

Business Newsletter . . .

UREA DEVELOPMENTS

Consolidated Mining & Smelting will build a urea unit at its Calgary, Alta., plant. The new unit, with a capacity for 100 tons a day of prilled urea, will be constructed by Vulcan-Cincinnati, Inc. It will use the Inventa-Vulcan urea process, will have facilities for total recycle of ammonia off-gas and a hot-carbonate system for purifying ammonia synthesis gas by removal of carbon dioxide, and will be designed to operate in outside temperatures as low as -50° F.

South Korea's first fertilizer plant opened last month at Chung-Ju, 70 miles from the Communist border. It will turn out 250 metric tons of urea daily, the output displacing some \$12 million worth of nitrogenous fertilizer imports a year. Financed mainly by U. S. International Cooperation Administration, the plant was built by McGraw-Hydrocarbon, Inc. Another urea plant of equal capacity is being planned, but no date has been set for construction.

H. J. Baker & Bro. has been appointed sales agent in the U. S., Puerto Rico, Cuba, and the Dominican Republic for the urea production of Comptoir Belge de l'Azote, also called Cobelaz.

MERGERS

Stockholders of Victor and Stauffer have cleared the way for merger of the two firms. Effective date: Nov. 1. Victor, which will become Victor Chemical Division of Stauffer, has been having the best year in its 62-year history. Sales for the first three quarters were over \$45 million, compared with \$39.6 million in 1958's first three quarters. Earnings for the 1959 period were \$2.12 a share, compared with \$1.44 for the '58 period.

Two firms active in plant construction are planning to combine their activities and facilities—Chemical & Industrial Corp. and Girdler Construction (a division of Chemetron). Chemical & Industrial will be the parent company, and Girdler its subsidiary. Chemetron will have a "substantial minority interest" in C&I. H. H. Hamilton will continue as chief executive officer of C&I, and W. Roberts Wood will continue as head of Girdler Construction.

RESIDUE PROBLEMS FOR HEPTACHLOR

Food and Drug proposes to rescind its present regulation allowing a 0.1 p.p.m. residue of heptachlor in or on food shipped in interstate commerce. The effect would be a banning of any amount of heptachlor on food—a zero tolerance, in other words. Behind the move: findings that heptachlor epoxide, which is not detectable by present analytical methods for heptachlor itself, forms on heptachlor-treated crops as a result of weathering, and that heptachlor epoxide appears to be more acutely toxic than heptachlor. Epoxide residues are also deposited in meat and milk when forage containing the epoxide residue is fed to meat and dairy animals. Interested parties have until Nov. 26 to request referral of the proposal to a scientific advisory committee.

GRACE TO MANAGE PUERTO RICAN PLANT

W. R. Grace has signed a contract to manage the ammonia and ammonium sulfate plant of Gonzalez Chemical Industries, Inc., at Guanica, Puerto Rico. The management contract is the first step in a contemplated reorganization of Gonzalez. Grace is expected to acquire a substantial share of stock in Gonzalez eventually. Built in 1956 at a cost of \$12 million, the plant is designed to produce 125 tons per day of

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ammonia, and 350 tons a day of sulfuric acid, which are combined to make over 400 tons of ammonium sulfate a day. Lloyd E. Lundahl, former manager of engineering and maintenance at the Memphis plant, will be plant manager of the Puerto Rican installation.

ARMOUR REORGANIZES

Armour Agricultural Chemical Co. has disclosed its reorganization plans. It is being realigned into two major divisions—fertilizer and nitrogen-phosphate. Fertilizer division, to be headed by H. Vise Miller as vice president and general manager, will include 27 fertilizer manufacturing plants in the U. S., one in Cuba, and one in Puerto Rico. Nitrogen-phosphate division—which will include the newly acquired nitrogen plant at Crystal City, Mo., the phosphate mining and processing facilities at Bartow, Fla., and Columbia, Tenn., and the triple super plant at Bartow—will be headed by Robert L. James, who was senior staff associate in market research and project feasibility for Arthur D. Little. Bernard M. Machen, who joined Armour when it acquired Mississippi River Chemical's nitrogen plant, will be sales manager of the nitrogen-phosphate division. John E. Moore, who was assistant general manager of the company, becomes assistant to president W. E. Shelburne.

DU PONT BUILDING METHYLAMINES PLANT

Du Pont is putting up a new methylamines plant at its Belle, W. Va., site. These basic chemicals are used in manufacturing a number of products, including 2,4-D and fungicides. The new plant will more than double Du Pont's methylamine capacity, all of which is now located at Houston, Tex.

MEETINGS

California Fertilizer Association, Fairmont Hotel, San Francisco, Nov. 8-11.

National Agricultural Outlook Conference, U. S. Department of Agriculture, Washington, D. C., Nov. 16-20.

Farm Chemicals Marketing Seminar, Barbizon-Plaza Hotel, New York, N. Y., Nov. 16-17.

Entomological Society of America, Entomological Society of Canada, Entomological Society of Ontario, Joint Meeting, Sheraton-Cadillac Hotel, Detroit, Mich., Nov. 30-Dec. 3.

Soil and Fertilizer Short Course, University of Minnesota, St. Paul, Dec. 7 and 8.

Joint Western Canadian and North Central Weed Control Conference, Royal Alexandra Hotel, Winnipeg, Man., Dec. 8-10.

American Association for the Advancement of Science, Hotel Morrison, Chicago, Ill., Dec. 26-31.

- Control laboratory deserves bigger role in management in the fertilizer industry (page 741).
- Agricultural chemicals industry resigning itself to low profits (page 742).
- Price is expected to have final say on amino acids' role in food supplementation (page 743).
- Plastics now firmly established materials of construction for fertilizer equipment (page 745).



Research Newsletter . . .

NEW PLANT GROWTH REGULATOR

A new plant growth regulator that makes plants short and stocky has been discovered at Michigan State University by N. E. Tolbert. Called CCC, it is 2-chloroethyl trimethyl ammonium chloride. The compound also makes plants darker green and increases the number of shoots. CCC and gibberellic acid are said to be mutually antagonistic—one offsets and reverses the response brought about by the other. CCC and its relatives do not appear to be very toxic to animals, although they are cholinesterase inhibitors. American Cyanamid is cooperating with Michigan State in further studies by producing quantities of CCC and its related compounds for experimental uses.

ARMY DEFERS IRRADIATED FOOD CENTER

The Army has deferred its plans to build an ionizing research center in California for study of irradiation of food, pending further laboratory studies on the use of high-dose irradiation for food sterilization.

One consideration involved in the Army's decision is "certain physiological problems" that have not yet yielded to solution in the laboratory, but the Army did not elaborate on that statement. Also involved was the need for studies to reveal precisely what strategic and tactical advantages the Army could gain from use of irradiated food. Affected by the decision is Irradiated Products, Inc., which was formed by Armour, General Foods, Food Machinery, and Continental Can to perform production planning for the plant.

AUTOMATIC MEASUREMENT OF CHOLINESTERASE INHIBITION

A system for continuous, automatic chemical determination of the acetylcholinesterase inhibition of certain insecticides has been introduced by Technicon Controls, Inc. System uses company's AutoAnalyzer, an instrument that automates the basic steps of an analytical procedure in wet chemistry—sampling, measuring of sample, mixing and separation, reaction, analysis, and recording of results. Applied to insecticides, the instrument is not specific for a particular insecticide, but it does provide a measure of total toxicity. The bio-assay is performed in two stages—incubation of the insecticide with a standard solution of cholinesterase, and measurement of the amount of cholinesterase remaining by colorimetry.

- In tests with alfalfa, uniformly sized particles of moderately reactive borosilicate glasses had greater ability to minimize seasonal variation in crop boron than comparable nonclassified particles (page 756).
- Toxicology studies on Crag fly repellent brought up to date (page 763).
- Two microbiological methods of assaying vitamin B₁₂ in foods of animal origin are compared (page 771).
- Gas chromatography helps identify the compounds responsible for unpleasant odor of beef preserved by irradiation (page 778).

