Optimising Compost Properties for Growing Media Applications

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The problem

Compost suitable for open-field use may not meet growing-media requirements because **pH or electrical conductivity (EC) can be too high**, biological stability insufficient, and particle size distribution unsuitable for the porosity and density needed in substrates.

The solution

Select compost by **feedstock and intended use**, then refine it as needed. A further **60–90 days of outdoor maturation,** with turning every two weeks, can improve stability and reduce EC and sometimes pH. **Sieving removes oversized or dusty particles** and helps achieve the required structure.

Benefits

Properly optimised compost is an **affordable, often local and recycled component** that valorises waste, **supports the circular economy,** and can perform very well in growing-media formulations.

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Practical Recommendations

- Always request batch-specific analytical data from the compost producer before purchasing.
- Compost characteristics vary with the feedstock—such as green waste, food waste, or sludge—so choose the type best suited to your application.
- Important additional tests, including hydrological properties, are not normally provided by the producer.
- Either producers can tailor the extended maturation and sieving process for premium supply, or substrate manufacturers can refine raw compost on-site for specific blends.

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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