



NITROGEN MICROBES

EFFICACY EVALUATION

RESULTS OF USE OF NITROGEN SOLUBILIZING BIOSTIMULANT.

NitrogenMicrobes, owned by Microendo Inc., is a unique and patented biofertilizer in the market, whose action is based on the activity of the bacteria *Enterobacter kobei*. This type of bacteria naturally live in the soil near plant roots, where they establish a mutually beneficial relationship (symbiosis) with the roots. In **NitrogenMicrobes**, the bacteria take nitrogen, which is abundant in the air, and transform it into ammonium, nitrites, and nitrates, which they deposit in the soil for plants to use through their roots. In turn, the bacteria produce hormones (indole-3-acetic acid) that stimulate plant development. **NitrogenMicrobes** can reduce chemical nitrogen fertilization by 60%, thereby reducing production costs. Furthermore, it fixes atmospheric nitrogen and deposits it in the soil, from where the plant roots can obtain it.



FIELD INFORMATION

Location

Rancho La Ocotera
Ixtlahuacán del Río, Jalisco

Size

1 hectare

Analysis Design:

- The trial was conducted on newly planted prickly pear crop.
- A dose of 1 L/ha was used.
- Ammonium and nitrate concentrations in the prickly pear sap were analyzed.
- Untreated prickly pears were left as a control.

EFFICACY EVALUATION

Three applications were made with an interval of 8 days between applications. The product was applied through the irrigation system. The ammonium and nitrate concentrations in the prickly pear sap were analyzed at the beginning of the treatment and 60 days after the treatment.

RESULTS

Table 1 presents the concentration of ammonium and nitrates in the prickly pear sap. The analysis shows an initial ammonium concentration of 142.5 ppm in the control and 180 ppm in the treated prickly pears, and a final ammonium concentration of 225 ppm in the control and 315 ppm in the treated prickly pears. For nitrates, the initial concentration was 615 ppm in the control and 652.5 ppm in the treatment, while the final concentration was 712.5 ppm for the control and 1552.5 ppm for the treatment. As we can see, there was a **57.9%** increase in ammonium concentration in the control after 60 days, while the treated prickly pears showed a **75%** increase in concentration. For nitrate concentration, the control showed a **15.85%** increase, while the treatment showed a **137.9%** increase.



NITROGENMICROBES

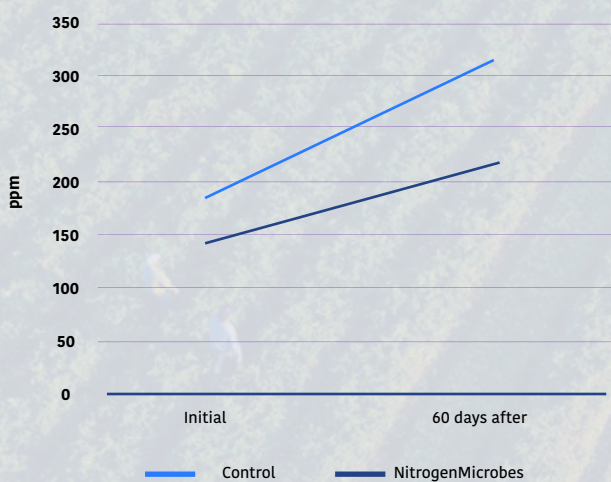
EFFICACY EVALUATION

RESULTS OF USE OF NITROGEN SOLUBILIZING
BIOSTIMULANT.

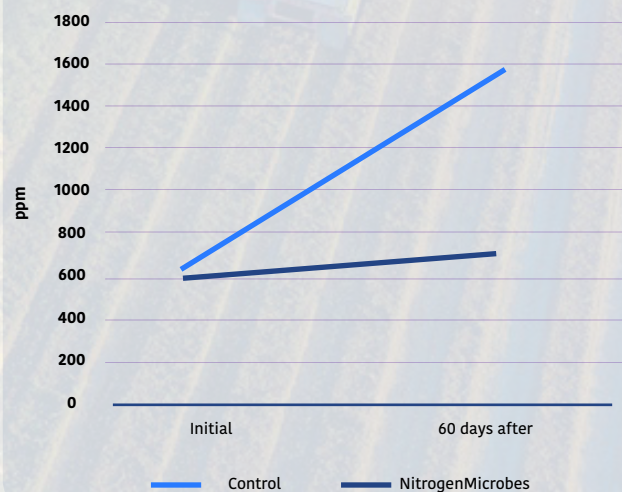
Treatment	Ammonium	Nitrate
Control	180ppm	652.5 ppm
NitrogenMicrobes	315ppm	1552.5 ppm

Table 1. Comparative table of the acquired concentrations of ammonium and nitrates, from prickly pears treated with **NitrogenMicrobes** versus the control.

Ammonium concentration in sap



Nitrate concentration in sap



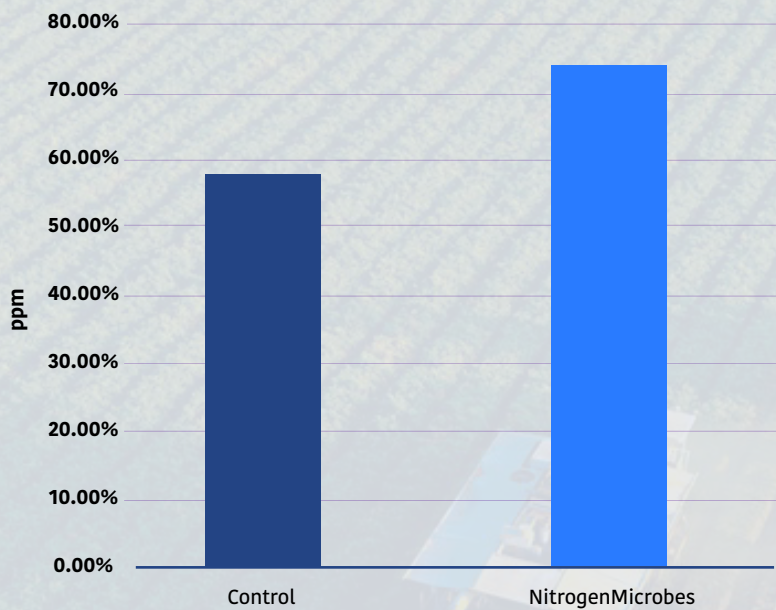


NITROGENMICROBES

EFFICACY EVALUATION

RESULTS OF USE OF NITROGEN SOLUBILIZING BIOSTIMULANT.

Percentage of acquired ammonium



Percentage of acquired nitrates

