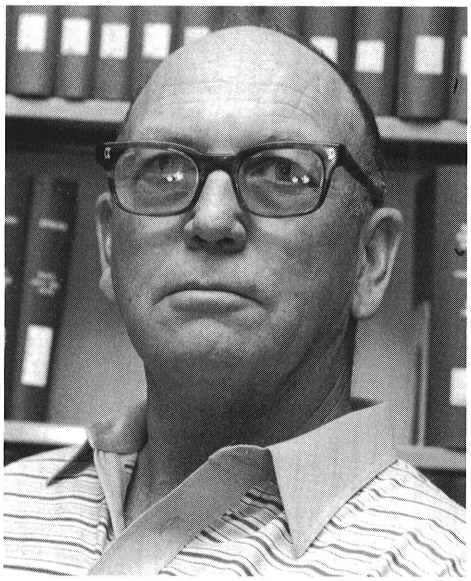
Award of Distinction

Through its Award of Distinction, The American Phytopathological Society formally recognizes exceptional productivity in research, inspiring leadership, and effective application of plant pathology for the benefit of humanity. This rarely bestowed honor has been presented six times previously in the history of the Society—in 1967 to E. C. Stakman, in 1969 to J. C. Walker, in 1972 to J. G. Horsfall, in 1980 to Harold H. Flor, and in 1983 to Arthur Kelman and George A. Zentmyer.

Raymond G. Grogan



Raymond G. Grogan, professor of plant pathology at the University of California, Davis, was born in Emma, GA, July 22, 1920, and educated at the North Georgia College of Dahlonega and the University of Georgia at Athens, where he earned the B.S. and M.Sc. degrees. After a three-year stint in the Navy, he went to the University of Wisconsin to obtain the Ph.D. degree under J. C. Walker in 1948.

He began his career as an instructor at the University of California, Davis, in 1948, was promoted to professor by 1960, and served as department chairman from 1969 to 1974. Professor Grogan taught courses on advanced plant pathology and diseases of vegetable and field crops and guided 23 Ph.D. degree and several M.S. students.

Dr. Grogan served the profession as president of the APS Pacific Division, chaired the Committee on Editorial Policy for *Phytopathology*, and served as APS representative to AAAS and other committees. He served on editorial boards of *Phytopathology, Plant Disease, Virology,* and the *Annual Review of Phytopathology*. Dr. Grogan was awarded a National Science Foundation Postdoctoral Fellowship in 1958 and the Campbell Award for vegetable research in 1962, was fellow of APS in 1969, and was included in *Who's Who in America* in 1974.

His innovative, diverse, and creative research comprised foliar and soilborne diseases of vegetable crops caused by viruses, bacteria, fungi, and abiotic factors. Initially, and under J. C. Walker's tutelage, Grogan demonstrated that a necrotic disease of bean was caused by a hypersensitivity in resistant cultivars to bean common mosaic virus; later, he showed this seedborne virus to be transmitted by bean pollen.

At Davis, Grogan studied the disease complex in lettuce known as June yellows, which he and associates demonstrated to be caused primarily by the seedborne lettuce mosaic virus and which could be controlled by using virus-free seed—a control program effective for more than 30 years and subsequently adopted by lettuce producers in New York and Florida.

Continuing with lettuce, he established that the soilborne chytrid, *Olpidium brassicae,* transmitted the big-vein agent—the first report of a fungus as a vector of a disease agent. Later, in Australia, he and a colleague described lettuce necrotic yellows, a virus disease that served as a model for basic research on bullet-shaped viruses. With tomato, he found that the seed coat was highly contaminated with tomato mosaic virus particles that could be transmitted mechanically from seed to seedling.

With bacteria, Dr. Grogan found that *Pseudomonas tomato* inhabits and is transmitted by tomato seed, and that *P. phaseolicola*—cause of halo blight of bean—is a seed contaminant in which sanitation is needed to produce bacterium-free seed. By nucleic acid hybridization with 18 plant pathogenic species, he identified four of six homologous groups of pseudomonads with distinct genotypic characterizations. More recently he and co-workers reported that corky root rot of lettuce is caused by a soilborne gram-positive bacterium, and that this disease can be controlled by cultural practices that improve soil water drainage and aeration.

With fungi, Grogan's research led to detection of a new mutant strain of lettuce powdery mildew that is endemic on wild lettuce in California and that caused the mildew epidemics during the 1950s. He incorporated resistance to lettuce downy mildew in *Lactuca serriola* from Russia into *L. sativa* and this resistance in the lettuce cultivar Calmar has been effective for nearly 20 years. In other work, Grogan established: 1) the importance of seed transmission in celery by *Septoria apii* and that crop rotation and use of disease-free seed are effective controls, 2) that stem canker of tomato is caused by *Alternaria alternata*, leading to the identifiable stable resistance probably from a single dominant gene, and the identification (with co-workers) of a host-specific toxin useful in screening tomato cultivars for resistance, and 3) that lettuce drop is caused by *Sclerotinia minor* and *S. sclerotiorum* with extensive research into the biology, epidemiology, and control of these two species. He found that 28 vegetative compatibility groups exist within *S. minor* and that the species is generally heterothallic.

Dr. Grogan developed biological concepts pertinent to the epidemiology of soilborne pathogens and concluded that the relation of soilborne inoculum to root surface is two dimensional and that propagule numbers and density in soil should be expressed volumetrically on the basis of competence distance and volume. He stresses that biological data on soilborne diseases should be interpreted from analysis of biological observations and not linearity of transformed data.

Difficult problems in research challenge Dr. Grogan, which was demonstrated when he determined in the 1950s that the cause of root rot, rapid collapse, and death of lettuce plants in the field was caused by damage from ammoniated nitrate fertilizer. He concluded that high temperatures and calcium deficiency at or near crop maturity contributed to tip burn of lettuce and symptom development.

Few have contributed to science and plant pathology as Ray Grogan has. After years of experience, he developed a philosophy that inspired two articles, "The Science and Art of Plant-Disease Diagnosis" and "The Role of Genetics in Etiological Pathology and Maintenance of Plant Health." Throughout his career, Dr. Grogan strived for excellence in himself while instilling it in his students. To him, research is challenging and fun, and he often compared research to solving a crossword puzzle in which the problem is not solved until all of the squares are filled. His devotion to that philosophy accounted for the many contributions to plant pathology in particular and to agriculture, science, and education in general.