

Spinach with Vitazyme application

Researcher: Rajnish Khanna, Ph.D.

Research organization:

i-Cultiver, Manteca, California

Location: USDA Plant Gene

Expression Center, Albany,

California

Variety: unknown

Growth media: Sunshine Mix #1

(Sungro Horticulture)

Experimental design: A

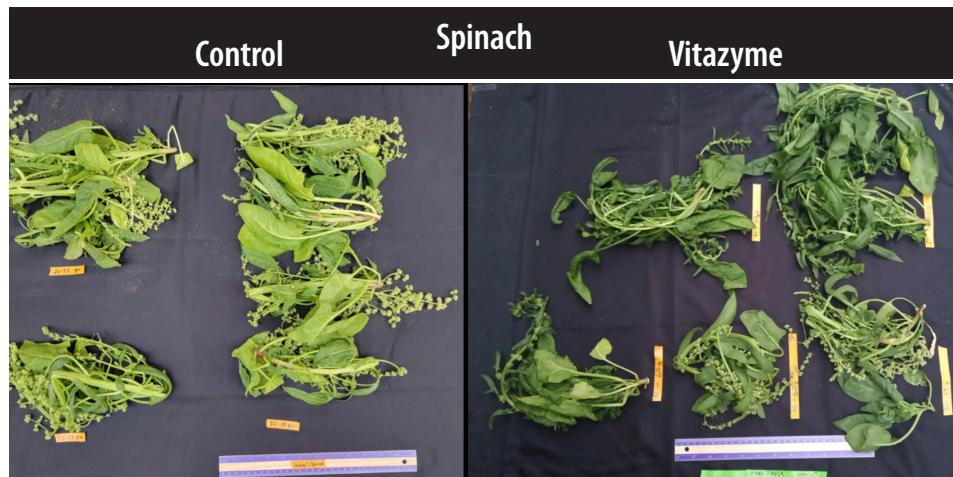
greenhouse trial was established using 5-gallon pots, to compare the effects of Vitazyme on fresh weight compared with untreated controls. Seven pots were used for each treatment.

① Control ② Vitazyme

Fertilization: Peters Professional 20-20-20 water soluble fertilizer applied at 1:64 dilution each week

Vitazyme application: a 1% Vitazyme solution sprayed on the leaves and soil, to the dripping point, every 14 days beginning at the four-leaf stage until flowering or harvest

Disease control: Floramite and Decathlon at 0.25 tsp/gal, sprayed at 1-2 gal/100 plants



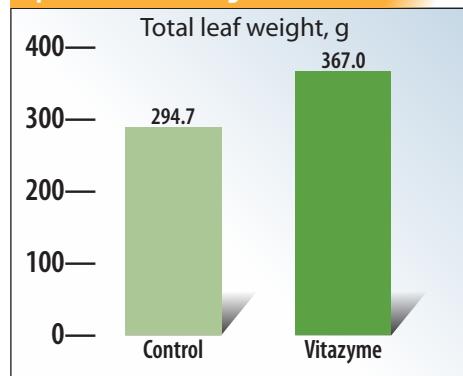
The effect of Vitazyme on spinach leaf and root growth was excellent in this California trial, giving a 25% increase in fresh weight.

Yield results: The mature plants in each pot were weighed, and the values were totaled

Increase in spinach fresh weight with Vitazyme: 72.3 g (+ 25%)

Conclusions: This greenhouse pot trial with spinach, using Vitazyme every 14 days, showed that the fresh weight of the spinach was increased by 25%, or 10.3 grams per plant.

Spinach Fresh Weight





Spinach with Vitazyme application

Researcher: Agustin Peralta

Farmer: Venancio Olayo Navarro

Research organization: Quimica Lucava &

Agroquimicos El Surco

Location: Campo La Aventura, Puebla, Mexico

Variety: unknown

Planting date: April 28, 2015

Experimental design: A 1 hectare spinach field was divided into equal parts of Vitazyme treated and untreated, to determine the effect of the product on spinach yield and profitability.

① Control ② Vitazyme

Fertilization: unknown

Vitazyme application: 1 liter/ha sprayed on the leaves and soil 15 days after planting, on May 13, 2015

Harvest dates: June 17 and June 25, 2015, 50 and 58 days after planting

Yield results: (See the table and chart to the right)

Crop observations: At harvest, the Vitazyme treated crop was superior to the control in the following ways:

- Leaves and plants were larger.
- The leaf color was a richer, deeper green.
- Hardly any insect damage was noted, whereas the control spinach had slight damage.

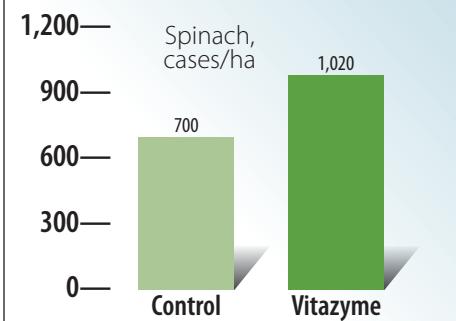
Treatment	Yield ¹	Yield change
	cases/ha	cases/ha
Control	700	—
Vitazyme	1,020	320 (+46%)

¹There cases were delivered to Wal-Mart. A case has 24 bunches of 5 cm diameter each.

Increase in spinach yield with Vitazyme: 46%

Profitability results:

Spinach results



Treatment	Yield	Gross income ¹	Vitazyme cost	Net return	Increased return	Cost : Benefit
	cases/ha	USD/ha	USD/ha	USD/ha	USD/ha	
Control	700	3,269.00	—	3,269.00	—	—
Vitazyme	1,020	4,763.40	33.33	4,730.07	1,461.07	43.8

¹One case sold for 4.67 USD.

Increased return with Vitazyme: 1,461.07 USD/ha

Cost : Benefit with Vitazyme: 43.8

Conclusion: This spinach study in Mexico revealed that only a single Vitazyme application, at 1 liter/ha 15 days after planting, increased the yield a remarkable 46%. This yield increase resulted in a 1,461.07 USD/ha improvement, which followed from a cost : benefit of about 44 : 1. Such results prove the great viability of the Vitazyme program for spinach and similar leaf crops in Mexico .