

Furney A. Todd, 1921-1991

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Furney A. Todd, emeritus extension professor of plant pathology at North Carolina State University, died on 3 March 1991 at the age of 70. To many residents of North Carolina, the name Furney Todd was one of the most well known in the state. Throughout his career, this wiry, energetic man worked at full speed to share his knowledge of plant disease control methods—in the fields,

before farm groups, and on radio and TV.

His interest in North Carolina's billion dollar tobacco crop dated back to his childhood. One of 11 children, Professor Todd was born on a tobacco farm near Wendell, North Carolina, on 9 October 1921. In 1939 he enrolled at North Carolina State University and received his B.S. in 1943. He immediately entered graduate school there, but his studies were interrupted when he accepted a job offer from the U.S. Department of Agriculture in 1944 as a tobacco plant pathologist.

As an investigator from 1944 to 1955, Todd became a member of a team headed by E. E. Clayton that initiated a range of projects, including the development of treatments for weed and disease control in tobacco seed beds, field control of nematodes using soil fumigation and various management practices, evaluation of cropping systems and fall management practices, and development of root-knot and multiple-resistant breeding lines of tobacco.

Furney Todd realized his dream of an applied research demonstration and information dissemination system when he joined the North Carolina Extension Service in 1955. His objective was to gain information that would be based on results of tests conducted on problem sites throughout all of the tobacco growing areas of North Carolina. Todd recognized that the level of research on experiment station test farms, although essential and valuable, was still at least one step away from what would be needed on a grower's farm. Plot space was always limited and populations of target pests were variable with a limited number of test sites. Although research funds were not available initially, Furney purchased a secondhand pickup truck and started to work. His first chemical soil treatments were applied with equipment mounted on a mule-drawn plow! He completed 10 demonstration projects during the first year, and he named his new program "Research on Wheels."

There was an urgent need for the comprehensive program that Furney Todd envisioned. At that time, university and commercial breeders were beginning to develop resistant cultivars at a rapid rate, and information on the performance of these cultivars and disease problems was needed. Furthermore, chemical companies were developing new experimental chemicals, indicating the need for extensive evaluation under farm conditions. In addition, losses from certain diseases were high and increasing in severity.

Professor Todd was confronted with the challenge of organizing a program that would be self-sufficient and would not depend on the use of farmer equipment and labor. It also would need to be mobile enough to travel throughout the tobacco region. The organization of the Extension-Research on Wheels (E-ROW) program was the answer. E-ROW grew from a modest beginning to a highly successful program with sophisticated mobile equipment and a staff of 10 technicians and two secretaries. It became possible to complete about 60-70 applied experimental replicated tests on problem sites annually throughout the flue-cured and burley belts.

From 1956 to 1980, Furney coordinated one of the most extensive educational efforts on plant disease control that has been conducted in the United States. This unusual program was a cooperative venture in which members of research and extension

joined forces with industry, county agents, and farmers to validate the information essential for practical management of tobacco diseases. E-ROW studies resulted in the development of Todd's "system" approach to disease management and enabled the grower to make choices that were based on his knowledge of the problems and needs on his particular farm long before the existence of the term "integrated pest management."

Furney Todd had the ability to provide information in a pithy, succinct, and engaging manner, and his intuitive knowledge of tobacco production and dedication to his task permitted him to reach a wide audience. Furney was a master at capturing the imagination and attention of all who worked with him as well as those who benefited from his work. Todd participated in approximately 900 grower meetings during his 25 years in extension that had a total attendance exceeding 65,000. He tested some 228 materials for disease control, 34 cropping systems, and 338 resistant cultivars and advanced breeding lines, and he evaluated 229 combinations of disease control methods. He presented over 2,950 radio programs, and his number of publications exceeded 500.

Todd believed that research information is of no value until it is interpreted in simple language and used by industry and growers. The success of the E-ROW program demonstrated that information can be spread rapidly and in some cases at the same time that results are obtained. Special programs designed by Todd to spread information and encourage industry and grower acceptance included R-9-P (Reduce 9 Pests by stalk and root destruction), R-Y-T (Rotate Your Tobacco), K. O. M. (Knock Out Mosaic), and system control programs.

Two highlights of his E-ROW program, still in operation, are summer tours and an annual review. One 3-day tour scheduled each July involves approximately 20 farm stops with attendance ranging from 100 to 200. A similar tour is conducted later in the season in the burley production area, and attendance ranges from 50 to 200 at approximately 14 farm stops. The annual review usually is held in early December. At this time, agents from the various counties where field tests are conducted report on the efficacy of disease control practices. About 25 people attended the first review in 1957. During the intervening years, the review meeting grew and expanded until 1977, when approximately 1,000 people attended.

Results from this massive research and educational effort have provided production knowledge that is used throughout North Carolina. The impact of this cooperative project has resulted in an estimated increase of \$70-100 million of gross income to growers annually. The development and grower acceptance of improved disease management methods was a significant factor in reducing loss and increasing yields.

Furney Todd was often referred to as "Mr. Tobacco" by his many friends in the industry. Honors in his field included special recognition by several county farm groups; Man of the Year, The Progressive Farmer (1972); Outstanding Extension Award (1972); Man of the Year, Tobacco Science International (1976); Tar Heel of the Week, Raleigh News and Observer (1977); Profile, Flue-Cured Tobacco Farmer (1977). In 1977 he was named Philip Morris Extension Specialist (distinguished professor of plant pathology), and in 1978 he was made a Fellow of the American Phytopathological Society. In 1981 he published a 352-page hard-bound book, Flue-cured Tobacco: Producing a Healthy Crop.

Among other activities, Furney served for 30 years as superintendent of the Sunday school at the Wendell Baptist Church. He is survived by his wife of 48 years, Anne Liles Todd, three daughters, one son, and six grandchildren.

At Furney Todd's funeral, 33 farmers with their tobacco tractors lined up at the cemetery to bid him farewell.