



## **Sunflowers Crop Report Directory**

### **Recommended Application Rates For Sunflowers**

**2009      Gelio 06 AK0324**  
Vinnitsia, Ukraine



## Crop recommendations for Sunflowers

Apply Vitazyme at planting with one of the following methods:

### **Dry Planters:**

With herbicide either before or after planting (either before or shortly after emergence) at the rate of 1 liter/hectare (13-16 oz/acre)

or

### **Liquid Planters:**

In furrow or 2x2 through liquid attachment on the planter. For small plots spray a 1% solution directly on the seeds in furrow before the row is closed at the rate of 1 liter/hectare (13-16 oz/acre)

For best results 2 applications are recommended, one at planting, and another at 30-60 cm (12-24 inch) height.

*Vitazyme can be tank mixed with all farm chemicals, including herbicides, insecticides, fungicides, and fertilizers.*

*Added benefit: when mixed with herbicide, Vitazyme will stimulate weed growth, thereby enhancing herbicide efficacy.*

## Vital Earth Resources

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# 2009 Crop Results

## Vitazyme on Sunflowers

Researcher: O.V. Kornijchuk, V.V. Plotnikov, and agronomic scientists

Organization: Vinnytsia State Agricultural Experiment Station, Ukraine Academy of Agrarian Sciences, Vinnytsia, Ukraine

Location: Ukraine central forest-steppe area near Vinnytsia

Seeding rate: 5 kg/ha

Planting date: May 22, 2009

Variety: Gelio 06 AK0324

Tillage: plowing, harrowing, and cultivation

Previous crop: winter wheat

Soil type: gray forest steppe soil; in the 0-30 cm layer, 2.2% organic matter, 8.4 mg/100 g of soil “hydrolyzed nitrogen”, 15.8 mg/100g of soil phosphorous, 12.4 mg/100 g of soil exchangeable potassium, and pH=5.5.

Experimental design: A uniform field was divided into plots of 1.0 ha each with two treatments and four replications. The objective of the study was to evaluate the effect of Vitazyme as either a seed application, or a seed plus foliar application on the yield of sunflowers.

### 1. Control

### 2. Vitazyme, once foliar

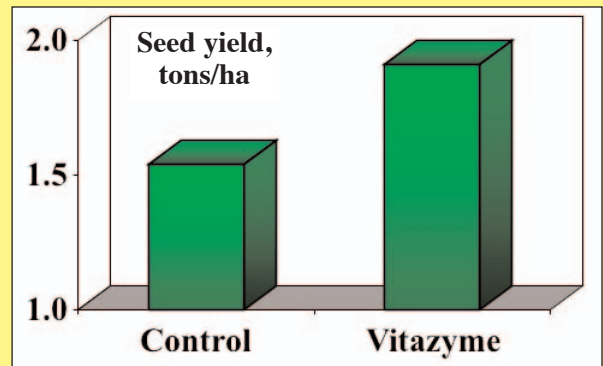
Fertilization: 45 kg/ha N

Vitazyme application: Treatment 2 received 1.0 liter applied to the leaves and soil on June 25, 2009, at “basket” formation.

Yield results:

Treatment	Seed yield tons/ha	Yield change tons/ha
Control	1.54	—
Vitazyme	1.91	0.37 (+24%)

**Increase in seed yield with  
Vitazyme: 24%**



Income results:

**Income increase with Vitazyme: 632 hrn/ha**

Conclusions: Sunflowers raised with Vitazyme (foliar at 1 liter/ha) in Ukraine produced 24% more seeds, and 632 hrn/ha more income compared to the control treatment. This product has proven itself to greatly improve sunflower production and profits in Ukraine.