

INCREASE ROOTING SUCCESS OF HIGH ESSENTIAL OIL CROPS

High essential oil (HEO) crops including lavender, rosemary and thyme can be challenging to root. One possible reason for slow and non-uniform rooting is low hydration of cuttings prior to sticking. Cutting hydration decreases from the time of harvest until cuttings are placed into a high humidity environment. Significant dehydration may occur during shipping and when cuttings are not stored properly. Our research shows that cuttings can rapidly dehydrate by as much as 20% during post-harvest handling, which leads to:

- Poor stickability and handling
- Non-uniform rooting
- URC death

Follow the guidelines below to better handle dehydrated cuttings.

1) *Open the shipment of cuttings and check for condensation in the bag.*

- Condensation in the bag? Cuttings lost water (dehydrated).
- Paper in bag will absorb free water.



Condensation in bag

2) *Inspect cuttings for turgidity (dehydration).*

- Dehydrated cuttings droop when the cutting base is held parallel to the floor.
- Hydrated or turgid cuttings will remain parallel with erect leaves.



No hydration prior to stick

3) *If there are signs of dehydration, open bags and place the bags of cuttings into a dense fog for several hours to overnight in a cooler set between 40 and 50°F (4 to 10°C).*

- Cooler with no humidification can dehydrate URC.
- Cooler with humidification (in bags) can slow hydration.
- Cooler with humidification (out of bags) will rapidly hydrate.



Hydrated in cooler prior to stick

4) *After rehydration, check for turgid cuttings.*

5) *Stick cuttings.*

- Avoid drying out cuttings after sticking; move quickly to rooting area. During the first 48 hours, use frequent, fine mist for short durations to increase humidity without saturating the soil.
- A broad spectrum fungicide, like Pageant Intrinsic, may be beneficial.

Hydrating URC prior to sticking improves rooting uniformity for more than just HEO crops. Watch for more information from Ball Tech On Demand on this research and other important issues related to young plant production.