Kenneth F. Warner, 1891–1965: A brief biography[1]

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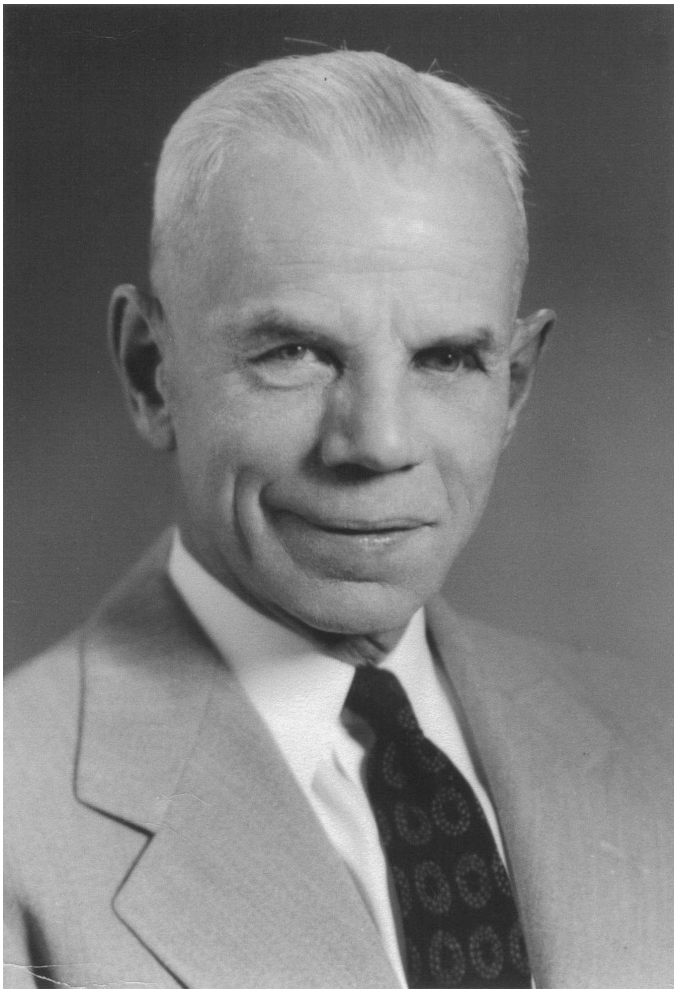

Kenneth F. (Ken) Warner was born September 10, 1891, in the small town of Roca, Nebraska, just south of Lincoln. His father, Dr. Amos G. Warner, was a professor of sociology at the University of Nebraska, and, though raised in the confines of Lincoln, Ken spent most of his formative years associated with his uncle's and grandmother's farms near Roca. During high school, he worked part time in the university agronomy plots. He majored in animal husbandry at the University of Nebraska, was a member of the livestock judging team, and graduated in 1912. During his college summers, he often hired out on local farms, and a memorable one in particular was owned by Sam McKelvie, who later became governor of Nebraska.

He obtained a master's degree at the University of Minnesota in 1915, under the tutelage of Professor Tom Patterson, whom he referred to as the "best animal man I ever knew." After graduation, he became an assistant county agent in Gage County, Nebraska, and later, the extension livestock specialist with the fledgling extension staff at the University of Nebraska. His early efforts included rust prevention in oats, along with a myriad of animal science projects. He gave an account of an early venture showing local farmers how to butcher hogs. When he and his associate arrived at dawn, the scaling vats were boiling and the farmers were standing around, wondering what a pair of young bucks from the college could tell them about butchering hogs. Ken relates, "They watched us do the first one, helped us on the second one and did the third one." It seems hard to beat that experience as a paradigm of effective extension teaching.

After a stint in the Medical Corps during World War I, he returned to the Nebraska position, but soon accepted an offer as Extension Animal Husbandman with the Armour Packing Company in Chicago in 1919. His former Animal Husbandry Professor at Nebraska, H. R. Smith, introduced him to his future wife, Clara Ayres, of Pierre, South Dakota. After marrying her in 1921, he promptly lost his job. However, he shortly joined the USDA Meats Investigation Section housed at Beltsville, Maryland, amid the stellar names of early animal science researchers, to wit: N. R. Ellis, O. G. Hankins, Hugh McPhee, E. Z. Russell, E. W. Sheets, Sewall Wright, and J. H. Zeller. His headquarters was the Packing House, which has been frequently remodeled and expanded until today it is the Abattoir of the Food Technology and Safety Laboratory. Beltsville was the end of a streetcar line beginning in northeast Washington. Employees rode the streetcar to be met at Beltsville by a horse and buggy and then delivered to their place of work.

Ken's assignment was to supervise at the Packing House, which conducted the slaughter and cutting evaluation tests of USDA experimental animals from

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Beltsville and as far away as Miles City, Montana. He was also to develop an objective way to assess meat palatability. He admitted that flavor was too much chemistry, so Ken tackled the mechanical. Here began the tests that led to the Warner-Bratzler shear. Using a piano wire as a saw proved unsuccessful. The first promising prototype involved a washtub suspended under a steel plate containing a hole into which a core of meat had been inserted. This plate was passed through a slit in a miter box-like device, and water was added to the tub until the meat was sheared. When the tub hit the floor, the shear strength was determined by the weight of the tub plus water. Rubber boots were an integral part of the test to protect against splashing. Prototypes advanced through an ice scale with an advancing screw crank, "read it just before it snaps back," to one with a leading needle that was left as the record, when the needle did snap back. Under the auspices of the USDA and Kansas State College, Lyman J. Bratzler, a graduate student of D. L. Mackintosh at Kansas State, improved this primitive device in 1932. Lyman, as Ken used to say "with Shakespearean imagination, brewed a mixture of rubber (the old boots again), beeswax, rosin, and paraffin," which provided a test material of uniform shear strength. He standardized the shear mechanism. The crank was put under power, which gave it manufacturability. Today, the Warner-Bratzler shear is a fixture in almost every meats laboratory in the country and the world.

As kids, my brothers and I would often accompany dad (Ken was our father) to the Packing House on Saturday mornings. In prowling through his office, we discovered a set of hinged false teeth with which we pinched each other. We know now that it was there as a result of a search for a mechanism to test for meat tenderness.

For over 30 yr, he and A. T. Edinger supervised the collegiate meats judging contests at the International Livestock Show. In 1930, Ken became a part of the Federal Extension Service, where single representatives for dairy, beef, poultry, and meats (namely, Parker, Lowe, Shrader, and Warner) were officed under the leadership of the venerable A. B. Graham. Ken's program was the Home Raised Meat Supply, and as such he traveled the country (2 to 3 wk at a time by train) giving slaughter, cutting, and curing demonstrations to agents and farm folks alike. One young northeast meats extension specialist was sharing his concern about being able to give an effective cutting demonstration. Ken said, "An extension demonstration is always successful, you either show them how to do it or how not to do it." With the advent of the freezer locker industry, he became a roving consultant and emissary, as this contributed to effective meat storage above and beyond cutting and smoking. In his soul, he hated to see the farm-butchering-curing scenario disappear, but in his heart, he knew it was for the best. He was honored by the industry in 1951 and again in 1964.

In 1940, he moved into the area of extension teaching, extolling the virtue of extension, but further, developing and teaching techniques to spread the word more effectively. He dotted the country at Farm and Home Weeks, summer schools, and extension meetings of all kinds (all states but one). During World War II, he became a part of the force in the War Manpower Commission known as Job Instruction Training. How do you get untrained persons incorporated into the work force to aid agriculture and foster production? I heard him say happily to a colleague, "We got them to pick beans with two hands." His methods were graphic and palatable.

When his wife's health needed more attention, Ken shifted to the Foreign Agricultural Service, responsible for the nurture and scheduling of many foreign visitors. His humorous, enthusiastic, and detailed dispatching of these strangers across our land endeared him to many.

He retired from the USDA in 1957 and became a visiting professor of extension at the University of Maryland. Here, he continued with boundless energy his mission of effective extension teaching. Talks, workshops, and summer schools allowed him to perfect and disseminate his message of careful planning, proper preparation, and skillful presentation of the extension message, in which he passionately believed. He became fully retired in 1961.

Ken wrote profusely. In the early days, publications consisted of bulletins, newsletters, and films on the slaughter and preservation of the Home Raised Meat Supply. In later years, there were practical and philosophical summaries of his thoughts on teaching and extension methods.

He was a member of Alpha Zeta, Gamma Sigma Delta, and Epsilon Sigma Phi. He was recognized with the USDA's Superior Service Award, was a charter member of the Reciprocal Meat Conference, and received its Signal Service Award. The American Society of Animal Production (today, ASAS) made him a fellow in 1960. In 1954, he was awarded an honorary doctor of agriculture by the University of Nebraska.

He was a devoted husband to his beloved wife, "Pat" (Clara), and a devoted father to their three sons, Richard G., Philip F., and William A. Warner. His community activities included the Boy Scouts and a longtime commitment to the Presbyterian church. He died January 6, 1965, with his wife following 11 years later on December 30, 1976.

He was a highly respected member of the extension and meat science community. If Ken were to be asked what he considered his greatest achievement, he probably would have suggested being "a communicator." He may have been right. He was a much sought-after speaker. His sense of humor, choice of words, sense of timing, change of pace, and simple, direct presentation made him a joy to listen to. He never considered

himself a "bench scientist." However, the Warner-Bratzler shear, after over 70 yr, is still the standard with which all meat tenderness measurements are compared. The instrument is still being manufactured and purchased worldwide, and a recent Internet search lists a total of 630 spots mentioning this device. *Feedstuffs* called it 1 of the 50 critical events that shaped the U.S. beef industry since 1940.

He enjoyed whatever he did and reveled in the friends he made throughout the country. The following would seem to serve as a fitting capsheaf to his life. My brother was talking to one of dad's colleagues at the University of Maryland who said, "I liked your dad, and you know why? Because he liked me."