

Good practices in mushroom cultivation to prevent diseases

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The problem

The increasingly **limited availability of authorized active ingredients to fight against fungal diseases** in mushroom cultivation requires development of programs for the integrated management of pests and diseases to reduce dependence on chemical control.

The solution

Good cultivation practices, focused on preventing disease occurrence, and on how to detect, limit and minimize its spread, to mitigate major impact on the crop.

Benefits

1. Good practices during mushroom cultivation minimize yield losses caused by fungal diseases; lowering the reliance upon phytosanitary products-increasingly expensive and less available.
2. Overall reduction of the environmental impact of the sector.



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Practical recommendations

Prevention of disease occurrence and spread are key practical aspects for mushroom cultivation:

(1) Recommendations on general good cultivation practices:

- Avoid leaving decaying mushrooms in the facilities.
- Remove the stems from casing soil after harvesting.
- Sweep floors and clean growing rooms frequently.
- Remove potential sources of infection (discarded mushrooms, bubbles) near the crops.
- Remove infected mushrooms as soon as possible.
- Disinfect machinery and equipment.
- Disinfection of shoes at the entrance and exit of the cropping facilities.
- Use air filters to prevent the spread of pests and diseases.

(2) Recommendations on crop hygiene

- The harvest teams must start picking growing rooms from younger flushes to the oldest ones.
- Disposable gloves should be used and changed for each cultivation room.
- All collection tools and equipment must be disinfected when leaving each room.
- Use of carpets or pits with disinfectant at the entrance of the culture rooms.
- A worker must be in charge of identifying pathogens in the crop and applying specific treatments to prevent their spread.
- Placement of antitraps mesh in the ventilation openings.
- Prevent the circulation of dust in the installation. Moisten floors before sweeping.
- Store casing materials in clean, closed areas covered with plastic.

(3) Recommendations on disinfection measures:

- Steam disinfection at 65-70°C for 9-12 hours prior to emptying the room is the most effective treatment (cook-out).
- Clean surfaces with a pressure water sprayer before applying disinfection agents, to increase their effect.



About BIOSCHAMP and this Practice Abstract

This practice abstract was elaborated in the **BIOSCHAMP project**, based on the EIP AGRI practice abstract format. © 2023

Project duration: from October 2020 to September 2024.

Goal: develop an integrated approach to tackle the mushroom cultivation challenges, improving the mushroom sector industrial profitability while reducing the agronomical need for pesticides by 90 %.