Key selection criteria for peat-free casing materials: the mushroom grower perspective

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The problem

A casing material may perform well technically but still be unsuitable for commercial white button mushroom (Agaricus bisporus) production. Growers need solutions that are **productive, economically viable, reliable, available,** and **easily integrated into existing systems**.

The solution

This multi-criteria approach identifies peat-free casings that are **technically effective, economically competitive, and practically adoptable**. It mitigates supply-chain risks and supports the transition toward circular, sustainable mushroom production.

Benefits

Effective disease management supports the successful adoption of peat alternatives by **reducing disease pressure and minimizing yield losses**.

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Practical Recommendations

Grower-Led Sustainable Material Selection

- **Involve growers** when defining selection criteria and rank them according to their importance.
- Assess **productivity and quality** alongside cost, availability, logistics, regulatory compliance, and environmental impact.
- **Prefer materials that can be stored safely and subsequently composted**, recycled, or valorised as an organic amendment rather than becoming non-recyclable waste.

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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