

amounts of ozone occurring naturally in the atmosphere over the Los Angeles area. The SRI report says that the Los Angeles area has the highest concentration of ozone on the earth's surface. Ozone concentration seems to correlate with manifestations of smog, and ozone concentrations seem to be the best single

measurement of smog intensity in the Los Angeles basin.

The mechanics of ozone formation in the atmosphere are not adequately explained by any existing theories according to SRI. When the ozone formation is understood then perhaps smog formation can also be explained.

Dye. Ammonia facilities at this plant went into operation in April. The plant was constructed at a cost of approximately \$25 million.

Urea will be sold for use as a fertilizer and as a cattle feed supplement, as well as a raw material for plastics and other items.

Both the ammonia and urea facilities incorporate processes developed through research in Allied Chemical's laboratories. The engineering and construction work in connection with these facilities were done by Catalytic Construction Co.

Chemical Enterprises Buys 9 Farm Chemical Distributors in NW

Chemical Enterprises, Inc., has acquired nine companies engaged in distributing anhydrous ammonia and other farm chemicals in Washington, Oregon, and Idaho. The nine companies were acquired from W. C. McCall of Portland, Ore., who will continue as a director and president of the companies. The companies are located in the wheat growing sections of those states.

According to Chemical Enterprises, this most recent acquisition will help to balance out its activities, giving equal emphasis on cotton, corn, pastures, rice, and wheat. The company distributes

Industry

FMC Maps Out Plans for New Fairfield Division

MORE DETAILS are now available on Food Machinery and Chemical Corp.'s recent purchase of the Fairfield, Md., facilities of U. S. Industrial Chemicals Co. (AG AND FOOD, Aug. 4, page 814). Newly created Fairfield Chemical division, which came into being on Sept. 1, will take over USI's production of insecticides, herbicides, grain protectants, and other chemicals manufactured at Fairfield. Among the plant's leading products are pyrethrins, allethrin, and piperonyl butoxide.

The new division will supplement the chemical activities of FMC's other divisions, including Westvaco, Chlor-Alkali, Westvaco Mineral Products, Ohio Apex, Niagara Chemical, and Buffalo Electro Chemical. A producer of SST, BHC, lead arsenate, calcium arsenate, and sulfur compounds, the parent company is a major factor in the ag chemical field. FMC also has a basic position as a producer of chlorine, caustic, phosphoric acid, and other important raw materials.

The Fairfield division is expected to become a center for diversified organic chemical production in the FMC family. Currently a producer of IPC and chloro-IPC, the Fairfield plant is likely to expand its activities in the direction of other carbamate compounds. Its general activities in the herbicide field will be intensified.

In accord with previous policy, the Fairfield division will serve as a supplier of raw materials and basic concentrates to manufacturers of agricultural chemicals. It will not enter the field of consumer products.

The staff of the new division will remain essentially what it was when part of USI. New manager of the division is R. B. Stoddard, who previously served as coordinator of insecticide operations for USI. W. S. Blondheim, plant manager, will be in charge of activities other than sales and research. Herman Wachs has been named director of research, with headquarters in Baltimore.

Other USI personnel now with the Fairfield Chemical division include W. E. Dove, director of entomological research, and H. A. Jones, director of the Fairfield laboratory. J. A. Rodda will be sales manager, with headquarters in New York.

Branch offices of the new division are being established in Chicago, Kansas City, New Orleans, San Francisco, and other cities.

Urea Now Coming from Allied's Omaha Plant

Initial production of urea has been obtained at the new Omaha, Neb., plant of Nitrogen Division, Allied Chemical &

Farm Editors See Experiment Stations as Guests of APFC

Seventeen editors of some of the nation's best-known farm magazines were guests of the American Plant Food Council on a week-tour of selected land-grant colleges and experiment stations throughout the country. The first stop on the tour (Aug. 16) was the University of Wisconsin. L. E. Engelbert, department of soils, at the University (extreme left) is shown telling a group of editors about the soils and agriculture of Wisconsin. The Wisconsin trip took editors to the University's laboratories, classrooms, and experimental fields. Editors were also shown a modern fertilizer mixing plant



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farm supplies through its 38 affiliated companies operating over 250 stations in key agricultural areas in the U. S.

In addition to Mr. McCall, other directors of the companies will include; Daniel B. Curll, Jr., president of Chemical Enterprises; J. C. Berry, president of

Louisiana Liquid Fertilizer Co., C. L. Cummings of Pendleton, Ore., J. O. Huntington of Walla Walla, Wash. Mr. Cummings will serve as vice president of the Oregon companies, and Mr. Huntington as vice president of the Washington companies.

plane designed exclusively as an aerial farm implement under the supervision of Fred E. Weick, Texas A&M College (see AG AND FOOD, May 26, pp. 546-52).

Like the AG-1 the AG-2 is a low wing single seat monoplane with thick high lift wings. Plastic spray tanks are built into the wings for carrying liquid herbicides and insecticides. There is a 53-cubic-foot hopper forward of the pilot for solids such as seeds, fertilizer, or dust.

Separate applying systems are incorporated for solids dispersal or liquid application. The plane has a rated payload of 2000 pounds either in the form of dust, in the hopper forward of the pilot, or as liquid, carried in the wing tanks. Both application systems are controlled by the pilot in the cockpit using a single control lever. A clutch system allows the pilot to change over from one system to the other.

The plane has been designed for good low speed performance with a 1-ton payload. Another feature, the plane is also designed for ease of maintenance and service, with low operating costs. The gross weight of 5200 pounds is believed to be the optimum size for the majority of crop dusting and forestry operations throughout the world.

National Distillers Expanding for Midwest Ag Chemicals Business

National Distillers Products Corp. stated clearly its intention last month to become a big factor in agricultural chemicals in the Midwest and to prove it announced acquisition of a sulfuric acid producer and plans for doubling capacity at its Tuscola, Ill., nitrogen plant.

Acquisition of Hegeler Zinc Co. of Danville, Ill., through an exchange of stock provided the sulfuric acid plant,

Fletcher Agricultural Aircraft in Volume Production

**New Zealand contracts for 100 agricultural aircraft
... Fletcher Aviation goes into volume production
... Transland completing tooling for AG-2**

AIRPLANES HAVE MOVED UP several notches in the farm implement ladder, with two companies now about to produce aircraft designed specifically for aerial application of agricultural chemicals.

Fletcher Aviation of Rosemead, Calif., claims to be the first manufacturer with a plane in volume production. The production claim by Fletcher was made at the same time as the company's announcement that a contract for 100 of the "utility" agricultural aircraft had been placed by a New Zealand firm. The New Zealanders plan to use the planes primarily for the aerial application of superphosphate fertilizers. The New Zealanders signed the contract for the airplanes before the test flights of the production prototype had been completed. The first flights of the prototype plane were made on July 14 of this year.

The Fletcher Aircraft is designed to lift a 1250 pound load of chemical from an unimproved flight strip. The all-

aluminum plane is coated with a plastic paint to protect it against the effects of corrosion from the chemical cargo. The chemical hopper, located behind the pilot, is coated with saran plastic for corrosion and abrasion resistance.

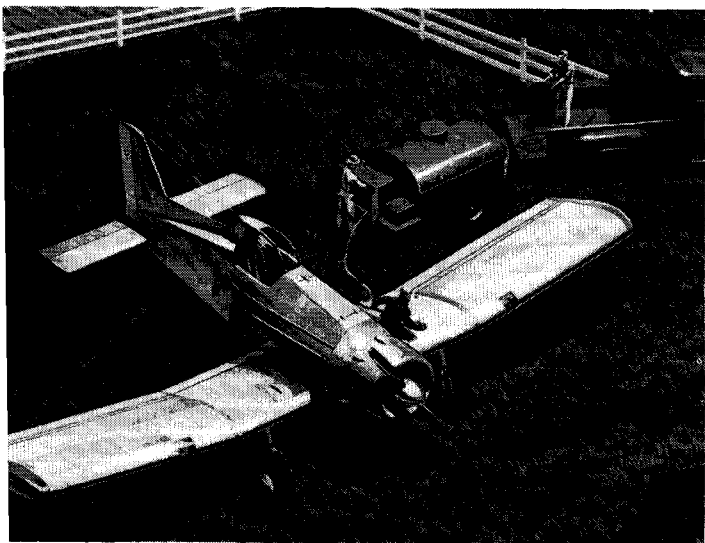
Aircraft application of fertilizers is a big business in New Zealand. An estimated 200,000 tons of superphosphate were applied by air last year. The aerial application of fertilizer has become an important aspect of New Zealand agriculture, for it allows the ranchers to increase the carrying capacity of range land which is inaccessible to ground application equipment.

AG-2 Nearing Production

Another development in the agricultural aviation field this month has been the announcement by Transland Co. that it has started production tooling for the AG-2. Design of the AG-2 is based on the features of the AG-1, the first

Artists drawing of the AG-2 (left) which Transland Aviation says is nearing the production stage. Fletcher Utility (right)

was test flown last month and Fletcher is now working on a contract to produce 100 of these aircraft for New Zealand



which the company intends to expand. The new sulfuric plant will be integrated with National's sulfuric plants of its USI Division at Tuscola, Ill., Dubuque, Iowa, and De Soto, Kans., the three of which now produce about 900 tons of sulfuric a day.

About 40 miles from Danville, National is building an ammonia plant which is to be expanded before completion. The plant was originally scheduled to produce about 35,000 tons of ammonia a year, but capacity will be increased to 65,000 tons. The lower level capacity is scheduled to go on stream early next year and the additional capacity will be ready about mid-1955.

The company has emphasized that it has not intention of manufacturing finished fertilizers. Policy of the company is to withdraw from special lines or those in which it has no basic position. Thus, the company has sold the anti-freeze, resin, and insecticide business of the USI Division.

The company pointed out that its sale of the insecticide division and the Baltimore plant did not include methionine and some of the other chemicals made there. These chemicals will be manufactured there, however, until new facilities for them are constructed at other locations.

A. E. Staley Buys Glidden's Feed Business

A. E. Staley Mfg. has purchased the livestock and poultry feed business of Glidden & Co. Amount of the sale was not disclosed.

Actual physical properties were not involved in the sale, but Staley will lease several of Glidden's distribution warehouses throughout the Midwest. Several members of the Glidden sales staff and dealers will transfer to Staley.

Glidden says it is selling the feed business to free its Indianapolis plant for production of vegetable oils and oilseed products. Staley will supply Glidden outlets from its own facilities at Decatur, Ill., where a new 100,000-ton-a-year mixing plant is located.

Girdler to Build Nitric Acid Plants Employing Du Pont's Process

The Girdler Co., a division of the National Cylinder Gas Co., will build nitric acid plants employing the process of Du Pont.

Girdler first built a nitric acid plant of the Du Pont type in 1949. Since then many improvements have been made in the process, and these will be incorporated in future plants sold by Girdler.

Use of nitric acid has grown considerably during the past several years, principally for the production of fertilizer-grade ammonium nitrate and the new nitrophosphate fertilizer materials.

Dow Building Biochemistry Laboratory

Construction of laboratories to house its Biochemical Research Department was started recently at Midland, Mich., by Dow Chemical.

The new structure, 208 by 190 feet, will provide 40,000 square feet of laboratory space for the five sections of the department, which includes toxicology, industrial hygiene, microbiology, basic biochemical, and wood laboratories. Completion is expected within a year.

People

Frolich Named to New Civilian Post in Chemical Corps

Per K. Frolich, vice president in charge of scientific activities of the Chemical Division of Merck & Co., has been appointed to the top civilian scientific post in the Chemical Corps. According to the announcement from the Department of the Army, Dr. Frolich will serve as Deputy Chief Chemical Officer for Scientific Activities and Chief Scientist for the Corps, a new position in the Chemical Corps. Chief Chemical Officer for the Corps is Maj. Gen. William M. Creasy. Dr. Frolich will assume his new duties about Dec. 1.

Robey W. Harned, consultant and staff assistant to the chief of the entomology research branch of the Agricultural Research Service, USDA, has retired. He directed cotton insect work for the Bureau of Entomology and Plant Quarantine for over 20 years. Before joining BEPQ, Harned served 25 years as professor of entomology and zoology at Mississippi A&M and entomologist at the Mississippi Agricultural Experiment Station. In 1927, he was president of the American Association of Economic Entomologists.

D. M. Yoder has been appointed head of the biological research department of Carbide & Carbon Division of Union Carbide & Carbon Chemicals Co. He will be responsible for research on the company's line of Crag agricultural chemicals. Dr. Yoder has been senior research fellow on Carbide's agricultural research fellowship at the Boyce Thompson Institute.

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