

Business Newsletter . . .

Ammonium Phosphates to the Fore

Using ammonia from U. S. Steel's new plant at Geneva, Utah, the Anaconda Co. will manufacture **ammonium phosphates** in Montana, where it now produces triple superphosphate. New installation, rated at 63,000 tons per year, will be completed in second half of 1957. U. S. Steel's production of ammonia and ammonium nitrate at Geneva will complement—not replace—its production of **coal-derived ammonium sulfate** at that plant. . . Coastal Chemical Co., being launched as partially owned subsidiary of Mississippi Chemical Corp., will produce **high analysis fertilizers** at Pascagoula, Miss. Fluor Corp. will build the **phosphoric acid and ammonium phosphate** granulated fertilizer units, which will use **St. Gobain processes**. . . TVA offers manufacturers DAP or calcium metaphosphate for **experiment or for manufacture of high analysis mixtures**. Limit to one company is 100 tons a year.

Improved Outlook for Castor Beans

Castor oil users should benefit from success this year with **mechanical harvesters**, necessary to **make castor beans an economical crop in U. S.** USDA spearheaded the work. Pacific Vegetable Oil believes development will gradually increase U. S. castor bean acreage, thus stopping price and supply fluctuations, the chief present drawbacks to wider use of castor oil here. Oil at 16 cents a pound is possible if market for castor bean meal, an industrial protein, develops well. In 1955, the U. S. used 60,000 tons of castor oil, 95% of it imported, chiefly as a source of sebacic acid and in surface coatings.

Fertilizers' Interest in Soil Bank

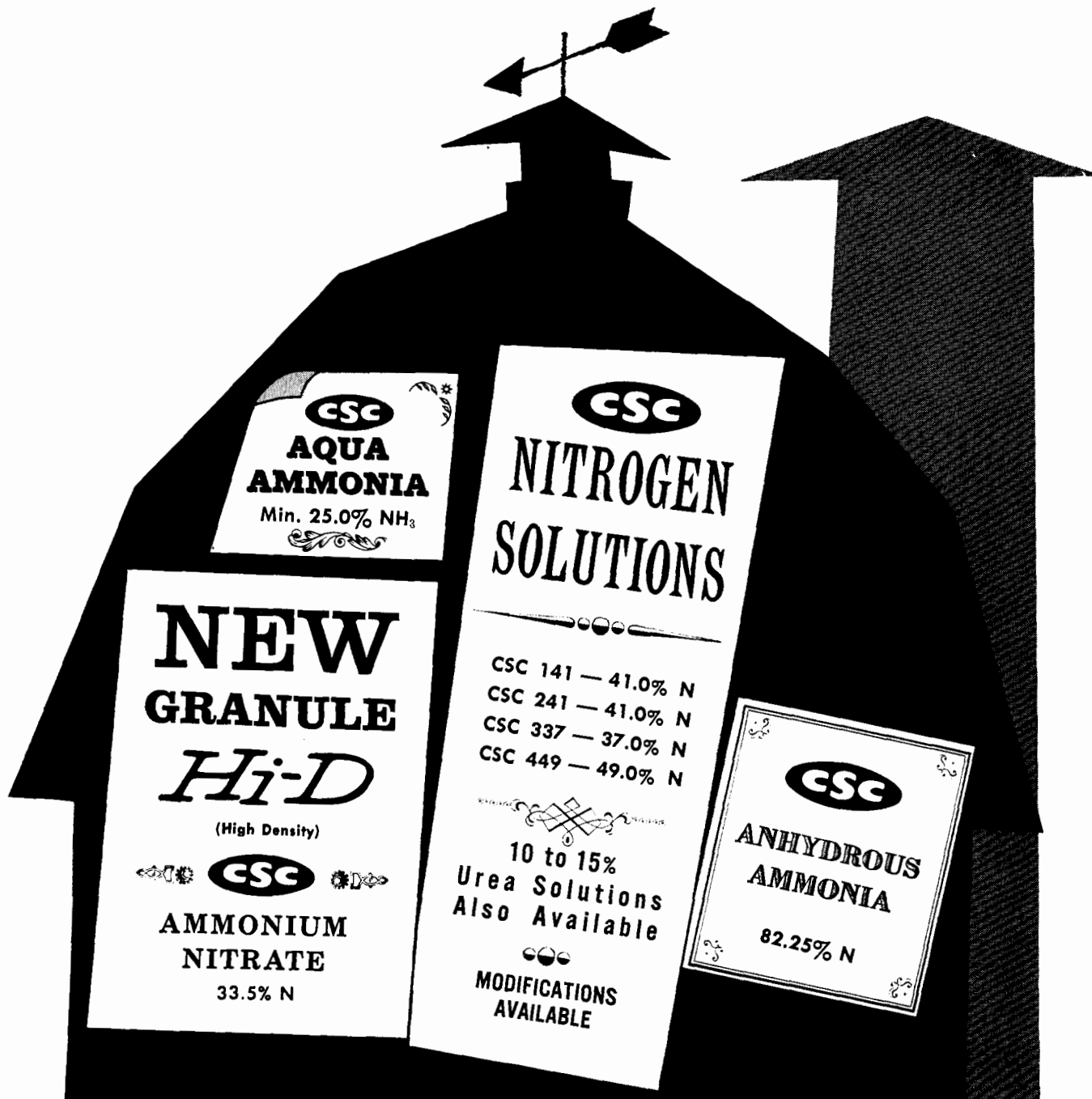
Net effect of Soil Bank plan on fertilizer consumption should be an **increase**, roughly estimated at 100,000 to 350,000 tons for 1957. Earl L. Butz, Assistant Secretary of Agriculture, thinks Conservation Reserve Program may create demand for an added 750,000 tons, which will be only partially offset by cut of perhaps 400,000 tons occasioned by Acreage Reserve Program. National Plant Food Institute agrees on the latter figure, but thinks CRP will add only about 500,000 tons to demand.

Price Strength in Chemicals for Agriculture

Strength characterizes prices for several materials used in pesticide manufacture and formulation. Pacific Coast Borax's new schedule, showing advances of 2.4 to 4.8% for borax and certain borates, established borax at \$74 per ton, carloads, at California shipping points. **Anhydrous ammonia moved up** a few dollars to \$75 per ton on spot, in keeping with the advance schedule, while copper sulfate, still a large-volume fungicide, slipped downward as prices for the metal weakened. Carload price is now \$13.90 per 100 pounds against former list of \$15.20. Wide price spread marks current trade in ammonium sulfate: Coke-ovens quote \$32 per ton; synthetic material is anywhere from \$32 to \$42 per ton.

Spotlight

- Agricultural chemicals expected to share in Canada's vigorous economic growth; prediction is that sales will double in next five years (p. 905)
- Deficiencies of minor elements in soils promise new markets—and production problems—for fertilizer industry (p. 906)
- New growth regulators produced by fermentation hold vast promise for agriculture, but researchers say commercial use must await further study of them (p. 907)
- Electronic computer makes rapid systematic appraisal of the many variables that must be considered in choosing raw materials for fertilizer formulation (p. 925)



offers low-cost nitrogen
for every need

Commercial Solvents Corporation is currently producing and supplying fertilizer manufacturers with the important forms of nitrogen. The liquid forms are widely used for the preparation of high-analysis fertilizers and for the ammoniation of superphosphates. The *new granule* Hi-D (High Density) CSC Ammonium Nitrate Fertilizer, an exclusive free-flowing, low moisture form of ammonium nitrate, is distributed entirely through fertilizer manufacturers.

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these District Offices:**

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AGRICULTURAL CHEMICALS DEPARTMENT • COMMERCIAL SOLVENTS CORPORATION
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NITROGEN the  of the Harvest

Research Newsletter . . .

FDA Acts on Toxicity Studies

Food and Drug Administration has placed **tighter safety controls** on residues of **organic phosphate insecticides** used on food crops. FDA scientists have discovered instances of "potentiation" when certain pairs of the insecticides are used simultaneously; toxicity of the combination is much greater than additive effect of same materials used individually. Under new ruling, any firm wishing a tolerance for a new organic phosphate must determine its toxicity to test animals not only when fed alone, but also **in combination with each of the other organic phosphate insecticides** for which tolerances have been set. (There are now five: parathion, methyl parathion, malathion EPN, and Systox; more than a dozen others are believed about ready for approval.) . . . FDA is also considering **removal of FD&C yellows** No. 1, 2, 3, and 4 from the list of coal tar colors approved for use in foods. Animal feeding studies show them to have about the same degree of toxicity as FD&C orange Nos. 1 and 2, and red No. 32, de-certified last year.

Pesticides from Fish Oils

New fungicides for citrus trees are ready for large-scale testing in Fish & Wildlife Service studies to develop **new uses for fish oils**. Modifying fatty acid fraction of fish oil with quaternary ammonium compounds produces a fungicide **50 times more effective** than anything now used—e.g. copper compounds. Tests will also be conducted with the less expensive whole oils, instead of refined fractions, to reduce costs. In one series, crude oils are combined with quaternaries; in another, emulsions containing 3 to 4% menhaden oil hydrogenated with a metal hydride are used. Hydride adds to the antifungal activity of the oil, and combination prevents plant injury that occurs when hydride is used alone. Fish oils and fish oil-metal hydride emulsions also have been found **effective as nematocides**, and offer advantages in nontoxicity and ease of application.

New Antibiotics, New Uses for Old

First antibiotic found to have **broad spectrum effect against internal parasites of animals** is hygromycin, under development by Eli Lilly & Co. . . . Two new antibiotics, anisomycin and griseofulvin, effectively controlled the fungus disease powdery mildew of snap beans in USDA greenhouse tests at Beltsville, Md. . . . Chas. Pfizer & Co. is marketing Biostat-PA (20% oxytetracycline) formulation for **extending freshness time of poultry**, following FDA acceptance on Oct. 23. Other Biostat formulations have been shown to retard spoilage in sausage and cured hams, and—in combination with gamma irradiation—to extend shelf life of refrigerated prepackaged red meats. A current study involves **injection of Biostat—via harpoon—into whales** during the chase, to delay decay processes following the kill.



- New insecticidal compounds result from fundamental physicochemical research on the mode of action of organophosphates (p. 930)
- Direct determination of lindane in soils and crops is based on Schechter-Hornstein method (p. 936)
- Ability of ethylene oxide to destroy thiamine in foods suggests value of studying not only toxicity of food-processing chemicals but nutritional effects as well (p. 956)