BiOWiSH® TECHNOLOGIES

Case Study

BiOWiSH® Crop Technology

Improving Yellow Melon Production in Costa Rica

Background

Widely consumed in Europe and America, the melon belongs to the plant family Cucurbitaceae (also known as gourds or cucurbits), which is characterized by its edible, fleshy fruit. The total land area allocated for melon farming has declined in recent years but production has remained stable due to the introduction of hybrid varieties and other advances in crop management.

In search of new crop management techniques for melon and other cucurbits, M & M S.A. in Lepanto de Puntaneras, Costa Rica, commissioned a trial of BiOWiSH® Crop in partnership with Green Life Corporation.

Objectives

The objectives of the trial were to evaluate the response of the melon plant to the application of BiOWiSH® Crop, and whether such application results in improved production.

Solution

BiOWiSH® Crop is an organic-based fertilizer that stimulates microbial activity in the soil, helping to increase micronutrient uptake in plants and improve plant vigor.

Implementation Program

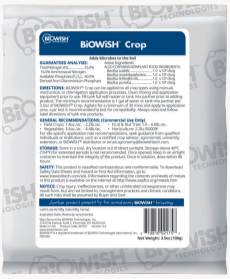
Using the yellow melon variety as test crop, the farmers designed and evaluated four treatments, all of which included the standard fertilizer and crop management program used by the farm. One treatment was designated as control, while three other treatments also incorporated various application rates of BiOWiSH® Crop.

To apply, the farmers mixed BiOWiSH® Crop with water at a rate of 5-10g/liter of water and left the solution to activate for 4 to 6 hours before applying. After activation, the mixture was injected into the irrigation system.

All treatments were evaluated based on the following criteria:

- General and phytosanitary conditions of the plants by visual observation
- General condition of the foliage harvest by visual observation
- Quantification of yield in export cartons per hectare

BiOWiSH® Crop



- Improves crop yields
- Improves nitrogen efficiency
- Increases nutrient availability
- Enhances root development
- Improves plant vigor
- Stimulates microbial activity in the soil

Available Sizes

- 100g/3.5oz
- 1kg/2.2lbs
- 5kg/11lbs
- 10kg/22lbs

Results

Visual Observations

Picture 1 of Control plants was taken 49 days after transplanting. The plants in the photo exhibited wilting, possibly indicating symptoms of fungal disease known as Fusarium oxysporum f.sp.

Picture 1: Control

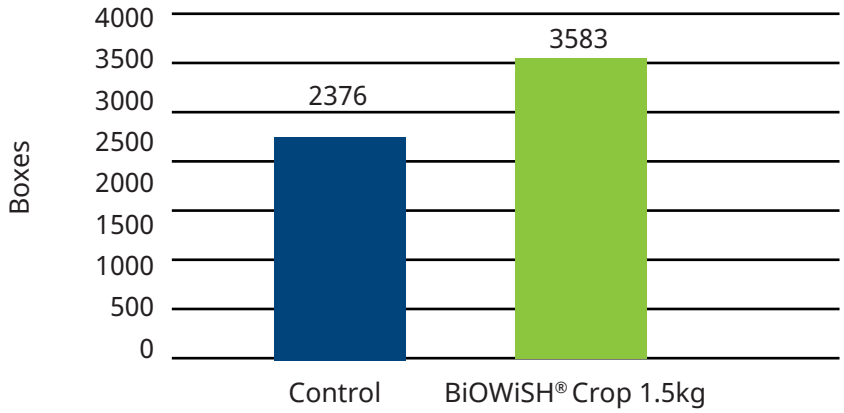
Picture 2 of BiOWiSH® Crop treated plants (@1.5kg/ha) was also taken 49 days after transplanting. The plants had a better color and plump appearance.

Picture 2: BiOWiSH® Crop Treated (1.5 kg / ha)

Visual Observations

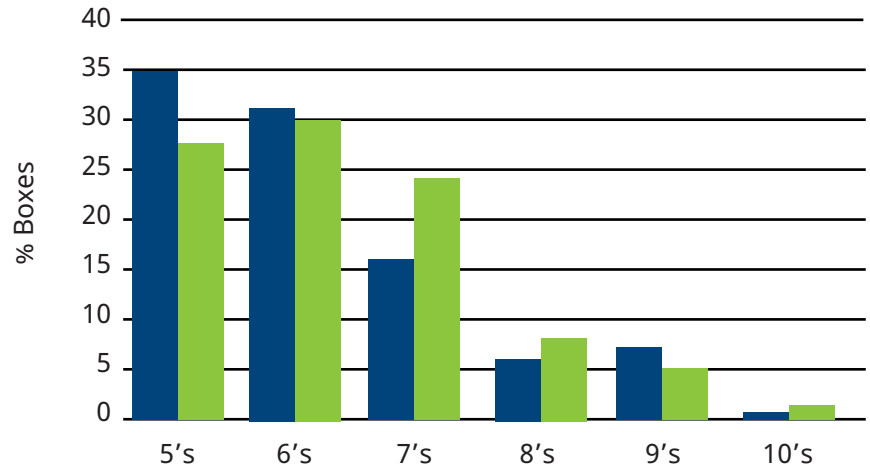
The use of BiOWiSH® Crop led to an increase in export cartons per hectare, with all BiOWiSH® treatments yielding higher production results than control. The application rate of 1.5kg/ha produced the best overall result with a 50% increase over the control. Under the treatment program, BiOWiSH® Crop was applied at zero, 20, and 35 days after transplanting.

Production Total (boxes/ha)



The BiOWiSH® Crop treatment (1.5kg/ha) also resulted in more evenly sized melons per box versus control, an additional benefit as the market does not accept many large sizes (5's) or small sizes (9's and 10's).

Size Distribution (%)



	5's	6's	7's	8's	9's	10's
Control	36	32	17	7	8	0
BiOWiSH® Crop 1.5kg	28	31	25	9	6	1

Conclusion

The results of the study showed the benefits of adding BiOWiSH® Crop to the standard crop management program for melons. Plants treated with BiOWiSH® Crop exhibited improved development and vigor, ending in a much better condition than control plants after the production cycle. With up to a 50% increase in production, the results also demonstrate the ability of BiOWiSH® Crop to increase nutrient availability in the soil and thus improve yield.

At the end of the study, the farmers recommended an application rate of 1.5kg of BiOWiSH® Crop per hectare, applied at zero, 20, and 35 days after transplanting.

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