

## BIOGRAPHICAL NARRATIVE OF MR. ALBERT CHAMBERS

Mr. Albert Chambers retired October 30, 2001, as professor in the Department of Entomology and Plant Pathology, University of Tennessee. He is a Tennessee native, and was employed by the Tennessee Agricultural Experiment Station since 1957. Mr. Chambers received the Bachelor of Science degree at The University of Tennessee, Knoxville, receiving the M.S. in 1960. Additionally, Mr. Chambers also took graduate classes at the University of Maryland, North Carolina State University, and Texas A&M University. While working on his M.S., Mr. Chambers was employed as an assistant in the Department of Plant Pathology. After receiving the master's degree, he was appointed Assistant Plant Pathologist (later changed to Assistant Professor) in the Department of Plant Pathology (later Agricultural Biology, still later Entomology and Plant Pathology). In 1971, he was promoted to Associate Professor, and in 1985 Mr. Chamber was appointed Professor. He has served almost his entire professional career at the West Tennessee Experiment Station at Jackson.

This short description of his march through the ranks does not explain his great importance to the well-being of Tennessee agriculture. During his career, Mr. Chambers has transformed approaches and methodologies for control of field crop diseases. His efforts have resulted in greatly increased vitality of soybean, cotton, and wheat producers in Tennessee. In fact, his findings have spilled over into all of our neighbor states, where his research results have filled knowledge gaps they could not handle themselves.

In his earliest years in the Experiment Station (1960-1967), Albert Chambers worked effectively on the control of vegetable and small fruit diseases, usually in close collaboration with other plant pathologists. These studies resulted in greater understanding of diseases that were limiting lima bean and strawberry production, and more effective means of limiting their damage. Mr. Chamber continued the evaluation of lima bean fungicides well into the 1970's.

During this early period, Mr. Chambers began turning his attention to disease problems on soybean. Tennessee soybean production was expanding rapidly during this time, but numerous problems were looming for growers. The most important of these was soybean cyst nematode, which was gradually spreading east from its original detection in the mid-1950's along the Mississippi River. There were also seedling and foliar diseases that were beginning to reduce yields. Mr. Chambers recognized the need for research to protect soybean production in Tennessee. With James Epps, USDA, he began studies on resistance of soybean cyst nematode, and to seed-borne and seedling diseases. His early experience would prove valuable much later, when double-cropping systems were implemented on a large scale.

In the late 1960's, leaf spots, rusts, and smuts of small grains, especially barley and wheat, were causing significant losses to producers. Again working with other Experiment Station personnel, Mr. Chambers embarked on intensive experiments to determine the best chemical means of control. Because of the difficulty of finding resistance to these pathogens, and the relative low value of the crop acreage, it was important to find fungicides and application technology inexpensive enough to be implemented by growers. These efforts, which began in 1968 and continue to the present, form the basis for recommended control of small gain foliar diseases in Tennessee today.

About the same time that Mr. Chambers began studies of small grain disease management, he also started developing a research program for the control of cotton seedling diseases. These diseases are favored in cool, wet weather, which in some years makes Tennessee a marginal area for cotton production. Often working with Knoxville-based scientists and other Jackson personnel, Mr. Chambers studied new fungicides and new methods for applying them to the soil. The results from this team approach provided greatly improved methods and materials for preventing cotton seedling diseases. Again, these findings form the basis for current management recommendations. In the 1970's, Mr. Chambers also conducted important studies on the relationship of cotton growth regulators to control boll rot. Most of his research was done at the Milan Experiment Station. Cotton disease management has continued as a major focus of research programs to the present day.

Around 1980, Mr. Chambers began to devote more attention to soybean. Partly because of major erosion problems in West Tennessee, no-till systems were being implemented by many growers. A major interdisciplinary research thrust began to form for the study of changes in soil characteristics, plant growth and yield, and insect and pathogen responses. Mr. Chambers, along with his Jackson colleagues, demonstrated that soybean cyst nematode numbers were greatly reduced in double-cropped fields. This finding helped to encourage further adoption of no-till land management in the mid-South. However, he also determined that some other plant diseases were more destructive on double-cropped soybeans, and so he embarked on evaluation of methods and materials to minimize their effects. Mr. Chambers' studies of diseases in no-till wheat-soybean cropping systems continue to this day.

Over this long tenure at Jackson, Mr. Chambers has steadily contributed 5-11 publications per year on the results of his research, which has resulted in more than 225 papers. These publications usually are the results of collaborative research with other Experiment Station or Extension personnel. The outlets for these results have run the length and breadth of American

agricultural publication, including *Phytopathology*, *Plant Disease Reporter*, *Journal of Nematology*, *Journal of Economic Entomology*, *Journal of Soil and Water Conservation*, *Crops and Soils*, *Journal of Production Agriculture*, *Tennessee Farm and Home Science*, *Fungicide and Nematicide Tests*, *Insecticide and Acaricide Tests*, *Beltwide Cotton Research Conference Proceedings*, *Proceedings of the Southern Weed Conference*, *Proceedings of the Southern Weed Science Society*, *University of Tennessee Extension Service publications*, *Tennessee Agricultural Experiment Station Bulletins*, *USDA publications*, *Better Crops with Plant Food*, *The Tennessee Farmer Magazine*, and *Soybean Digest*.

Mr. Chambers' publications provide a perfect example of dissemination of information to the appropriate audiences. Because his work has been primarily of an applied nature, he has reported in fields days, in reports to regional applied groups such as the Beltwide Cotton Research Conference, in the annual publication *Fungicide and Nematicide Tests*, and so on. For the results of much of his work, these outlets are far more appropriate and client-effective than would be the typical referred journal.

Although Mr. Chambers remains as active as ever in his retirement, his legacy to Tennessee agriculture is clear and permanently enduring. Extension recommendation for disease control in field crops are largely due to his efforts. His work on cotton and soybean diseases has provided importantly understanding of their interactions with cultivars and tillage practices. His intense, long-term effort to control cotton seedling diseases have enabled Tennessee cotton growers to get more reliable stands of cotton, thus helping to reinvigorate the industry in Tennessee. Mr. Chambers clearly stand, as one of his clients once stated, as one of "the finest and best". His career should be seen as one of the greatest influences of the vitality of Tennessee agriculture, and one of the very best that the Experiment Station at The University of Tennessee has to offer.