Low-peat blends for button mushroom casing layers: From screening to validation

Alternative Materials

Local components can partly replace peat in casing layer blends.

- Sphagnum Moss
- Wood Fibre
- Bentonite
- Grass Fibre
- Flax Fraction
- Perlite
- Bark Type 1.
- Bark Type 2.
- Bark Type 3.

9 Raw materials characterised

From screening to crop validation

A three-step pathway for low-peat casing layer blends

1 Build the blends

After characterization of 9 raw materials, Inagro tested 26 alternative blends, including some peat-free mixes, in lab-scale trials.

2 6 blends selected for research-facility validation

(INAGRO facilities)

Mycelium development, pinning, disease incidence and yield across different flushes were evaluated.

6 Selected for validation at research facilities

3 Selection for commercial demonstration ongoing

(INAGRO facilities)

The most promising blends are now being validated at Inagro. The three best-performing blends will be selected for commercial demonstration.

Selection for commercial demonstration ongoing

What matters for growers?

Key criteria for successful casing layer performance.

- Mycelium development
- Reliable Pinning
- Low disease incidence
- Yield across flushes

Key message for growers

Several alternative casing layer mixes, including peat-free blends, are showing promising results compared with traditional casing soil, highlighting the potential of these raw materials.

Current status and next steps

Laboratory-scale trials are finished. Larger-scale validation trials are ongoing at Inagro. In the next phase, the three best-performing blends will be selected for commercial demonstration.

*This project has received funding from the European Union's Horizon Europe research and innovation programme under **Grant Agreement No 101216569** and by the Swiss State Secretariat for Education, Research and Innovation (SERI). Views and opinions expressed are however those of the PEATLESS project only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them."*

Project funded by

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs, Education and Research EAER
State Secretariat for Education, Research and Innovation SERI

Funded by the European Union