1.

Technical Paper

Winter 2021

Cynosa™

Product Efficacy Report

New, silicon-based and bioflavonoid rich biostimulant

PATENT PENDING • No.PO3268GB

Cynosa™ Report Summary

The results from our first large scale trials are coming in now, following the development of our new silicon-based product; Cynosa.

So far these have been trialled on:

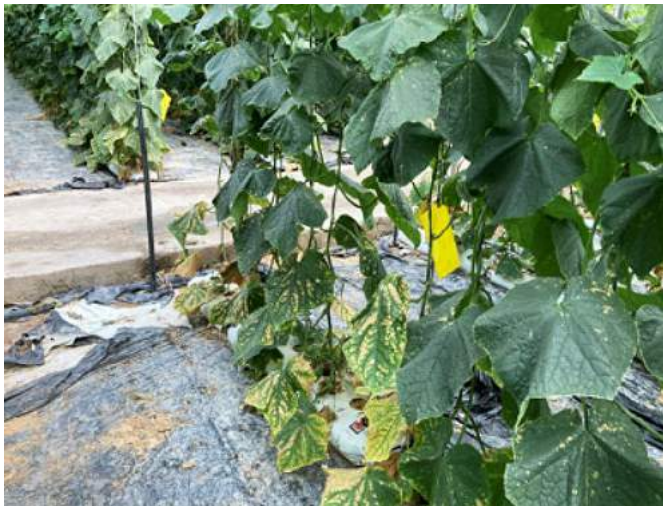
- Peppers
- Cucumbers

When applied in conjunction with Maxstim, crops have had:

- Significantly higher yield
- Better resistance to disease and abiotic stress
- Reduced use of fungicides
- Stronger leaf and stem structure

Our report details that Cynosa prevented powdery mildew throughout the crop. It is visible on the leaves but is not active and plant defences are able to withstand it. On the untreated plants, powdery mildew has had a much more widespread negative effect on plant health.

Cynosa has demonstrated that on application it can offer support and protection from fungal diseases by increasing the plant's ability to combat fungal infection. When Cynosa is used alongside Maxstim it adds strength and disease resistance to the huge benefits that Maxstim already offers.



Control

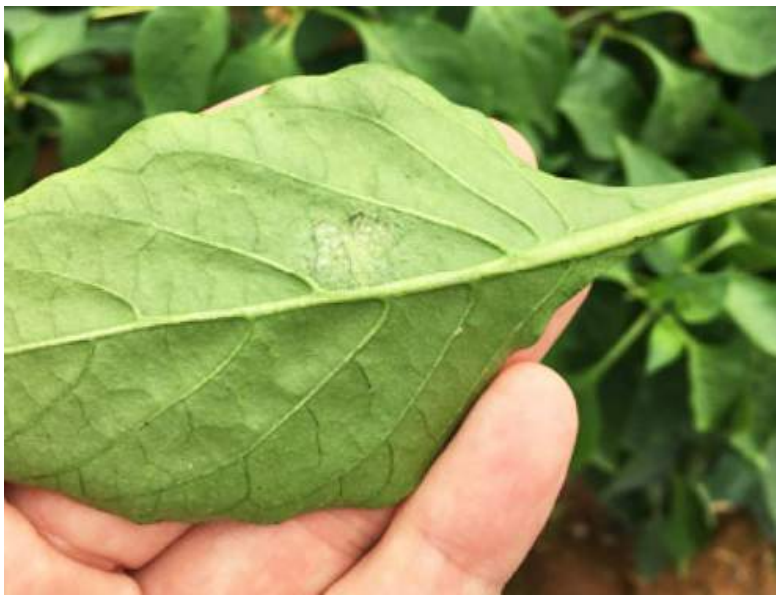
Cynosa

Cynosa™ Report

Cynosa is a result of the latest research from Maxstim Ltd, creating a product designed to strengthen plants and protect them against fungal diseases. It is a perfect companion product to use alongside Maxstim's other biostimulants to support crop development and growth throughout the plant's life cycle. To demonstrate product efficacy, field testing has been underway in a variety of crops, and the first results are being reported. Our main aim with the design of this product is for growers to avoid or reduce using traditional fungicides on their crops. Overwhelmingly we're being presented with evidence that Cynosa, used in conjunction with Maxstim biostimulants, is supporting the plant's natural defences against these otherwise difficult to control stressors.

Prevents Powdery Mildew

Plants: Peppers, variety Rayo
Where: Alicante, crop grown under plastic
Time: February
Application rate: Maxstim was used from the beginning of the crop cycle in November. Cynosa was started in February, 3l/ha every 15-21 days.



First appearance of symptoms in mid-May

Cynosa composition:

- Silicon
- Ortho Silicic Acid
- Amphenox
- Bioflavonoids
- Surfactant

Cynosa™ Report

Results:

Powdery mildew appeared on the leaves of the pepper plants, but it remained inactive, similar to powdery mildew resistant plants. The pepper plants remained active and healthy.

Plants continued to grow in a healthy manner

Plants:	Peppers, variety Abraham
Where:	El Ejido (Almeria)
Time:	June, beginning of the season
Application rate:	Cynosa (2 l/ha) and Maxstim (3 l/ha) were applied three times per month and compared with other silicon products.
Results:	Powdery mildew appeared, but in areas treated with Cynosa the plants did not react and the disease remained inactive. The control area, where an alternative silicon product was used, required two additional treatments of a fungicide, as opposed to the Cynosa sites, which required no further treatments.

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For Soil Use and for Hydroponic Growing

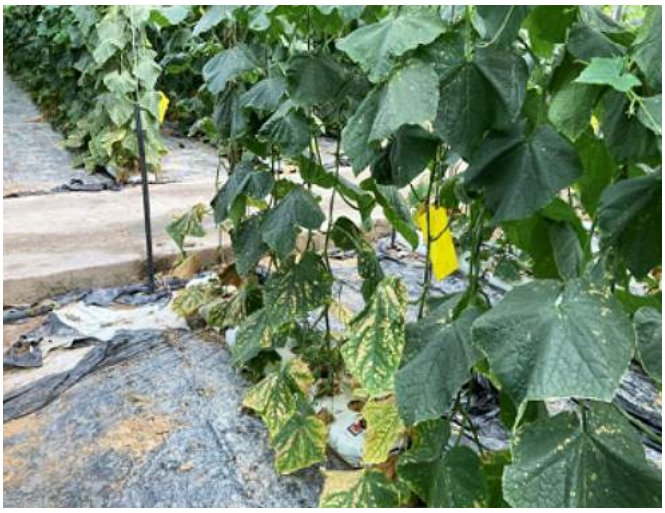
Plants: Cucumbers, variety Exquisito

Time: September

Application rate: For soil grown cucumbers, the dose of Cynosa was 2 l/ha. For the hydroponically grown cucumbers, the dose of Cynosa was 1 l/ha added to the hydroponic system. Maxstim is used extensively throughout the area already.

Results: Grower reported, that in comparison to a control of an alternative silicon product, Cynosa plants had;

- Higher cut resistance
- Higher breakage resistance
- Higher sap volume
- Lower incidence of fungus development or mildew in hydroponic plants
- Hydroponically grown plants can result in silicon deficits as there is no soil - the usual source of Si for plants.



Control

Cynosa

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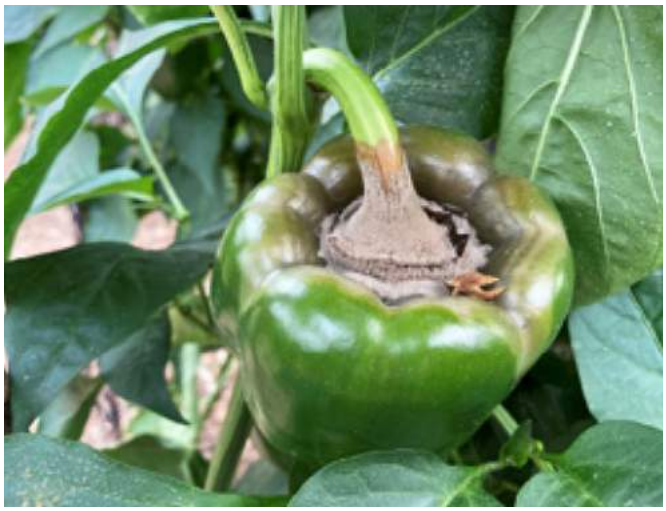
Higher Yields

Plants: Peppers, variety Hokaido
Where: Almeria
Time: June, beginning of the season
Application rate: Cynosa (2 l/ha) and Maxstim (3 l/ha) were applied three times per month.



Results:

The weight of the pepper crop was recorded in Cynosa areas and compared with control areas. A 4.2% increase in yield was observed in the areas treated with a combination of Cynosa and Maxstim. In addition to the yield increases there was an improvement in crop quality. The peppers were targeted by caterpillars and subsequently a lot of them suffered with rot (Botrytis). It was noted that in the Cynosa area this rot did not spread from the fruit to damage the whole plant.

These results were not expected, and further research is required to understand this process. Our observations indicate that application of Cynosa may elicit additional protective mechanisms within the plant.

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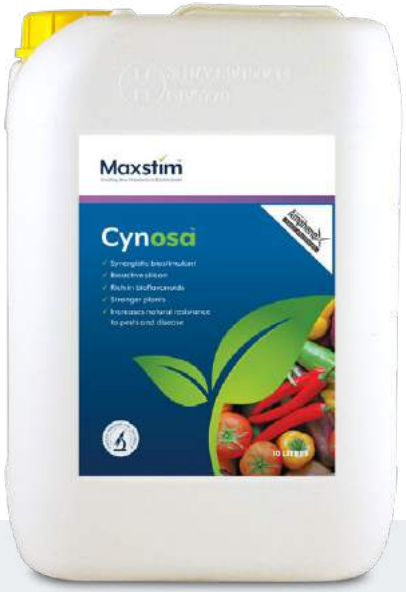
Key Conclusions

The field trials conducted have demonstrated that Cynosa can increase crop yield and quality at the same time as reducing the need for fungicides in both soil and hydroponic growing environments.

When applied in conjunction with Maxstim, crops have shown:

- Significantly higher yield
- Better resistance to disease and stress

Cynosa has demonstrated in multiple instances that it is able to strengthen a plant's natural resistance against fungal diseases, such as powdery mildew, and rot, and is able to prevent potential damage spreading to a more significant portion of the plant. Applications of Cynosa and Maxstim liquid biostimulants are equipping plants to protect themselves, whilst also strengthening their capability to perform natural processes throughout their growth cycles, and therefore increasing both quality and quantity of a grower's crop.



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