
COOLERS FOR FRUITS AND VEGETABLES, by Rene Guillou, Bul. 773.

DISEASES OF GERANIUMS, by Albert O. Paulus, Donald E. Munnecke, and Philip A. Chandler, Leaf. 130.

TRAMP IRON CONTROL AND REMOVAL, by John B. Dobie, John P. Hughes, and Frederic C. Jacobs, Cir. 489.

Storage of VEGETABLE SEED

Vegetable seed dried at harvest to 4-6% moisture and stored in moisture-proof containers will maintain high germination and vigor for more than three years.

Seed germination and vigor are at their peak at harvest and decline thereafter, slowly or rapidly, depending on storage conditions. The two most important environmental factors influencing that decline are storage temperature and seed moisture. The lower the temperature, the longer the seed will maintain high germination. Seed moisture, the more critical of the two storage factors, varies with the relative humidity of the air around the seed. Low relative humidity is essential for safe seed storage.

To maintain germination for a long time, the vegetable seed should be dried at harvest to 4-6% moisture content either naturally or artificially at temperatures not exceeding 110°F and stored in moisture-proof or moisture-resistant containers. Tin or aluminum cans have proved to be the best containers but tightly sealed containers of other moisture-resistant materials are nearly as good.

The question now under study is why seeds of high moisture content die more quickly than seeds of low moisture content. Certain essential enzymes may break down in high moisture storage or an unbalanced metabolism may cause the cells of the growing points to die.—J. F. Harrington, Dept. of Vegetable Crops, Davis.

Progress in breeding of HYBRID CARROTS

A current carrot breeding program is designed to improve quality and yield and shipping and processing properties and also to develop slow bolting and more resistance to insects and to plant diseases.

Production of hybrid seed from normal plants is impractical on a commercial scale because of the detailed hand work involved. However, hybrid seed can be produced through natural pollination of a strain possessing male sterility by a normal-flowering strain in an isolated planting. Some of the promising experimental hybrids are very uniform in root size and shape and are much faster growing than standard open-pollinated varieties.—James E. Welch, Dept. of Vegetable Crops, Davis.

Studies on the causes of SHEEP PNEUMONIA

Three infectious agents identified with considerable frequency in cases of sheep pneumonia are being studied to determine the ability of each agent to produce pneumonia. One of the agents, a virus, offers the most promise for control, although the disease it produces is milder in experimental cases than in field cases and the lung damage is somewhat different.

Because complex mechanisms may be involved, the three causative agents, singly and in various combinations, are being tested on sheep. Some of the test sheep will be subjected to rigorous environmental stresses to determine the effect of lowered resistance.—D. L. Dungworth, School of Veterinary Medicine, Davis.

DONATIONS FOR AGRICULTURAL RESEARCH

Contributions to the University of California, Division of Agricultural Sciences

BERKELEY
National Science Foundation .................................................. $7,590.00
U. S. Public Health Service .............................................. $500.00
For study of development in parasitic wasps

DAVIS
Amalgamated Sugar Co. .............................................. $11,160.00
Holly Sugar Co.
Spreckels Sugar Co.
Utah-Idaho Sugar Co.
For beet-pulp feeding experiment
California Dairy Industries Assoc., Inc. ............................... $100.00
For research in food processing
LOS ANGELES
Athletic & Recreational Turfgrass Association .................. $150.00
For turfgrass research

RIVERSIDE
American Cyanamid Company ........................................... $1,500.00
For study of new insecticides
California Avocado Society ........................................... $500.00
For research in biological control of pests on avocado
California Spray-Chemical Corporation ............................. $1,000.00
For field crop tests of Calspray insecticides

STATEWIDE
J. A. and Catherine Bradley Quinn ................................... 2 acres
To complete acreage of West Side Field Station