

Robert H. Daines, 1905–1985

Darrell Weber



Dr. Robert H. Daines, a pioneer in many fields in plant pathology, passed away August 2, 1985, at the age of 80. He remained scientifically productive until his death. He had previously survived open heart surgery to obtain a triple bypass and had recovered from having part of his stomach removed. Eventually, however, he died from cancer. Through all of these health problems, Dr. Daines maintained a positive attitude and continued to conduct vigorous research.

He is survived by his wife Anna, four children, and 20 grandchildren. Robert Daines was born in Preston, ID, on April 14, 1905, and was reared in this small farming community. He was active in his church in this community and served a two-year mission for the Church of Jesus Christ of Latter Day Saints. Later when he lived in New Jersey, he served as president of the New Jersey Stake which represents about 10 congregations of the Mormon church. He was active in the New Brunswick community and served as the president of the school board for several years.

His undergraduate college training was obtained at Utah State University at Logan, where he majored in plant science (B.S. 1929). He obtained his M.S. and Ph.D. degrees in plant pathology at Rutgers University (Ph.D. 1934). After receiving his degree, he was asked to join the faculty at Rutgers to work on diseases of fruit crops.

One of his first challenges was to control the serious diseases of apples. At that time, apples were considered a biennial crop in New Jersey. In cooperation with Standard Oil of New Jersey, he evaluated potential fungicides for control of fruit diseases. He played a key role in the development of two important fungicides, Captan and Phaltan. Because of the effective control programs tested by Daines, it was possible to grow apples as an annual crop. He also contributed significantly to the development of Mertect as a control for blue mold of apple. He developed a control for apple scald that was marketed as a product called Stop Scald. He received an award (1965) from the New Jersey Apple Institute for his significant contribution to the apple industry.

In New Jersey, fusiform canker threatened many thousands of peach trees. Dr. Daines worked out a control program that avoided this threat. He found an effective control for bacterial spot of peaches and contributed important information on brown rot and Rhizopus rot of peaches. For his efforts he received the special New Jersey State Horticultural Society citation (1956), a special citation from the Atlantic County Board of Agriculture (1954), and an award of achievement from the New Jersey Peach Industry Commission (1965).

During the early 1940s a new disease was observed on fruit trees, but no causal agent could be isolated. Daines was among the first to recognize fluoride as the damaging agent. He also investigated the effects of sulfur dioxide, chlorine, ozone, and lead on plants. He played a definitive role in the field of air pollution. The New Jersey legislature appointed him to the state air pollution commission, and he became its secretary. This commission drafted the first statewide air pollution legislation that was enacted into law in the United States.

In addition to fruit diseases, he was also assigned by the research director to work on sweet potato diseases. He discovered the causal agent (a virus) of russet crack of sweet potato. He contributed information to the control of Java blackrot, scurf, stem rot, foot rot, soft rot, and hard core. For his efforts he received a citation for outstanding contributions to the sweet potato industry (January 1965).

Perhaps the impact of his services to the New Jersey fruit growers was best illustrated when they asked the director of the Agricultural Experiment Station at Rutgers University if Dr. Daines could continue to work until he was 70. The director responded to their request, and Dr. Daines did not retire until he was 70.

Professionally he was active in The American Phytopathological Society. He served as an associate editor of *Phytopathology*. He was secretary, vice-president, and president of the Northeastern Division of The American Phytopathological Society. He was given the Award of Merit in Plant Pathology of the Northeastern Division in 1952 and was elected a Fellow of The American Phytopathological Society. He was also active in the Society of Sigma Xi, Alpha Zeta, the American Association for the Advancement of Science, and the New Jersey Agricultural Society. During his career, Dr. Daines published over 200 journal articles and wrote several chapters in books. His academic contributions were recognized by two universities. He was awarded honorary degrees from Brigham Young University and Utah State University.

Upon his retirement from Rutgers University, Dr. Daines and his wife Anna moved to Utah where they could be closer to their children and grandchildren. He was given a professor emeritus position in the Department of Botany and Range Science at Brigham Young University. Immediately after he arrived he began an active research program. He investigated powdery mildew of apple, western-X on sweet cherry, and pear decline. For the next 10 years he conducted research on these diseases with Darrell Weber. He continued to publish his findings, and a paper was submitted only weeks before he died.

Robert Daines was truly an exemplary plant pathologist with tremendous devotion and energy. He was a man who solved disease problems, who contributed to the welfare of the growers, and who continued to work in plant pathology to the very end of his life. He was loved and appreciated by thousands because of his sensitive and caring nature.