

Chemical Enterprises stepped into the ammonia distribution picture just as fertilizers' forms and use were undergoing their major revolution

FARMING is "big business" in the United States. It is a group of many small businesses which spends billions of dollars annually for materials and equipment. This fact undoubtedly influenced the conclusions reached by a group of chemical engineering and financial experts organized under the leadership of Williams Haynes to study broad fields of activity within the chemical industry.

An advisory group with long experience and special skills in engineering, marketing, and finance, spent much time exploring the idea, finally screened it down to chemicals for agriculture. After extensive surveys farm chemicals were deemed to have the most promising prospects, and the soundness of this judgment was soon demonstrated.

In the advisory group were four prominent engineers: Frank G. Breyer of Singmaster & Breyer; Charles R. ("Ray") Downs, Charles O. Brown, and Daniel B. Curll, Jr. They became members of the board. Financial interests were represented by J. T. Foster, of Lee Higginson Corp. and Kingsley Kunhardt of Guaranty Trust Co. Mr. Haynes served temporarily as president. Breyer became board chairman.

Chemical Enterprises thus came into being, and although it was only incorporated in February 1952, its growth in a little more than three years is probably without parallel in this business. As of April 1, 1955, it is an organization of 47 companies, 31 of which are owned outright while 16 are affiliates through ownership of 50% holdings. Through a system of local subsidiaries CE is able to distribute nitrogen in the form of ammonia to farmers at some 300 points.

Companies which make up the CE group also sell the grower other agricultural chemicals, including insecticides, but ammonia is its big business. It has stepped into the chemicals-for-agriculture market at a time when planting practices are being revolutionized—when the use of anhydrous directly in the soil as a gas and in other forms is rapidly expanding.

Sales, Earnings at Higher Levels

This can be seen in the few earnings reports which have been issued so far. For the fiscal year ended June 30, 1954,



The President . . .

Daniel B. Curll, Jr.

Distribution is the Problem

sales by CE's affiliated companies had expanded to \$7,389,000, from \$6,513,000 in the previous fiscal year. This comparison was made on a *pro forma* basis assuming ownership for the entire fiscal year. Total ammonia sales for the 1954 fiscal period increased 33%.

As noted, CE's brief existence has been marked by constant expansion. At the beginning of April this year its operations had been extended into 21 fertilizer-consuming states, mostly in the South, Southwest, Midwest, and Far West. Originally it had been planned to supply farmers with many different products, equipment, and technical assistance. The idea underwent refinement and ultimate concentration upon ammonia at the suggestion of Mr. Curll, who is now its president, and who is thoroughly at home in the matter of agricultural ammonia. Before joining Chemical Enter-

prises he was manager of Commercial Solvents' agricultural division, and prior to that with the Belle, W. Va., ammonia works of Du Pont Co.

The ammonia problem is one of distribution. To smooth out differences in its supply and demand and close up this gap is a major objective of CE. If a demand curve is plotted for nitrogen you will find that it has gone up quite sharply in recent years. A second curve representing ammonia production and supply will also head upward, stepwise. A third curve for sales of agricultural supplies including ammonia, however, will show that it has not kept pace with the other two.

Gap in Ammonia Demand and Supply

A comparable illustration might be offered by a motor highway which runs on interminably through the Southwest, with hardly a service station in sight. The demand is there, notwithstanding. For the want of servicing we have the same situation in ammonia; in fact, some ammonia producers are not utilizing their full plant capacity for that reason.

CE is supplying the grower with the mechanical means for direct application of ammonia to the soil as well as the ammonia itself at strategic points of distribution. Equipment for the storage of anhydrous ammonia, its handling and use, are comparatively expensive and would call for a capital investment not all farmers can afford. Application cost for a farmer owning his own equipment is around \$1.50 per acre although in some instances it could run as low as 50 cents. Custom application will cost around \$3 per acre. One man and a tractor can apply ammonia to twice as many acres as two men and a tractor can apply nitrate in solid form.

Ammonia storage is a troublesome problem which CE takes out of the producer's hands through its pressurized storage tanks at distribution points. It may be moved from there to the farm in pressure tank trucks or in smaller 1000-gallon tank trucks owned by the farmer. Chemical Enterprises is well armed with arguments favoring the direct application of ammonia. It can quote W. B. Andrews of Mississippi State College, a pioneer of the idea, to show that it increased cotton yields from 1100 pounds per acre to 1500 and 1600 pounds, or how a grower in California's Imperial Valley obtained five harvests of tomatoes by using 60 pounds of ammonia per acre.

The many companies in the CE group are operated as independent units so they can meet the diversified needs of agriculture in their areas. Plant element requirements differ with the farm area as do the crops, and the use of custom application in one section may not find favor in another. Even applicators will differ.