

Planting Corn in 60-in. Row-Widths for Interseeding Cover Crops

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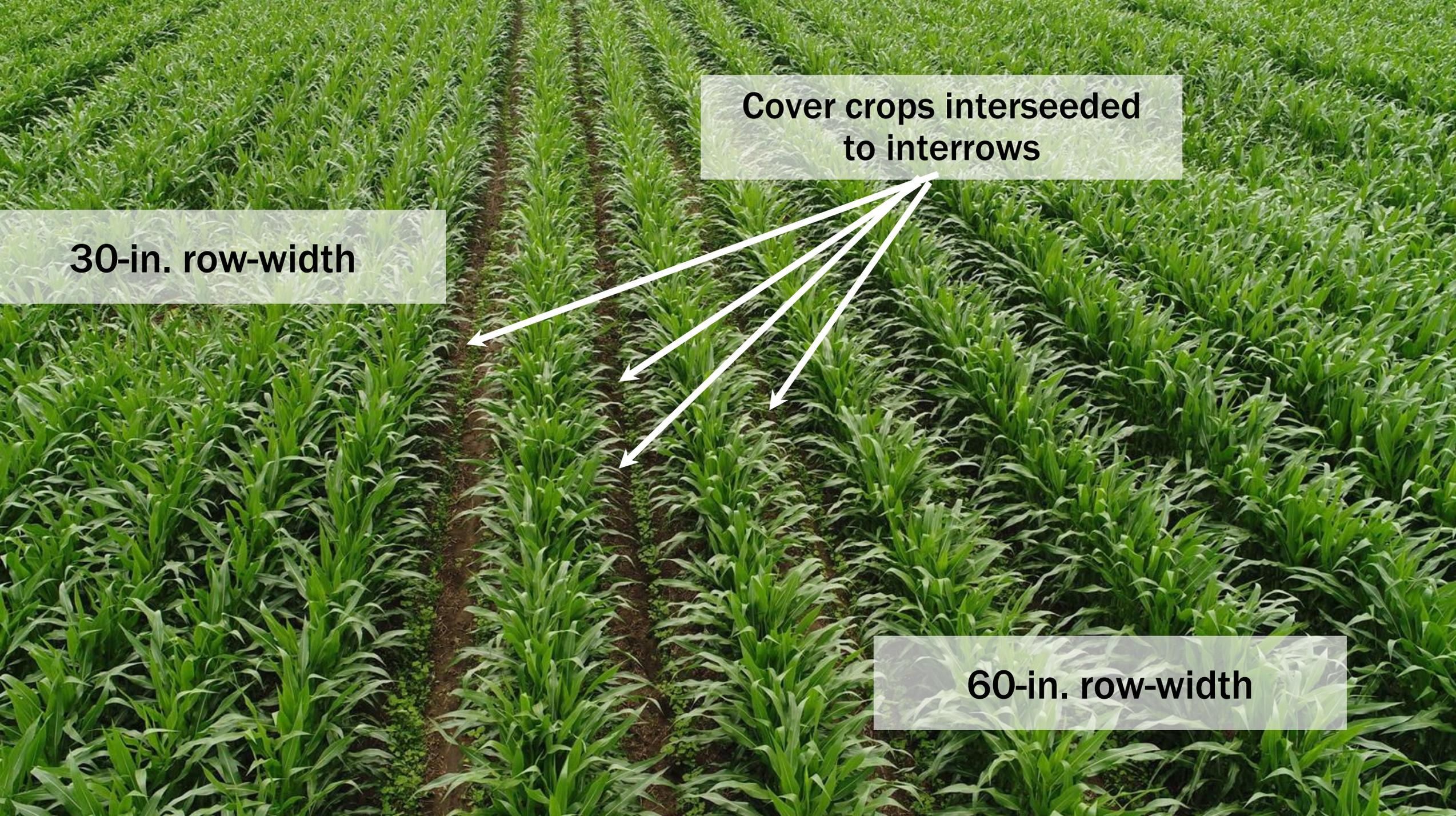




Solar Corridor concept

- Corn rows spaced far enough apart to enable sunlight to reach the lower leaves for the entire growing season.

Ottman & Welch, 1989; Deichman, 2000



**Cover crops interseeded
to interrows**

30-in. row-width

60-in. row-width

2018 – cover crops interseeded (June)

- Fred Abels, Holland
- Jack Boyer, Reinbeck

- Brian & Heather Kessel and Jim Johnson, Lamoni
- Chris Teachout, Shenandoah

ABELS	BOYER	KESSEL/JOHNSON	TEACHOUT
Cowpeas (24 lb/ac); Annual ryegrass (9 lb/ac); Buckwheat (15 lb/ac)	Cowpeas (10 lb/ac); Guar (10 lb/ac); Cereal rye (5 lb/ac); Annual ryegrass (5 lb/ac) Rapeseed (2 lb/ac) Buckwheat (5 lb/ac)	Cowpeas (25 lb/ac); Annual ryegrass (10 lb/ac); Buckwheat (15 lb/ac)	Cowpeas (8 lb/ac); Mung beans (1 lb/ac); Sunn hemp (1 lb/ac)

**Jack Boyer
June 8, 2018**

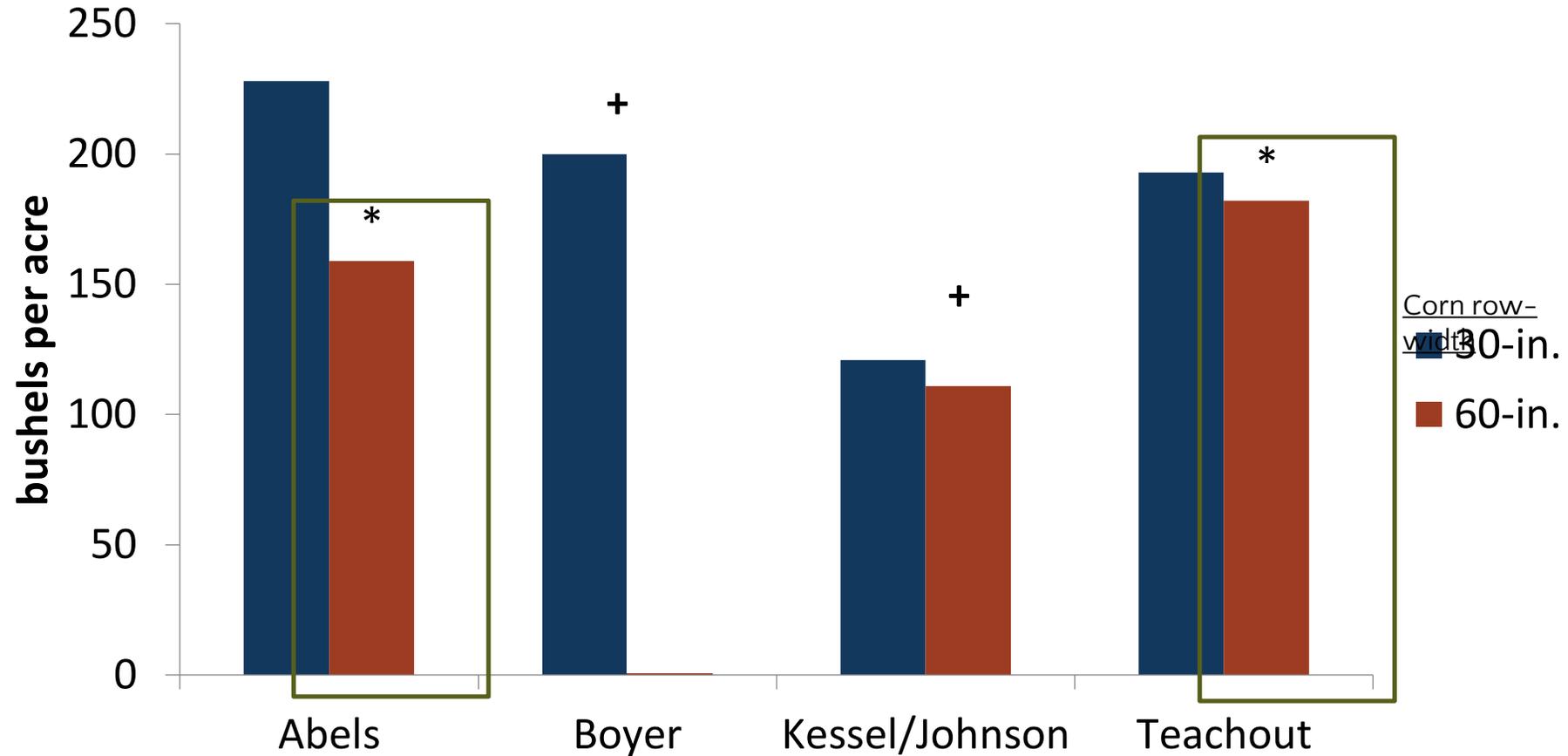


2018: 60- VS. 30-IN. CORN ROW-WIDTHS FOR INTERSEEDING

Farm	Cover crop biomass (lb/ac)		Cover crop N (lb N/ac)	
	30-in.	60-in.	30-in.	60-in.
Abels	3,681	4,225	--	--
Boyer	339	3,870	7	100
Kessel/Johnson	964	3,766	20	60

MORE COVER CROP BIOMASS AND N AT 2 FARMS

2018: 60- VS. 30-IN. CORN ROW-WIDTHS FOR INTERSEEDING



***CORN YIELD REDUCED AT TWO FARMS**

+CORN YIELD SIMILAR AT TWO FARMS

2019 – cover crops interseeded (June)

- Fred Abels, Holland
- Robert Alexander, Remsen
- Nathan Anderson, Aurelia
- Jack Boyer, Reinbeck
- Jeremy Gustafson, Boone
- Mark Yoder, Leon

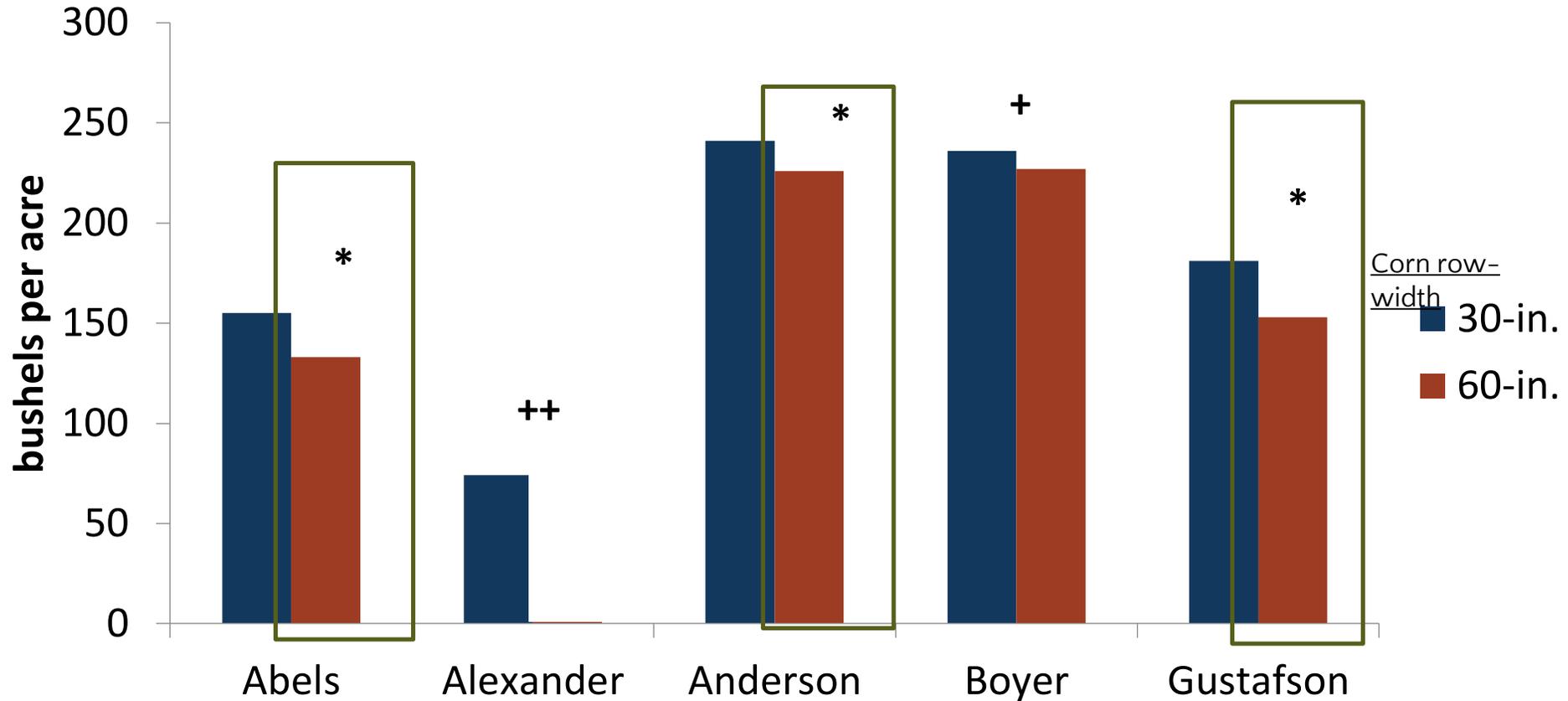
ALEXANDER	ANDERSON	BOYER	YODER
Buckwheat (5 lb/ac); Cereal rye (10 lb/ac); Collards (2 lb/ac); Cowpeas (7 lb/ac); Crimson clover (3 lb/ac); Phacelia (1 lb/ac); Rapeseed (2 lb/ac); Winter peas (7 lb/ac)	Annual ryegrass (8 lb/ac); Buckwheat (5 lb/ac); Common vetch (4 lb/ac); Crimson clover (4 lb/ac); Flax (5 lb/ac); Rapeseed (1 lb/ac)	Buckwheat (6 lb/ac); Cereal rye (30 lb/ac); Collards (2 lb/ac); Cowpeas (3 lb/ac); Crimson clover (3 lb/ac); Phacelia (2 lb/ac); Rapeseed (1 lb/ac)	Cowpeas (25K seeds/ac)

2019: 60- VS. 30-IN. CORN ROW-WIDTHS FOR INTERSEEDING

Farm	Cover crop biomass (lb/ac)		Cover crop N (lb N/ac)	
	30-in.	60-in.	30-in.	60-in.
Alexander	1,620	1,808	--	--
Anderson	35	671	2	26
Boyer	424	2,207	17	87
Yoder	105	2,530	2	49

MORE COVER CROP BIOMASS AND N AT 3 FARMS

2019: 60- VS. 30-IN. CORN ROW-WIDTHS FOR INTERSEEDING



*** CORN YIELD REDUCED AT THREE FARMS**

+ CORN YIELD SIMILAR AT TWO FARMS

++ Severe cutworm pressure

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**RESEARCH
REPORT**

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2018

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60-IN. CORN ROW-WIDTHS FOR INTERSEEDING



Weed control can be a challenge!
Hybrid selection?

- Potential for:
- N for succeeding crops
 - Forage to graze





Feed Costs	Tons	Cost/ton	Total	\$/hd	\$/hd/day
Hay	11.34	135	\$1530.9	\$43.74	\$1.41
Cornstalks	7.81	70	\$546.70	\$15.62	\$.50
		Totals	\$2,077.6	\$59.36	\$1.91

















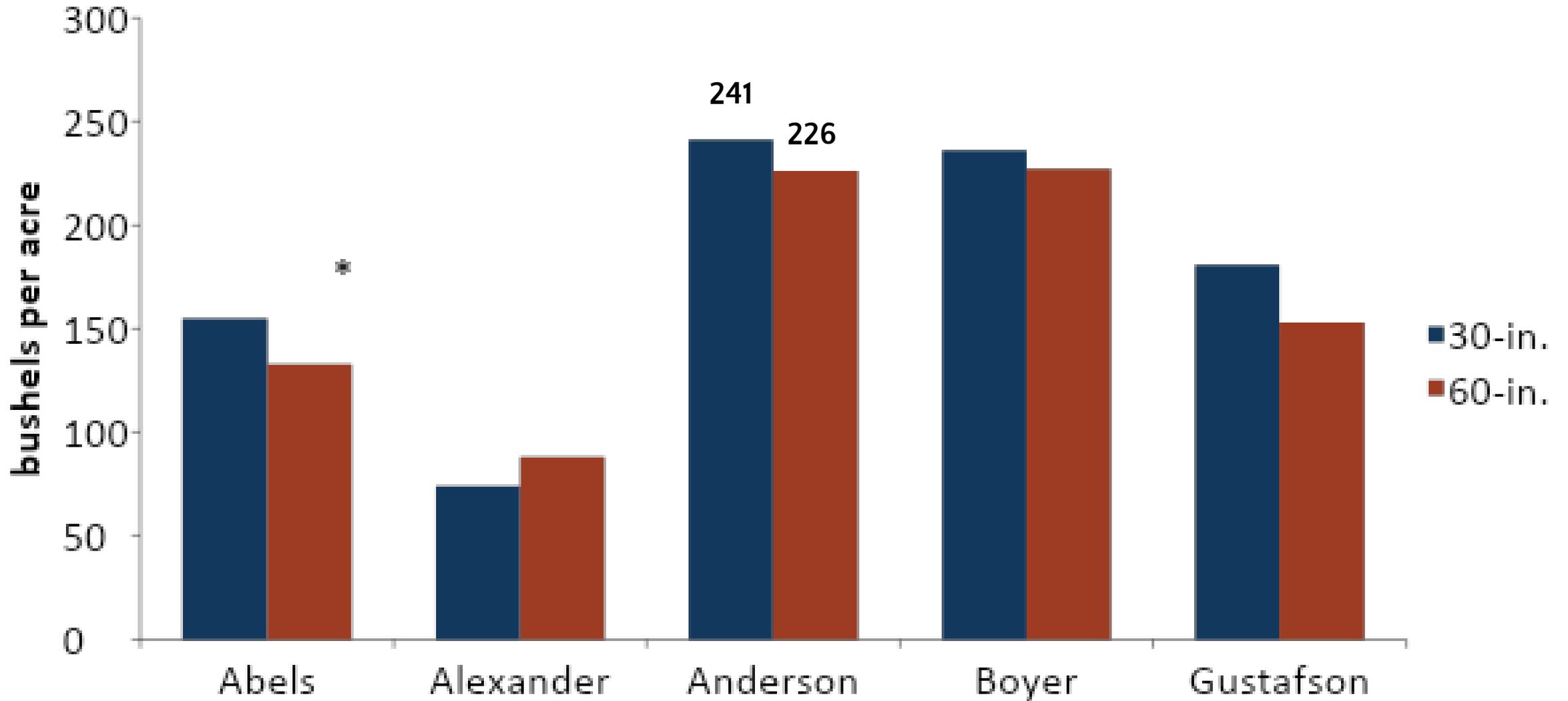








13 bushel difference @ \$3.75 = \$48.75/acre



Farm	Cover crop biomass (lb/ac)		Cover crop N (lb N/ac)	
	30-in.	60-in.	30-in.	60-in.
Anderson	35	671	2	26

636 lbs biomass @ \$120/ton = \$38.16/acre

Nitrogen value as feed protein?

Other questions I have:

Can I have better weed control with overwintering CC?

Can I raise better corn-on-corn with 60" rows vs 30"?

How can I increase interseeded CC biomass?

Basically:

How can I improve the economic return of this practice?

Questions & Reflection

