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James N. Wiltbank, 1924–1995: A brief biography

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In 1924 Milo Charles Wiltbank and his wife, Ellen Mae Hale Wiltbank, were living in the little town of Storrs, Utah. Milo was working there temporarily until he made enough money to return to their home in Eagar, Arizona. While there, they were blessed with a son, James N. Wiltbank (born on October 9, 1924). Shortly after the birth of their son, they returned to Eagar, where Jim grew to manhood.

The area around Eagar was livestock country, and Jim grew up with a love for beef cattle and the people that produced them. He attended Eagar Elementary School and Round Valley High School, graduating in 1942. His mother helped him apply for a Sear's scholarship to the University of Arizona at Tucson. After his freshman year of college, he entered the United States Army. He served in an antiaircraft unit during World War II. His tour of duty in the service took him to England, Belgium, France, and Germany.

Jim returned to Arizona in 1946 and received a call to serve on a mission for the Church of Jesus Christ of Latter-day Saints in the New England Mission. He spent his entire mission in Vermont. During his 2 yr of missionary service, he further developed his skills in teaching, public speaking, and working with people. When he returned, he attended Brigham Young University and completed a bachelor's degree in animal science in 1951. On May 31, 1951, he married Trudy Doreen Mostert. He was accepted into graduate school at the University of Wisconsin at Madison and studied there from 1951 to 1955. His studies were in the area of physiology of reproduction under L. E. Casida and E. R. Hauser. He earned his master's degree in 1952 and his Ph.D. in 1955. Part of his Ph.D. research related to the maintenance of the corpus luteum after hysterectomy in cattle and sheep. This work continues to be referenced in scientific literature on the corpus luteum. While he was in school in Wisconsin, he worked as a scientific aid for the Dairy Husbandry Research Branch of the U.S. Department of Agriculture.

After graduating with his doctorate, he continued his work with the Department of Agriculture. He moved to Beltsville, MD, where he worked for the animal husbandry division as a geneticist. From 1955 to 1958, he conducted research at the Beltsville Station and also at the Iberia Livestock Station, at Jeanerette, LA, and the Beef Cattle Research Station at Front Royal, VA.

In 1958, he moved his growing family to Fort Robinson, NE. Fort Robinson was an old army remount station. His family lived on the station. Graduate students worked with him there in a cooperative agreement with Montana State University and the University of Nebraska. Jim was involved in remodeling the old horse facilities into beef cattle research facilities. He realized that in order to do reliable research, it was necessary to have adequate facilities. Starting from this point in his life, he always seemed to be involved in developing beef cattle research facilities.

The period of time in Fort Robinson was a very productive one in Jim's career. The work that he did there is probably quoted more than any beef cattle research that he ever completed. One of his areas of study was with puberty in heifers. He determined the age and weight at which different breeds of heifers reach pu-

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berty and developed guidelines for managing heifers through their second calving. He studied the nutrient requirements of cows during pregnancy and prior to breeding, relating the nutrition level and body condition score of the cow to her return to estrus and conception. Although he was involved in many other projects, the beef industry has been impacted most by his studies with heifer management and nutritional management of beef cows.

The Fort Robinson Station was closed in 1965 and Jim went to work with E. R. Squibb and Sons in New Jersey as supervisor of animal research. During this period of time, he conducted field trials all over the United States and Mexico. This gave him an opportunity to become acquainted with beef cattle producers and their problems across the continent.

In 1967 Jim moved his family to Fort Collins, CO. He accepted a position in research and teaching in the Animal Science Department at Colorado State University (CSU). Again, he was involved in building facilities. He expanded feedlot space to hold animals for studies in estrus synchronization and other hormone studies at the Rigdon Farm. A facility was developed on the foothills campus to house his New Management Herd. This herd was used to demonstrate the advantage of using newly developed techniques in reproductive management.

Jim was an excellent teacher. He told his students that he was not there to evaluate them. He was there to teach them to think and to learn to solve problems. In his undergraduate class in reproductive physiology, he gave a midterm test to almost 100 students. The test contained mostly short answer and essay questions and was time consuming to grade. After grading the test, he made a 10-min appointment with each student to discuss the test. It was important to him that each student understood the material: he was there to teach, not to evaluate.

Jim had numerous graduate students and he worked them hard. Many of the experiments required working all night. In some studies, blood samples were taken every 2 h. In other studies, groups of heifers were observed for signs of estrus for 72 h straight. He always took his turn and supported his students. W. Craig Burrell reminisces: "In the spring of 1971, I was checking heat on a group of heifers at the CSU Rigdon Farm at two o'clock in the morning. There was a lot of activity, and I was working alone cutting out the heifers that were in standing heat into a separate corral. I heard a car pull up and recognized it immediately. It was the only 1947 DeSoto in town. Out climbed Dr. Wiltbank wearing his crumpled cowboy hat. As usual, one of his pant cuffs was stuffed partly into the top of his boot. 'Good Morning,' he shouted, 'I thought that you might be needing some extra help.' This was typical of the way he supported his graduate students."

During his time in Colorado, Jim developed a method of synchronizing estrus in beef heifers using an ear implant. The Syncro-Mate-B treatment was largely the product of Jim Wiltbank's research in Colorado. By that point in his career, he had gained a lot of recognition. He had published many papers both in scientific publications and in popular magazines. He was asked to talk to groups of beef producers all over the United States and in some other countries.

By the year 1974, Jim and Trudy's family had grown. They had nine children and had started on grandchildren. (Jim had a personal commitment to reproduction.) Jim accepted a research position at Texas A&M University and was stationed at the Beeville experiment station. The Wiltbank family moved to Texas.

The Beeville Station was small with a few experimental pastures and a small feedlot. When Jim arrived, he started building. Cattlemen in South Texas were very cooperative, and with their support and donations additional acreage was purchased. Large pastures were developed and new facilities were built to handle cattle and carry out research. Jim's enthusiasm for the building project was only surpassed by his enthusiasm for his research. He continued his work with Syncro-Mate-B and worked out a system for synchronizing cows that involved the Syncro-Mate-B implant and 48-h calf removal (the Shang method). He conducted field studies on the Tom O'Connor Ranch involving nutrition and reproduction and developed a method to induce estrus in thin postpartum cows. The O'Connor method incorporated flushing and 48-h calf removal.

In Texas, Jim did a lot of his work with cooperating ranches. Texas A&M's Extension Beef Cattle Specialist L. R. Sprott wrote about his experience of working with Jim. "In February l975, Doc took me under his wing as a research assistant at the Texas A&M Agricultural Experiment Station in Beeville, Texas. My responsibilities were to implement and monitor his research field trials in beef cattle reproduction. Little did I know that I would be working with as many as 50 cooperating ranches over a three and a half year period. I became intrigued with the research done by Dr. Jim Wiltbank. What amazed me the most was that he attacked many applied problems at the ranch level regarding reproductive performance, and that his findings were those that could be easily and quickly utilized by ranch owners and managers. More important, recommendations based on his work were sound and effective in improving production. Clearly the list of his contributions is long, but his work in heifer development, body condition in breeding females, bull management, estrus synchronization and herd nutrition as it impacts reproduction is classic."

Jim Wiltbank published extensively. He was an author of almost 100 scientific publications. Twenty-seven of these were published in the *Journal of Animal Science*. His articles in the popular press were even more numerous. He was the mentor of over 51 graduate students. One of his proudest moments was when his former graduate students gathered for a special recognition dinner at the ASAS meetings on July 27, 1987.

Jim was well respected by cattle producers not only in the United States but also in other countries. He had

been invited to speak to cattle producers in 32 states in the United States and in numerous countries around the world.

In 1981, Jim accepted a position at Brigham Young University (BYU). Part of his assignment was to teach classes in beef cattle management and reproductive physiology. He was enthusiastic about his teaching assignment and was happy to be teaching undergraduate students again. He worked with research projects on the BYU dairy and was involved with several of the dairies in the Church of Jesus Christ of Latter-day Saints welfare system. He was able to continue with his beef research by using the BYU beef herd and church-owned ranches as cooperators. Nevertheless, in order to carry out an aggressive research program he needed some more cattle and facilities. His friend Sam Skaggs offered to donate a ranch in Malta, ID to the university. With the support of Sam Skaggs and others, he was able to develop the ranch into a research and teaching facility.

After retiring from Brigham Young University, he continued to interact with the beef industry as a consultant and guest speaker. He and Trudy moved back to Arizona and settled into a home in Mesa. He died in Mesa on December 31, 1995.

We pay tribute to a creative scientist, a caring teacher, and a true friend of the beef cattle industry.