

W. Frank Shipe

March 8, 1920 — May 20, 2008

Born in Middletown, Virginia, March 8, 1920, W. Frank Shipe received his B.S. degree in Dairy Science in 1941 from Virginia Polytechnic Institute. Immediately after graduation, he was called into the Army. He served over four years, mostly in the Pacific theater in the artillery and achieved the rank of Major. Upon discharge, he returned to VPI as an Instructor. In April 1946, he entered graduate school at Cornell and earned his Ph.D. degree in September 1949. He majored in Dairy Chemistry and minored in Organic Chemistry and Bacteriology.

Since joining the Cornell faculty, October 1, 1949, Professor Shipe devoted most of his time to teaching and associated educational activities, but also maintained a very active research program, publishing over 100 scientific papers and articles. His research efforts were devoted primarily to determining the factors influencing fluid milk spoilage and in developing methods for monitoring quality. His work on the freezing point of milk led to the universal adoption of the thermister type of cryoscope and the use of standard salt solutions for their calibration. He introduced the Infrared Milk Analyzer (IRMA) for milk fat and protein analyses in New York State. His studies as associate referee for the Association of Analytical Chemists (AOAC) led to the adoption of turbidometric instruments (e.g. Milko-Testers) for determining the fat content of milk. He also developed improved methods for measuring free fatty acids and the Vitamin A contents of milk.

Much of his work on milk quality pertained to factors affecting milk flavor. His findings relating to lipolytic and oxidative changes during storage of milk contributed to the control of these defects. Professor Shipe and his graduate students demonstrated beneficial and harmful effects of various milk enzymes. These studies led to the development of procedures for immobilizing enzymes. He and his colleagues developed pigmented plastic milk containers that protect the flavor and the vitamin A and riboflavin contents of milk. His research on dried beans helped to elucidate the causes for decreases in protein digestibility during storage.

During his teaching career, Professor Shipe taught over 4,000 students and advised more than 300 undergraduate and 40 graduate students. He always took a personal interest in his students and he and his wife, Margery, generously extended the hospitality of their home as an expression of friendliness and genuine interest in each individual.

As a teacher, Professor Shipe's dedication and performance was outstanding. One of his greatest assets was his untiring willingness to work with both undergraduate and graduate students on a one-on-one basis as well as in

the classroom and laboratory, and his motivation and stimulation of students came not from a heavy hand, but by subtle direction toward self-discipline and inquiry. He also was very innovative in the classroom, being one of the first department members to use the overhead projector and videotapes. In recognition of his excellence in teaching, he received the coveted American Dairy Science Association (ADSA) Kraft Teaching Award in 1982.

The first course Professor Shipe taught, beginning in 1952, was entitled Commercial Grades of Dairy Products, which dealt with the grading of the sensory qualities of dairy products. With Professor Shipe's coaching, the Cornell Dairy Products Judging team entered seventeen national contests and eight northeast regional contests. Throughout those years, a number of the team members won awards for judging milk, ice cream, butter, cheese and yogurt. These contests gave the team members and coach an incentive to improve their sensory acuity and sensory vocabulary. When the dairy emphasis was replaced with the food science curriculum in 1964, he modified this course to include all foods and placed more emphasis on the principles of sensory evaluation and statistical analysis of data. He taught this course, Sensory Evaluation of Foods, from 1965-88. Similarly, his Introductory Dairy Science Course, taught from 1957-64, was revised to include other foods and renamed Food Properties and Analysis. From 1972-86, he supervised the course in Food Chemistry for seniors and graduate students. In 1972, he developed a new course entitled Food Facts and Fads, currently called Food Choices and Issues. It was developed for non-majors to provide specific information about foods and the food industry and to dispel misconceptions about them. Since its inception, the course has had the largest enrollment of any food science offering, currently over 200 students from various disciplines.

In addition to chairing the department's Scholarship and Curriculum committees for over 20 years, Professor Shipe served the College of Agriculture and Life Sciences on the Program Area, Physical Science, Honors and Curriculum Committees. He was also a member of the University Faculty Council for four years.

During periods of sabbatical leave, he conducted research on the evaluation of stabilizers for ice cream at North Carolina State College in 1956-57, served as Flavor Project Director for the New York State Department of Agriculture and Markets in 1963-64 and conducted studies on milk fat globule membrane at the National Institute for Dairying, Reading, England in 1970-71. In 1985, he worked as a volunteer for Bread for the World by drafting legislative proposals pertaining to aid for developing countries. Other professional activities include: AOAC Associate Referee for Cryoscopy; AOAC Associate Referee for Automated Fat Tests; Secretary-Treasurer, Vice President and President of the Eastern Division of ADSA; Student Affiliate Committee of ADSA; Secretary-Treasurer, Vice Chairman and Chairman of Central NY Institute of Food Technologists, and Flavor Nomenclature

and Reference Standard Committee of ADSA. He has been a member of the American Chemical Society, American Dairy Science Association, Institute of Food Technologists, International Association of Milk, Food and Environmental Sanitarians, Alpha Zeta, Phi Kappa Phi and Sigma Xi.

Professor Shipe and his wife were active members of Saint Paul's United Methodist Church for over 40 years, where he served on several committees and as Lay Leader. He was also a very public spirited individual, frequently sending letters or telegrams to his state and federal representatives, the President and occasionally to the editor of the *Ithaca Journal*.

Professor Shipe retired from full time department activities July 1, 1986. He continued contributing to the department for several years. He spent time every week in Stocking Hall where he continued some of his research on milk quality and gave lectures in the Food Chemistry and Food Choices and Issues courses. His retirement allowed him more time to spend with his wife, Margery. They were married 59 years when Marge died in 2007. He attributed much of his success to her advice and support. Their two daughters and their husbands, 11 grandchildren and six great-grandchildren survive Professor and Mrs. Shipe.

John W. Sherbon, Chairperson; David K. Bandler, James C. White