

Thomas Andrew Nickerson, Food Science and Technology: Davis

1921-1978

Professor

Dairy Technologist in the Agricultural Experiment Station

Tom Nickerson died unexpectedly following a heart attack at his home on May 29, 1978. His untimely death at fifty-six years of age ended a career distinguished by unselfish dedication to educational activities and service to others.

Thomas Andrew Nickerson was born and raised in Davis, California. He was graduated from the University of California, Davis, with a bachelor's degree in 1943. Following two years of service in the U.S. Navy, he entered the University of Minnesota, St. Paul, where he earned his master's degree in 1948 and his doctorate in 1950. He began his career at U.C.D. that same year in the Department of Dairy Industry, which in 1959 was merged with the Department of Food Technology to form the Department of Food Science and Technology. He was promoted to Professor in 1966 and was Associate Dean of the College of Agricultural and Environmental Sciences from 1964 to 1969 and acting Associate Dean in 1976. Active in the University's Academic Senate, he was chairman of the faculty of the college at the time of his death.

His research activities were in dairy chemistry and dairy technology, and his work in these areas resulted in more than ninety publications. Over the years he was concerned with the chemical composition of milk and milk constituents, packaging of butter, and various ways of preserving milk. Problems with protein instability during freezing of milk led to fundamental studies on milk proteins and their interactions with milk constituents and additives. Much of his early work related to various technical problems in ice cream manufacture: stability, texture, sweetness, and composition control. Investigation of one particular defect in ice cream, "sandiness," which is the gritty texture caused by crystallization of milk sugar, led to an intensive study of this sugar, lactose. His research on lactose resulted in about fifty publications ranging from the fundamentals of lactose chemistry to practical problems of its recovery and utilization. His publications on the thermodynamics and kinetics of lactose mutarotation and crystallization form the heart of the current literature on these subjects, and have practical applications in ice cream technology and in recovery of lactose from cheese wheys. His studies on the acid and enzymatic hydrolysis of lactose increase the potential for use of this sugar as a food sweetener. He studied adsorption properties of crystalline lactose with an eye to using it as a carrier for other flavoring agents. His most recent work emphasized recovery of lactose from wheys by complexing with alkaline earth metals.

Nickerson was well known professionally. He was an internationally recognized expert on the subject of lactose and contributed chapters on lactose to three current books on dairy chemistry. He was in demand to present papers at technical meetings, such as those of the American Dairy Science Association, Institute of Food Technologists, and American Chemical Society. In 1969 and 1970 he was a visiting scholar at the New Zealand Dairy Research Institute, Palmerston North, New Zealand. During a sabbatical leave in 1976 to 1977, he worked with the Faculty of Agriculture, Novi Sad, Yugoslavia, through the Fulbright-Hays Program, and also at the Division of Food Research, CSIRO, Highett, Australia. He was to have presented an invited paper at the International Dairy Congress in Paris at the end of June, 1978. Closer to home, he contributed effectively to the California Dairy Industries Association and to the annual Western Food Industry Conference. He distinguished himself and the

University in the eyes of the food industry and the people of California by his participation in various public meetings and conferences.

Professor Nickerson established an enviable reputation as an effective, popular teacher. His principal teaching responsibilities were in courses in dairy chemistry and in food and dairy technology. As in other areas of his life, his teaching success was attributable largely to his interest in helping people. He had excellent rapport with students and colleagues alike and used this characteristic well in extensive collaborative teaching. He was innovative in his teaching methods, such as in use of the Personalized System of Instruction in one of his courses. Tom gave teaching high priority and worked at improving his instructional skills throughout his career.

What made Tom special in the University and the community was his complete dedication to service to others with little concern for his own recognition. He gave of himself not only to his family but to the larger family of his students and associates. He shared ideas unselfishly with both students and faculty. He guided a large number of individual undergraduate projects, and was sought after as a graduate research advisor. He was especially generous of his time in discussions with students and this made him an effective advisor. Over the years he was academic advisor for several hundred students in the Food Science, Home Economics, and Consumer Food Science majors. His door was always open for counsel, and students and colleagues alike took advantage of the sympathetic ear of this patient, unassuming man.

Tom's quiet strength commanded respect, and he was especially valuable on many committees for the balance provided by his mature judgment and even temperament. He was not afraid to express an opinion different from the majority view, but he did it in a way that contributed to the solution of problems. He was able to accept himself, and that gave him security to accept others and their opinions. Tom's concern for young people carried through from his family to service in the Davis community. He was active in Cub Scouts, Boy Scouts, Little League, 4-H, and Future Farmers of America. He received an honorary membership in 4-H in recognition of fifteen years of advisory committee service. He was a member of Kappa Sigma and served the fraternity for many years as a faculty advisor.

Tom Nickerson is survived by his wife, Katinka, his mother, Alice Nickerson, two sons, Mark and Eric, a daughter, Natalie, and two grandchildren.

Also, a host of students, friends, and co-workers grieve his passing. He truly cared about them all and in his gentle way, he enriched their lives. The loss of Tom Nickerson to them and to the University can not be measured.

W. L. Dunkley R. L. Merson E. E. Moore L. M. Smith