# Poinsettia cuttings enjoy superior hydration in OASIS® Wedge® engineered foam propagation substrate compared to peat-lite soilless mix.

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## Introduction

Fast, ample hydration of unrooted cuttings is very crucial for rapid establishment and production of quality young plants with strong roots. However, excessive misting to maintain hydration during propagation can lead to numerous issues, including nutrient leaching and pathogen growth.

This is particularly pressing for cuttings from plants such as poinsettias, with larger foliage and higher evapotranspiration rates. When cuttings struggle to pull adequate water from the substrate, due to low water holding capacity or poor water availability, the detrimental impact of insufficient hydration manifests quickly.

Fig. 1. Unrooted poinsettia cuttings

Providing adequate hydration for plants with high water demands is further complicated when the plant does not tolerate overly wet or water-logged root zone conditions. Overwatering remains the most common mistake made by poinsettia propagators at all levels of experience. Substrates that provide ideal cutting hydration must address both these issues in the critical initial propagation stage and beyond.

## Objective

The objective of this experiment was to examine the hydration capacity of OASIS® Wedge® engineered foam propagation substrate compared to peat-lite mix with poinsettia cuttings.

## Materials & Methods

OASIS® Wedge® foam propagation substrate and peat-lite soilless mix were used in this study. Both propagation media were placed in OASIS® Wedge® strips and well saturated with water.

Unrooted 'Freedom Red' poinsettia cuttings were received from Guatemala. Immediately upon receipt, the cuttings were unpacked and inserted into the OASIS® Wedge® substrate and the peat-lite mix, then placed on greenhouse benches.

After insertion into the propagation media, the cuttings were not watered or misted for the course of the 6-day experiment. The quality of the cuttings with regard to turgidity was monitored and photographs were taken at insertion and at 3 and 6 days after insertion.

**Note:** This experiment was conducted to demonstrate the hydration capacity of two substrates. The methods outlined here were designed for that purpose, not to recommend propagation of poinsettias without misting and watering.

## Results

All the cuttings in the peat-lite mix turned flaccid in the first 3 days after insertion. By 6 days after initiating the experiment, all cuttings in the peat-lite mix were completely wilted. In contrast, as shown in Figure 2 below, cuttings in OASIS® Wedge® foam substrate remained turgid throughout the 6-day experiment, with the exception of a few leaves at the bottom of some cuttings.

After 6 days, the wetness and weight of both media were assessed (data not shown). The peat-lite was wetter and weighed more than OASIS® Wedge®, despite the wilted condition of the cuttings.

Fig. 2A–C. After insertion into the saturated propagation media, the poinsettia cuttings were not watered or misted during the course of the 6-day experiment. OASIS® Wedge® (on the left in each image) provided cutting hydration superior to peat-lite mix (on the right) throughout the experiment. 'Freedom Red" poinsettia cuttings are shown immediately after sticking (2A), 3 days after sticking (2B), and 6 days after sticking (2C).

*Fig. 2A*

*Fig. 2B*

*Fig. 2C*

## Conclusion

The quality of the poinsettia cuttings at 3 days and 6 days clearly demonstrates that OASIS® Wedge® engineered foam propagation substrate provides superior and faster cutting hydration than peat-lite mix. In addition, the fact that the peat-lite mix was wetter and weighed more than OASIS® Wedge® at the end of 6 days illustrates that cuttings were unable to utilize the water in the peat-lite mix, even though substantial water was present. These results can be explained by the fact that peat-based substrates have higher matric potential than foam, which makes water less available to the cuttings.

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