Influence of Fish Emulsion + Humic Acid Applied In-Furrow on Yield and Quality of Organic Soybean

Cooperator: Bill Langlois
Nearest Towns: Dorothy
Soil Type: Sandy loam
Tillage: Field cultivator
Variety: Attwood
Planting Date: 6-7-06
Row Width: 22 inch
Fertilizer: 2 gal. fish emulsion + 1 gal. molasses broadcast/a
Herbicide: None
Harvest Populations: 200,000
Harvest Date: 10-27-06
Experimental Design: RCB with 2 replications

Purpose of study:
To measure the influence of fish emulsion + humic acid applied in-furrow on yield and quality of organic soybean.

Results:
The treatments were established by injecting 3gal. fish emulsion + 1pt. humic acid in-furrow on 2 of the 4 replicated strips the length of the field with a 24 row planter. Harvest area was the centermost 9 rows by 2373 feet combined and weighed with a weigh wagon. The field had virtually no rain during the growing season and became severely infested with soybean aphids (>500 aphids/plant) in June which persisted for several weeks. Weed control was excellent until we received rain in August and a major flush of pigweed infested the row area. As a result of these environmental conditions and uncontrollable pest in an organic system, yields were dramatically reduced. As a result there were no measured advantages for the fish + humic acid treatment in regard to yield, protein percent, oil percent, test weight or seed size as can be noted in Table 1.

Table 1. Influence of fish emulsion + humic acid applied in-furrow on yield and quality of organic soybean - 2006

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Yield (bu/a)</th>
<th>Protein (%)</th>
<th>Oil (%)</th>
<th>Test wt. (lb/bu)</th>
<th>Seed size (seeds/lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish + humic acid</td>
<td>6.3</td>
<td>36.1</td>
<td>18.1</td>
<td>58.1</td>
<td>3388</td>
</tr>
<tr>
<td>Control¹</td>
<td>5.8</td>
<td>36.2</td>
<td>18.1</td>
<td>58.1</td>
<td>3423</td>
</tr>
<tr>
<td>LSD 0.05</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

¹ No in-furrow fertilization