

Casing in mushroom cultivation

BIOSCHAMP project - practice abstracts

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The problem

Peat is the main component of commercial mixtures used for mushroom casing. **The industry is highly dependent on peat since the alternatives are neither agronomically nor economically efficient.**

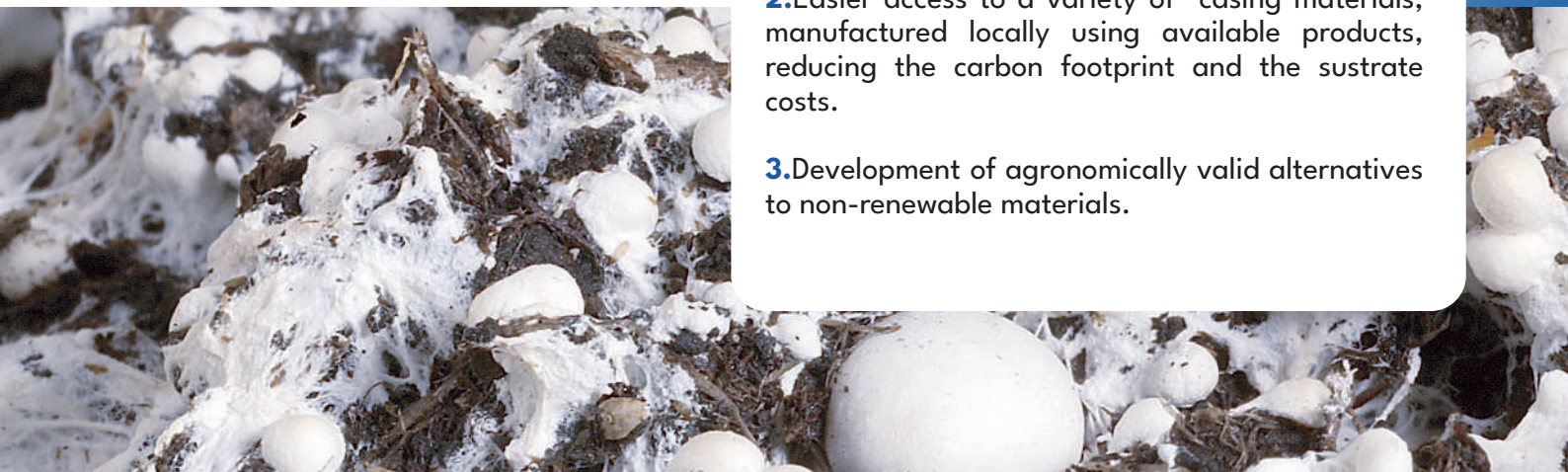
Peat is a natural material considered as a non-renewable fossil resource. In addition, peat extraction has adverse effects due to the significant impact on unique ecosystems while simultaneously contributing to global warming. Since peatlands are carbon sinks, conservation of peatlands prevents the release of CO₂ into the atmosphere. Peat extraction is increasingly restrictive in Europe, making the material less available and more expensive.

The solution

Use of biomass-based sustainable materials to partially or totally replace the use of peat as casing material, as the solution developed by the BIOSCHAMP project.

Benefits

- 1.Improvement of mushroom farms profitability.
- 2.Easier access to a variety of casing materials, manufactured locally using available products, reducing the carbon footprint and the substrate costs.
- 3.Development of agronomically valid alternatives to non-renewable materials.



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Practical recommendations

(1) Recommendations for the hygienic management of mushroom casing:

Hygiene represents a fundamental aspect for the production and application of casing soil used in mushroom cultivation.

- Every access to the facilities where the casing materials are stored must have disinfectant mats for footwear.
- The trucks carrying mushroom casing material should be thoroughly cleaned.
- The casing must be stored indoors, to prevent contaminations of external agents such as pathogenic spores.
- Casing containers must be properly cleaned. Workers must develop their activity in sanitized environments, and use clean equipment.
- Keep the packages closed until the casing is used.
- Pay special attention to the hygiene of the equipment in which the casing soil is moistened and mixed.
- Avoid contact of the casing material with surfaces outside of the disinfected areas.

(2) Recommendations for the preparation of the casing:

- Humidification: the casing material must be adequately moistened to prevent structural losses.
- Check the humidity level before using the casing: apply it with the correct moisture level.



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 %.