

John Daniel Gilpatrick, 1924–1982

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The untimely passing of John Daniel Gilpatrick on March 3, 1982, evoked an appropriate tribute by an internationally known plant pathologist in Great Britain: "Besides his scientific wisdom and his broad yet detailed knowledge of apple diseases and their control, his quiet friendliness and concern for others has greatly impressed us. He will be greatly missed both as a scientist and as a man." All who knew John and worked with him professionally concur in this appraisal.

John D. Gilpatrick was born February 24, 1924, in Rumford, Maine. His family moved to Canada where, in addition to his public school education, he earned the B.S. degree in agriculture at McGill University, MacDonal College, Quebec, in 1946, and the M.S. degree at the University of Alberta in 1948. He earned the Ph.D. degree in plant pathology at the University of California at Berkeley in 1961.

Prior to joining Cornell University, Dr. Gilpatrick spent more than 15 years doing applied agricultural research while working for the Shell Development Company in California, the Squibb Institute for Medical Research in New Jersey, and the Chemagro Corporation in Kansas. As technical representative for Chemagro, John resided in New York State and worked with many Cornell scientists at Ithaca and Geneva in cooperative research on chemicals for disease, insect, and mite control. He was appointed assistant professor in the Department of Plant Pathology at Geneva on January 1, 1968, and was promoted to associate professor with tenure in 1971.

His assigned responsibilities to promote research for the benefit of the fruit-growing industry in New York State were accepted with serious dedication. His research integrated the impacts of climatic conditions, fruit tree development, fungus inoculum pressures, and fungicidal modes of action in special protective and eradicated spray programs for the most effective control of the major fruit diseases in New York State. These included apple scab, apple powdery mildew, cedar-apple rust, cherry leaf spot, fire blight of pears and apples, and brown rot of peaches, cherries, and prunes. Evaluation of fungicides and programs were conducted with various types of ground spray equipment and with aircraft. The underlying aim of the research was to develop the most effective commercial control of orchard diseases with the least number of sprays during the growing season. With a colleague, Dr. Gilpatrick initiated the Single Application Treatment (S.A.T.) whereby a single orchard spray of captafol in the spring as the first leaf tissue became visible from apple fruit buds gave effective control of apple scab until after bloom. Usually four or five sprays are applied during this period.

In 1969, there was a dramatic and unprecedented failure to control apple scab in New York State with the widely used fungicide dodine. Dr. Gilpatrick and a colleague developed specialized techniques and proved that the pathogen, *Venturia inaequalis*, had developed resistance to the fungicide. This was the first proven case of resistance in a crop-destroying fungus to a major fungicide used in agriculture. This, together with later

discoveries at Geneva and elsewhere of resistance of fungal plant pathogens to benzimidazole fungicides, opened a new major area of concern and studies for plant pathologists worldwide.

Dr. Gilpatrick's research on disease control were well recognized by fruit growers, extension personnel, and industry representatives. His efforts to prevent further erosion of a diminishing reservoir of fungicides needed for plant disease control brought further national and international recognition. Dr. Gilpatrick's research on fungicides provided valuable information needed for annual updating of official state recommendations on disease control.

A long-time member of the American Phytopathological Society, Dr. Gilpatrick was an aggressive worker on the Society's Chemical Control Committee, chaired an APS symposium on the "Resistance of Plant Pathogens to Chemicals" in 1976 in Kansas City; served on the editorial committee of the APS-sponsored publication, "Fungicide and Nematicide Tests"; prepared with colleagues a comprehensive report on "Integrated Pest Management for Northern Deciduous Tree-Fruits" for the Pest Management Strategies in Crop Protection, Vol. II, Congress of the United States, Office of Technology Assessment; and chaired a committee that prepared a unique treatise entitled "Contemporary Control of Plant Diseases with Chemicals—Present Status, Future Prospects, and Proposals for Action" for the Environmental Protection Agency under contract with the APS.

On the international scene, Dr. Gilpatrick served as a member of the "FAO Panel of Experts on Pest Resistance to Pesticides and Crop Loss Assessment" in the Food and Agricultural Organization (FAO) of the United Nations World Health Organization. He participated in their meetings in Washington, DC, in 1976 and in Rome, Italy, in 1978. Valuable information was made available to scientists worldwide through publications of the panel deliberations and conclusions in the FAO Plant Protection Bulletin.

Because of the expertise and research conducted by Dr. Gilpatrick, he was invited to lecture and teach laboratory techniques on resistance at a special school convened at the Agricultural University at Wageningen, the Netherlands, in August of 1980 and 1981.

His first sabbatic leave in 1974 involved research on apple and pear diseases at the Volcani Center of the Agricultural Research Organization in Israel. In 1980, he spend another sabbatic leave with the Ciba-Geigy Corporation in Basle, Switzerland, where his research was on the mode of action (under certain environmental conditions) of a new family of fungicides with activity against ergosterol synthesis in disease-causing fungi.

In 1946, he married Kathleen E. Weiss, affectionately nicknamed "Twink." John was a devoted family man always ready to meet the many challenges as the family grew to nine children. He and his wife provided for the health and well-being of the family and for the formal education and character development of the children, becoming enthusiastically involved in their extramural interests, which included years of involvement with their sons' and daughters' athletic pursuits, particularly in baseball and basketball. John is survived by his wife; six daughters, Sally Walsh, Nancy Greenstreet, Leslie Wood, Rebecca, Jennifer, and Amy; three sons, Robert, Steven, and Thomas; one brother, Claude; one sister, Laura Gates; and six grandchildren.