

## Reese Haskell Vaughn, Food Science and Technology: Davis

1908-1988

Professor Emeritus

Reese H. Vaughn, Emeritus Professor of Food Science and Technology and Food Technologist in the Experiment Station at the University of California, Davis, died November 5, 1988 in Davis five weeks past his 80th birthday. Born on October 1, 1908 he was a native of Farragut, Iowa. Vaughn earned a bachelor degree in biology at Simpson College in 1930, followed by master and doctoral degree in sanitation and food bacteriology from Iowa State College in 1935. His 40-year career at the University of California began in 1936 with an appointment as Instructor in Food Technology and Junior Bacteriologist in the Experiment Station at the University of California, Berkeley, where he spent 16 years before moving to the Davis campus where the Department of Food Technology relocated in 1952. He attained the rank of Professor in 1954 and served as department chair from 1963-66. In 1976, at the mandatory retirement age he retired as Professor, Emeritus.

Vaughn was widely recognized as an authority on food microbiology, particularly in the areas of lactic and acetic fermentations, wine microbiology, public health, food spoilage and waste disposal problems and food plant sanitation. Much of his research centered on olive, pickle and wine fermentations, water and waste disposal, and spoilage problems related to these industries. He also contributed to the microbiology of the coffee, citrus, dried fruits and frozen food industries. His research included various bacterial groups--*Aerobacter/Escherichia* ("coliforms"), the various lactic acid producers, acetic acid bacteria, and anaerobic spoilage species of *Clostridium* and *Desulfovibrio*, as well as yeasts and molds. He devised special differential media and diagnostic tests for many of these groups. Vaughn's studies on specific organisms included determination of conditions permitting spoilage and methods of prevention. His interest in wine fermentations included the malo-lactic fermentation and tartrate decomposition in wines and treatment of winery liquid and solid wastes. His interests in the diseases and spoilage problems of the olive and pickle industries involved identification of the causative microorganisms and preventive measures. Various related problems of tissue softening led his research into studies of pectin-splitting microorganisms and the types of pectinolytic enzymes produced. Biochemically this involved the degradation of polygalacturonic acids and the development of differential media to detect these activities by bacterial, yeast and fungal species isolated from abnormal fermentations. Vaughn also studied the effect of sorbic acid on various food-related microorganisms. He demonstrated that sorbates, by inhibiting competitive yeasts and molds, allowed better growth of desirable lactic acid bacteria. He studied the mechanism by which sorbate acted as a microbial inhibitor and developed sorbate containing enrichment medium which was selective for various species of *Clostridium*. He was instrumental in the development of salt-free storage in the olive/pickling industries to replace traditional salt brine storage which created major disposal problems. The results of Vaughn's research activities resulted in approximately 250 publications, chapters in various books and industry reports.

During his career Vaughn received a Rockefeller Foundation Fellowship to conduct research and teaching in Brazil in 1957 and a Fulbright Lectureship in Greece in 1967. In 1957 he was honored by his election as a Fellow of the Royal Society of Health in London; selected for the Campbell Award from the American Society of Horticulture in 1959; and as a Diplomat of the American Board of Microbiology in 1964. The Institute of Food Technologists elected him as a Fellow in 1972. He was President of the Northern California and Hawaiian branch of the Society of American Bacteriologists in 1948 and 1949 as well as a member of the National Council of that society in the same period, and was Chairman of the Northern California Section of IFT in 1962. He was active in a number of other professional societies and

organizations and governmental agencies, such as the American Public Health Association (subcommittee on Microbial Examination of Foods), Institute of Food Sanitation Management, American Society for Enology and Viticulture, and the National Science Foundation (Food Protection Committee). He served as a consultant to many local, state and federal agencies and served on the scientific/technical committees of several California industrial groups.

Vaughn was responsible for the teaching of food microbiology for many years. Attesting to his teaching and concern for his students are numerous former graduate students, now in academic, governmental and industrial positions worldwide, and the many other students who benefitted from his wisdom and advice as graduate advisor.

Vaughn's concern for students is reflective of the close family life the Vaughns enjoyed. His hobbies were woodworking and restoration of antique furniture, coin collecting, birdwatching and gardening. As a huntsman he supplied doves, pheasants and ducks for the family table in the fall each year.

Reese Vaughn is survived by Marjorie, his wife of 53 years, three sons, two daughters and nine grandchildren.

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