## Fertilizer's Progress and Problems

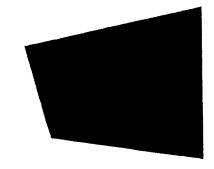
CONCENTRATED ATTENTION is being focused on fertilizer and the progress and problems of that industry this week, as the National Fertilizer Association holds its fall meeting in Hollywood, Fla. The picture is much different from that of 20 years ago, or of nearly 10 years ago.

Timed with this week's focus of attention on the fertilizer situation, AG AND FOOD presents a feature survey developed through studies by its 15 technical editors in the publication's offices in the West, Southwest, Middle West, and East. Direct contact with leaders in the field during the past six weeks has produced a compilation of fact, estimate, and opinion which is a gage of the climate of the industry at present and its attitude toward the future. There are problems, there are matters for concern, but also there is rapid and effective advancement and there remains a great potential for expansion in the use of fertilizers.

With increased education and effective work with the federal and state agricultural departments, demand for fertilizer has zoomed. But the field has proved attractive and production has climbed even more rapidly. The increase in ammonia capacity to date has been spectacular and it will increase greatly within the next two years. Superphosphates, too, have been growing, with the concentrated or triple superphosphates being the leader in expansion. The postwar surge is continuing and it is bringing fertilizer capacity beyond shortages throughout the country. The problems now are changing to the field of marketing. But hand in hand goes technological advancement in an effort to beat the competition.

Striking changes in types of fertilizer and methods of application have come into the picture since the war. Anhydrous ammonia was a leader. It caught on in California and in the Mississippi Delta area soon after the war and now is spreading rapidly in the Middle West and western parts of the country. Aqueous ammonia, although earlier than the directly injected anhydrous product, was put somewhat into the background for a time but now is coming out strongly after its share of the markets. Another fluid form, aqueous solutions of ammonium salts, has come into the picture as a competitor to the others and is proclaiming its advantages in handling and application. The search for the most economical manner of getting plant nutrients into the ground through fertilizers better fitted to the existing conditions in a geographical area is becoming a heated race.

The advantages of liquid application have appeal in the phosphorus fertilizers as well, and there again the campaign took hold in California. Growth seems to have slowed there but the idea has spread to the Middle West. But in phosphorus, too, the aqueous solutions are moving in for their share of the field. The idea of ammonium phosphate solutions which will provide both N and P has enough attraction to give the more expensive materials a sense of optimism. To go even further, the "complete applicator" is now in production for the application of N, P, and K in one trip through the field.



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The race for higher analysis is another which continues vigorously. Last year a commercial plant for the large scale manufacture of 12-12-12 went into production and now recently a nitric phosphate plant has begun producing 14-14-14 on a tonnage scale. Several special grades are showing higher percentages in a single element. Certainly in some areas of the country a nitric acid unit appears to be an increasingly important adjunct to a complete fertilizer plant.

Seasonal sales have been a traditional bugaboo to the fertilizer industry. Farmers want fertilizer in the spring and they want to buy fertilizer in the spring. It is hard to get them to plan and buy ahead. This year the campaign to push fall sales of fertilizer is probably the strongest ever. Two big factors militate against its success. One is the promise of great capacity, particularly for nitrogen, which leaves the buyer to believe that there will be plenty on hand when he wants it. Some very important factors in the industry believe that despite the capacity that will be available at the beginning of 1955, the supply situation once again will be tight at the peak of the spring season. The other factor which has damaged fall sales in some areas of the country has been drought.

Another tough problem is the dealer situation. Some say that the dealer is the weakest link in the marketing chain. But on the other hand, there may be good reasons. For example, a great many dealers are not solely fertilizer sellers but handle it as only one of their many products. The dealer education campaign has been growing with limited success. There has even been talk of direct selling by the basic producer. But at the moment the strongest attention seems to be growing toward stimulation of the consumer in order to encourage his demands of the dealer. The county agent probably is in for even more attention than he has had in the past.

The agricultural experiment stations continue to show the economic practicability of applying even more fertilizer—far more fertilizer than the average used at present. This is bound to have an effect, but we are a long way from reaching the ideal state they prescribe. Fertilizer consumption may not rise as much next year as it has several recent past years. But there is still a big potential market and capacity is growing by leaps and bounds. The technical developments and marketing techniques will be under heavy pressure this next year to get all the fertilizer production into the ground. There is a lively year ahead with the strongest challenge the fertilizer industry has seen since World War II.