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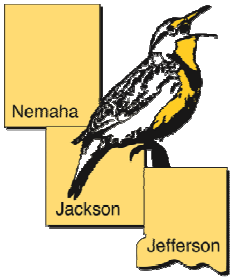
Meadowlark Extension District Demonstration Plot Tour

August 25, 2015

Domann Farms, Winchester



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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

40' - 30" spacing x 26,000 population
60' - 20" spacing x 26,000 population
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60' – 20" spacing x 30,000 population

South *North*

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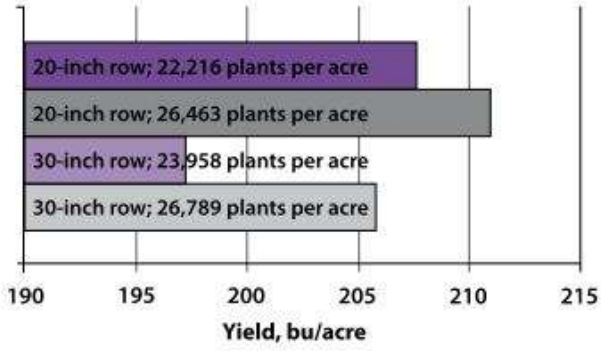
2014 Results

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.



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Agronomy
Kansas State University

Narrow Rows: Kansas Experience

Table 1. *Corn grain yields for three row spacings in 13 environments in Kansas.*

Row Spacing	Yield Potential		
	High	Medium	Low
	> 160 bu/a	160-120 bu/a	< 120 bu/a
(in)	- - - - - Grain Yield (bu/a) - - - - -		
15	202 a*	145 a	39 b
20	191 ab	144 a	41 b
30	182 b	139 a	58 a
Number of Environments	4	7	2

* *letters followed by the same letter are not statistically different from other values in the same column.*

Staggenborg et al.

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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…

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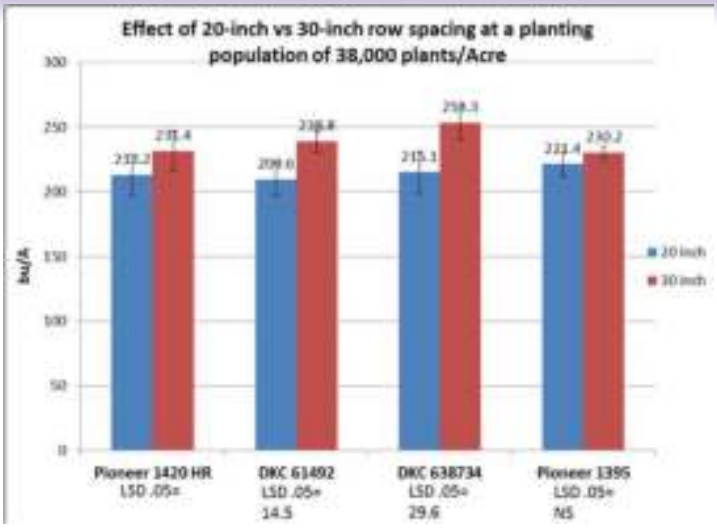
University of Missouri Data



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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…

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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.

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Soybean Date of Planting – Recent Studies in Kansas

	Planting Date		
	Mid-Late May	Early-Mid June	Mid-Late June
Site, Year	Yield, bu/a, compared to Early May planting		
Powhattan, 2000-02	1.7	11.4	-9.0
Belleville, 1999, 2001	4.4	-26.2	-55.2
Topeka, 2000-02	-4.8	-15.1	-19.2
Ottawa, 1999-2002	6.6	-0.3	-25.8
Belleville, 2009-10		-6.5	
Scandia, 2009-10		-4.5	
Manhattan, 2010	-7.7	-15.3	-26.1

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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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