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CASE STUDY: REPORT ON THE BEHAVIOR OF A BANANA CROP UNDER THE INFLUENCE OF **UNLEASH™**

I. Introduction

Although not in the tropics, banana cultivation in Israel has been a profitable enterprise, mostly because of the prices the fruit can get in local markets. In order to overcome the climatic limitations, especially wind damage to the leaves, and the high cost of irrigation water, there is a need for large investments in the infrastructure of the crop. Yet the results have been amazing as the yields are above the sixty (60) tons per hectare and more. These yields are well above the typical yields of banana- exporting countries - thirty (30) tons per hectare.

However, banana farmers in Israel are eager to find ways to improve the productivity of their crops, reduce fertilizer and water use, shorten the growth period or any other means of efficiency or higher profit

II. Test Process

Treated Area: 300 plants in 300 sq. meters

Unleash™ Application

Applications	Date	Amount
#1	Jan 2012	125 ml
#2	Feb 2012	65 ml
#3	March 2012	60 ml

Harvest: July 1-7, 2012

Notes

- In November 2011, a team from **Unleash™** met banana farmers at **Kibbutz Ginosar, located on the banks of the Sea of Galilee**, and the parties reached agreement on the terms of a test.

- The **Unleash™** team advised to start treatment prior to transplant and flowering (to maximize results). **Unleash™** was applied by the farm agronomist to randomly selected groups of existing beds through the drip irrigation system. (The farmer did not know which plants had been treated with **Unleash™;** only the farm agronomist was knowledgeable of and executed the plan.)

- At ripeness, the clusters were collected, counted, and weighed.

III. Results

Table 1 – Summary

	Weight (kg)	Number of Clusters	Mean Weight per Cluster (kg)
Unleash™	**4,515**	**121**	**37.31**
Control	1,989	50	39.78
Percent Difference	**+127%**	**+142%**	**-6%**

Table 2 – Harvest Details

	Weight (kg)	Number of Clusters	Mean Weight per Cluster (kg)
June 1 Flowering			
Unleash™	724.5	21	34.50
Control	192	6	32.00
June 2 Flowering			
Unleash™	591	18	32.83
Control	518	12	43.17
July 1 Flowering			
Unleash™	434	12	36.17
Control	69	2	34.50
July 2 Flowering			
Unleash™	Unleash™	Unleash™	Unleash™
Control	Control	Control	Control
July 3 Flowering			
Unleash™	Unleash™	Unleash™	Unleash™
Control	Control	Control	Control

IV. Conclusions

- During the measurement period, there was a significant increase in the number of Unleash™-treated banana plants already flowering. Flowering of plants treated with **Unleash™** occurred several weeks before flowering of control plants.

- Banana plants in the Ginosar Valley area suffered from strong winds during this trial, which can cause their leaves to tear and rip, increasing the risk of disease and drought, and decreasing their photosynthetic capacity. **Unleash™** treated plants were greener and healthier, and retained a lot more leaves and flowers.

- The Unleash™-treated plants produced 127% more bananas by weight than the control plants. This was at least partly due to the Unleash™-treated plants tolerating the high stress caused by winter winds, resulting in the treated plants having significantly more leaves and flowers.

- The average cluster weight of both treated and untreated plants was statistically similar. The higher yields from the **Unleash™**-treated plants was due to the greater number of banana clusters.