

Business Newsletter . . .

Reorganizations, Expansions

Monsanto has redesigned its inorganic chemicals division to provide **separate sales sections** for agricultural and industrial chemicals. Division's research department is also realigned to **strengthen research emphasis** on phosphorus and nitrogen raw materials for agriculture. . . . Commercial Solvents is launching **major expansion** of its agricultural chemicals sales and customer service in the Midwest for the 1956-57 fertilizer season. . . . Hercules Powder is making its first big **push into food products field** through acquisition of Huron Milling Co. Huron last year had sales of \$12 million, chiefly in proteins, amino acids, starch, and related materials derived from wheat flour.

New Chemicals, New Markets

Nematocide AAventa 46N (AG AND FOOD, February 1956, page 103) will soon be introduced to **commercial market** in U. S. and possessions. Developed in Netherlands, the organic mercurial has given promising experimental results; registration for sale under individual state pesticide laws should be completed soon, says U. S. Import-Export Associates. . . . Armed with reports of favorable results at Michigan State University and at commercial feed lots, Squibb is marketing nationally its Synovex **hormone pellets**. Implant combines natural hormones progesterone and estradiol; in Michigan State tests it gave **greater weight gain at lower cost** per pound of gain than any other hormone-stimulation product on the market.

Pesticides Production Up

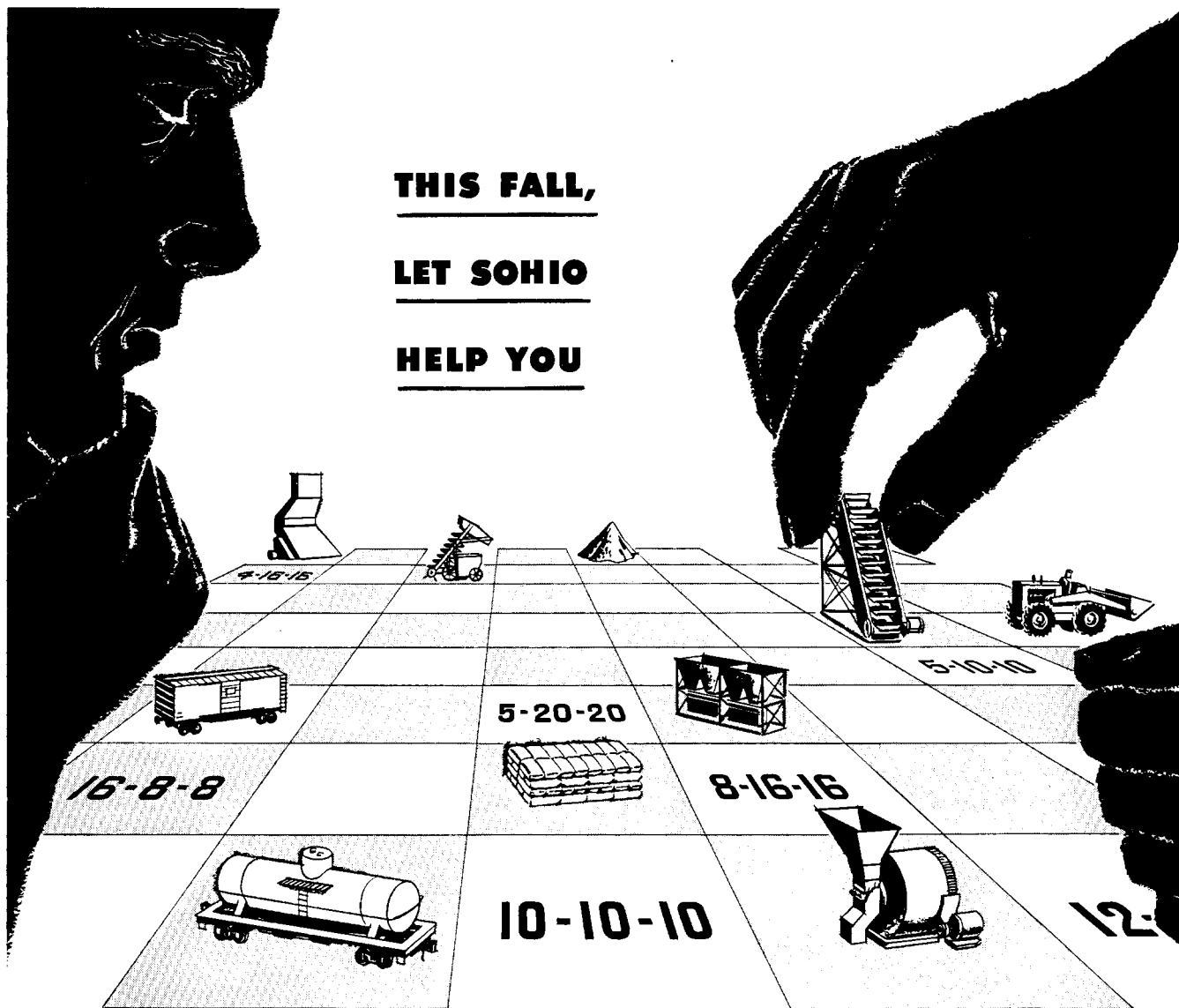
Preliminary production figures for the 1955-56 pesticides year show a number of **solid increases**. For the 10 months which ended July 31, U. S. Tariff Commission reports indicate that DDT production was 114 million pounds, up from 89 million in the same period a year earlier. Benzene hexachloride showed a marked gain from 6.2 million pounds for the 10-month period last year to 11.1 million in 1955-56. Not all products registered increases; 2,4-D slipped slightly to an estimated 23.7 million pounds from 25.0 million in the 1954-55 October-July period.

Prices: Some Down, Some Up

Prices of some **chemicals for agriculture** are moving downward despite sweeping upturns in industrial chemicals. Anhydrous ammonia was slashed \$8.00 per ton some time ago. More recently Chilean nitrate was cut \$1.75 to a bulk price of \$46 per ton at Atlantic ports, the first change since 1950. Nitrogenous sludge came down 20 cents per unit-ton. **Firmer trends** developed among **insecticide materials**. An increase of 25 cents per 100 pounds was effected for processed sulfurs. DDT, BHC, and other chlorinated hydrocarbons are unchanged, but formulations based on them are strengthening owing to rising costs of containers, labor, and transportation.

Spotlight

- Forest fertilization considered one of biggest and most active frontiers in sight as outlet for nitrogen (p. 827).
- Soil injection for killing brush offers foresters another chemical aid to good management of U.S. timber resources (p. 828).
- Plenty of room for improved fungicides lies in difference between control and economic control (p. 832).
- Western Europe's use of each of the three plant nutrients now approaching 3-million-ton mark (p. 830).



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Research Newsletter . . .

Nitrogen Fixation via Nuclear Fission

Brookhaven National Lab will set up demonstration unit for recently discovered process for **fixing nitrogen** by means of **energy from nuclear fission**. In the new process, developed by Paul Harteck and Seymour Dondes of Rensselaer Polytechnic Institute's chemistry research staff, air at 25 atmospheres and about 200° C. is quickly and economically converted into nitrogen dioxide by ionizing radiations from powdered uranium-235 oxide. Radiations from 235 grams of U-235 (cost: \$5875) are sufficient to convert required quantity of ordinary air into 258 tons of nitrogen dioxide—enough to make 610 tons of nitric acid (value: \$76,000). By-passing heavy use of electricity or other costly fixation processes, the method could mean **cheaper nitrogen fertilizers**. Harteck and Dondes estimate that a reactor plant costing \$20 million and burning U-235 worth \$6 million each year could produce 70,000 tons of nitrogen dioxide worth \$10 million, convertible into fertilizer worth \$15 million or nitric acid worth \$60 million.

Clearinghouse for Residue Data

California Agricultural Experiment Station at Berkeley is setting up a **clearinghouse** for **pesticide residue test results** collected in the West. First of its kind in this country, the project is designed to increase consumer protection against residues in crops, and enable growers to use pesticides more effectively without risk of exceeding residue tolerances. Data useful for predicting probable residues from farmers' control programs are now collected by many laboratories—university, government, or private. But would-be users of such data are often hampered by variety of test report forms used, and by frequent omission of information on spraying or dusting schedules, formulations, equipment, weather, harvest time, and storage treatment.

Ag Chemical Imports Doing Well

New herbicide Simazin, developed by Geigy in Switzerland and brought to the U. S. in 1955 for tests, is giving excellent results at experiment stations in Missouri, Oregon, Ohio, Indiana, and South Carolina. Product holds both broad-leafed weeds and grasses in check for long periods; in Missouri tests, corn plots were still weed-free more than **three months after treatment**. FDA has not yet approved Simazin for use; also, need for further testing makes it doubtful that it will be sold commercially before 1959. Chemically, Simazin is 2-chloro-4,6-bis(ethylamine)-s-triazine. . . . **Systemic insecticides** show promise of controlling **sugar beet leafhopper**, which infects thousands of acres of sugar beets yearly with curly top virus. Experimental results indicate insecticide can be **applied as seed coating** at cost of less than 50 cents an acre; plants grown from treated seed appear able to withstand the insect's attack. Early results with Thimet (American Cyanamid) appeared most promising; also in the running are several other systemics, including imports Systox and Bayer 19639.

Spotlight

- Chymotrypsin appears to react with DDP in a way analogous to its reaction with other phosphorus-containing antiesterases used as insecticides (p. 853).
- Eighteen compounds found to triple insecticidal effect of allethrin (p. 858).
- Aldrin, dieldrin, and endrin exhibit toxicity to quail chicks of 100 times that of DDT (p. 863).
- A microbiological method for assaying DL-methionine in poultry feeds shows the amino acid to be stable to heat (p. 872).