

# Controlled-Environment Greenhouse



Agriculture, Fisheries and Conservation Department

## Cultivating White Button Mushrooms in the Controlled Environment

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### From the Editor

Controlled-environment facilities can adjust the temperature, humidity and carbon dioxide concentration to provide an optimal environment for cultivating quality white button mushrooms. This issue introduces how to use purpose-built controlled-environment facilities to cultivate white button mushrooms.

## Controlled-Environment Facilities and Cultivation Rooms

The controlled-environment facilities can adjust the temperature, humidity and carbon dioxide concentration.



The display panel clearly shows different indices and the operation of the facilities.

Connected to the cultivation rooms, the controlled-environment facilities supply air which suits the growth of the white button mushrooms.

The cultivation rooms are enclosed areas so as to maintain a well-controlled environment.

Light is not required throughout the growth of the white button mushrooms. Switch on only when working in the room.



## Transfer of Culture Material to Racks and Casing



Transfer the mycelium-filled compost bags which have been kept under low temperature to the cultivation racks. Loosen the surface layer (2 to 3 cm thick), fill the gaps and spread the culture material evenly. Maintain the room temperature between 18°C and 20°C and relative humidity at around 95% to let the mycelia recover vitality from the dormant state .

After 1 day, add soil (4 to 5 cm thick) over the culture material and irrigate adequately to moisten the soil added; do not let water leak into the culture material. Gradually raise the room temperature to 26°C and maintain the carbon dioxide concentration between 8,000 and 10,000 ppm to facilitate the growth of the mycelia.

## Growth of Fruiting Bodies

Gradually lower the room temperature to 18°C in 4 days and the concentration of carbon dioxide to 1,000 to 1,500 ppm, and maintain the relative humidity between 85% and 90% when the surface of the soil is covered with mycelia to stimulate the growth of the fruiting bodies.



The fruiting bodies become mature and are ready for harvest after growing for about 7 days.

It takes some 20 days from casing to harvesting.

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

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