Meadowlark Extension District Demonstration Plot Tour
August 25, 2015
Domann Farms, Winchester

To our sponsors – MANY thanks!
**Corn Plot Layout**

**Meadowlark Extension District**  
Demonstration Plot Program  
*Row Spacing Comparison - 2015*  
Cooperators: Domann Farms/Gigstad Farms  
Planting Date: April 22, 2015/Hoegemeyer 8408 AM

<table>
<thead>
<tr>
<th>South</th>
<th>North</th>
</tr>
</thead>
</table>
| 40’ - 30” spacing x 26,000 population | unprinted 00% x 8 plants/ft | 2015 Results
| 60’ - 20” spacing x 26,000 population | unprinted 00% x 8 plants/ft |
| 40’ - 30” spacing x 26,000 population | unprinted 00% x 8 plants/ft |
| 60’ - 20” spacing x 30,000 population | unprinted 00% x 8 plants/ft |
| 40’ - 30” spacing x 30,000 population | unprinted 00% x 8 plants/ft |
| 60’ – 20” spacing x 30,000 population | unprinted 00% x 8 plants/ft |

**2014 Results**

**Corn Demonstration Plot Results**

The first year of a multi-year corn row spacing study was conducted in 2014 with collaboration from Domann Farms and Gigstad Farms in northeast Jefferson County. Results are included in the chart below. NOTE: results are from single year with multiple years of data needed to make any definite conclusions.

![Yield Chart](chart.png)

- **20-inch row**: 22,216 plants per acre
- **20-inch row**: 26,463 plants per acre
- **30-inch row**: 23,958 plants per acre
- **30-inch row**: 26,789 plants per acre

![Yield Chart](chart.png)
Narrow Rows: Kansas Experience

So why not?

- Even though we don’t use light efficiently early (advantage narrow @ V7) – that difference is gone by V12. – (Ciampitti/UNL)
- By flowering, corn roots have expanded to span the distance between 30” rows
- Yield, even in high yielding environments and @ high populations – doesn’t seem to be significantly different…
Where Do Narrow Rows Fit?

- Some say Interstate 90 and north. Others, north of 43° N. Latitude (northern Nebraska).
- University of Minnesota: 9% advantage to narrow rows
  - shorter growing season → earlier-maturing hybrids → fewer leaves and less time from emergence to silking → less leaf area to intercept sunlight
  - Other northern Corn Belt universities agree...
2015 Corn N Loss Evaluation

• 7 Plot Sites – applied 6/10-11 & 6/16-17
  – 6 with the equivalent of 100# N/A applied to an area 50’ x 10’ in size
  – 1 with the rates of 40, 80, & 120# N/A applied to plots 50’ x 10’ in size
  – Readings taken weekly w/ a SPAD meter from plot area and a ‘check’ area adjacent to the plot

• Results:
  – 1 of 6 sites showing a 5-7% difference between treatments
  – Consistent 8-10% difference between check and 120#/A treatment – but none between others.

Soybean Date of Planting – Recent Studies in Kansas

<table>
<thead>
<tr>
<th>Site, Year</th>
<th>Planting Date</th>
<th>Yield, bu/a, compared to Early May planting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mid-Late May</td>
<td>Early-Mid June</td>
</tr>
<tr>
<td>Powhattan, 2000-02</td>
<td>1.7</td>
<td>11.4</td>
</tr>
<tr>
<td>Belleville, 1999, 2001</td>
<td>4.4</td>
<td>-26.2</td>
</tr>
<tr>
<td>Topeka, 2000-02</td>
<td>-4.8</td>
<td>-15.1</td>
</tr>
<tr>
<td>Ottawa, 1999-2002</td>
<td>6.6</td>
<td>-0.3</td>
</tr>
<tr>
<td>Belleville, 2009-10</td>
<td>-6.5</td>
<td></td>
</tr>
<tr>
<td>Scandia, 2009-10</td>
<td>-4.5</td>
<td></td>
</tr>
<tr>
<td>Manhattan, 2010</td>
<td>-7.7</td>
<td>-15.3</td>
</tr>
</tbody>
</table>
Soybean Plot Layout

- **Maturity Group/Population Interaction**
  - Planting Date: July 2, 2015
  - Two maturity groups:
    - Hoegemeyer 3811
    - Hoegemeyer 4442
  - Two populations:
    - 145,000
    - 185,000

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