Howard Wait Riley

May 2, 1879 — August 19, 1971

Howard Wait Riley, professor of agricultural engineering, emeritus, was invited by Dean Liberty Hyde Bailey in 1907 to develop applied engineering educational programs to improve the life of rural people. Professor Riley accepted this challenge and initiated the Department of Farm Mechanics in the College of Agriculture at Cornell, in the basement of Stone Hall. The name of the department was changed to that of Rural Engineering in 1913 and to its present name of Agricultural Engineering in 1930.

Professor Riley served as Department head until 1944 and was one of two men for whom Riley-Robb Hall was named upon its completion in 1956. He retired from Cornell in 1947.

Professor Riley was born in East Orange, New Jersey, son of William H. and Louisa Lord Riley, and came to Ithaca with his family in 1894.

In 1901 he received the Mechanical Engineering degree in electrical engi- neering at Cornell. Electrical Engineering was not considered mature enough at that time to award degrees, as alternating current was only then being proved as superior to Edison's direct current.

His initial employment was that of chief draftsman with United Telpherage Company in New York City. At the end of three years he resigned from this position to accept an engineering post with Morse Chain Company, then located in Trumansburg, New York.

Two important events in the life of Professor Riley occurred in 1906. He married Julia Whiton Mack of Ithaca, and he resigned his position with Morse Chain Company to accept an instructorship in the Senior Mechanics Laboratory of Sibley College at Cornell. In this position he became intrigued with internal-combustion engines, and in later years his knowledge of and interest in these engines earned him the title of "Gas Engine" Riley. During his early years on the faculty he owned and operated the only automobile making a daily appearance on the Agricultural campus.

From the time the department was organized until 1946, Professor Riley was known among students for his lucid presentation of subject matter in the courses that he taught, which included introductory mechanics, structures, drainage, surveying, and dairy mechanics. It was his aim to make his courses not only vocational, but to have his students understand sound engineering reasoning and application.

Wishing to add a firsthand knowledge of agriculture to an engineering background, Professor Riley in 1913 purchased a farm on West Hill, which he operated as a successful dairy enterprise until he sold his registered Holstein herd in 1946.

In his early days of teaching, to develop coordination between mind and hand, Professor Riley authored an extensively used bulletin on knots, splices and hitches. This bulletin became the pattern for that section of the Boy Scout Handbook.

Because of his innate interest in the improvement of life on the farm, it was clear to him that the most important improvement to rural living was running water in the home. This, however, required some safe means for disposing of the water following use. So he studied the problem of sewage disposal systems that would be satisfactory and at the same time simple to construct. This work resulted in a bulletin setting forth a new and original design of a concrete septic tank that is still recommended by engineers and health departments.

The work on septic tanks was followed closely by a 3,500-mile tour during the summer of 1920, when Professor Riley, equipped with a truck and trailer-load of demonstration equipment, covered the state giving demonstrations on how to install water and sewage disposal systems in farm homes.

Professor Riley was one of the judges at the last international Winnipeg Motor Contest, held in 1913, where huge internal-combustion engine tractors of the day were tested.

During World War I he conducted extension tractor schools; he also con- ducted one of the first tractor demonstrations in New York State and gave an early demonstration of horse-drawn grain combine harvesters. He de- signed the first test device to obtain a visual record of spray pattern from spray nozzles. He did research on milk cooling and electric fence controllers, and also devised an important element of the basic system for natural draft dairy stable ventilation. From 1943 to 1947 he was a consultant for Harry Ferguson, Inc., on haying machinery.

Professor Riley was one of eighteen charter members of the American Society of Agricultural Engineers, which was organized in 1907. He was a life member, and fellow, and the fifth president of this society. He was a member of Phi Kappa Phi, and for two decades prior to his retirement he served as a faculty adviser to the Christian Science Society at Cornell. He was also a devoted participating member of the First Church of Christ Scientist of Ithaca.

Professor Riley was a pioneer in the field of agricultural engineering; he was always ready to experiment with any new machine or mechanical theory if he thought that it would improve the welfare of the rural family.

Survivors include a son, Manton L. Riley, of Canandaigua, New York, two grandsons, and three great-grandsons.

Anson Wright Gibson, Orval C. French, E. Stanley Shepardson