

Industry

Monsanto to Build Research Center for Inorganic Chemicals

Monsanto has announced plans for a research center to consolidate its inorganic chemicals research activities to be constructed near St. Louis in the near future. The research building, accommodating about 160 people will make it possible for Monsanto to bring its research people, presently located in Everett, Mass., and Dayton, Ohio, together with the rest of the inorganic chemicals division staff.

Construction of the two-floor building is scheduled to get under way shortly, with the completion planned for the fall of 1955. The research center will be built on a 250 acre tract the company has acquired in Creve Coeur, Mo. The 250 acre area is part of Monsanto's long range development program.

Company Formed to Import German Potash

The Potash Import & Chemical Corp. has been formed to bring muriate and sulfate of potash into eastern United States port cities from Western Germany.

Offices for the firm will be at 285 Madison Ave., New York. The officers of the company are Henry Mann, president; Werner Duehrssen, vice president. Henry Maddux, well-known soil authority, will be agronomist in the new organization and will be located at Raleigh, N. C. Cliff Collier will handle southeastern sales with headquarters in Atlanta.

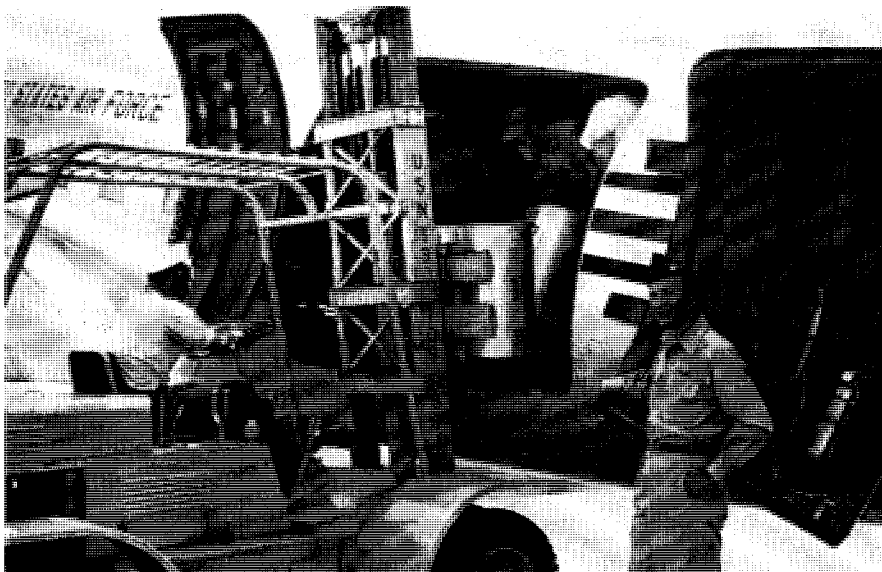
Geigy Formulating Plant to Serve Plains Area

Agricultural chemicals division of Geigy Chemical Corp. has announced that construction of a \$500,000 formulating plant and sales office is under way at Des Moines, Iowa.

The new installation, to replace the midwestern territorial headquarters at Burlington and Lockridge, Iowa, will service an area from the Rocky Mountains to the Alleghenies. Plans include two formulating plants, one for the manufacture of insecticides and fungicides and the other for herbicides, as well as a sales office and a service building incorporating a quality control laboratory.

The plant will enable Geigy to maintain its policy of having formulating plants in every major geographical area. There are two plants in the East, three in the Southeast, one in the Southwest and two in the Far West.

Air Force Joins Battle Against Army Worm



The transportation facilities of the U. S. Air Force were utilized to rush toxaphene insecticide from the Hercules plant in Brunswick, Ga., to Minnesota to combat the recent record invasion of army worms. State officials said the infestation was the worst in 40 years and the governor of the state proclaimed a state-wide emergency. Officials say that perhaps 50% of the crops in the state would have been destroyed if prompt application of insecticide had not halted the outbreak

New Citrus Concentrate Method Retains More Flavor Esters

APPROXIMATELY 93% of the volatile esters that are the flavor source in orange juice are retained in a new concentrating method announced by Golden Gift, Inc., of Deland, Fla. Golden Gift makes fresh whole orange juice at the rate of 225,000 gallons a month; would rather license the "hi-ester retention" process than go into the concentrate business itself. The new process produces a frozen three-to-one concentrate for a cost differential of less than 0.0015 cents additional per six-ounce can.

Heart of the process is the votator, a direct expansion chiller in which Freon is evaporated against a stainless steel wall, freezing the juice to a sherbet consistency at 27° to 27.5° F. The mixture is then centrifuged. The supernatant liquor contains 93 to 95% of the volatile flavor esters, less than half of the fruit sugars. It is stored in a vaporproof cold-wall tank, under nitrogen. From 100 gallons of juice containing about 12% fruit sugars, about 15 gallons of supernatant containing almost all of the flavor can be obtained. This supernatant will be about 30% sugar. About 85 gallons of ice crystals, the slush from the centrifuge, will contain only a trace of flavor oils and will be about 8.4% sugars. This centrifuge effluent will be charged to an

evaporator, and most of the water removed.

In conventional concentrate manufacture, juice is fed directly to the evaporator, and under the low vacuum used, about 90% of the flavor esters are volatilized with the water. An observer standing near the steam outlet of the evaporator in a conventional plant smells a beautiful orange odor, from the orange flavor being discharged to the air. The evaporator in the "hi-ester retention" process has little or no odor. The extra expense of freezing the juice is almost offset by added economy in the evaporation operation due to reduced volume, less dissolved solids allowing more efficient evaporation, and elimination of flavor fortification.

The evaporator residue, slightly over 10 gallons from the original 100, contains about 57% sugars and is added back to the flavor-containing supernatant in cold-wall blending tanks to produce the final concentrate. Golden Gift has produced and marketed about 70,000 gallons of bulk concentrate (three-to-one) and about 60,000 cases of six-ounce cans. The process has also been used commercially on grapefruit concentrate, and experimentally on pineapple juice. It makes a long-time goal of the orange

concentrate industry feasible; five-to-one concentrate with full flavor and practically no water. Milk, grape juice, and other natural beverages can also be concentrated by this process.

New Unit Makes Brea Biggest Dry Ice Producer in West

Brea Chemicals has begun shipments of dry ice from its recently completed carbon dioxide recovery unit established as an adjunct to Brea's ammonia plant. Production from the new unit in Brea, Calif. combined with that of a similar in-

stallation in Santa Maria, makes Brea the biggest dry ice producer in the West. Combined production of the two plants is 150 tons of carbon dioxide per day.

Monsanto Constructing 400-Ton-Per-Day Contact Sulfuric Unit

Construction work has been started on a 400-ton-per-day 100% sulfuric acid unit at Monsanto Chemical's William G. Krummrich plant at Monsanto, Ill.

The new unit, which is expected to be in production Jan. 1, 1955, will supplement existing facilities. The unit is

known as a Leonard-Monsanto contact sulfuric acid plant. It is typical of plants which have been put up under contract in various parts of the country by the engineering sales department of the company's research and engineering division. What is believed to be the largest unit in the world of this type, a 550-ton-per-day unit, was recently completed at Bartow, Fla., for Davison.

Kodak's DPI Division Expands Production of Monoglycerides

Distillation Products Industries division of Eastman Kodak Co. has increased its production facilities for Myverol distilled monoglycerides. Raymond W. Albright, DPI general manager, said the expansion was necessary to meet customer demand.

The current expansion of facilities in this Mt. Read plant is expected to provide even greater efficiency and improved quality control of product, the DPI executive said.

In a program of continuing development work, DPI is currently investigating new methods of blending shortening and is setting up a pilot plant in this field. The division is also carrying on research into various other commercial and industrial applications of the materials.

FMC Purchases USI Plant, Sets Up Pesticide Division

Food Machinery and Chemical Corp. has completed negotiations for the purchase of National Distiller's USI Division plant, in Fairfield, Md. Food Machinery plans to operate the Fairfield plant as a separate division of the corporation for the production of pesticides.

The Fairfield Chemical Division of FMC will concentrate on production of piperonyl butoxide, pyrethrins, allethrin, and grain protectants. FMC is already considering plans to expand the operations of the newly created division in the area of pesticide chemicals.

People

Peter C. Crolius has joined the staff of The National Fertilizer Association as editorial assistant. Mr. Crolius was graduated this year from Cornell University's department of extension teaching and information in the college of agriculture.



He will assist **Peter C. Crolius** **Delbert L. Rucker**, director of information, in conducting the information and public relations programs of the NFA.



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