

Handling and placing of the slabs

Preparing for the new crop 3-3

Delivery

- 1 Outside storage is not recommended.
- 2 Store in a clean and dry area separated from the production area.
- 3 Do not stack pallets/slip sheets higher than three.
- 4 Make sure the pallets/packs cannot accidentally be damaged by vehicles or personnel.
- 5 Avoid contamination of the substrate or foil wrapping with dust, soil or exhaust fumes.
- 6 Leave the packaging intact on until laying out the slabs in the greenhouse.
- 7 To ensure traceability make sure you retain any relevant delivery information such as retrieval codes.



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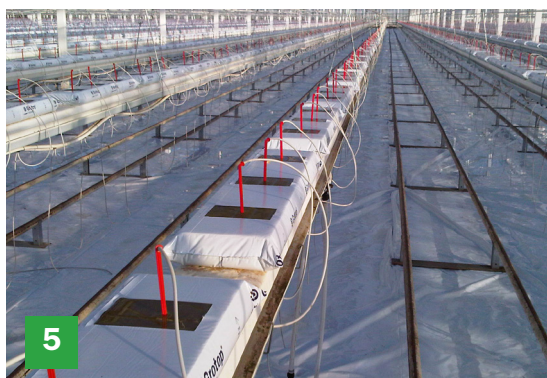
Laying out the slabs

- 1 Before laying the slabs, the greenhouse should be thoroughly cleaned. See factsheet Cleaning the greenhouse.
- 2 While unloading the pallets or unpacking the packs, handle the slabs carefully to prevent damaging the substrate or foil wrapping. Damage of the foil can result in uneven initial saturation and may lead to poor crop establishment and an uneven plant stand.
- 3 Make sure the slabs are positioned the right way up: notice the text and arrow on the foil wrapping. The ventilation hole and sealing strip are on the upper side of the slab.





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Initial saturation

- 1 If you have not ordered pre-cut plant holes, cut the planting positions in the foil wrapping based on the required plant.
- 2 Do not plant onto dry slabs.
- 3 Saturate the slabs at least 48 hours prior to the planting date to allow the solution to warm up and prevent transplant shock during planting. Proper saturation before planting is essential to establish and maintain the water characteristics of slabs. Under high light and temperature conditions temperatures in the root zone can become too high. High root zone temperatures ($>26^{\circ}\text{C}$) increase the risk of Pythium infection. To minimise the risk, the slabs should be initially saturated the night before the young plants are delivered to the greenhouse.
- 4 Insert the irrigation pins into the stone wool but be careful not to push them through the slab. Gradually fill the slabs with the appropriate nutrient solution.
- 5 After filling, ensure that all slabs are correctly filled with nutrient solution and top up manually if required. The foil wrapping should be bulging and the nutrient solution should be visible on the surface of the stone wool. Variations in water content at this stage will make accurate root zone management difficult and may create an uneven plant stand.
- 6 Leave the slabs fully saturated for at least 24 hours to achieve the maximum capillary action capacity of the slab. An exception may only be made under extreme weather conditions when the slabs are saturated the night before to prevent the substrate solution from becoming too hot.



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Cutting the drain holes

Only do this when the slabs are fully saturated.

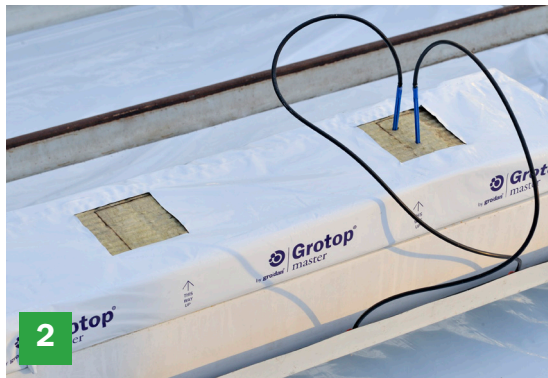
1 Grodan takes its position in respect to sustainable cultivation seriously. The best way to reduce emission of fertilizer to surface water is to recycle the drain solution from day 1. When the drain holes are cut excess nutrient solution will flow into the drain channels. This solution will be clear, allowing UV systems to work effectively and will be perfectly balanced. Therefore provided the distribution system has been properly flushed with clean water it is perfectly safe to capture and re-use this solution on the new crop.

2 The drainage holes can be cut 24 hours prior to planting. For optimum results it is advised to place the knife underneath the slab and make the cut in an upward direction, (this will also avoid tearing the floor covering if hanging gutters are not used). The opening should measure 3 cm. To ensure the drain opening does not become blocked during the cultivation cycle widen the opening with your fingers. Never create a reservoir of 'dead' water at the bottom of the slab. This will limit root development and root function.

3 One drain point is required per 133 cm slab. For slabs longer than 133 cm in length one or two drain holes can be cut, based on the preference of the grower. Please note more drain holes will make it harder to resaturate the water content in the slab in phase 3 and 4. Also more drain is needed to level the EC in the slabs. Especially in the steerable Next Generation assortment, the number and position of drain holes are important to focus on. More information on the Grodan 6-phase model on www.grodan.com.

4 The closest distance between first dripper and drain hole defines the water behaviour in the slab. The wider the distance, the more refreshment and resaturation can take place in the slab. In the Next Generation assortment the advice is at least 20 cm.

5 The cut should be made at the lowest point at the end of the slab in the direction of the slope. In case of an uneven profile, extra drainage holes will be required, once the slabs have settled at the lowest point. Never make the drainage holes directly underneath a propagation block or extra irrigation pin. Also be aware of block position at inter plantings on the same slab or the position of an extra dripper in the middle of the slab.



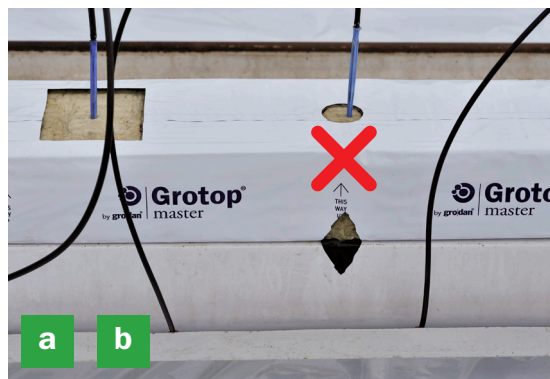
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Please note

If the drainage system cannot process the large flow of drainage water when drain holes are made, start at the lowest point of drain system (end of row) and work backwards towards the highest point (concrete path).

If circumstances (too high WC or more frequent watering strategy) are demanding for a change during the crop it is easier to make an extra drain hole than to reduce the number of drain holes in a slab.

- a** Wrong drain holes
- b** Drain hole below the dripper
- c** Drain hole under the block
- d** Opening too small, not at the bottom





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Planting the crop

- 1 Agree with the propagator on the time of delivery and discuss the climate conditions during transportation so that the plants arrive in optimum condition.
- 2 Make sure the greenhouse and the slabs have the right temperature, for good rooting in this should be between 18°C and 28°C. Allow two or three days of at least 19-20°C to warm up the greenhouse. The maximum temperature difference between greenhouse and propagation is 3°C at the most.
- 3 When unloading the plants, avoid citing them in cold areas such as the packing shed and move them directly to the greenhouse. Start planting or placing them beside the plant holes as soon as possible. Under extreme weather conditions plant in the early morning or wait until the evening when the temperature is lower.
- 4 After planting, apply 1 or 2 irrigation rounds to even up the block WC and thereafter based on block WC 40-70%, climatic conditions permitting.

For more information speak to your Grodan representative or local Grodan dealer.

