

NEW PUBLICATIONS



—now ready for distribution—

Single copies of these publications—except Manuals and books—or a catalog of Agricultural Publications may be obtained without charge from the local office of the Farm Advisor or by addressing a request to: Agricultural Publications, 207 University Hall, University of California, Berkeley 4, California. Make checks payable to The Regents of the University of California.

CONTROLLING NEMATODES IN THE HOME GARDEN, by Bert Lear, Leaf, 112.

NEW RIVER FLAX, by William H. Isom and George F. Worker, Jr., Leaf, 113.

NEMATODE-RESISTANT ROOT-STOCKS FOR CALIFORNIA VINEYARDS, by Lloyd A. Linder, Leaf, 114.

FLOODING

Continued from page 7

ing the demand for oxygen by plant roots and soil microorganisms.

Greenhouse studies further showed that flooding injury was less severe in sterilized soil than in unsterilized. Because extensive attempts failed to isolate a single microorganism capable of inducing the symptoms of flooding injury, the function of soil microorganisms prob-

ably is complex. When bare-rooted plants were placed in an aerated mixture of soil and water at 104°F for eight hours, no root damage occurred after transplanting to soil but when roots of plants were placed in a nonaerated soil-water mixture, all died after transplanting. The primary cause of summer flooding injury may be the lack of aeration in the saturated soil with increased soil temperature acting to hasten and intensify the damage.

It is unusual to flood a field for 36 hours—the period needed in the fourth year of field tests to develop summer flooding injury—but many fields with an irrigation run of a half mile or more may drain slowly enough to remain saturated for 36 hours.

The severity of summer flooding injury of alfalfa is influenced by water and

soil temperatures; the length of time the soil remains saturated; and the predisposition of plants by recent mowing.

These studies indicate that stand depletion of alfalfa is influenced by excessive summer flood irrigation and have stimulated research on the effect of regulating irrigation of alfalfa by soil moisture measurement.

D. C. Erwin is Assistant Plant Pathologist, University of California, Riverside.

W. F. Lehman is Assistant Agronomist, Imperial Valley Field Station, University of California, El Centro.

B. W. Kennedy was Laboratory Technician, University of California, Riverside, when the studies reported here were made.

G. F. Worker, Jr., is Assistant Specialist in Agronomy, Imperial Valley Field Station, University of California, El Centro.

The above progress report is based on Research Project No. 1575.

DONATIONS FOR AGRICULTURAL RESEARCH

Contributions to the University of California, Division of Agricultural Sciences

BERKELEY

California Redwood Association	\$2,500.00
For study on seasoning stain in California redwood	
County of Plumas	\$800.00
For timber taxation studies	
Fibreboard Paper Products Corporation	\$25.00
To assist in research on forest products	
National Science Foundation	\$5,913.04
For research on the biosystematics of <i>Diabrotica</i> and related genera of beetles of North America	
U. S. D. A., Forest Service	\$1,250.00
For study of genetic components of variance of internode growth using clones	

DAVIS

American Cyanamid Company	\$2,000.00
For research on the control of diseases of ruminants on range and pasture	
Buckner Manufacturing Co., Inc.	1 - No. 180 Rainmobile, Jr. 10 - No. 8600 11/64" sprinklers
For irrigation of experimental plantings	
Dow Chemical Company	270 gals. Telone 50 gals. methyl bromide 20'x800' polyethylene tarp
For soil fumigation experiments for the control of nematodes in grape replants	
Foremost Dairies, Inc.	\$2,800.00
For research with unidentified factors in milk, milk by-products, and soya-beans in poultry rations	
Herman Frasch Foundation	\$2,500.00
For research on the effect of environment on the chemical constitution of plants in relation to disease and pest resistance	
International Harvester Co.	2 - SD-240 6-cylinder gasoline engines
For use in research on deciduous fruit harvesting	
Neal Brothers, Incorporated	1,000 rooted chrysanthemum cuttings
For research in landscape horticulture	

Shell Chemical Corporation	270 gals. D-D
For soil fumigation experiments for the control of nematodes in grape replants	
Strawberry Cooperative Exchange	\$100.00
For strawberry plant breeding program	
Sugar Research Foundation, Inc.	
To study the use of sugar in canned and frozen berry products	\$875.00
To study the effects of sweetness on the consumers acceptance of apricots, pears and peaches	\$2,625.00
To study the use of sugar in nonsweet foods	\$1,250.00
To study the role of the sweetener in food preservation	\$2,500.00
Union Carbide Chemicals Co.	\$1,000.00
For cotton insect investigations with Sevin	
U. S. D. A., Marketing Research Division	\$53,468.50
For antemortem and postmortem studies on poultry	
U. S. D. A., Animal Husbandry Research Division	
For poultry breeding investigations	\$2,800.00
For studies on blood group relationship in sheep	\$3,500.00
U.S.D.A., Animal Disease and Parasite Research Division	
For research on roundworm parasites in cattle	\$6,500.00
For investigations on the whey plate agglutination test for the diagnosis of bovine Brucellosis	\$10,000.00
U. S. Public Health Service	\$1,948.00
For the study of infectious canine hepatitis	

LOS ANGELES

California-Florida Plant Corporation	400 chrysanthemum cuttings
For floricultural research	
Filon Plastics Corp.	600 square feet corrugated reinforced fiberglass plastic panels
For experimental growing houses, for the study of the effect of purple light on growth of floral plants	
National Science Foundation	\$6,000.00
For mosquito research program	

RIVERSIDE

Dow Chemical Company	\$6,500.00
For studies on insect resistance to insecticides	

Penalty for private use to avoid payment of postage, \$300

University of California College of Agriculture, Agricultural Experiment Station, Berkeley 4, California

Paul F. Sharp
Director

Free—Annual Report or Bulletin or Report of Progress
Permit No. 1127