

# Business Newsletter . . .

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## NEW CONSTRUCTION

Southwestern Nitrochemical has broken ground for an 80-tons-per-day ammonia plant at Chandler, Ariz. The \$4-million plant is scheduled for completion next January. Southwestern Nitrochemical is a joint subsidiary of First Mississippi Corp. and Southwestern Agrochemical. Latter is a farmer-owned corporation that now makes sulfuric acid and ammonium phosphate at Chandler.

Spencer Chemical is constructing a new building at its Kansas City research center. The new building, fourth at the center, will house process development work. Until recently most of company's process development had been conducted at the Jayhawk Works, Pittsburg, Kans. Construction is to begin this month, with completion scheduled for early 1960. New building will provide about 11,000 square feet.

Stauffer will increase its capacity for a Trithion intermediate, p-chlorothiophenol, by 50%. New capacity, to be based on a process developed by Stauffer research, will permit company to expand and integrate its Trithion insecticide production at Henderson, Nev. When completed next January, the new facility will replace present intermediate unit at Niagara Falls, which will then be converted to other uses.

U. S. Industrial Chemicals has completed a phosphoric acid storage tank at Tuscola, Ill. The reinforced concrete structure will hold over a million gallons of phosphatic fertilizer solution. USI says reinforced concrete is something new for phosphoric acid tanks—most tanks for phosphoric acid are built of lined steel.

Included in Olin Mathieson's recently announced \$30-million expansion program are a new facility for production of sulfamic acid—intermediate for synthetic sweeteners—and enlarging of facilities for Poly-Solv—a solvent for insecticides. Sulfamic acid plant will be located at Joliet, Ill. Poly-Solv expansion is slated for Brandenburg, Ky.

Monsanto's private road between its phosphate plant at Soda Springs, Idaho, and its Ballard phosphate mine 11 miles away was opened in late July. Specially built haulers will carry 75 tons of ore each trip, with four of the new trucks doing the work formerly done by 15 smaller trucks. Round trip from mine to plant will take about one hour.

American Agricultural Chemical Co. says construction at its new fertilizer plant at Johnson Creek, Wis., is on schedule. First phase of construction will be completed Nov. 1, including a mixed fertilizer storage building, and bag and bulk shipping facilities.

## NEW VENTURES FOR MILES CHEMICAL

Miles Chemical says it will soon be turning out semicommercial quantities of dialdehyde starch, a corn-derived chemical originally developed by USDA'S Northern Utilization Research Branch. The chemical is said to have almost limitless possibilities in a wide variety of uses—as a tanning agent, as a hardener for photographic papers and films, as a finishing agent in textiles, to impart wet strength to paper, as a binding agent in tobacco, in various plastics and polymers, and in many other applications. Miles Chemical says its research and development work has resulted in the "first realistic commercialization of a process for dialdehyde starch." Details of the Miles process are said to be significantly different from those developed by USDA. Semicommercial plant with capacity for several hundred thousand pounds a year will be on stream by mid-October. Long range plans for dialdehyde starch, to be called Sumstar, point to a multimillion-pounds plant. Abbott Laboratories revealed its plans to make the product last spring.

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Miles Chemical is also taking steps to expedite its participation in the farm feed business. Key to its entry in farm feeds is use of Takamine enzymes in formula feeds. Goal is to establish the Miles name in the farm feed industry by offering a select group of products through a hand-picked distributor network. This is to be backed by research aimed at new products for farm feed, and by advertising.

#### ACQUISITIONS

International Minerals has bought Miami Fertilizer Co., Trebein, Ohio. Miami Fertilizer produces Big M dry granular fertilizers, sold principally in the Miami Valley area of Ohio. Its facilities include a fertilizer mixing plant and a granulating unit. Charles F. Martin will continue to manage the plant.

Farm Fertilizers, Inc., has purchased the plant and facilities of General Fertilizer Co., Fremont, Nebr. Ken Bauer will continue to be in charge of the Fremont office.

Agricultural Chemicals, Ltd., has purchased the factory and physical assets of Grand Valley Fertilizers, Ltd., at Orangeville, Ont. With this addition, Agricultural Chemicals, Ltd., has four Canadian plants; the others are at Port Hope and London, Ont., and Fort Chambly, Que.

#### AMMONIUM NITRATE FERTILIZER NOT INVOLVED IN OREGON BLAST

It was "nitro carbo nitrate," not fertilizer ammonium nitrate, that was involved in the truck blast disaster at Roseburg, Ore., last month, according to Interstate Commerce Commission officials investigating the explosion. Nitro carbo nitrate is the Bureau of Explosives' term for ammonium nitrate sensitized with carbonaceous materials, Diesel oil in this case. According to Dr. Melvin A. Cook, director of the Institute of Metals and Explosives Research at the University of Utah, and chief witness for the plaintiffs in the case brought against the government following the Texas City disaster, the big hazard at Roseburg was in transportation of nitro carbo nitrate with dynamite. Said Cook: "I believe that the Roseburg explosion would not have occurred had nitro carbo nitrate been by itself and not used in conjunction with dynamite." Manufacturing Chemists' Association and National Plant Food Institute joined in the flat statement that fertilizer-grade ammonium nitrate is not an explosive and will not explode unless mixed with some organic matter such as oil.

#### LEGISLATION FOR NEWER AG CHEMICALS

Both House and Senate have now passed an amendment to the Federal Insecticide, Fungicide, and Rodenticide Act, bringing nematocides, plant regulators, defoliants, and desiccants under the same legislation as regulates other pesticides. This automatically puts the newer agricultural chemicals under the Pesticides Amendment to the food and drug act. The President is expected to sign the bill into law. L. S. Hitchner, executive secretary of the National Agricultural Chemicals Association, said passage of the bill means uniform regulation of agricultural chemicals and eliminates the possibility of conflicting controls under other federal legislation.

#### PESTICIDES GAIN IN '58

Production and sales of pesticides and other organic agricultural chemicals in 1958 topped those of 1957, says U.S. Tariff Commission. The 1958 production total was 539 million pounds, about 5% higher than 1957's total of 512 million pounds. Sales climbed to 467 million

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pounds, valued at \$196 million, compared with 1957's 433 million pounds, valued at \$178 million. DDT was again the leading pesticide—with 145 million pounds produced (a record) and sold. Output of cyclic pesticides and other cyclic agricultural chemicals reached 445 million pounds, about 9% more than the 407-million-pound output of 1957. Sales of cyclics in 1958 were 378 million pounds, valued at \$148 million, compared with 350 million pounds, valued at \$132 million, in 1957. Production of acyclic pesticides and other acyclic organic agricultural chemicals in 1958 amounted to 95 million pounds, compared with 104 million pounds reported in 1957. Sales of acyclics in 1958 totaled 89 million pounds, worth \$48 million, against 94 million pounds, worth \$46 million, in 1957.

## INDUSTRIAL USES FOR SURPLUS CROPS PUSHED

The Senate has passed a bill to create a new research agency within the Department of Agriculture. Purpose of the new unit, to be called the Agricultural Research and Industrial Administration, is to develop new industrial uses and expand present industrial uses for farm crops. New agency would have almost unlimited authority to look for ways to convert surplus crops into industrial chemicals. The bill is now before the House Agriculture Committee. A similar bill passed the Senate last year, but died in the House.

## MEETINGS

American Chemical Society, 136th National Meeting, Atlantic City, N.J., Sept. 13 to 18. Division of Agricultural and Food Chemistry, Ritz-Carlton Hotel, Sept. 15 to 18. Division of Fertilizer and Soil Chemistry, Haddon Hall, Sept. 14 to 17.

Fungicide Colloquium, American Phytopathological Society, Boucke Hall, Pennsylvania State College, University Park, Sept. 2.

Citrus Processing Conference, Winter Haven, Fla., Sept. 17.

Agro-Forestry Meeting, Pringle Falls, Ore., Sept. 29-30.

Traffic Committee, National Plant Food Institute, Rice Hotel, Houston, Tex., Oct. 7-8.

Symposium on Research Progress on Insect Resistance, Mayflower Hotel, Washington, D. C., Oct. 7-8.

National Agricultural Chemicals Association, French Lick-Sheraton Hotel, French Lick, Ind., Oct. 21-23.

Accident Prevention School for Fertilizer Plant Personnel, Fresno, Calif., Oct. 29 and 30.

Fertilizer Industry Round Table, Mayflower Hotel, Washington, D.C., Nov. 4-6.

National Aviation Trades Association, Hotel Monteleone, New Orleans, La., Nov. 16-20.

Carolinas-Virginia Pesticide Formulators Association, Pinehurst, N.C., Dec. 1-2.

- Full effect of St. Lawrence Seaway on chemicals for agriculture is not likely to be felt for many years (page 593).
- Manufacturers' direct sales to farmers on the increase (page 594).
- Weed killer 2,4-D is top-seller among selective herbicides (page 596).



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## DDT HAS HYDROPHOBIA

Why is DDT so unpredictable in controlling mosquito larvae when it is applied to lakes, ponds, and other mosquito-breeding areas? Because of its behavior in water, USDA chemists and entomologists have discovered. Using DDT tagged with radioactive carbon, they found that after 24 hours half of the DDT had evaporated by codistillation with water. Within two minutes after stirring 1 part DDT into 100 million parts of water, another third of the DDT had fled to the bottom and walls of containers. Whether containers were made of paper, glass, or aluminum made no difference. These hydrophobic qualities of DDT surprised USDA scientists, because DDT has been investigated more thoroughly than any other insecticide, and is used more than any other. Similar tests with dieldrin, parathion, malathion, and lindane did not show the same actions as with DDT.

## ANTIBIOTICS FOR BEEF AGING

Antibiotics may be able to speed up the aging of steaks, say University of Missouri researchers. They injected oxytetracycline into tails of steers a few minutes before slaughter. Animals' vascular systems circulated the antibiotics throughout the body before slaughter. After processing, carcasses were aged in room kept at 86° F. for two days, then chilled. Steaks from these carcasses were as tender and palatable as steaks from carcasses aged in the normal manner for two weeks. Antibiotic prevents spoilage organisms from attacking the meat while it is held in a high temperature room. High temperature, in turn, allows natural enzymes in muscles to tenderize the meat much faster than they would be able to do under the usual aging conditions. Cooking the steaks to medium well done destroyed antibiotic residues.

## LONGER-RANGE BLIGHT FORECASTS

Twenty-day forecasts of infections of late blight, fungus disease of potatoes and tomatoes, are being tried this season in 11 North Central states. If successful, these longer-range predictions will be used generally next season instead of the seven-day forecasts issued routinely since 1952. Longer range forecasts will give more time to get word to growers on the advisability and timing of protective chemical sprays. Dealers and manufacturers of the chemicals may benefit also, if the predictions are used to manage inventory and sales programs. New 20-day forecasts are based not only on past temperature and humidity readings but on longer-range weather predictions as well. Late blight attacks usually occur when temperature is 65° to 75° F. and relative humidity is 90% or more for 12 hours.



- Synthesis of Sevin containing radioactive carbon makes possible research on Sevin's metabolism by insects and its mode of action (page 612).
- Concentrated fertilizer produced by burning elemental phosphorous with dry air and treating fume with ammonia (page 618).
- Use of superphosphoric acid gives high analysis liquid fertilizer (page 623).