

Lowell Wendell Nielsen, 1910–1988

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Lowell Nielsen, professor emeritus, North Carolina State University, died August 8, 1980, after several years of failing health. Always a colorful individual with a genuine interest in colleagues and students, he displayed an uncommon loyalty to the Department of Plant Pathology even after his retirement in 1975.

Lowell was born April 23, 1910, on his father's irrigated farm near Weston, ID. Reared in a Mormon household that consisted of his parents, four brothers, and three sisters, he received his elementary and high school education in the Weston public schools and enrolled at Ricks Junior College, Rexburg, ID, in 1928. After graduating from there in 1930, Lowell entered the University of California at Los Angeles in the fall of 1932 but transferred to Utah State College the next year to study plant pathology. He was awarded the B.S. degree by Utah State in 1933 with a major in plant pathology and a minor in entomology.

During 1934, Dr. Nielsen assisted Dr. F. B. Wann, plant physiologist at the Utah State Agricultural College, in his work on the chlorosis of various small fruits and on the physiological changes produced in tomato and bean plants infected with the curly top virus.

His M.S. thesis research was directed by Dr. H. L. Blood of the USDA, stationed at Utah State. He determined the vascular tissues involved in curly top virus translocation and the tissues upon which the insect vector must feed to effect transmission. From early 1935 until May 1936, he continued to assist Dr. Blood and gained additional experience with bacterial canker and Verticillium wilt of tomato.

From May 1936 until January 1937, he worked for the American Smelting and Refining Company at Logan, UT. He established and maintained experimental plots, measured stomatal apertures of plants treated with SO₂, and observed the degree of injury of treated plants.

In May 1937, Dr. Nielsen was awarded an industrial fellowship by the Plant Pathology Department of Cornell University to investigate, under the direction of Prof. L. M. Massey, the fungicidal properties of silver. His first paper, "Studies on the Fungicidal Properties of Silver" was presented at the 31st annual meeting of APS in Columbus, OH, in 1940. He received the Ph.D. in 1941.

In the early 1940s, pressure from potato growers in eastern North Carolina and increased legislative appropriations to the North Carolina Agricultural Experiment Station provided an opening for a potato pathologist. Dr. Luther Shaw, then head of plant disease work in North Carolina, contacted Prof. L. M. Massey for recommendations of Cornell graduates who might be interested in the position. Massey replied, "I would take Nielsen. He is thoroughly sound . . . stands on his own feet, is cooperative and loyal, straightforward about everything, and thoroughly capable. He is resourceful and dependable—one can assign him to a job with confidence and know he will do it well." Massey's evaluation stood inviolate for 35 years, during the whole of a distinguished career of teaching and research.

Dr. Nielsen accepted the position at North Carolina State and remained there until 1944, but during the war years, research was difficult. After much frustration and anguish, Dr. Nielsen accepted a position as plant pathologist with the California Packing Corporation, Rochelle, IL, in April 1944. After a year, however, he returned to research and joined the Idaho Agricultural Experiment Station at Aberdeen.

Dr. James H. Jensen came to NC State in 1945 and began

to build the nucleus of a faculty that was later to constitute one of the outstanding departments in the country. With World War II concluded and prospects bright for the future, Jensen in 1948 enticed Nielsen to return to North Carolina to reactivate research on potato diseases and to initiate a program on sweet potato diseases. He was also assigned teaching responsibilities. His course in phytopathological methods, although it has been modified through the years, remains as a cornerstone of instruction in our department. His high standards and his meticulous attention to accuracy, organization, and detail had a profound influence on students and colleagues alike. Students will remember him for his insistence on the use of simple direct sentences that conveyed clarity and meaning and for his relentless expurgation of unnecessary verbiage from manuscripts, term papers, and bulletins. Early students included J. L. Apple, K. R. Barker, D. F. Crossan, Urban Diener, J. F. Fulkerson, G. V. Gooding, Jr., F. F. Hendrix, Lorin Krusberg, C. E. Lewis, N. T. Powell, H. R. Powers, A. C. Triantaphyllou, A. S. Williams, and N. N. Winstead.

His research work embraced most of the diseases of potato and sweet potato. He investigated factors affecting seed piece decay, scab, soft rot, and late blight. He showed that, in North Carolina, bacterial soft rot of potato is caused by *Erwinia caratovora* subsp. *atroseptica* and to a lesser extent by *E. caratovora* subsp. *caratovora*. He also found that the two *Erwinias* are tuberborne and that anaerobic conditions stimulate infection in naturally inoculated lenticels. The influence of solar heat and bruising on increased incidence of soft rot was also determined.

He served as advisor to the U.S. AID-North Carolina State University mission to Peru from 1966 to 1971. He made a number of trips to Peru and collaborated closely with Dr. Edward R. French, head of the Department of Plant Pathology, and others at the International Potato Center.

In sweet potato research, he investigated internal cork, Fusarium surface rot, black rot, and scurf, especially the harvest and cultural practices affecting their severity. Recognized as one of the leading sweet potato pathologists in the world, he was awarded a Fulbright professorship in 1964 to New Zealand, where he evaluated an extensive selection of clones native to the mainlands adjoining the Pacific Basin for resistance to major diseases. He was cited for exceptional service by the National Sweet Potato Collaborators Conference in 1975. The authors of the *Compendium of Sweet Potato Diseases* (APS Press, 1988), C. A. Clark and J. W. Moyer, called attention to two plant pathologists, W. J. Martin and L. W. Nielsen, who had "dedicated their careers to the study of sweet potato diseases." It was only because of their efforts in identifying and developing practical control procedures that it was practical to compile the information in the *Compendium*. "With great admiration and respect," the authors dedicated the *Compendium* to Drs. Nielsen and Martin.

Dr. Nielsen married the former Davora Edmonds, who survives him. Survivors also include two sons, Michael and Kent, members of the faculty of the Arizona State University and the University of Texas at Dallas, respectively; a daughter, Mrs. Nancy Larson of Stockholm, Sweden; and six grandsons.

In the early 1950s, Lowell and Davora built a cottage on the North Carolina coast. This was a favorite spot for rest and recreation, which they enjoyed during vacation periods. The call of the seaside remained strong throughout his lifetime.

A touching memorial service for Dr. Nielsen was conducted by his children on August 13, 1988. To conclude the service, his daughter quoted a favorite selection, John Masefield's "Sea Fever," the last two lines of which seemed singularly appropriate to commemorate the departure of this truly unique and remarkable man: "All I ask is a merry yarn from a laughing fellow rover/ A quiet sleep and a sweet dream when the last trick is over."