

Controlled-Environment Greenhouse



**Agriculture, Fisheries and
Conservation Department**

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Cultivation of Edible Mushrooms in Controlled- environment Greenhouses



From the Editor

Local edible mushrooms have long been well-received. In recent years, the production of local mushroom farms has been affected by fluctuations in the supply of mycelium-filled compost bags used for growing edible mushrooms. Two companies have installed controlled-environment (CE) facilities in factory building units and chicken sheds respectively for the cultivation of edible mushrooms, using mycelium substrates and mycelium-filled compost bags imported from the Mainland. This issue is a brief report on their production processes.



Conversion of Factory Building Units to CE Greenhouses for the Cultivation of Edible Mushrooms

The mushroom farm operator has installed CE facilities in factory building units and converted them into enclosed CE cultivation rooms. Mycelium substrates imported from the Mainland are spread on cultivation racks for the growth of mushroom spawn. The resulting mycelia grow rapidly in a favourable and stable environment, producing steady yield of well-developed fruiting bodies. The mushroom farm operator plans to acquire additional facilities for cultivating different kinds of quality mushroom spawn for production purposes.

Facilities and
equipment
inside the CE
cultivation room



Multi-layered
cultivation and
automatic misting
and
humidification



Initial development stage of mycelia



Intermediate growth stage of
fruiting bodies



Mature fruiting bodies ready
for harvest



Conversion of Chicken Sheds to CE Greenhouses for the Production of White Button Mushrooms

The mushroom farm operator has covered disused chicken sheds with insulation panels and installed CE facilities and layered planting racks. Mycelium-filled compost bags imported from the Mainland are put on the planting racks for cultivation. The CE facilities can adjust and control the temperature, humidity, carbon dioxide concentration and illumination of the cultivation rooms to meet the needs of mushrooms during different growth stages. The use of CE facilities ensures the quality and yield of mushrooms.



Display panels outside the mushroom cultivation room
showing different indices and the operation of facilities



Ventilation and temperature
control facilities



Growth stage of mycelia



Development stage of pin-heads



Mature fruiting bodies



Fresh white button
mushrooms

AFCD Home Page:
<http://www.afcd.gov.hk>

For more information and visits to greenhouses, please contact:
Horticulture Section, AFCD (Tel: 2679 4294)