

# CUCUMBERS: CARBON DEFENSE® CONTROLS POWDERY MILDEW

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## RESEARCH SUMMARY

Independent trials on cucumber were carried out in a greenhouse at Frostagrønt AS, the largest commercial cucumber grower in Norway. The study evaluated Carbon Defense for efficacy in controlling powdery mildew in cucumbers.

## PROTOCOL

- Randomized complete block design, 8 plants in each block, 3 replicates
- Treatments started three weeks after sowing, on the day before planting in the greenhouse
- Carbon Defense was applied once a week for three weeks
- A total of 5 measurements were taken on days 3, 7, 11, 14 and 18 after the first treatment

### Treatments

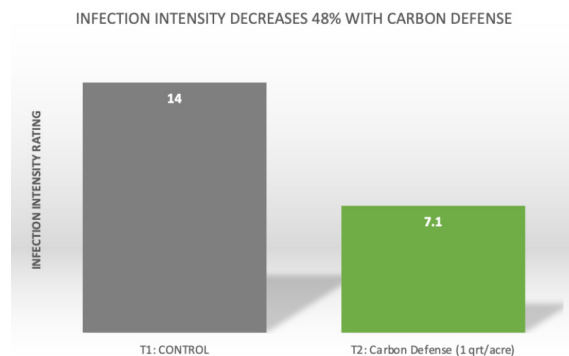
- T1: Control (water)
- T2: **Carbon Defense** at 1 qt/acre



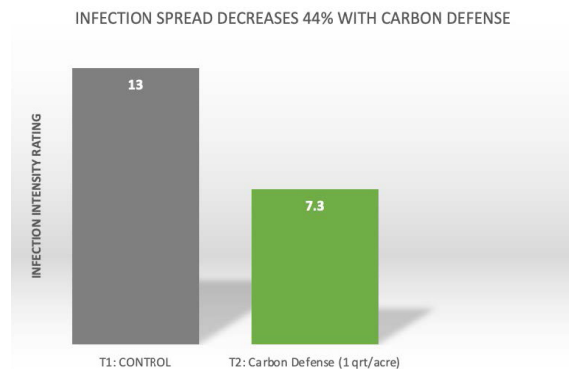
**Figure A:** Picture of the control plant (left) and treated plant (right) from greenhouse study.

## RESULTS

- Researchers observed treated plants were brighter green, healthier, and had bigger leaves than the plants without Carbon Defense treatment (figure A).
- All treatments had a significant mildew inhibitive effect compared to the control ( $p \leq 0.02$ ).
- Compared to the control, Carbon Defense reduced infection intensity ratings by 48% (figure B).



**Figure B:** Treated versus control plants with Carbon Defense (1 qt/acre)



**Figure C:** Infection spread measured, compared to plants treated twice with 1 qt/acre Carbon Defense