Effect of Oil Seed Radish on Wheat Yield

Steve Prochaska, Ohio State University Field Specialist, Agronomic Crops

Objective
To evaluate wheat yield response to a fall planting of oil seed radish into drilled wheat.

Background
Crop Year: 2011
Location: OSU Unger Farm
County/Town: Crawford
Soil Type: Blount
Drainage: Systematic
Previous Crop: soybeans
Tillage: No – tillage
Soil Test: pH 6.8, P 23 ppm, K 124 ppm
Wheat Planting Date: Sept. 30, 2010
Wheat Variety: Pioneer 25R62
Radish planted 10/4/2010 @10.5 pds/acre
Row width; 10 inches
Fertilizer: For wheat and soybeans, 107-81-75
Wheat Seeding Rate1.4 million seeds/acre
Wheat Harvest Date: July 6, 2011

Methods
Pioneer 25R62 soft red winter wheat was planted Sept. 30, 2010 in 10 inch rows with a Great Plains drill at a rate of 1.4 million seeds per acre. Daikon oil seed radish was planted into wheat at a rate of 10.6 lbs/acre using a calibrated spinner spreader on Oct. 4, 2010. Final radish plant population in the treatment plots was 0.6 plants per square foot (data taken with wire frame thrown 3 times and plant number averaged on 11/26/2010). This study used a randomized complete block design with two treatments replicated 3 times to compare planting of oil seed radish into wheat versus wheat not planted with radish over yield. A small plot combine was used to harvest plots on Nov. 18, 2011. Plot size was 5 by 45 feet.

Treatments
1) Planting of radish into wheat
2) Control

Results

Table 1. Moisture and Yield of 25R62 Wheat

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Ave. Moisture</th>
<th>Ave. Yield (bu/A)</th>
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<tbody>
<tr>
<td>Radish / wheat</td>
<td>10.6</td>
<td>82.7</td>
</tr>
<tr>
<td>Control</td>
<td>10.7</td>
<td>90.7</td>
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LSD (P=0.05) NS
CV(%) 2.9
Summary
Radish does not overwinter in north central Ohio. Therefore, to further test this observation, trials were established Oct. 4, 2010 in winter wheat. There was not a significant difference in yield between wheat seeded with oil seed radish and wheat not seeded. Why would radish be expected to be a benefit? Explanation of this maybe helpful.

Acknowledgement
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For more information, contact:
Name: Steve Prochaska
Address: 222 W. Center Street
Marion, Ohio  43302
prochaska.1@osu.edu