

Lester C. Ulberg, 1917–1998: A brief biography

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Lester C. Ulberg was born in Dover, Wisconsin, on December 2, 1917. He was the eldest son of Albert and Lottie Ulberg and was reared in the Lookout, WI, area. Ulberg attended the University of Wisconsin's agriculture winter short course, and his formal education probably would have ended there, were it not for the war. As a young man, he had a bit of wanderlust, and it seems he almost welcomed the army as a chance to see some of the world. In 1941, he enlisted in the U.S. Army and served from 1941 to 1945. Unfortunately, he was a prisoner of war from October, 1944, until repatriated at Alt Drewits, Prussia, in February, 1945. Although very reluctant to talk about his experiences during the war, one could tell they affected him profoundly.

Upon returning from the war he married Margaret Jaeger in 1945, and they had one daughter, Karen. In 1946, he entered the University of Wisconsin, receiving his B.S. in 1948 and the M.S. in 1949. Ulberg completed his Ph.D. studies in 1952 under the direction of L. E. Casida. From this time on, family and profession defined Dr. Ulberg's life.

In 1952, he joined the faculty of Mississippi State University as an assistant professor and served there until he joined the faculty of North Carolina State University (NCSU) as an associate professor in 1957. He was named a William Neal Reynolds Professor at NCSU in 1979 in recognition of his many contributions to teaching, research, and graduate education. Lester Ulberg received many awards, including the ASAS Reproductive Physiology Award and the Distinguished Service Award of the Southern Section. Les was named a Fellow of ASAS in 1986. However, I am sure that he felt his greatest recognition came when he received the first L. E. Casida award for graduate student education, in 1985.

Ulberg was an outstanding scientist, but his greatest contribution may have been in graduate student education. His research served as a focal point for a graduate education program that produced 20 Ph.D. and 19 M.S. graduates. Les certainly would not have liked the terminology *graduate student training*, as he believed they were to be educated, not trained. Ulberg had an outstanding ability to stimulate students to think about their projects, design appropriate experiments, analyze the data, interpret the results, and formulate new hypotheses. Graduate students were expected to spend many hours reading the scientific literature, and not just literature related to their project. They were encouraged and challenged to think about the literature they read and not merely to accept it. Ulberg insisted on a biological interpretation of the results and not just reliance on statistical significance. He often stated that if we know the biology we can sit in the office and "armchair" answers to many questions in the field. This sometimes led to a false belief that he did not approve of statistical analysis. I remember students furtively coming to my office for statistical assistance because of this false belief.

Ulberg approached science with a practical problem in mind, such as the effect of heat stress, nutrition, and management on reproductive performance. Nevertheless, he insisted on attempting to understand the underlying biology. He believed that good science was based on asking good questions. His ability to formulate good

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questions and pursue good answers was instilled in his students. This approach led to the education of students who now have achieved national and international recognition.

The fact that Ulberg and I both studied at Wisconsin under the guidance of L. E. Casida and A. B. Chapman greatly influenced our working relationship. We often had stimulating discussions in seminars or when gathered to discuss a research project. We would often take opposing positions to debate in order to make students think. Many students were amazed to see us leave one of these "discussions" and go across the street for coffee as friends. Many of the best research projects had their origins in these discussions and(or) in the coffee shop. Ulberg was the ultimate professional. He believed that good debate exposed many sides of a question and strongly urged everyone to question and discuss. Further, he felt that professional discussion should be completely separate from personal feelings. He was extremely disappointed with faculty and students who could not separate professional disagreement from personal feelings.

Ulberg was a pioneer in many areas of research. He and his colleagues developed a technique for embryo transfer in swine that permitted detailed studies of the effects of exogenous hormones, energy intake, and uterine capacity on embryonic survival and litter size. This occurred despite his early reluctance to work with pigs. When asked why he did not work with pigs, his response was "pigs are too smart for me." However, when a student expressed a strong interest in working with pigs, he agreed with the understanding that I would be responsible for the management of the pigs. Later, several students conducted their Ph.D. studies in swine and made major contributions to the understanding of the reproductive physiology of the pig.

Ulberg's research had a heavy emphasis on the endocrine control of ovarian function and the impact of envi-

ronmental factors on early embryonic development. He was a pioneer in research on estrus synchronization and developed an effective method for treating follicular cysts in cattle. His research on early embryonic development showed that embryo damage from heat stress occurred within the first few days after fertilization. Further, he demonstrated that exposure of sperm to elevated temperatures increased embryonic mortality, indicating the need for protection from heat and other stresses at and immediately following mating.

Although Ulberg often disparaged statistics and computers, he was a user of both. His objections were not to these tools but to allowing them to be the focal point rather than biology. In fact, he was one of the first NCSU Animal Science faculty members to obtain his own computer. This original was a desk-size computer. He then outfitted a van to allow the computer to be taken to farms where he could conduct data analyses immediately. This was particularly useful for his Herd Reproductive Status method of assessing a dairy herd's reproductive situation. This program was later incorporated into the Dairy Herd Improvement Association program. Later, he purchased personal computers as they became available and became quite adept at using them. This came as a major surprise to many of his students and fellow faculty.

After retiring from NCSU, Les helped his daughter, Karen, in her computer-oriented business. She states that it would have been impossible without him and that he was the best employee she ever had.

Although many students remember being in awe (afraid) of Dr. Ulberg in the early stages of their graduate education, all remember him with a great deal of warmth and respect at the end of their tenure. They came to recognize the excellent education received through his dedicated efforts. All have attempted to emulate him in their careers. Dr. Ulberg truly was an outstanding motivator, teacher, and scientist.