Yielding Production of *Agrocybe cylindracea* on Different Substrate Packing under Greenhouse with the Evaporative Cooling System

Thidaporn Theunpao¹, Todsaporn Thongthieng¹, Supawadee Punyadee¹, Sermsiri Mayteeworakoon²

¹King Mongkut’s University of Technology Thonburi, Thailand
²National Center for Genetic Engineering and Biotechnology, Klong Luang, Thailand

*Agrocybe cylindracea* is one type of widely edible mushroom in Thailand. High yield cultivation and quality improvement of *Agrocybe cylindracea* were rarely studies. The aim of this study was to investigate the suitable substrate packing for *Agrocybe cylindracea* production under greenhouse with the evaporative-cooling system. This study used two different substrates, compacted substrate and loose substrate for 1 kg packing bag. Mycelium growth presented the significantly highest with 1 kg of loose substrate for 3 weeks. The yielding results were not significantly differenced between the compacted and the loose substrate. Both results of the number of fruiting bodies shown significantly decreased. Length of fruiting body stalks was not significantly differenced between the compact and loose substrate. The results of mycelium growth, yielding, and fruiting body production of the compacted substrate was selected for used to large scale cultivation. It showed significantly the highest percentage of yielding in the second harvesting cycle.