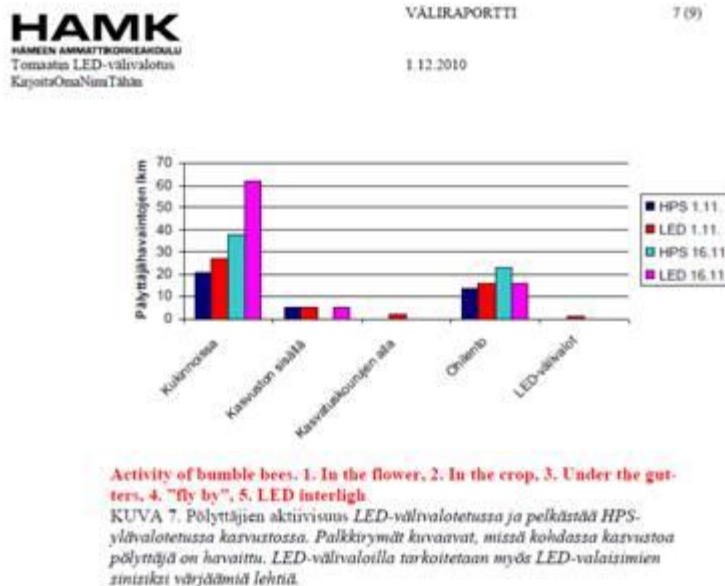


Experiences bumble bee activity and interlighting tomato

21st of October, 2011

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- In none of our tests we have found negative effects of the LED interlights on bumble-bee activity. In several tests there have been paid extra attention to:
 - Finland, Hamk University (Lepaa). Below there is a figure which indicated flying activity of bumble bees that has been observed. It can be seen that it seems that even more flower visits were relatively done in the LED interlighting treatment (with SON-T top) as the other side of the greenhouse, only SON-T top. The graph indicates 2 counting data (11th of January and 16th of January)



- Improvement Centre there have been in our first trial no specific remarks on bumble bee activity. In the second trial last year there have been some problems with not that good fruit set in the beginning of the trial. It was thought that it could have 2 reasons: 1. A failure in micro-elements dosing 2. Bumble-bee activity. Several actions have been taken: 1. Micro-element dosage corrected. 2. Place the bumble bee box further away from the air circulation tube under the gutter, so less air movement close to the bumble bee box. Next to that they were given extra feed. This extra need for feeding was this season seen in more greenhouses (also with SON-T). After these changes no problems were seen anymore and bumble bees were doing a good job. So the growers involved don't think the problems were related to the LED lighting.

In conclusion: we haven't seen any negative relation between the use of LEDs as interlighting in combination with SON-T on the activity of bumble bees.