

Priva Root Optimizer

Better roots and increased production

Optimal water dosing ensures a healthy root system, which in turn increases production. Priva has developed an intelligent aid to allow the plant itself to influence water dosing: the Priva Root Optimizer. This is a module which determines every irrigation cycle based on the quantity of water absorbed and the water content of the substrate. This optimizes water dosing in line with the conditions, the state of the crop and the type of substrate.



Priva Root Optimizer software

The Root Optimizer provides the grower with an automatic start strategy based upon the crop's requirements. The Priva Root Optimizer determines the water absorption per growing section based on a measuring set-up which contains a representative number of plants. The result is that the irrigation cycle is started at the right time, the crop is given exactly the right amount and the substrate is never again too dry or too wet. The Root Optimizer system can be used for all crops.

Optimizing the water dose

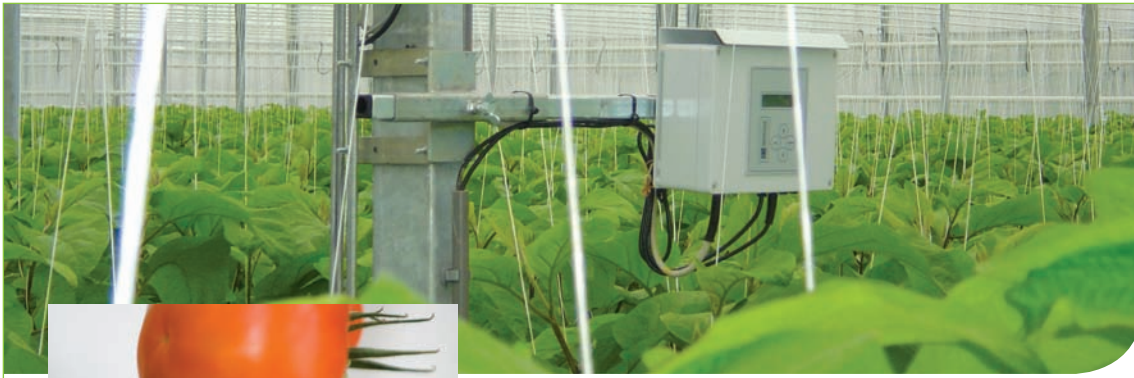
The start time in the morning is crucial. Root Optimizer can determine exactly what state the crop is in after the night. The transpiration is recorded per growing section and the optimal start time for water dosing is determined.

The start time can also differ per growing section as a result of transpiration differences. In the afternoon the Root Optimizer will automatically reduce the water dose and ensure the correct moisture content during the night. This is extremely important for a good air/water ratio in the substrate and prevents root problems. The greatest benefit from the Priva Root Optimizer is typically seen after the longest day, when the transpiration from the crop decreases and the air humidity increases.

Measuring set-up

The Root Optimizer uses the following measuring set-up: the Priva Groscale slab weigher, the Priva drain sensor system which measures the amount of drain running out of the substrate and the unique Root Optimizer software in the Intégro which regulates the moisture management for the substrate on which the crop is grown.





The Priva Root Optimizer calculates the water absorption and determines the optimal water dose based on the substrate weight, the water dose and the quantity of drain water. This ensures that the moisture level of the substrate is always optimal and the crop is able to keep transpiration, growth and the absorption of food in balance.

Drain water measurement

The Priva drain measurement component has been specially developed to quickly and very accurately measure the quantity of drain water from a substrate (mineral wool or Perlite for example) in combination with the Priva Groscale and the Priva Root Optimizer software. The optimal water dose is determined based on this measurement.

Drain measurement characteristics:

- measuring capacity of approximately 10 litres per hour
- drain gutter lengths of 2 metres and 2.8 metres

Priva Groscale

The Priva Groscale measures the weight of the slab very accurately. Interference introduced by activities is filtered out of the measured weight. The difference between the weight increase, weight decrease and drain quantity is an indicator of the transpiration and growth.

The major advantage that the combination provides is that it is not only the radiation that controls the water dose, but the water absorption too. This water absorption by the crop which is determined by the Root Optimizer is supplemented with the correct quantity of feeding solution at the correct time. Groscale characteristics:

- Highly accurate measurements
- Max. load up to 100 kg and 200 kg
- Robust and durable
- Weight read-out at the site of the Groscale interface.

Advantages of the Root Optimizer

- Easy selection of the required water dosing strategy
- Precise and timely addition of feeding solution based on the crop requirement
- Healthy root environment from optimal moisture content control ensures undisturbed absorption of food
- Realisation of the required drain quantity
- No build-up of salt in the substrate
- Automatic adjustment of the control if there is a sudden change in conditions
- Weight errors do not affect the calculations

Need to know more?

Call Priva at T +31 (0)174 522 600 or visit our website www.priva.nl. We will be delighted to help you with your next step.



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