

# Poinsettia cuttings rooted in OASIS® Wedge® show no transplant shock or delay, even when transplanted with foam substrate dry and exposed.

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### Introduction

OASIS® Wedge® engineered foam propagation media provides propagators with a unique propagation experience that delivers superior cutting hydration without oversaturation. In addition, OASIS® Wedge® provides a uniform, consistent, pathogen-free substrate that promotes production of high quality, well-rooted young plants.

Though research regarding engineered foam propagation substrates is overwhelmingly positive — from cutting hydration to adventitious root formation and young plant performance — misconceptions still exist.

Growers less familiar with foam substrates may harbor the belief that foam-propagated rooted cuttings require extra care at transplant and that standard cultural best practices are insufficient to achieve optimal transplant quality.

Part of this misconception comes from the fact that OASIS® Wedge® foam substrate keeps water readily and easily available to cuttings. Cuttings can pull all the water they need, and the foam doesn't fight back. This is a primary reason that OASIS® Wedge® is an outstanding propagation substrate for plants that demand lots of water but don't tolerate oversaturation. However, because the plant can take up more water, water content in the foam can drop more quickly.

As cuttings become fully rooted and pull even more water, best practices for water management become more critical. As with all substrates, these include monitoring and watering regularly after rooting, saturating the substrate before transplant, and transplanting into a moist substrate. If best practices aren't followed, growers risk allowing the substrate to dry out and subsequent quality or crop loss.

While it is never recommended to forgo appropriate watering practices in normal production settings, OASIS® Wedge® has been known to withstand less-than-ideal cultural conditions and transplanting techniques. Even then, as this research shows, cuttings propagated in OASIS® Wedge® still produce outstanding transplants.

### Objective

The objective of this experiment was to explore and document the transplant quality of poinsettia cuttings propagated in OASIS® Wedge® engineered foam substrate under varied treatments, including dry foam substrate left exposed above the soil surface at transplant.



Fig. 1. Rooted poinsettia cutting in OASIS® Wedge® engineered foam substrate.

## Materials & Methods

Unrooted 'Prestige Early Red' poinsettia cuttings were obtained from Ecke Guatemala and propagated in OASIS® Wedge® foam substrate on a mist bench. After 26 days from initiation of propagation, the well-rooted cuttings were transplanted into 4-inch pots under four treatments:

- Treatment 1 – Foam transplanted dry with top surface exposed
- Treatment 2 – Foam transplanted dry with top surface buried
- Treatment 3 – Foam transplanted wet with top surface exposed
- Treatment 4 – Foam transplanted wet with top surface buried

For Treatments 1 and 2, water was withheld from the rooted cuttings for 3 days prior to transplant. The substrate was very, very dry, but the leaves were not yet wilting (did not reach the permanent wilting point), as shown in Figure 2. Cuttings in these dry substrate treatments were planted dry.

For Treatments 3 and 4, the foam-propagated rooted cuttings received normal water up to the time of transplant. As shown in Figure 3, the foam substrate was fully saturated with water prior to transplant, ensuring the cuttings in these wet substrate treatments were planted wet.

In the case of both dry foam and wet foam treatments, half of the rooted cuttings were transplanted so the top surface of the foam was covered. The other half were transplanted so that the top surface of the foam propagation substrate was left exposed. In all the above cases, the rooted cuttings were transplanted into a moist peat-perlite potting media.

Immediately after transplanting, the pots in all treatments were irrigated until the media was saturated. Then the young plants were not irrigated for the next 3 days. Photos were taken at 24 hours and 72 hours.

After 72 hours, the young plants were rewatered. At 96 hours, they were extracted from the pots, root development was examined, and additional photos were taken.

**Note:** The treatment methods described here were applied to study the transplant quality of foam-propagated poinsettia cuttings under varied conditions. Under normal transplant conditions, it is recommended that the top surface of the propagation media be covered by the transplant media.

Fig. 2. Prior to transplant at day 26 of propagation, OASIS® Wedge® foam substrate for half the rooted cuttings (Treatments 1 and 2) was very dry, but leaves were not wilted (did not reach the permanent wilting point).



Fig. 3. OASIS® Wedge® foam substrate for the remaining half of the rooted cuttings (Treatments 3 and 4) was saturated before transplant occurred on day 26 of propagation.



## Results

Immediately following transplanting at day 26 of propagation (which was followed by initial watering), transplants under all four treatments were equally healthy and vigorous, as shown in Figure 4. At 24 hours after transplanting, with no watering since initial watering, the quality of transplants in the four treatments was virtually indistinguishable.

At 72 hours after transplanting, with no watering since the initial watering, the quality of transplants remained consistent, as shown in Figure 5 (closeup) and Figure 6. This was regardless of whether the foam propagation substrate had been dry or saturated and/or exposed or covered at transplant.

At 96 hours after transplanting (with plants watered after 72 hours), transplant quality remained high across all treatments, as evidenced by well-established young plants. Even in plants with the foam substrate surface left exposed at transplant, roots grew out and touched the bottom of the pot, as shown in Figure 7.

Fig. 4A-D. Immediately after transplanting followed by initial watering, young plants in all four treatments were equally robust. From left to right, photo 4A (Treatment 1) shows foam transplanted dry with top surface exposed, photo 4B (Treatment 2) shows foam transplanted dry with top surface buried, photo 4C (Treatment 3) shows foam transplanted wet with top surface exposed, and photo 4D (Treatment 4) shows foam transplanted wet with top surface buried.



Fig. 4A



Fig. 4B



Fig. 4C



Fig. 4D

Fig. 5A–D. At 72 hours after transplant and no water since initial watering, transplant quality was consistent, regardless of treatment. From left to right, photo 5A (Treatment 1) shows foam transplanted dry with top surface exposed, photo 5B (Treatment 2) shows foam transplanted dry with top surface buried, photo 5C (Treatment 3) shows foam transplanted wet with top surface exposed, and photo 5D (Treatment 4) shows foam transplanted wet with top surface buried.



Fig. 5A



Fig. 5B



Fig. 5C



Fig. 5D

Fig. 6A–D. At 72 hours after transplant and no water since initial watering, transplant quality was consistent, regardless of treatment. From left to right, photo 6A (Treatment 1) shows foam transplanted dry with top surface exposed, photo 6B (Treatment 2) shows foam transplanted dry with top surface buried, photo 6C (Treatment 3) shows foam transplanted wet with top surface exposed, and photo 6D (Treatment 4) shows foam transplanted wet with top surface buried.



Fig. 6A



Fig. 6A



Fig. 6A



Fig. 6A

Fig. 7A–B. At 96 hours after transplant, with water after 72 hours, transplant quality remained high and consistent across young plants in all four treatments. Even in plants with the foam substrate surface left exposed at transplant, roots grew out and touched the bottom of the pot as shown on the left (7A), producing well-established young plants as shown on the right (7B).

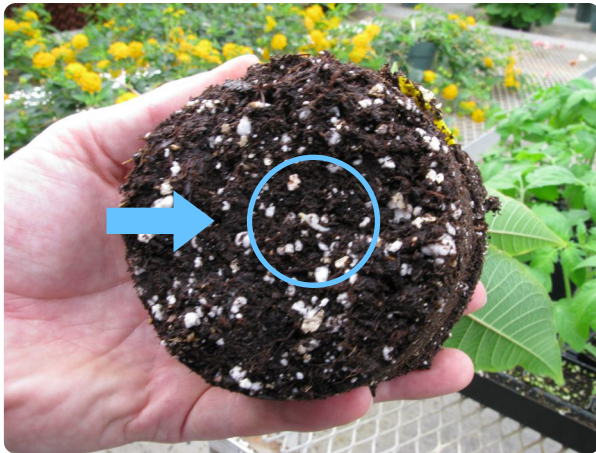


Fig. 7A



Fig. 7B

**Conclusion**

In all four treatments of this study, no transplant shock/delay was observed in the young plants propagated in OASIS® Wedge® foam propagation substrate. Transplant quality was equally high, irrespective of whether the foam was transplanted wet or dry and also whether the foam surface was covered with potting mix or left exposed at transplant.

**Conclusion  
(cont.)**

Across all treatments, roots grew to the bottom of the pots within 96 hours from the time of transplanting. Even with the foam propagation media planted dry and exposed at transplant — and no extra watering or care provided — transplant quality was not diminished. This clearly demonstrates that cuttings propagated in OASIS® Wedge® foam substrate can be treated like any other newly transplanted plug and do not require extra water or extra care at transplant beyond standard cultural best practices.

**The following practices will help assure optimal transplant quality with cuttings propagated in OASIS® Wedge® foam substrate:**

- + Always make sure to saturate the propagation substrate thoroughly before transplant.
- + Don't leave rooted plugs lying exposed on top of the transplant media, waiting to be planted. Keep the roots and the substrate protected until the transplant crew is ready to plant them.
- + Always transplant rooted cuttings into moist potting mix. Otherwise, the surrounding matrix will suck water away from both the plant and the propagation substrate.
- + Once the cutting is transplanted, thoroughly water the new transplant with a fertilizer solution to saturate the propagation and transplant media.
- + Growers should watch young plants carefully, especially during summer. Irrigation schedules must take plant growth, climate and similar factors into consideration to ensure the OASIS® Wedge® substrate doesn't dry out.

The best way to check the irrigation requirements is to lift the OASIS® Wedge® strips and feel the weight. If the strips are lighter, water them thoroughly. Don't wait until young plants show any signs of wilting because the roots might already be damaged by that point. Please refer to OASIS® Wedge® Product Usage document for more information.

If the grower follows standard cultural best practices when transplanting cuttings propagated in OASIS® Wedge® substrate, the transplanted cuttings can be handled in the same manner as any type of propagation mix, including peat-based soilless mixes. With OASIS® Wedge®, roots will begin to penetrate into the surrounding transplant media within 24 hours, producing well-established, quality young plants within 96 hours after transplant.