Economics of Malting Barley Production: Costs and Profit with Sensitivity Analysis

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Cornell University/NWNY Dairy, Livestock and Field Crops Program
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• Producers
  • Domoy, Drum, Kiraly, O’Mara, ...

• Extension
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Summary

• Profit estimates vary -- negative to positive -- depending upon yield and price received by the farmer for barley

• Producers can use estimates to make decisions regarding malting barley production’s place in their cropping systems; understanding variability plays an important role

• Understanding yield, quality, price, costs, profit interactions associated with suggested changes in production practices are key moving forward
Research Questions

• What are the costs of production under different scenarios?
• What are profits under different scenarios?
• How sensitive are costs of production and profit to variability in yield and price received by producers for barley?
• What are some implications of the above moving forward?
Approach

- Estimate costs of production under varying conditions
- Examine prices received by farmers for barley (Source of barley price data: CCE/Harvest New York. 2016. NYS Brewery: Supply Chain Analysis)
- Estimate value of production, price times yield
- Estimate profit and perform sensitivity analysis with respect to yield and output price
## Variable, Fixed and Total Costs by Scenario, NY, 2014 and 2015

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Variable</th>
<th>Fixed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring, Conventional, Standard Management, 2015</td>
<td>194.90</td>
<td>165.06</td>
<td>359.96</td>
</tr>
<tr>
<td>Spring, Conventional, Intensive Management, 2015</td>
<td>238.99</td>
<td>167.24</td>
<td>406.23</td>
</tr>
<tr>
<td>Winter, Conventional, Standard Management, 2015</td>
<td>222.27</td>
<td>165.06</td>
<td>387.33</td>
</tr>
<tr>
<td>Winter, Conventional, Intensive Management, 2015</td>
<td>255.18</td>
<td>167.23</td>
<td>422.41</td>
</tr>
<tr>
<td>Spring, Min Till, Intensive Management, 2014</td>
<td>254.37</td>
<td>154.83</td>
<td>409.20</td>
</tr>
<tr>
<td>Winter, Min Till, Intensive Management, 2014</td>
<td>268.13</td>
<td>154.83</td>
<td>422.96</td>
</tr>
<tr>
<td>Spring, No Till, Intensive Management, 2014</td>
<td>364.35</td>
<td>118.39</td>
<td>482.74</td>
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<tr>
<td>Spring, Conventional, Intensive Management, 2014</td>
<td>320.52</td>
<td>129.82</td>
<td>450.34</td>
</tr>
</tbody>
</table>
Profit, return to management, ($/acre) by barley price ($/bushel) by barley yield (bushels/acre), spring variety, conventional tillage, standard management, NY, 2015
Profit, return to management, ($/acre) by barley price ($/bushel) by barley yield (bushels/acre), spring variety, conventional tillage, intensive management, NY, 2015
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