

## OBITUARY

**Isaac Wahl**

1915–2004



*IN MEMORIAM*

Isaac Wahl, Professor Emeritus of Plant Pathology, died in January 2004. He was born in 1915 in Russia and grew up and received his secondary education in Warsaw, Poland. His teachers and friends, who predicted the course of events in Eastern Europe, encouraged him in 1935 to go to Palestine for his higher education. Concurrently with studies at The Hebrew University of Jerusalem, he taught at the Mikve Israel Agricultural School. His many students there remember him as a dedicated and most interesting teacher. Isaac Wahl obtained his M.Sc. degree in 1940 and his Ph.D. in 1947.

Wahl started to teach at The Hebrew University of Jerusalem's Faculty of Agriculture in Rehovot, where he developed Plant Pathology as one of the important disciplines. His lectures were instrumental in persuading many of his listeners to choose plant pathology for their future career. His stimulating ideas to look at the host–pathogen interaction in its wider ecological concept, including the weed progenitors of the cultivated crop species, raised much interest. Wahl later moved to Tel-Aviv University, where he established Plant Pathology as a discipline within the Department of Botany. He soon attracted gifted students who subsequently became leaders in the field of plant pathology themselves.

Wahl's research on the cultivated and wild progenitors of barley, oats and wheat, and on their pathogens led not only to new sources of resistance but also to a better understanding of the wild ecosystem. The Fertile Crescent, of which Israel is a part, is the center of origin of these important food crops, which co-evolved with their respective pathogens, as well as the alternate hosts of the pathogen. In the wild, epidemics caused by the pathogen are rare, whereas the cultivars of these crops in agrosystems are renowned for severe epidemics worldwide. The cultivated species and their respective wild progenitors are attacked by the same array of pathogens. Studies to understand these differences were one of the main thrusts of Prof. Wahl's life work.

Prof. Wahl and his students found many new sources of disease resistance, which they characterized and made available freely to crop improvement teams worldwide. His knowledge also helped to manage the agrosystem so that resistance sources were more durable. They learned that durable resistance in the natural wild ecosystem is effective only in a diverse population, where approximately one-third of the population is resistant. The management suggestions of Wahl and his research colleagues were collated and published in several papers. These models were later implemented in the control of oat crown rusts and wheat stripe rust in the USA, barley powdery rust in Europe, rice blast in the Philippines and coffee rust in Colombia. Wahl's ideas and philosophy were brought together and published in 2003 in his book entitled "Disease Resistance from Crop Progenitors and Other Wild Relatives", published by Herbert Utz Verlag, Munich, Germany.

Isaac Wahl envisioned and founded the Institute for Cereal Crops Improvement at Tel-Aviv University, which was dedicated in 1982. He served as its director until retirement, and continued later as a researcher in the institute. The aim of the institute is to utilize gene pools of the wild relatives of the cereals, and is dedicated to the preservation and study of germplasm of wild species *in situ* and *ex situ*. Wahl was instrumental in the establishment of the Minnesota–Israel Endowed

Scientific Exchange Program.

Wahl's ideas and perceptions were much appreciated in the inner circle of plant pathologists studying plant–pathogen interactions from an ecological perspective. He was named Fellow of the American Phytopathological Society and the Israeli Phytopathological Society in recognition of his achievements. Wahl was honored with the prestigious Rothschild Prize (1964) and the Harvey Prize (1978), and with the Bruno Kreisky Award for Service to Humanity (Vienna, Austria, 1985). The President of Israel presented him in 1992 with the prestigious Israel Prize in the Life Sciences for his work in pathology and mycology.

Isaac Wahl passed away in January 2004 after a long illness. His wife Esther predeceased him. He will be remembered by his many disciples and for his major contributions to the ecological interactions between plants and their pathogens.

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