

George F. Stewart, Food Science & Technology: Davis

1908-1982

Professor Emeritus

George F. Stewart was truly a man for all seasons. He was a scholar, teacher, scientist, author, administrator, family man, outdoorsman. He was equally at home in the classroom, the laboratory, the industry board room, the halls of government and on the trout stream. He touched the lives of many in this country and abroad. He contributed greatly to a better understanding and management of the world's food supply.

Dr. Stewart was born February 22, 1908 in Mesa, Arizona and died March 18, 1982 in Davis, California. In his youth he developed a great fondness for the wide expanses of the arid southwestern United States and a concern for nature and the environment which never left him.

Dr. Stewart received a B.S. in Chemistry from the University of Chicago in 1930 and a Ph.D. in Dairy Chemistry from Cornell University in 1933. For five years thereafter he worked with Ocoma Foods as a chemist in Omaha, Nebraska gaining early experience with the dynamics of the food industry. In 1939 he joined the faculty at Iowa State University and initiated the Poultry Products Research Laboratory. In the following twelve years a large number of students, undergraduate and graduate, attended his classes, worked in his laboratory and benefited from his thoughtful guidance. These students are now in highly responsible positions in academia, government, and industry in both the US and abroad. During this period the Food Technology curriculum was guided by an Administrative Committee which Dr. Stewart initiated and chaired.

During the years of World War II he served as Expert Consultant in Food Preservation, to the US Department of Defense. In that capacity he led and coordinated a successful wide-ranging research effort to resolve the problems experienced by the armed forces and our allies in utilizing dehydrated eggs. For his last four years at Iowa State he was Associate Director of the Experiment Station. Dr. Stewart was a welcome counselor to industry trade associations, attending the first meeting of an organization which became the Poultry and Egg Institute of America and initiating what is now its Research Council. He was the first recipient of the Christy Award for research of the Poultry and Egg National Board.

In 1951 he came to the University of California, Davis to chair the Department of Avian Sciences (then Poultry Husbandry). For seven years he steered the department through its translocation from Berkeley to the Davis campus; through a period of expanding faculty; and through the building of new and expanded facilities. He developed a rapport between the department and the California poultry industry which has been lasting and mutually beneficial.

With his family he spent a sabbatical year in Australia as a Fulbright Scholar. He is still recognized in that country as the individual who played the key role in launching their poultry industry on the road to modernization, expansion, and success. He was called back in 1967 as Underwood Lecturer and keynote speaker to celebrate their fiftieth anniversary of poultry research.

In 1959, he joined the faculty of the Department of Food Science and Technology as its chair. In 1964, at the University's request, he was named the Director of the Food Protection and Toxicology Center and became chair of the newly formed Department of Environmental Toxicology.

In 1970, he returned to the Department of Food Science and Technology and resumed his roles as teacher, writer, researcher, and public servant. Between 1969 and 1974 he served as Coordinator of the Packaging program, a new area of research for the department.

Many professional societies were benefited by Dr. Stewart's participation. He was a long time member of the Poultry Science Association, serving as one of its Directors and was elected to its Body of Fellows. He also was a member of the American Chemical Society, the American Institute of Nutrition, the American Dairy Science Association, the American Association for the Advancement of Science, the American Public Health Association, and the International Union of Nutrition Sciences. Honor societies included Sigma Xi, Phi Kappa Phi and Phi Tau Sigma. Closest to his heart, however, was the Institute of Food Technologists, of which he was a Charter Member and to which he devoted a great deal of time and effort. He served as Executive Editor of *Food Technology* and the *Journal of Food Science* from 1960 to 1965, and on the Editorial Board for many more years. He received the IFT International Award in 1966; the Nicholas Appert Award in 1975; and was elected a Fellow of the Institute in 1971. He served on its Council and Executive Committee for several years and became its president in 1968. He assisted in establishing the Iowa Section (formerly Ames) and served as its first chairman. In a closely allied activity, along with Drs. E. M. Mrak and M. L. Anson, he co-founded the International Committee on Food Science and Technology, which on April 1, 1970, became the International Union of Food Science and Technology. He served as Secretary-General of the committee and the first president of the union. Another organization he helped found was the Society of Nutrition Education in which he served as a member of the Executive Committee and as president.

Dr. Stewart was a prolific writer and editor. In addition to authoring over seventy-five research papers, he was co-founder of *Advances in Food Research*, currently in production of its twenty-eighth annual volume. He also co-founded the *Journal of Nutrition Education* and *Monographs in Food Science and Technology* of which over thirty have been published.

His greatest sense of accomplishment was achieved when *Food Science and Technology Abstracts* was established in 1969, the culmination of an international effort under his leadership which was more than five years in development. No scientific library throughout the world related to food or agriculture is thought to be complete without subscribing to this abstracting journal.

Dr. Stewart's research related primarily to the processing and preservation of poultry meat and eggs. He was the first to demonstrate that the browning reaction in dried eggs is due to a reaction between glucose and protein. He was the first, with colleagues, to work out practical pasteurization procedures for egg products. He was the first to establish time/temperature tolerances for the maintenance of quality during the storage of frozen poultry. He was first to demonstrate, with colleagues, the development of resistance in spoilage organisms in chilled poultry due to antibiotics. He was also the first to establish the importance of time after oviposition (laying) and composition of sealing compounds for the effective shell treatment of eggs to maintain interior quality.

He served as consultant to many food companies on a wide array of food problems. He served on literally dozens of advisory committees to numerous departments of government and the National Academy of Sciences on matters related to food science and nutrition.

In 1975, Dr. Stewart retired but remained very active with his writing and editing in food and agriculture, and with his concern for the environment. In 1976, with Dr. Ben Buchanan, he conducted an AID-

supported study to identify local actions which might lead to the resolution of malnutrition in Latin America. With Maynard Amerine, he published a textbook, *Introduction to Food Technology* in 1970, and just prior to his death they completed a revision of this text. He was active in the preservation of the wilderness and associated wild life through a variety of organizations. Honors continued as well. The Institute of Food Science and Technology of the United Kingdom invited him to address them in 1980 as Honorary Fellow. He was called back from retirement to teach courses in quality assurance and packaging in which he was involved at the time of his death.

Dr. Stewart is survived by his wife Grace, a son Kent in Blacksburg, Virginia, two daughters, Carol Kinney of Tucson, Arizona and Janet Stewart of Seattle, Washington, and seven grandchildren.

A. W. Brant Frank Ogasawara Walter Sadler

