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Director of research and development for Swift's ag chemical division had big hand in developing nonburning lawn fertilizer

ONE DAY back in 1928, M. Dwight Sanders, a young research chemist at Swift & Co., was asked to check the rate of discharge of some commercial lawn fertilizer spreaders. The company in those days had no test plots of its own. However, Edward F. Swift, vice president of the company, generously consented to have the experimentation carried out on the huge lawn of his suburban home.

As Sanders recalls the incident: "I went galloping over the lawn checking the operation of the spreaders, completely oblivious of the fact that the grass was getting a stiff overdose of plant food. The next day, the gardener called, frantically wanting to know what all those big brown stripes were doing all over the place." Sanders adds: "Mr. Swift was kind enough not to comment on the incident afterwards, but we were never invited back."

Actually, the striped-lawn affair had a happy ending. "This," says Sanders, "added considerable impetus to our search for a nonburning Vigoro. After years of study, we succeeded in developing a nonburning complete lawn food, the first of its kind on the market."

Today, Sanders is director of Swift's research and development relating to plant foods, phosphate mining, phosphate chemicals, insecticides, fungicides, and weed killers. He is in charge of the company's research centers at Calumet City, Ill., and Bartow, Fla., and directs the work of five quality control laboratories.

Strongly supported by the research division, Swift in recent years has made rapid strides as a formulator of pesticides. It markets some 700 different products in this field, and has been particularly successful in developing pesticidal dusts and sprays for the home gardener. Sanders is especially proud of the company's mosquito spray, which enables him to garden and barbecue in comfort at his home in the Indiana Dunes.

Sanders has also played an important part in getting the company into fluorine chemistry. Swift now makes fluosilicic acid and sodium fluosilicate from phosphate rock, for use

mainly in fluoridating city water supplies. On the subject of current research projects, Sanders prefers to remain mum. "Like other companies in the field," he explains, "we are allergic to tipping off the competition."

The Great Adventure

Born in Dalton, Ga., in 1902, Sanders spent many of his early years on a farm. His father was a farm equipment manufacturer, miner, and farmer who raised corn and cotton. After young Sanders' freshman year in college, he spent a summer harvesting wheat in Oklahoma and Kansas. As he recalls: "Those were the days when wheat was harvested mainly by college boys and hoboes. It was a great adventure—and the first time I was ever outside Georgia."

After graduating from the University of Georgia in 1924 with a B.S. in agricultural chemistry, he landed a job as science teacher in a small country high school. There he taught just about every science imaginable ("Some I scarcely knew existed") and also coached the football team.

A year later, he accepted a job as control chemist in Swift's fertilizer plant in Atlanta. From 1927 to 1932, he worked in the company's plant food laboratory in Chicago, where, among other things, he studied the ammoniation of mixed fertilizers and helped develop improved fertilizers for lawns and gardens. In 1932, he was placed in charge of the control laboratory in Harvey, La.

Three years later, Sanders became the first head of Swift's new chemical engineering division in the Chicago research laboratories. During this period, he developed an improved process for recovering meat packing fats for industrial use. He also studied the treatment of process water and industrial wastes.

During World War II, Sanders joined the Army but, as he puts it, was soon "shanghaied" into the Air Force. For a five-month period, he was assigned to the Pentagon ("... where I learned that all those jokes about the Pentagon were absolutely true!"). Shortly afterwards, he was sent to India and Burma to take charge



M. Dwight Sanders

Born, Dalton, Ga., 1902. B.S., agricultural chemistry, Univ. of Ga., 1924. Swift & Co., control chem., Atlanta, Ga., 1925-27; research chem., Chicago, 1927-31; mgr., control laboratory, Harvey, La., 1932-35; head, chemical engineering div., Chicago, 1935-42 and 1946-52; director, research & development, agricultural chemical div., 1952 to present. U. S. Army, 1942-46. Member: ACS, AICChE.

of water supplies for seven military bases.

In 1946, Sanders returned to Swift's research laboratory in Chicago. And in 1952, he was appointed to his present position.

This job requires a good bit of traveling. Each year, he visits many of the company's 28 plants in the U. S. and Canada to help maintain close liaison between research and production. In addition, he visits the laboratory in Bartow, Fla., five or six times a year. "I have to go down there at least once each summer," he quips, "just to make my winter trips look honest."

At present, he is chairman of the ACS Division of Fertilizer and Soil Chemistry. During the past few months, he has been busy setting up the special symposium on soil testing for the ACS fall meeting in Atlantic City.

Among his other outside activities, he is a member of the technology and chemical control committees of the National Plant Food Institute. For relaxation, both he and his wife, a talented musician, enjoy listening to their hi-fi. "Fortunately, we can really let it blast—the nearest neighbor is at least 100 yards away."