

Chickpeas with Vitazyme application

Researcher: V.V. Plotnikov

Research organization: Plant Designs, Inc., Rochester, New York, and Agro Expert International, Kaharlyk, Ukraine

Location: Biliaivka District, Odessa Region, Maiaky Village, LTD Maiaky, Ukraine

Variety: Iordan

Planting date: April 16, 2018

Previous crop: winter wheat

Soil type: typical chernozem (humus=4.1%)

Planting rate: 600,00 seed/ha

Field preparation: disking to 6-8 cm, plowing to 20-22 cm, cultivation to 4-5 cm

Experimental design: A chickpea field trial was initiated in southern Ukraine by dividing a field into Vitazyme treated and untreated portions, to determine the effect of this product on chickpea yield.

① Control ② Vitazyme

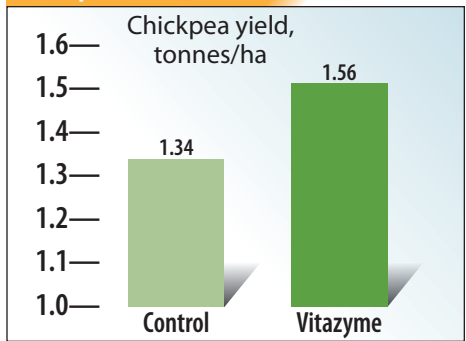
Fertilization: 16-16-16 kg/ha N-P₂O₅-K₂O at planting

Vitazyme application: 1 liter/ha sprayed on the soil on April 14, 2018

Yield results:

Treatment	Yield tonnes/ha	Yield change tonnes/ha
1. Control	1.34	—
2. Vitazyme	1.56	0.22 (+16%)

Chickpea Yield



Increase in chickpea yield with Vitazyme: 16%

Income results: The 0.22 tonne/ha yield increase improved income by \$199/ha.

Conclusions: A chickpea trial in southern Ukraine revealed a 16% yield increase with 1 liter/ha of Vitazyme applied on the soil before planting. This increase was highly profitable, giving the farmer \$199/ha more income, showing the great value of this program.



Chickpeas with Vitazyme application

Researcher: Vadim Plotnikov
Research organization: PJSC "Maiaky", Ukraine, Plant Designs, New York, USA, and Agro Expert International, Ukraine
Location: Biliaivka District, Odessa Region, Maiaky Village, Ukraine
Variety: Iordan
Seeding rate: 0.6 million seeds/ha
Planting date: April 4, 2017
Previous crop: wheat
Soil type: typical Chernozem; humus = 4.1%
Soil preparation: disking to 6-8 cm, plowing to 22-24 cm, harrowing to 4-5 cm
Experimental design: A chickpea field was divided into Vitazyme treated and untreated control areas to determine the efficacy of this product in promoting yield increases.

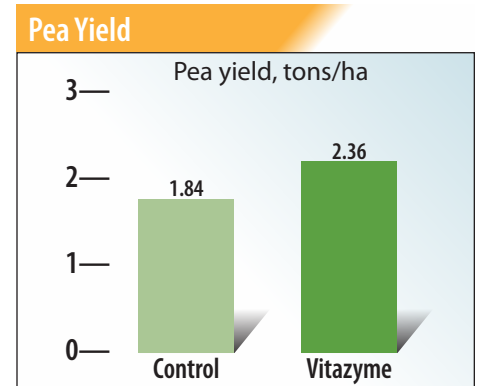
① Control ② Vitazyme

Fertilization: 16-16-16 kg/ha of N-P₂O₅-K₂O as a starter at planting
Vitazyme application: 0.6 liter/ha sprayed on the leaves and soil at flowering
Growing season weather: dry
Yield results:

Treatment	Pea yield tons/ha	Yield change ton/ha
1. Control	1.84	—
2. Vitazyme	2.36	0.52 (+28%)

Increase in pea yield with Vitazyme: 28%

Income results: At a price of \$875.00/ton of chickpeas, the added 0.52 ton/ha gave an additional \$455/ha income.



Conclusions: A chickpea trial in southern Ukraine, during a drought-stricken year, using Vitazyme at 0.6 liter/ha sprayed on the leaves and soil at bloom, resulted in a 0.52 ton/ha (28%) yield increase. This increase resulted in an income increase of \$455/ha. Such results illustrate the great utility of this program for chickpea production in Ukraine.