THE OBSERVATION POST

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Looking Ahead with the Phosphate Fertilizer and Mixing Industries

ACCEPTING Department of Agriculture claims for phosphatic fertilizers, the Defense Production Administration established Expansion Goal No. 149 calling for a total production of 3,550,000 tons P_2O_5 in 1955. This is about 65% more than the 2,150,000 ton output during fiscal 1951. Implementation of this program under NPA guidance was accomplished largely through the following:

1. Construction of plants in deficit areas;
2. Utilization of new supplies of non-Frasch sulfuric acid (sour gas, smelter fumes, pyrites, etc.);
3. Production of concentrated superphosphate;
4. Production of phosphatic fertilizers by sulfur conservation methods;
5. Cooperation with AEC to promote recovery of uranium from wet phosphoric acid.

The phosphatic fertilizer program now has been fully implemented. If construction proceeds in accordance with certificates of necessity, the balance sheet will be closely as follows:

Phosphatic Fertilizers Program

Summary

	Tons P_2O_5
Production, fiscal 1951	2,150,000
Desired production, fiscal 1955	3,550,000
Required expansion	1,400,000

Implementation of Goal

Total expansion from new or enlarged facilities	1,289,300
Triple or other concentrated superphosphates	726,400
Ammonium phosphates	145,800
Phosphoric acid for use in present plants	79,500
Nitraphosphates	160,000
Normal superphosphate	175,600
Increased production from existing facilities (chiefly normal superphosphate)	110,700
Indicated expanded capacity by 1955	1,400,000

Looking forward to many years ahead there appears little doubt that sulfur conservation techniques will have to be introduced into the phosphatic fertilizer industry. At present there are two such competitive processes. First is the much publicized acidulation of phosphate rock with nitric acid or mixtures thereof. Perhaps, equally attractive to domestic manufacturers may be the traditional production of wet-process phosphoric acid followed by the use of the by-product gypsum for production of ammonium sulfate.

Big Investment Needed for Fertilizer Expansion

New facilities for producing nitrogen compounds and phosphatic fertilizers cost a lot of money. It is estimated that the nitrogen facilities will cost around $440 million and the phosphatic fertilizer plants, slightly less than $100 million. The increased output of plant foods should permit additional production of about 10 million tons of mixed goods containing 14% nitrogen and 14% phosphorus pentoxide.

Position of Dry Mixers

During the past two years the fertilizer mixer firms who number about 800 have learned how greatly they are dependent on the distribution policy of the 90 acidulator firms. If the latter had not chosen to follow a generous policy, many of the fertilizer mixers would have had to suffer extreme hardship. When the current phosphatic fertilizer expansion program has been completed, there will be compelling reasons for large producers—and there will be large producers—to arrange for integrated distribution outlets. This will tend to minimize fluctuations in business and thus permit establishment of sounder production programs.

The dry mixer has valuable assets and these should not be minimized. He will unquestionably have an important role to play in any future organization of the fertilizer industry. Just as the ammonia producer needs the fertilizer manufacturer, the latter needs grass roots distributors. Integration throughout the industry is the trend and it makes sense. The fertilizer mixer has mixing and storage facilities and trucks. He knows the farmers in his area, as well as the local banker. He can arrange for credit and render special services. The large producer must either use these assets or duplicate them. The mixer, like the distributor of automobiles, can enjoy an area monopoly for a producer. He can emphasize sales and services, thus relieving the producer of this expense.

Storage Problem

He will have an obligation to assume a share of the increasingly important storage problem which, because of the seasonal characteristics of the industry, is growing in proportion to production. In return he should probably be able to obtain mixed fertilizers as cheaply as he can make them. It is not at all improbable that an integrated distributor will be able to achieve greater economic stability and equal rewards with less financial risk.

Looking Forward

The Atomic Energy program, the need for producing nitrophosphates as a sulfur conservation measure, and the entry of the petroleum and chemical industries into the fertilizer business have combined to create a revolutionary situation in the fertilizer industry. It is not possible to blueprint details of the upheaval or its aftermath.

Major changes are destined to occur. There will be enormous low-cost producing centers. These will prefer to depend on integrated distributors.

The handwriting has been on the wall for some time. It is not surprising that the chemical and petroleum industries were first to read it. These industries have great financial resources and are accustomed to operating in a changing and competitive environment. They have taken the initiative and it has aroused the fertilizer industry. However, the progressive elements of the fertilizer industry have taken steps to meet the challenge.