

would indicate that many of the opinions might be ill-founded and that growers are beginning to realize it.

Experimental results obtained in 1953 at Clemson apparently disprove some of the survey statements, emphasized Mr. Law. The yield-increase was highly profitable, irrigated cotton made far less second growth after defoliation than un-irrigated (an advantage to those who pick with machines), the irrigated cotton was defoliated as successfully as the un-irrigated, and irrigation did not hamper insect or weed control practices.

Attempting to answer the question, "does irrigation pay?", John White of the Arkansas Agricultural Experiment Station cited tests in Arkansas, where irrigation increased cotton yields by an average of 200 pounds of lint per acre, net returns ranged from about \$33 to nearly \$45 more per acre.

"By assuming the 200-pound yield level and the use of a sprinkler system, well water, and electric motor, lint cotton prices could drop to slightly less than 18 cents per pound before irrigation would cease to be profitable," indicated Dr. White. Discussing the cost of putting in an irrigation system, he quoted University of Arkansas economists who estimated the outlay for 100 acres, not including land preparation, at \$76 per acre with a sprinkler system, using well water and electric motor, and \$44 per acre for free surface water.

Industry

Monsanto Shifts Control of Anniston Plant to Organic Div.

Administrative control of the Anniston, Ala., plant of Monsanto will be shifted from the inorganic chemicals division to the organic chemicals division on Sept. 1, it is announced.

The engineering and purchasing activities of the former phosphate division, now the inorganic chemicals division, have been transferred from Anniston to St. Louis. Research activities of the inorganic division will be relocated at St. Louis with certain organic chemical research activities remaining at Anniston. This is in line with the new organization structure adopted early this year.

In the past, an increasing proportion of the Anniston plant's production has been organic chemicals, including Aro-colors, biphenyls, and a rodenticide. Recently the production of calcium carbide and ferrosilicon has been discontinued by Monsanto as a result of economic conditions adversely affecting the production of these products. The production of certain miscellaneous phosphate salts will be relocated and integrated with operations at the Carondelet plant in St. Louis.

Bemis Opens Multiwall Bag Plant in California

Bemis Bro. Bag Co. has started operations at its New Wilmington, Calif., plant for manufacturing multiwall paper shipping sacks. The plant has been under construction since last October. It replaces another plant there which Bemis had operated for 22 years. A 125,000-square-foot plant, the new building provides increased capacity and space for planned future expansion. The plant will reach full capacity, the company expects, by the end of September, when all moving operations are completed.

New Buildings Near Completion For Dow's Ag Research

Three new buildings at Freeport, Tex., for Dow's agricultural research department are expected to be ready for occupancy early next month. The new buildings are the first of a group planned as the permanent headquarters for the entire department.

Two of the new buildings are for poultry; the other is a greenhouse. One of the poultry buildings, 2500 square feet in area, will be used in experimenting with nutritional materials. The other

building, 3500 square feet in area, will be used for research on plants.

The agricultural research department of the Texas division was created in April 1946, and began with only one person, V. H. Melass, a nutritionist. At present the department has a staff of eight, six of whom are qualified scientists in the field of agricultural research. R. W. Colby is head of the department.

Monsanto Plans Phosphate Salts Expansion at 4 Plants; Will Build New Plant in N. J.

Monsanto has announced plans for a major expansion of its capacity for producing phosphate salts and phosphoric acid, including construction of a new plant at Kearny, N. J.

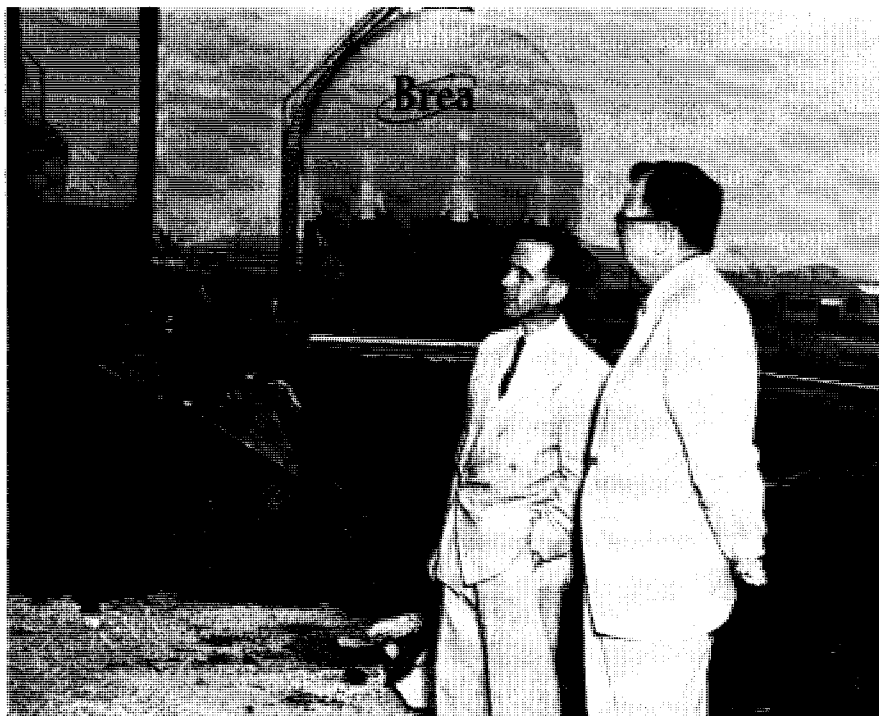
The site selected at Kearny is on a deep water channel of Passaic River and adjacent to the main line of the Pennsylvania Railroad.

Facilities at Kearny will include a unit for converting elemental phosphorus into phosphoric acid and a plant for sodium tripolyphosphate.

Also included in the phosphate expansion are new production facilities for existing plants at Trenton, Mich., St. Louis, Monsanto, Ill., and Long Beach, Calif. A phosphoric acid unit will be

Brea Starts Building Ammonium Phosphate Plant

Brea Chemicals, Inc., has started construction on an ammonium phosphate plant at Brea, Calif. The output will be sold in solution form to western growers, complementing the company's aqua ammonia. Homer Reed, president of Brea, and Jack Tielrooy, development manager, watch the ground-breaking operation. Completion is expected during the latter part of next month. Similar plants are expected to be built by Brea at Brawley and Fresno, Calif.



built at Long Beach and phosphoric acid facilities will be enlarged at Trenton. Expansion of units for sodium tripolyphosphate and new facilities for tetrasodium pyrophosphate will be undertaken at St. Louis. A new acid burner is scheduled for the Monsanto, Ill., plant.

Dieldrin Soon to Be Sold for Household Use

Shell Chemical has announced that its insecticide dieldrin will soon be available for use in homes. Until now, its use has been mostly on farms, ranches, and lawns. USDA has granted label acceptance for the use of dieldrin as a spray or dust in households for controlling roaches, ants, silverfish, ticks, carpet beetles, paper nest wasps, and mud daubers.

IM&C Acquires Refractory Plant

International Minerals & Chemical Corporation has acquired Sonsel Refractories Corporation at Brighton, Mich. The newly acquired plant will continue production of zirconium refractories under a patented process and other special refractories on an expanded scale as part of International's industrial minerals division.

C&I Acquires Rights to License Stengel Process

The Chemical & Industrial Corp., Cincinnati, Ohio, has recently acquired the right from Commercial Solvents Corp. to license the Stengel process for ammonium nitrate production. This process makes it possible to produce granular ammonium nitrate in almost a single step from nitric acid and ammonia. The Stengel process will produce ammonium nitrate solutions or a dry, molten salt. Chemical & Industrial Corp. is prepared to design and erect plants using this process.

Research

Peat Soil Conditioner Developed in Holland

A soil conditioner and fertilizer based on black peat has been developed in Holland. Intermittent reduction and oxidation of peat in an autoclave using ammonia and oxygen produces the product known as X2. Field tests showed X2 to give increases in crop yields of up to 25%. Investigations at Wageningen Agricultural University were reported during the recent International Peat Symposium at Dublin.

"Maneb" Selected Name for Fungicidal Chemical

The coined name maneb has been selected by the Interdepartmental Committee on Pest Control for the fungicidal chemical manganese ethylenebis(dithiocarbamate). The American Phytopathological Society, the American Medical Association, and the American Chemical Society have also agreed to the selection. The Interdepartmental Committee is made up of representatives of the Departments of Agriculture, Interior, Army, Navy, Air Force, and Health, Education, and Welfare.

The chemical has previously been known by its chemical name and also as manganese EBD, MnEDB, and MED. The name maneb refers to the pure chemical and technical grade should indicate the percentage of the pure chemical present.

Atomic Agriculture in Canada

Chalk River, Canada's Oak Ridge is serving as a source of isotopes for agricultural research for Canadian researchers investigating a variety of agricultural problems. Studies as diverse as measurement of soil moisture habits of cutworms and production of humus are under way.

At Saskatchewan University phosphorus-32 has been used as a tracer to study the uptake of phosphorus by wheat and barley seeds and seedlings. More than 90% of the phosphorus is apparently absorbed by the grain and seedlings within the first 13 days after germination. To study the movement of cutworms and other underground insects, pieces of radioactive wire were cemented to the larvae. The movements and activities of the larvae underground could then be followed with radiation detection devices.

The effects of phosphate fertilizers on high lime soils is being studied with radioactive phosphorus at Ontario Agricultural College. Workers there are also investigating the amount of available phosphorus occurring naturally in the soil with isotopes.

Carbon-14 has been used to test soil conditioning chemicals and to tag amino acids in plants to determine how organic materials affect production of humus in plants.

BHC Found to Cause Off-Flavor in Olives

Musty off-flavor of olives, reported from three different areas of California recently, has been traced to certain insecticides by University of California Research scientists.

Food technologist Reese H. Vaughn and Pomologist Hudson T. Hartmann, on the Davis Campus, found that the unusual musty flavor in canned ripe olives is caused by benzene hexachloride.

Tests at the University's Wolfskill experiment orchard in winters show that when the chemical is sprayed on the leaves, applied to soil under the trees, or painted on fresh pruning cuts, the off-flavor may develop in processed fruits. Lindane, a purified form of benzene hexachloride, also produced the off-flavor.

If the insecticide drifts into olive groves from nearby crop fields, it will flavor the fruit, the researchers warned.

Education

Award for Agricultural Bibliographies

Entries are being accepted now for the Oberly Memorial Award made every two years by the American Library Association for the best bibliography in the field of agriculture or the natural sciences.

Further information about entries is available from J. Richard Blanchard, librarian, University of California Library, Davis, Calif., who is chairman of the Oberly Memorial Fund Committee.

Points to be considered in judging the bibliographies, according to Blanchard, are: accuracy, scope, usefulness, format, and special features such as explanatory introductions, annotations, and indexes.

Research Fellowship Set Up as Memorial to Sir Jack Drummond

The appeal for funds for the Sir Jack Drummond Memorial has closed and the trustees of the fund have announced that more than \$750,000 has been received. A research fellowship has been established for work in nutrition and the fellowship will be available for work in any research institute in Britain or overseas.

Headquarters for administration of the trust will be in the University College, London.

People

Culpepper Replaces Riley As Spencer VP for Sales

Joe E. Culpepper has been elected vice president and will continue to serve as general sales manager for Spencer Chemical. J. R. Riley, Jr., vice president in charge of sales for the company, has resigned but will continue to be active as a director, member of the executive