

Quantum Growth improved potato growers' overall productivity by 31%.

Location: Various potato growers in Sao Paulo, Brazil

Background: In 2010, four potato growers in the state of Sao Paulo, Brazil participated in a study to test the benefits of Quantum Growth on their crop. The experiment was supervised by Professor André Palermo Tonietti from UNIPINHAL, University of Pinhal located in the city of Espirito Santo do Pinhal.

Results Achieved: **Treatment with Quantum Growth improved overall productivity by 31%, providing an increased revenue of R\$ 5,513.51.**

The University concluded that based on the results of the experiment, Quantum Growth Technology successfully demonstrated its potential as a productivity enhancer and results indicate that it can be used on the Brazilian Potato Production System with success.

Farm Location	Farmer Name	Production System	Cultivar
Rosario	Laercio Berbamasco	Irrigated	Monaliza
Momboca	Jair Varaldo	Upland	Monaliza
Casa Branca #1	Toninho Gomes	Irrigated	Agata
Casa Branca #2	Jose Pai do Paulinho	Irrigated	Monaliza

Farm Location	Potato Bags (Control)	Potato Bags (Quantum Growth)	Productivity Increase (bags/hectare)
Rosario	600	914	314
Momboca	327.29	594.34	267.05
Casa Branca #1	873	951	78
Casa Branca #2	721	848	127
Totals	2521.29	3307.34	786.05

Farm Location	Productivity Increase (bags/hectare)	Bag Value* (Quantum Growth)	Return on Investment
Rosario	314	R\$ 26,70	R\$ 8,383.80
Momboca	267.05	R\$ 26,70	R\$ 7,130.24
Casa Branca #1	78	R\$ 35,00	R\$ 2,730.00
Casa Branca #2	127	R\$ 30,00	R\$ 3,810.00
Mean values	196.5	R\$ 29,60	R\$ 5,513.51

*Mean values on harvest day

The Experiment

Each farm was visited 5 times during the experiment. Product was applied according to instructions from Ecological Laboratories, Inc (ELI). In the first visit to the farm ELI representatives explained the application protocol and benefits of Quantum Growth. On the second visit, the potato seeding was performed with the addition of one gallon per hectare of Quantum-VSC to the treated plots. Thirty days later Quantum-VSC was applied again to the soil and after an additional 30 days Quantum-Light was sprayed on the leaves. Plants were harvested 30 days after the last application.

For more information on Quantum Growth products call 866.871.0154

Quantum Growth™



Use of Quantum Growth increased potato production and reduced wastage.

Boomplaas Farm Potato Trial

Start Date: 22/10/2014 **Date of Planting:** 17/10/2014
Farm: Boomplaas
Farmer: Nicolaas Lourens **Date of Harvesting:** 02/06/2015
Location: Reitz

Application Details

Date: 22/10/2014
Mixture: 2.5L Quantum-VSC and 2.5L Quantum-Light mixed with 200L of water
Rate: Applied at a rate of 200 litres p/ha in the second layer furrow before ridging
Method: In separate spray tank on potato ridger
Notes: Herbicide and fertilizer were applied at the same time as the Quantum Growth but from a separate tank.

Harvest Details

Date: 02/06/2015
Method: 25 meters of every row on both the control and Quantum Growth applied hectares were cordoned off (approx. 300 m²). Within each section, every potato was weighed. This yielded a total weight for each section. The potatoes were then taken to separate sorting tables where both the control and the Quantum Growth potatoes were sorted into large, medium, small and wastage potatoes.

Yield Results

Sizes	Quantum Growth	Controlled	% Increase/Decrease
Large	136.9 kg	104.9 kg	30.5%
Medium	268.6 kg	229.8 kg	16.9%
Small	184.0 kg	111.2 kg	65.5%
Wastage	16.5 kg	54.9 kg	(232.7%)



Difference in potato yield between the control section (left pallet) and the Quantum section (right pallet).



The control plants (left) had a smaller root structure with less potato nodes compared to the Quantum plants (right).



Control potatoes are top and right. Quantum potatoes are on the left.

Borneo Farm Potato Trial

Start Date: 21/10/2014 **Date of Planting:** 21/09/2014
Farm: Borneo
Farmer: Marius Lourens **Date of Harvesting:** 10/03/2015
Location: Reitz

Application Details

Date: 21/10/2014
Mixture: 2.5L Quantum-VSC and 2.5L Quantum-Light mixed with 200L of water
Rate: Applied at a rate of 200 litres p/ha at approx. 40cm above ground
Method: Through spray tank behind tractor

Notes: The crop was under irrigation and was not affected by any drought throughout the season. Only 1 application was given and was applied at 4 weeks after planting. This is not according to recommended guidelines, but still proved to show very successful results.

Harvest Details

Date: 10/03/2015 – 11/03/2015
Method: A full harvest was done on the entire hectare of both the Quantum and control hectares. Counting was done on all the large bags of potatoes that was delivered to the warehouse to determine the per hectare increase in weight.

Yield Results

	Quantum Growth	Controlled	% Increase/Decrease
Large Bags	99	87	13.79%
Weight	49.5 Tons	43.5 Tons	