

Photo captions to left, and counter clockwise:

The field station is located on gentle hillsides in a comparatively warm citrus-growing area. Photo shows recently constructed lath house and reservoir.

Wind machine in the background provides primary frost protection for the citrus planting by pulling warmer air from the hill slopes and pushing it down to the cold lower ground.

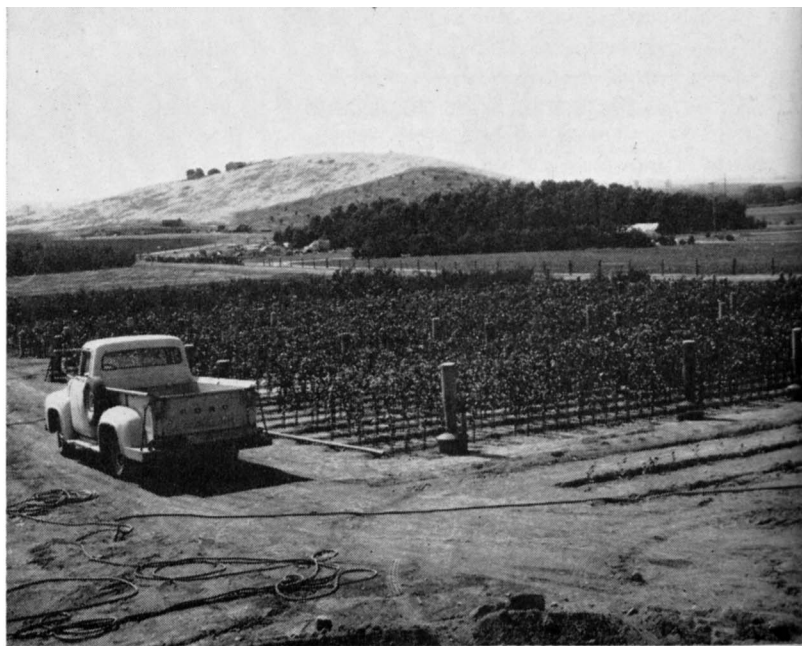
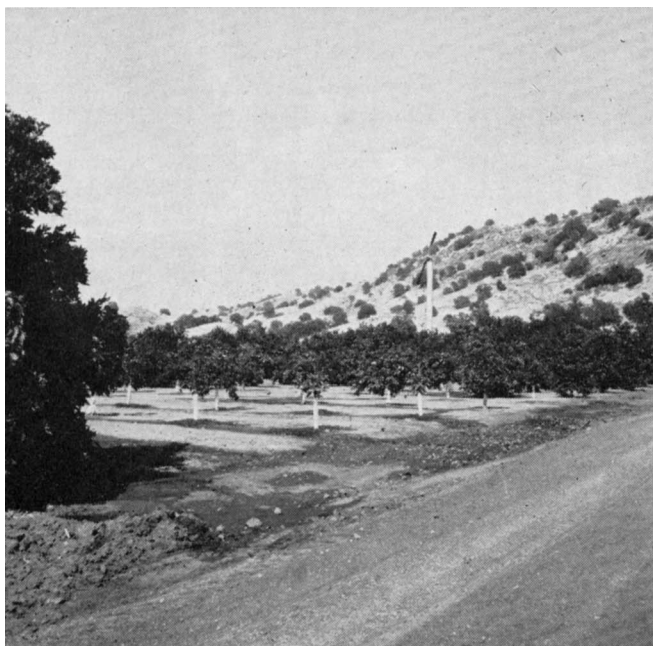
Field growing of nursery trees for future research experiments is an important function of the Lindcove Field Station.

The trifoliate rootstock strain study with a common frost nucellar top provides information as to the rootstock's ability to impart growth and production to the scion top.

Greenhouse operations provide researchers with growing conditions that are suitable year-round for propagation of rootstocks, virus indexing, and for new trees for the field.

Many old-line varieties are maintained on the station primarily as a source of propagative material. Also the station is in a "quick decline"-free area. Thus budwood from these trees may be shipped anywhere in the state.

Only the tender new growth is harvested from the tea experiment plots. Picking is done on a weekly basis from March to November.



# LINDCOVE FIELD STATION

**L**INDCOVE FIELD STATION in Tulare County was established 10 years ago primarily to study the problems of the citrus industry as population pressures began forcing growers to move from Southern California into the San Joaquin Valley. Tulare County now produces more navel oranges than any other county in the nation, and the value of California oranges is now well over \$100,000,000 annually.

The development of improved citrus varieties, stronger rootstocks, and better cultural practices for citrus growing in the San Joaquin Valley are the main goals of research at the station. Some of the research was also prompted by the urgent need for true-to-type citrus budwood free of disease and virus infection, particularly of the vector-borne tristeza virus. "Mother trees" are under a continuing testing program as budwood sources for the State of California Bureau of Nursery Service Budwood Certification Program.

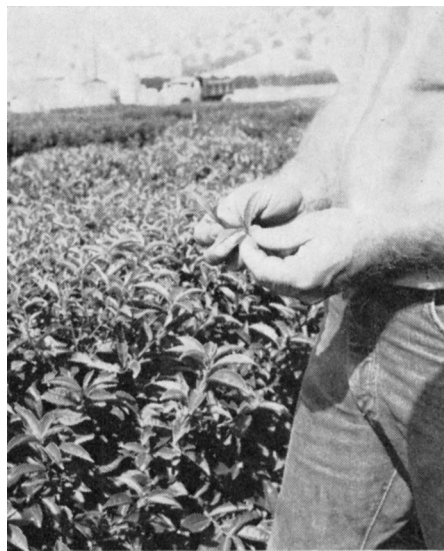
The station covers 174 acres, of which 131 were purchased by the University of California, and 43 donated by the citrus industry. It is northeast of Exeter on a foothill slope. The upper plantings are in an area much warmer than most of the citrus districts in the San Joaquin Valley. The area to the west gets about as cold in the winter as most citrus groves in the area and wind machines and orchard heaters are used when needed. The soil at

the station is mostly of the San Joaquin series which is the major soil type in most citrus areas of central California. Soils of the Hanford and Vista series are also found at the station as well as a few small pockets of Alamo clay.

Current research projects include:

**TEA IN CALIFORNIA**—Evaluation of adaptation and production possibilities. Project leaders: L. G. Jones, Specialist, Department of Agronomy and Range Science, U.C., Davis; and K. H. Ingebreetsen, Farm Advisor at Large, U. C., Davis.

**AVOCADO STUDIES**—variety and cultural evaluations—J. H. Larue, Farm Advisor, Tulare Co.



**CITRUS VARIETY IMPROVEMENT**—development and maintenance of primary reference sources of virus-free, true-to-name sources of propagative material. Project leader: Walter Reuther, Horticulturist, Dept. of Horticultural Science, U.C., Riverside. E. C. Calavan, Plant Pathologist, and E. M. Nauer, Associate Specialist, Dept. of Plant Pathology, U.C., Riverside.

**CITRUS ROOTSTOCK-SCION INTERACTIONS**—effects on tree growth, fruiting, and physiology. Project leader: W. P. Bitters, Horticulturist, Dept. of Horticultural Science, U.C., Riverside. J. D. Kirkpatrick, Associate Horticulturist, and R. W. Scora, Assistant Botanist, Dept. of Horticultural Science, U.C., Riverside.

**GENETICS AND NUCELLAR EMBRYONY IN CITRUS**—breeding to produce new varieties. Project leaders: R. K. Soost, Geneticist, and J. W. Cameron, Geneticist, Dept. of Horticultural Science, U.C., Riverside.

**CANTALOUPE MARKET QUALITY**—experimental analysis of between-field variations in certain attributes. Project leader: R. M. Davis, Jr., Associate Olericulturist, Department of Vegetable Crops, U.C., Davis.

**VEGETABLE BREEDING**—tomatoes. Project leaders: P. G. Smith, Olericulturist, Department of Vegetable Crops, U.C., Davis; and V. H. Schweers, Farm Advisor, Tulare County.

