

Otto Kunze is recruited to the Agricultural Engineering Faculty

Agricultural Engineering undergraduate and graduate students at Texas A&M often became immersed in the art of communicating the lessons of mechanization, electrification, irrigation, rural life and farm efficiency through the then contemporary media. Otto Kunze, for example, who enrolled at Texas A&M as an undergraduate student in 1947, served as a reporter for the A&M Student newspaper, the *Battalion*, and in that capacity became acquainted and involved with many different departments on campus, with “all the College Deans at the University,” and with many department heads—not to mention students and faculty. He brought his parents through the Mechanical Engineering laboratories on Parent’s Day, and covered all the Parent’s Day activities for the *Battalion*. That he was a *Battalion* reporter and an agricultural engineer actually helped bring attention to the Department. Kunze also served as Scribe for the Texas Student Branch of the American Society of Agricultural Engineers.

Texas A&M’s Student Branch continued active and involved in on-campus activities, and in the real world of agricultural engineering. In 1949, Student Branch officers included:

President.....Charlie Modisett
Vice-President Mark Gordon
Secretary-Treasurer..... E. R. Bernard, Jr.
Scribe Otto Kunze
Parliamentarian..... Henry O’Neal

Student members of the Branch held positions on the Social Committee, Outstanding Student Committee, F.E.I. Committee, the Agricultural Council, and other posts. Annual membership fees had risen from the WWII-era \$1 to \$2, and eight faculty members attended each of the sixteen Branch meetings held each year. Agricultural engineering students and faculty remained closely entwined in Student Branch programs and activities and in professional departmental programs. An education in agriculture went far beyond the class-room and on-campus laboratories, and included immersion in the real world of agrilife behind and beyond the farmers gate.

In 1949-50, ASAE Student Branch members had lectures from a former student then employed by the Dugger Implement Company in Dallas, and another with the Texas Highway Department. Dean of Agriculture Charles N. Shepardson stressed the necessity of the individual

assuming his or her individual responsibilities—in school and in the real world. To be sure, the real world included “fun times” as reflected by performances of impersonators of Al Jolson and Bing Crosby. And there were “chow times” and barbecues, and a visit from “Santa Claus.” Judging by the activities of the ASAE Student Branch members, agricultural engineering students lived a rich, full, and informative life in the extended world of Texas agribusiness.

When the College of Engineering applied for a Chapter of Tau Beta Pi, an honor society for students in all branches of engineering, Otto was elected Scribe for the fraternity. He graduated in 1950 as one of the outstanding students in the College of Agriculture. He left Texas A&M to enroll in graduate studies at Iowa State College.

There, at Iowa State, as at Texas A&M, graduate students and faculty were friends and colleagues. The faculty members had a sack lunch on campus every week, and graduate students assisted by making coffee and providing other amenities. While at Iowa State, Kunze recalled, a farm journal offered him a position as an agricultural writer. Kunze declined because he was just “too involved” with the work at hand. He completed studies for the Master of Science degree in 1951, got engaged to be married, and that summer attended the American Society of Agricultural Engineers annual meeting in Houston, Texas. There, Central Power & Light offered him a job. Otto accepted and was sent with his bride to San Benito in the lower Rio Grande Valley. His first job as an agricultural engineer focused on rural electrification.

Specifically, his assignment was to convert farm tractor, flat-belt driven irrigation pumps along the Rio Grande to electric powered units. A tractor-driven pump usually required a full-time employee to be on hand constantly, while electric powered pumps could operate without supervision and maintenance, at least in theory. There were some bobbles along the way. The electric pumps sometimes worked briefly and then shut down. This is where Otto Kunze and other agricultural engineers became problem solvers. Usually the problem was that the farmer not infrequently tried to use a 30 hp electric motor to operate a pump requiring 50 hp. There were a lot of similar electric problems that usually required instruction and information as opposed to physical repairs. Rural electrification continued to be a work in progress.

One of the big Central Power & Light news stories had to do with Valley farmers trying to irrigate with water pumped from “seepage wells” where ground water was allowed to collect before being pumped out with a centrifugal pump. Wells pumping from certain depths, however, invariably churned froth at the bottom of the hole rather than pumping water to the top. The

“cavitation” problem was solved by installing a vacuum gauge on the suction side of the pump. When the lift pressure became excessive, the pump was automatically slowed maintaining a constant flow of water. The device was widely publicized in the Valley as a CP & L agricultural engineering triumph. To be sure, in the post-World War II era the Rio Grande Valley was becoming Texas’ “citrus valley.” Many farm families from the Washington and Oregon Pacific Coastal areas were acquiring land and moving the Valley to begin raising fruit and citrus. Others were raising cotton.

One of the immediate cotton-raising problems was a pink boll worm epidemic like no other. That became one of the challenges confronting Central Power & Light, Otto Kunze, and other agricultural engineers working in the Valley and elsewhere in Texas. Curiously, electricity became one of the vital ingredients in controlling the pink boll worm. Professor (Pete) P.T. Montfort, in the department of Agricultural Engineering, headed the state-wide farm electrification program and worked closely with the USDA Farm Electrification Program in Washington D.C. His office in Scoates Hall adjoined the Department Head’s office, and Montfort, while well known to Agricultural Engineering students on campus, did not teach classes. His job was full-time state-wide agricultural-utility electric research and liaison. The pink boll worm problem solution had to do with electricity.

Specifically, the best way to control the boll worm was by the use of moth traps, and a moth trap consisted of a “black light lamp mounted at the center of four baffles which were at right angles to each other.” Below the lamp and baffles was a cone or funnel attached to a quart sized mason jar with some form of cyanide on its base. The pink boll worm moth was attracted to the blacklight bulb, flew into the jar, died, and was collected by an entomologist who could determine the level of infestation by the total count from the assorted traps. Montfort, Otto Kunze, and H.O. Roberts, another agricultural engineering graduate (class of 1924) employed by Central Power & Light collaborated on setting, maintaining and servicing the traps. The program worked exceptionally well, and became a statewide and national news item. The National Rural Electrification Division of the USDA’s (May 1954) *Rural Electrification Magazine* featured the black light cyanide jar boll worm eradication campaign as its cover story—featuring Otto Kunze on the bright red cover.

Kunze became one of CP&L’s spokesman and public relations specialist in the Rio Grande Valley. One of his jobs was to teach farm electrification in the region’s public schools

through the medium of the local Future Farmers of America chapters in twenty-three different schools. In some cases, he was called on to provide electrification demonstrations at FFA Father/Son banquets. In other instances, he wrote news items for local newspapers, and for the *Rural Electrification Magazine*. It was a busy, satisfying, and rewarding time. Then, a year later, his working relationships with CP&L seem to have cooled. Kunze did not know why. But then, he received a letter from the Agricultural Engineering Department at Texas A&M, offering him a job—a job offer apparently that:

Everyone in the Company seemed to know about it and I was the last to be informed. The position offered a better salary at a place that I had learned to love and respect. I took the job and moved to College Station in November 1956. The position at Texas A&M University was accepted with the stipulation that I would get a Ph. D. degree. Without this goal, the position had no future for me. I had never looked for another job, but instead, another job found me.

It was meant to be! The Kunze's moved back to College Station in November 1956.



Fig. 7.2, Otto R. Kunze