**Vitazyme on Buckwheat**

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*Location:* Vinnytsia State Agricultural Research Station, Vinnytsia, Ukraine (Central Forest and steppe Region)

*Variety:* Ukrainian Super Elite  
*Soil type:* gray podzolic (organic matter = 2.2%, hydrolyzed N = 8.4 mg/100 g soil, P = 15.8 mg/100 g soil, exchangeable K = 12.4 mg/100 g soil, pH = 5.5)

*Previous crop:* sugar beets  
*Planting date:* May 7, 2010  
*Planting rate:* 4.5 million seeds/ha

*Soil preparation:* tillage to 22 cm, harrowing to 3 to 4 cm

*Experimental design:* A buckwheat plot area was divided into four replicates with a control and two Vitazyme treatments, with the objective of determining the effects of the product on yield.

1. **Control**  
2. **Vitazyme on seeds**  
3. **Vitazyme on seeds and leaves**

*Fertilization:* 30 kg/ha of N, incorporated before planting

*Vitazyme application:* Treatments 2 and 3, 1 liter/ha on the seeds at planting on May 7; Treatment 3, 1 liter/ha on the leaves and soil at early bloom on June 7

*Yield results:*

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Yield</th>
<th>Yield change</th>
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</thead>
<tbody>
<tr>
<td>1. Control</td>
<td>1.70</td>
<td></td>
</tr>
<tr>
<td>2. Vitazyme, seeds</td>
<td>1.95</td>
<td>0.25 (+15%)</td>
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<tr>
<td>3. Vitazyme, seeds + leaves</td>
<td>2.12</td>
<td>0.42 (+25%)</td>
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**Yield increase with Vitazyme:**  
15 to 25%

*Income results:* Income was increased by 630 hrn/ha for one treatment, and 835 hrn/ha for two treatments.

*Conclusions:* This Ukrainian trial with buckwheat revealed that Vitazyme, applied either on the seeds or on the seeds plus the leaves, gave an excellent yield response: 15% for the seeds only, and 25% for the seeds plus the leaves. Income increases were from 630 to 855 hrn/ha. This program is an excellent management practice for buckwheat growers in Ukraine.