Red Kidney Beans with Vitazyme application

**Researcher:** James Anderson  
**Research organization:** J and H Distributing, Belgrade, Minnesota  
**Location:** Atwater, Minnesota  
**Variety:** Chapparel dark red kidney beans  
**Planting date:** early June, 2017  
**Soil type:** silty clay loam Chernozem  
**Irrigation:** center-pivot  
**Experimental design:** A kidney bean field was treated with a strip of Vitazyme applied at planting to determine the effect of the product on bean yield.

1. **Control**  
2. **Vitazyme**

**Fertilization:** 2 gallons/acre of Red-Line liquid fertilizer, containing 6-12-2% N-P₂O₅-K₂O plus 1.0% Zn, 0.3% Fe, 0.04% Mn, and 0.05% Cu  
**Vitazyme application:** 13 oz/acre (1 liter/ha) in the seed row at planting  
**Weather conditions:** some wind damage, and quite warm and dry midsummer  
**Harvest date:** September 25, 2017  
**Yield results:** The yield was affected by considerable white mold.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Yield</th>
<th>Yield change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lb/acre</td>
<td>lb/acre</td>
</tr>
<tr>
<td>1. Control</td>
<td>2,198</td>
<td>—</td>
</tr>
<tr>
<td>2. Vitazyme</td>
<td>2,558</td>
<td>360 (+16%)</td>
</tr>
</tbody>
</table>

**Income results:** At about $0.25/lb, this additional 360 lb of beans netted $90/acre more income.

**Conclusions:** This red kidney bean trial in west-central Minnesota revealed that a Vitazyme in-furrow application, using only 13 oz/acre (1 liter/ha), produced a sizable yield increase of 16%. This yield increase netted about $90/acre more income, showing the great efficacy of this product to benefit kidney bean growers.
Red Kidney Beans with Vitazyme application

Researcher: James Anderson
Research organization: J and H Distributing, Belgrade, Minnesota
Location: Atwater, Minnesota
Variety: Red Hawk dark red kidney beans
Planting date: early June, 2017
Soil type: sandy clay loam Chernozem
Irrigation: center-pivot
Experimental design: A dark red kidney bean field was treated on one portion with Vitazyme as a foliar application to determine the effect of the product on bean yield.

Control  Vitazyme

Fertilization: 2 gallons/acre of Red-Line liquid fertilizer, containing 6-12-2% N-P₂O₅-K₂O plus 1.0% Zn, 0.3% Fe, 0.04% Mn, and 0.05% Cu
Vitazyme application: 13 oz/acre (1 liter/ha) sprayed on the leaves at early bloom
Weather conditions: quite warm and dry midsummer
Harvest date: September 21, 2017

Yield results: White mold was not a serious problem in this field.

<table>
<thead>
<tr>
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<th>Yield change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lb/acre</td>
<td>lb/acre</td>
</tr>
<tr>
<td>1. Control</td>
<td>3,100</td>
<td>—</td>
</tr>
<tr>
<td>2. Vitazyme</td>
<td>3,633</td>
<td>533 (+17%)</td>
</tr>
</tbody>
</table>

Yield increase in red kidney bean yield with Vitazyme: 17%

Income results: At $0.25/lb of beans, the additional yield of 533 lb/acre produced additional income of $133.25/acre.

Conclusions: A dark red kidney bean field-scale trial in west-central Minnesota revealed that Vitazyme, applied at 13 oz/acre (1 liter/ha) to the leaves at early bloom, increased bean yield by 17%. This 533 lb/acre increase netted the farmer an additional $133.25/acre, showing the great value of this program for kidney bean growers.