

William Frederick Millier II

August 31, 1921 — February 13, 2002

A precise professional, an innovative engineer, and a ready resource for solving technical design problems has departed from the Ithaca scene. His teaching of the fundamentals for tractor power, and the specific needs for agricultural machines has helped many students to excel in their careers. His research with forage conveying, fruit harvesting, seed pelleting and pesticide application has helped many consumers benefit from low cost fruits and vegetables. During his lifetime, Bill Millier was also recognized as a faithful fireman, careful clock repairman, conscientious churchman, stubborn golfer, and loyal family leader.

William Frederick Millier was born on a farm in Mottville, New York, a few miles southeast of Skaneateles. His schooling started in a one room rural school in Sennett, and in spite of regular farm chores, he was one of the leading scholars of his class at Skaneateles High School. He entered the College of Agriculture at Cornell University in 1938. The advent of a war emergency program found Cornell undergraduate Millier preparing special bulletins to help farmers. His bulletins included “Tune up the Tractor”, “Cultivator Adjustment” and “Common Binder Problems.” As an additional contribution to the war effort, he joined the Army Air Corps in 1944, and served as an electronics technician until World War II ended.

Bill received his Bachelor of Science degree from Cornell’s College of Agriculture in October 1945. He then took a position as a District Agricultural Engineer in the Department of Agricultural Engineering, which often led him to Auburn, New York, where he married his lifetime partner, Mary Sumislawski, at an August 1947 wedding.

Recognizing the need for a graduate degree and the challenges of ventilating dairy barns, Bill became a Research Assistant working with Professor Clesson Turner and earned his Ph.D. degree in 1950. Their innovative work created a ventilation system that remains a seminal development in ventilation of structures for dairy and other animals. A half-century later in 1998, this work, developing a slot inlet ventilation system, was recognized by the American Society of Agricultural Engineers. A plaque installed at the front entrance of Riley-Robb Hall on the Cornell campus honors Professor William Millier. The inscription reads:

SLOTTED INLET VENTILATION
AN HISTORIC LANDMARK
OF
AGRICULTURAL ENGINEERING

A CRUCIAL STEP IN THE EVOLUTION OF MODERN ANIMAL AGRICULTURE WAS THE DEVELOPMENT OF MECHANICAL VENTILATION METHODS FOR ANIMAL HOUSING. AIR INLETS ARE PIVOTAL TO GOOD VENTILATION.

IN 1948, WILLIAM F. MILLIER, WORKING AT CORNELL UNIVERSITY UNDER THE DIRECTION OF PROFESSOR CLESSON TURNER, TESTED AND PUBLISHED THE CONCEPT OF THE SLOTTED INLET. PROFESSOR TURNER AND OTHERS AT CORNELL UNIVERSITY SUBSEQUENTLY CONTINUED TO DEVELOP SLOTTED INLET SYSTEMS AND SYSTEMATIZE DESIGN METHODS.

SLOTTED INLETS WERE QUICKLY AND WIDELY ADOPTED THROUGHOUT THE UNITED STATES TO IMPROVE FARM ANIMAL ENVIRONMENTS AND HAVE BEEN THE MOST WIDELY USED INLET TYPE FOR MECHANICALLY VENTILATED AGRICULTURAL BUILDINGS.

DEDICATED BY THE ASAE

1998

In 1950, the opportunities in Minnesota beckoned and the Milliers went to Saint Paul where Bill became a registered Professional Engineer and a Research Associate analyzing labor needs and developing practical processing of rations on dairy farms. Bill and Mary soon realized that Ithaca was a bit warmer than Saint Paul, and accepted when Orval C French offered the position of Assistant Professor of Agricultural Engineering, effective November 16, 1952.

During his career at the Department of Agricultural Engineering, he rose through the ranks with appointments as Associate Professor with tenure in July 1956, and Professor in July 1964. He has authored and co-authored some eighty-one publications. Upon his retirement on October 1, 1986, he was awarded the status of Professor Emeritus.

His 1959-60 sabbatical leave was spent as a Design and Product Test Engineer with New Holland Machinery Company, New Holland, Pennsylvania, testing and improving forage-handling equipment. In 1967-68, the Millier family went to Riverside, California, where Bill worked with Galen K. Brown et al at the Harvesting and Farm Processing Research Branch, AERD, ARS, USDA at the University of California, Riverside. He studied the weight loss and internal atmosphere of navel oranges influenced by washing, mechanical injury, wax coating, and storage conditions. In 1975-76, Bill and Mary went to Wageningen in the Netherlands, and his search for improvements in mechanized apple harvesting took him to many parts of Europe.

Professor Millier was a dedicated teacher as well as a creative and productive researcher. His courses in farm machinery were heavily subscribed and his laboratory exercises were noted for creativity and thoroughness. Those who were enrolled in his class well remember his demands for excellence in data processing and report writing.

His research activities were wide ranging and his creative efforts resulted in several patents and unique designs. Much of his work involved unique solutions to materials handling problems. His leadership with auger conveyor research resulted in definitive descriptions of the capacities and power requirements of screw conveyors. A belt-tube forage conveyor was also developed for rapid forage handling. His leadership in mechanized apple harvesting resulted in several machines that contributed to the improvement of handling and harvesting apples for the fresh market. Numerous graduate students benefited from his creative ideas in such diverse areas as seed pelleting, forage blower design, and fertilizer distribution. His creative contributions continued throughout his retirement through his almost daily presence in Riley-Robb where he was always ready with a new idea.

As a personal friend, he was immensely loyal and sometimes painfully honest in his support and criticism. There were no hidden agendas with Bill. You always knew that you were getting a straight answer to whatever question you raised, whether it was professional or personal. His presence at the weekly coffee gatherings in the Riley-Robb seminar room is sorely missed with the passing of a great professional, friend, and colleague.

Bill is survived by his wife, Mary; sons, William and John; daughters, Kay and Barbara; grandsons, Andrew, Robert and John. He is also survived by a sister, Rachel Gardner of Penn Yan; and by six nieces and thirteen nephews.

Roger A. Pellerin, Gerald E. Rehkugler, Wilmot W. Irish