

IN MEMORIAM JOSEPH NEAL SASSER 1921–2005

Joseph (Joe) Neal Sasser, pioneer and world authority on root-knot nematodes, died on August 17, 2005, at the age of 84. Dr. Sasser was a man of dignity and affable humor. He is survived by Laura Elizabeth (Lib) Long Sasser—his wife of 60 years, three daughters, one son, two sisters, 11 grandchildren, three great-grandchildren, and one great-great-grandchild.

Joe was born on May 21, 1921, in Wayne County, North Carolina, and, together with his nine siblings, was raised on a tobacco farm. In 1938, he graduated from high school and attended Wake Forest College for one year on a baseball scholarship. Eventually he transferred to then North Carolina State College to major in agricultural education. Upon graduation in 1943, he entered Midshipmen's School at Northwestern University in Evanston, Illinois, and subsequently served a three-year tour of duty in the U. S. Navy on a sea-going rescue tug.

From 1946 to 1948, Joe worked in the agricultural chemicals industry. It was at this time that nematologist A.L. Taylor inspired Joe to study plant-parasitic nematodes. In 1948, he enrolled in a master's degree program at NC State College to investigate population dynamics of root-knot nematodes. He entered the University of Maryland in 1950 and, under the direction of Dr. Benjamin G. Chitwood and other nematologists at Beltsville, completed his Ph.D. in 1953. The subject of his doctoral thesis (identification and host-parasite relationships of certain *Meloidogyne* species and races) established the direction of his distinguished career.

In 1953, Joe returned to NC State University (NCSU), assuming research and teaching duties as the first full-time nematologist (assistant professor) in the Plant Pathology Department. His vision and leadership of phytonematology came at a crucial time for that emerging discipline, in that he was able to affect the direction of graduate education and research in nematology. He accomplished this, in part, by placing able graduate students on fundamental research problems that few scientists had previously considered, propelling the NC State Department of Plant Pathology into a world center for graduate education in nematology.

In the early 1950s, practical training and in-depth educational programs in plant nematology were urgently needed. Joe addressed that challenge by developing graduate courses focusing on plant-parasitic nematodes and organizing a number of workshops. Those workshops were designed primarily to train scientists from other disciplines because there were few nematologists in the U.S. at that time. With financial support from the Rockefeller Foundation, Joe and col-



Joseph N. Sasser

leagues from around the world taught an intensive summer graduate course that resulted in the 1960 publication of a comprehensive textbook on plant nematology.

Joe, his graduate students, and other associates were among the first to research the physiological and biochemical pathways operative in plant-parasitic nematodes and to employ molecular techniques in root-knot nematode taxonomy. They also used cytogenetics and differential host specificity to characterize the worldwide genetic diversity among species and subspecies of those nematodes. Other collaborative research involved the development of improved nematode-management strategies, especially crop rotations and chemical soil treatments; characterization of multiple-pathogen disease complexes, implicating root-knot nematodes; host-parasite relationships of numerous nematode-host combinations; descriptions of new nematode species; nematode ecology and distribution; and estimation of general damage potential and crop losses to major nematode species. Joe influenced the research direction of many graduate students, post-doctoral associates, and visiting scientists.

When Joe became involved in NCSU's U.S. Agency for International Development (USAID) mission to Peru, he developed an interest in a global approach to

the root-knot nematode problem. By the mid 1970s, he had conceptualized, organized, and implemented his widely acclaimed “International *Meloidogyne* Project” (IMP). That program, funded by the USAID, aimed primarily at coordinating and promoting research on root-knot nematodes in many regions of the world where nematodes, alone and in combination with other disease agents, cause extensive crop losses. About 200 cooperators from 70 countries, organized in eight project regions, participated in the IMP. They were encouraged and supported in various ways to conduct research in their own countries on nematode distribution, pathogen variability, host resistance, and chemical and biological control, as well as other aspects of their personal scientific interests. Several workshops were organized in each project region, during which cooperators presented the results of their work and discussed plans for future cooperative research. Through this program, more than 1,000 nematode populations of *Meloidogyne* species from around the world became available for comparative studies. This resource enabled nematologists at NCSU to carry out fundamental research that substantially has increased our knowledge on the biology, diversity, biochemistry, ecology, cytogenetics, and taxonomy of root-knot nematodes.

The IMP also facilitated global training programs in nematology and, in 1983, sponsored a comprehensive special course at NCSU on *Meloidogyne* and other nematodes. The lectures presented by world experts resulted in the two-volume set, “An Advanced Treatise on *Meloidogyne*.” The International *Meloidogyne* Project was one of USAID’s most successful efforts.

During the late 1950s and early 1960s, the newly developing Society of Nematologists also benefited from Joe’s energy and dedication to the field. He was the first vice president and the second president of this profes-

sional society. He was also an active member of the American Phytopathological Society and various nematology organizations.

Joe’s contributions to nematology and agriculture were recognized widely and brought him many honors. In 1982, he received the Oliver Max Gardner award, a statewide University of North Carolina award for contributions to higher education and service to humanity. Additional honors included: honorary member of the Society of Nematologists; an Award of Distinction, 9th International Congress of Plant Protection; honorary member of the Organization of Nematologists of Tropical America; Ciba-Geigy award for Excellence in Nematology; and the naming of two nematode species in his honor.

Joe retired in 1989, after 36 years of research and service to the State of North Carolina, his university, and the international nematology community. Still, he continued to live a full life during the ensuing 16 years. On a more personal level, Joe served in numerous posts in his community and church. In spite of his devotion to his work, his church, and his friends, he was totally dedicated to his wife, Lib, a lady of great grace and charm, as well as his very large, beautiful family. Whether at his retirement home, a Society of Nematology meeting, an NCSU emeriti luncheon, or another activity, Joe’s presence, sharp mind, wit, and charm contributed much to the success of the day. His pride in the achievements of his former graduate students and colleagues undoubtedly helped him sustain an intense scientific interest until his sudden departure from life on 17 August 2005.

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