

MEMORIAL RESOLUTIONS

Richard (Dick) Atkins

Tom Al Austin

Kalju Eik

Bill G. Ellett

Solon A. “Bud” Ewing

Lloyd Randall Frederick

Vernon M. Meyer

Anton “Tony” Netusil

Bert E. Nordlie

Helen Hersh Schuster

Hazzle L. (H.L.) Self

**Iowa State University Faculty Senate
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RICHARD (DICK) ATKINS

Richard (Dick) Atkins, 84, died on June 27, 2003 in Ames, Iowa following a long illness.

Richard E. Atkins was born near Corning, Kansas to Irvin and Dora Mae Atkins. He grew up in Manhattan, Kansas where he received a B.S. Degree in Agronomy from Kansas State University in 1941. He continued his education at Iowa State College and received a Master of Science in Plant Breeding in 1942. From 1943 to 1946 he served in the U.S. Navy as a radar and communications officer aboard the U.S.S. Lowry (DD770) in the Pacific Theatre of World War II. His naval vessel was awarded a Naval Unit Citation for its service in the Philippines, Iwo Jima, and Okinawa areas. He returned to Iowa State and obtained a Ph.D. in Plant Breeding in 1948. He married Helen Louise Wasson of Blairsburg, Iowa on November 29, 1952.

Atkins was a professor of agronomy at Iowa State from 1948 until retirement in 1989. He taught graduate and undergraduate courses in plant breeding and directed the research and academic programs of 46 graduate students. Responsible for breeding programs and performance testing of sorghum, wheat, and barley, he was the author or co-author of numerous papers, reports, and pamphlets on plant breeding and genetic research with grain sorghums and cereal grains.

A member of the American Society of Agronomy from 1948, Atkins served as Iowa Chapter president from 1949 to 1950. He was a member of the Crop Science Society of America and was an associate editor for both the Agronomy Journal and Crop Science Journal.

He was a member of several professional and honor societies including the Iowa Academy of Science, Sigma Xi, Gamma Sigma Delta, and Alpha Zeta. Atkins served terms as chairman and vice chairman for the National Sorghum Research Committee, editor of the Sorghum Newsletter, and chairman of the Gene Nomenclature Committee for the Sorghum Improvement Conference of North America. He was a member of the Hard Red Winter Wheat Improvement Committee, the Upper Mississippi Valley Regional Barley Improvement Committee, and the Flax Institute of North America. He was awarded an honorary life membership in the Iowa Crop Improvement Association.

Richard Atkins was an active member of Ames Lions Club, Kappa Sigma fraternity, and the Collegiate Presbyterian Church. After his naval service in the 1940s he continued to serve as a member of the Naval Research Reserve Company, reaching the rank of Lt. Commander.

He is survived by his wife Helen of Ames; a son Stephen Atkins of Highland Park, Illinois; two daughters, Mary Kay Kolb of Cedar Rapids, Iowa and Barbara Atkins of Ames; and five grandchildren, Jeffrey and Jordan Atkins and Sarah, Rachel, and Hannah Kolb. He is also survived by two sisters, Naomi Hodgson and Wanda Culbertson. He was preceded in death by his parents, two sisters and two brothers, including Dr. I.M. Atkins, a distinguished small grain and flax breeder at Texas A&M University and Dr. M.D. (Don) Atkins, who was involved in work at Kansas State and the Soil Conservation Service.



University Professor Tom Al Austin

University Professor Tom Al Austin passed away July 23, 2003. He was born November 21, 1943, in Fort Worth, Texas, the son of George Allen and Vaye Tom (King) Austin. In 1967, he received his BS in civil engineering from Texas Tech University. He went on to earn advanced degrees in civil engineering with an MS from Utah State University (1969) and a PhD from Texas Tech University (1971). He also served in the United States Army from 1964 to 1975.

In 1972, he began his career at Iowa State University in the civil engineering department. He was promoted to full professor in 1979 and University Professor in 1996. Austin was well respected in his field and involved in many university activities and committees, such as serving on the faculty senate and as president of the board of directors for the Iowa State University Press.

He researched flood prediction, hydrologic modeling, and GIS applications to hydrology and taught a wide variety of courses in environmental engineering and water resources, including the cumulative senior design course. He directed the Iowa State Water Resources Research Institute from 1983 to 1990 and was division leader for environmental engineering from 1990 until his death.

He has directed a number of projects in the area of water resources and utilization. Local examples of these include ongoing work on water quality monitoring on Lake Saylorville and Red Rock Reservoir and improved flood warning system and water supply alternatives for the City of Ames. He was also involved in development work in Tanzania, Turkey, and Russia. He was an expert witness in over 20 court cases, and early in his career he worked for the US Department of Agriculture Forest Service in Utah and for the Texas Water Development Board.

Along with his university activities, he was involved with many national committees of professional engineering bodies as well, including

- American Society of Civil Engineers (Fellow)
- American Society of Engineering Education
- National Council of Examiners for Engineering and Surveying
- Fundamentals of Engineering Exam Writing Committee
- Accreditation Board for Engineering and Technology, Inc., Accreditation Visitor for ASCE.

Because of his great service and commitment to his profession and community, he received many awards, including the following:

- Governor's Volunteer Award, 1998
- Who's Who in American Education, 1995–1997, 5th Edition
- Who's Who in Technology, 1988–89, 6th Edition
- American Men and Women of Science, 17th Edition
- Civil Engineering Academy, Texas Tech University, 1990
- Tau Beta Phi, 1967
- Sigma Xi Research Society
- Chi Epsilon, 1974

Along with his professional interests, he enjoyed painting and fishing, and some of his paintings have been exhibited at Iowa State University. He was a member of the Grace Bible Chapel in Story City and was past director of the Story County Conservation Board, and an Eagle Scout. He is survived by his wife, Loretta Austin, six children, and 16 grandchildren.

Kalju Eik

Kalju Eik, 78, of Ames, died Nov. 4, 2002 of a stroke at Israel Family Hospice House in Ames.

Kalju Eik was born Dec. 15, 1923 in Mahu, Virumaa, Estonia, the son of Eduard and Liina (Rotka) Eik. Following occupation of Estonia, he was conscripted into the German Army. He was wounded and became a prisoner of war of the U.S.S.R. Earlier, his brother had been conscripted to serve in the U.S.S.R. armed forces and was forced to remain in the U.S.S.R. after the war. As a prisoner of war, Eik was granted repatriation to Germany and this was the key to his eventual freedom to emigrate and come to the United States.

Eik enrolled in Baltic University in Hamburg after the war and transferred to Iowa State College with advanced standing, first enrolling in the spring quarter 1951. He completed the B.S. degree in agronomy at Iowa State in 1953. He completed the M.S. in 1958 and was granted the Ph.D. in 1962, both in soil fertility at Iowa State.

He joined the department as a technician in 1953, then worked as a research associate from 1955-1962 when he became research associate and supervisor of the soil-testing laboratory in agronomy extension. He became an assistant professor in 1976. As supervisor of the laboratory, he continued to develop the extraction chemistry and instrumentation of mass produced soil-testing for diagnosing fertilizer needs of crops, including the computerization of intake, test-tracking, and reporting results and recommendations to clients. In this position he also played a major role in regional and national committees dealing with soil and soil amendment analyses and evaluation. His work here has been a pattern for the large soil-testing industry in Iowa and the U.S.

Eik was a member of the American Society of Agronomy, Soil Science Society of America, Council for Soil Testing and Plant Analysis, North Central Iowa Soil Testing Commission, and Sigma Xi, and Gamma Sigma Delta. He was a member of the North Central Regional Soil Testing Committee and also served as chair.

He is survived by one niece. He was preceded in death by three brothers and one sister.



Bill G. Ellett

Bill G. Ellett was born on July 25, 1924, in Bagley, IA. Bill received his Bachelor's degree in elementary education in 1949, and his Master's degree in school administration in 1953, both from Drake University. He pursued his post-graduate work at Iowa State University. Throughout his career, he worked as an elementary and middle school teacher in Dallas Center; as principal of Osceola Junior High School; and supervising principal of Louise Crawford, Abbie Sawyer, and Kate Mitchell Elementary Schools, all in Ames.

Bill was a member of the Board of the Iowa Association of Elementary School Principals, chaired its professional relations and nominating committees, and was its membership chair. He was president of the Iowa State Education Association's Central District, and the Ames Elementary Principals and Ames Education Association; served on the Executive Board of the National Association of Elementary School Principals in education groups, as presiding officer, coordinator, moderator and consultant for annual meetings. He served the national association on six evaluation teams, on its nominating and evaluation committee. He contributed to North Central Accreditation (NCA) of elementary schools in Iowa and surrounding states. He was active in many other educational organizations and had several articles published in "Midland Schools" and "Iowa Elementary Principal."

Bill's seventeen years of service to Iowa State University began in 1986 as a student teaching supervisor. He later became coordinator for a Project Opportunity Cohort (learning community), and was a member of the teaching faculty in the College of Education.

Bill valued time spent with his family. They include his wife, Kari Ellett of Ames, and their daughter Jennifer and her husband Craig Huegel, of West Des Moines. Bill also has two sons, Tim Ellett and his wife Cindy, of Ames, and Tom Ellett and his wife Linda, of San Diego, California. Bill has two grandchildren, Mary and Lindy Ellett of Ames. Bill's sister Kathy Kennedy resides in Ames, and his two cousins, Dixie Scarborough and Bob Byerly both reside in Prescott, Arizona.



Solon A. "Bud" Ewing

Solon A. 'Bud' Ewing, a longtime leader in animal science at Iowa State University, died of septicemia June 19 in Ames. He was 71.

Ewing joined the ISU faculty in 1958, and remained at ISU with the exception of four years, 1965 to 1968, when he taught at Oklahoma State University, his alma mater. From 1968 to 1973, he was assistant director of the Iowa Home Economics and Experiment Station. Ewing served as the eighth head of the ISU's Department of Animal Science from 1973 to 1992, serving longer than any other department head in animal science.

"Bud Ewing's unique leadership style allowed him to develop the department to the stage that it is recognized as one of the top animal science departments in the nation and the world," said Richard Willham, distinguished professor emeritus of animal science.

"His efforts in developing value-added product processing and marketing, systems analyses and computer applications for refined management decisions in animal production and marketing, and molecular biology have benefited all of Iowa animal agriculture," said Willham.

He was visiting professor at the University of California-Davis 1992-93. After retiring as department head, Ewing continued to teach and conduct research. In 1997, he became professor emeritus. In 1999, he published a textbook on animal welfare, stress physiology and related influences.

Ewing's tenure as head of animal science came during a time of great growth for the university. He was able to attract and build a quality faculty that brought recognition to the department and prestige and international prominence to the university. He provided significant direction in both concept and development of several centers and facilities at Iowa State University. His vision led development of several research and teaching facilities on campus to better serve students and the livestock industry. These entities included the new Meat Laboratory, the Meat Export Research Center, the Swine Nutrition and Management Research Center, the Iowa Livestock

Extension Initiative, the Linear Accelerator Facility and the National Swine Research and Information Center.

During his nineteen years as Head of Animal Science at Iowa State, Dr. Ewing established the first animal science faculty positions in the US in enterprise management systems analysis adapted to personal computer technology; established the first molecular biology faculty positions and programs in Animal Science at Iowa State University; provided administrative leadership for the first importation of Chinese swine for research in the USA as a joint effort among ISU, the University of Illinois and the USDA. He established priority and secured funding for the development of the Swine Nutrition and Management Research Center at Iowa State, and secured funding for major redevelopment of facilities at the Beef Nutrition Research Center, Swine Breeding Research Center, the Animal Science Teaching Farm and the Poultry Research Center.

It was Ewing's leadership that secured first priority by Iowa State and the State Board of Regents for the funding and construction of intensive livestock and laboratory facilities as an addition to Kildee Hall for teaching and research, and conversion of the old Meats Laboratory to an animal evaluation and teaching facility. He secured legislative funding for the Iowa Livestock Initiative as a pilot program for increasing effectiveness of Extension Programs in Livestock Management in Iowa, and he developed the original proposal that resulted in establishment of the Agricultural Products Research Center at Iowa State University.

Ewing's many honors include the Animal Science Hall of Fame Award, the Gamma Sigma Delta Award of Merit for Distinguished Services to Agriculture, the Iowa Cattleman's Hall of Fame Award, the ISU Faculty Citation, Distinguished Graduate in Animal Science from Oklahoma State University, Honorary Master Pork Producer, and a Fellow of the American Society of Animal Science. He is a member of the American Society of Animal Science, the Dairy Shrine Club, Alpha Zeta and Gamma Sigma Delta.

He was an active member of the First Baptist Church of Ames and served on the Friends of University Museums Council, the Northcrest Retirement Community Board and the Iowa Barn Foundation Board.

Ewing was born July 21, 1930, in Jackson County, Oklahoma. He graduated from Headrick, Oklahoma, high school and earned a bachelor of science degree in animal husbandry in 1952 from Oklahoma State University. He married Dorothy Folks in 1952 in Weatherford, Oklahoma. He was a lieutenant in the U.S. Air Force from 1952 to 1954. Ewing returned to Oklahoma State University where he was instructor in animal science and conducted research on nutrient requirements of beef cattle and swine. He earned his master's degree in swine nutrition in 1956 and his Ph.D. in beef cattle nutrition in 1958. In 1958, the Ewings moved to Ames, where he joined the faculty of Iowa State, teaching beef nutrition and continued his research.

Survivors include his wife; two daughters, Anne Ewing of Stillwater, Oklahoma, and Linda Schmatz of Prairie Village, Kansas; four grandchildren; and a brother, Burnice "Bill" Ewing of Owasso, Oklahoma.



Lloyd Randall Frederick

Lloyd Randall Frederick, 81, of Ames, died Sunday, June 1 at Mary Greeley Medical Center in Ames.

Lloyd Randall Frederick was born Aug. 5, 1921, in Shannon, Ill., the son of Elmer L. and Ina (Hendricks) Frederick. He received his B.S. degree in agronomy from the University of Nebraska in 1943. He then proceeded to Midshipman's School at Columbia University, after which he served in the U.S. Navy during WWII. He married Shirley Miller Oct. 20, 1943 in New Jersey. Frederick entered Rutgers University in 1946 where he received his M.S. and Ph.D. degrees in soil microbiology. In 1953 he received an Honorable Discharge from the Navy.

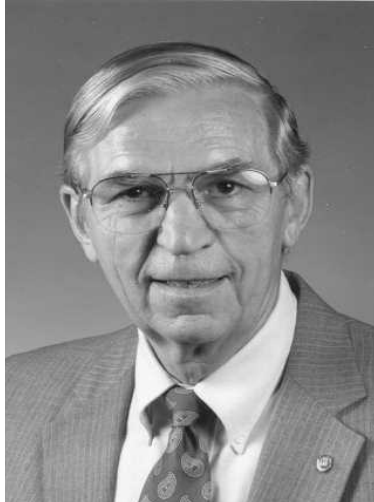
He began his career as an assistant microbiologist at Purdue University in 1946 and joined Iowa State University in 1956 as a professor of soil microbiology. While at Iowa State Frederick conducted research on ecology of rhizobia and nematodes; effective inoculation of legumes with rhizobia; reactions between phenolics and amino acids; factors affecting crop waste decomposition and release of nitrogen in the field; distribution, toxicity and nitrification of anhydrous ammonia in soils; qualitative relationship between temperature and nitrification in soils; sulfur content of air and rain; sulfur oxidation and manganese availability; and fate of organic and pipe-sealing sulfur compounds.

Frederick taught undergraduate and graduate courses in soil fertility, soil microbiology, microbial ecology, and general soils. His major responsibility was teaching soil fertility and fertilizers. In addition to classroom teaching, Frederick was responsible for advising undergraduate and graduate students. He served as a Fulbright Resident Scholar in Germany during 1962. Throughout his career Frederick contributed to professional journals, and in 1985 he published (with others) *Methods of Soil Analysis*.

He joined the Agency for International Development (AID) in Washington, D.C. in a full-time civil service position as a Senior Soil Microbiologist after he left Iowa State in 1978. He worked with international programs, mainly in less-industrialized countries. In this position he designed and developed international research programs on biological nitrogen fixation to promote sustainable agriculture. After Frederick retired from AID in 1989 he served as a consultant for AID, the National Research Council of the National Academy of Sciences, and the United States Department of Agriculture.

Frederick was a member of the American Society of Agronomy, Soil Science Society of America, American Society for Microbiology, Society of American Bacteriologists, Society for General Microbiology, Sigma Xi, and the British Society of Soil Science. He served as chair of soil microbiology and the director of the Soil Science Society. He was a Fellow of the American Society of Agronomy and the Soil Science Society of America.

He is survived by his wife, Shirley of Ames; two daughters, June A. (Rusty) Ost of Cape Coral, Fla., and Mary L. Jensen of Omaha, Neb.; one son, David R. (Leslie) Frederick of Clinton, Utah; one brother; seven grandchildren; and one great-grandchild.



Vernon M. Meyer

Vernon M Meyer, Iowa State University Professor Emeritus, died February 5, 2003, in Ames, Iowa at the age of 78. He retired from the University in May of 1993 following 34 years of dedicated service.

Vernon M. Meyer was born in 1924 in New Prague, MN. He earned his B.S. (1951), M.S. (1955), and Ph.D. (1978) degrees in agricultural engineering from the University of Minnesota. He began his career as an engineering appraiser trainee then was an agricultural engineer for the Minnesota Farm Bureau Service Co. From 1954-58 he was on the staff of the University of Minnesota as an instructor and research associate. In 1958 he was hired by Iowa State University as an assistant professor and extension agricultural engineer.

Vern's primary areas of interest were livestock facility design and environmental controls and energy conservation. Vern was recognized by producers' groups and other professionals for his knowledge and skill. Vern's sense of humor and method of delivery made him a very popular extension speaker. In his day he was a leader in the engineering aspects of animal welfare issues particularly in his concern for how a livestock facility design contributed to the welfare of the animal.

Vern was an active member in the American Society of Agricultural Engineers (ASAE), especially its Standards Committee. He received 13 blue ribbons in the ASAE Extension Exhibits Competition. He held membership in many honorary societies such as Alpha Epsilon, Epsilon Sigma Phi, Gamma Sigma Delta, Gamma Alpha, Tau Beta Pi, and Plumb Bob.

Vern is survived by his wife Beverly; four sons, Gordon Meyer of Ames, Brad Meyer of Des Moines, Steve Meyer of Gilbert and Doug Meyer of Lincoln, Nebraska; two sisters, Elsie Hawthorne of Brooklyn Center, Minnesota, and Ann Tgsvold of Columbia Heights, Minnesota; one brother, Harlan Meyer of LeCenter, Minnesota; and 13 grandchildren.



Memorial for Professor Anton "Tony" Netusil

Professor Anton "Tony" Netusil devoted virtually his entire career to Iowa State University, first as a student and later as a faculty member and administrator. Dr. Netusil earned his bachelor's, master's and Ph.D. degrees at Iowa State University and was a member of the faculty for nearly 30 years.

Upon completing his bachelor's degree at Iowa State University, Professor Netusil spent two years in the United States Army and then embarked on a career in secondary education, first as a teacher of mathematics and then as a counselor and principal. He returned to Iowa State to complete his Ph.D. in Education Administration and Statistics, which was conferred in 1967. Thereafter he joined the department of Professional Studies in Education (later Educational Leadership and Policy Studies) and was promoted through the various professorial ranks. He served as interim departmental co-chair before his retirement in 1997.

Professor Netusil was a tireless servant on behalf of the University, having been a member of the North Central Association Steering Committee, the Athletics' Council, the Graduate Council, and the University Council on International Programs. He served the Faculty Senate as Secretary, Vice President, and in 1994-1995 as President.

In addition to his service on campus, Professor Netusil also served the community of Ames and the State of Iowa in many ways. He was a member of the Ames Community School District Board of Directors for eight years. He also was a member of the Board of Directors for the Iowa Association of School Boards and was a member of the Board of Directors of the Heartland Area Education Agency. Professor Netusil was a frequent consultant to school boards and school districts in Iowa and also was a mediator, fact finder and arbitrator for the Iowa Public Professional Employee Relations Board.

Known as a master teacher, Professor Netusil was elected to membership in Phi Delta Kappa, Phi Kappa Phi, Phi Mu Epsilon and Cardinal Key. He is missed by his family, his students and his colleagues at the University, and his friends in Ames and throughout Iowa.



Bert E. Nordlie (1935-2003)

Bert E. Nordlie, former faculty member and Chair of the Department of Geological and Atmospheric Sciences, passed away on June 5, 2003 of complications from a previous spinal cord injury. Bert was born in Denver, Colorado in 1935 to parents Gordon E. and Madeline B. Nordlie. He graduated from South High School in Denver in 1953, where he was an all-state athlete. He went on to the University of Colorado on an athletic scholarship for football and graduated in 1960 with a B.S. degree in geology. In 1957, while at Colorado, Bert married Margaret “Peggy” Jane Brummett in Steamboat Springs.

Upon graduation from Colorado, Bert attended the University of Chicago, where he earned an M.S. degree in geology in 1962 and a Ph.D. in geochemistry in 1967. After finishing the Ph.D., Bert spent the summer as a Visiting Scientist in the laboratory of renowned experimental petrologist George Kennedy at UCLA, studying the origin of diamond. In the fall of 1967, Bert joined the faculty of the University of Arizona as an Assistant Professor. In 1970, he became the Chief Scientist of the Laboratory of Experimental Petrology at the University, and in 1971 was promoted to Associate Professor. During this time, he gained prominence for his theoretical and experimental research on phase relations in magmatic gases and for his integrative studies of the morphology, structure, and petrology of volcanoes of the Galapagos Islands.

In 1974, Bert joined Iowa State University as Professor and Chair of the Department. He continued in that position until 1988. Bert oversaw the hiring of eight faculty and played a major role in leading the Department to its current form. His research at Iowa State focused on volcanoes in Iceland and Kenya. His teaching included undergraduate and graduate courses in mineralogy and petrology and the large geology service course for civil engineers.

Bert retired from Iowa State in 1997 after Peggy passed away from cancer, and shortly thereafter moved to Conifer, Colorado. This is the land that he loved, and it is very sad that after only a few years back in Colorado he injured his spine in a fall outside his home. The accident left him confined to a wheelchair. At the time of death, he was living in St. Cloud, Minnesota near his son Curt and family. Bert was an extremely talented individual. His premature death is a tragic loss.

In addition to his son Curt, Bert is survived by his other son Lt. Col. Craig W. Nordlie, his mother, Madeline B. Nordlie, one sister, Karen J. Carpenter, and nine grandchildren and one great-grandchild.



Helen Hersch Schuster

Dr. Helen Hersch Schuster died October 22, 2003 in Seattle Washington.

Helen Schuster is a cultural anthropologist who devotes her life in the study of Yakima Indian history, society, arts and crafts, and contemporary development.

Professor Helen Schuster was born December 14, 1919 in Menominee, Michigan, and grew up in Milwaukee, Wisconsin. She graduated from UCLA with a chemistry degree and worked in the first synthetic rubber plant in Texas during WWII. She married George Schuster in 1941, and they had two children. The family moved to Seattle in 1946 to be with the rest of the Schuster family. She was active in many community organizations. She returned to University of Washington in 1961 and received her bachelor (1963, cum laude), master's (1965), and doctoral degrees (1974) in Cultural Anthropology.

Dr. Schuster taught Anthropology at University of Puget Sound and University of Wyoming where she was granted the first Newberry Fellowship in 1975. In 1976, she was hired by the Department of Anthropology, Iowa State University in Ames, Iowa. Dr. Schuster received numerous honors and awards in the next dozen years while teaching at ISU. She was awarded Outstanding Academic Advisor by the College of Sciences and Humanities, ISU, in 1979; the Membership Award in the Century Club of University of Washington, 1980; the National Award for Creative Programming by the National University Continuing Education Association's Annual Award in 1982; and the ISU Student Affairs Human Relations Award in 1986. Dr. Schuster's monograph titled The Yakimas was selected as an Outstanding Academic Book by Choice in 1982. She was also elected a member of the honorary societies of Sigma Xi (1980) and Phi Kappa Phi (1980).

In 1990, Dr. Schuster retired from the Department of Anthropology as professor emeritus. To commemorate her outstanding contributions at ISU, a departmental award was established in her honor, **The Helen Schuster Award for Outstanding Anthropology Student**, which annually awards the most accomplished undergraduate seniors.

After retirement, Dr. Schuster returned to the Seattle area living in Poulsbo where she continued her work in anthropology, attending conferences, reviewing books, and giving lectures. She loved her work with Native Americans and specialized in the study of petroglyphs and pictographs. She enjoyed collecting art, travel, skiing, fishing, sports cars, and being with her family and friends.

Dr. Helen Schuster is survived by daughter Barbara and son-in-law Michael Larson, Grandchildren Jennifer and Aaron Schuster, daughter-in-law Linda Schuster, and Nikki Gamm. Her son Stewart Schuster predeceased her July 31, 2003.



Hazzle L. "H.L." Self

Hazzle L. ("H.L.") Self, former Animal Science Professor, died December 31, 2002 in Texas. Born in Clairette, Erath County, Texas, August 1, 1920, Dr. Self was reared on a general crops and livestock farm. He received his B.S. degree from Texas A & M in 1948, an M.S. degree from Texas Technological College in 1950, and a Ph.D. from the University of Wisconsin in 1954.

Dr. Self served as an assistant professor at Tarleton State University, Stephenville, Texas from 1948 to 1952. From July 1952 to August 1954, he was a University Fellow at the University of Wisconsin and an Assistant Professor from September 1954 to September 1959. He served as State Swine Extension Specialist at Iowa State University from 1959 to 1961. From 1961 he served as Professor in Charge of Outlying Research Centers and as a Professor of Animal Science at Iowa State University.

Four qualities highlight the professional career of H.L. Self. (1) Excellence in production management research relevant to the entire range of swine and beef cattle concerns—breeding, gestation, nutrition, housing, management marketing and product acceptability; (2) sensitivity to both producer and industry problems and his personal credibility as advisor to livestock and industry groups; (3) communications philosophy exemplified by more than 80 articles in scientific journals and university publications, literally hundreds of articles in the farm press, and talks to scientific and producer groups throughout the country; and (4) extraordinary productivity that allowed him to be at once researcher, educator, administrator, graduate student advisor and interpreter of research to significant producer and public groups—and to perform with distinction in all roles.

Dr. Self received national and international attention for his research at the University of Wisconsin in the early 1950's on the effect of feed level on litter size in gilts and that low hemoglobin levels in some newborn pigs from sows on concrete could be enhanced by prepartum intramuscular iron treatment of the dam.

In response to an industry-wide push to improve the quality of pork in the mid 1950's, Dr. Self initiated a major research and development program in swine artificial insemination, resulting in national and international recognition in the scientific community and the swine industry. He also set up and supervised the first boar stud and swine AI field trial in the nation. Representatives of the packing industry brought to Dr. Self a problem with "sex odor" in pork. He helped develop a procedure for detecting the undesirable odor and demonstrated that the odor was not peculiar to boars but was present at a predictable rate in both barrows and gilts.

Dr. Self authored or co-authored over 50 manuscripts, abstracts and technical articles across a broad range of animal management problems. This research was designed to provide answers of an applied nature for beef cattle and dealt with the effects of overhead shelter and feeding in confinement, effect of season on performance and other factors including water consumption. As early as 1968, Dr. Self recognized the need to reduce grain handling losses in farmer-feeder operations and to reduce the energy used for drying grain destined for on-the-farm feeding. A unique and classical series of experiments on grain storage systems was conducted over a period of eight years with corn and sorghum grains. The total grain dry matter going into a storage system, the total dry matter coming out of the system and the conversion ratio of both pre- and post-storage grain dry matter to liveweight gains of cattle was determined for three systems; dried, conventional upright silo and the oxygen-limiting system. Chemical preservation of high moisture grain was also studied. These studies demonstrated that high moisture grain is equal to or better than dried grain thus resulting in a saving of millions of gallons of fuel for drying the grain.

The timely availability and the soundness of his data on the confinement feeding of beef cattle is credited with preventing the unwise investment of millions of dollars in improper facilities throughout the upper Midwest. This research was expanded to include studies on the disposal of liquid manure from confinement cattle feeding facilities.

In 1972, Dr. Self published data which not only established the magnitude but identified the anatomical component where shrink occurs in feeder cattle during shipment and established guidelines for the expected rate of post-shipment recovery.

In still another facet, Dr. Self established that weaning calves at 45 days of age enhanced the occurrence of estrus and conception rate of the dams compared to cows nursing calves to 200 days of age without adverse effects on the calf weight at weaning.

The data from all these studies were made available to the scientific community through the publications referred to above. Dr. Self presented numerous papers at each of the Iowa Cattle Feeders and Cow-Calf Days over the years, at other state cattle meetings, at regional and national meetings, and he co-authored several books. He served as a member of the Editorial Board of the Journal of Animal Science and served as program chairman of the Applied Science Section at the annual meeting of the American Society of Animal Science. He served as chairman of the Iowa Beef Industry Council Research Committee, and as president of the Iowa Forage and Grassland Council.

After 26 years at Iowa State University, Dr. Self retired on October 8, 1985, as Professor Emeritus. He was honored by Texas Tech University on October 16, 1992 as a distinguished agriculture alumnus.

Survivors include his wife, Martha Smith of Hico, Texas, daughters Linda and Ann, and son Michael.