

# profile...

## Spencer Chemical, an 11-year veteran still growing in fertilizers, succeeds by keeping one jump ahead of the nitrogen market

**K**ENNETH SPENCER once said, "I'm not smart enough to make a living like my father and grandfather before me—by mining coal and selling it only for its B.t.u. value." The statement could hardly be true, for the Spencer family coal company has since tripled its coal production. But the philosophy behind the statement has proved a good thing for Spencer Chemical and its many customers. Spencer's being "not smart enough" has, in just 11 years, led to an unusually successful chemical enterprise with annual sales now approaching \$50 million.

In a bold move back in 1941, Spencer and his associates took on the task of design, construction, and operation of a \$32-million chemical plant for the Government. Through another bold move in 1946, they leased what had become the Government's Jayhawk Ordnance Works, formed Spencer Chemical, and plunged into the nitrogen fertilizer business. Many experts in the industry viewed this venture with doubt, for nine government ammonia plants were up for sale at this time. These plants had a potential ammonia and ammonium nitrate capacity far in excess of prewar sales. But Spencer's move had a sound base: three years of market research which accurately foretold the postwar wave of fertilizer demand.

In mid-1947, after Spencer Chemical's first full year of commercial operation, its ledgers showed a neat profit of \$2.8 million on total sales of \$12.7 million. The company's product list then had only three entries: ammonia, nitric acid, and ammonium nitrate. Chemicals for agriculture made up 82% of sales.

A few months ago, Spencer Chemical celebrated its 11th birthday as a commercial corporation. Although it is still a young company, annual sales have reached \$48 million, net profit, \$5 million. The product line has expanded too, in agricultural chemicals, plastics, and industrial items like methanol and formaldehyde. Spencer Chemical has diversified extensively,

but is still sending over half its production into agricultural outlets.



The President . . .

### Kenneth A. Spencer

#### Expansion at a Dizzy Pace

When Spencer Chemical produced its first pound of commercial agricultural ammonia in 1946, it climaxed seven years of planning. In 1939 Kenneth Spencer, then vice president of the Pittsburg & Midway Coal Mining Co., had initiated a study of the Kansas-Missouri-Oklahoma area. The study's aim was to look into industrial development that would stimulate use of coal in the area. Before the survey was finished a war started, and emphasis was shifted to defense industries.

Partly because of this survey, the Government built a number of defense plants in the area. Spencer was asked to construct and operate the Jayhawk Ordnance Works at Pittsburg, Kan. He accepted.

The original plan was to make Jayhawk an ammonia-from-coal plant, since Spencer had long been interested

in using coal as a chemical raw material. But cost studies showed that natural gas would be a less expensive starting material. Thus, Jayhawk became the first U. S. ammonia plant to use the natural gas reforming process.

While Jayhawk busily turned out war material, Spencer kept a small staff at work on postwar utilization of the plant. By the end of World War II, he was armed with these facts:

- Increasing use of fertilizer was one of several long term trends in agriculture
- The biggest increases in use of fertilizer were occurring in the Middle West
- Most existing ammonia plants were east of the Mississippi, with little private production in Jayhawk's area

Spencer leased the Jayhawk plant, and adopted Spencer Chemical as the company name. As a sidelight on setting up the commercial company, Spencer recalls that more money had been spent on the market survey than was earned from building and running Jayhawk throughout the war.

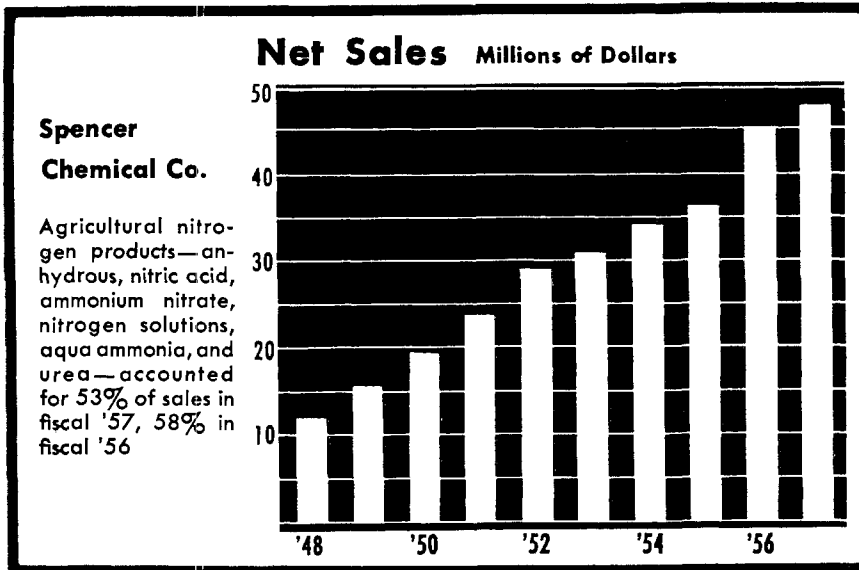
#### And Then Rapid Growth

Since its transformation in 1946, Spencer Chemical has expanded at a dizzy pace—about 15% per year. Real growth started in 1948 when Jayhawk was purchased from the Government. Since then the original three products made at Jayhawk—ammonia, nitric acid, and ammonium nitrate—have been raised to eight with the addition of nitrogen solutions, prilled ammonium nitrate, methanol, dry ice, and aqua ammonia. Jayhawk, with 500 tons per day of ammonia capacity, is still Spencer Chemical's largest plant.

In 1949 the company added its Calumet City formaldehyde plant near Chicago. The following year brought another ammonia plant—a Government-owned installation at Henderson, Ky. Here Spencer immediately switched from the coke process previously used to the more economical natural gas. Henderson now turns out ammonia—capacity, 200 tons per day—as well as nitric acid and nitrogen solutions. A urea plant is under construction.

A third ammonia unit was added in 1954 with a 200-tons-per-day Spencer-built plant at Vicksburg, Miss. This is also the site of a 10-tons-per-day urea plant that went on stream this summer.

By almost any standard, Spencer Chemical has chalked up a striking growth record. And emphasis has been on chemicals for agriculture, a



field subject to ups and downs that are hard to predict. From the beginning, Spencer has used market research as its crystal ball for planning expansions.

The company's three ventures into ammonia were all based on careful economic studies and market research. And except for its habit of making careful plans in advance, Spencer might have a fourth ammonia plant

today. In 1955, when Spencer was thinking about such a plant, market research indicated a coming over-supply of ammonia. Plans for further growth in ammonia were discarded, and Spencer turned instead to plastics.

A 45-million-pounds-per-year polyethylene plant was built at Orange, Tex. There Spencer makes low density, high pressure material under ICI license; also, it has its own process

for medium density polyethylene. Right now, construction is under way to double the capacity of this plant. And at Jayhawk, Spencer is running a pilot plant for high density, low pressure polyethylene using the process of Standard Oil (Ind.). Two months ago Spencer got a modest start in nylon, with a small plant at Henderson.

Diversification has kept sales on the rise and earnings at high levels even during the last couple of years when income from nitrogen products has been down. On the nitrogen surplus, Spencer points out that the industry's one-million-ton excess capacity could be more than used up if farmers merely returned to the soil as much nitrogen as is removed by crops each year.

To help the farmer make better use of all types of plant foods, Spencer conducts a program of farmer education. Movies, film strips, and educational literature have been distributed as aids to improved farm management. Spencer also works with bankers to promote awareness of the role of credit in running a farm properly. Advertising is slanted toward better farming practices as the key to higher profits. In short, Spencer subscribes to the philosophy that "as the pie gets larger our slice will grow as well."

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