Green Mold of Mushrooms

Green mold is characterized by dense white mycelial growth followed by extensive green sporulation of the fungus.

Symptoms and Effects

When mushroom beds spawned with the cultivated mushroom, Agaricus bisporus, are infested with Trichoderma green mold, non-productive areas occur on the casing surface (Fig 1) resulting in serious yield losses. Trichoderma spp. have traditionally been found as weed molds in compost, causing only limited green patches on casing/compost or cap spotting on mushrooms. However, in the early 1990’s a new strain of Trichoderma was responsible for a green mold epidemic in Pennsylvania. This strain was identified as Trichoderma harzianum biotype 4 (Th4).

Green mold is characterized by dense white mycelial growth followed by extensive green sporulation of the fungus (Fig 2). Apparently normal spawn runs can give way to large patches of green Trichoderma sporulation (Seaby 1996). From 1994-96, crop losses in Pennsylvania ranged from 30 to 100% (Wuest et al. 1996). Crop losses to green mold are variable, however, since the onset of the disease in Pennsylvania crop losses have been estimated in excess of $30 million. Agaricus rhizomorphs often exhibit browning reactions and basidiocarps may be covered with green mold or secondary invaders such as Penicillium.

Although unspawned compost does not support high levels of green mold, the nature of the interaction between the mushroom mycelium and Trichoderma harzianum biotype 4 (Th4) is not understood. Green mold causes significant yield losses of Agaricus button mushrooms, as well as specialties such as Shiitake and Pleurotus.

References


Wuest, P.J., L.A. Anton, and D.M. Beyer. 1996. Mushroom crop losses associated with Trichoderma green mold when compost was infested prior to casing and the casing was CAC’d or deep-scratched. Mushroom Green Mold Round Table. PSU. 43.

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