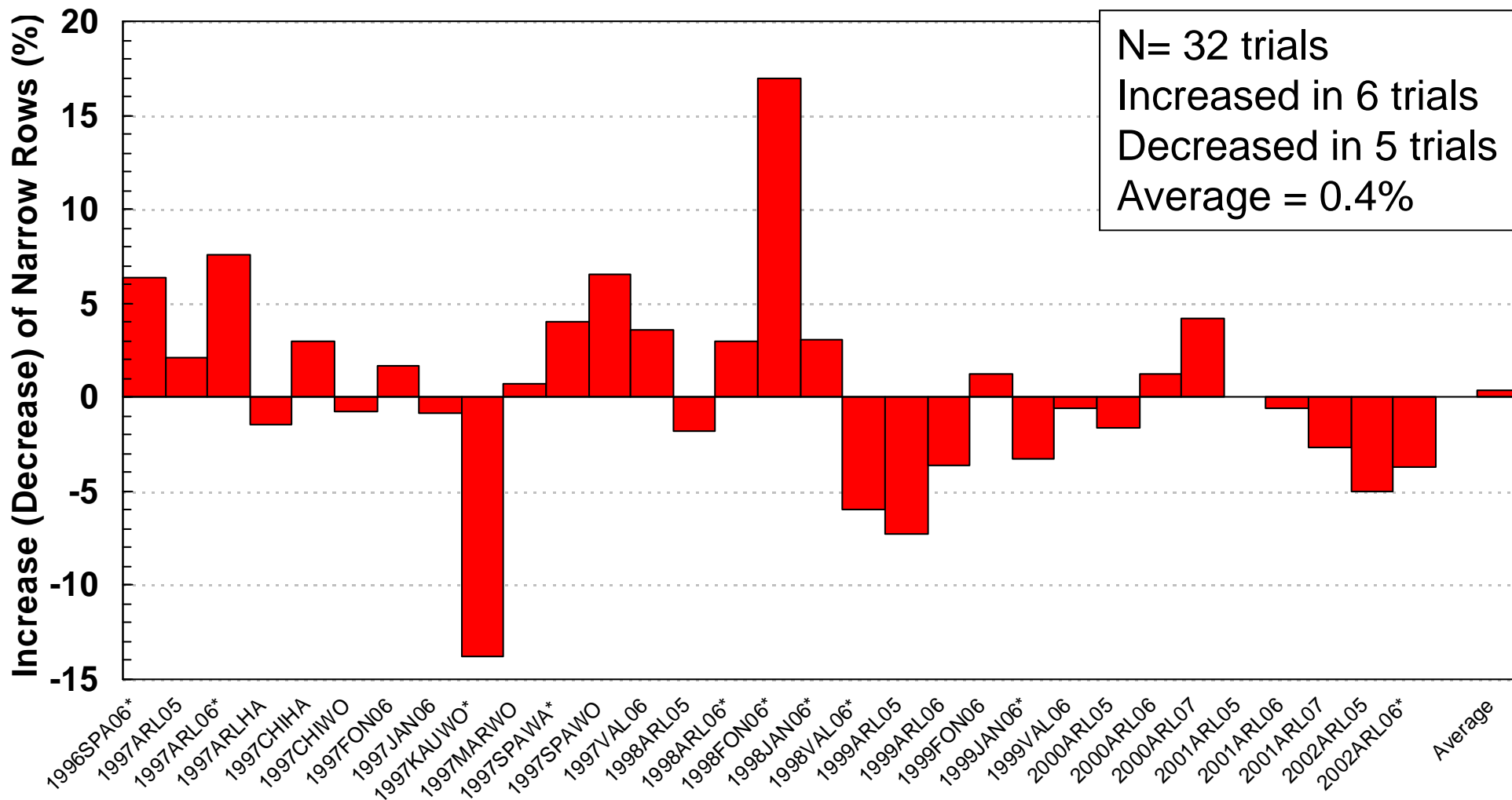


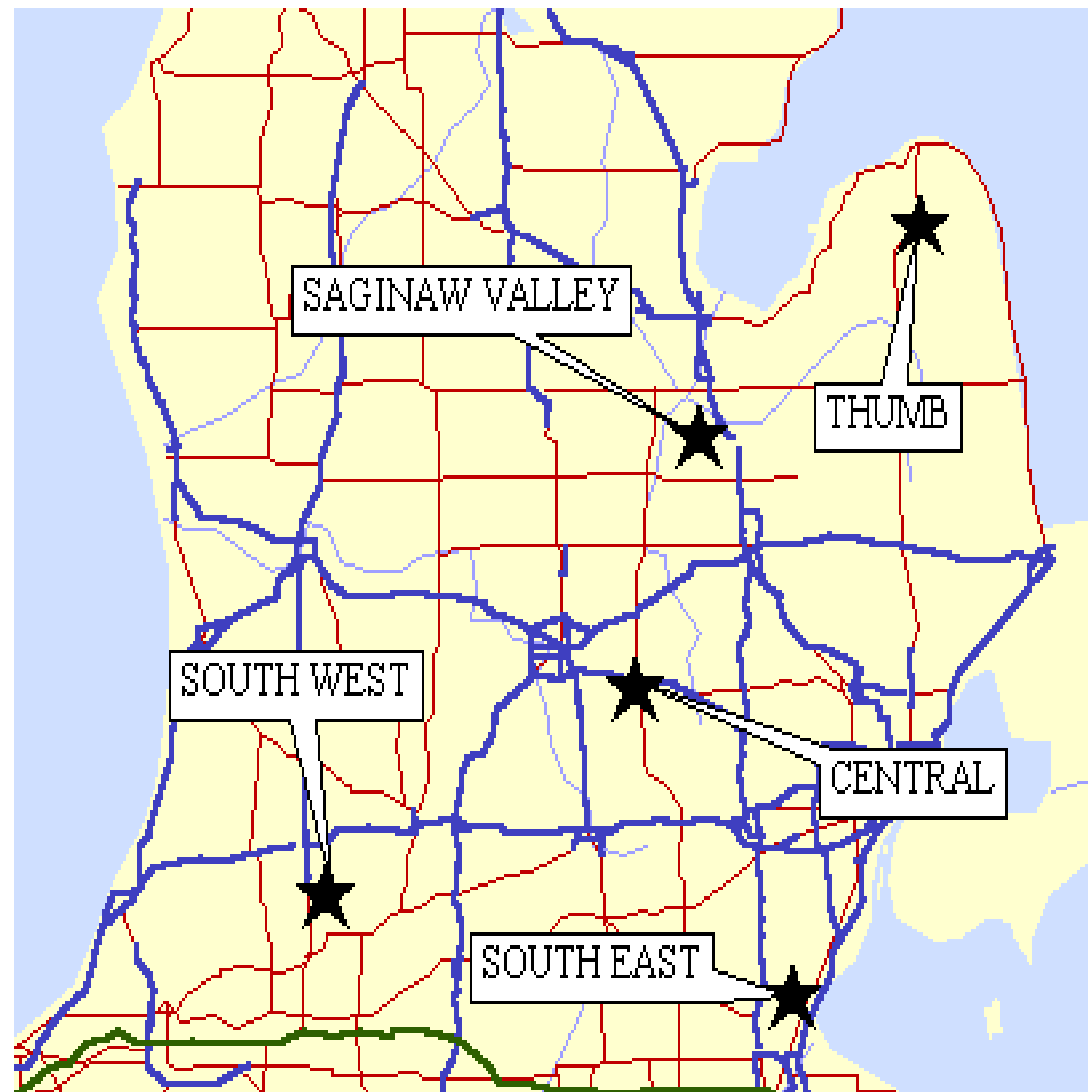
# Corn Grain Yield Change For Narrower Compared to 30-inch Row Spacing in Wisconsin



# Michigan Row Spacing study

## Methods

- 15 total site-years (5 Sites x 3 Years)
- 4 hybrids per Site
- 5 populations per site (23000, 26400, 29800, 33200, 36500 plants/A)
- 3 row widths (15, 22, 30 in)
- 2640 total plots



Source: Widdicombe and Thelen, 2002 (AJ 94:1020)



**15" row  
configuration**



**30" row  
configuration**



# Corn response to row width in Michigan 1998-1999. Each value is the mean of 880 plots.

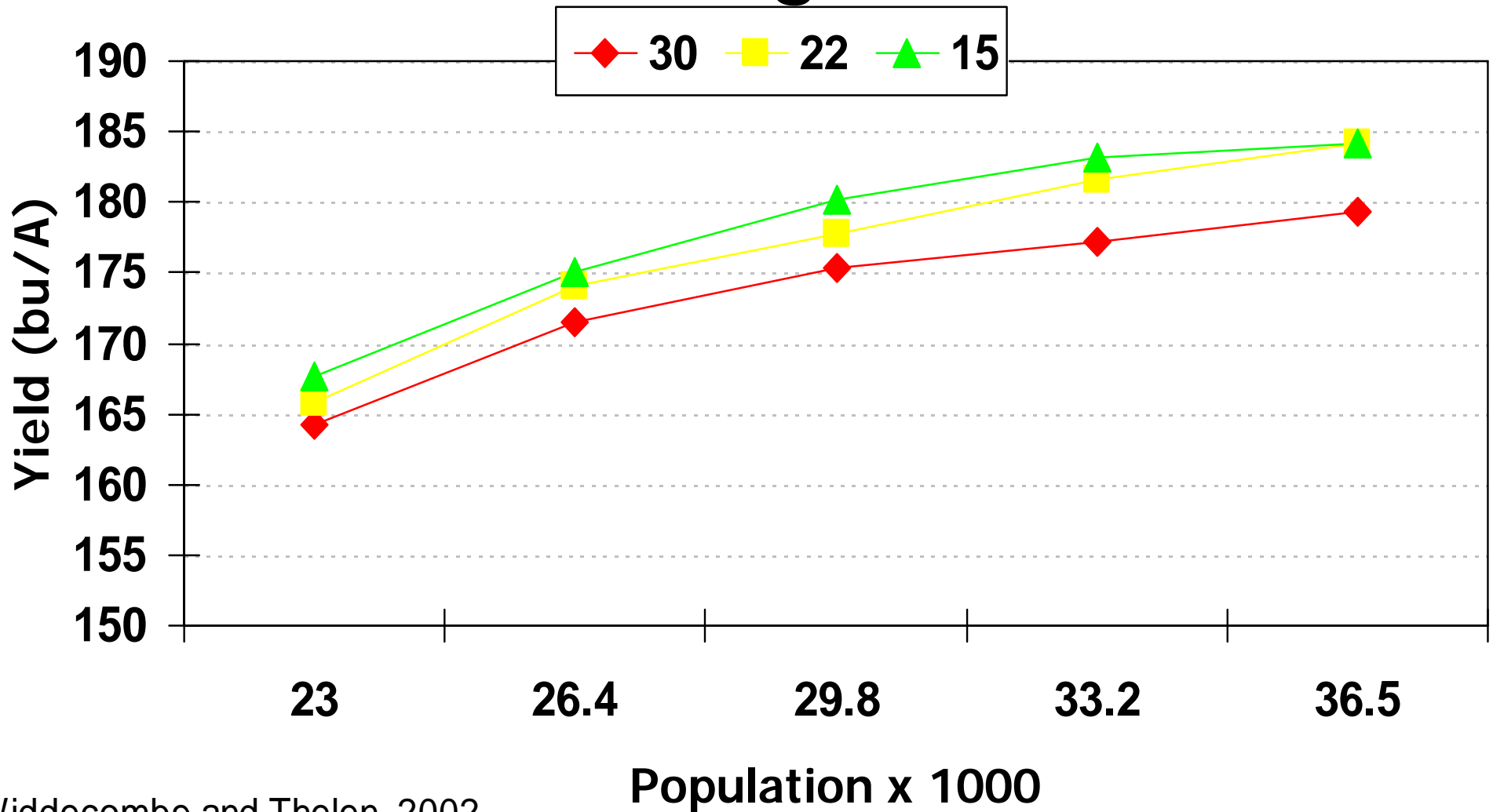
Row width (in)	Yield (bu/A)	Moisture (%)	Stalk Lodging (%)
30	177 c	19.6 a	1.60 b
22	181 b	19.2 b	1.92 a
15	184 a	19.2 b	1.65 b



Source: Widdicombe and Thelen, 2002 (AJ 94:1020)

# Corn Performance in Narrow Rows in Michigan 1997-99 Three Year

## Averages



Widdecombe and Thelen, 2002

# Conclusions from Michigan

- Corn grain yield increased 2% and 4% when row width was narrowed from 30 inches to 22 inches and from 30 inches to 15 inches.
- Increasing plant density had a quadratic plateau effect on grain yield.
- Grain moisture was negatively correlated and test weight was positively correlated with plant density.
- As plant density increased corn forage yield increased and DMD, ADF, NDF, and CP were adversely affected.



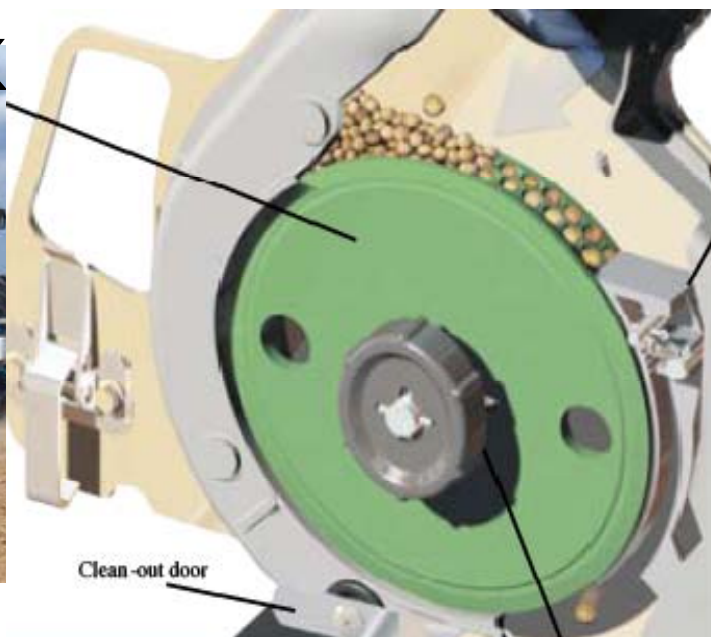
# Paired (“Twin”) Row Corn



- Karlen and Kasperbauer (1989) reported a 9% decrease in corn yield in the SE USA from twin rows compared to 30 in single rows.
- Ottman and Welch (1989) reported no differences between single 30 in rows and twin rows on 30 in centers (- 2% difference).

# "Twin-" or "Paired-Row" Corn Planters

ATI Monosem, KS



7.5 in. 22.5 in.

Twin rows  
18 DAP

Great Plains, KS



SOYBEANS  
CORN  
COTTON  
MILO





# Recent University Trials Evaluating Twin-Row Corn (JD = John Deere, GPPS= Great Plains Precision System)

State	Years	Tests	Planter comparison	Yield advantage for Twin-rows (bu/A)	Authors
IA	2002-2004	3	JD 7000	2.1	McGrath et al.
PA	2002	1	GPPS v JD1780	1.4	Roth et al.
ON	1995-1999	15	Unknown	5.0	Stewart
MO	2001	7	GPPS v JD7000	-9.7	Nelson & Smoot
DE, MA	2003-2004	4	GPPS v JD	-5.0	Kratochvil & Taylor
OH	2004	6	GPPS v JD	-9.0	Watters & Foster
OH	2005	1	GPPS v JD7000	<u>-1.5</u>	Wert
<b>Average</b>				<b>-2.4</b>	

# Paired Row Comparisons in Ontario (Stewart)

