



HEATPROTECT

EFFICACY EVALUATION

RESULTS OF USING A BIOSTIMULANT FOR WATER STRESS PROTECTION.

HeatProtect, owned by Microendo Inc., is the first product made from the selection of the best microorganisms obtained from desert plants, making it a patented and unique product in the market. It provides the plant with osmoprotectants that grant tolerance against water stress and salinity, promoting water retention and regulation in the cells. With the use of **HeatProtect**, you can reduce irrigation by up to 30%, offering a 100% organic solution in a more logical and natural way for the environment.



FIELD INFORMATION

Location

Agricultural Ranch "El Sol de Sayula"
Sayula, Jalisco

Size

1 hectare

Analysis Design

- The trial was conducted on bell peppers grown in hydroponics.
- A dosage of 1 liter per hectare was used.
- The concentration of ammonium (NH₄), nitrates (NO₃), phosphates (PO₄), potassium (K), calcium (Ca), magnesium (Mg), sodium (Na), and electrical conductivity (EC) was analyzed in the sap of bell peppers.
- Untreated peppers were left as controls.

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Three applications were carried out with an interval of 8 days between applications. The product was applied via the irrigation system, adding 333 mL of each component of the HeatProtect product per application. The concentration of ammonium, nitrates, phosphates, potassium, magnesium, calcium, sodium, and electrical conductivity in the sap of recently mature bell pepper leaves was analyzed.

RESULTS

Table 1 presents the comparison of results obtained from the control plants versus those treated with HeatProtect. In the case of ammonium, nitrates, phosphates, potassium, and magnesium determination, the plants treated with HeatProtect showed higher concentrations in leaf sap, obtaining 10%, 6%, 14.58%, 94.8%, and 39.40% more than the control, respectively. In the case of calcium, sodium, and electrical conductivity concentrations, the treated plants with HeatProtect had lower concentrations of



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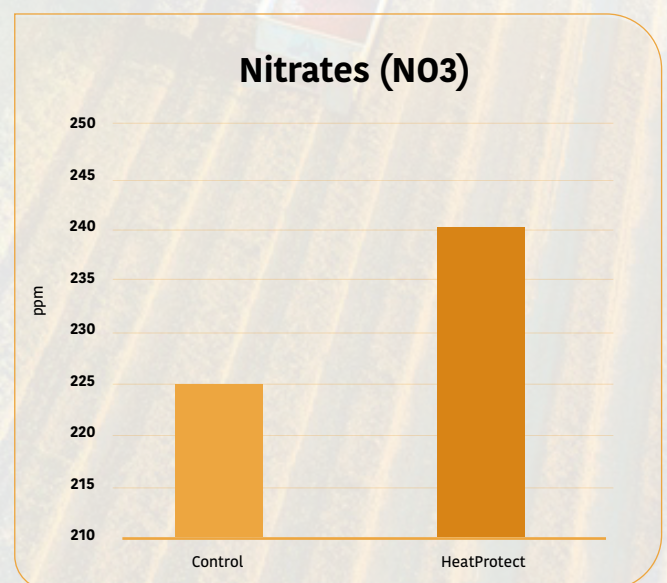
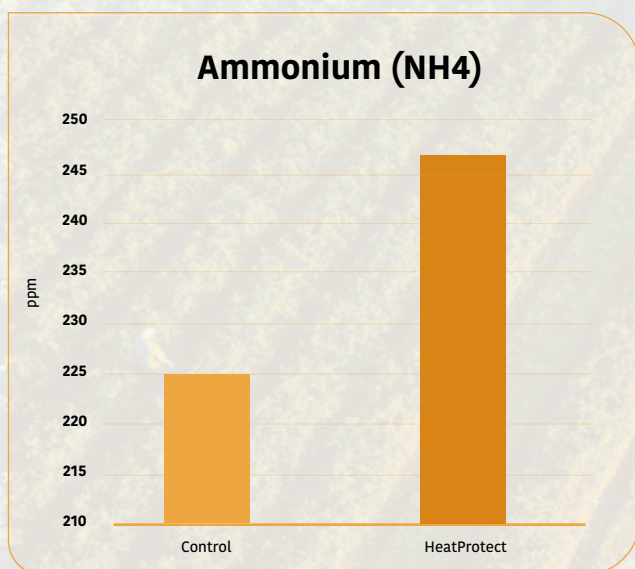
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calcium and sodium, as well as lower electrical conductivity, thus demonstrating the protective effect of the product against high saline concentrations.

Treatment	NH4	NO3	PO4	K	Mg	Ca	Na	CE
Control	225	225	293.76	1875	53.8	4.05	157.5	1.12
HeatProtect	247.5	240	336.6	3652.5	75	3.75	150	1.07

Table 1. Comparative table of the concentrations of the different ions measured, as well as the electrical conductivity of bell peppers treated with **HeatProtect** versus the control.



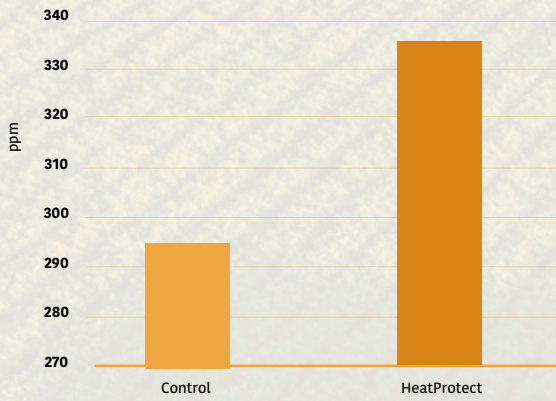


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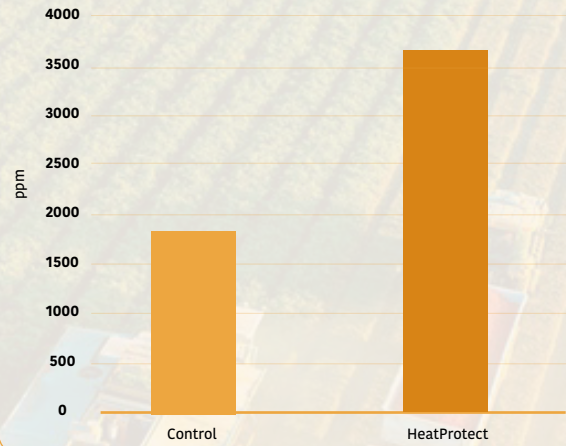
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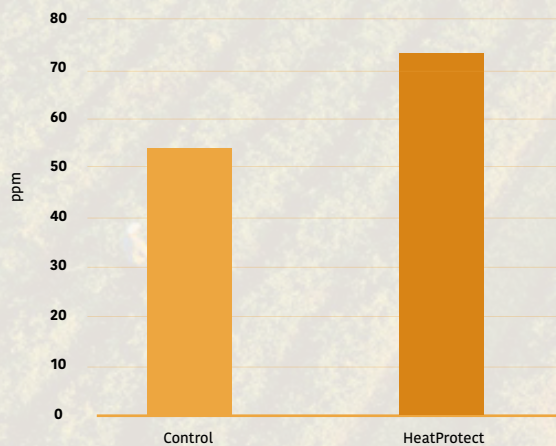
Phosphates (P04)



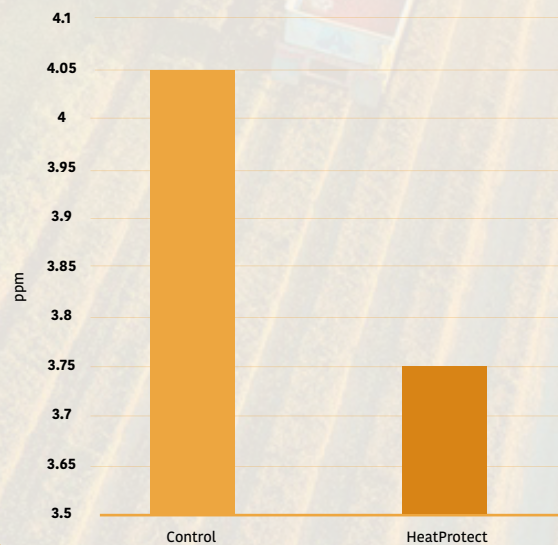
Potassium (K)



Magnesium (Mg)



Calcium (Ca)





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