



Squeezing No-Till Corn Into 12-Inch Rows

Marion Calmer

Farmer/Owner - 38 years

Calmer Ag Research - 28 years

Calmer Corn Heads - 18 years





Wisconsin

Michigan

Iowa

Illinois

★ STINE
SEED
Adel

★ CALMER
FARMS

Indiana

Silt Loam

Missouri

Kentucky



Squeezing No-Till Corn Into 12-Inch Rows



Squeezing No-Till Corn Into 12-Inch Rows

- 12", 15", and 20"



Squeezing No-Till Corn Into 12-Inch Rows

- 12", 15", and 20"
- Genetics



Squeezing No-Till Corn Into 12-Inch Rows

- 12", 15", and 20"
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- Populations



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- Populations
- Residue Buildup

October 2012 www.FarmProgress.com

WALLACES FARMER.

Time to cool
your corn Page 7

Update on livestock
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Aflatoxin blending rules Page 68



Narrow harvest

By ROD SWOBODA

CORN harvested in fields in a 12-inch row width isn't something you see every day. But you may someday, perhaps sooner than you think. To get higher yields, it's going to take higher plant populations, which require narrower rows to spread out the plants on each acre. That does two important things: It avoids crowding, and it lets plants have greater access to soil moisture and nutrients.

In a 12-inch row width, plants within the row can be 10 inches apart with room to grow, instead of 3 inches apart in a 30-inch row competing with one another for water, nutrients and sunlight. Most corn in Iowa is planted in 30-inch rows at a population of 34,000 to 36,000 plants per acre.

A showstopper at this year's Farm Progress Show in Iowa was a 60-row planter and a 20-row corn head, both built for 12-inch rows. Stine Seed Co. of Adel had the equipment custom-built to test its high-population corn hybrids. Last spring Stine planted 2,500 acres at 51,000 seeds per acre in the ultra-narrow rows on local Stine farms in central Iowa. Each plant had about 10 inches of equidistant space.

At the Farm Progress Show, the planter was displayed at Stine's exhibit and the corn head at the Calmer Corn Heads exhibit. Calmer built the corn head for Stine. Both exhibits grabbed attention. "Lots of growers stopped and asked good questions, interested in the potential to increase yields and other benefits of moving to narrow-row corn," says David Thompson, national marketing director for Stine Seed.

Narrow-row corn has been discussed for years. In the last five to 10 years, technology and corn production practices have evolved, and more growers are



ULTRA-NARROW: Marion Calmer (left), who built the world's first 12-inch-row corn head (pictured), and Fred Eby, farm manager for Stine Seed, pause during harvest of ultra-narrow row corn on a farm near Perry in central Iowa this fall.

Key Points

- Narrow-row, high population corn is hot topic at farm show.
- More growers are interested in narrow rows to boost yield.
- New advances in machinery and genetics show promise.

taking a look at row spacing and plant population. "I'm not sure many farmers were ready for this conversation even five years ago," says Thompson. Today, with higher corn prices and advances in equipment and corn genetics, many meaningful

conversations and more field research are going on.

High-population hybrids

Over the past 15 years, Harry Stine, president of Stine Seed, has been developing corn hybrids specifically adapted for higher populations and narrow rows. Stine has new hybrids specifically designated as HP, or high population, hybrids. They are narrow in plant architecture, grow leaves more upright instead of wide and are shorter in height.

How did the high-population corn perform in a low-moisture

year? It did quite well — better than corn planted in 30-inch rows at normal populations. The day Wallace Farmer rode the combine in a Stine field of commercial corn, the yield monitor averaged 242 bushels per acre, not bad for a field that only got an inch and a half of rain in July and just a few traces in August. Harvest population in the 12-inch rows was about 49,000 plants per acre.

In a good year in 30-inch rows, many fields in Iowa will yield 200 bushels per acre. Stine is convinced that planting high populations of the right hybrids

in ultra-narrow rows of 12 or 15 inches is the way corn yields will someday climb to 300 bushels per acre for many growers.

Marion Calmer is also a believer in narrow-row corn becoming the norm. He invented the first narrow-row corn head in the mid-1990s. "If farmers are to gradually grow 300-bushel-per-acre corn or higher, we're going to have to do it in 12-inch, 15-inch or 20-inch rows. And we'll need the corn genetics to support high plant populations," he says.

■ For more, see Page 6.



In the Beginning





Thursday, January 17, 13

**Marion
Calmer**



Thursday, January 17, 13

**Marion
Calmer**

**1974
40-inch
rows**



Thursday, January 17, 13

**Marion
Calmer**

**1974
40-inch
rows**

**1988
30-inch
rows**



Thursday, January 17, 13



Thursday, January 17, 13

1995 15-inch corn rows





Marion Calmer and Harry Stine FPS 2012

Harry's Dream!!!

1/3 lb / ear

x 51,000 pop.

= 300 bu/AC



45" Rows @ 32K

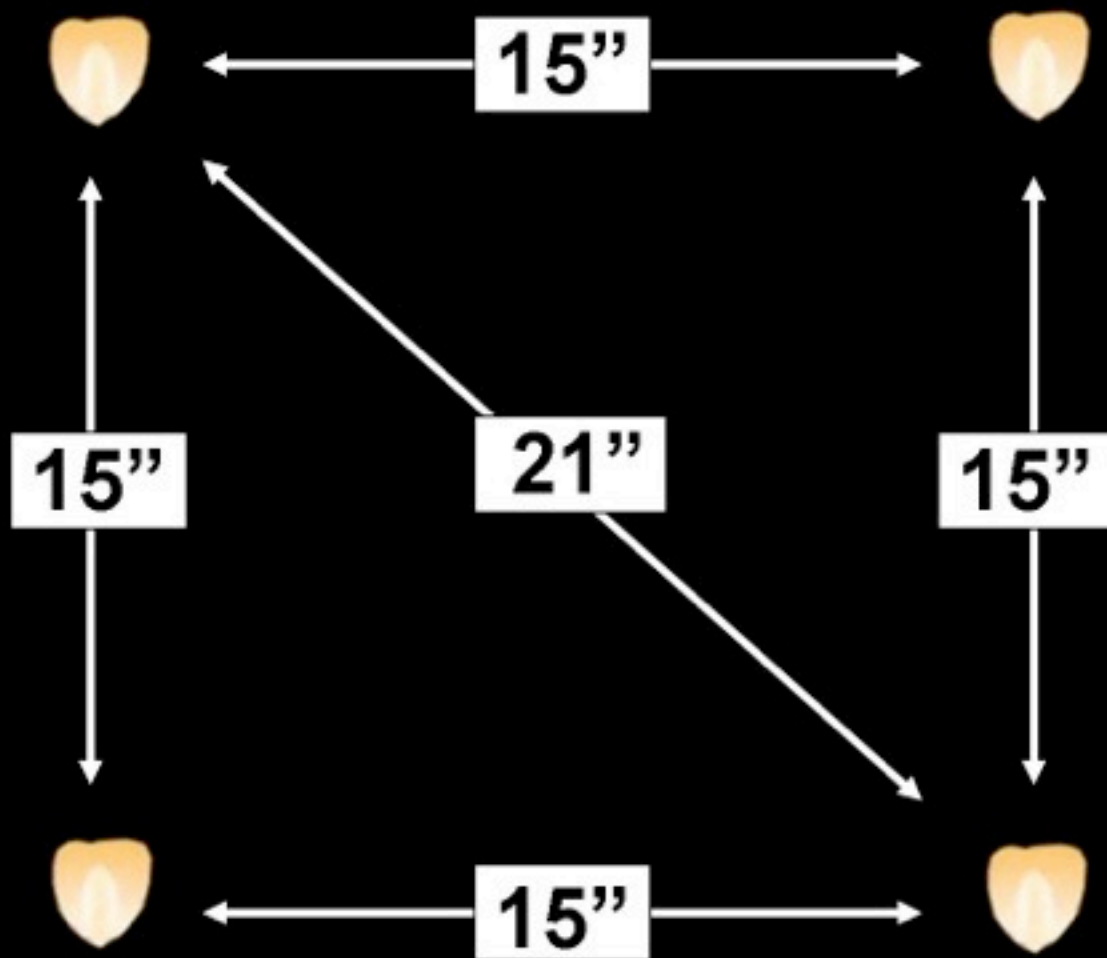




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Equal Row & Plant Spacing

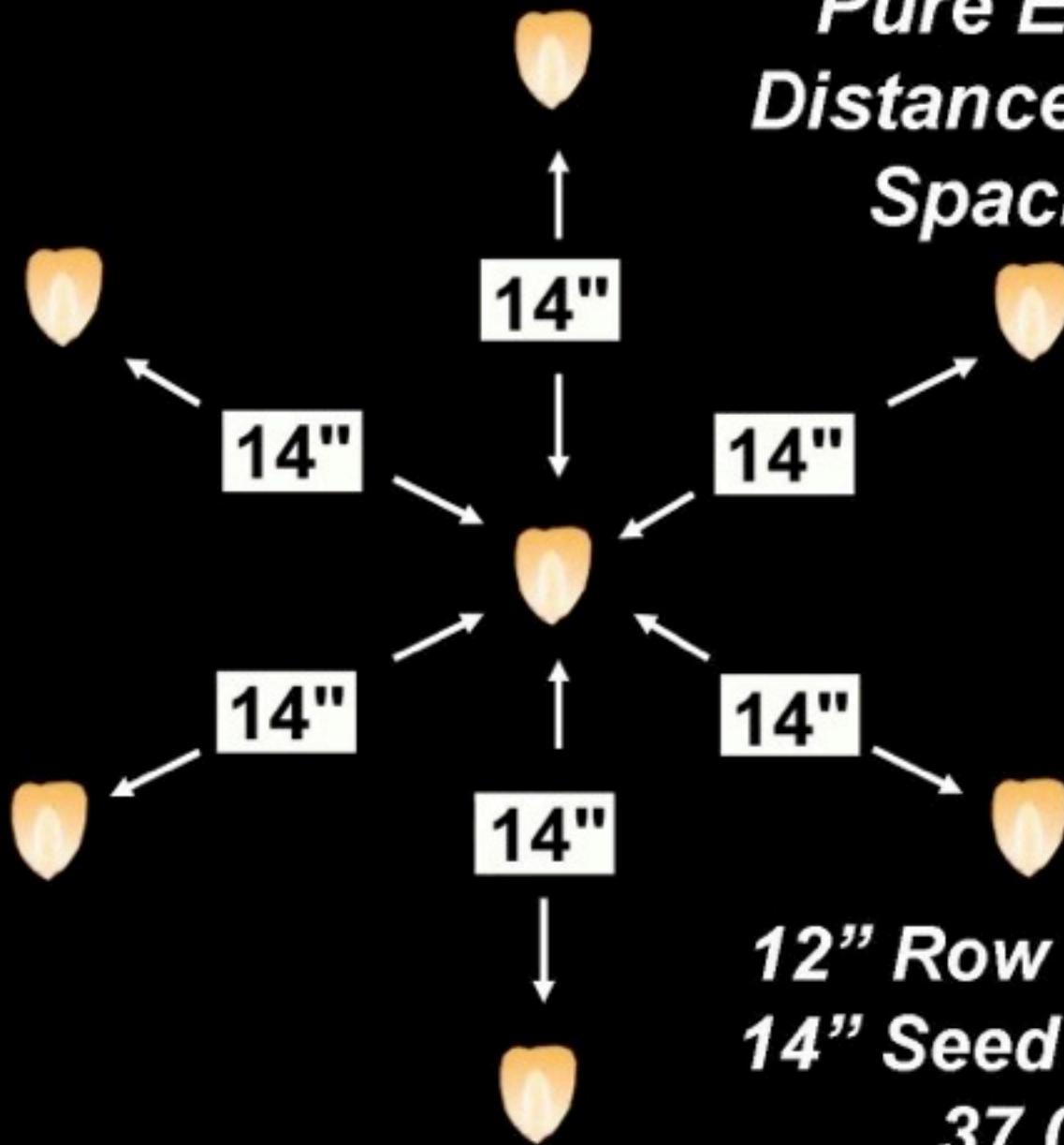
15" Row Spacing & 15" Seed Spacing = 28,000





**15''
ROWS
@
32K**

*Pure Equal
Distance Plant
Spacing*



*12" Row Spacing
14" Seed Spacing
37,000*

45'' Rows

15'' rows

Cover Crop

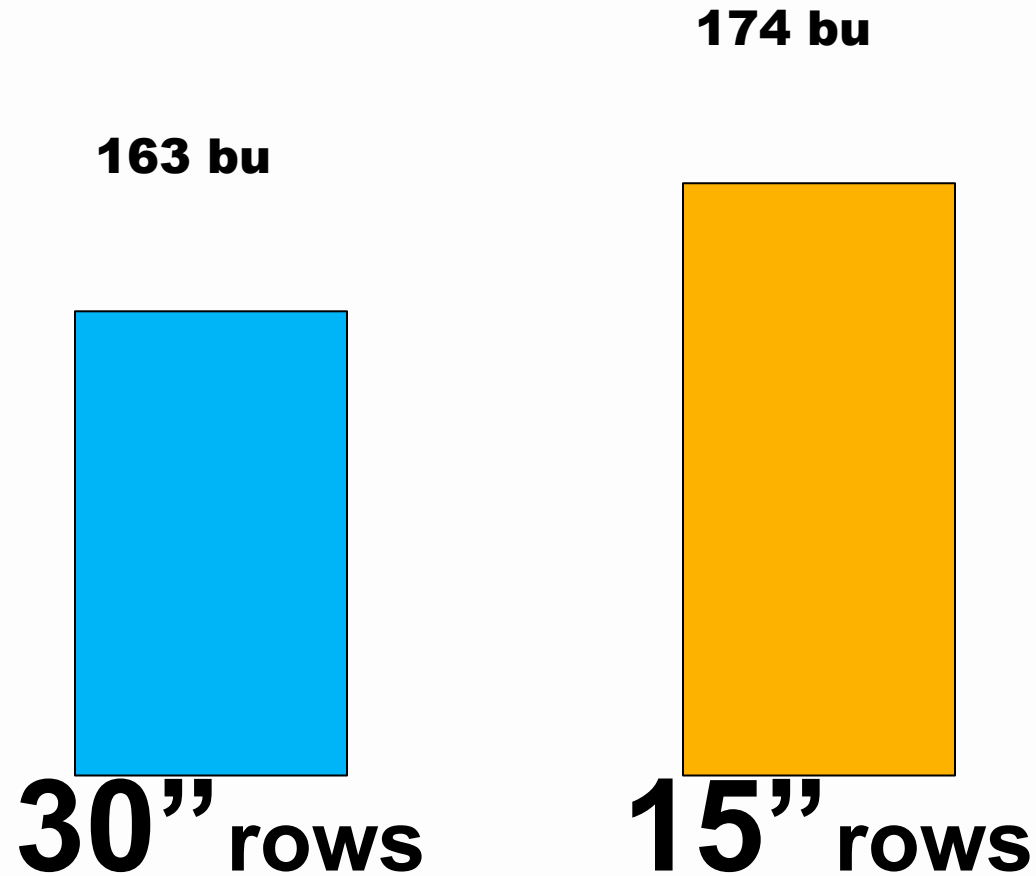


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Long Term (5 Year) Corn Row Spacing Study



2012 Corn Row Spacing Study





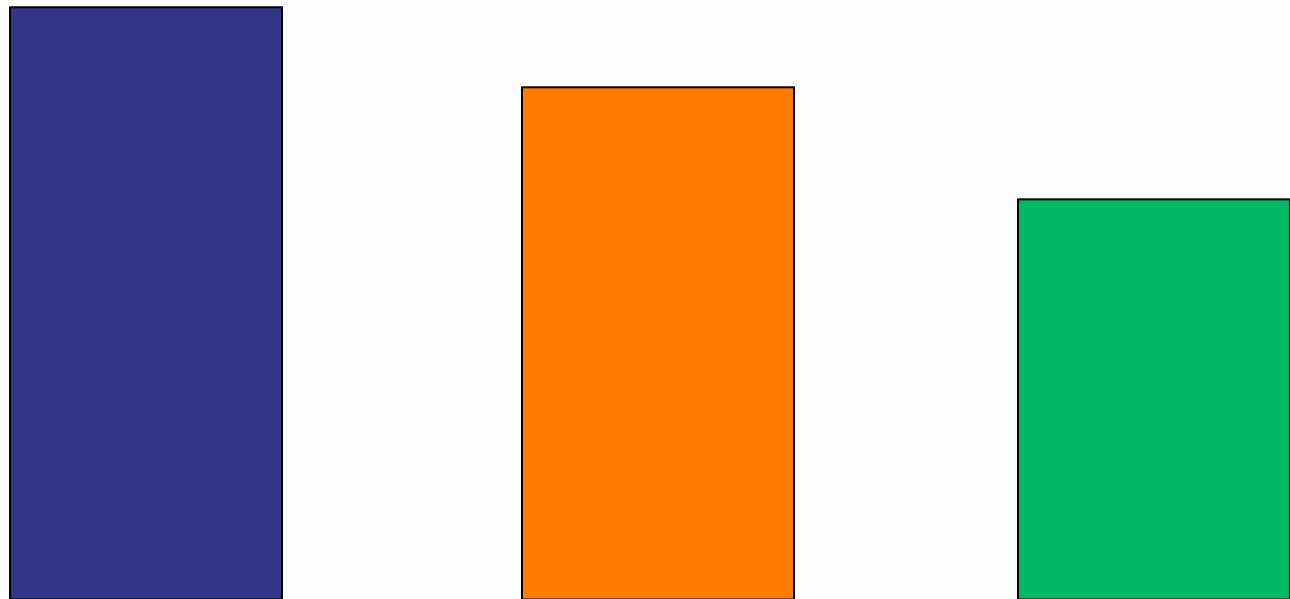
Thursday, January 17, 13



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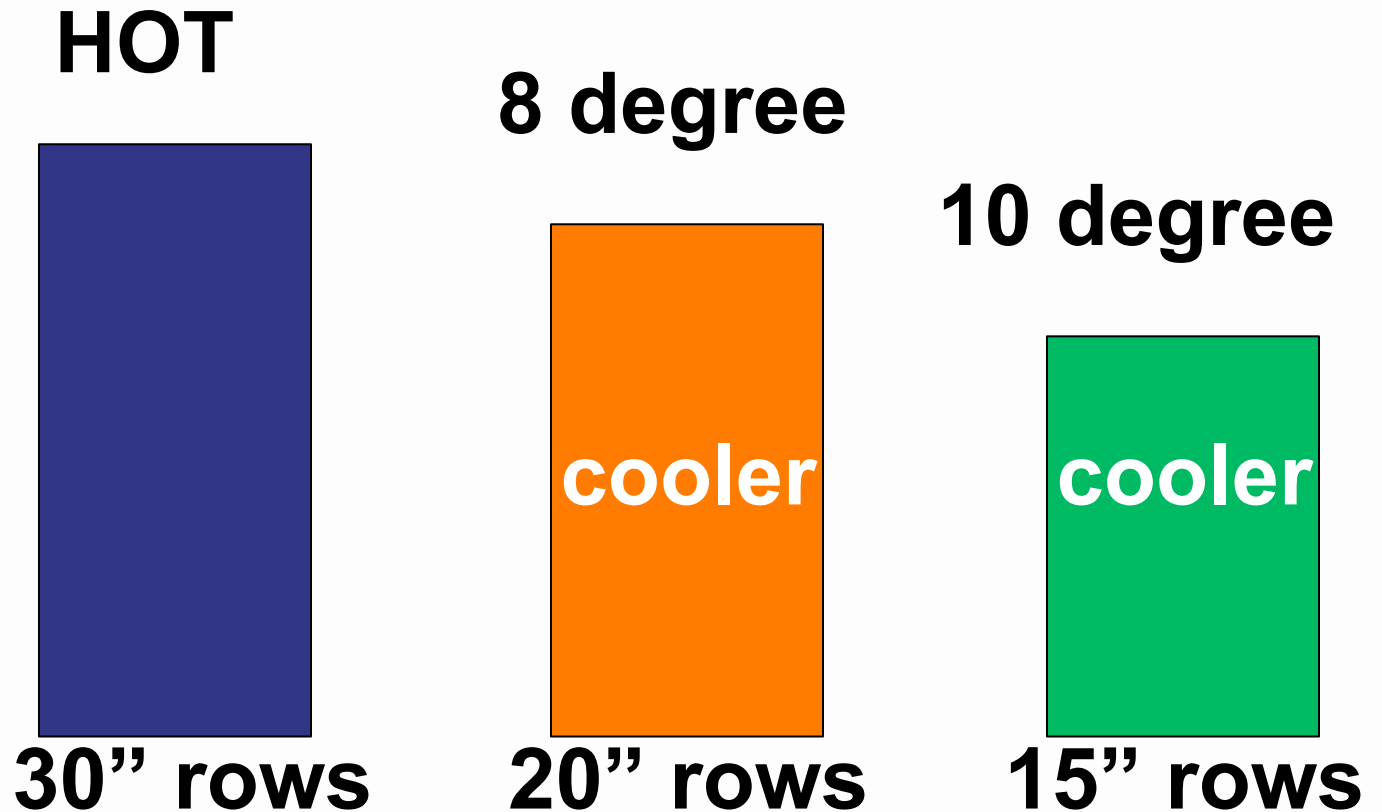
2012 Ear Temperature

From Nauvoo, Illinois



2012 Ear Temperature

From Nauvoo, Illinois



**South
Africa**



60-inch rows



Thursday, January 17, 13

Mistakes I Made



Mistakes I Made



Mistake #1

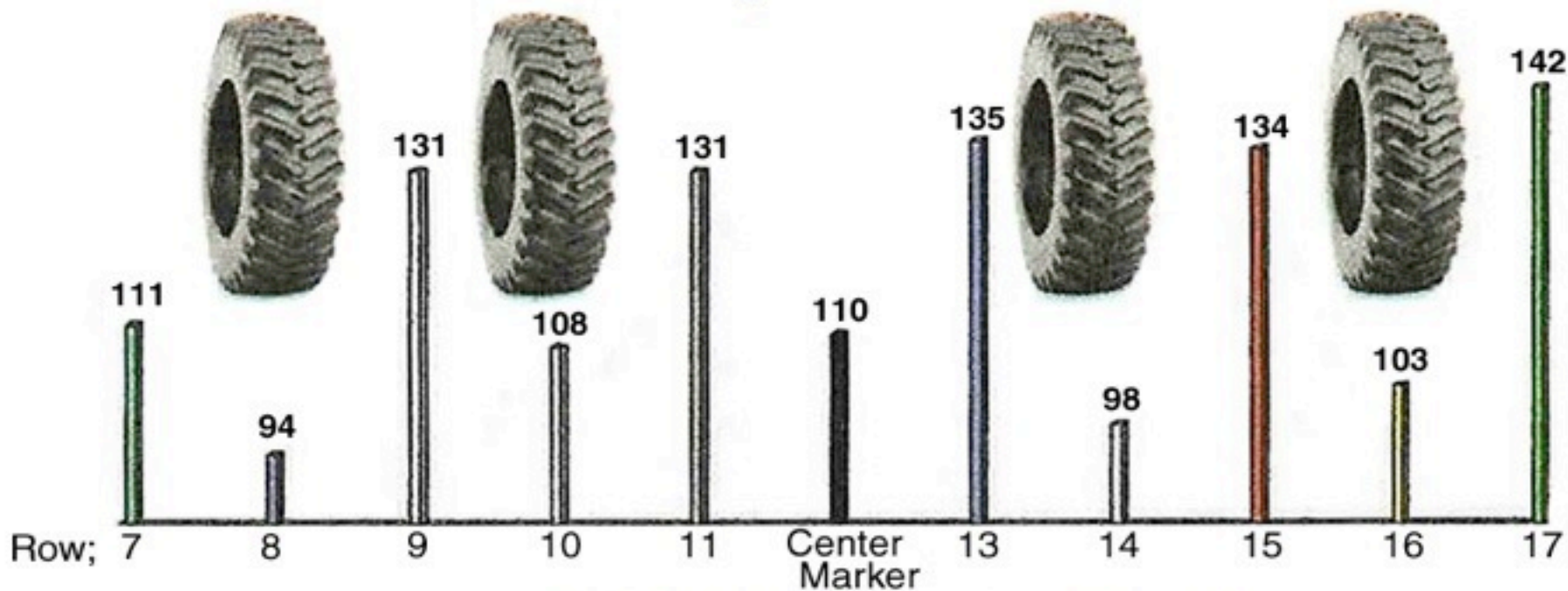


Mistake #1

Planting into compacted tire tracks



When the 15" Split Row is Planted into the CENTER of an 18.4 x 46 tire.
Planting Date - 05-06-95



Avg Yield of Entire Planting width = 125
Avg Yield Without Mrkers & Tire Rows = 131
Avg Yield Without Tire Rows = 130

Mistake #2



Mistake #2



Buying tall skinny tires

160- TO 225-HP 8000 SERIES TRACTORS



No Hitch Weight
With Grain Cart

19180# = 8#
? = 12#



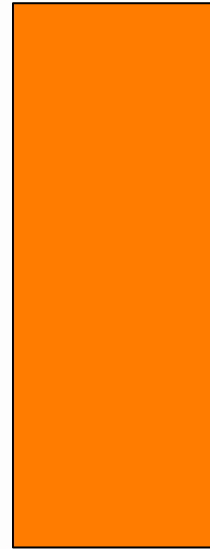
2012 Tire Track Study

182 bu



Center

184 bu



Edge



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Thursday, January 17, 13



Marion's ideal corn planter



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Not recalibrated. Both meters.



2012 Speed Study





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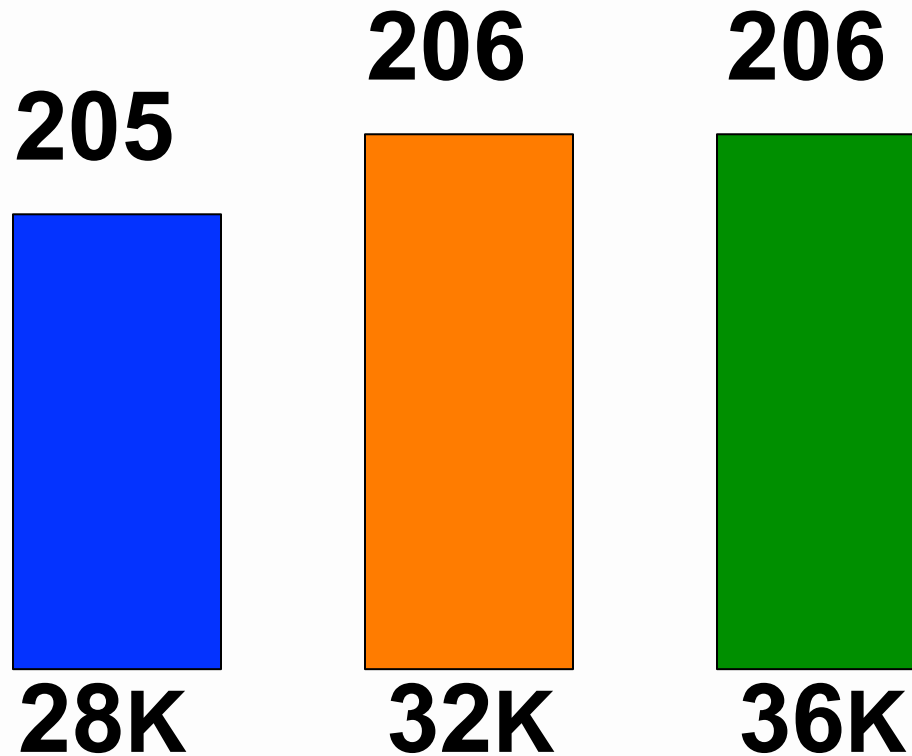
Planting too high of a population With a 30" Hybrid



Thursday, January 17, 13

Long Term (5 Year) Corn Population Study

with 30" Genetics

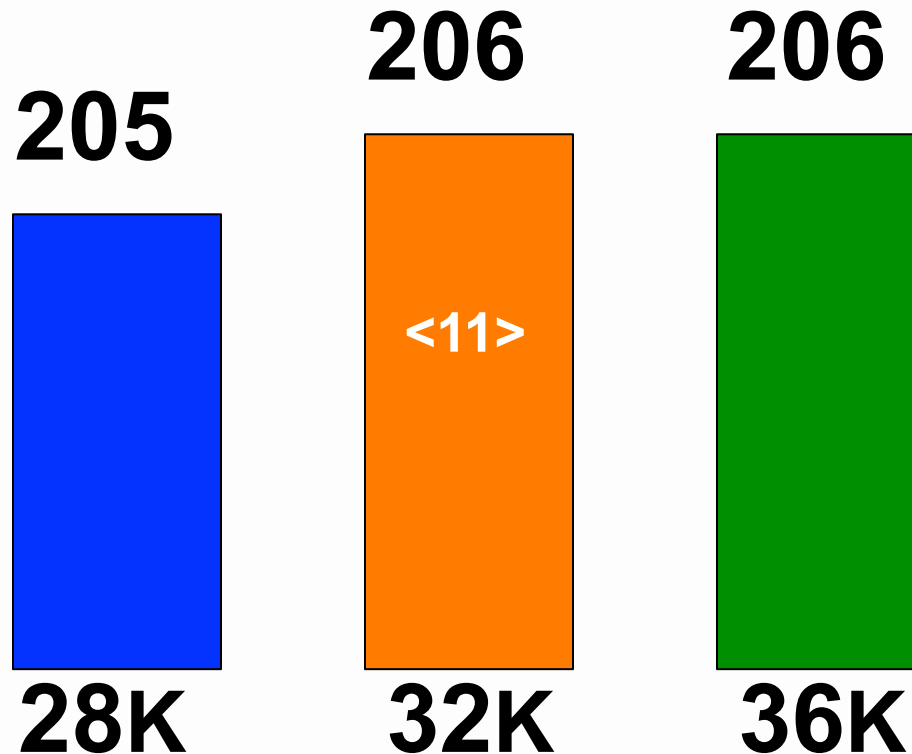


@ \$320/bag, 1K seeds cost \$4

Corn valued @ \$5bu

Long Term (5 Year) Corn Population Study

with 30" Genetics

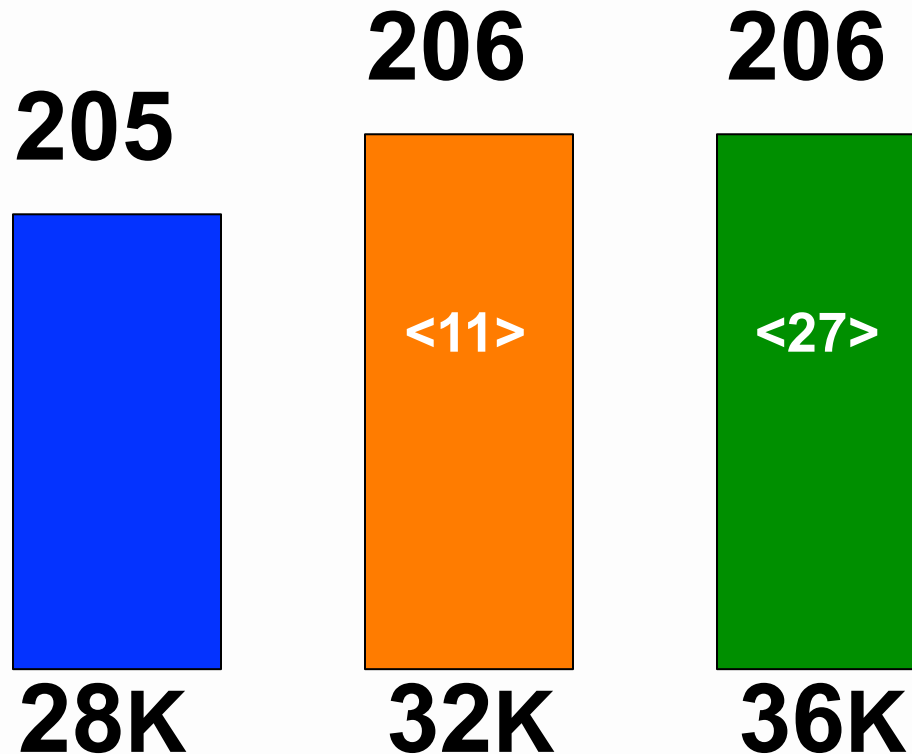


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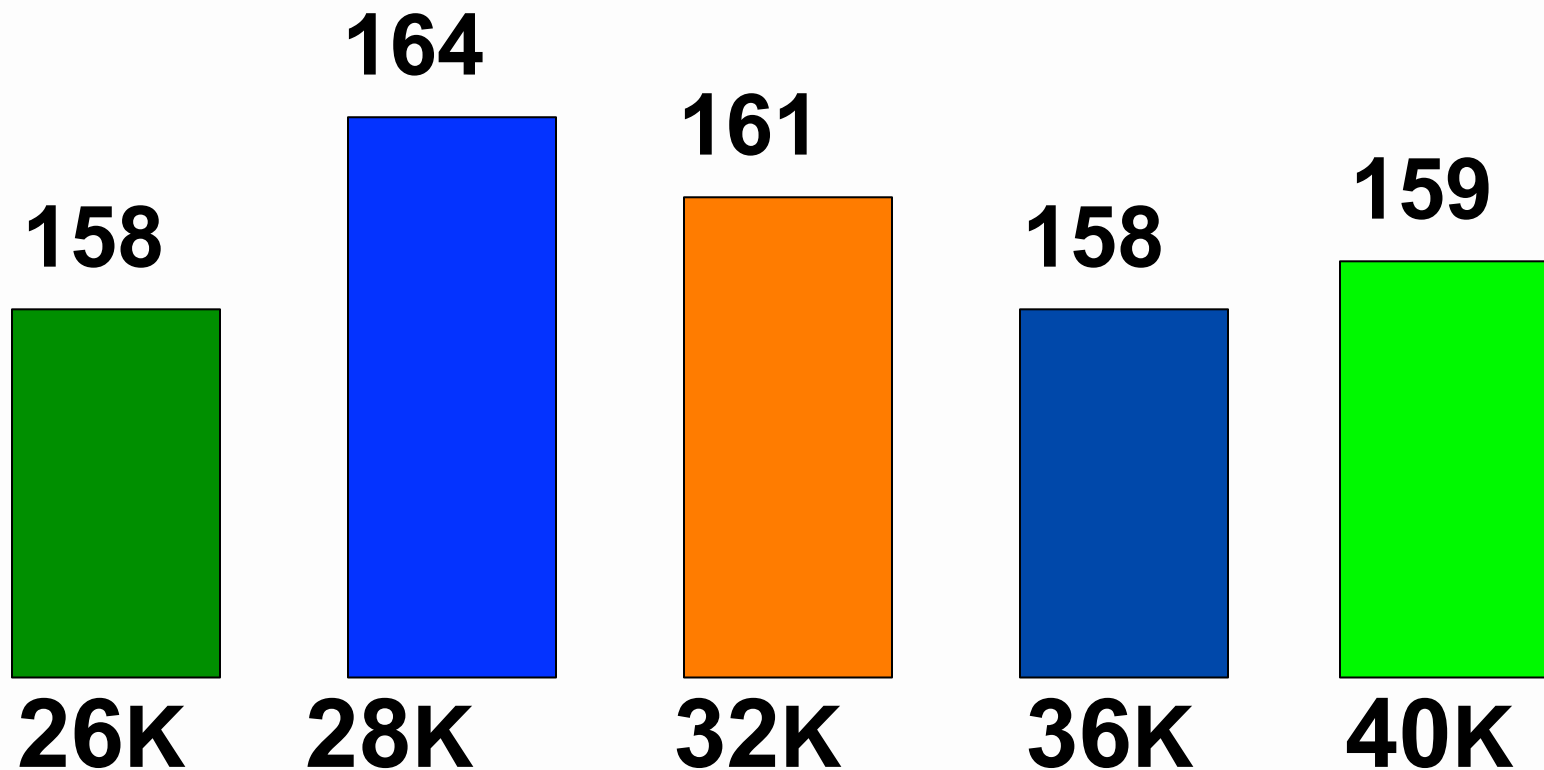


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Corn valued @ \$5bu

2012 Corn Population Study

with 30" Genetics



@ \$320/bag, 1K seeds cost \$4

Corn valued @ \$5/bu



Thursday, January 17, 13



Thursday, January 17, 13



Mistake #5





Mistake #5

Using too much chemical

Dual II Magnum	\$21/AC
Marksman with application	<u>\$16/AC</u>
Total	\$37/AC

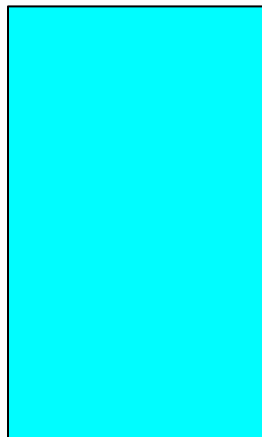
2010 Herbicide Program

Pre-Emergence

Lexar-

(Calisto Attrex + Dual)
+ 1/2 # Attrex

\$40/ac

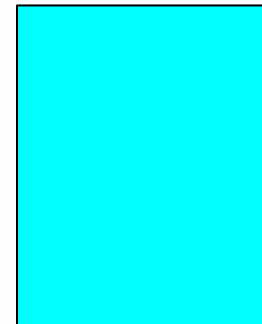


Post-Emergence

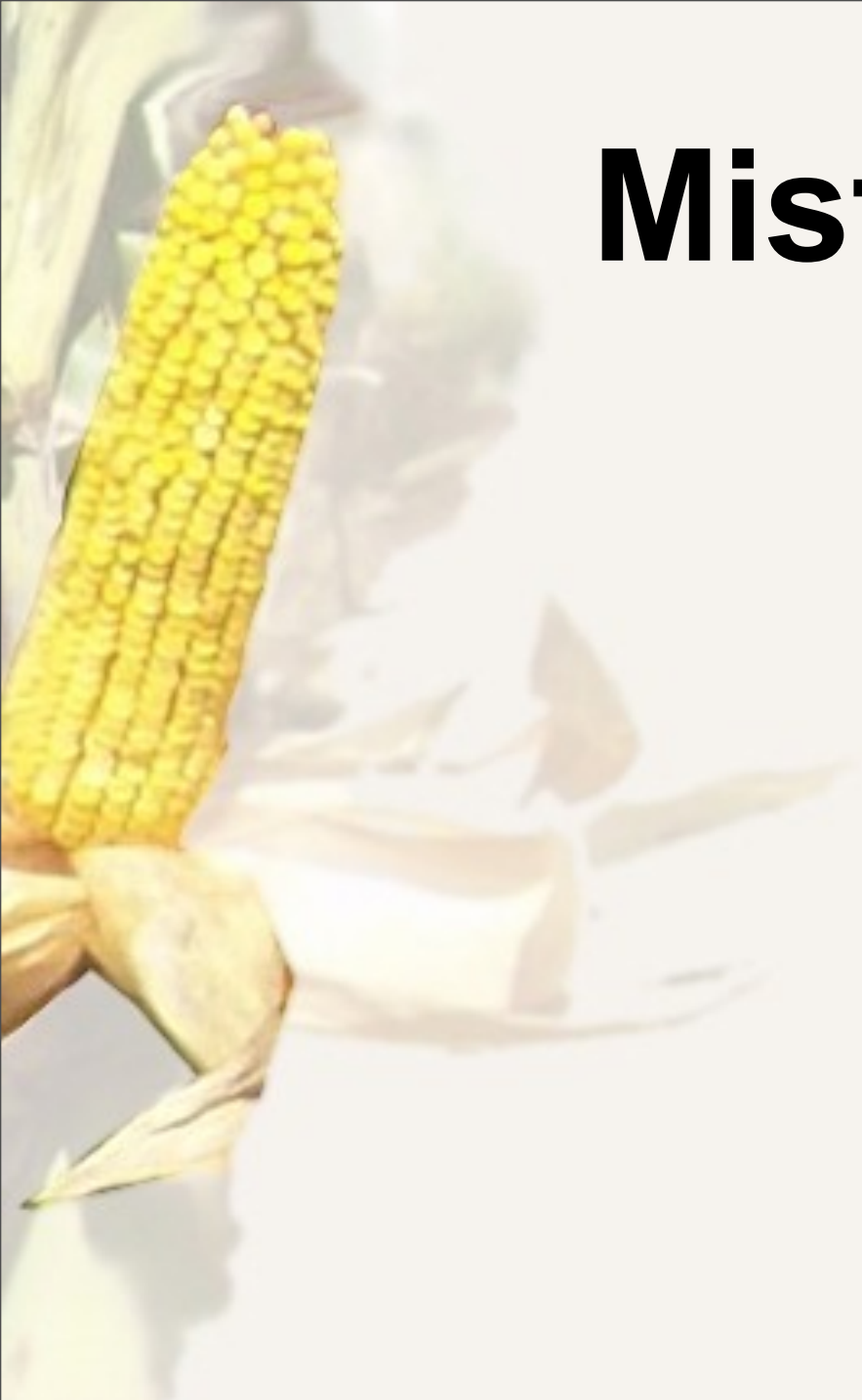
Halex- GT +

Attrex
(Roundup)

\$27/ac



Mistake #6





Mistake #6

Chose the wrong hybrid

Upright leaf

Ear flex

Short



PIONEER®

9733VT3PRO



12-INCH ROWS



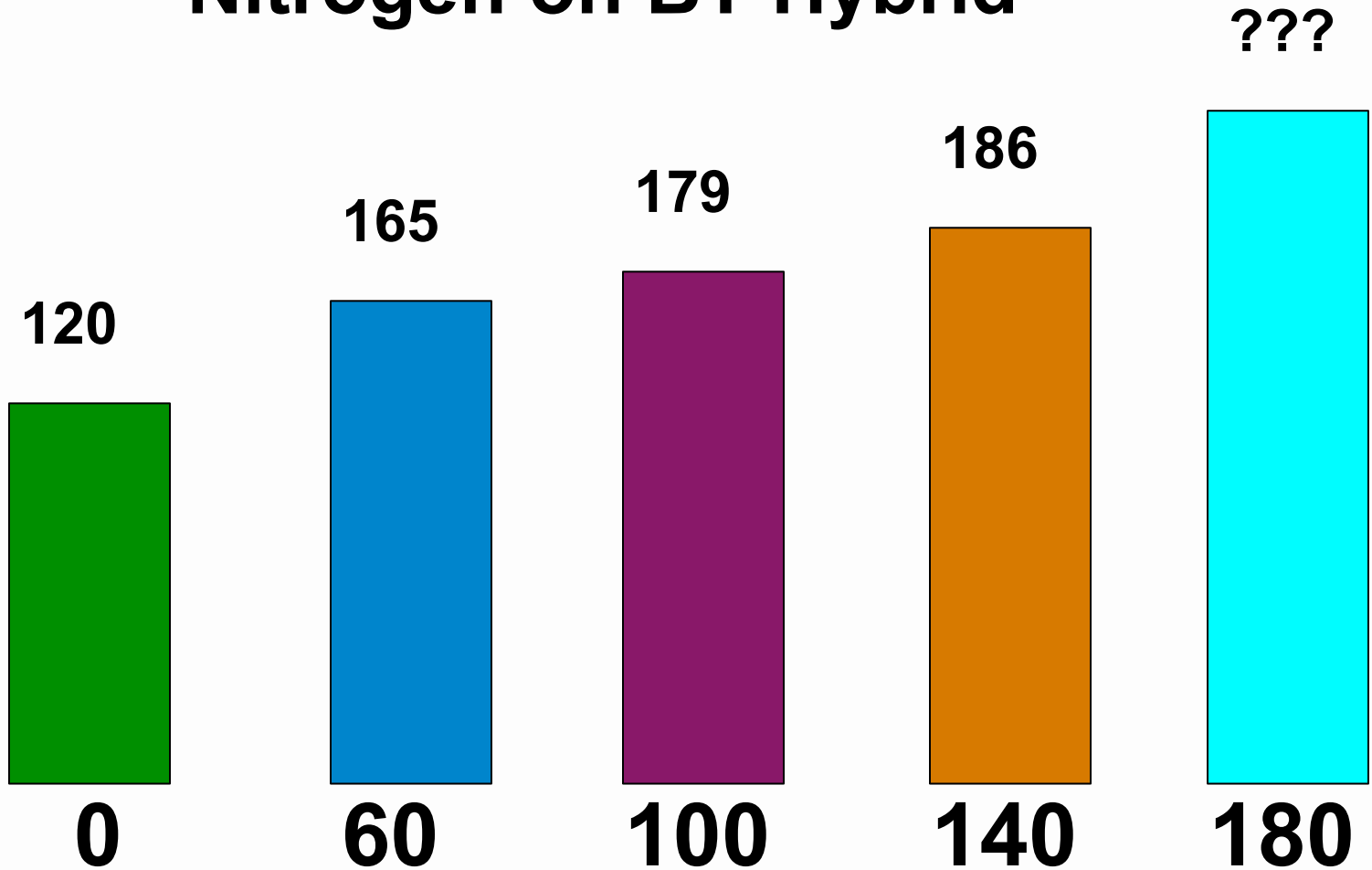
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Thursday, January 17, 13

1997 Nitrogen Rates BT Hybrid

Nitrogen on BT Hybrid



2000 Marion and Francis Childs



Thursday, January 17, 13



Thursday, January 17, 13



Thursday, January 17, 13





Thursday, January 17, 13



Thursday, January 17, 13



**40, 90, and
600 series®**

CALMER BT CHOPPER®

**Revolving
Window
“Chopping”
Knife Roll**





CASE-IH
2200 series®

CALMER BT CHOPPER

**Revolving
Window
“Chopping”
Knife Roll**





**NH 96c,
98c, 996**

®

CALMER BT CHOPPER

**Revolving
Window
“Chopping”
Knife Roll**





Mistake #7



Mistake #7

I believed that
narrow row corn
was just for the
northern corn
belt





Calmer Corn Head Seminar February 6, 2013



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- Residue Buildup



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- Questions



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