



6.137
Bib 412

IMC7

BOOK OF ABSTRACTS



THE 7TH INTERNATIONAL MYCOLOGICAL CONGRESS
OSLO 11-17 AUGUST 2002

The decrease in fruiting body yields commonly occurs in the mushroom production in Thailand when mycelia obtained from continuous subcultures are used. The stability of commercial mushrooms: *Auricularia auricula*, *Agrocybe cylindracea*, *Lentinula edodes*, *Lentinus polychrous*, *L. squarrossulus*, *Pleurotus ostreatus*, *Pleurotus* species under names *P. cystidiosus* and *P. sajor-caju*, and *Tricholoma crassum*, after continuous subcultures of mycelia for production twenty times was investigated. Mycelial growth rates and fruiting body yields were determined. The PCR-RFLP technique was also tried to be employed for the preliminary detection of fungal genetic stability. After the twentieth subculture, growth rates and fruiting body yields of all mushrooms were found to be rather consistent except *Auricularia auricula* giving the decrease in both its growth and yield after the third subculture then reversing to be stable through the subsequent subcultures. For the detection of genetic stability, all fungal species gave consistent DNA patterns (600-800bp PCR products from ITS4 and ITS5 primers, and the unique RFLP pattern of each species when the DNA was digested with either AluI, TaqI, MboI, or HinfI) except *A. auricula* giving the different pattern of HinfI digest after the third subculture which was corresponding to its growth and yield reduction. The genetic stability of mushrooms should be examined after continuous subcultures of mycelia prior to application in the large scale production.

1171 - Stability of some commercial mushrooms in Thailand after continuous subcultures of mycelia for production

W. Sattayaphisit¹, N. Boonkerd¹, N. Teaumroong¹ & S. Rodtong^{2*}

¹School of Biotechnology, Institute of Agricultural Technology, Suranaree University of Technology, Nakhon Ratchasima 30000, Thailand. - ²School of Microbiology, Institute of Science, Suranaree University of Technology, Nakhon Ratchasima 30000, Thailand. - E-mail: sureelak@ccs.sut.ac.th