriously hindered by competition from broadleaf trees such as tanoak and madrone. Those broadleaf species were controlled, and growth of Douglas fir trees dramatically increased, by a single application of selective herbicides in tests by agricultural botanists at UC, Davis.

FUNGI IMPROVE YIELDS

A new line of research at UCR has shown that certain beneficial fungi can increase nutrient absorption by citrus and avocado plant roots, increase water uptake, and improve fruit yields. The ultimate goal of a project now under way is to develop methods of making use of these unique fungi as "biotic fertilizers" to increase crop yields and fertilizer efficiency.

BREAKTHROUGH IN STUDY OF LIVING CELLS

Plant pathologists at UCR have duplicated in the test tube the formation of a living cell wall, representing a major contribution to man's understanding of living cells. This is the first time a visible cell has been synthesized in the absence of a living cell or its membranes, and opens a new field of experimentation: the possibility of understanding how cellulose and chitin—two of the most common natural substances in the world—formed.