

QUEST Crop report – Week#4
Belgium, January 21st, 2002

At this moment, plants sown before November 10 are already on the hole. For these plants, irrigation strategy is very important and will have an effect on the rest of the crop. The susceptibility to Botrytis can now already be influenced. Those who water too much and create a lush plant with weak cells will increase the risk of Botrytis later in the year. Botrytis spore pressure will also play a role.

Once the plants are well established, the drip frequency can go down in order to create a strong root system and a generative plant. This means that the water content (WC) of the slabs must be reduced during the next couple of weeks. Use the proper devices to monitor this: a weigh scale or a WC meter. A good strategy is to work with long irrigation turns (up to 150 mL per plant). This will also help maintain the proper slab EC. The forecast for the next period is for dark but mild weather. This means that there will be days with only one irrigation (possibly up to 200 mL). It is preferred to water between 10.30 and 14.00 hrs. The drip EC is 3.3 to 3.5. Should the slab EC go up, reduce the drip EC to 3.0.

Note: If you water too much, you will get a watery plant. A watery plant requires more heating. This releases more moisture into the greenhouse, which means more venting. Your fuel costs will be higher in this case.

Should it turn sunny, watch out that the slabs do not dry out too quickly. A WC reduction of 6 % overnight is allowed. During cold and clear nights, an evening irrigation may be necessary. Should the weather stay mild and humid, with little wind, we must keep the crop active and not deplete it. The purple color in the head of the plant can disappear quickly. In new and tight greenhouses the vents can be loosened a bit so that there is some air exchange. The venting temperature of the lee-side is set close to the heating temperature (to 0.5°C). The minimum pipe can have a humidity increase of up to 5°C.

At the moment the 24hr temperature of the early crops is 18°C. An example:
Night, 17°C; Day, 19°C + 1 – 1.5 degree afternoon increase to get a good color in the plant.
Should mild and dark weather continue, lower the night temperature to 16.5°C and also reduce the afternoon boost. Maintain a minimum pipe at night and ramp up slowly, starting at sunrise. Only when the night temperature is extremely low (less than 16.5°C) should you start ramping before sunrise. Start dosing CO₂ when the plants become active, namely when the CO₂ concentration begins to drop, about one hour after sunrise.