

## **Matrix Crop Report – Week #11**

### **Belgium March 8th, 2004**

The fruit load continues to slowly increase on the first plantings. The first clusters are sizing nicely. The heads are rather thin in a few greenhouses. We therefore recommend using a smaller day-night difference to make the heads stronger, for example: 17°C night and 18°C day.

In crops where the fifth truss is not yet flowering, the day-night difference may still be a bit larger. At this stage the plant still needs some generative steering to avoid that the fruits become too big. Consider set points of 17°C night and 20°C day with 0.5°C light increase during the night.

Solar irradiance can be quite high already in March. This is reason to reduce the minimum pipe significantly and in time in order to avoid BER. With full sun this may be a reduction of 15 to 20°C. Also limit the maximum pipe to 55-60°C for the same reason.

To reduce the development time and to improve air circulation around the lower part of the plants, a grow-pipe of 40 – 45°C at the height of the second/third truss can be very helpful. Keep the following in mind:

- During the day the grow-pipe is 45°C, possibly 5°C warmer if leaves are removed during dark weather.
- Have a light reduction of 5 – 10°C on the grow-pipe.
- If a grow-pipe is used, reduce the minimum pipe with 5°C so that it does not get too warm in the greenhouse.
- Right after removing leaves, it is advisable to have the grow-pipe at a maximum of 40°C at night.

Be careful with venting before 10:00 hrs and after 15:30 hrs if the outside temperature is low. This is to avoid cold air on the heads. In new greenhouses the vents can be slightly cracked starting at 10:00 hrs to maintain enough activity and to keep the climate more uniform. Further venting on humidity. The minimum vent opening should be on humidity instead of a having large reduction on temperature.

The potassium concentration in the slabs tends to be low at the time of the first harvest. It is therefore advisable for the later plantings to gradually increase the amount of potassium.

Last year there was quite a bit of fruit drop with various varieties at the start of the season. With that in mind pay attention to the following items:

- Fruit drop can be caused by the formation of ethylene. Improving air circulation below the foliage can reduce this. The earlier leaves are removed, the better the air circulation and light penetration around the lower clusters.
- Breaking leaves makes the plants shake suddenly and this can also cause fruit drop. Cutting leaves may be a solution.

- Borax can play an important role, also preventatively. By multiplying the borax target by 1.5 to 2, the risk of fruit drop may be reduced. At the moment that fruit drop occurs, the values can be increased a little more. However, when levels are too high, toxicity can occur.