

## Mathilde Bensaude, 1890–1969

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Mathilde Bensaude, outstanding mycologist and plant pathologist, died at Lisbon, Portugal, November 22, 1969. She was internationally known for her discovery of heterothallism in the Hymenomycetes, and greatly appreciated for establishing the services for plant quarantine in Portugal.

Born Mathilde Simone Rachel Pauline Bensaude on January 23, 1890, she was the daughter of Alfredo Bensaude and Jane Oulman Bensaude. Her father was the well-known founder of the "Instituto Superior Tecnico" in Lisbon. Her mother was French. Mathilde early gained wide knowledge of agricultural problems on the tobacco plantation which her father inherited at São Miguel in the Azores. An uncle gave her an intimate understanding of the history of Portugal.

At the age of 14, Mathilde was sent to high school in Germany and from there to the University at Lausanne, Switzerland, for her undergraduate studies. Her graduate work at the Sorbonne culminated in her brilliant thesis on heterothallism for which she received her doctorate in 1917. This work was published in "Comptes Rendues" in 1917; and a report of her complete research, in a memoir in 1918.

Dr. Bensaude's work paved the way for further concepts of fungal behavior. So startlingly new was her description of heterothallism in the Hymenomycetes, that there was definite skepticism on the part of some mycologists. Very soon, however, her results were corroborated by the detailed work of Kniep in Germany.

From the Sorbonne, Dr. Bensaude came to the United States and studied with L. R. Jones and later with G. W. Keitt at the University of Wisconsin, gaining the expertise which, together with her own creative genius, prepared her for the work in Portugal. She loved Wisconsin and in one of her later letters, wrote "the blissful happiness of the city of Madison 1920-23 is like an emotional oasis to me".

Dr. Bensaude did research on several plant diseases in Wisconsin from 1920-1923. Cross inoculation studies with strains of *Cladosporium* from stone fruits, in cooperation with G. W. Keitt, were reported in PHYTOPATHOLOGY. Her paper on *Olpidium* in 1923 was the first reference to this genus as a root parasite in American literature.

On returning to Europe she became director of an experiment station in the Azores. Here she studied economically important diseases of beets, Easter lilies, and onion seedlings. She made field surveys and arranged for spraying potatoes and orchards. She wrote, "The farmers seem to take well to me and not to mind my being a woman". Needed financial and scientific support did not come, so in February 1927 she joined the Research Institute Rocha Cabral in Portugal.

Dr. Bensaude was employed in 1932 by the Ministry of Agriculture in Lisbon. Her greatest, lasting contribution during this period was the development of the expertise for treatment and prevention of plant diseases in Portugal.

Dr. Bensaude remained with the Ministry until her mother's death in 1938, when she returned to the Azores to care for her aged father. After his death in 1942 she came back to the United States, where for 2 years she worked on ring rot of potato in Wisconsin and New York. This disease became her scientific interest for the remainder of her life. Her work on *Corynebacterium sepedonicum* which described histological aspects of the disease appeared in 1946.

Dr. Bensaude took great interest in the establishment of the coffee rust research center at Oeiras under the directorship of Dr. Branquinho D'Oliveira. At the urging of Dr. Frederick L. Wellman, the U.S. foreign aid program gave financial help to this laboratory since Portugal was especially suited to its major project, the study of rust on coffee. Since coffee is not grown in that northern latitude, it was a safe place to assemble collections of the fungus from around the world, to define races, and assay for disease resistance.

The role of the scientist today is that of a person who not only utilizes creative genius to open up new realms, but who must also interpret results to the listening public so that new knowledge may be used to satisfy the needs of people. Such was the part of this remarkable woman. She was extraordinarily sensitive to the people around her, great in her understanding, and endowed with a vision for improvement of economic conditions. Her life spans a time before the most serious need of communication between scientist and public had become evident, but she foresaw it and her efforts had profound influence on the economy of her country. The disciplined mind which early worked out some features in the cytological behavior of fungi transferred its genius to making knowledge available.