



**31st Annual
NATIONAL
NO-TILLAGE
CONFERENCE**

January 10-13, 2023 • St. Louis, Mo.

New Profit Opportunities with No-Tilled Wheat

Phil Needham
Needham Ag Technologies, LLC



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Yetter
FARM EQUIPMENT
SINCE 1930
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exapta
solutions, inc.
Precision
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MonTag
The Andersons



GS3
GS3 QUALITY
SEED
Sound



Martin Till
MidWest
Bio-Tech, Inc.



aea



wearparts
TILLAGE TOOLS
Cultivating Solutions for Growth
DAWN
LAFORGE





Gore. NZ
46°06'10" S



Mike targets around 600-700 heads per square yard and the heads shown above had around 60 and 80 grains per head. So if you average these heads together, that's 70 grains per head.

When multiplied, 600 heads per square yard on average, works out at 42,000 grains per square yard. With 11,000 seeds per pound on average, that's 307.99 bu./ac. This isn't far from the 275 bu./ac high regions in the field.

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Highest wheat yield



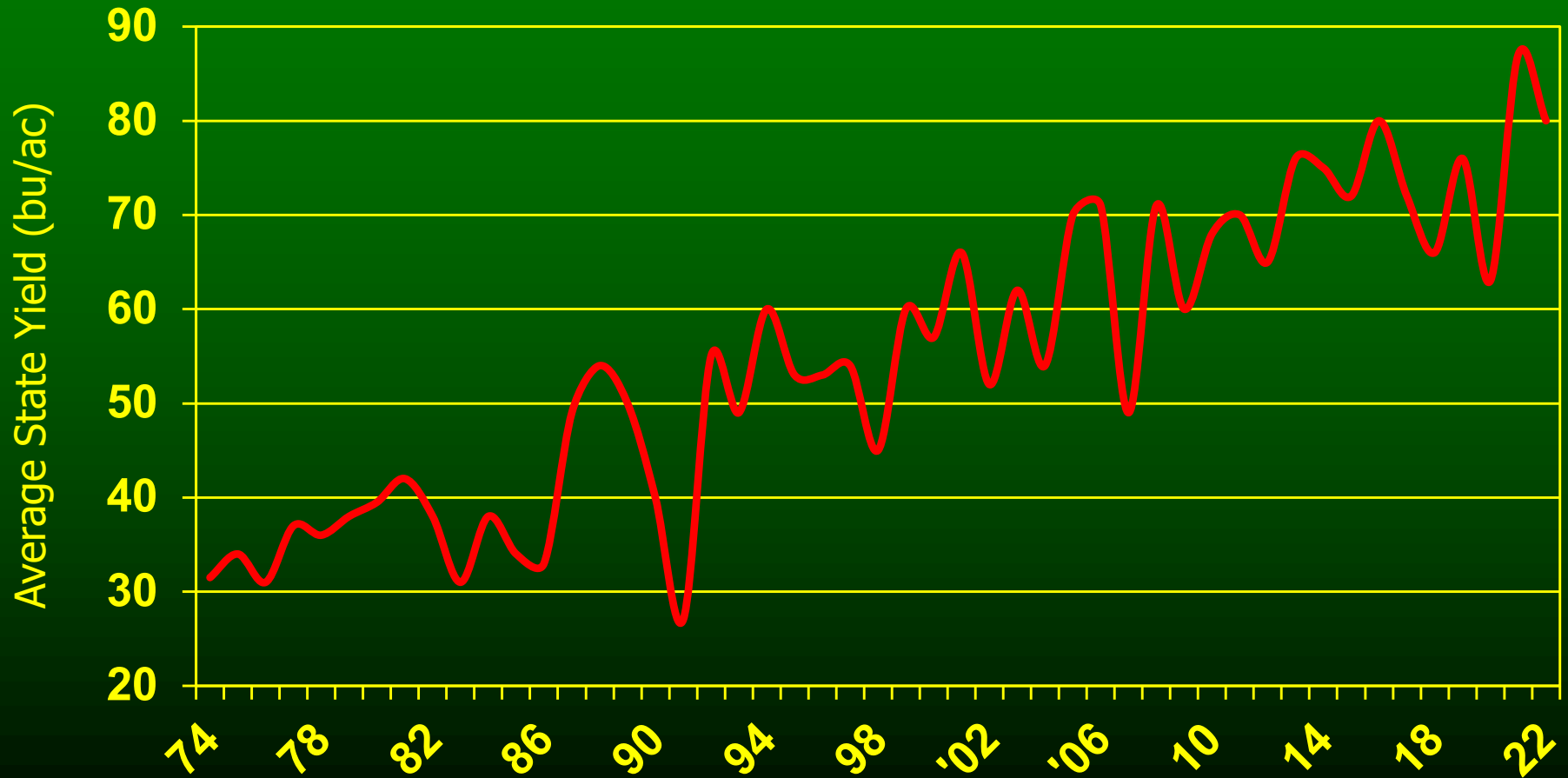
The highest wheat yield is 17.398 tonnes/ha (38356.02 lbs/ha or 258.70 bushels/acre) and was harvested from 8.6353 ha (21.33 acres) by Eric Watson at Paddock 15a, Wakanui, Canterbury, New Zealand, on 17 February 2020.

Top 8 Highest (And Most Consistent) Wheat Yield & Profit Management Practices.



1. Fertility Based On Yield Potential.
2. Narrow Row Spacing.
3. High Yielding, Short Varieties With FHB Toler.
4. Stand Count (seed population x planting date).
5. Uniform Head Counts In The Ideal Range.
6. Weed And Insect Control.
7. Nitrogen x Fungicides.
8. Phosphorus In Row.
9. Timing !

Kentucky Average State Wheat Yields 1974-2022



Source: USDA (<http://www.nass.usda.gov>)

No-Till Wheat Adoption in Kentucky

1980 - 2010

Year	Harvested No-Till Acres
1980	<1%
1990	22%
2000	39%
2010	69%

Source: University Of Kentucky

Table 1. Effect of Tillage on Wheat for Seven Fields Over Three Years

Tillage	Yield (bu/ac)
No-Till	84.1
Till	85.3

Source: University of Kentucky

ON-FARM NO-TILL WHEAT RESEARCH, AND ITS EFFECT ON THE SOIL AND ROTATIONAL CROPS

L. Murdock, J. Grove and D. Call - University of Kentucky Dept of Agronomy
John Hagen and Phillip Needham – Opti-Crop, Owenboro, Kentucky
Scott Van Sickle - Wheat Tech, Russellville, Kentucky











Variety Selection





Great Plains No-Till Box Drill Almost Empty

Same Drill - Filled Up With Seed.

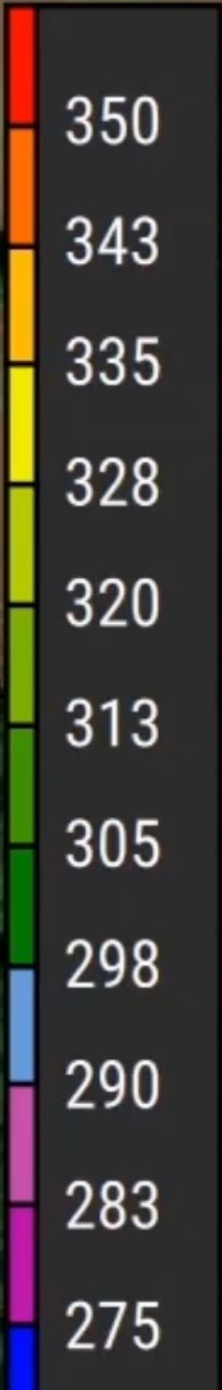
**Wheat Was Planted At A 15-20
Degree Angle to Corn Rows**

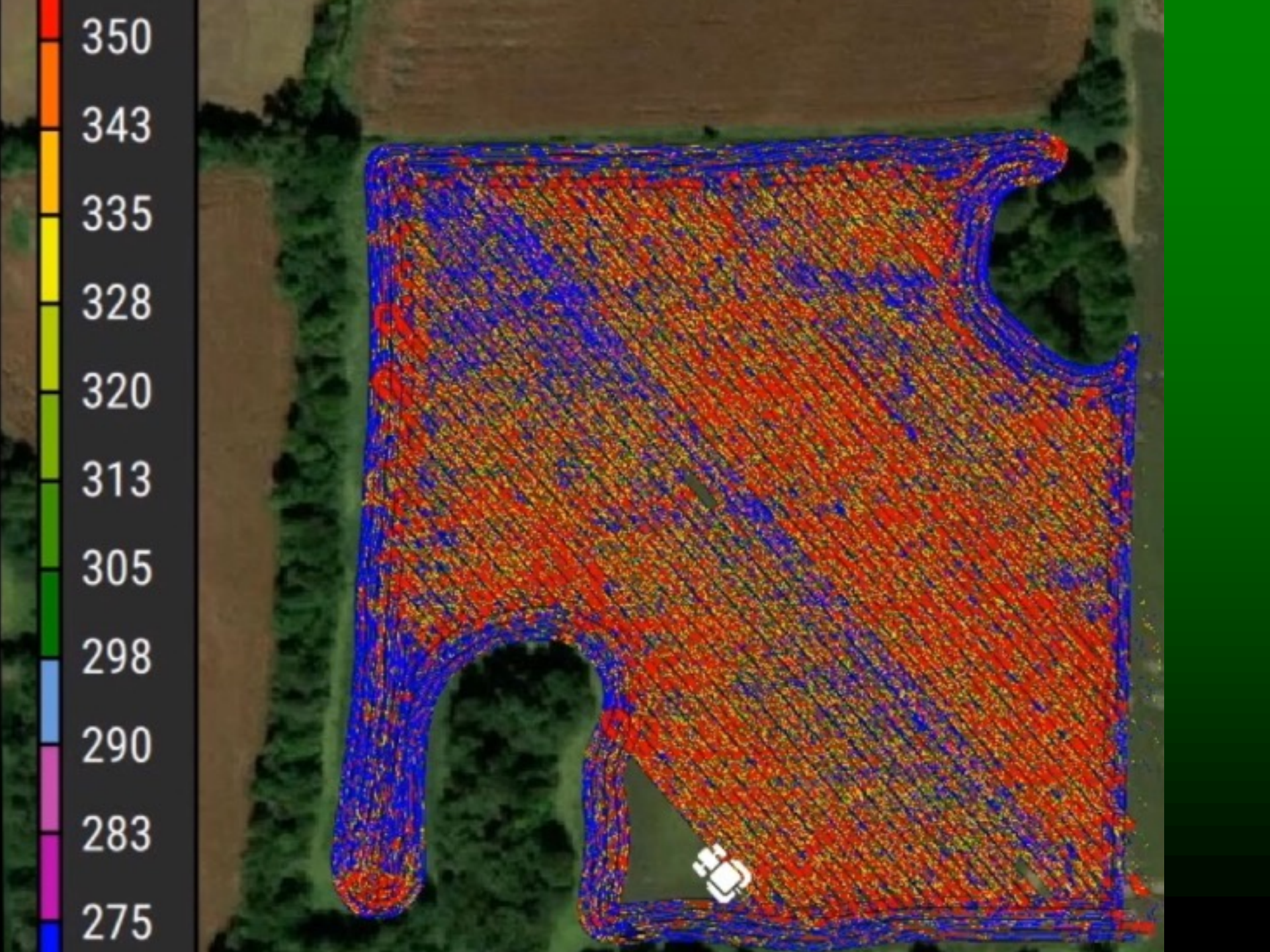


**Dividing Line.
Maybe 20
Minutes Between
2 Passes.**




2:05 PM

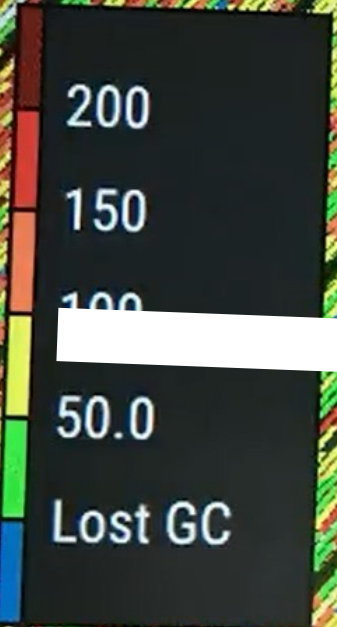
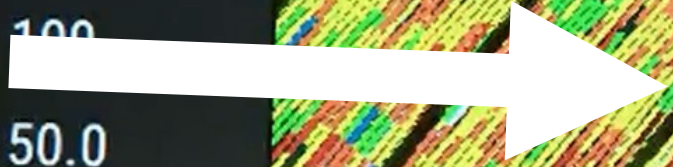




☰ Down Force

Combine Passes

Split 




Off

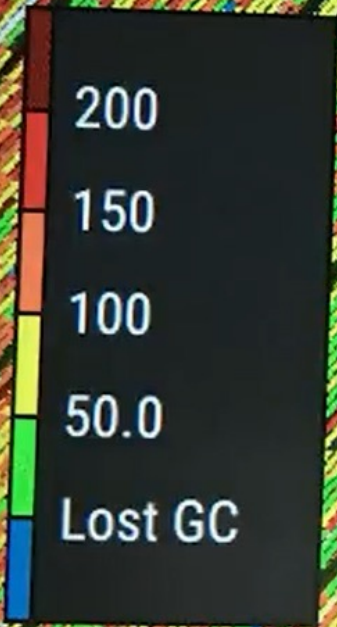
Jessie


A vertical toolbar on the right side of the screen containing several icons: a compass, a zoom-in/out icon, a tractor icon, a power icon, and a volume icon.

☰ Down Force

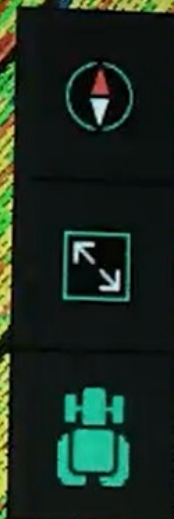
Drill Passes

Split 



Off 

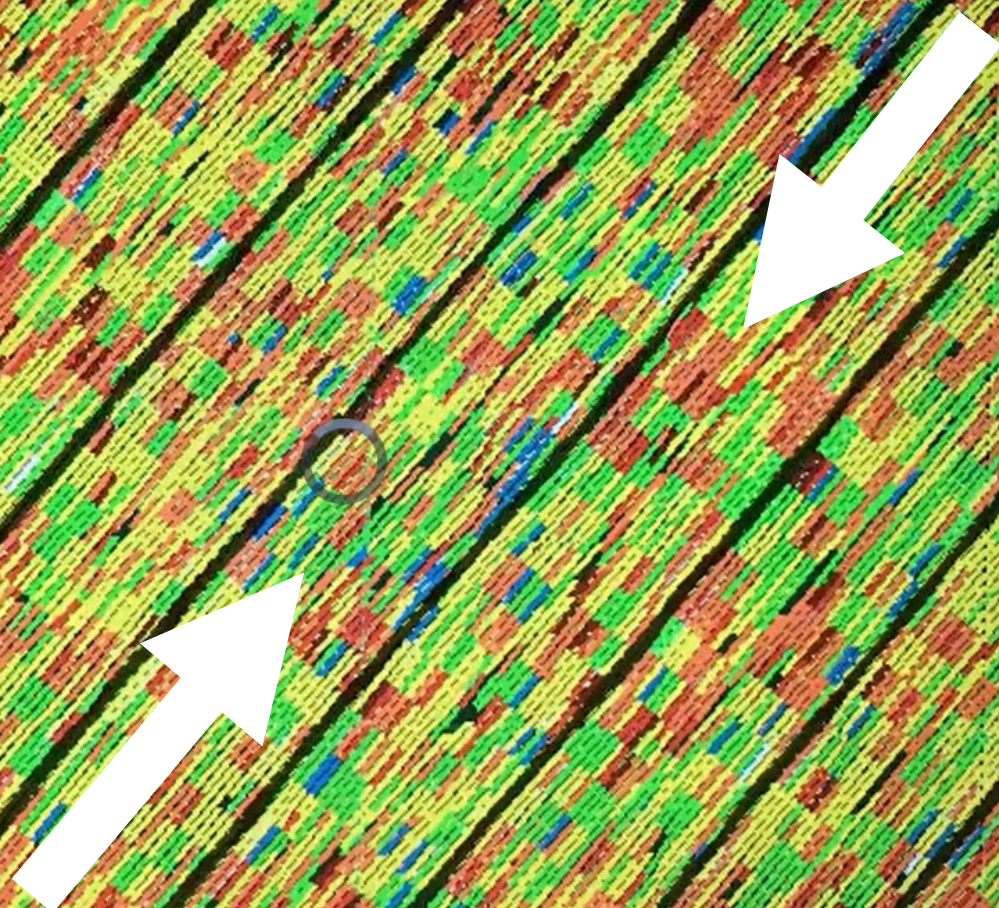
Jessie

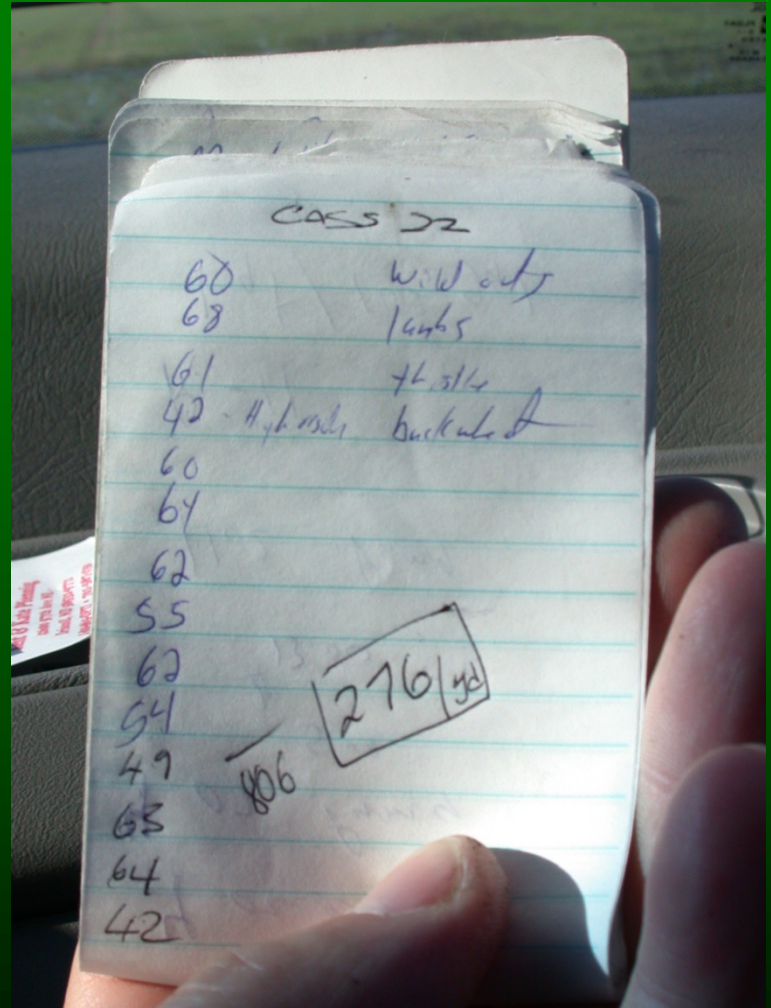


A vertical stack of four icons: a compass rose, a square with four arrows pointing outwards, a red robot-like figure, and a red plus sign.



A vertical stack of two circular icons: a red plus sign (zoom in) and a red minus sign (zoom out).





CASS 22

60	Wild cat
68	lamb
61	thistle
42	High mch. backside
60	
64	
62	
55	
62	
54	
49	
63	
64	
42	

806

276 | 42



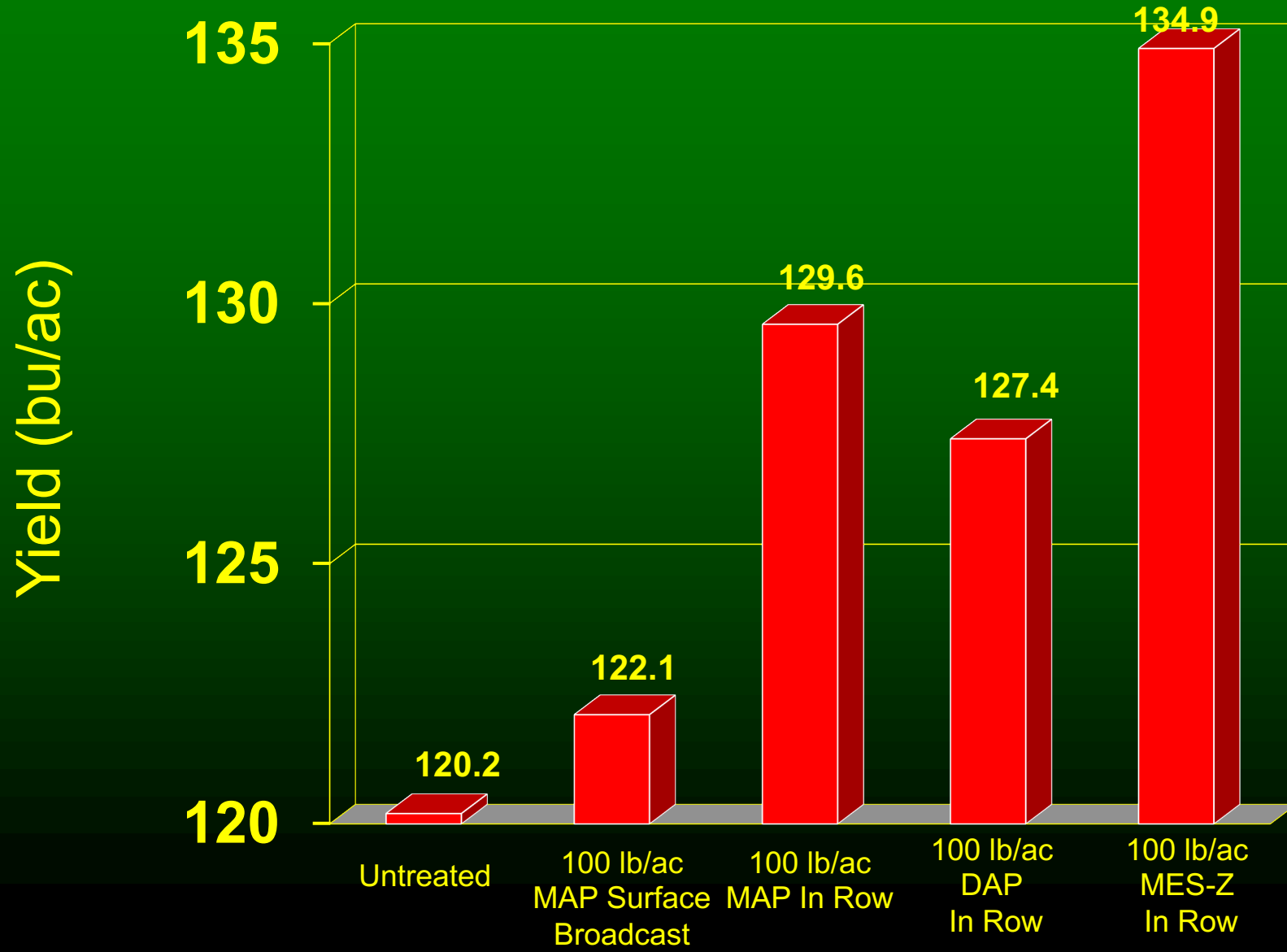






Effect of In-Row P With No-Till 7.5" Wheat

Needham Ag Technologies. NT Wheat After 200 bu/ac corn Location: Calhoun, KY - Harvest 2015
(Average of 2 replications). Soil Test P=69 lb/ac, S=49 lb/ac and Z 2.8 lb/ac (Mehlich 3 analysis)











**Dry Nitrogen
Application
Methods ?**



Flat Fan Nozzles



Stream Bars

Liquid Nitrogen Application Methods?



3/5/7 Hole Streamer Nozzles

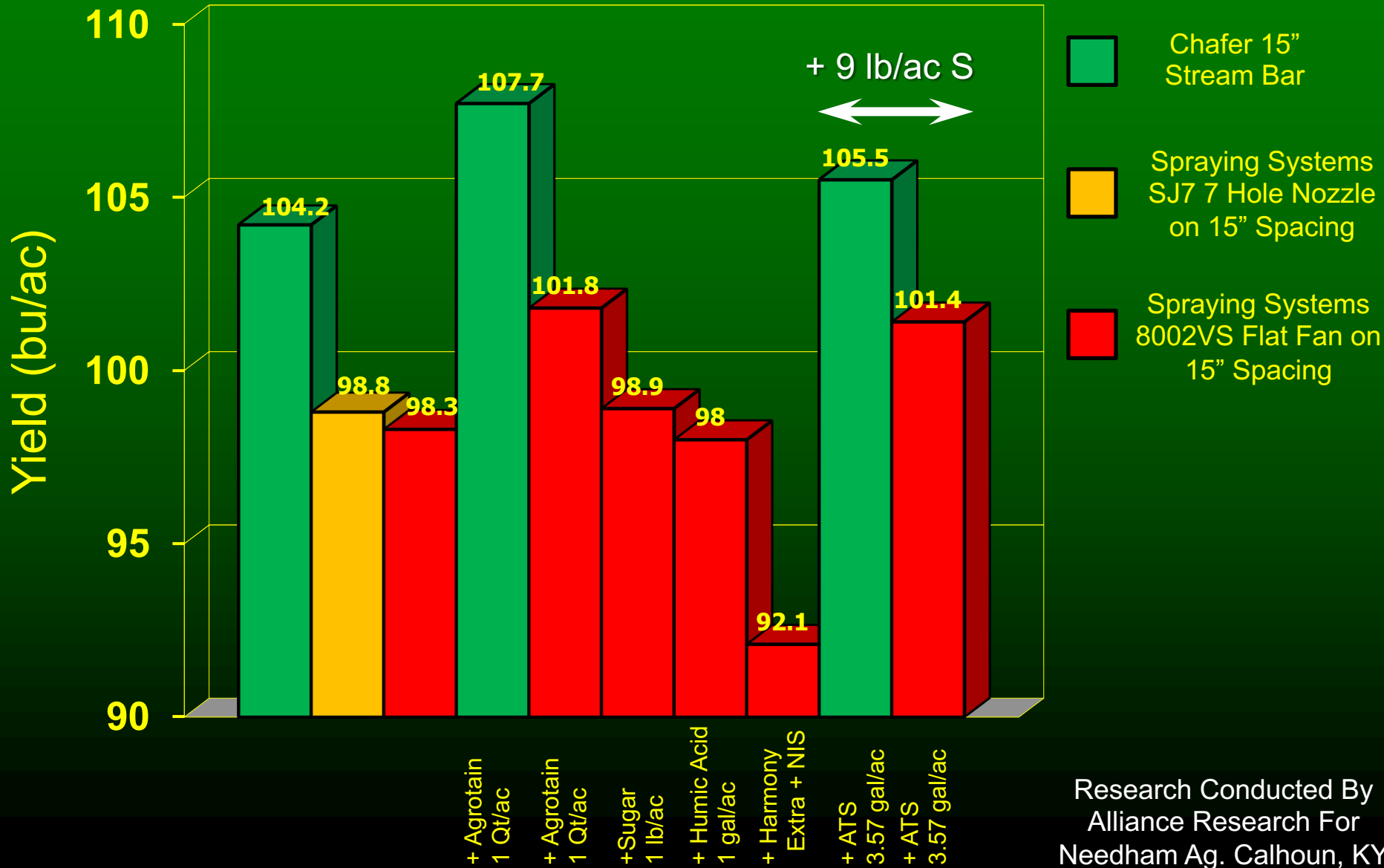


7 Hole Streamer Nozzles (SJ7)



Wheat – Spring Nitrogen Application Methods

Growth Stage Feekes 6/Z31 Application. 3 Year Average Yields (From 2015-2017 replicated trials)
 Application Rate - 66.6 lb/ac of applied N (adjusted to 66.6 lb/ac with ATS treatments)



Research Conducted By
 Alliance Research For
 Needham Ag. Calhoun, KY



Fusarium Head Blight (Scab)

Best Management

Tolerant Varieties
Prosaro Pro/Miravis Ace
Correct Timing
Plenty of water
Forward/Backward Nozzles





Questions



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DAWN