



WATERING MAT

I - CHARACTERISTICS

An effective capillary mat consists of 3 layers (+ 1 optional):

1 - PLASTIC LAYER (lower)

This is the part of the mat that is in contact with the ground. It is waterproof and of a certain thickness to enable

- **Insulation / protection** for the culture from diseases that can exist in the soil or the culture medium, particularly with porous surfaces which are difficult to disinfect (wood, gravel, etc.).
- **The homogenisation of ground irregularities**, to provide a better distribution of water under the pots and prevent puddles from forming. Surfaces such as tar, concrete and very hard-packed gravel can also ensure very good regularity of the ground.

N.B.: A slight slope (1°) facilitates surplus water run-off after watering. The tilt must be in the direction of the width and not the length of the culture surface.



2 - ABSORBENT LAYER (middle)

Its maximum absorption ability must be 1l/m². Any thicker would not enable good watering management. Water little and often to allow the root system to develop well.



3 - WOVEN POLYPROPYLENE LAYER (upper)

Being stuck to the absorbent layer, it gives the mat its solidity and allows it to roll for easier storage.

4 - OPTION - Micro-perforated plastic

- Depending on the watering system it is advisable to add micro-perforated plastic to the mat (above the woven polypropylene layer) to extend its life. It also enables a slower absorption of water and reduces the accumulation of salts and foams in the mat.
- Some are available with a black side and the other white. Due to light refraction, the latter allows the cyclamen shape to be rounded off.
- It should be discarded after each culture.
- **WARNING: watering on the plastic is not recommended.**



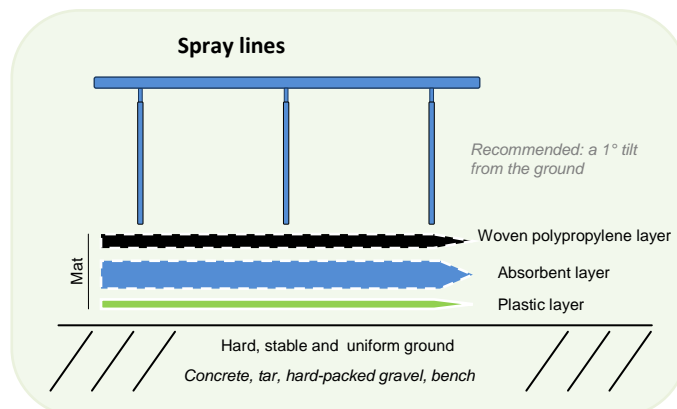
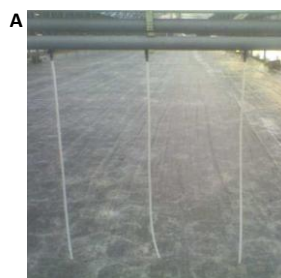
II - WATERING

1 - HOW DO I WATER THE MAT?

2 systems are very suitable:

- **A spray line** equipped with hoses which virtually descend to ground level lets you water the mat without wetting the plants (A). In this case pots need to be adequately spaced so that the hoses pass between the plants (B).

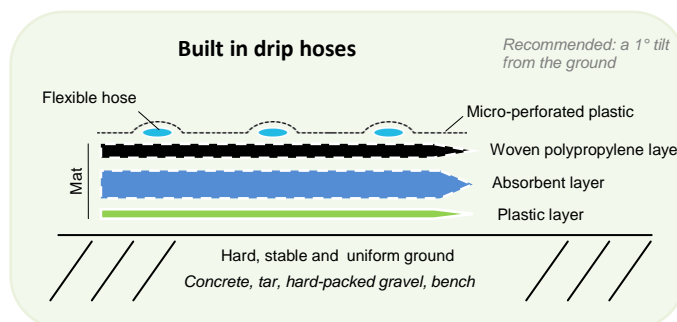
Using micro-perforated plastic is not recommended with this watering system.



- **Built-in drip hoses** (every 20/30 cm) installed 1 m or 1.5 m apart from each other, on the mat.



In the case of adding micro-perforated plastic, it is important to foresee flexible hoses, installed under the plastic.



You must remember that the mat's absorption capacity is 1l/m². Short watering times are therefore recommended.



WATERING MAT

2 - WATERING MANAGEMENT

- After watering, the absorbent material will dry in a few hours (in summer the drying time is short).
- **When should you water again?**
 - ✦ The reference point should be the pot and not the mat
 - ✦ The humidity level in the pot should reach ½ or ⅓ inside the pot. Never leave the substrate fully dry, the peat could then contract and lose contact with the mat.
 - ✦ Substrate near the bulb should remain dry. It is good to prevent Botrytis.
- The surplus water that is not absorbed by the pots evaporates into the greenhouse, thus producing a slight cooling effect around the pots.
- Poor watering management can cause health problems.



Botrytis



Botrytis

III – QUESTIONS / ANSWERS

1 – CAN YOU GROW ON THE MAT IMMEDIATELY?

No, installing the pots on the mat should only be done after the **rooting period**, during which it is advisable to irrigate from above:

- With the same spray line, using fine nozzles and not hoses,
- Or even by hand.

The rooting phase lasts 4 to 5 weeks. During this period if the pots are in contact with the mat the compost will be too wet (watering from above + absorption of water from the mat from below). In this case the roots will not be able to develop properly

It is therefore essential to ensure good drainage and avoid asphyxiation of the roots by insulating the pots from the mat.

Tip: use transport trays with large drainage holes and place the tray containing the plants on another inverted tray.



Transport tray on inverted tray



Transport tray with wide hole for drainage.

2 – SUITABLE POTS AND SUBSTRATES

The same types of pots and substrate as those used for a sub-irrigation system are suitable. There are numerous pots with very efficient designs for use on watering mats (see the "Potting stage" factsheet).



3 - WHAT POT SIZE?

All pot sizes can be used provided they are suitable for cultivation. For 17 and 19 cm pots (6.75 -7.5"), the quantity of water and the frequency of watering needed could sometimes be insufficient in a period of high heat with such a fine absorbent layer. This may lead to asphyxiation, or make the plants wilt, two situations which involve the risk of root loss.



4 – HOW SHOULD THE MAT BE MAINTAINED?

The micro-perforated plastic film extends the life of the mat which can be used for several years.

It is important to disinfect it after each culture in order to avoid health concerns. The mat is not very thick so it can be disinfected easily. Several products have been approved and will not leave any residue (for example: benzoic acid or peracetic acid).

It is strongly advisable to rinse it thoroughly with clear water every year to remove salt build-ups from the fertilisation or growth regulators from the previous crop.

The micro-perforated film, however, is discarded.