The use of **Biodegradable pots** in the cultivation of **Poinsettia**

In Italy about 20 million plastic pots are used in the cultivation of poinsettias each year, creating substantial waste at the end of their use by the consumer over a short period of time. Part of the solution to this environmental problem is offered by the use of biodegradable and compostable pots instead of traditional pots in polypropylene plastic (PP).

An experiment was undertaken in a heated greenhouse at the Nursery Az. Agr. Vivai Altamura, Montecorvino Pugliano (SA), supervised by the University of Basilicata.

Three types of pots were utilized: Control pots consisted of traditional 14cm PP pots, Bio-1, 14cm biodegradable pots made of Mater-B (Novamont SpA); Bio-2, biodegradable 13.2cm pots made from rice-husks (Vipot) from Future Power Srl. The Poinsettia variety used was ‘Premium Red’

At the potting stage of the young plants, the Control and Bio-1 pots were filled with 1.25 litres of substrate while the Bio-2 pots were smaller and could accomodate only 0.85 litres of substrate (32% less that the other pots). Given the full monitoring and measurements applied during the experiment, this difference in substrate volume undermines precise scientific comparison between the results. Unfortunately, pots of precisely the same specifications of size and shape in each type of material were not available.

The material consistency of the biodegradable pots is important in terms of use in automatic potting machines, behaviour under various irrigation regimes and durabilità, also of colour, over time, from grower to retailer and to the point when the pots are thrown away by the consumers.

The results of the experiment prove that biodegradable pots can be considered as a viable alternative to plastic pots in the cultivation of Poinsettia and other ornamental crops. Bio-1 pots showed agronomic characteristics similar to those of the Control over a wide range of measurements such as: plant height, number of inflorescences, number and fresh weight of stems, bracts and flowers, distance between the bracts and the colour of the leaves and bracts. The measurements of plant characteristics grown in Bio-2 pots were never lower than about 10% (often 2-3%) than the measurements of the control plants in plastic pots and those in the Bio-1 pots. Given the fact that the Bio-2 pots contained 32% less substrate, it could be reasonably said that the performance of the Bio-2 equalled or exceeded the performance of the Control or Bio-1 pots. Further research is required.

For further information: “La coltivazione della Stella di Natale in contenitori biodegradabili”; V. Candido, Dipartimento di Scienze dei Sistemi Colturali, Forestali e dell’Ambiente, sez. Ortofloricoltura, Università degli Studi Basilicata [www.unibas.it](http://www.unibas.it) and:


The biodegradable pots used in the experiments are from: FuturePower Srl, [www.futurepowersrl.eu](http://www.futurepowersrl.eu) For those in Mater-bi, see Novamont, Fax 0321 699600, [www.novamont.it](http://www.novamont.it) [www.materbi.com](http://www.materbi.com) The use of biodegradable pots in Mater-bi has also been the subject of substantial research and evaluation in the region of Liguria co-financed by the EU Commission for the Environment.