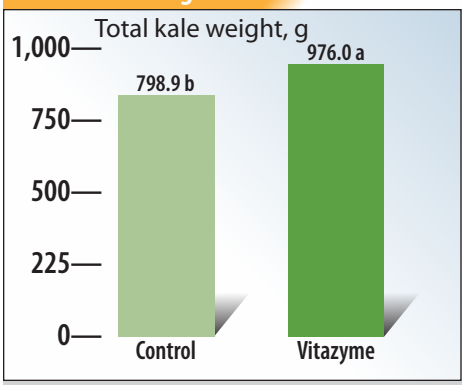
Kale *with Vitazyme application*

Researcher: Rajnish Khanna, Ph.D.
Research organization: i-Cultiver, Manteca, California
Location: USDA Plant Gene Expression Center, Albany, California
Variety: *Brassica oleracea*
Growth media: Sunshine Mix #1 (Sungro Horticulture)
Experimental design: A greenhouse trial was established using 3-gallon pots, to compare the effects of Vitazyme on kale fresh weight compared with untreated controls. Eleven 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
Yield results: The mature plants in each pot were weighed, and the values were statistically analyzed.

Kale Fresh Weight1



[1]Means followed by the same letter are not significantly different at P = 0.05. P = 0.029.

Increase in kale fresh weight with Vitazyme: 177.1 g (+ 22%)

Conclusions: This greenhouse pot trial with kale, using Vitazyme every 14 days, showed that the fresh weight of the kale was increased by 22%, or 16.1 grams per plant. These results show the excellent effect of Vitazyme to increase the productivity of kale.

Kale *with Vitazyme application*

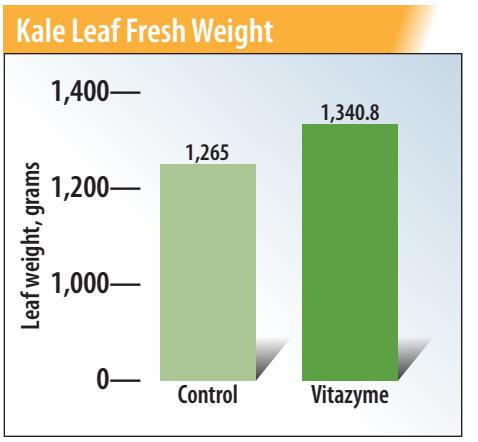
Researcher: Rajnish Khanna, Ph.D. ***Research organization:*** e-Cultiver, Manteca, California
Location: USDA/Plant Gene Expression Center, Albany, California ***Variety:*** unknown
Planting date: September 1, 2024 ***Potting Soil:*** Sunshine Mix #1 (Sungro Horticulture) ***Pot size:*** 3 gal tall
Experimental design: A small greenhouse trial, with eight plants per treatment, was set up to evaluate the effect of Vitazyme biostimulant on the growth of kale plants.

1 ***Control*** **2** ***Vitazyme***

Fertilization: Peters 20-20-20 water soluble fertilizer at 1:64 ppm, once per week
Vitazyme applications: 1:100 dilution on the leaves to the dripping point, and to the soil, every two weeks
Kale harvest results: The kale plants were harvested on December 23, and the leaves for both treatments were weighed.

Treatment	Leaf weight[1]	Weight change
	grams	grams
1. Control	1,265.0 b	—
2. Vitazyme	1,340.8 a	75.8 (+6%)

[1]Total of eight plants, fresh weight. The mean weight of the treated plants (a) is significantly greater than the control plants (b) at P = 0.18.



Conclusions: A small-pot greenhouse kale trial, which compared an untreated control with a Vitazyme treatment (1% solution every two weeks), revealed a fresh leaf weight increase of 6% with Vitazyme. This increase was significant at P = .18.