

Effect of EcoFlora and ComCat on Quality of California Strawberries

SG Crop Solutions



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Summary



In 2021, we conducted a trial on strawberries at the Helena Research and Development facility in Salinas, CA.

The results showed that **ComCat** worked well to improve fruit size (11% increase) while suppressing Botrytis (20% decrease in disease incidence and a 21% decrease in disease severity). **EcoFlora**, which contains beneficial microbes, decreases disease incidence by 28% and disease severity by 40%.



Trial Overview

Location: Salinas, CA

Researcher: Steve Milton, Helena Research and Development

Trial Design: Randomized complete block with 4 replications

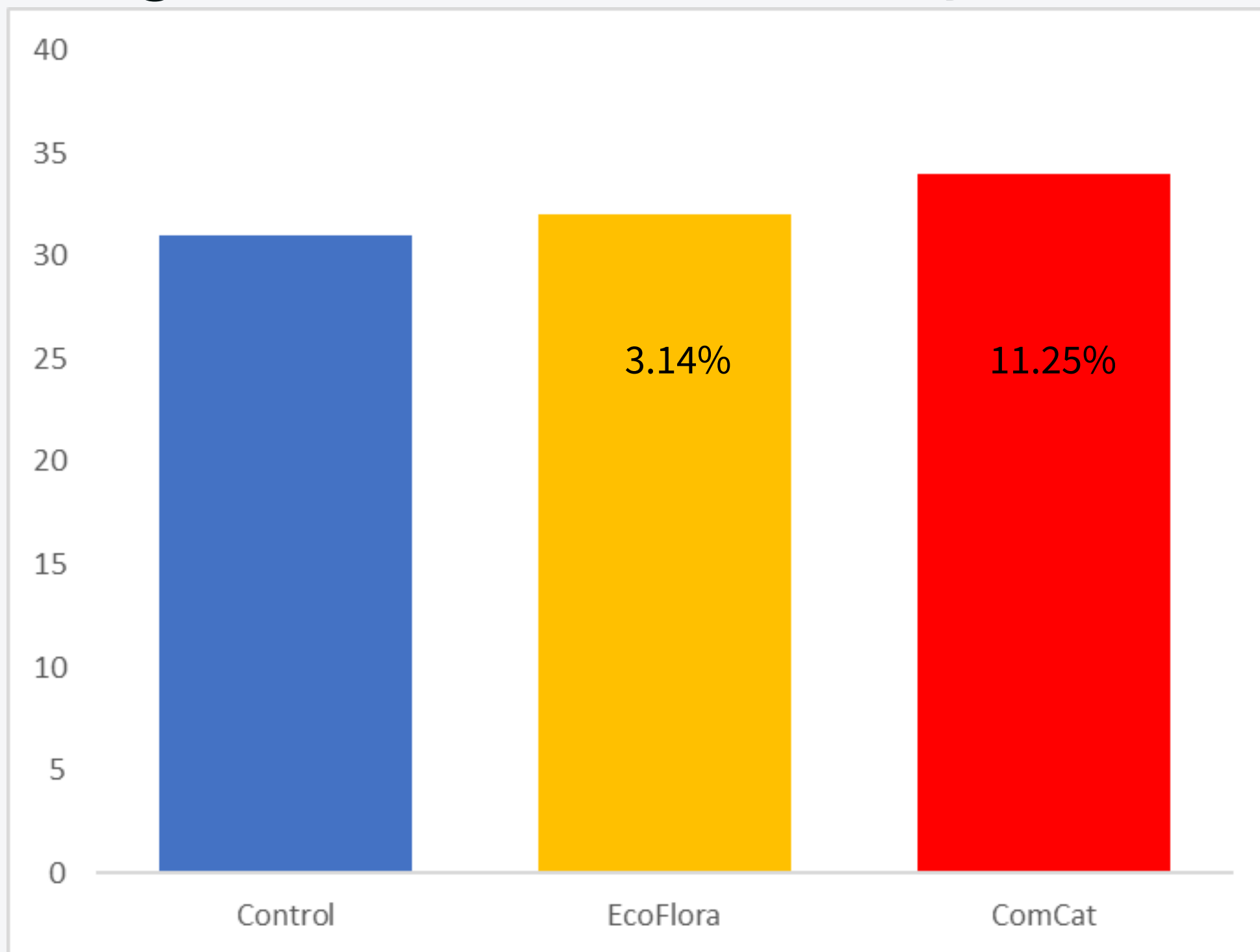
Treatments: All treatment applied through the drip irrigation on a 21 day interval beginning April 28, 2021. The plants were at full bloom and full production.

1. Control
2. EcoFlora applied at 8 oz/A
3. ComCat applied at 20 grams per acre

Result Collection: Plant weight as evaluated over 5 evaluation periods between May 5, 2021 and June 16, 2021. Disease incidence and severity were evaluated by using 10 fruit and leaving it at room temperature for 7 days to facilitate disease development.

Weight of 10 Fruit

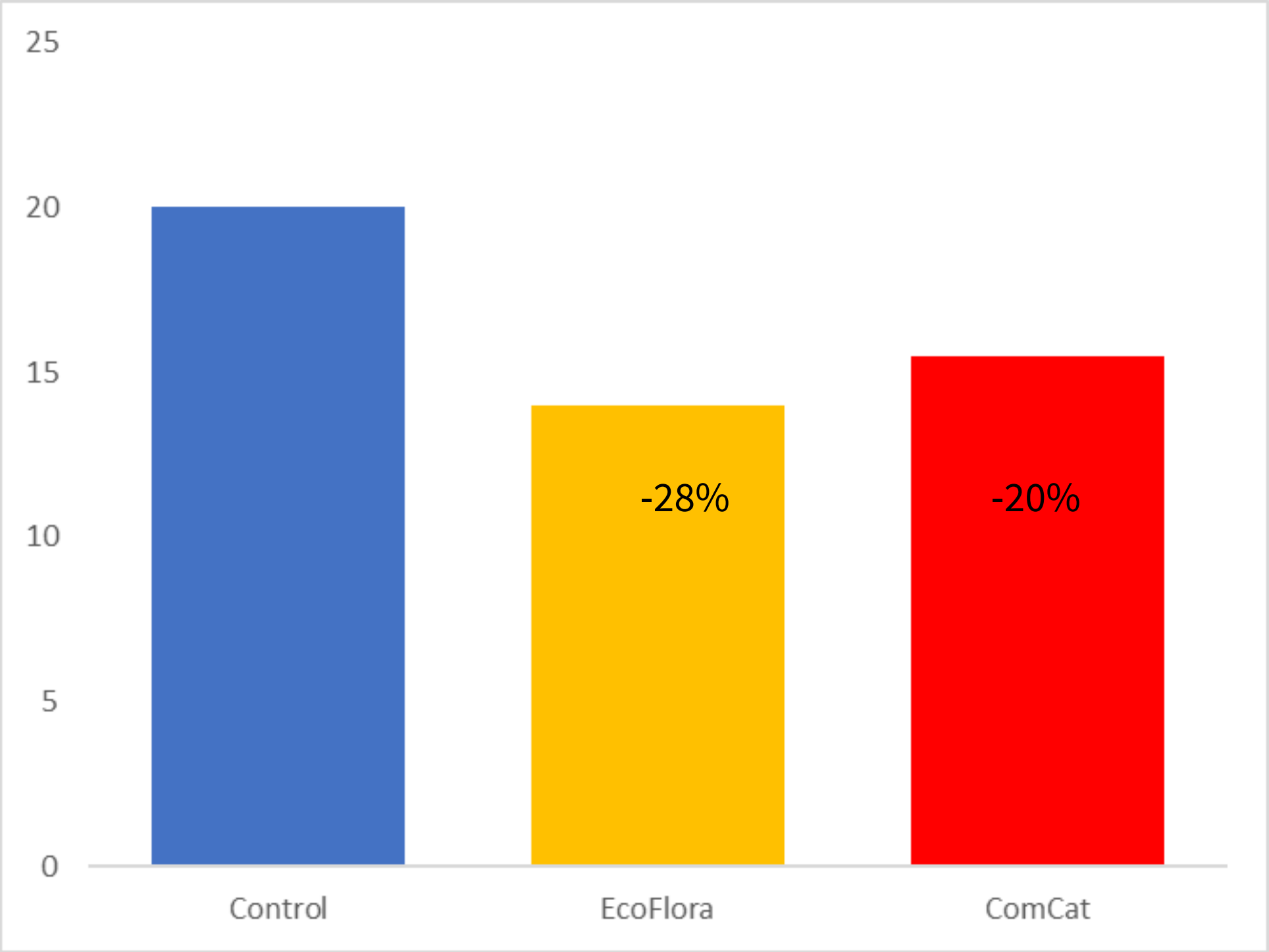
Average of 5 Evaluations May 5-June 16



- Fruit in the **ComCat** treated plots weighed significantly more than the control ($p=.07$), an 11% increase. This would contribute significantly towards overall yield and quality of the crop.
- This can be attributed to “Supercharged energy production”.

Differences analyzed using a T-Test comparing each treatment to the control. Treatment probably of differences is on each treatment bar.

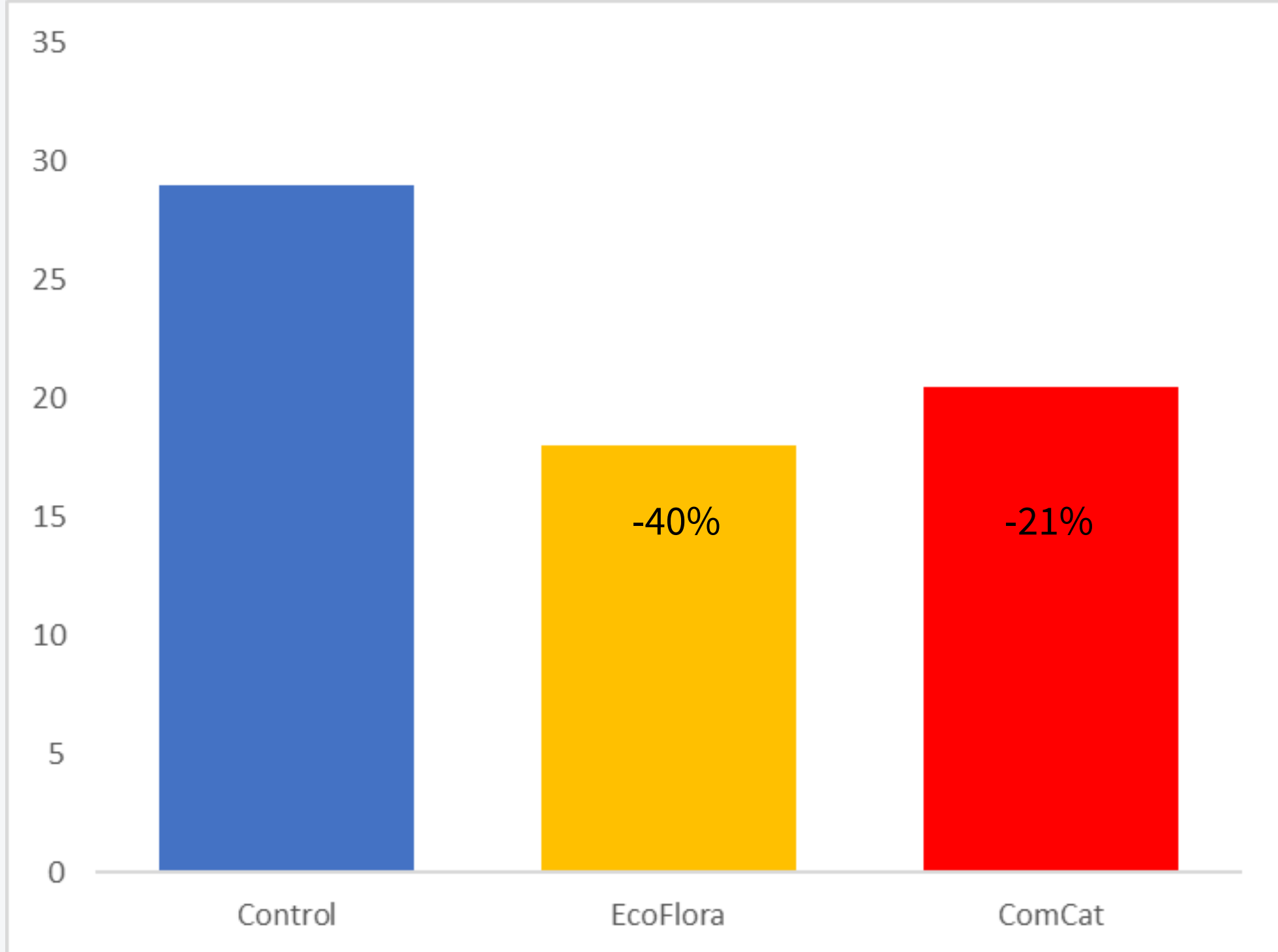
Post Harvest Botrytis Evaluated 7 Days After Each Harvest - Average of 5 Evaluations 5/5-6/16



- Both **EcoFlora** and **ComCat** had less post harvest Botrytis incidence than the control.
- **EcoFlora** performed the best with a 28% reduction in disease incidence compared to the control.
- This can be attributed to “Creating a symbiotic physical barrier composed of diverse microbial populations”.

Differences analyzed using a T-Test comparing each treatment to the control. Treatment probably of differences is on each treatment bar.

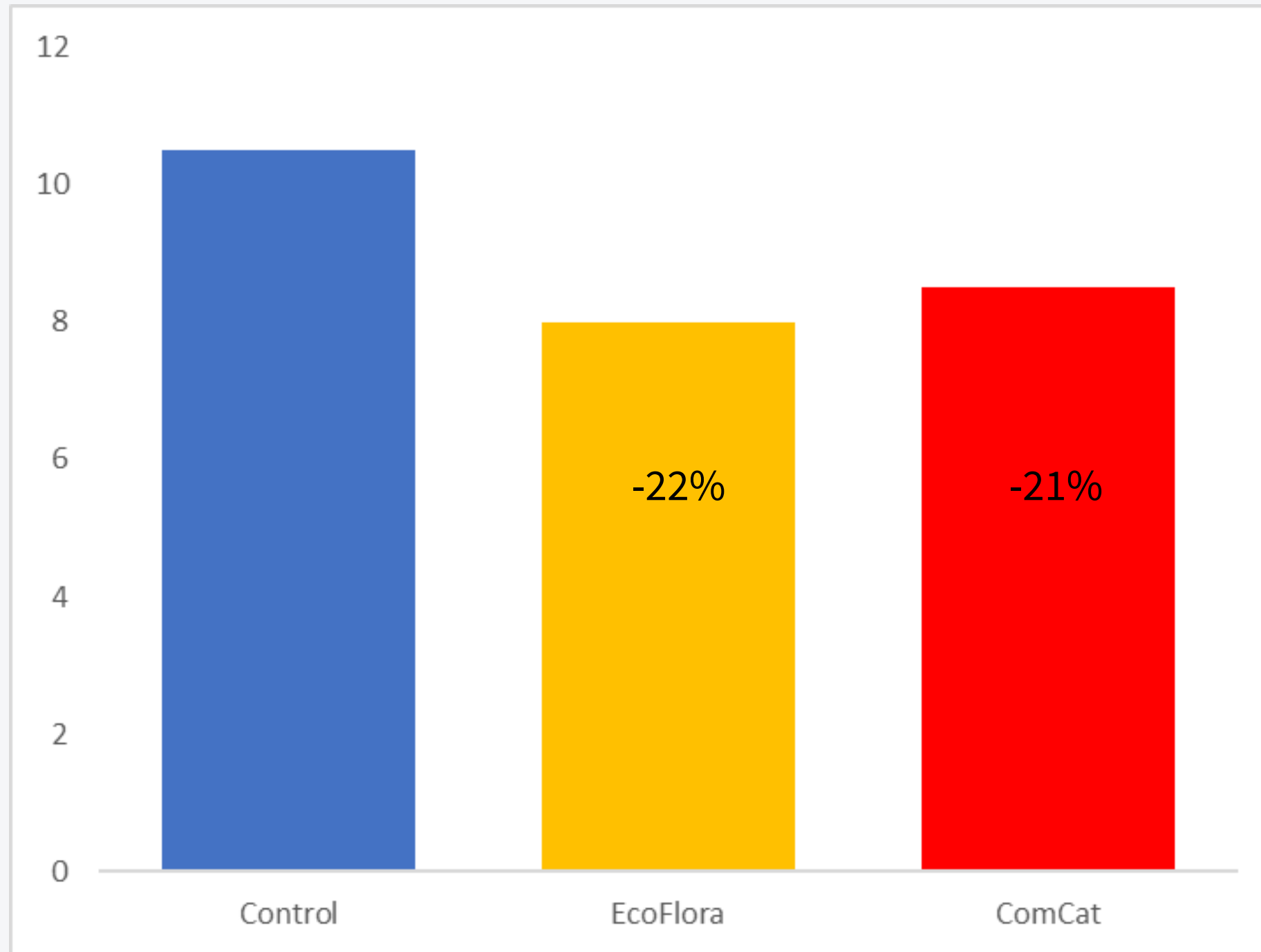
Post Harvest Botrytis Evaluated 7 Days After Harvest - Average of 5 Evaluations 5/5-6/16



- All of the treated plots had less Botrytis severity compared to the control.
- **EcoFlora** performed significantly better than the control with a 40% reduction in Botrytis severity.
- This can be attributed to “Creating a symbiotic physical barrier composed of diverse microbial populations”.

Differences analyzed using a T-Test comparing each treatment to the control. Treatment probably of differences is on each treatment bar.

Post Harvest Disease Incidence (Botrytis and Rhizopus) Evaluated 7 Days After Each Harvest Average of 5 Evaluations 5/5-6/16

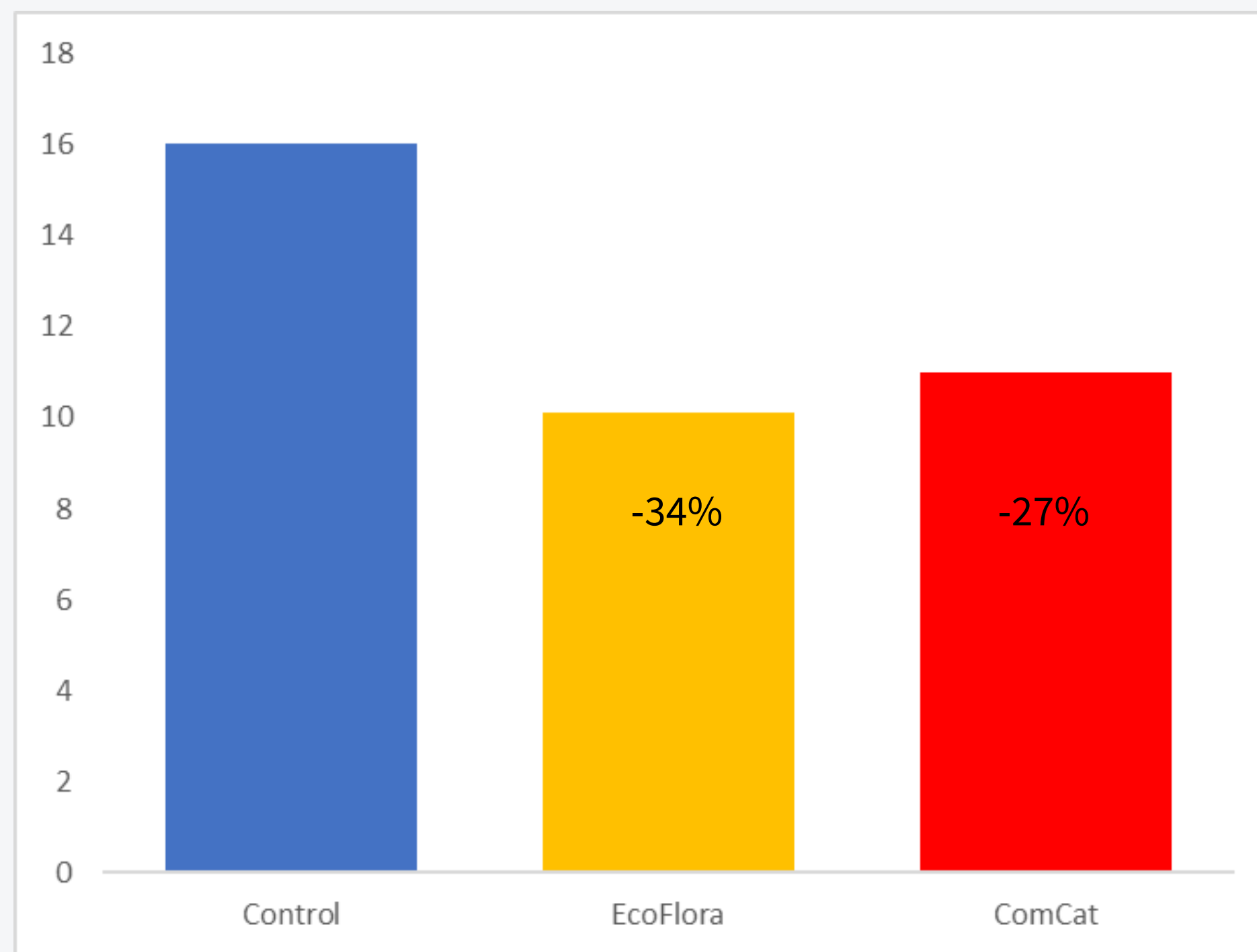


- Both **EcoFlora** and **ComCat** had less overall disease incidence than the control.
- **EcoFlora** performed the best with a 22% reduction in overall disease incidence compared to the control.
- This can be attributed to “Creating a symbiotic physical barrier composed of diverse microbial populations”.

Differences analyzed using a T-Test comparing each treatment to the control. Treatment probably of differences is on each treatment bar.

Post Harvest Disease Severity (Botrytis and Rhizopus) Evaluated 7 Days After Each Harvest Average of 5 Evaluations May 5-June 16

- All of the treated plots had less overall disease severity compared to the control. **EcoFlora** performed the best compared to all treatments with a 34% reduction in overall disease severity.
- This can be attributed to “Creating a symbiotic physical barrier composed of diverse microbial populations”.





Conclusion

ComCat worked well to improve fruit size (11% increase) and suppress Botrytis (20% decrease in disease incidence and a 21% decrease in disease severity):

- **Support plants' overall energy production**
- **Supporting a heartier plant more resilient to stress**

EcoFlora suppressed Botrytis better than ComCat. This is likely due to the beneficial microbes in the product out competing the pathogen (28% decrease in disease incidence and a 40% decrease in disease severity). Note that there is a zero tolerance in post harvest Botrytis for fresh strawberries so the 28% reduction in disease incidence is the most meaningful. This supports product claims of:

- **Diversifying crop nutrition sources**
- **Protect the crop and increase yields**

NOTE - When examining all diseases present (Botrytis and Rhizopus) the EcoFlora suppressed disease incidence by 22% and disease severity by 34%. The Rhizopus pressure in this trial was low so this level of control is predominately reflective of Botrytis suppression.

Thank you for your attention!

Please reach out or visit our website for more information:

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