Growing Round-Up-Ready Sugar Beets vs. Conventional Sugar Beets

By Steven Snyder
Introduction

- Sugar Beets are very important in both the United States agriculture and Wyoming’s agriculture.
- Fifth leading cash crop in Wyoming
- Why it is important to research new technologies
Introduction

- Why GMO crops?
- Why look at Round-Up-Ready sugar beets?
Background

- Who is interested in growing Round-Up-Ready sugar beets?
- Who does it affect?
Background

- Previous interest in Round-Up-Ready sugar beets.
- History of Round-Up-Ready sugar beets.
- Why Wyoming Sugar Company was able to experiment with Round-Up-Ready.
Problems with Round-Up-Ready

- Government approval
- Marketing
- Price of new technologies
- Possible yield declines
- Chemical differences
Advancements Round-Up-Ready Creates

- Weed Control
- New tillage methods
- Fuel savings
- Less farm & migrant labor
- More acreage
- Protecting environment
<table>
<thead>
<tr>
<th>Task</th>
<th>Conventional Fuel Cost</th>
<th>Round-Up Fuel Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.) Plow</td>
<td>$7.50</td>
<td>$8.50</td>
</tr>
<tr>
<td>2.) Rollo-harrow</td>
<td>$3.00</td>
<td>$1.50</td>
</tr>
<tr>
<td>3.) Rollo-harrow</td>
<td>$3.00</td>
<td></td>
</tr>
<tr>
<td>4.) Level</td>
<td>$2.50</td>
<td></td>
</tr>
<tr>
<td>5.) Telone</td>
<td>$6.00</td>
<td></td>
</tr>
<tr>
<td>6.) Level</td>
<td>$2.50</td>
<td></td>
</tr>
<tr>
<td>7.) Apply Fertilizer</td>
<td>$1.30</td>
<td></td>
</tr>
<tr>
<td>8.) Rollo-harrow</td>
<td>$3.00</td>
<td></td>
</tr>
<tr>
<td>9.) Ridge</td>
<td>$1.50</td>
<td></td>
</tr>
<tr>
<td>10.) Plant</td>
<td>$1.50</td>
<td></td>
</tr>
<tr>
<td><strong>Total Fuel Cost</strong></td>
<td><strong>$31.80</strong></td>
<td><strong>$10</strong></td>
</tr>
</tbody>
</table>
## Sugar beet budget

<table>
<thead>
<tr>
<th>Item</th>
<th>Conventional costs per acre</th>
<th>Round-Up-Ready costs per acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel</td>
<td>$31.80</td>
<td>$10.00</td>
</tr>
<tr>
<td>Labor</td>
<td>$10.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>Beet labor</td>
<td>$40.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Equipment maintenance</td>
<td>$2.00</td>
<td>$1.00</td>
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<tr>
<td>Tractor maintenance</td>
<td>$3.00</td>
<td>$1.50</td>
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<tr>
<td>Chemicals</td>
<td>$35.00</td>
<td>$40.00</td>
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<tr>
<td>Fertilizer</td>
<td>$60.00</td>
<td>$30.00</td>
</tr>
<tr>
<td>Telon</td>
<td>$40.00</td>
<td>$20.00</td>
</tr>
<tr>
<td>New equipment</td>
<td>$0.00</td>
<td>$10.00</td>
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<tr>
<td><strong>Total costs</strong></td>
<td><strong>$221.80</strong></td>
<td><strong>117.5</strong></td>
</tr>
</tbody>
</table>

Average income per acre: **$1,200**
Sugar and Yield Comparison

2007 Round-Up
- 29.3 Tons per acre
- 16 Percent sugar

2007 Conventional
- 30.1 Tons per acre
- 16 Percent sugar

2008 Round-Up
- 31.1 Tons per acre
- 17.5 Percent sugar

2008 Conventional
- 30.3 Tons per acre
- 17.5 Percent sugar
GMO Crops

- Increase Yield
- Herbicide Resistance
- Disease Resistance
Conclusion

- **Round-Up-Ready Pros**
  - Weed control
  - New Technologies
  - Fuel savings
  - Labor, Time, Machinery savings
  - Environmentally safe

- **Conventional Pros**
  - Reliability
  - Known
  - No new investments
Conclusion

- **Round-Up-Ready Cons**
  - Law suit
  - Price of technologies
  - Some unknown

- **Conventional Cons**
  - Input costs
  - Weed Control
  - Time
Recommendation

Incorporate a portion of your crop to ensure it is right for you.

Eventually go to Round-Up-Ready!
Questions?