Peat-reduced substrates for ornamentals in Italy

Alternative Materials

Compost is the main organic peat-replacing component, combined with pumice and, in some formulations, softwood fibre.

- Compost from food waste
- Compost from sewage sludge
- Compost from green waste
- Compost from agro-industrial by-products
- Softwood fibre
- Pumice

From candidate blends to validation

Candidate blends were formulated from local materials to meet crop-specific requirements.

1 Formulate candidate blends

Ten candidate blends were formulated from local materials to meet crop-specific requirements.

10 candidate blends

2 Select for research validation

Five of ten candidates were selected for research-facility validation.

5 selected for research-facility trials

3 Validate and demonstrate

Five blends are under validation; the final blend(s) for commercial demonstration are still being selected.

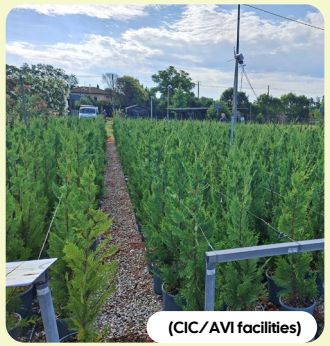
Ongoing selection for commercial demonstration

Validation in practice

Experimental trials with ornamental species.

- *Nandina domestica*
- *Cupressocyparis leylandii*
- *Photinia × fraseri* 'Red Robin'

(CIC/AVI facilities)



(CIC/AVI facilities)

The 5 selected blends for validation

Peat + pumice + green compost + food waste compost

Pumice + green compost + food waste compost + softwood fibre

Pumice + green compost + sewage sludge compost + softwood fibre

Pumice + green compost + sewage sludge compost

Peat + pumice + upgraded food waste compost

Key message for growers

- Peat reduction in ornamentals depends on balanced formulations. Compost is the main organic peat-replacing component, complemented by pumice and, in some formulations, softwood fibre.
- Key requirements include porosity, water retention, structural stability, mildly acidic pH and appropriate EC.

Current status and next steps

Five blends are under validation; the final blend(s) for commercial demonstration are still being selected.

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