

Vital Earth Resources

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2012 Crop Results

Vitazyme on Cantaloupe

Researchers: Robert Garcia and Cristhian Mazariegos, Foragro Development, Guatemala City, Guatemala; Alex Diaz and William Sosa, Heads of Plant Protection, Proingasa Classic, Guatemala **Company:** Proingasa Classic

Location: Site 21, Section 8, Valves 26 to 29, km 132, Senegal, Rio Hondo, Zacapa Department, Guatemala

Variety: Honey Dew HQ252 **Soil type:** silty clay

Climate: temperature, 27 to 38°C; relative humidity, 63%

Altitude: 230 meters above sea level **Planting date:** October 22, 2011

Experimental design: A cantaloupe field was selected for a trial to determine the effectiveness of Vitazyme to enhance the yield and quality of the crop. A treated area of 2 manzanas (1.4 ha) was compared to an adjacent untreated area using three Vitazyme applications.

1. Control

2. Vitazyme

Fertilization: unknown

Vitazyme applications: (1) Roots of the seedlings were dipped into a drum containing a 1% Vitazyme solution (1 liter in 100 liters of water) for one manzana (0.7 ha), to give 1.4 liters/ha; (2) foliar and soil spray of 1.4 liters/ha at 23 days after planting; (3) foliar and soil spray of 1.4 liters/ha at 43 days after planting (sprayer had 1,100 liter capacity, with purple Albus nozzles applying 0.49 liter/minute).

Growth results: *Vitazyme treatments gave a greater leaf area and root mass than the control plots.*

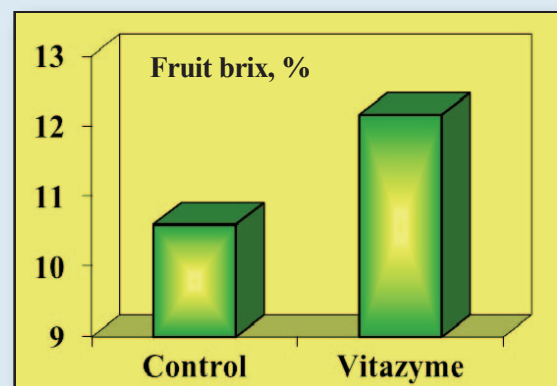
Yield and quality results: Harvesting was completed December 18, 2011.

Melon Brix

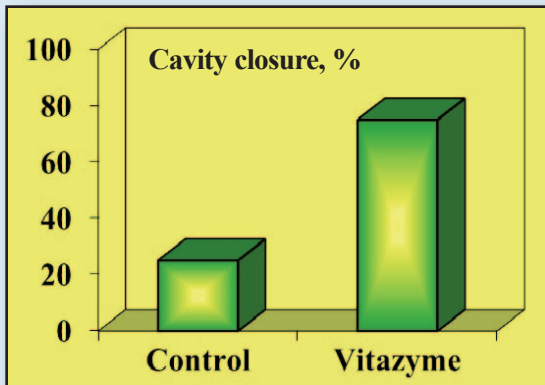
Treatment	Brix	Change
	%	%
Control	10.60	—
Vitazyme	12.16	+1.56 (15%)

**Increase in fruit Brix with
Vitazyme: 1.56 points**

The increase in fruit soluble solids with Vitazyme was most excellent, 1.56 points, which would be very noticeable to the person eating the melons.



Cavity Closure



Treatment	Closure	Change
	%	%
Control	25	—
Vitazyme	75	+50 (+200%)

Increase in fruit cavity closure with Vitazyme: 200%

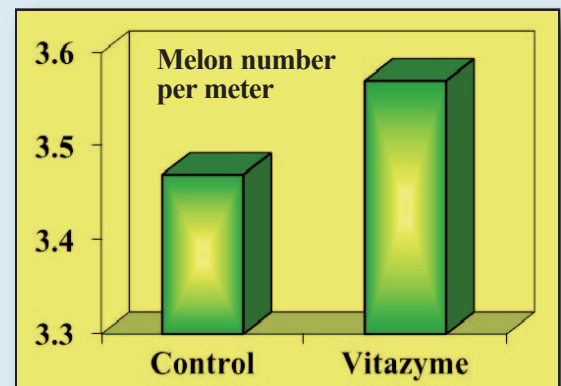
The size of the fruit cavity was considerably smaller with Vitazyme compared to the control treatment, by 50%, meaning there was more edible fruit inside the melons.

Melon Yield

Treatment	Fruit number	Change
	number/meter	number/meter
Control	3.47	—
Vitazyme	3.57	+0.10 (+3%)

Increase in fruit number with Vitazyme: 3%

While not a large increase (3%), there were more melons in the Vitazyme treated area.



Conclusions: A cantaloupe trial in the Guatemala revealed that Vitazyme produced a small increase in melon number (3%); weights were not measured. However, melon quality was markedly improved in terms of sweetness (+1.56 Brix, a 15% sugar increase) and filling of the cavity (+200%) with Vitazyme. These data prove the great efficacy of this product for cantaloupe production in Guatemala.

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Researchers: Robert Garcia and Cristhian Mazariegos, Foragro Development, Guatemala City, Guatemala; Alex Diaz and William Sosa, Heads of Plant Protection, Proingasa Classic, Guatemala **Company:** El Castano Classic

Location: Field Espinal T1 Nogales, km 145, Estanzuela, Department of Zacapa, Guatemala

Variety: Harper Caribbean Gold **Soil type:** silty clay

Climate: temperature, 27 to 38°C; relative humidity, 63%

Altitude: 230 meters above sea level **Planting date:** October 15, 2011

Experimental design: A canteloupe field was divided into a Vitazyme treated area of 3 manzanas (2.1 ha), and an untreated control area, with three Vitazyme applications made for the treated area. The objective of the study was to determine the effects of this biostimulant on melon yield and quality.

1. Control

2. Vitazyme

Fertilization: unknown

Vitazyme applications: (1) Vitazyme at 1% (1 liter in 100 liters of water) was sprayed on the young plants in trays, one day before transplanting (October 14, 2011); (2) foliar and soil spray of 1.4 liters/ha at 23 days after planting; (3) foliar and soil spray of 1.4 liters/ha at 43 days after planting (sprayer had 1,100 liter capacity, with purple Albus nozzles applying 0.49 liter/minute).

Growth results: Vitazyme treatments provided greater leaf area and root mass compared to the untreated control area.

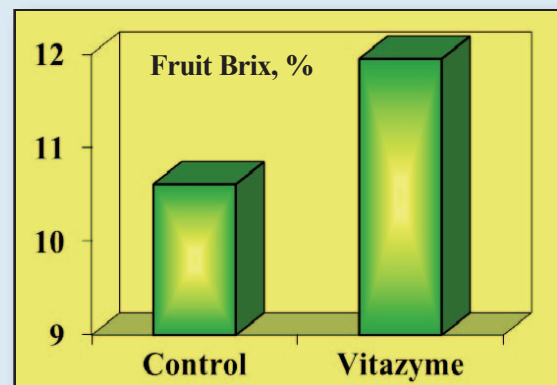
Yield and quality results: Harvesting was completed December 10, 2011.

Melon Brix

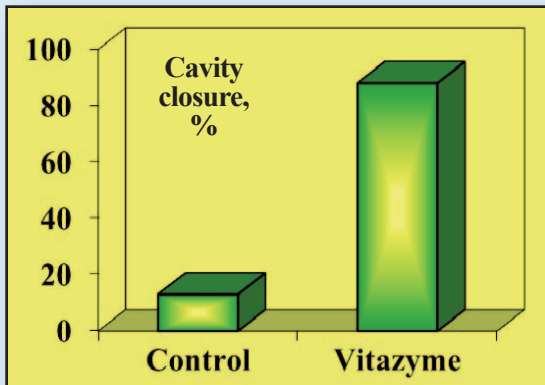
Treatment	Brix	Change
	%	%
Control	10.61	—
Vitazyme	11.95	+1.34 (+13%)

**Increase in fruit Brix with
Vitazyme: 1.85 points**

An excellent increase of 1.34 Brix was obtained with Vitazyme applications, a 13% increase in melon sugar compared to the untreated control.



Cavity Closure



Treatment	Closure	Change
	%	%
Control	13	—
Vitazyme	88	+75 (+577%)

Increase in fruit cavity closure with Vitazyme: 577%

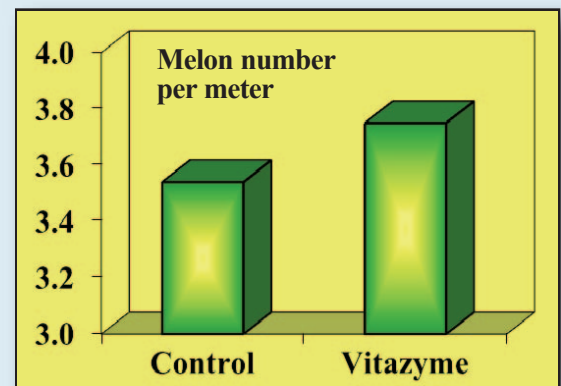
Vitazyme caused a marked increase in the amount of internal fruit of the melons, closing the cavity by 88%, versus 13% for the untreated control.

Melon Yield

Treatment	Fruit number	Change
	number/meter	number/meter
Control	3.54	—
Vitazyme	3.75	+0.21 (+6%)

Increase in fruit number with Vitazyme: 6%

A good increase in the melon number (+6%) was obtained with Vitazyme use, though the weight of the melons was not determined.



Conclusions: A study comparing Vitazyme (three applications) with an untreated control in Guatemala revealed that this product markedly improved canteloupe yield (+6%), and quality: the cavity closure was improved by 577%, and the melon Brix by 1.34 points (13%). Melon weight was not determined. These results reveal how greatly Vitazyme boosts the growth of the plants, and the yield and quality of the fruit as well in Guatemala.