

diacetate from 2-methylnaphthohydroquinone and phytol or phytol acetate can be improved by the introduction of borotrifluoride etherate as an acid condensation medium. In the Hoffmann-La Roche laboratories in Basle, Switzerland, the synthesis has been carried out using the following: phytol, phytol acetate, phytol formate, phytol dichloroacetate, phytol methyl ether, synthetic isophytol, isophytol acetate, and isophytol from optically active phytol.

Ground Limestone Good Insecticide Carrier, Finds USDA

A free flowing limestone dust giving good coverage of plants from airplane and ground equipment has been reported by entomologists of the Department of Agriculture. Previously limestone has been considered too alkaline and mechanically unstable for use as a carrier dust; however, according to the USDA a manufacturer in the South has developed a chemical process which yields a dust which flows freely and stores well even under moist conditions.

The entomologists reported that limestone mixtures with DDT, EPN, gamma BHC, and parathion all were effective after a year of storage. They reported that: "None of the insecticides broke down or lost their effectiveness when stored in glass-stoppered bottles at room temperatures." Only BHC showed appreciable deterioration following storage in paper bags at 100% humidity.

Illinois Planning Research Center for Corn Genetics

The University of Illinois is planning to inaugurate a corn genetic research center July 1. Included in the plans is a scheme to maintain genetic corn stock of the corn belt region. The genetic project will be supervised by Marcus M. Rhoades and J. R. Laughnan, professors at the university.

In addition to maintenance of present genetic stocks the center will: develop new combinations of chromosomal testers, determine linkage relations of unplaced genes, and search for new genes.

The project will be supported by a grant from the U. S. Department of Agriculture.

Leaf Analysis to Study Nutrients Efficiency in Orchards

Leaf analysis and tree symptoms are considered the best basis for studying nutritional problems in California orchards, according to Omund Lilleland of the University of California. As the result of his analyses of leaves he says that fertilizers applied on the soil in some

California orchards remains positionally unavailable and are not absorbed by the trees.

For this reason leaf analysis has been favored for evaluating the nutrient needs of the orchards in California. The technique has proved valuable in establishing requirements for potash, magnesium, and manganese in many orchard trials.

Keep 'Em Happy and They'll Lay

The University of California has a research problem aimed at more and better production from the laying hen. One group of workers has been studying the effect of sunlight and other environmental factors on egg production. They found that 13 hours of light was about optimum for laying hens, in the absence of sunlight artificial light seems to be an adequate substitute.

Another group at the University has started on a project to break 17,000 eggs, hoping to find whether a whole flock of chickens can lay grade AA eggs. These researchers believe that by examination of the interior quality of eggs they may be able to develop a superior genetic stock combining the two desirable features of quality and quantity production. The egg breaking experiment is part of the project to evaluate egg quality.

Education

Aids to Graduate Students In Food Technology at MIT

Scholarships, fellowships, and assistantships are available to qualified graduate students who wish to study in the department of food technology at Massachusetts Institute of Technology.

The aids for the year 1953-54 are available to students who desire to specialize in various fields of food technology. Many of the fellowships are sponsored by the food industry. In addition recipients of several national fellowships awarded by such agencies as the National Research Council and the National Science Foundation choose to do their graduate work at MIT.

Further information may be obtained from the Director of Admissions, Massachusetts Institute of Technology, Cambridge 39, Mass.

\$100,000 Worth of Canning Equipment Given to U. of Calif.

More than \$100,000 worth of food processing equipment has been received in the food technology building at the University of California's Davis campus. The two dozen pieces of equipment, most of them donated by industry, are expected by Sherman J. Leonard, associate

specialist in food technology, to make the Davis pilot plant the most fully equipped in the nation for food processing research and teaching.

According to Leonard, the pilot plant will be able to handle most of the fruits and vegetables processed in California under conditions similar to commercial canneries.

Peach pitters, pit shaker, cup down, rotary washer, conveyors, elevators, graders, sorting conveyors, cooker and siruper, cup-down peeler-blancher, and distribution systems are among additions to the canning line.

The university hopes to have additional equipment for studying tomatoes and their products, fruit juices, and concentrates eventually.

Government

Congress Discusses Inspection Legislation

Representatives of the canning and drug industries have urged passage of legislation pending before congress which would grant the Food and Drug administration a legal basis for inspection of processing plants. The legislation was introduced following the Supreme Court decision in the Cardiff case, in which the court ruled that, under existing law, the FDA does not have the right to inspect plants without the owner's permission.

Secretary Hobby has testified that the legislation has been introduced for the sole and limited purpose of eliminating the requirement that permission be granted before inspection can take place. The hearings have, however, developed into a discussion of the whole problem of inspection procedures with several congressmen expressing interest in the methods and limits of inspection after entry has been granted.

Current discussion seems to center on how far the right to inspect should extend, prescriptions and manufacturers formulations have been cited as material which the manufacturer should be able to restrict from inspection. The discussion of procedure developed as a result of consideration of the brief filed in the Cardiff case by the FDA. Some critics believe that the FDA claimed rights to inspect privately developed processes in that brief.

FDA Cool Toward Cold Sterilization

The Food and Drug Administration will not stand as a bar to progress in the use of cold sterilization of foods and antibiotics, according to W. B. Rankin.

Rankin, assistant director of field

operations of the FDA, in a recent talk at the Oak Ridge Institute of Nuclear Studies, clarified the attitude of the FDA regarding the use of radioisotopes under the food and drug laws.

Discussing the use of radiation and radioisotopes in food sterilization Rankin acknowledged that it was an attractive goal to strive for but before it would be practical there must be more information on the following problems: the molecular changes which occur during the sterilization of food and drugs; whether

the irradiation has any adverse effect upon the nutritional value of the food or the therapeutic efficacy of the drug; whether the irradiated products are toxic in any respect. The answers to these problems can only be determined by research on each product for which cold sterilization is proposed. He urged the industry to continue their present studies on these problems, observing that the absolute safety of cold sterilization must be established before it can be approved by the FDA.

and related insecticidal analogs inhibit susceptible esteroytic enzymes. This research is expected to assist also in a clarification of the ripening and spoilage processes in fruits and other crops.

Also honored were:

Fred C. Bishopp of the Bureau of Plant Entomology and Plant Quarantine for directing research which has resulted in effective methods for controlling pests.

Henry A. Jones, Bureau of Plant Industry, Beltsville, Md., for research into the genetics of cytoplasmic male sterility in plants.

J. M. Mehl, administrator of the Commodity Exchange Authority, for vision and leadership in developing Federal regulation of futures trading in agricultural commodities.

Ernest Ralph Sasscer, Bureau of Entomology and Plant Quarantine, for inspirational leadership in planning, organizing, and directing USDA's activities against the entry and spread of plant pests.

R. W. Trullinger, chief of the Office of Experiment Stations, for vision and leadership in research administration.

John L. Horsfall has retired from his post as chief entomologist for American Cyanamid Co., the position he has held since 1944. From 1920 to 1925, he was associate professor of entomology at Pennsylvania State College, and went to Cyanamid for a year. From 1926 to 1928 he did research for the Bayer Co., returning to Cyanamid in 1928. He played a key role in the development work on parathion and malathion, two insecticides manufactured by Cyanamid.

W. G. Nibler has been appointed extension farm crops specialist at Oregon State College. Mr. Nibler joined Oregon extension service in 1940 as assistant county agent in Columbia county and has been serving as Columbia county's extension agent since 1947.

Charles E. Brooker has been appointed assistant sales manager of Pennsylvania Salt Mfg. Co.'s food industries department. Mr. Brooker joined Pennsalt in 1950 and has been specializing in dairy and beverage plant applications of sanitary chemicals, cleaning operations, and bottle washing.

C. A. Stiegman, M. L. Parker, Harold L. Townend, and N. Harold Fyffe have been made vice presidents of Oldbury Electro-Chemical Co. Mr. Stiegman will also serve as the company's technical director. Mr. Parker will be in charge of production; Mr. Townend, in charge of engineering; and Mr. Fyffe, in charge of sales.

People

Two USDA Chemists, Other Scientists Receive Distinguished Service Awards

The Department of Agriculture presented Distinguished Service Awards to seven employees and two works units on May 19 in Washington. Among the honored employees were two chemists—**Sterling B. Hendricks** and **Allene R. Jeanes**.

The employees received their awards and a handshake from Secretary of Agriculture Benson at special ceremonies on the Washington Monument grounds.

Dr. Hendricks, who is with USDA's Bureau of Plant Industry, Soils, and Agricultural Engineering, received his award in recognition of his many contributions "of fundamental knowledge to the advancement of science." His work has been in a number of fields and he has published more than 150 articles to the scientific literature.

Dr. Jeanes, of the Bureau of Agri-

cultural and Industrial Chemistry at Peoria, Ill., was honored for her "pioneering chemical research on dextrans and for leadership and effective contributions in an extensive research program for national defense which expedited the development of blood plasma substitutes from dextrans."

One unit award honored the animal fat oxidation unit at Wyndmoor, Pa., for research which led to large-scale commercial development of epoxidized fatty products for stabilizing plasticizers.

The project on the action of diisopropyl fluorophosphate (DFP) on esterolytic enzymes received the other unit award. The citation stated that this work was an outstanding contribution to agricultural chemistry, science, and the defense effort through the discovery of manner in which DFP

USDA chemist Sterling B. Hendricks receives Distinguished Service Award and handshake from Secretary of Agriculture Ezra Taft Benson

