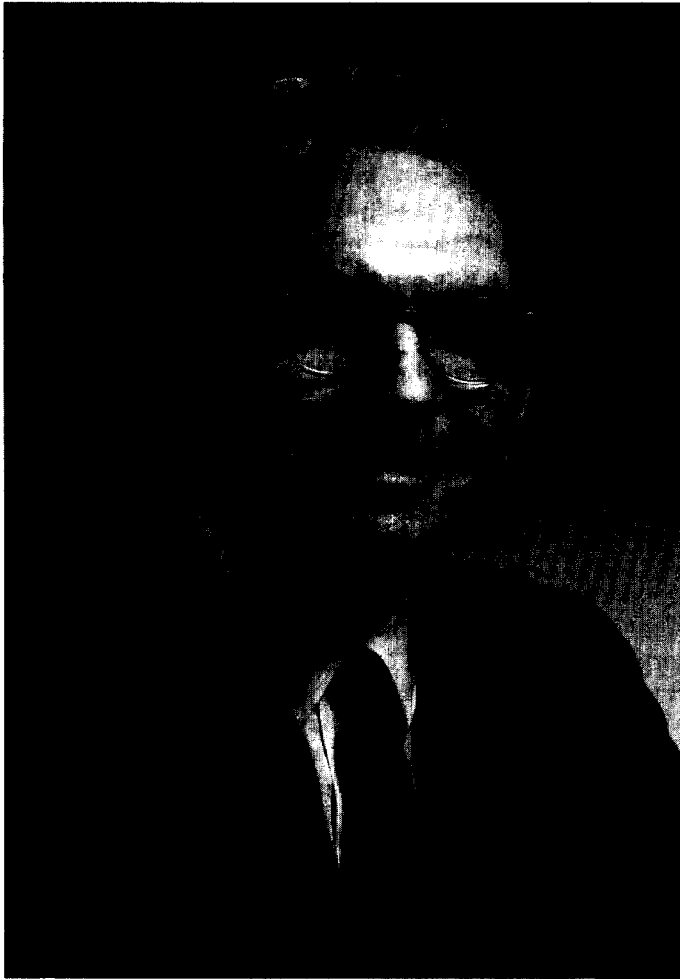


Lyman J. Bratzler, 1905–1976: A Brief Biography

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Lyman J. Bratzler was born September 24, 1905, at Barrington, IL, where he obtained his elementary and high school education. He was reared on a dairy farm, from which he developed his interest in agriculture. He entered the University of Illinois in 1926 and was a member of the Meats Judging Team in 1929. He received inspiration from some great teachers: Dean Mumford, Sleeter Bull, R. R. Snapp, H. P. Rusk, and W. G. Kammlade. He received the B.S. degree in 1930.

Lyman Bratzler spent the next three years at Kansas State College, where he held a fellowship from the USDA to improve a shear device for measuring meat tenderness. At the time Kenneth F. Warner of

the USDA had developed a shear device for measuring the tenderness of lamb legs that seemed to show promise. At the suggestion of Professor David L. Mackintosh of Kansas State College, young Bratzler studied the factors influencing the reproducibility of the shear. As a result of his investigations on speed of travel, shape of the opening, thickness of the blade, and the effect of sharpness or dullness, the shear device known as the Warner-Bratzler shear was developed. The new device was equipped with a motor to give a constant rate of shearing, a blade of uniform thickness with a V-shaped opening and blunt edge and changed to a vertical device in contrast to the original version, which was horizontal and had a round hole in the blade. Although these modifications were made over 60 years ago, the Warner-Bratzler shear has remained unaltered in its basic design and has been the most widely used mechanical device for measuring tenderness in the world.

Lyman Bratzler received the M.S. degree in 1932 and served the next year on the staff at Kansas State while his major professor, D. L. Mackintosh, was on leave from Kansas State. Following the return of Professor Mackintosh, Lyman worked at a variety of jobs for a period of 14 years, which included farm appraiser for the Federal Land Bank, public relations and sales for Cudahy Packing Company, private meat wholesale business, civilian employee as Meat Technologist for the U.S. Army Quartermaster Subsistence Laboratory, and Meat Technologist in the Research Laboratory of Swift and Company.

In 1946 he was appointed to the faculty of Michigan State University, where he taught both undergraduate and graduate courses in animal husbandry. He coached the first Meats Judging Team at Michigan State. He served as adviser to the Block and Bridle Club and to the Food Science Club. He was instrumental in obtaining support for the Mobile Meats Trailer owned by the Michigan Livestock Improvement Association, which was used by the University for meat demonstrations and educational programs.

At first Professor Bratzler taught animal husbandry and meats courses, but enrollment in meats under his inspiring leadership and teaching ability increased to the point that he was forced to confine his teaching and research to the area of meats. Enrollment in meats increased to where he was teaching 200 to 250 students in meats courses. He recognized that meats should be taught to students in areas other than animal husbandry, such as in Food Distribution, Hotel and Restaurant Management, Institutional Management, and Foods and Nutrition.

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Lyman Bratzler had few superiors as a teacher. He not only was an outstanding teacher of undergraduate students, but he also had the ability to stimulate the inquiring mind of the graduate student. He directed the graduate program for more than 30 students, many of whom held or hold responsible positions in industry, government, or universities.

Professor Bratzler had a great ability to stimulate students' desire for knowledge. He operated his office with an open-door policy and freely offered advice to students on subject matter and job opportunities, and he was available to discuss any problem they might have. Professor Bratzler felt that one of the most effective learning processes for graduate students was for them to teach others. He required all his students to assist with the laboratory teaching associated with his undergraduate Meats Course. This class included students from Hotel and Restaurant Management, Home Economics, and Animal Science. The teaching of this course required, other than the usual teaching skills, much patience and a good sense of humor. It was obvious to anyone that Prof thoroughly enjoyed teaching this class. There are today, no doubt, literally hundreds of successful restaurant managers and home economists who owe their knowledge of meat selection, meat cookery, and meat economics to Prof. Bratzler.

Professor Bratzler developed a strong and productive research program. Soon after joining the staff at Michigan State University, he studied the effects of various hormones on the growth and carcass composition of cattle, hogs, and lambs. Along with his co-workers he was the first to demonstrate the influence of sex on carcass composition of swine. He was an author or co-author of numerous publications on methods of evaluating fatness and(or) leanness in live animals and their carcasses. Such studies involved linear carcass measurements and subjective evaluation and clarified our understanding of the usefulness of antipyrine injection, specific gravity of carcasses and cuts, the use of the live probe and lean meter, and the use of various carcass-to-cut relationships. His other research studies included meat quality, especially tenderness and meat color, meat cookery, meat emulsions, chemical elucidation of wood smoke constituents, and quality and preservation of Coho salmon.

Professor Bratzler published 73 papers in scientific journals, over 40 abstracts, and was the author of 6 bulletins and 2 chapters in books. Lyman also served as editor of the publication titled "Cross-Sectional Muscle Nomenclature of the Beef Carcass—Michigan State College, 1952" (H. Q. Trucker, M. M. Voegeli,

and G. H. Wellington, authors). The publication has been extremely useful to the livestock and meat industry.

Under the leadership of Prof. Bratzler, the area of meats science expanded from the one part-time job, to which he was first appointed at Michigan State University, to a total of four full-time staff members. One of the greatest monuments of his devoted service to the area of meats science is the meats laboratory he designed, which was completed at Michigan State University in 1956. His planning, vision, and faith in meats science is evident in the well-equipped building containing an abattoir, coolers, processing laboratories, and research facilities. The Food Science Department was established at Michigan State University in 1960, and Professor Bratzler became one of the original faculty members of the department. He was jointly appointed in two departments, Food Science and Animal Husbandry. He was promoted to Associate Professor in 1948, Professor in 1955, and was granted Professor Emeritus in 1972.

Professor Bratzler served as the first elected Chairman of the Reciprocal Meat Conference and served on the Executive Committee of the American Meat Science Association and as president in 1968. He served on the Editorial Board of the *Journal of Animal Science*. He assisted in planning the facilities for a Meat Research Institute at Balcarce, Argentina under the auspices of USAID. He was associated with the Quality Lamb Carcass Contest at the International Livestock Exposition since its inception, serving first as Superintendent and as a judge for 5 years.

His reputation in meat research has been widely recognized, and he received the American Society of Animal Science Meats Research Award in 1968. His effectiveness as a teacher is equally impressive. He received the Distinguished Teaching Award of the American Society of Animal Science in 1965, and the Distinguished Meats Teaching Award given by the American Meat Science Association in 1971. He also received the Signal Service Award of the American Meat Association in 1962. He was active in civic affairs, serving on the school board, taking an active part in his church, and assisting with the scouting program.

Professor Bratzler was the "father" of the Meat Science program at Michigan State University. His legacy continues in the program to date. Michigan, the United States, and world have benefited greatly by his outstanding contributions to meat science. Prof. Bratzler and his wife, Hildred, were the parents of four children, John, Kay, Robert, and Mary.