

## 2016 KBS GLBRC Lux Arbor Continuous Corn (L1) Experiment Agronomic Protocol

### January 1, 2016

KBS GLBRC Lux Arbor Continuous Corn (L1) Experiment	
Site	KBS Lux Arbor (L1) (Parker Road)
Planting	Plant Dekalb DKC52-84 in late April or early May. Variety DKC52-84 is a 102 day maturity, Roundup Ready Genuity Smartstack RIB (refuge in a bag) corn blend. Planting rates will be spatially variable and will be based upon previous yield maps
Cover Crop	No cover crops used
Tillage	No-till Ditches (caused by soil erosion) need to be fixed with a combination of tillage, soil movement with a loader, packing and grass seeding. Locations of work will be mapped with Suzanne Sippel.
Fertilizer	<p>Nitrogen Recommendations from MSU Soil and Plant Nutrient Laboratory. Phosphorus, potassium and lime recommendations for variable rate application from CHS</p> <ul style="list-style-type: none"> <li>• 0.1 N:Corn price ratio</li> <li>• Low to Medium Soil Productivity</li> <li>• Fertilizer recommendations based on corn silage (not corn grain).</li> </ul> <p>Total nitrogen recommendations: 150 lb N ac<sup>-1</sup> (168 kg N ha<sup>-1</sup>).</p> <p>Starter: 10 gals/A of 28% UAN Solution (28-0-0) (30 lbs N ac<sup>-1</sup>, 34 kg N ha<sup>-1</sup>)</p> <p>Sidedress: 40 gals/A 28% UAN solution (28-0-0) (120 lbs N acre<sup>-1</sup>, 134 kg N ha<sup>-1</sup>).</p> <p>Phosphorus (P): Mono-Ammonium Phosphate (11-52-0) applied by CHS on 11/19/15 using variable rate technology. Fertilizer rates based on soil tests taken after 2014 Harvest. Average application rate was 113 lbs product per acre [12 lbs N ac<sup>-1</sup> (13 kg N ha<sup>-1</sup>) and 59 lbs P<sub>2</sub>O<sub>5</sub> ac<sup>-1</sup> (66 kg P<sub>2</sub>O<sub>5</sub> ha<sup>-1</sup>)]</p> <p>Potassium (K): Potassium Fertilizer (0-0-60) applied by CHS on 11/19/15 using variable rate technology. Fertilizer rates based on soil tests taken after 2014 Harvest. Average application rate was 265 lbs product per acre [159 lb K<sub>2</sub>O ac<sup>-1</sup> (178 kg K<sub>2</sub>O ha<sup>-1</sup>)]</p> <p>Lime: Dolomitic Lime applied by CHS on 11/30/15 using variable rate technology. Lime rates based on soil tests taken after 2014 Harvest. Average application rate was 2.26 tons per acre (5.06 Mg ha<sup>-1</sup>)</p>
Harvest	<p>Grain harvest: Harvest corn in October or November including yield mapping</p> <p>Stover Harvest: Mow/windrow corn stover after grain harvest with the Loftness Shredder/Draper and round bale stover after putting stover in windrows. Stover will be baled and removed by Kellogg Farm or Stafford Farms. Record weight and dry matter percentage of corn stover.</p>
Weed Control	<p>Burn down: Glyphosate (32 oz ac<sup>-1</sup>) 3-7 days before planting at label rates.</p> <p>Preemergence:</p> <p>Postemergence: Broadcast Halex GT at 3.6 pts ac<sup>-1</sup>. (Halex GT is a premix of: Mesotrione (2.05%), S-metolachlor (20.5%) and Glyphosate (20.5%)). Follow with glyphosate (32 oz ac<sup>-1</sup>) later in season if necessary.</p>
Micro-plots	No micro-plots at Lux Arbor.