

The separation lattice is nearly 3 cm thick, placed directly within 5 cm of casing soil laid directly upon the colonized compost beds. This technique limits the number of up-channeling rhizomorphs, reduces surface area, and in doing so, increases the likelihood that any primordium forming will have greater access to nutrients drawn from the mother mycelium. This interruption layer centralizes and distances the loci for primordia formation, resulting in an increase in the size and earlier formation of mushrooms. As *Agaricus blazei* fruitbodies tend to be large and have a high protein content, each erupting primordium has high demands for nutritional resources from the surrounding substrate. A first flush of *Agaricus blazei* is analogous to the second and third flushes that create the Portobello form of *Agaricus brunnescens*.

When dense clusters of primordia first form, the more rapidly developing fruitbodies can fuse and pull adjacent mushrooms from the substrate, a feature which can be avoided by surgically separating touching mushrooms while they are at the primordial stage. Mushrooms grown from immature composts can show slight brownish stains, or fissures on the stems, hiding hollowed portions filled with amber, almond fragrant liquids. This disease recedes as the compost matures during the flushing cycle.

*Agaricus blazei* can be grown on the recycled sawdust blocks from the end of the cultivation cycles of Shiitake (*Lentinula edodes*), Maitake (*Grifolia frondosa*), Reishi (*Ganoderma lucidum*), and other primary saprophytes. Turning the compost piles made from the above for several weeks and mixing with wheat straw has provided a satisfactory compost medium for growing Himematsutake. The net nitrogen of composted Shiitake blocks approaches 2%, near the target nitrogen levels for classic Portobello composts. The use of this

mushroom on "spent" substrates from the cultivation of primary saprophytes is on-going for idealizing a sequence of mushroom species growing on the same medium.

Peculiar to *Agaricus blazei* is that molds are not as likely to contaminate a peat moss casing layer once the mycelium emerges from below, a sure sign that the mushroom has predominated the microsphere. This dominance is so pronounced as to set Himematsutake apart from other species needing casing layers to encourage fruitings. This phenomenon also allows for a window of time in which experiments can be conducted without becoming victimized by mold infestation. The bottom of the trays must have adequate drainage and aeration or the mycelium will go into stasis and fruitings will be retarded. Growing Himematsutake indoors for the first two crops and then making ridge rows of mounded substrate excavated from trays for outdoor cultivation may be a good paradigm for warmer climates.

Cultivators in Hawaii and Florida have been growing this mushroom outdoors in mound culture. One common observation is that it does not attract the common insects that plague Oyster mushroom cultivation. The almond scent may repel insect pests. Also noteworthy is that the mushrooms are slow to rot, which means shelf life of the crop is good, provided the mushrooms are chilled directly after harvest. By all comparisons, *Agaricus blazei* is an exceptional mushroom. As with many species, pioneering Japanese mycologists first "blazed" the path for its cultivation and deserve credit for bringing this species forward, ironically one that was originally discovered in the United States but never recognized for its superb qualities. *Agaricus blazei* is an important new cultivar, ranking high in both culinary value and medicinal properties (Stamets and Yao 1999).