MICOLOGIA APLICADA INTERNATIONAL, 15(1), 2003, pp. 23-29

http://micaplint.fws1.com

World Society for Mushroom Biology and Mushroom Products
Symposium: Prospects of Mushroom Cultivation in Latin America for the XXI Century

EDIBLE MUSHROOM CULTIVATION AT THE INSTITUTE OF ECOLOGY IN MEXICO

G. MATA AND D. SALMONES

Departamento Hongos, Instituto de Ecología, Apartado Postal 63, Xalapa 91000, Veracruz, Mexico.
E-mail: mata@ecologia.edu.mx

Presented in Cuernavaca, Mexico, February 22, 2002

ABSTRACT

Research work on mushroom cultivation at the Institute of Ecology (INECOL) began in 1989 cultivating *Pleurotus* spp. At present, these studies have been extended to other genera including *Lentinula* and *Volvariella*. Different agricultural and forest by-products have been evaluated as substrates for commercial cultivation. More than one hundred strains of *Pleurotus* have been studied in order to select germplasm suited for commercial production. Hybrids obtained by crossing selected monokaryons give yields greater than the parents in reduced culture cycles. Some strains of *Lentinula edodes* have been cultivated on pasteurized non-conventional substrates, such as coffee pulp, sugar cane bagasse, and wheat straw, showing good adaptation to this process. The strain collection (INECOL) has over 300 strains of edible mushrooms, and nearly 100 strains of phytopathogenic fungi. More than 60% of them come from wild Mexican specimens, mainly isolated from tropical and subtropical regions. Training courses and workshops have been carried out in order to share practical experience, and to offer technical support and basic services to growers from Mexico and other countries of Latin America. Recently, some aspects of enzyme production and physiological adaptation have been investigated in *Pleurotus* and *Lentinula*. The antagonistic relations between mushrooms and other fungi (mainly *Trichoderma* spp.) are also important topics. Strain selection for greater yields, physiological adaptation to different substrates, disease resistance, spawn improvement, and germplasm conservation are basic lines for future research.

Key words: Edible mushroom cultivation, *Pleurotus*, *Lentinula*, *Volvariella*, Latin America, agricultural and forest by-products, interbreeding, strain collection.