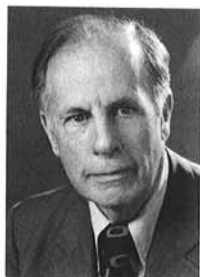


James W. Sinden, 1902 to 1994

Lee C. Schisler

Professor Emeritus, Department of Plant Pathology, The Pennsylvania State University, University Park 16802.



On 20 December 1994, the mushroom industry throughout the world lost a brilliant scientist and good friend—Dr. James W. Sinden. For more than 60 years, Dr. Sinden dedicated his life to the service of the industry he loved. His research contributions formed the basis for mushroom growing as it is practiced today.

James W. Sinden was born, one of twin sons of George and Mabel Hull Sinden, on 12 November 1902 in Oak Park, IL. The family moved to Canon City, CO, in 1909. Jim completed high school in 1920 and went on to the University of Kansas at Lawrence for his undergraduate education, intending to become a journalist. After 2 years, however, Jim switched to biology and graduated in 1924. From 1924 to 1930 he attended Cornell University, Ithaca, NY, where he earned a Ph.D. in Plant Pathology.

In 1930 Dr. Sinden became a research professor in the Department of Botany and Plant Pathology at The Pennsylvania State University, University Park, where he investigated all aspects of the culture of the cultivated mushroom, except insect pests. His development of grain spawn, a quality product used as mushroom "seed" in the early 1930s brought significant changes to the industry. Patents were obtained on the Sinden Grain Spawn method in 1932 and 1936. New strains developed from his extensive collection of mushroom spores provided much of the stock for the nation's spawn production and resulted in greatly increased mushroom yields. Other innovations stemming from his research included a practical synthetic compost; shortened composting in the two successive phases; control of fungus diseases of mushrooms with fungicides; and the first investigation of what turned out to be, as he predicted, virus infection. Another important development resulting from this work was the change from wide piles of compost hand-mixed to narrow piles that could be mixed with a machine straddling the pile.

While at Penn State, Dr. Sinden worked closely with mushroom growers and spawn-makers to facilitate successful introduction of his innovations into the industry. He possessed the ability to discuss his research on a level the listener could understand; whether new to the mushroom field or an experienced grower, one was never in his presence without learning something. His energy and enthusiasm were contagious. His drive for excellence in everything he did and in what he tried to help others to achieve had no limits.

In 1952 Dr. Sinden left Penn State to join the management of Hauser Champignonkulturen AG at Gossau, Zurich, and became part owner. In addition to taking part in the active direction of the firm, Dr. Sinden continued a research program. He helped Hauser develop into a model mushroom farm and a producer of mushroom spawn with worldwide distribution. Machines for mechanization of all operations in modern mushroom culture, especially related to the tray system, also were developed. At the same

time, he was an integral factor in research and development at Butler County Mushroom, Inc., West Winfield, PA, and was a consultant to growers in various countries.

Among his research contributions, made together with associates at Hauser and Butler, were the following: mixed- or through-spawning, use of spent compost for making casing soil, relation of CO₂ control to mushroom development, supplementation of compost before spawning or casing, development and maintenance of superior mushroom strains, and understanding of the cause and control of viral, bacterial, and fungal diseases of the cultivated mushroom.

Dr. Sinden lectured throughout the world on mushroom topics and wrote many articles for magazines and professional journals during his distinguished career. His comprehensive paper on "Ecological Control of Pathogens and Weed-Molds in Mushroom Culture" which was published in the *Annual Review of Phytopathology* in 1971 remains the definitive work in this area. Dr. Sinden donated his lectures, articles for magazines and professional journals, newspaper clippings, personal correspondence, field reports, and more to the Department of Plant Pathology at Penn State. A portion of his personal library containing books related to mushroom culture was included. A repository, designated the Sinden Collection, was established in Penn State's Mushroom Spawn Laboratory.

He was a member of Phi Beta Kappa, Phi Kappa Phi, Sigma Xi, Gamma Alpha, and Alpha Kappa Lambda. He was also a fellow of the American Association for the Advancement of Science and held honorary life memberships in the Mushroom Growers Association of Great Britain, the American Mushroom Institute, the Canadian Mushroom Growers Association, and the Australian Mushroom Growers Association. Dr. Sinden was honored by mushroom-growing associations throughout the world, as well as by the International Society for Mushroom Science for 50 years of dedicated service to the industry in 1980. In addition, the Sinden Awards were established by the Mushroom Growers Association of Great Britain: One is presented for the most outstanding practical contribution to the mushroom industry in research, development, advisory work, communications, and leadership; the other, the Young Scientist or Grower of the Year Award, is awarded on a competitive basis to those no older than 30 years who are training or working in the industry. The American Mushroom Institute established a Sinden Scholarship Award that is presented on the basis of merit to graduate students conducting dissertation research involving edible mushrooms. A foundation for the study of botany also was named for him at the University of Zurich.

Dr. Sinden retired in 1990. He was a dedicated, disciplined, humble, and caring person. He will be missed, but Jim Sinden and his influence and contribution to the worldwide mushroom community will never be forgotten.

In addition to his wife, Edith Sigel Sinden, James Sinden is survived by one daughter, Dr. Jane S. Godby of Ottawa, Canada; one son, Dr. Stephen Lee Sinden of Greenbelt, MD, two grandchildren; and three great grandchildren.