Leo Chandler Norris

March 6, 1891 — February 3, 1986

Leo Chandler Norris, professor emeritus of nutrition, died on February 3, 1986, in Lawrence, Kansas, four weeks before his ninety-fifth birthday. He was born on March 6, 1891, in Canaseraga, New York. His life and work spanned much of the period of the development of the science of nutrition, and he was one of the principal architects of Cornell’s commitment to nutrition as an important academic endeavor. Leo Norris earned a Cornell B.S. degree in animal husbandry in 1920 and was one of the university’s early Ph.D.’s in animal nutrition, working under the direction of L. A. Maynard. He was first an instructor in poultry husbandry in 1923, an assistant professor in 1926, and a full professor in 1936. He was given the title of professor of nutrition in 1943.

Leo Norris will long be remembered as one of Cornell’s great mentors of graduate students. Thirty-five individuals received their Ph.D. degrees under his direction at Cornell. They became the faculty members and research workers throughout the United States who developed the science and application of nutrition not only in the field of poultry science, but broadly in the field of animal nutrition. He was a demanding faculty adviser. He insisted on accuracy, hard work, attention to detail, and preparation in basic sciences that allowed application of those sciences to problems facing the poultry industry. Although graduate work with Leo was demanding, his students were devoted to him. The experience and training they received from studying with him molded their scientific lives. Though he did little formal classroom teaching, the U.S. Poultry Science Association gave him the association’s Teaching Award in 1957, a unique tribute to his work with graduate students.

Leo Norris’s research spanned the major era of discovery of essential nutrients in nutrition. In 1921, when he began his Ph.D. study, vitamin A was known, the B vitamins had not yet been clearly identified, and vitamin D and vitamin E were not yet established as entities. By the time of his retirement from Cornell in 1959, all the vitamins we now recognize had been isolated, characterized, and synthesized and their basic functions established. Many of the trace mineral elements were not considered dietary essentials in the 1920s. The Cornell group led by Norris was in the midst of the race to isolate and identify the unidentified growth factors found in natural foodstuffs. Norris and his students contributed to many of the vitamin discoveries of his era. They carried out work with riboflavin, pantothenic acid, folic acid, biotin, vitamin B_{12}, and vitamin K. They were also concerned with phosphorous utilization and with trace elements, including manganese, zinc, and molybdenum.
Norris described the deficiency of riboflavin in young chicks, and he identified whey, a by-product of cheese making, as an important source of the vitamin. That led to the development of an industry that recovered the whey solids, which had previously caused a disposal problem for the cheese industry. He also discovered the importance of manganese deficiency as a cause of leg weakness in commercially grown poultry. The supplementation of feed with manganese solved a major problem limiting the intensification of the poultry industry in the United States. He was anxious to ensure that results of scientific research would be available to the feed industry in the United States, and in 1934 he initiated the Cornell Nutrition Conference for Feed Manufacturers, which is still in existence.

Though Norris is primarily recognized for his work and discoveries in poultry nutrition, he was concerned with the broad application of this new science. Along with L. A. Maynard, he was instrumental in forming a school of nutrition at Cornell, which brought together the various groups interested in nutrition from the Departments of Animal and Poultry Husbandry and the College of Home Economics. He served as the first secretary of the school. During World War II his laboratory was involved in studying the adequacy of K rations and other formula foods supplied to soldiers in the field.

He was the long-term chairman of the Committee on Animal Nutrition of the National Research Council (1954-62) and was responsible for developing standards for feeding most species of farm and other domestic animals. His role in the scientific community was broad: he served as president of the American Institute of Nutrition and was active in the U.S. Poultry Science Association.

When Leo retired from Cornell in 1959, he moved to the University of California at Davis, where he developed another academic career. He carried out research on mineral metabolism, continued to guide graduate students, and published original work until a few years before he died.

Leo Norris was a Cornellian, a scientist, and a teacher whose legacy will remain part of scientific agricultural production and the science of nutrition. He will also be remembered as a scientific ancestor to a substantial number of members of the nutrition community.

L. J. Daniel, R. J. Young, M. C. Nesheim