Residue management and circularity in button mushroom cultivation

PEATLESS Project
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The problem

Button mushroom cultivation is a **strong example of a circular bioeconomy**, converting agricultural by-products into nutritious food and valuable soil conditioners. As **peat alternatives and other renewable raw materials** are introduced, residue management may receive increased attention, as some materials originate from **value chains with a history of possible pesticide use**.

The solution

A circular approach combines **renewable materials with quality control, responsible sourcing and good cultivation practices**. Reliable raw materials, appropriate residue monitoring and supply chain traceability support circularity and future-proof mushroom production.

Benefits

Good residue management supports **the successful adoption of peat alternatives**, promotes circularity and strengthens consumer trust while maintaining high quality and food safety standards.

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Practical Recommendations

- Reliable raw materials and controlled supply chains support quality assurance.
- Agricultural by-products can contribute to circular production systems.
- Locally available resources can help reduce transport needs and improve resource efficiency.
- Peat alternatives can help reduce dependence on non-renewable resources.
- Residue monitoring can support transparency and product quality.
- Spent mushroom substrate and other cultivation residues can be reused or valorised to help close nutrient and material loops.

Circular resource management helps button mushroom growers close nutrient loops while supporting the successful adoption of peat alternatives.

About PEATLESS and this Practice Abstract

This practice abstract was elaborated in the framework of the PEATLESS project, based on the EIP AGRI practice abstract format. © 2023
Project dates: from May 2025 to April 2028.
Goal: To characterise sectorial needs at selected systems towards tailoring PEATLESS alternative substrate blends to overcome identified barriers for peat reduction in horticulture.

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