

Edmund Brian Lambert, 1897-1971

George C. Papavizas and August E. Kehr



Dr. E. B. Lambert was born March 3, 1897, in St. Paul, Minn., the son of George C. and Mabel T. Gravel Lambert. He died on August 13, 1971, at his home in Silver Spring, Md., and is survived by his wife, Pearl Ann; a daughter, Barbara of Bethesda; a sister, Mrs. Thomas P. Fitzgibbon of St. Paul, Minn.; and two

brothers, Richard F. of Sarasota, Fla., and George C. of North Miami, Fla. He received his undergraduate and graduate degrees at the University of Minnesota; the Ph.D. degree in plant pathology and genetics in 1927.

Dr. Lambert began his professional career as a plant pathologist as an instructor of plant pathology at the University of Minnesota from 1921 to 1923. From 1923 to 1928, he served as pathologist in the Office of Cereal Crops and Diseases of the USDA, St. Paul, Minn. His research from 1928 to 1943, as a pathologist with the USDA in Washington, D.C., resulted in several advancements in mushroom culture. As early as 1930, he established the principle that the thermal-death-time of mushroom pathogens could be utilized to eradicate them during pasteurization of the medium. Later, he established the principle that pasteurizing also served as a continuation of composting. The two-phase pasteurization system developed by Dr. Lambert is now universally used by commercial growers. He was the first to learn that cultivated mushrooms may be propagated from single spores, and that these single-spore cultures are quite different from one another, presumably due to segregation during meiosis in the basidium. This study has been verified since by many workers, and forms the basis of all genetic programs for mushroom improvement.

Several serious diseases of mushrooms were recognized and studied by Dr. Lambert. The *Mycogone* disease, which in 1928 was causing 100% losses in many commercial establishments, was shown to be exclusively soil-borne and thus, control could be effected by steaming the soil. He also showed that the X disease was transmitted by infectious particles, and that losses caused by this disease could be virtually eliminated. Other notable discoveries that are now widely used in the industry include a method of reconditioning compost to avoid *Chaetomium* disease, the efficiency of chlorinated water for controlling certain mushroom pathogens, the relation between the *Cephalothecium* disease of mushrooms and nematodes, and the adverse effects of CO₂ accumulation in mushroom houses upon fruiting.

During World War II, he was co-owner of Fungus Products Co., which produced penicillin by methods developed by himself. He was Vice President and Research Director of the Keystone Mushroom Co. from 1946-1948, and returned to the USDA at

Beltsville in 1948. In 1952, because of Dr. Lambert's competence in plant disease epidemiology, the Bureau of Plant Industry, Soils, and Agricultural Engineering asked him to join temporarily the newly formed Civil Defense Administration to appraise the vulnerability of the United States to biological warfare against crop production, and to recommend a program of defense against such attack. Shortly after returning to Beltsville in 1953, Dr. Lambert was drafted again to assist the Division of Cereal Crops and Diseases to organize and direct a joint research program on stem rust epidemiology with the Chemical Corps of the Army. Dr. Lambert became leader of Mushroom and Microbiology Investigations in the Crops Research Division in 1960. He retired in 1965, and served as a USDA Collaborator from 1965 to the time of his death.

Dr. Lambert was the author of over 60 scientific papers in several fields, such as cereal pathology, mushroom varietal improvement, mushroom physiology, mushroom production and disease control, penicillin production, and biological warfare appraisal and defense. His contributions to the science and art of mushroom growing and disease control were numerous during his last 10 years of active duty. One of his most important contributions was the determination of the effect of moving air over growing mushrooms at different rates with different relative humidities. These quantitative studies, together with studies on fresh air requirements, serve as the basis for calculating the requirements of air-conditioning installations in modern commercial mushroom plants.

Dr. Lambert was recognized as the world's foremost research worker on many phases of mushroom cultivation. He was the only American asked to be a member of the international committee that initiated the First International Mushroom Congress in 1949. He was selected President of the National Organizing Committee of the Fifth International Mushroom Congress and was subsequently elected President of the Congress, held in 1963. At the Congress, his leadership was recognized by the entire membership, and especially by The Mushroom Institute, which honored him with an award in recognition of his recent contributions to their industry.

He was elected honorary life member of the British Mushroom Growers Association in 1949, the French Agricultural Syndicate of Mushroom Growers in 1950, and the American Mushroom Institute in 1955. The Superior Service Award and an Outstanding Performance Rating of the USDA were awarded to him in 1961 and 1963, respectively. He was a member of the Gamma Sigma Delta Society, The Washington Academy of Science, The Washington Botanical Society, The American Phytopathological Society, Mycological Society of America, Sigma Xi, American Society for Horticultural Science, The American Society of Industrial Mycology, and The Cosmos Club.