

# Wesley Winnfred Gunkel

*October 17, 1921 — May 12, 2000*

Professor Emeritus Wesley W. Gunkel was a dedicated Agricultural Engineer, serving Cornell for a half century and helping numerous students, colleagues and clients find pathways to inventive solutions. His intense concentration on practical engineering problems and his high spirits during adversity are memorable. The corridors of Riley-Robb Hall still echo with his cheerful whistle.

Wes was born in Hope, North Dakota, where daily farm chores helped establish his work ethic. One of his early exploits was skiing on a towrope behind his older brother's truck. Snow covered roads across the plains were wind-swept and snowbanks on either side gave added thrills. During one nasty spill, a ski hit him in the throat and he could not talk for a week. This did not stop his inquisitive mind. He graduated from high school at the top of his class, and entered North Dakota Agricultural College in Fargo, now North Dakota State University. He was honored with induction into Alpha Zeta and Phi Kappa Phi.

Pearl Harbor and World War II changed plans for many young men. Private Gunkel entered military service in April 1943, and left active duty in October 1945 as First Lieutenant. He qualified for the rigorous Student Training Program in the Army Air Corps. As a navigator in U.S. 8th Air Force, he flew from England on a B-17 Flying Fortress. His squadron was one of the busiest in WWII, but Wes only told his experiences when pressed. One mission with several thousand bombers targeted fuel storage outside of Berlin. While flying towards the target, Wes could not see his wingman because of smoke from nearby exploding shells. Although his plane returned from this mission, more than one-third did not.

Returning from another mission, they landed the damaged bomber at a Nazi occupied field in Belgium to make repairs. While racing around to fix the plane, a large number of Belgium citizens arrived. So they packed the plane with these refugees, and were able to get airborne and return to England without any loss of life.

When flying home across the Atlantic, several squadrons of B-17s met high headwinds and an approaching storm. With limited fuel and reduced ground speed, the airfield in Labrador was nearly out of range. As lead navigator, Wes calculated a new course through less severe winds. Although some continued on the original course, all planes that diverted to the new course did reach the airfield.

Like many of his generation, Wesley Gunkel was first in his family to graduate from college, receiving a Bachelor of Science degree in 1947 from North Dakota State University. He continued studies in Agricultural Engineering at Iowa State University, earning a Master of Science degree in 1948 and a position as Instructor. That summer, O. C French persuaded Wes to join an expanding faculty in the Department of Agricultural Engineering at Cornell as Assistant Professor. Within five years, he was promoted to Associate Professor and there were new challenges to face. In 1957, Professor Gunkel earned the Ph.D. degree in Agricultural Engineering from Michigan State University, and returned to Cornell, becoming Professor in 1960.

Three sabbatic leaves interrupted teaching and research in agricultural machinery design and applications. In 1962-63, the Gunkel family went to the University of Nigeria in Nsukka where Wes was Chairman of the Agricultural Engineering Department. In 1969-70, the Gunkel family went to Hawaii where Wes was a Consultant with Dole Pineapple Co. and designed one of the first mechanical pineapple harvesters. Their last sabbatical in 1976-77 was in the Philippines at the International Rice Research Institute where Wes was a Visiting Scientist designing machines to reduce human drudgery and improved food production.

One of Professor Gunkel's first research projects at the College of Agriculture was a sprayer for pesticides, but his interests and achievements include bean harvesters, onion drying, wind powered water heating, coated moldboard plows, a robotic grape pruner, automotive pollution and fuel efficiency. Two unique projects explored vacuuming beetles from potato plants, and the "snap-back" of nylon towropes. Cooperating with colleagues and graduate students, he produced more than one hundred technical publications and articles, and received a Technical Paper award from the American Society of Agricultural Engineers in 1974. Major contributions included, "Energy Requirements for New York Agriculture, Part I Food Production" (1974); "Part II Indirect Energy Inputs" (1976); and "Bioconversion of Agricultural Waste for Pollution Control and Energy Conservation."

Wes was very helpful to all students, and of his 70 graduate students between 1959 and 1997, eighteen earned Doctoral degrees. He urged several students to enter the James F. Lincoln Arc Welding competition, and a half dozen received substantial prizes for their projects. He was recognized as an outstanding teacher by Agricultural Engineering students and his department in 1976 and in the top 10% by Tau Beta Pi in 1982.

Wes was proud of his colleagues, and an active leader of the departmental awards committee. Many members of his department were recognized with honors because he prepared the rigorous documentation, especially for the American Society of Agricultural Engineering (ASAE). These results contributed to the high national ranking for Cornell's Agricultural and Biological Engineering Department.

Professor Gunkel was a member of the American Society for Engineering Education, American Association for the Advancement of Science, Society of Automotive Engineers, Council on Agricultural Science and Technology, National Safety Council, Human Factors Society, Fluid Power Society, and American Wind Energy Association. He was most active with the American Society of Agricultural Engineers where he served on committees for Research, Graduate Education, the Division of Power & Machinery, Agricultural Chemical Application, and Nursery and Greenhouse Mechanization. Also a representative of ASAE to the Engineers Joint Council, he was elected Fellow of ASAE in 1980.

Professor Gunkel consulted with many American firms and the Ministry of Agriculture in Ghana. He was an expert witness in more than forty cases, developing reports and testifying where litigation involved product liability and accidents with farm machinery. Safety for operators of farm machinery was part of his teaching, his design philosophy, and his life, perhaps originating from those boyhood accidents on the farm in Hope, North Dakota.

In northeast Ithaca, Wes joined the Cayuga Heights Fire Department, and was a Deacon at the First Congregational Church. He was a charter member of the Ithaca-Cayuga Rotary Club, and its president in 1973-74. In 1979, a severe operation and treatment for stomach cancer were successful. Nearly twenty years later another cancer was found and treated. In spite of this, Wes remained active and cheerful, participating fully in faculty meetings and informal coffees until two days before his death. His ready smile, hearty greetings, and warm friendly personality raised our own spirits under all conditions.

Wesley Winnfred Gunkel is survived by his wife of 54 years, Lucille Peterson Gunkel; his daughter, Sharon, of Ithaca; his son, Gerald, of Tampa, Florida; and two sisters, Eleanor Cornelius and Edith Munter, of Fargo, North Dakota. He is remembered by many more as a stalwart individual, a cheerful survivor, and a compassionate mentor dedicated to Agricultural Engineering and Cornell.

*William F. Jewell, Norman R. Scott, Wilmot W. Irish*