fertilizer has been in effect for sometime by an agreement between the two governments.

Turkish Planning Domestic Chemical Industry

The Turkish government has recently announced a series of proposals which indicate that they are interested in developing a domestic chemical industry. These include plans for the development of fertilizer and nitric acid plants. The fertilizer plant is expected to cost about $17 million with facilities for gasification of native Turkish lignite and recovery of ammonia to eventually yield ammonium nitrate, urea, and nitric acid.

Plans are also being developed for superphosphate and sulfuric acid plants to be constructed at Travzone, a port on the Black sea, here estimates call for an initial investment of about $1 million for the superphosphate plant and about $3 million for the sulfuric acid plant. The superphosphate capacity is expected to be about 50,000 tons per year.

Present plans are in the tentative stage with the government negotiating with the export import bank for loans to help finance the developments. They are also examining bids for construction and it is expected that more definite news should be available this summer.

German Potash Output Up 19%

Total production of the West German potash industry was 19% above 1952, with the Burbach Kaliwerke A.G. reporting an increase of 32%. The latter company reported a production of 320,000 metric tons of potash with a production capacity of 400,000 tons.

Exports from the West German industry were more than 16% above 1952, however, German domestic sales fell by about 3%.

Education

Wash. State Offers Short Courses for Agriculture Teachers

Washington State College is offering a series of short courses in agricultural science for vocational agriculture instructors and others interested in these fields this summer. In addition to the courses to be offered at the college campus in Pullman, Wash., a series of specialized courses are to be offered at various off-campus locations.

U. of Calif. Opens New Food Labs on Davis Campus

New food and nutrition laboratories were opened at the Davis campus of the University of California when the new home economics building was dedicated March 31.

The laboratories are also equipped for food and nutrition research as well as student use.

USDA Advisory Group Asks Pink Bollworm Control Study

Pink bollworm control investigations and the development of foreign markets for American cotton were two of the recommendations of the Cotton and Cottonseed Research Advisory Committee which met recently at Washington. The committee, composed of leaders in the cotton industry, meets annually to recommend to the Department of Agriculture problems for investigation in the field of production research regarding cotton.

The pink bollworm, formerly confined to the Texas Gulf Coast area, has recently spread at an alarming rate, creating emergency conditions in the cotton growing areas of Texas and parts of Oklahoma, New Mexico, and Louisiana.

Government

Pest Control Group Warns Against Vaporizers in Homes

Recommendations that insecticide vaporizers not be used for insect control in living quarters has been issued by the Interdepartmental Committee on Pest Control. The committee, composed of representatives of the Departments of Agriculture, Defense, Interior, and the Federal Security Agency, meets periodically to consider recommended practices for pest control.

Research

Aureomycin Does Not Affect Growth Action of Vitamin B_{12}

THE GROWTH RATE of female mice fed a diet containing 30% animal protein is not found significantly affected by the addition to the diet of either aureomycin with and without vitamin B_{12}, or by vitamin B_{12} alone. According to studies by Leonora Mirone, associate professor of nutritional research at the University of Georgia, aureomycin hydrochloride also has no beneficial effect on the growth of male mice fed this same high-protein diet. However, there is a definite growth response in male mice to vitamin B_{12} during the first five weeks of growth, although this response is not maintained throughout the 10 weeks of test. This appears to indicate that, in the case of the male, either vitamin B_{12} is not synthesized at a sufficiently rapid rate to meet the demands for optimum growth during the period of very active growth or that the establishment of the necessary intestinal flora requires a longer period of time as compared to female mice.

In the tests carried out by Dr. Mirone, the basal diet was composed of 30% casein, 48% sucrose, 15% lard, 5% salt, 2% alphacel, and was supplemented with adequate amounts of vitamins.

Dr. Mirone has found that aureomycin hydrochloride, with and without vitamin B_{12} and vitamin B_{12} alone have no effect on the body moisture, fat, and nitrogen content of the female mice. In the case of the male mice, however, there is an increase in the percentage of body fat and an accompanying decrease in the moisture and nitrogen content with all levels of aureomycin fed. This effect is augmented by the addition of vitamin B_{12} to the diet.

The findings emphasize the difference in response to aureomycin hydrochloride and vitamin B_{12} on the part of female mice as compared to male mice. This difference is worthy of further investigation, said Dr. Mirone, for it may lead to a fuller understanding of the basic differences in the nutritional mechanisms operative in the two sexes. Further work may also indicate a distinct advantage in the simultaneous administration of vitamin B_{12} along with aureomycin hydrochloride in the treatment of humans or animals suffering from debilitating diseases. Such treatment may also be valuable in cases of extreme emaciation from starvation or nutrition.

Science Foundation Awards 60 Research Grants

The National Science Foundation has approved 60 grants, totaling $469,550, for research and education in the biological and physical sciences.

Among the grants were several of interest to agricultural and food chemists. C. Tanford of Iowa State College is to receive $9000 over a period of two years to make a physico-chemical investigation of protein molecules.

A study of the psychophysiology of the chemical senses, by C. Pfaffman of Brown University, will receive a $16,300 grant.

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A. W. Galston of California Institute of Technology will undertake a program on the light-controlled growth reactions in plants on an $11,000, two-year grant.

Two systematic biological studies will be undertaken. One, on weevils of the western U. S., will be done at Brigham Young University by V. M. Tanner under a $2400, one-year grant. The other is on the freshwater algae of Alaska and will be done by H. Croasdale of Dartmouth under a one-year, $2500 grant.

Pear Waste Now Paying

A four-year development program by an industry-government research team at the Western Regional Research Laboratory has resulted in a technically successful solution to one of the fruit waste processing problems of the West. The waste, a product of pear canneries, has resisted conventional disposal methods because the pectin content made the juice viscous and difficult to filter. Furthermore, much of the solids content is not fibrous but composed of stone cells. As a consequence, pear flesh is too weak structurally to withstand ordinary pressing operations.

As finally developed, the process is continuous. Its essentials are: (1) Lime is added to ground waste at 70° to 100° F. to adjust the pH to 8.5. The naturally occurring enzyme, pectinesterase, is activated by this treatment, deesterifying the pectin. The result is a highly hydrated calcium pectinate gel, which occludes solid materials as it precipitates. (2) As further deesterification occurs, the calcium pectinate gel is converted to a calcium pectate gel that readily synerizes. Syneresis is aided by gently breaking up the gel into $^1/_8$ inch chunks in a trough fitted with a rotating shaft containing 320 paddle blades. Additional lime aids the subsequent filtration step. (3) Juice is pressed from the mixture in a squeeze-press, the press cake is shredded and then dried, and the juice evaporated to molasses.

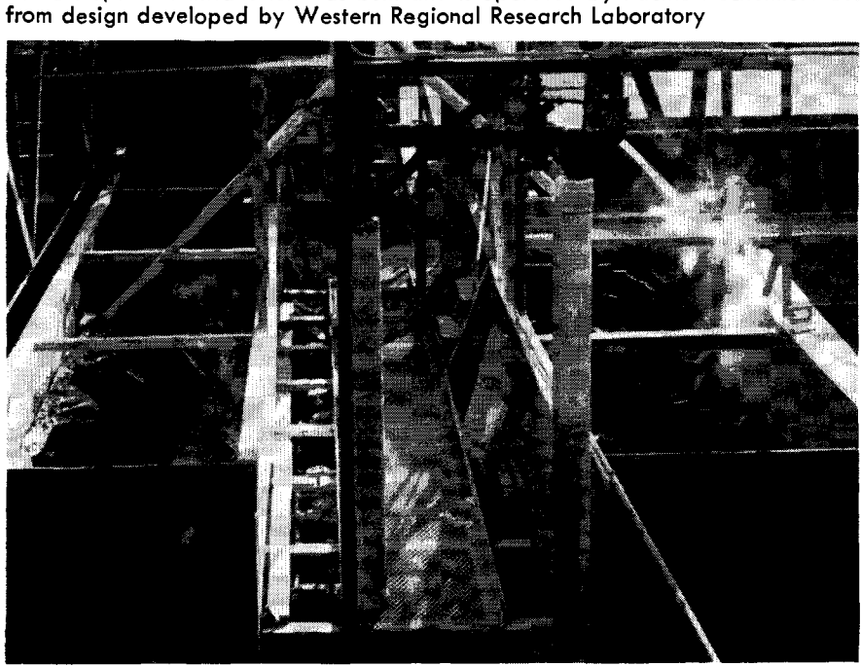
The ultimate economic promise of the process is still clouded. The first commercial installation, put into operation by Pacific Biochemical Co. in the 1952 season, is located in the San Jose region where about one third of the U. S. pear pack is produced. The pear waste in this region amounts to about 50,000 tons annually. The treatment of this waste would yield approximately 8000 tons of molasses of 42% sugar content, and 4000 tons of dried pulp. Both products are of economic value for livestock feed. However, the processing season is only 50 to 70 days in extent, necessitating a plant design whose daily capacity is about six times that which would be required if a year-round operation were possible. Operators of the commercial plant have compensated for this handicap by using the facilities to extract chlorophyll from other agricultural sources in the period when the pear canneries are not in operation.

Spraying Citrus Leaf with Urea Promising Method of Application

Leaf spraying with urea solutions is a method of citrus grove fertilization currently under study at the University of California's Citrus Experiment Station. Horticulturist W. W. Jones, who is directing the experiments, claims that the new method is more economical than traditional soil treatment. Results of recent experiments on orange trees indicated greater yields from this method of supplying nitrogen than those obtained with the usual soil treatment.

Dr. Jones has warned against indiscriminate use of the spray, for strong solutions of urea can burn the leaves of the tree. Citrus growers in California have shown keen interest in the work.

Gel conditioning troughs of 600-ton-per-day pear waste plant, operating on the 1952 crop. The installation was built and is operated by Pacific Biochemical Co. from design developed by Western Regional Research Laboratory



People

Romeo Short to Head Agriculture's Foreign Relations

Romeo E. Short, the recently appointed director of the Foreign Agricultural Service of the USDA has now been appointed chairman of the U. S. FAO interagency committee. Mr. Short thus becomes the central figure in the international relations of American agriculture. The committee which he now heads was created in 1946 to facilitate coordination between the Secretary of Agriculture and the UN Food and Agriculture Organization. The interagency committee is composed of representatives of the Departments of State, Treasury, Commerce, and Interior. The U. S. has been an active member of the FAO since its creation, contributing about $1.5 million annually to the budget of that organization.

Mr. Short was formerly a vice president of the American Farm Bureau Federation.

Howard J. Shaughnessey, director of Illinois State Public Health Laboratories, will receive the sixth annual award of the Society of Illinois Bacteriologists. The award is to be presented at the society's May 16 meeting in the Edgewater Beach Hotel in Chicago.

N. H. Marsh and **F. W. Mitchell, Jr.,** have been appointed chief chemist and chief analyst, respectively, of the nitrogen chemicals plant now under construction by American Cyanamid at New Orleans. Dr. Marsh has been working as coordinator of a special project at the company's Stamford research laboratories and Dr. Mitchell came to the company from the research laboratories of General Aniline & Film at Easton, Pa.

Edward P. Stamm, logging manager for Crown Zellerbach Corp., has been promoted to vice president of the company. He will be in charge of the company's timber, logging, and forestry operations in the U. S. His headquarters will remain in Portland, Ore.