Construction and Expansion (31 Jan. 2007)

Northstar Bioenergy
Hallock, MN

Velva, ND
Minot, ND

http://nbb.org/resources/fuelfactsheets/
Oilseed Crops Grown in North Dakota

**Edible**
- Canola, safflower, soybean
- Sunflower

**Industrial**
- Camelina, crambe, cuphea
- Flax, rapeseed

**Spice**
- Coriander, mustard

**Nutritional**
- Borage, flax
<table>
<thead>
<tr>
<th>Crop</th>
<th>% Oil</th>
<th>lbs/A Oil</th>
<th>Gals/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring camelina</td>
<td>35</td>
<td>402</td>
<td>54</td>
</tr>
<tr>
<td>Spring canola</td>
<td>40</td>
<td>1000</td>
<td>133</td>
</tr>
<tr>
<td>Winter canola</td>
<td>40</td>
<td>1160</td>
<td>155</td>
</tr>
<tr>
<td>Mustard</td>
<td>35</td>
<td>665</td>
<td>88</td>
</tr>
<tr>
<td>Flax</td>
<td>40</td>
<td>560</td>
<td>75</td>
</tr>
<tr>
<td>Soybean</td>
<td>20</td>
<td>540</td>
<td>72</td>
</tr>
<tr>
<td>Safflower</td>
<td>35</td>
<td>525</td>
<td>70</td>
</tr>
<tr>
<td>Sunflower</td>
<td>44</td>
<td>990</td>
<td>132</td>
</tr>
</tbody>
</table>
Cool Season Oilseed Study

- **Crops**
  - Canola
  - Camelina
  - Crambe
  - B. juncea

- **Seeding Date**
  - 4 @ 10 to 12 days
  - 1st 1 May

- **Locations**
  - Carrington
  - Hettinger
  - Langdon
  - Minot
  - Prosper
  - Williston
  - Brookings, SD
  - Bison, SD
Oilseed End Use: Food & Fuel

- **Crop** – where best adapted in the region
  - Seed yield, seed oil content, and oil yield
  - Meal (press cake)

- **Production costs** (agronomic)
- **Manufacturing costs**
  - (crushing, oil processing, etc.)
- **Markets**

Opportunities to partner with? Ag Eng, Animal Sci, Ag Econ
Questions?
North Dakota Agricultural Statistics Districts

1,040,000 acres seeded
Average yield 1,440 lb/A

22% 1400 Lb/A
22% 1550 Lb/A
9% 1500 Lb/A
3% 1380 Lb/A
2% 1380 Lb/A
0.7% 1540 Lb/A
36% 1350 Lb/A
0.4% 1530 Lb/A
6% 1635 Lb/A

2005 % Canola acres seeded
http://www.nass.usda.gov/nd
## Potential Oilseed Crop Yields ND/MN

<table>
<thead>
<tr>
<th>Crop</th>
<th>Projected lbs/acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camelina</td>
<td>800-1,500</td>
</tr>
<tr>
<td>Canola Spring</td>
<td>1,500-3,500</td>
</tr>
<tr>
<td>Canola Winter</td>
<td>1,800-4,000</td>
</tr>
<tr>
<td>Mustard</td>
<td>1,000-2,500</td>
</tr>
<tr>
<td>Flax</td>
<td>800-2,000</td>
</tr>
<tr>
<td>Soybean</td>
<td>1,800-3,600</td>
</tr>
<tr>
<td>Safflower</td>
<td>1,000-2,000</td>
</tr>
<tr>
<td>Sunflower</td>
<td>1,500-3,000</td>
</tr>
</tbody>
</table>