peatless

Practical Management of Peat-Reduced Growing Media in Seedling Production

PEATLESS Project
Practice Abstract No. 7

Author:
Lorenz Rieger
rieg@zhaw.ch
Alex Mathis
mase@zhaw.ch

Country/region:
Zurich University of Applied Sciences (ZHAW), Switzerland

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Contact Information:
CTICH (Spain - coordinator)
direccion@ctich.com

The problem

Peat-reduced growing media differ from peat-based substrates in **water availability, nutrient dynamics (available Nitrogen) and pH**. Without adapted management, germination, seedling uniformity and growth may be affected, especially in trays and other systems with small substrate volumes.

The solution

Preliminary PEATLESS results and previous trials indicate that **peat-reduced media can reliably produce high-quality vegetable transplants** when cultivation practices are adapted to substrate properties. This includes **irrigation and fertilisation** and, in pressed soil block systems, sufficient cohesion and shape stability during handling and transplanting.

Benefits

Adapted management enables **peat reduction without compromising transplant quality**. Reliable germination and uniform nursery production can be achieved while reducing dependence on peat resources.

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Practical Recommendations

- Monitor pH, EC and nitrogen regularly to support timely fertilisation adjustments.
- Adjust starter fertilisation, especially when wood fibre or other nitrogen-binding materials are used.
- Uniformly pre-moisten substrates before sowing and irrigate frequently with small water volumes during germination.
- Maintain uniform moisture and avoid temporary drying.
- For pressed soil blocks, verify sufficient cohesion, shape stability and physicochemical buffering capacity, as peat contributes to block integrity during handling and transplanting.
- Test new formulations under commercial conditions before large-scale use.

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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