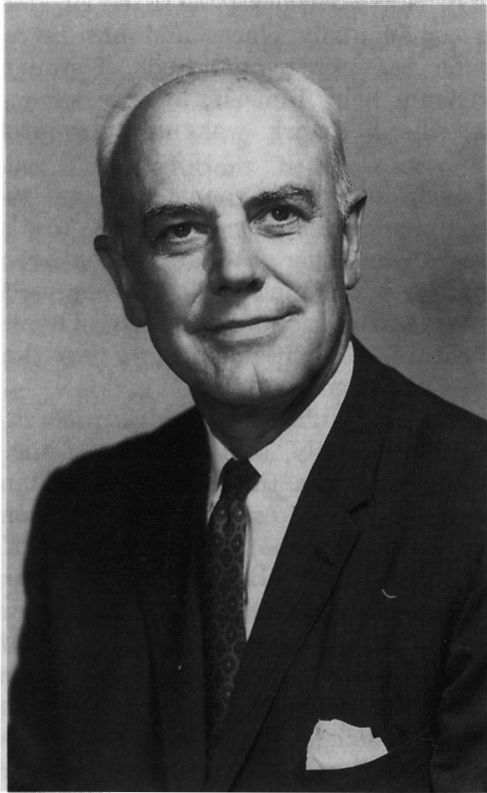


Glenn Wade Salisbury, 1910–1994: A Brief Biography

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On June 2, 1910, on a farm in the town of Sheffield (Ashtabula County), Ohio, was born Glenn Wade Salisbury, destined to become a superb scientist, an outstanding teacher, and an agricultural leader for the ages. After matriculating through the public school system in Columbus, Ohio, he graduated from Ohio State University with a Bachelor of Science Degree in 1931. In three years he completed work for his Ph.D. at Cornell University with a major in Animal Husbandry and minors in Nutrition and Genetics, receiving the degree in June 1934. Another major event shaping his life during graduate study was his marriage to a most supportive lifelong companion, Dorothy Cross, in 1932.

Thereupon he started his long and illustrious career as an Instructor in the Animal Husbandry Department at Cornell. In 10 years he had risen through the ranks to full professor. His early research dealt with nutritional aspects of feeding and management, such as the effects of the quality of hay and protein in the diet on milk production of dairy cattle. Other research involved genetics and milk secretion.

In 1937 he visited parts of Europe to exchange ideas on the future direction of research. In 1939 he pursued

these ideas further with others at eight midwestern agricultural experiment stations. Then, in 1939, he and Professor Stanley Brownell, Head of the Animal Science Extension Division at Cornell, established what was to become the most extensive and productive program in the world on the science and application of artificial insemination of cattle. Many of the future leaders in the field developed through this program of research, teaching, and extension and had tremendous impact on improvement of dairy cattle throughout the world.

A few examples of the types of ideas Dr. Salisbury pioneered, researched, and put into practice were 1) egg yolk-citrate, an improved medium for preserving sperm, 2) use of antibacterial agents to control possible pathogens in semen, 3) design of field trials providing the scientific basis for establishing the optimal numbers of sperm for insemination, and 4) the development of nonreturns to service as a practical low cost measure of fertility. All these were widely adopted in the artificial breeding industry. Thus, sperm from each bull could be preserved and used to inseminate thousands of cows and produce a high rate of pregnancy. Artificial insemination of dairy cows with the semen of genetically superior sires and the control of several venereal diseases was worth billions of dollars to the dairy industry.

The collaborative effort between Cornell University and its staff, New York State legislative personnel, and farm leaders serves today as a monumental model of the success that can be achieved with modest costs when it involves a person with the ingenuity, initiative, scientific ability, and practical vision of Dr. Salisbury. He was a prime mover of this program, along with Professor Brownell, and he also carried on administrative duties as head of Animal Breeding. He taught a large, highly popular course in animal breeding, combining reproductive physiology with genetic selection. He prepared a mimeographed textbook for his students with a clear and concise view of the essential concepts of these subjects.

His research continued at the University of Illinois, where he became head of the Department of Dairy Science in 1947. With collaborators, he conducted many basic studies on regulators of sperm metabolism, on maintenance of the integrity of DNA in sperm, and the development of new semen extenders to preserve the viability and genetic integrity of DNA in sperm. In addition, he attracted and hired a strong group of faculty while he headed the department from 1947 to 1969. Thereafter, as Director of the

Illinois Agricultural Experiment Station until his retirement in **1978**, he critically reviewed the efforts of state agricultural and federal experiment stations and other agencies in contributing to the efficiency and productivity of animal agriculture. Many of these ideas can be found expressed in a symposium on animal agriculture held in his honor at the University of Illinois in **1978**. Numerous other areas of research are found among his **265** publications, representing many coauthors among his expert team of collaborators. Included in this list of publications is the classic reference book *Physiology of Reproduction and Artificial Insemination of Cattle*.

He gave of his time and talent freely and as a result of numerous requests his influence was widespread beyond the realm of scientific publications. Examples of this influence include his serving as an advisor to the Near East Foundation and as a consultant to the English Milk Marketing Board, to the USAID, and to the Office of Technology Assessment of Congress, to mention a few. He served on the Agricultural Panel of President Kennedy's Science Advisory Commission. Dr. Salisbury was a dynamic speaker and was invited to give many guest papers at important national and international meetings. He also was an active member of many professional societies as well as honorary ones.

In appreciation and recognition of his service to agriculture he received numerous honors and awards. Among these was the prestigious Borden Award by the American Dairy Science Association early in his career (**1945**) and the Distinguished Service Award by the same organization in **1978**. In mid-career (**1964**) he received the highest honor awarded by the American Society of Animal Science, the Morrison Award. In **1978** he was elected to the National Academy of Science, and his notable career was capped by his receiving the highest prize in agriculture, the Wolf Prize, in **1981**.

In this limited edition of the story of Dr. Glenn W. Salisbury it is important to reserve a little space and pause to reflect on Glenn as a great thinker, a great challenger, a great critic, and a great supporter with a soft heart. He demanded rigorous use of the scientific method; he had no patience with or sympathy for the lazy, but he gave full support, encouragement, and

positive suggestions to any young researcher when a carefully planned experiment somehow failed. To assist young researchers with their ability to analyze and synthesize ideas he held a series of weekly open discussion sessions. Out of these came a mimeograph called "An Approach to the Scientific Solution of Problems in Applied Biology," written in **1948**. This has been copied many places and has served as a guideline for research by hundreds of students and faculty. Glenn held himself to the same set of standards. His hallmark was absolute intellectual integrity.

In his early days as a young professor the older graduate students remember him as a "brother." As time passed, the younger graduate students remember him as their "academic father," and when we and our families were invited annually to share Thanksgiving with Dorothy and Glenn Salisbury, we gave thanks for "our" wonderful family.

Among his many interests, besides research, teaching, YMCA and family, was his love of the outdoors, of the good earth, the trees, the woodlands and all that dwelled therein. As he pondered the nature of things, constantly searching for scientific truths and the meaning of life, he had a passion for learning from the lessons of history. Perhaps this was sparked in young Glenn when he heard "Grampa Joe" recount some of the tragedies and bravery he had experienced in the Civil War. Further insight into Glenn Salisbury's thoughts, beliefs, and hopes can be found in an extensive taped interview with Professor Robert Bratton, recorded May **26, 1967**, by the Curator of the Collection of Regional History of Cornell University and on file in Ithaca, New York.

Glenn Wade Salisbury's keen intellect, combined with unlimited enthusiasm, interest, and encouragement, were qualities that inspired others. He left an example for all of us to follow when he passed to his reward February **3, 1994**. His son, Laird Wade Salisbury of Janesville, Wisconsin, summed it up when he said "Dad was a good and decent man who always did his best." Besides his wife, Dorothy Cross Salisbury of Urbana, Illinois and his son, Laird, he is survived by his daughter, Susan Lynne Salisbury-Richards of Woodridge, Illinois, and other relatives and members of his childrens' families.