Vigo for Agri review

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Bright AGRO Innovation

vigo FOR AGRI

Description of Vigo

- Vigo for Agri™ is a plant supplement which in itself is not a nutrient source but rather an optimiser/potentiator of other nutrient additives.
- Vigo for Agri™ has a physiological effect at the cell membrane level triggering nutrient and water movement thereby allowing the plant to maximise usage of available nutrients.
- Being water soluble, the product is easily absorbed through the roots or leaf stomata.
- The product can be applied at anytime within the plant's growth cycle – i.e. from seed to mature plant.
- Treated plants respond by producing more roots and healthier shoots over a shorter period of time as well as enhancing bud break, increasing flowering and therefore fruiting.
- Vigo for Agri™ functions similarly to other secondary metabolites in the regulation of primary metabolic pathways.

Germination and seedling development – Rice

Table 1. Effect of VIGO on the growth of rice seedlings under growth chamber conditions. The VIGO concentration was prepared by diluting 1 mL of stock solution with 500 mL of tap water for petri dish wetting. (n = 60 plants).

Treatments	Number of lateral roots	Root length (mm)	Coleoptile (mm)	Seedling mass (mg)	Seedling length	Vigour index	Seedling survival (%)
	Mean ±SE						
Control	4 b	34.5 b (0.76)	30.0 b (0.82)	54.3 b (0.29)		6450 b (115)	100
VIGO	26 a	53.3 a (0.67)	34.2 a (0.71)	60.9 a (0.64)		8750 a (104)	100

Values in the column with different letter(s) are significantly different at P ≤ 0.05 by least significant difference.

The treated seedlings had 6,5 X more roots than the control.
The roots are 1,5 X longer roots
The seedlings were 10% heavier than the control
Vigour was improved with factor 1,4

Germination and seedling development- corn

Table 1: Effect of VIGO on the growth of maize seedlings under laboratory conditions (7 days).

Treatments	Growth Parameters								
	Germination (%)	Root Length (mm)	Number of 2nd Roots	Number of Laterals	Root Weight (mg)	Shoot Length (mm)	Shoot Weight (mg)	Root / Shoot Ratio	Vigour Index
Control	78	26.5 b	4 b	5 b	84.2 b	18.7 b	103.7 b	0.83 b	3520 b
VIGO	91*	35.6 a	8 a	15 a	125.0 a	32.0 a	125.8 a	1.12 a	6152 a

Note - * Significantly different from other treatments within the column at $p \leq 0.05$ level (Chi-square test)

Values with the same letters within the columns do not differ from each other at a 5% level of significance

Germination was improved and also vigour was increased with a factor of 1,75
Longer roots were formed and root numbers increased between 2- 3X
Root weight was increased with a factor of 1,5
Shoot length increased with a factor 2 and the shoot weight was 1,2X more

Same corn plants after 90 days

Table 2: Effect of VIGO on growth of potted maize plants under greenhouse conditions (90 days).

Treatments	Growth parameters					
	Leaf stage	**Shoot height (mm)**	**Root weight (g)**	**Shoot weight (g)**	**Root / Shoot ratio**	**% survival of plants**
Control	4.4 ± 0.59 b	420.7 ± 59.8 b	4.30 ± 0.74 b	9.57 ± 1.55 b	0.39 ± 0.09 a	63*
VIGO	6.6 ± 0.42 a	663.7 ± 46.0 a	7.02 ± 0.76 a	17.6 ± 1.77 a	0.41 ± 0.05 a	89

Note - * Significantly different from other treatments within the column at $p \leq 0.05$ level (Chi-square test)

Values with the same letters within the columns do not differ from each other at a 5% level of significance

Plants that have enhanced growth parameters than the standard treatment

The survival rate from the standard treatment, compared to the ratings after 10 days, decreased by 20 %, while Vigo treated plants the survival rate was more than 97%

Germination and seedling development: beans & okra

Table 1. Influence of VIGO (1:500 dilution) on growth and vigour of two commercial crop plants. Seeds were incubated in the dark at 25°C for 6 days. Mean values with different letters within each of the growth parameter for each crop are significantly different ($P < 0.05$).

Crop	Treatment	Root length (mm)*	Shoot length (mm)*	Seedling mass (mg)*	Vigour Index
Okra	Control	3.99 ± 0.17 b	14.47 ± 0.53 b	99.3 ± 3.1 b	1606 b
	VIGO	9.93 ± 0.46 a	35.7 ± 1.33 a	153.0 ± 4.7 a	4152 a
Bean	Control	11.7 ± 0.61 b	5.25 ± 0.26 b	438.2 ± 13.8 a	1441 b
	VIGO	26.8 ± 1.28 a	6.05 ± 0.21 a	465.1 ± 13.2 a	3469 a

*Mean value ± SE

OKRA: Longer roots (2,5 X),taller plants (2,4 X) more biomass (1,5 X) and improved vigour (2,6 X)

BEAN: Longer roots (2,3 X),taller plants (1,2 X), more biomass (1,1 X) and improved vigour (2,4 X)

Germination and seedling devlopment

Crop/culture	Vigo (% germ)	Water (% germ)
Black beans	85	82
Broccoli	93	27
Onions	69	34
Peas	100	98
Radish	75	56
Wheat	80	46

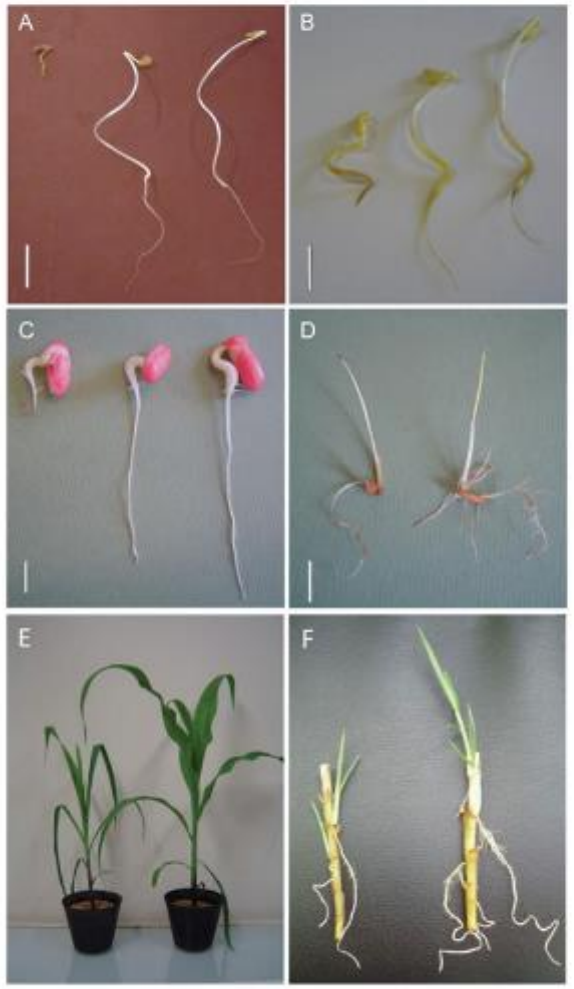
Germ rating after 4 days, Nov. 2014

Vigo concentration was 1:800 (1,25 ml Vigo/liter water)

Visual comparison of seedlings

Vigo for Agri™

treated seeds and plants



A - Tomato

B - Okra

C - Beans

D - Rice

E - Maize

F - Pasture Grass

Bulbs

trial summary

To determine the effects of Vigo™ on the growth of floral bulbs. Two week old seedlings of an Albuca cultivar were used in the trial.

treatments:

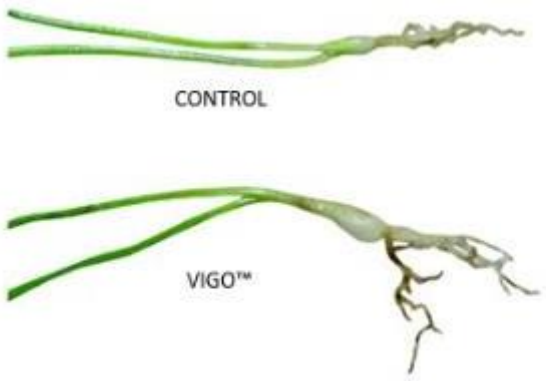
- Control – water.
- Vigo™ – treated at a dilution of 1:4000.

Plot size: 10 plants x 3 replications = 30 plants / treatment.

The trial period was conducted for 3 months, after which bulb sizes and weights were measured and compared.

trial observations and results

Plants treated with Vigo™ responded more vigorously, significantly increasing bulb size and weight when compared to untreated plants.



the spectrum of crop species

Find your crop species in the following list for which Vigo for Agri™ can bring enhanced production results:

Vegetables & Fruit

Fruiting:

Tomatoes, Sweet Peppers, Chillies, Cucumbers & Strawberries – treatment with Vigo for Agri™ results in an increase in fruit number and size.

Rooting:

Treatment with Vigo for Agri™ enhances root development increasing size and shortening time to maturation.

Tuber:

Potatoes, treated with Vigo for Agri™ result in increases in the number of tubers and size.

Bulb:

Onions, treated with Vigo for Agri™ result in an increase in bulb size and shortening the time to maturation.

Podded:

These include both shelled and non-shelled legumes. Treatment with Vigo for Agri™ increases the number of pods.

Summary

added features & benefits

Added Features

- Vigo for Agri™ is 100% natural.
- Vigo for Agri™ can be used in tandem with all fertilisers – chemical and organic.

Added Benefits

- When applied to plants, Vigo for Agri™ increases yield by 16% to 40%.
- Fruit produced is scientifically tested to have the same nutritional value as quality fruit grown without Vigo for Agri™.
- Vigo for Agri™ has an indefinite shelf life.