



Robert D. Sweet

April 6, 1915 – January 30, 2014

Bob (Robert D.) Sweet died January 30, 2014, at his residence in Jacksonville, N.Y. Bob and Virginia, his wife of 62 years, had resided on Slaterville Road for most of their 70 years in Ithaca. Bob touched the lives of many folks in the community. He was well known for telling stories and having a sense of humor. His stories often began with his passion—sharing a lifetime of experiences growing vegetables in New York. Bob credited his lifelong learning and thoughtful approach to issues to his parents who operated a small vegetable farm in northern Ohio.

As a member of the Kiwanis Club of Ithaca for over 50 years, Bob participated in fundraising projects to support Kiwanis community projects. Bob's long tenure with the club provided a sense of local history as well as an incentive to keep current with local club goals and projects. Bob remained an active member of the St. Paul's Methodist Church congregation from the mid-thirties until he died. Throughout his life he was an avid reader and spent much time visiting the Trumansburg and Ithaca Public Libraries. His daily reading of the Ithaca Journal kept him informed about community issues. Bob was loved by his daughters, Charlotte and Christina, his grandchildren and his great-grandchildren. He left his family and friends a treasure trove of memories.

Bob completed his B.S. degree in education at Ohio University with the intention of teaching vocational agriculture in Ohio. No jobs were available in 1936 and his advisor suggested that he pursue an M.S. degree at Cornell University, where he was offered an assistantship involving lettuce breeding. He completed his degree in 1938 and began work on his Ph.D. in vegetable crops, plant breeding, and plant physiology, completing the degree in 1941.

He joined the faculty as the Extension Specialist for commercial vegetable crops in 1940 prior to completing the Ph.D. He knew that vegetable growers were desperate for hand-laborers to hoe or hand weed crops such as carrots and onions and that is why he began a career that focused on weeds. Bob began as a Vegetable Crops Instructor in 1940 and subsequently was promoted to Assistant Professor in 1943, Associate Professor in 1946 and Professor in 1950. He served as Chairman of the Department of Vegetable Crops from 1975 to 1982.

When Bob began his studies at Cornell, it was not uncommon for growers to feel compelled to pay for up to 200 hours per acre for hand weeding. The advent of World War II severely decreased the availability of hand-laborers. Bob attended a weed conference in California in the early 40's and learned that carrot growers there were using what was called 'stove oil' to kill weeds successfully in carrots. The 'stove oil' left a particularly bad taste and smell on the carrots so that they could not be sold. To deal with this Bob worked with H.L. Yowell of Standard Oil of New Jersey to conduct field trials with Stoddard Solvent, which was found to be safe and effective. By 1946, Stoddard Solvent was used by nearly all of New York's carrot growers. Thus, Bob was one of the creators of the first successful chemical weed control technique for vegetable crops in the northeastern United States.

Bob had a long and distinguished career as a weed scientist in vegetable crop production beginning with his first appointment as Instructor in the Vegetable Crops Department in 1940. He was a pioneer investigator in the use of chemicals to replace tillage to control weeds in row crop vegetables. Among his many contributions in the field of research was his discovery of synergistic responses among herbicidal chemicals and the development of combinations that increased their effectiveness at greatly reduced rates. The research that he conducted with atrazine, fruit oil, and 2- 4D in sweet corn dramatically reduced atrazine rates and was rapidly and widely adopted by the industry.

Bob and his graduate students studied the growing habits of many weed species, developing their life cycle patterns with special attention to points or events that made them especially vulnerable to control by chemical or biological means. His studies on yellow nutsedge (*Cyperus esculentus* L.) were classical.

Bob was an early proponent of the IPM (Integrated Pest Management) concept, especially biological control methods. Among his accomplishments in the area was the identification of potato cultivars that were especially competitive with many weed species including quackgrass, nutsedge, pigweed, lambsquarters and ragweed. Additionally, his research in IPM led to the concept of using living mulches, e.g. white clover or similar legumes for both sweet corn weed control and nutrition. Grass mulches were also identified for improving soil health.

Bob was a popular and skilled advisor to undergraduates as well as graduate students. His door was always open to them and he was generous with his time and sage in his council. He took very much of a team approach with his graduate students. They would all help one another with planning, planting, and harvesting field experiments. Technicians would be included in these discussions and were an important part of the team. Bob was astute in hiring good helpers, and he treated them so fairly and respectfully that they were extremely loyal to him. Thus they grew

in their job skills to the point where they helped break in new graduate students. Because of his reputation, Bob's graduate students seldom

had a problem finding good employment when they completed their degrees, and they tended to maintain strong, affectionate relationships with him long after they left Cornell. Attesting to his long career in research, 26 Masters theses and 19 Doctoral dissertations were awarded under his direction, and many prominent researchers in the field of weed research were his students. He has been author or co-author of some 80 scientific publications as well as numerous popular articles.

Bob was one of the founding members of the regional Northeastern Weed Science Society (NEWSS) and a true legend in the field of Weed Science. He served as the first Secretary/Treasurer of the NEWSS and was the second President of the society from 1949 to 1950. He received the Award of Merit from the society in 1975 and became a Fellow of the society in 1979. His name became so synonymous with NEWSS service and student education that the NEWSS graduate student award was named for him. Bob was also very active in WSSA (Weed Science Society of America) as he was the first Business Manager of the national society and served as the first editor of the journal *Weeds*. He was named a Fellow of the WSSA in 1974. Bob was the NEWSS Representative to the Board of the Council for Agricultural Science and Technology (CAST) from 1978 and was a continuing Board Member of CAST until 2009. CAST is a nonprofit organization composed of scientific societies and many individual, student, company, nonprofit, and associate society members. CAST provides timely, objective, science-based information without motive or agenda to inform agricultural decision makers at all levels.

To all who knew him, Bob will be remembered as a great scientist, teacher, and friend. He was intelligent, engaging, kind, respectful, and thoughtful of others. He was not afraid to champion causes and did so with great passion and respect. He was, in short, a true gentleman and pioneer in the field of Weed Science and he will be missed by all who knew him.

Robin R. Bellinder; Elmer E. Ewing; Russell R. Hahn