**BECK’S CORN CHAMPION MIX**

A combination of 82% Dixie Crimson Clover, 15% GroundBuilder Radishes, and 3% Appin Turnips. We like this product ahead of corn.

**BENEFITS**
- Produces large amounts of nitrogen when crimson clover is allowed to go to flower
- Scavenges nitrogen and other nutrients left over from the previous crop as well as from the crimson clover
- Improves soil structure by reducing compaction

**PLANTING TIPS**
- **Planting Rate:** 16 lbs./A.
- **Aerial Rate:** 20 lbs./A.
- **Planting Depth:** 1/4 in. - 1/2 in. deep
- **Planting Time:** July to September (For best results, plant six weeks before killing frost.)

| Price per 50 lb. Bag | $82.00 | If Paid by Sept. 15, 2015 | $72.16 |

**BECK’S BEAN BUILDER MIX**

A combination of 81% Beck’s Annual Ryegrass, 16% GroundBuilder Radishes, and 3% Appin Turnips. We like to see this mix ahead of soybeans, but it also works well ahead of corn.

**BENEFITS**
- Breaks up soil compaction
- Improves soil tilth
- Scavenges large amounts of nutrients
- Erosion control
- Improves water infiltration

**PLANTING TIPS**
- **Planting Rate:** 19 lbs./A.
- **Aerial Rate:** 24 lbs./A.
- **Planting Depth:** 1/4 in. - 1/2 in. deep
- **Planting Time:** July to September (For best results, plant six weeks before killing frost.)

| Price per 50 lb. Bag | $60.00 | If Paid by Sept. 15, 2015 | $52.80 |

**BECK’S GROUNDBUILDER RADISHES**

This product produces large root masses that can shatter compaction, as well as scavenge nitrogen and nutrients deep within the soil.

**BENEFITS**
- Radishes can capture nitrogen before winter killing
- Winter kill in late December or early January
- Ground aeration
- Reduces soil compaction
- Weed suppression

**PLANTING TIPS**
- **Planting Rate:** 5 - 10 lbs./A.
- **Aerial Rate:** 8 - 10 lbs./A.
- **Planting Depth:** 1/4 in. - 1/2 in. deep
- **Planting Time:** July to early September (For best results, plant six weeks before killing frost.)

| Price per 50 lb. Bag | $105.00 | If Paid by Sept. 15, 2015 | $92.40 |

**NEW | BECK’S WINTER MIX**

This product combines 95% Cereal Rye and 5% Dwarf Essex Rapeseed. The Cereal Rye provides a deep, fibrous root system while the rapeseed helps break up compaction.

**BENEFITS**
- Extremely winterhardy
- Excellent for erosion control
- Versatility for late planting
- Scavenges nutrients
- Potential to graze

**PLANTING TIPS**
- **Planting Rate:** 35 - 50 lbs./A.
- **Aerial Rate:** 50 lbs./A.
- **Planting Depth:** 1/4 in. - 1/2 in. deep
- **Planting Time:** August to November

| Price per 50 lb. Bag | $24.00 | If Paid by Sept. 15, 2015 | $21.12 |
**BECK’S OAT RADISH MIX**

This mix is a combination of 90% Spring Oats and 10% Beck's GroundBuilder Radishes. It provides the deep rooting potential of radishes and the fibrous root structure of oats.

**BENEFITS**
- Breaks up soil compaction
- Increases soil porosity
- Winter kill
- Increases earthworm activity
- Reduces erosion

**PLANTING TIPS**

**Planting Rate:** 35 lbs./A.
**Aerial Rate:** 45 - 50 lbs./A.
**Planting Depth:** 1/4 in. - 1/2 in. deep
**Planting Time:** July to October (For best results, plant six weeks before killing frost.)

Price per 50 lb. Bag $35.00  If Paid by Sept. 15, 2015 $30.80

---

**BECK’S ANNUAL RYEGRASS**

With a dense, fibrous root system, this product is effective in improving soil structure. It is recommended to kill the ryegrass when it is actively putting on new top growth in the spring.

**BENEFITS**
- Can be planted later in fall
- Dense, fibrous root system
- Improves soil tilth
- Will root down 40 in. or more
- Excellent winterhardiness

**PLANTING TIPS**

**Planting Rate:** 10 - 12 lbs./A.
**Aerial Rate:** 20 - 25 lbs./A.
**Planting Depth:** 1/4 in. - 1/2 in. deep
**Planting Time:** July to October

Price per 50 lb. Bag $39.00  If Paid by Sept. 15, 2015 $34.32

---

**ADDITIONAL COVER CROP SEED**

<table>
<thead>
<tr>
<th></th>
<th>Seeding Rates (Use Higher Rates for Aerial Application)</th>
<th>Price per 50 lb. Bag</th>
<th>If Paid by Sept. 15, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oats</td>
<td>Winter kills and great companion with most cover crops</td>
<td>30 - 50 lbs./A.</td>
<td>$19.00 $16.72</td>
</tr>
<tr>
<td>Beck's Cereal Rye</td>
<td>Fast germinating, quick growing with good rooting depth</td>
<td>35 - 50 lbs./A.</td>
<td>$19.00 $16.72</td>
</tr>
<tr>
<td>Dixie Crimson Clover</td>
<td>Excellent nitrogen producer with good winterhardiness</td>
<td>12 - 17 lbs./A.</td>
<td>$70.00 $61.60</td>
</tr>
<tr>
<td>Dwarf Essex Rape</td>
<td>Winterhardy brassica with a vigorous tap root</td>
<td>5 - 8 lbs./A.</td>
<td>$55.00 $48.40</td>
</tr>
</tbody>
</table>

**SPECIAL ORDERS**

Other products not on this list may be available. Call for pricing. All custom blends and special orders are C.O.D. and CANNOT be returned. **Prices are subject to change without notice.**

**CASH DISCOUNTS**
- 12%...August 1, 2015 - September 15, 2015
- 11%...September 16, 2015 - November 15, 2015
- 10%...November 16, 2015 - January 10, 2016
- 5%...January 11, 2016 - March 15, 2016
- 3%...March 16, 2016 - June 15, 2016
- 0%...June 16, 2016 - August 1, 2016

Zero carrying fees until Nov. 15, 2016 with approved credit and signed promissory note. Application deadline February 14, 2016.

**RETURNS**
- Customers may return up to 5% of their total seed order
- Any returns over 10% will be subject to a $10.00 per unit restocking fee
- No bags that have holes, been opened, torn, or tags removed may be returned
- Additional fees may apply to custom mixes
- No returns will be accepted after November 1, 2015 for fall seeding
In this study we evaluated the advantages of cover crops and their ability to increase yield by improving soil tilth, scavenging for and producing nitrogen, and shattering compaction. Corn was planted into three different cover crops which had been planted in the fall of 2013. In addition, three different nitrogen programs were evaluated to assess nitrogen scavenging and sequestration. These nitrogen rates consisted of 180 lb. (100% nitrogen program), 135 lb. (75% nitrogen program), and 90 lb. (50% nitrogen program).

<table>
<thead>
<tr>
<th>Cover Crop and Pounds of Nitrogen</th>
<th>Harvest Population</th>
<th>Test Weight</th>
<th>Bushels Per Acre</th>
<th>Net Return</th>
<th>Return on Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BECK’S CORN CHAMPION MIX</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>30,667</td>
<td>59.2</td>
<td>204.8</td>
<td>$757.92</td>
<td>+$42.92</td>
</tr>
<tr>
<td>135</td>
<td>31,333</td>
<td>58.5</td>
<td>206.4</td>
<td>$737.56</td>
<td>+$22.17</td>
</tr>
<tr>
<td>180</td>
<td>32,333</td>
<td>59.1</td>
<td>208.7</td>
<td>$720.11</td>
<td>+$3.09</td>
</tr>
<tr>
<td><strong>AVERAGE</strong></td>
<td>31,444</td>
<td>58.9</td>
<td>206.6</td>
<td>$738.53</td>
<td>+$22.73</td>
</tr>
<tr>
<td><strong>BECK’S ANNUAL RYEGRASS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>31,333</td>
<td>59.1</td>
<td>190.4</td>
<td>$720.56</td>
<td>+$5.56</td>
</tr>
<tr>
<td>135</td>
<td>30,000</td>
<td>59.3</td>
<td>201.7</td>
<td>$740.46</td>
<td>+$25.07</td>
</tr>
<tr>
<td>180</td>
<td>31,000</td>
<td>59.3</td>
<td>209.9</td>
<td>$740.46</td>
<td>+$30.47</td>
</tr>
<tr>
<td><strong>AVERAGE</strong></td>
<td>30,778</td>
<td>59.2</td>
<td>200.7</td>
<td>$736.17</td>
<td>+$20.37</td>
</tr>
<tr>
<td><strong>BECK’S GROUNDBUILDER RADISH + OATS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>32,333</td>
<td>59.8</td>
<td>190.1</td>
<td>$704.52</td>
<td>-$10.48</td>
</tr>
<tr>
<td>135</td>
<td>33,333</td>
<td>58.8</td>
<td>199.9</td>
<td>$718.19</td>
<td>+$2.80</td>
</tr>
<tr>
<td>180</td>
<td>31,667</td>
<td>59.1</td>
<td>201.7</td>
<td>$698.66</td>
<td>-$18.36</td>
</tr>
<tr>
<td><strong>AVERAGE</strong></td>
<td>32,444</td>
<td>59.2</td>
<td>197.2</td>
<td>$707.12</td>
<td>-$6.68</td>
</tr>
<tr>
<td><strong>CONTROL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>31,333</td>
<td>60.2</td>
<td>185.3</td>
<td>$715.00</td>
<td>—</td>
</tr>
<tr>
<td>135</td>
<td>28,333</td>
<td>59.4</td>
<td>191.9</td>
<td>$715.39</td>
<td>—</td>
</tr>
<tr>
<td>180</td>
<td>33,333</td>
<td>59.1</td>
<td>198.8</td>
<td>$717.02</td>
<td>—</td>
</tr>
<tr>
<td><strong>AVERAGE</strong></td>
<td>31,000</td>
<td>59.6</td>
<td>192.0</td>
<td>$715.80</td>
<td>—</td>
</tr>
</tbody>
</table>

†Bu./A., and test weight corrected to 15% moisture. ‡Net return is gross income (Bu./A. x $4.15/Bu.) minus cover crop cost, nitrogen cost and $6.00 application cost, if applicable. ◊Return on investment is Bu./A. difference x $4.15/Bu. minus cover crop cost and $6.00 application cost. Costs figured at $0.60/lb. UAN, $2.00/lb. Beck’s Corn Champion Mix, $2.98/lb. Beck’s GroundBuilder Radish and Oats Mix and $0.80/lb. Beck’s Annual Ryegrass.

**SUMMARY**

The Beck’s Corn Champion Mix contains Appin Turnips, oilseed radishes, and Crimson Clover. This mix resulted in the highest average yield and the greatest average return on investment of 206.6 Bu./A. and $22.73/A., respectively. Beck’s Annual Ryegrass also provided an average positive return on investment of $20.37/A. All of the cover crops provided greater yield than the control, although the Beck’s GroundBuilder Radish and Oats did not always provide a positive return on investment. What was interesting is that Beck’s Corn Champion Mix, which contains the nitrogen producing legume clover, provided the greatest return on investment with the lowest nitrogen rate. This study will continue over the years to see if cover crops continue to improve yields and allow farmers to reduce nitrogen rates in the future.

Results from this study were collected at Beck’s London, Ohio Practical Farm Research (PFR)® location. More information can be found on pages 290-291 of the 2014 PFR book.

**COVER CROP ADVANTAGE: PLANT BIOMASS STUDY**

**PURPOSE** Over multiple years there has been debate about the amount of nutrients cover crops can capture. This spring we collected plant biomass samples from Cereal Rye and Annual Ryegrass prior to termination.

**SUMMARY** Following corn, the results show Cereal Rye scavenged anywhere from 25 - 40 lb./A. of nitrogen and annual ryegrass captured as much as 25 lb./A. Cereal Rye showed an impressive 90 lb./A. of Potassium (K2O) captured as well. Even if these nutrients are not plant available until later in the growing season, cover crops are preventing them from leaching out of the field and into the streams. — Ryan Moore, Cover Crop Product Lead, rmoore@beckshybrids.com