



Part of ROCKWOOL Group

# Grow Guide Cannabis Edition

Guides And Tips for Growing in Stone Wool  
Volume 2

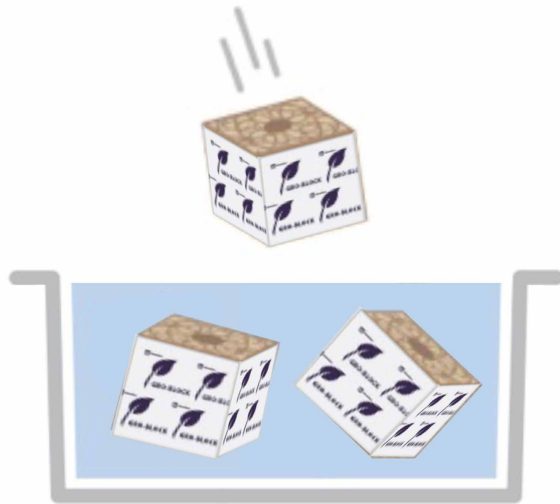
**Chapter 5: Propagation in Stone Wool:  
Transplanting**



## TRANSPLANTING

Transplanting from a small block to a large block or slab is an important step in plant development, allowing for further root development and greater plant stability for large fruiting and flowering crops.

Extra care must be taken throughout this process to prevent plant shock, delayed growth, and poor root development. Transplanting from a smaller volume of growing media into a larger one provides better irrigation control and allows the plant to develop the root system required to support maximum flower and fruit development.



### Preparation

The initial conditioning of blocks and slabs sets the stage for proper rooting-in. First, the EC of the conditioning nutrient solution should be close to what the plant has already been receiving. Using a similar EC will make it easier for the roots to grow into the new substrate. Ideally, the plant should already be irrigated with a nutrient solution of 1.5-3.0 mS/cm and a pH of 5.5-6.0 before transplanting.

Slabs can be conditioned using a drip irrigation system by filling the bags with the proper nutrient solution until they are full, ballooning, and taught at the seams. Once slabs are fully saturated, drainage slits should be cut at the lowest point of the slab, beneath the seam, closest to the drain. Placement of drain slits is important as it allows for optimal WC and EC management throughout the remainder of the crop cycle.

Large blocks may be conditioned using a watering wand, automated wetting line, or boom system by making several low-speed passes over the top of the blocks with a coarse spray until full saturation is achieved. Block weights and water contents must be checked to ensure that full saturation has been consistently achieved.

Blocks can also be conditioned by fully immersing them in a reservoir containing the proper nutrient solution until they sink.

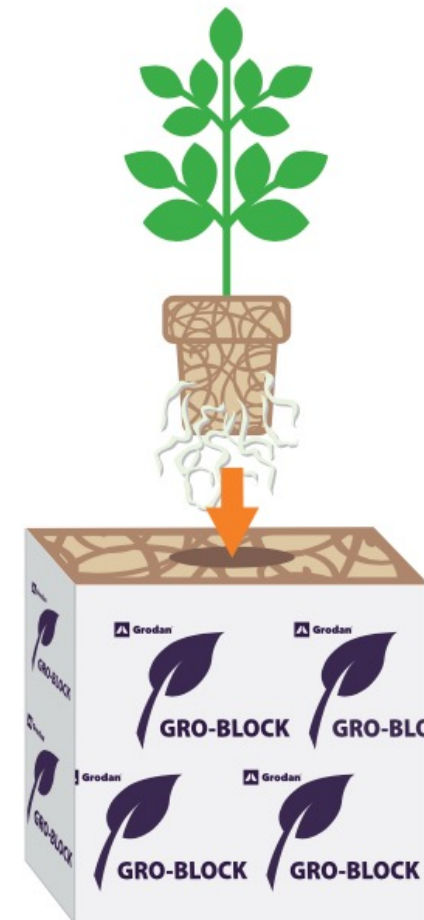
Blocks may also be conditioned using a flood table, as long as the solution can reach the top of the block and be held for a few minutes at that height.



## Transitioning to Transplant

Plants must be carefully transitioned to new environments to avoid transplant shock that will delay growth, reduce final product yield, and negatively impact quality. Environmental conditions such as temperature, humidity, CO<sub>2</sub> and light intensity should be maintained as close as possible to what the plant has already been acclimated to for the first 48-96 hours after transplant. After this acclimation period climate and lighting conditions can be intensified and manipulated as needed to target maximum growth and photosynthesis.

When transplanting, the water content (WC) of the transplanted block should around be 70% to 80% at field capacity. Once the transplant is placed on the slab or larger block, a single irrigation event equal to 3% of the total substrate volume should be delivered to even out the WC and EC at the point of interface and encourage water holding in the upper block. Irrigation events should be delivered via pressure-compensating drip emitters with a maximum flow rate of 0.3-0.5 gph.



**VWC = ~ 70 - 80%**



## Transplanting to Blocks

### Irrigation Strategy

Irrigation strategy plays an important role in how a plant develops during the transplant phase. By utilizing the Grodan root-zone sensors to accurately measure substrate WC, EC, and temperature, you can determine the optimal irrigation strategy for your crop.

After the initial transplant, the Grodan root-zone sensors should be placed in the top block for the first 24-72 hours. Irrigation volumes of 1-3% should be applied approximately every 1 to 4 hours for the first 24-72 hours after transplant to maintain a WC between 60-70% in the top block. With small shots and a rest time between irrigation events, growers can maintain upper block water contents high enough to sustain existing roots until they transition to the lower block or slab, while simultaneously preventing the top block from becoming over-saturated.

24-72 hours after the initial transplant, any night-time irrigations should be eliminated, and the Grodan root-zone sensor should be moved to the bottom slab or block. Day-time water content should be monitored and maintained at 50-75%. Roughly 5-7 days after the initial transplant, the plant should be well rooted into the new substrate, and the desired crop steering irrigation strategy can be implemented for vegetative or generative growth.

