

Precision No-Till Planting Techniques That Make Money

Bill Lehmkuhl, CCA
Precision Agri Services, Inc.
January 14, 2012



20th Annual National No-Tillage Conference

St. Louis, Missouri * Jan. 11-14, 2012



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No-Tillage Today 56 No-Till K Tomatoes



Lehmkuhl Farms, LLC



- Family started to no-till in 1978
- Came back to the family farm in 1986
- Started crop consulting in 1994
- Started working with planters in 1996

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Disclaimer

**What works for one...
May not work for another!!!**





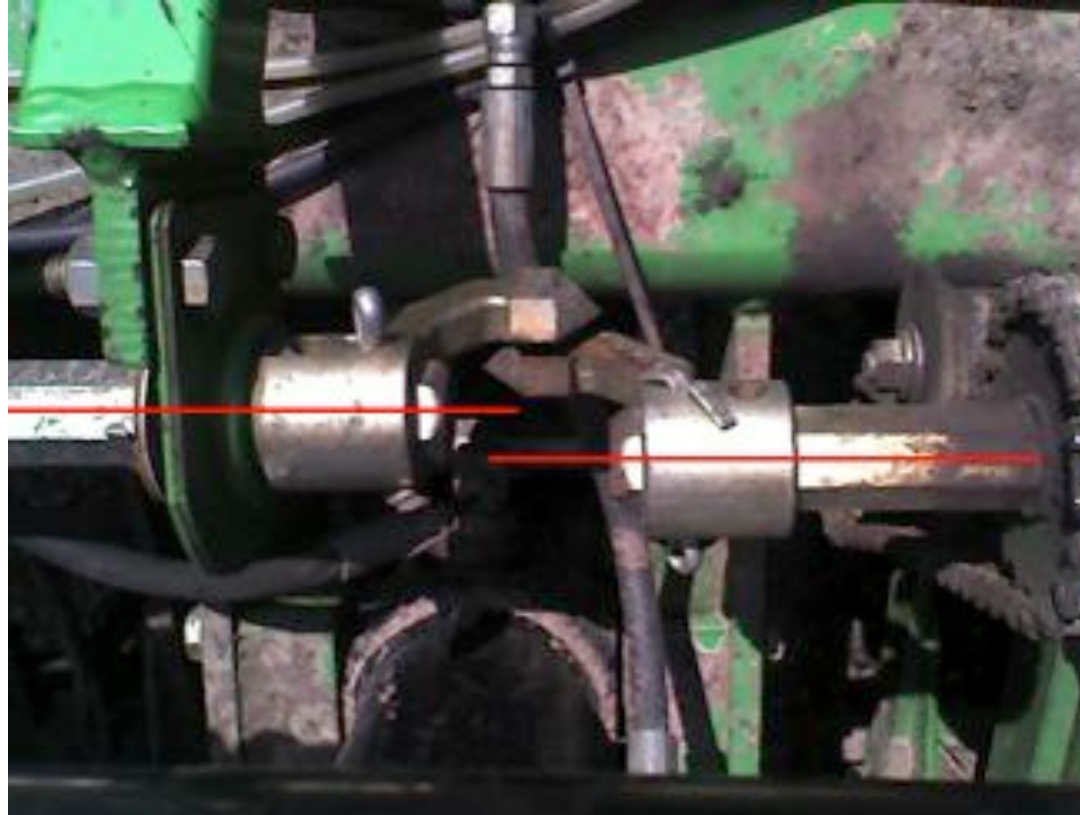
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Stand Establishment / Emergence



**All Seeds Should Germinate and Emerge Within 24 – 48
Hours of One Another!**



What are we talking about when it comes to high yield corn?

Ear Count and nothing else

Its not in  plant population





Seeds / Acre Planted





Plants / Acre

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Ears / Acre @ Harvest





17' 5"

Economics

Ear Count

Loss of 1000 ears / acre

or

1 ear per 1/1000 of an acre

-5 to -7 bushel / acre

Kernel Count

18 to 16 rows around

-20 bushel / acre

35 long to 34 long

-5 bushel / acre





30"



Twins



20"



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Whether your planter looks like this...



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Or whether it looks like this



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From the hitch pin to the closing wheels...





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- No-Till Coulters too deep
- Keeton Seed Firmer pressure lightened
- Closing Wheel pressure lightened
- You must watch the row unit in action...forward motion pulls the unit down.





Level bar across entire planter

- On central fill planters the center section may need to be adjusted to compensate for payload
- Tillage practices affect bar height across large planters



Maintain Proper Bar Height



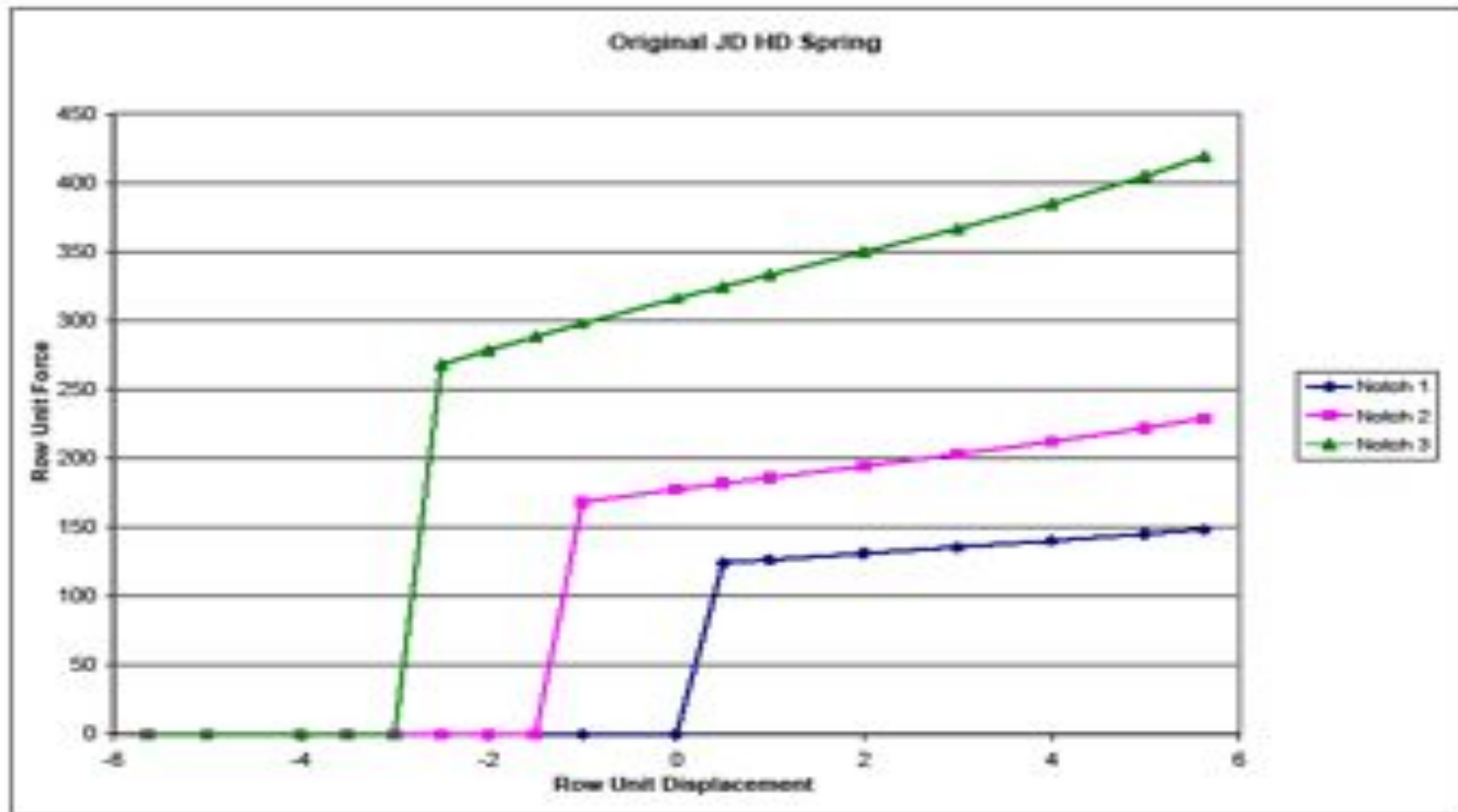


Check T-Handle Daily

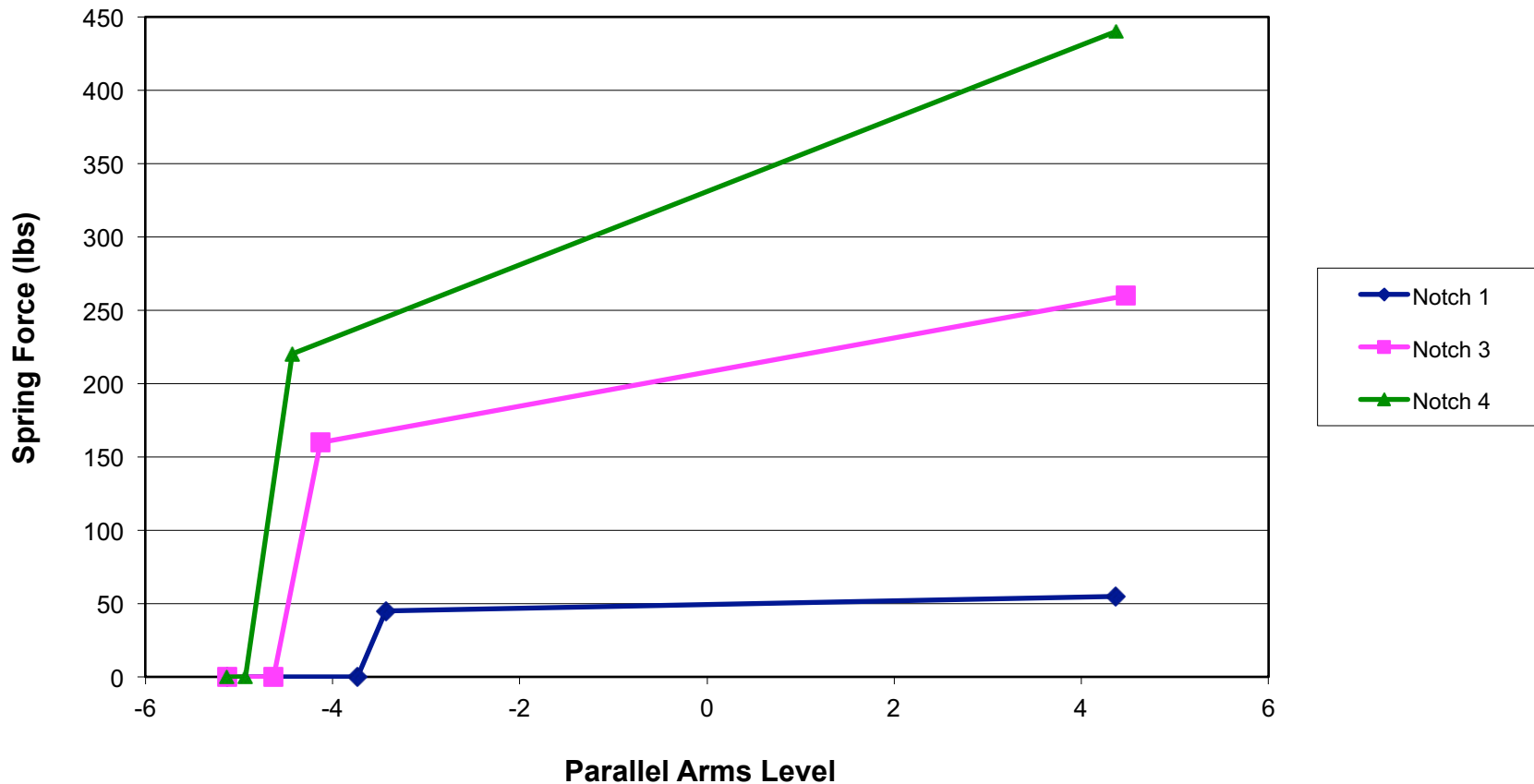


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Kinze Spring Force



Parallel Arms / Bolts and Bushings



Seed Environment



Down Force



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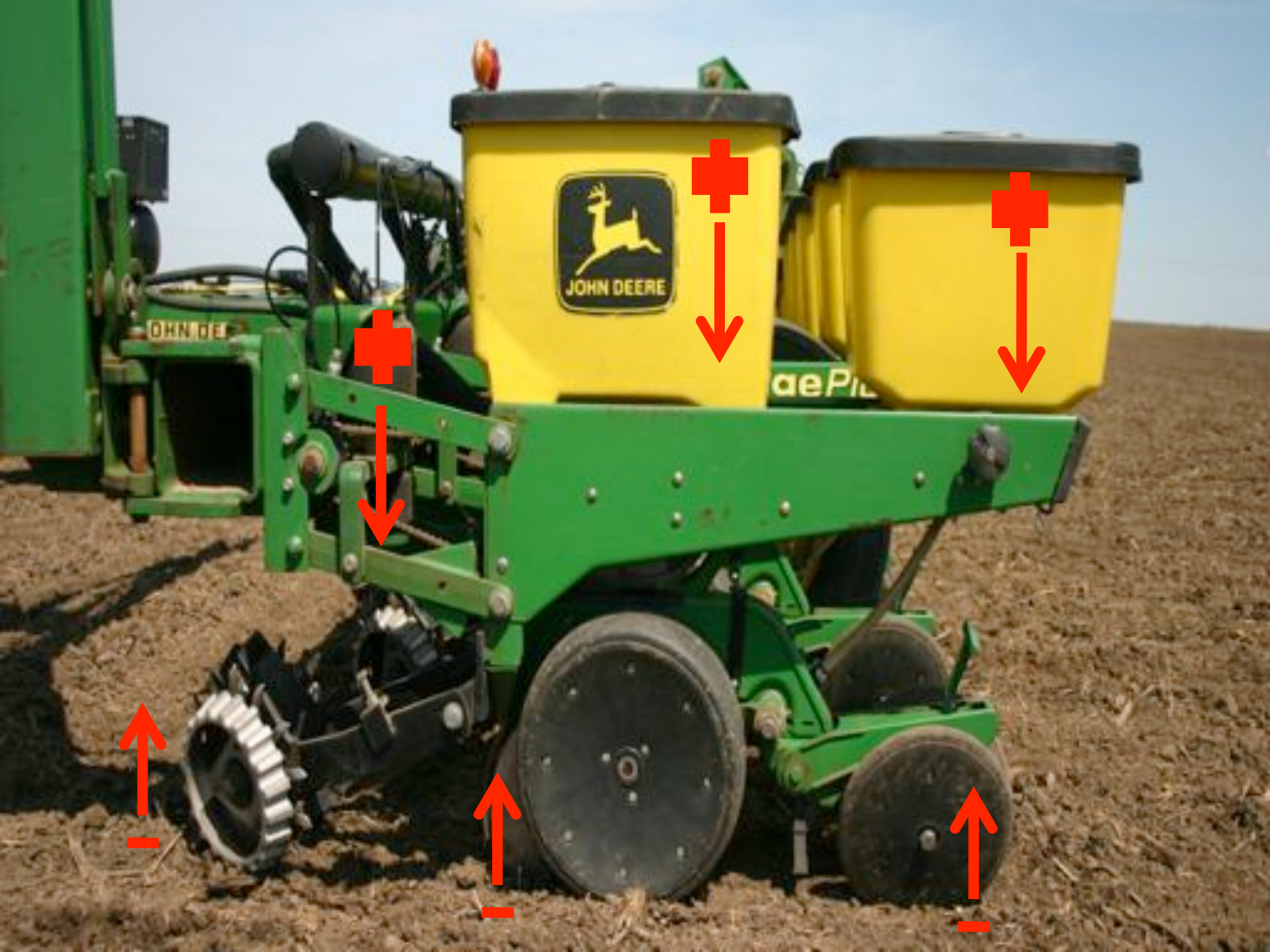
Why Does Down Force Matter?

- Maintain Consistent Depth
- Crown Root Development
- V4 - 6 = Rows Around V6 - V8 = Rows Long



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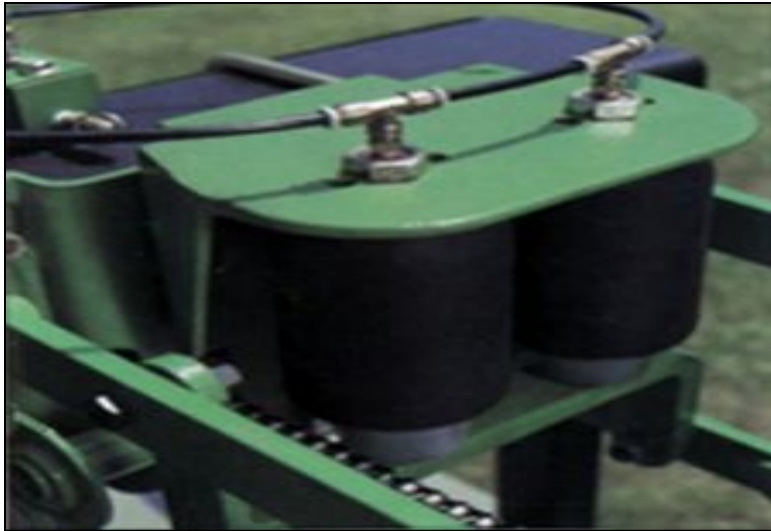




JOHN DEERE

JOHN DEERE

aePlanter



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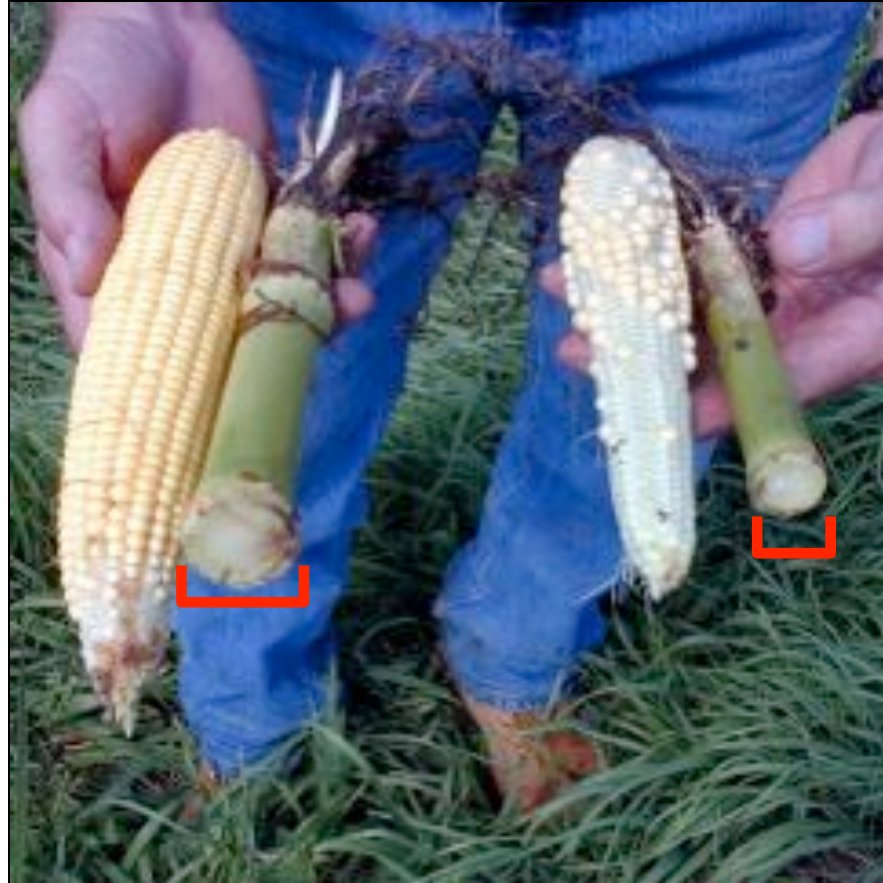


400 lbs.

100 lbs.

Too Little Down Force





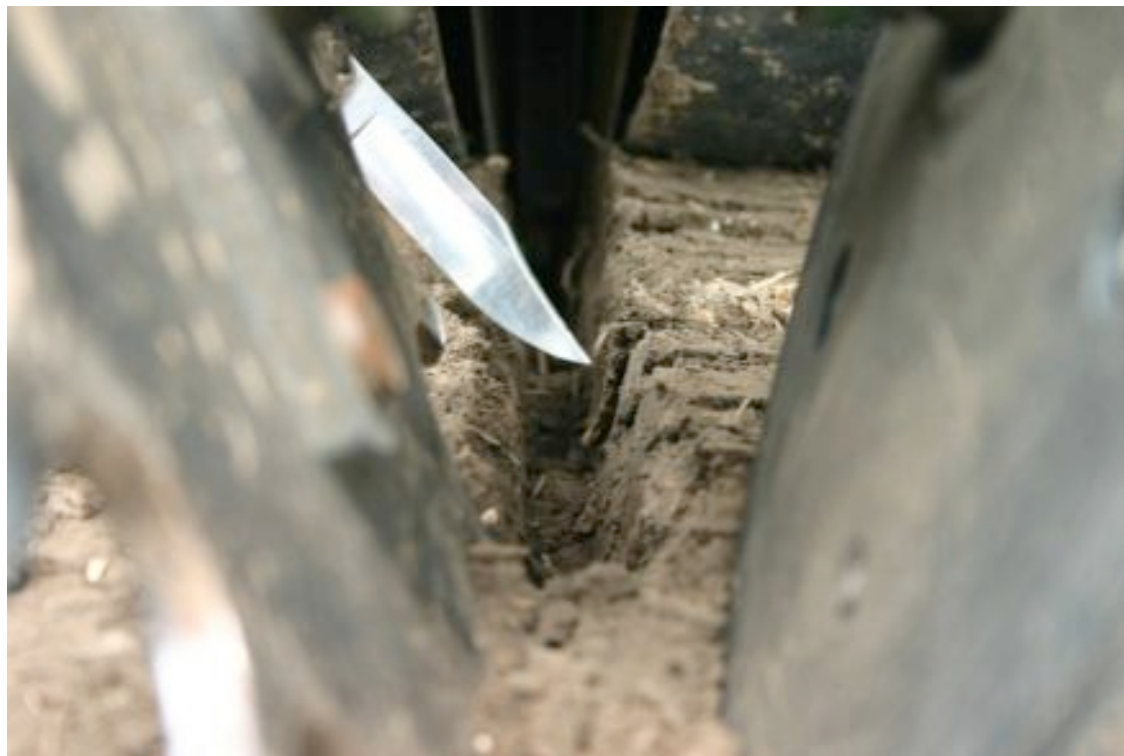
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Too Much Down Force



Side Wall Compaction



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Short Ear, Short Cob = Early Season Stress



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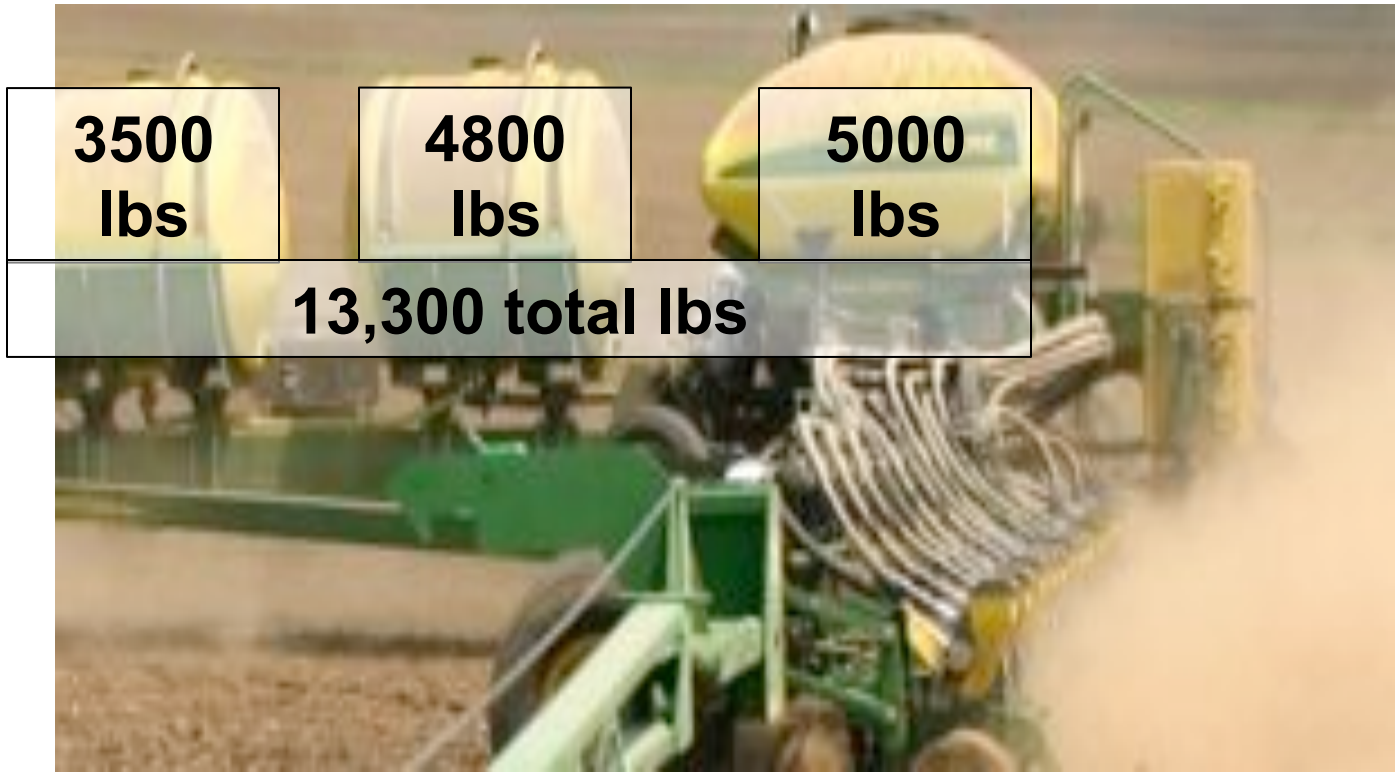
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Central Fill Planters



Weight Management





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No-Tilling Today 56 No-Till Tomorrow



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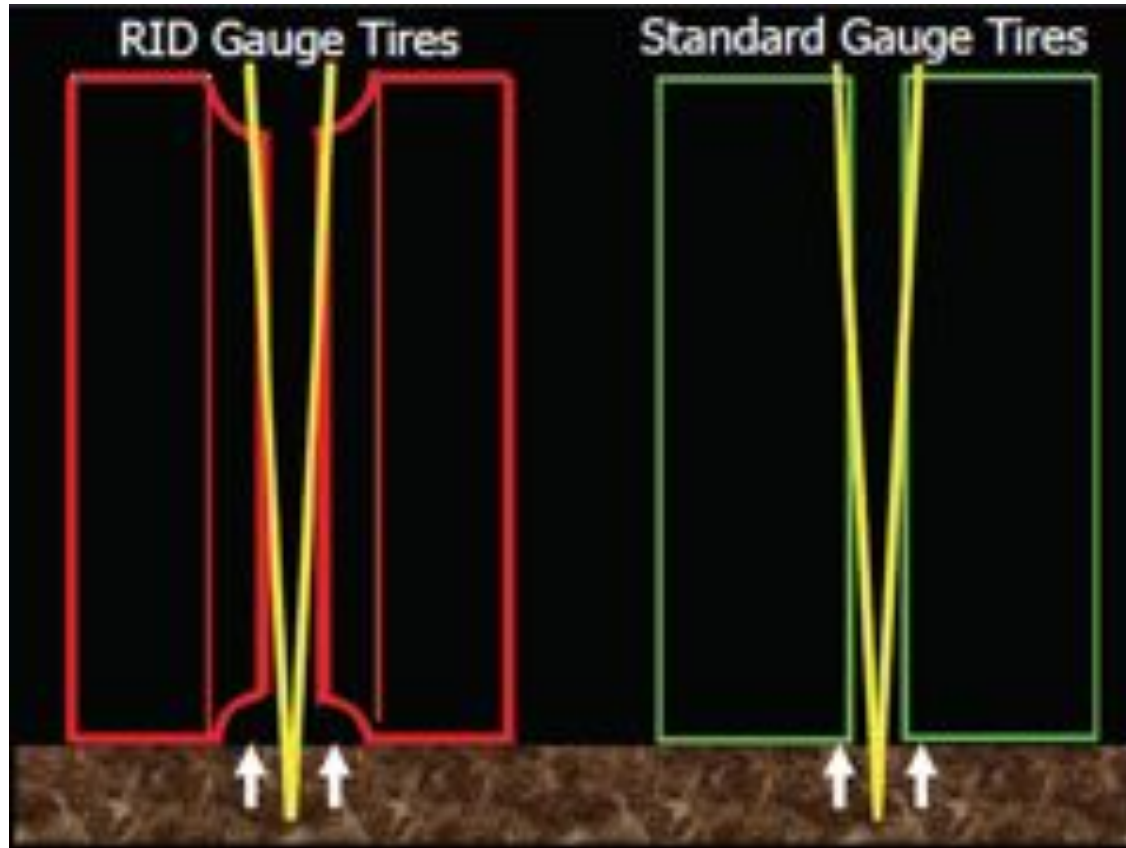


Gauge Wheels



Gauge Wheel Types







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Seed Opening Disks



- A common problem area
- Must replace if less than 14 1/2" at beginning of season
 - New blades = 15"



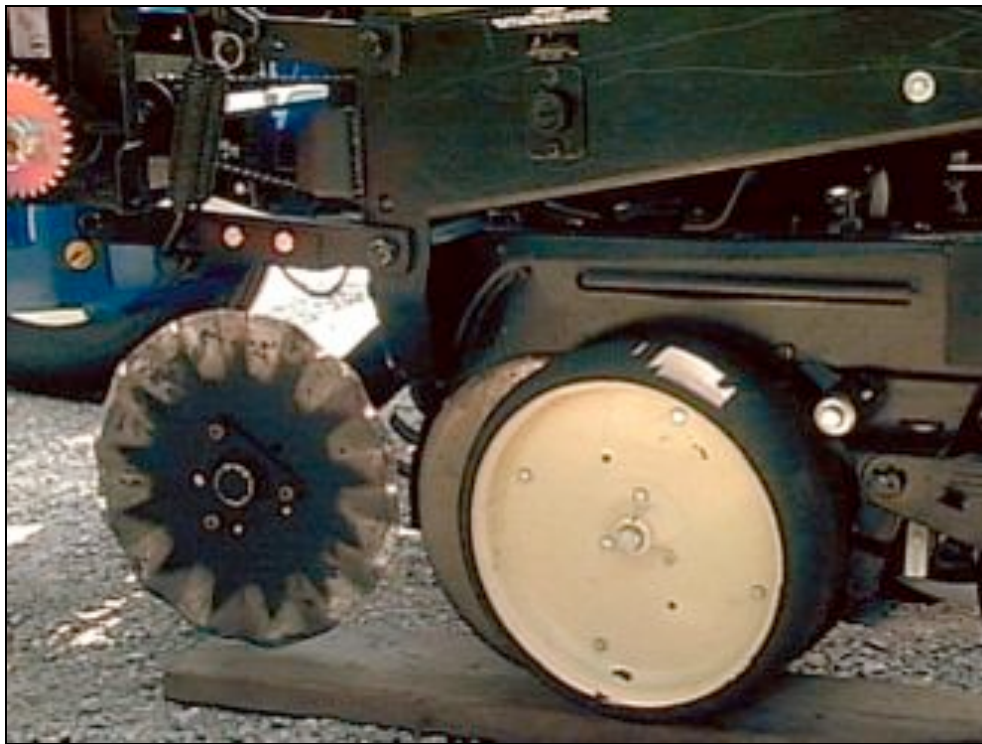
Seed Opening Disks

Proper Adjustment Creates True - Vee Trench



- 3.00 mm / standard openers should have between 2" - 2 1/2" of blade contact
- 3.50 mm / heavy duty openers / Kinze 3000 series only need 1" - 1 1/2" of blade contact
- Check Multiple Places

No Till Coulter





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Row Cleaners



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No-Tillage Sunday 56 NB 2012 K Tomatoes



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-7 Bushel





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Floating vs. Fixed





**Manufacturers are now giving
you the ability to adjust row
cleaners from the cab**





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Seed Firmer



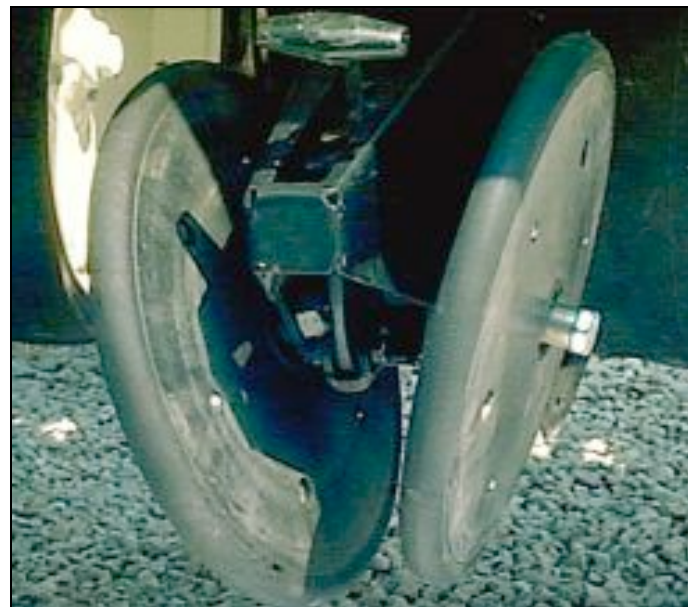
Closing Wheels



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??????



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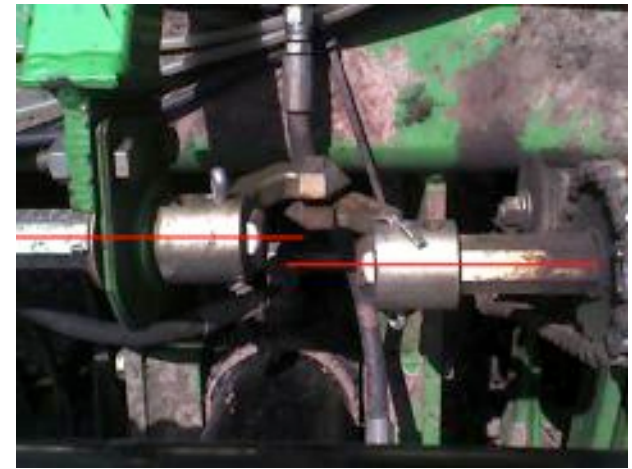




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Variable Rate Drive Systems

Precision[®]
PLANTING

RAWSON
CONTROL SYSTEMS

Veris[®]
technologies

JOHN DEERE

CASE IH
AGRICULTURE

KINZE[®]

Swath Control Clutch Systems

TC TRU COUNT

JOHN DEERE

Ag Leader[®]
Technology

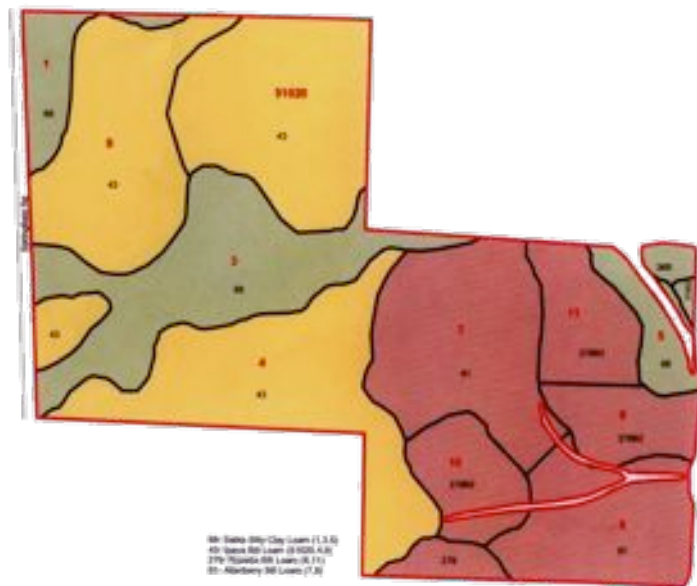
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Swath Control



Variable Rate



32000	31.3 ac
36000	37.9 ac
39000	18.5 ac



Variable Rate Prescriptions

- Model the environment
Is soil type the only factor that determines yield?
- Use yield maps if available
- Involve your seed dealer / agronomist



2010 Yield Results

Narrow Row Plot – New Knoxville, Ohio

30 Inch Rows: 183.8 bu.

Twin Rows: 191.5 bu.

+ 5.7 bu.

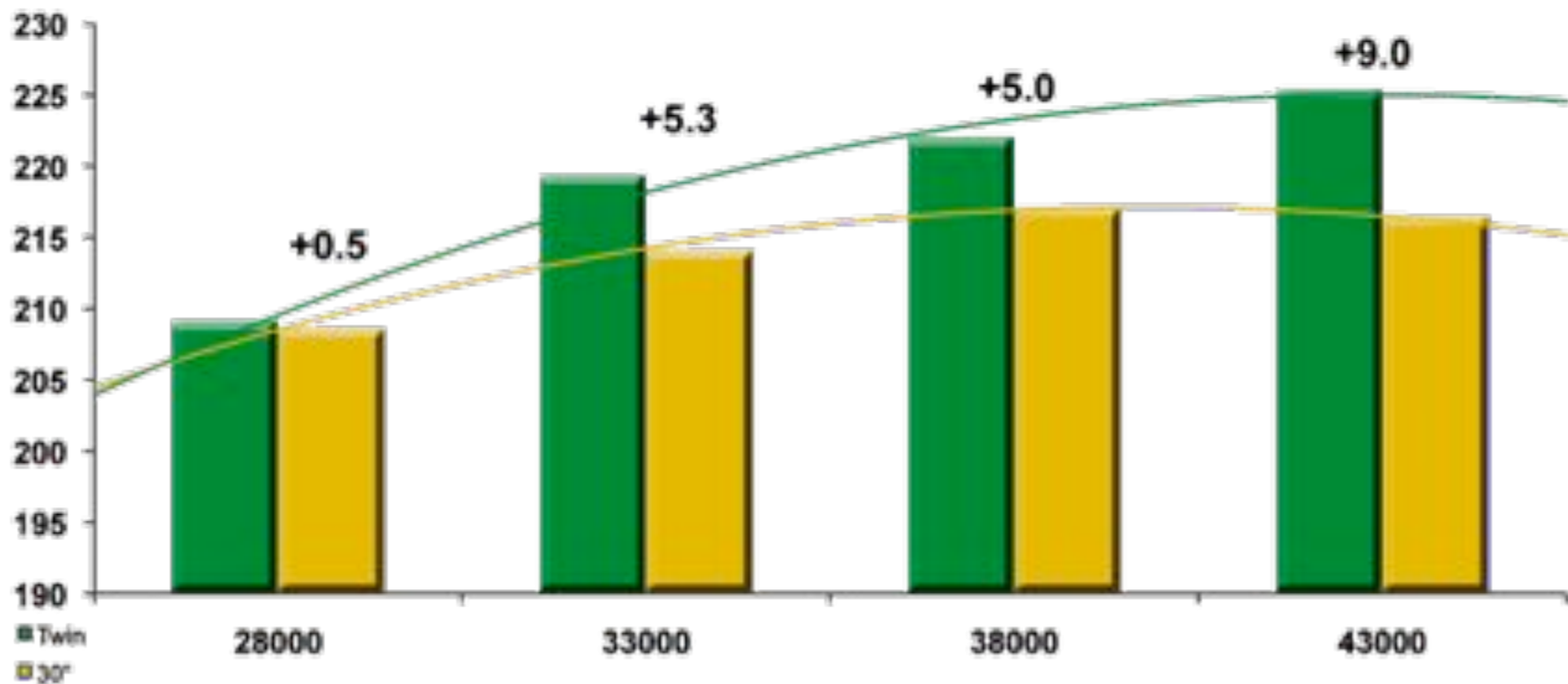
= 9.7 avg.

2009
Average + 13.7 bu.

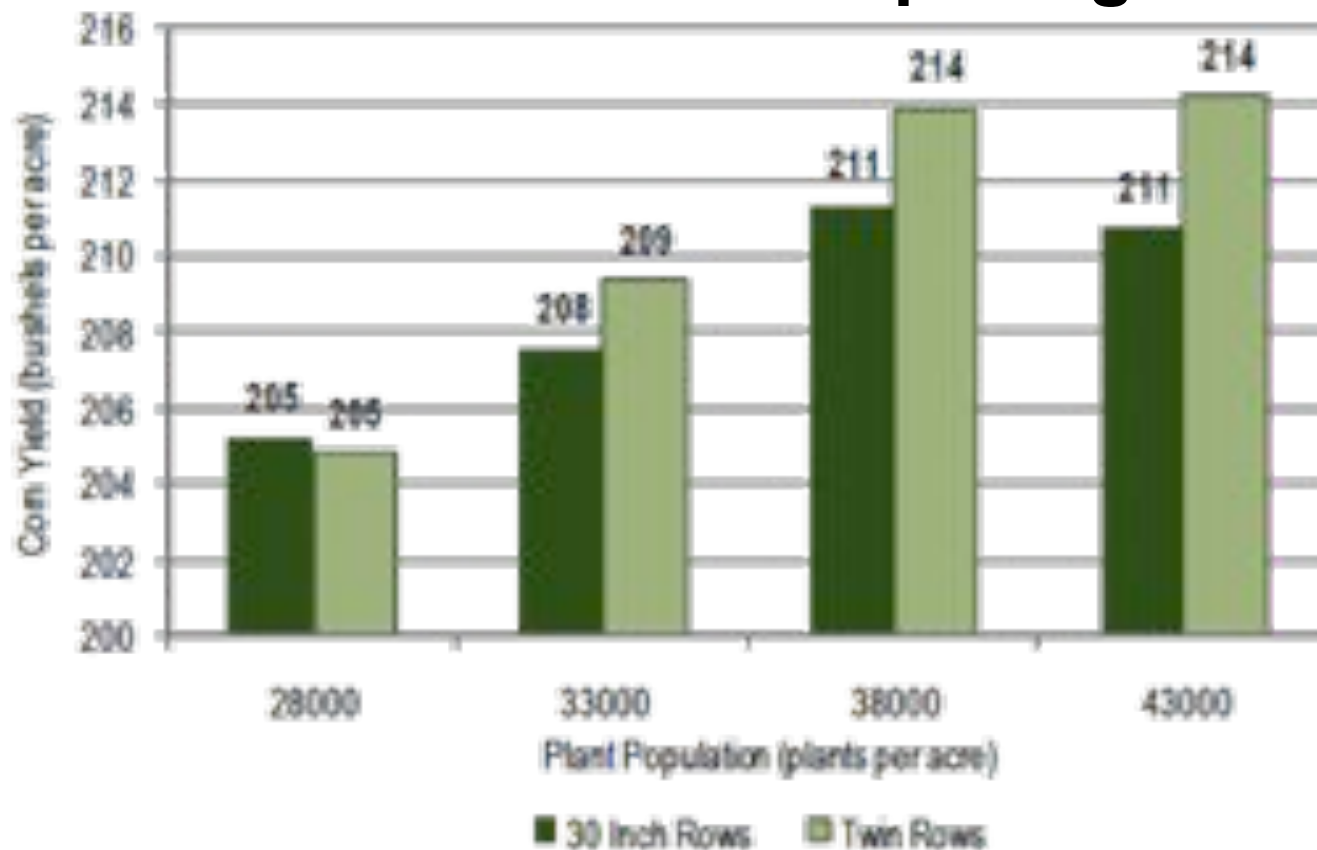


2009 AgriGold Row Spacing Research

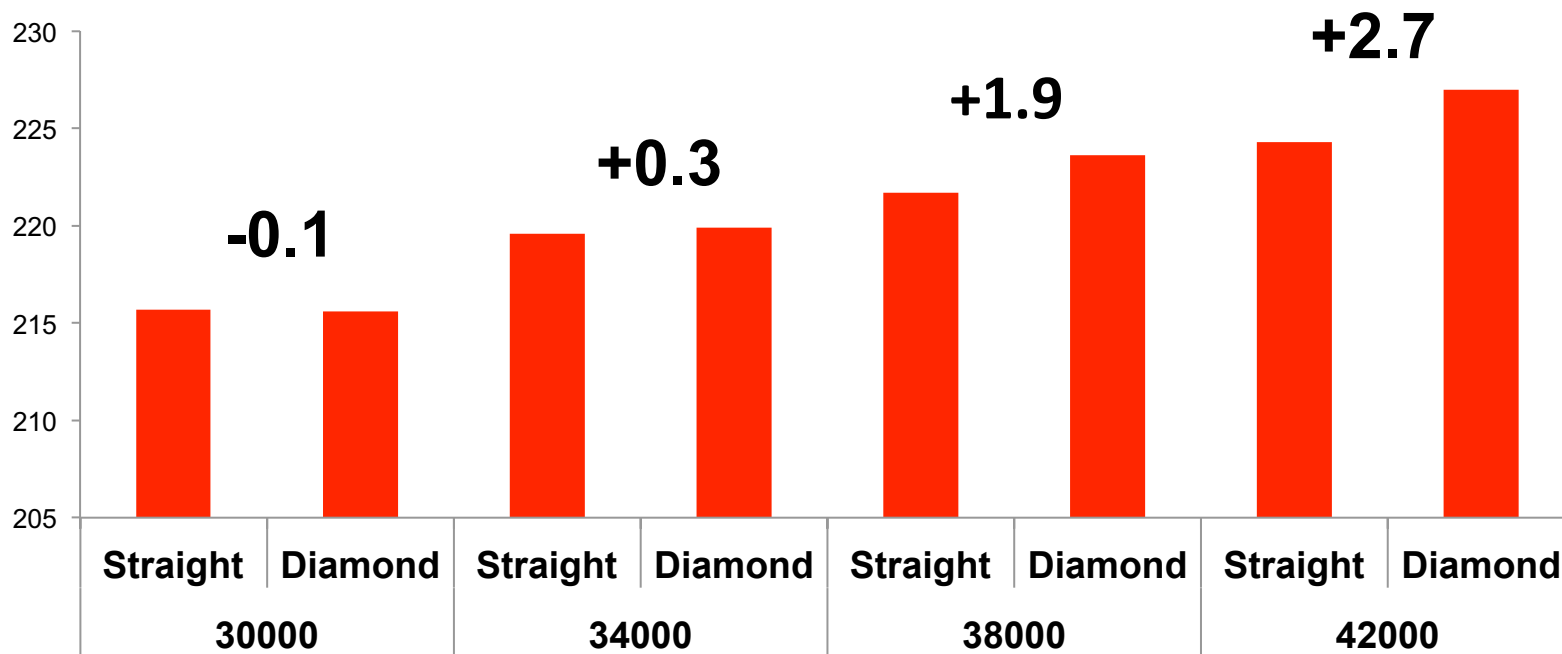
Compiled Yield Data For All Tested Hybrids

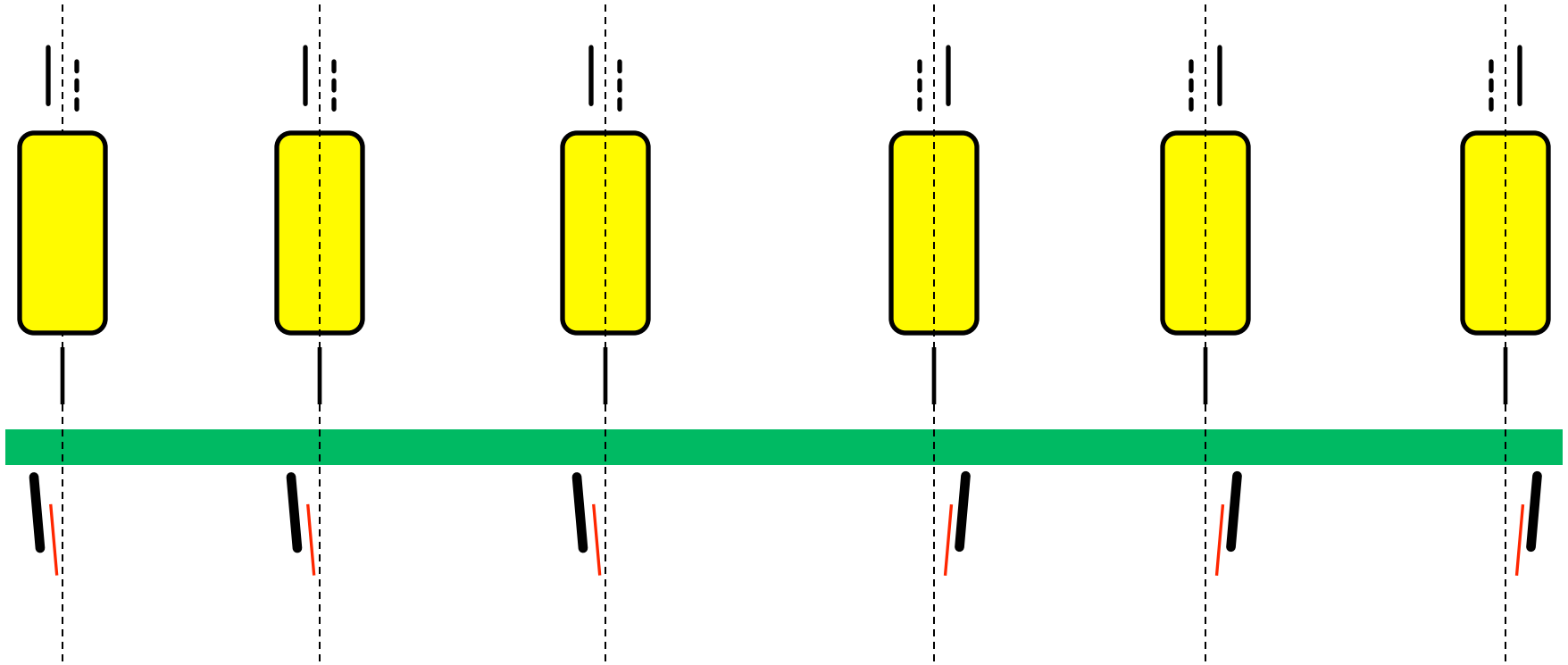


2009 Monsanto Row Spacing Study



Beck's PFR Study - Diamond vs. Straight





A Final Thought...

**“Farming is a kind
of continual
miracle wrought
by the hand of
God.”**

-- Benjamin Franklin

