Johan Gerard ten Houten, 1911–1993

J. P. H. van der Want

Professor Emeritus Johan Gerard ten Houten, Hans to his friends, died on 15 May 1993 at his home in Wageningen, The Netherlands. He was born on 17 April 1911 at Winterswijk, The Netherlands, and studied biology at the University of Utrecht, The Netherlands. In 1935, he graduated with a major in Plant Taxonomy and with Phytopathology as one of his minors. During those years of economic depression, Hans was glad to find a job as a drug salesman for a pharmaceutical company. It must have given him a boost in morale when Professor J. Westerdijk invited him to do research in her phytopathological laboratory at Baarn, the Netherlands. His work on diseases of conifer seedlings led to a Ph.D. degree from the University of Utrecht.

Meanwhile, Hans married Dr. Anneke Pannekoek, a palaeozoologist, and he and his family left for Java (the main island of present Indonesia) in 1939. As an employee of an agricultural company, Hans took charge of research on pests and diseases of the fiber crop roselle. Years later, in 1960, the Tunisian government recognized his contributions to roselle culture by inviting him to provide advice on the experimental introduction of this crop.

In 1942, during World War II, ten Houten was separated from his family and imprisoned by the Japanese army in the Molucca islands, Indonesia. Under the difficult conditions of the jungle camps, the Japanese allowed him to start large-scale production of yeast to supplement the meager diet of the prisoners with vitamin B. He considered this effort to be one of the most important contributions he made during his life.

After the Japanese surrender, ten Houten was reunited with his family and returned to the Netherlands. In 1946, he joined the Biology Department of the Royal Shell Laboratories in Amsterdam as head of its Biocide Section.

In 1949, ten Houten became the first director of the newly established Institute of Phytopathology Research (IPO) in Wageningen. In this position, he manifested remarkable skills in directing the development of crop protection research in The Netherlands. Endowed with a good share of persuasiveness, he managed to obtain the financial means to develop adequate facilities in the institute.

Originally IPO had four departments: mycology, entomology, nematology, and virology. Dr. ten Houten soon added a department of resistance research with the aim of assisting plant breeders in their efforts to improve crop resistance to diseases.

After the institute's inception, Dr. ten Houten also acted as head of the Mycology Department for some years. This offered the opportunity for him to study collar rot of apple trees caused by *Phytophthora cactorum*. During this period, he also became interested in the evaluation of losses caused by pests and diseases, a subject he considered to be of prime importance for obtaining support for development of research and control measures.

Dr. ten Houten favored an international exchange of ideas. In journeys abroad, especially those to the United States, he made contact with various scientists, many of whom he persuaded to work at Wageningen. In this way, IPO benefited from the knowledge and skills of foreign phytopathologists and entomologists who contributed to the prestige of IPO. In return, the guest workers learned about Dutch agriculture, its crop protection problems, and the ways the problems were investigated. This policy resulted in fruitful mutual interactions and long-term cooperation.

A study tour of the United States made in 1953 acquainted ten Houten with the serious effects of air pollution on crops and the technology available for relevant research. This experience prompted him to urge that attention be given in The Netherlands to crop damage by air pollutants. Being a dynamic person, he soon obtained financial support to establish a position in this area. Technical facilities for experiments also were established, including a number of greenhouses for exposing plants to different concentrations of various gaseous substances. Gradually, the number of coworkers studying air pollution related to plant production increased. By 1973, ten Houten had established a biological network, covering the whole of The Netherlands, designed to determine toxic concentrations of pollutants.

In 1971, ten Houten was appointed as extraordinary professor in the Agricultural University, Wageningen, with the task of lecturing on environmental protection related to air pollution. As there were no statutory restrictions on combining the position of extraordinary professor with that of director of IPO, the new assignment aided in extending the capacity of personnel and facilities in this new field.

In 1974, ten Houten was appointed as ordinary professor in a full-time assignment in the Agricultural University. This meant that he had to resign from the office of director of IPO. During 25 yr of service to IPO, he had established the institution as a world-renowned center for crop protection research. Until 1 September 1976, when he retired, he dedicated himself to strengthening the Department of Air Pollution Science of the University.

Throughout his official career, ten Houten made major contributions to international cooperation and understanding in his fields of science. He advised his Belgian colleagues on the organization of the first Symposium on Phytopharmacy and Phytriatry held in Ghent in 1949. This symposium became an annual event in which ten Houten often participated. He was secretary general of the newly established International Society for Plant Pathology (1968–1973), chairman of the Plant Protection Committee of the International Society for Horticultural Science (1971–1973), and chairman of organizing committees of various international symposia and congresses. Nationally, he served, among other activities, as chairman of the Netherlands Society of Plant Pathology (1951–1957) and chairman of the Royal Society for Agricultural Science (1970–1974).

Ten Houten was awarded an honorary Ph.D. degree from the State Faculty of Agricultural Sciences at Ghent, Belgium; he was an Officer in the Order of Orange-Nassau and an Officer in the Order of the Crown of Belgium.

During the last years of his life, ten Houten suffered increasingly from Parkinson's disease. Even under these difficult circumstances he displayed great strength of mind and humor until the very end of his active and fruitful life.