



Precision Planting®

Fluid Fertilizer Foundation



Precision Seed and Fertilizer

PRESENTED BY

Aaron Herrmann

Research Agronomist

How do WE manage crop nutrients for the grower's peak profitability?

Managing Phosphorous for Grower Profitability

Right Time

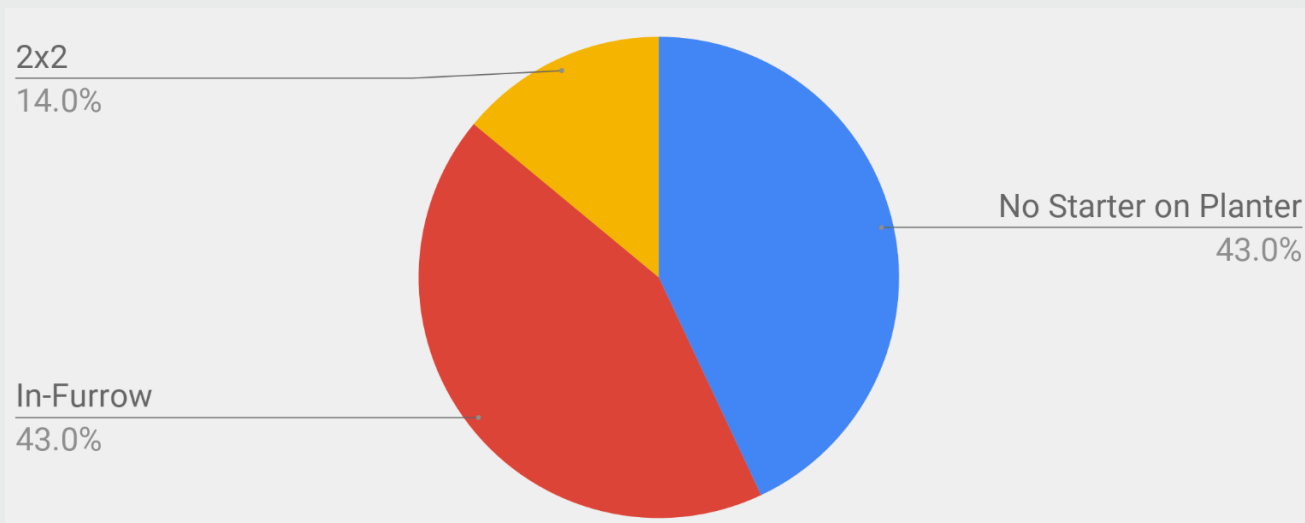
Right Place

Right Amount



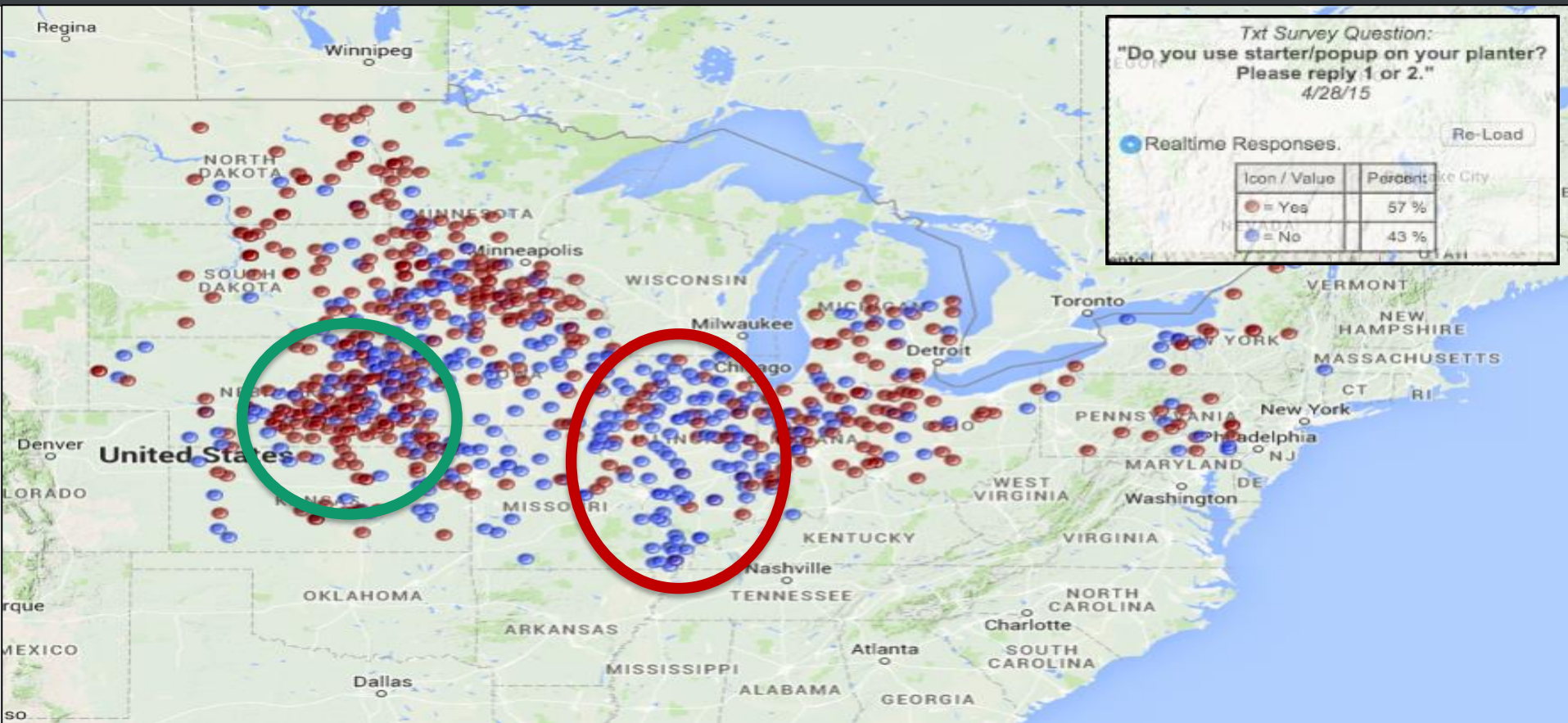
Starter Fertilizer
on the Planter

Starter Adopters



Farm Journal - Text Survey - May 2015

Where?



Meet the Starter Skeptic

Starter Skeptic's top reasons for not using starter?

"I've tried it and it didn't work"

"Starter costs too much"

"I've tried it and it didn't pay for itself"

"My soils test High/Very High in P & K so I don't need starter"

"I am not going to slow down planting"

"Too much hassle"

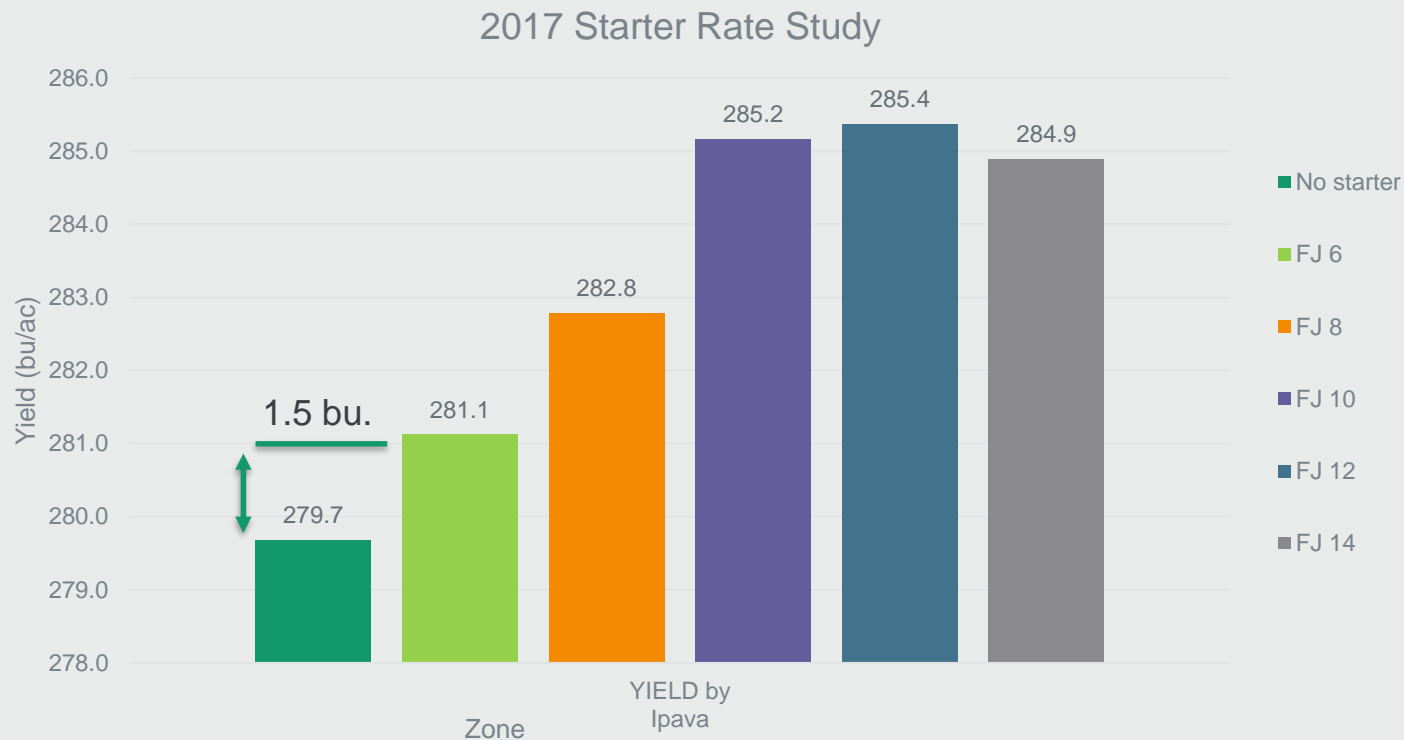


Starter Skeptic

“I tried starter and it didn’t work”

The Fine Print: He has put starter on at a in-furrow rate of 2-6 gallon and can’t see it on the yield monitor.

"I tried it and it didn't work"

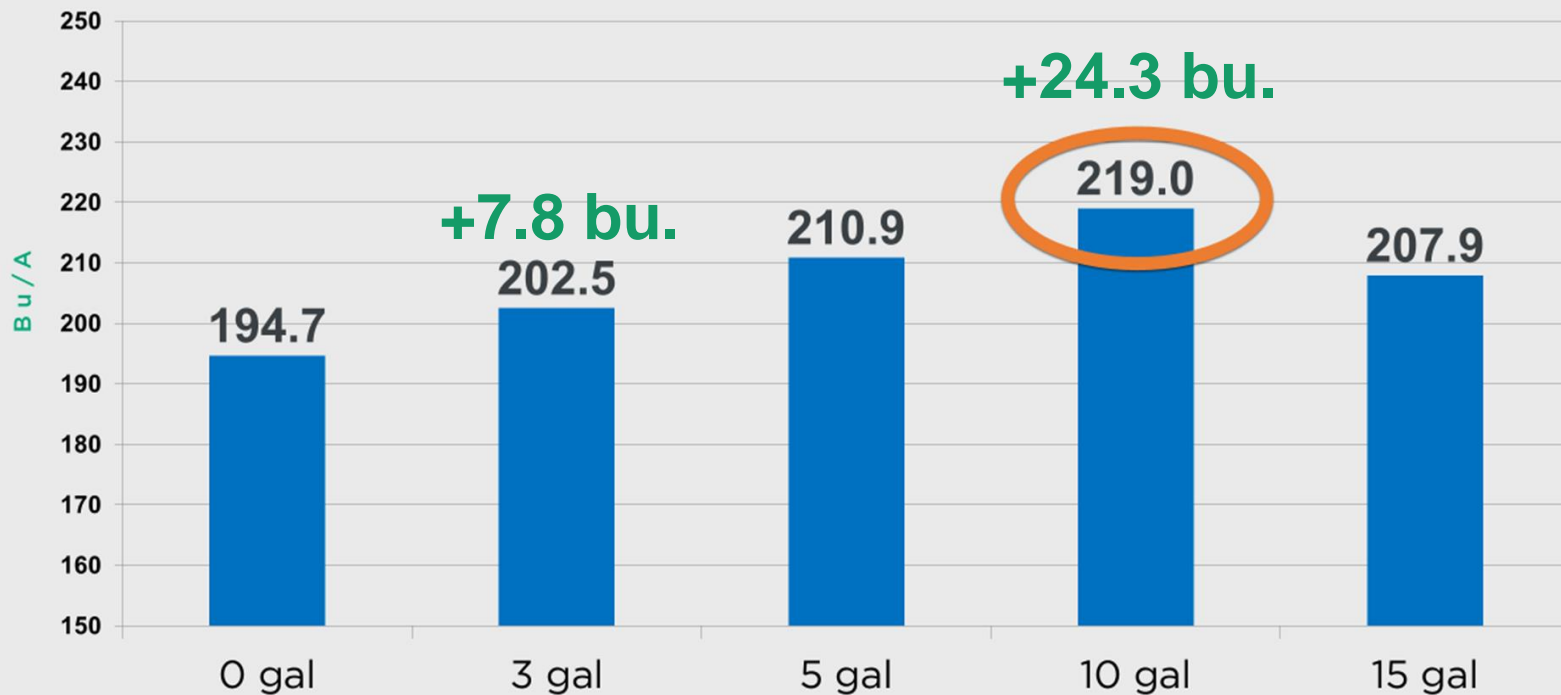


Starter Rate Comparison

7-23-5+1Zn, Avg all attachments

2015 Starter Plot, Roth 60

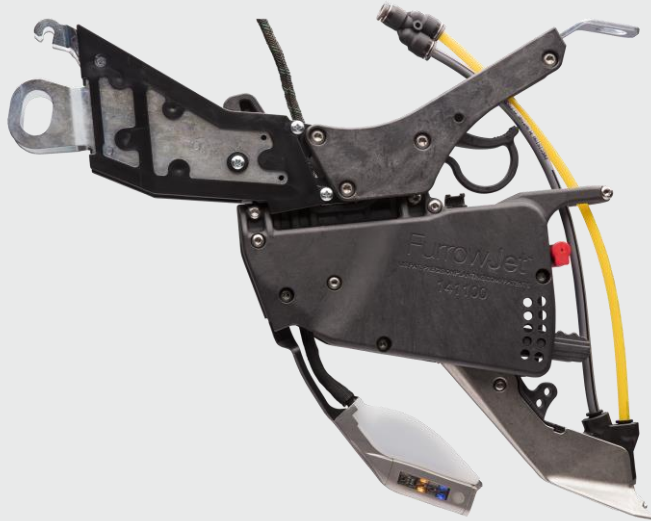
10 Acre Ipava Soil Zone



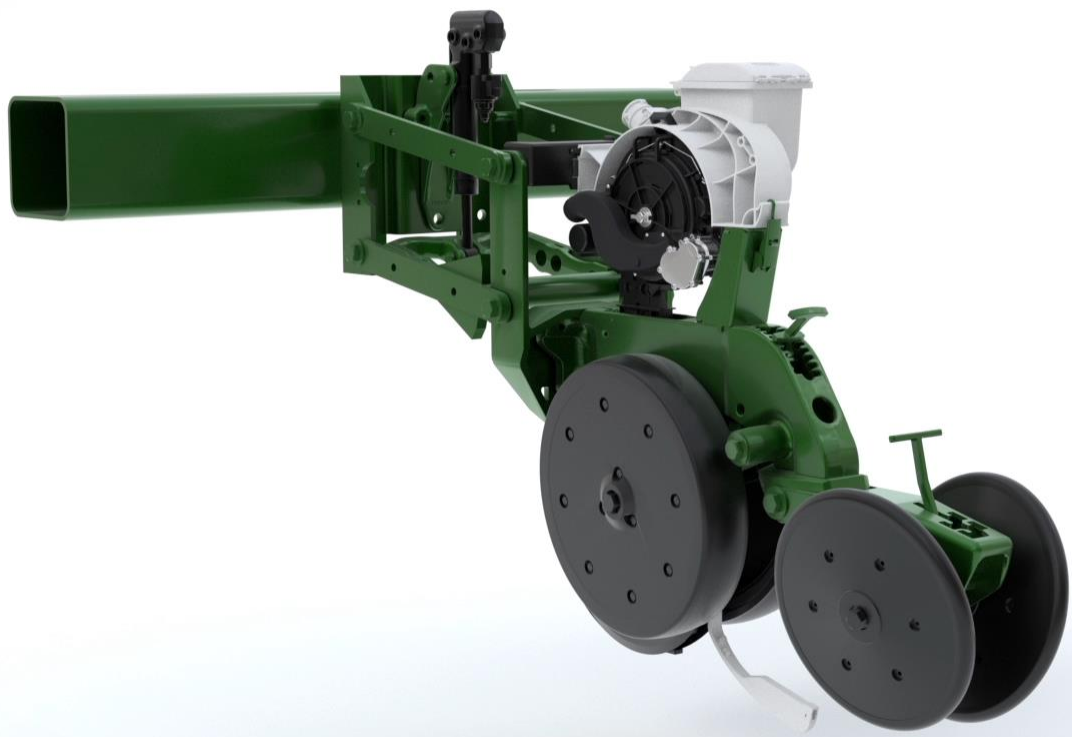
40%

of Starter Yield Response Captured

FurrowJet



100%
of Starter Yield
Response Captured



Starter Skeptic

“Starter costs too much”

“I tried it and it didn’t pay for itself”

The Fine Print: He is admitting he gets extra bushels but <10 bu. Can’t pay for a \$30 starter cost.

Fertilizer Program ROI

Program Scenario

250 Bu. Corn
.35 lbs of P205 per bu removed
88 lbs of P205 for Maintenance
DAP: \$480 per ton
10-34-0: \$450 per ton

Starter Response	Gross \$/ac
5 bu/ac	\$18 /ac
10 bu/ac	\$35 /ac
15 bu/ac	\$53 /ac

Fertilizer Program Assessment

Traditional Dry Program		P205	Fertilizer Investment
Fall Broadcast	190lbs of Dry DAP (18-46-0)	88 lbs	\$46 /acre

- No Opportunity for Starter Response

No Reallocation		P205	Fertilizer Investment
Starter	8GPA of Liquid (10-34-0)	32 lbs	\$21/ac = \$67 /acre
Fall Broadcast	190lbs of Dry DAP (18-46-0)	88 lbs	\$46/ac + \$21 Cost

+ \$14/ac

Reallocation: Starter Credit		P205	Fertilizer Investment
Starter	8GPA of Liquid (10-34-0)	32 lbs	\$21/ac = \$50 /acre
Fall Broadcast	120lbs of Dry DAP (18-46-0)	56 lbs	\$29/ac + \$4 Cost

+ \$31/ac

Reallocation w/ Efficiency Factor (1.5x)		P205	Fertilizer Investment
Starter	8GPA of Liquid (10-34-0)	32 lbs	\$21/ac = \$42 /acre
Fall Broadcast	87lbs of Dry DAP (18-46-0)	40 lbs	\$21/ac - \$4 Cost

+ \$39/ac

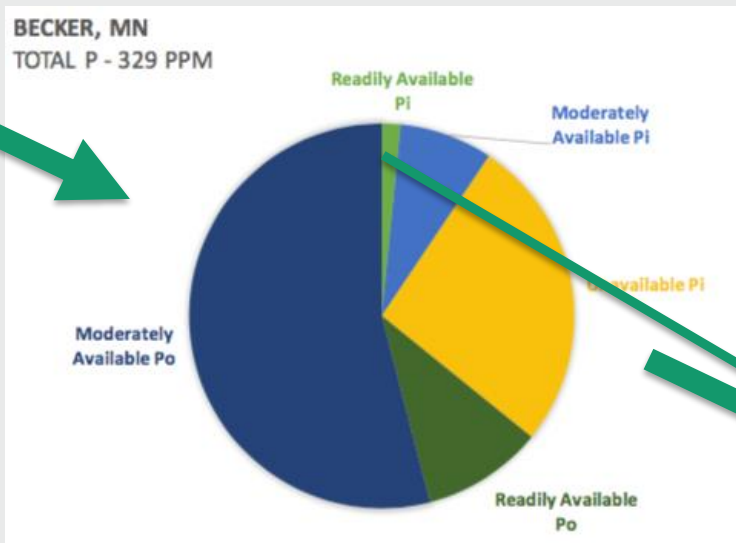
Starter Skeptic

**“My soils test High/Very High in P & K
so I don’t need starter”**

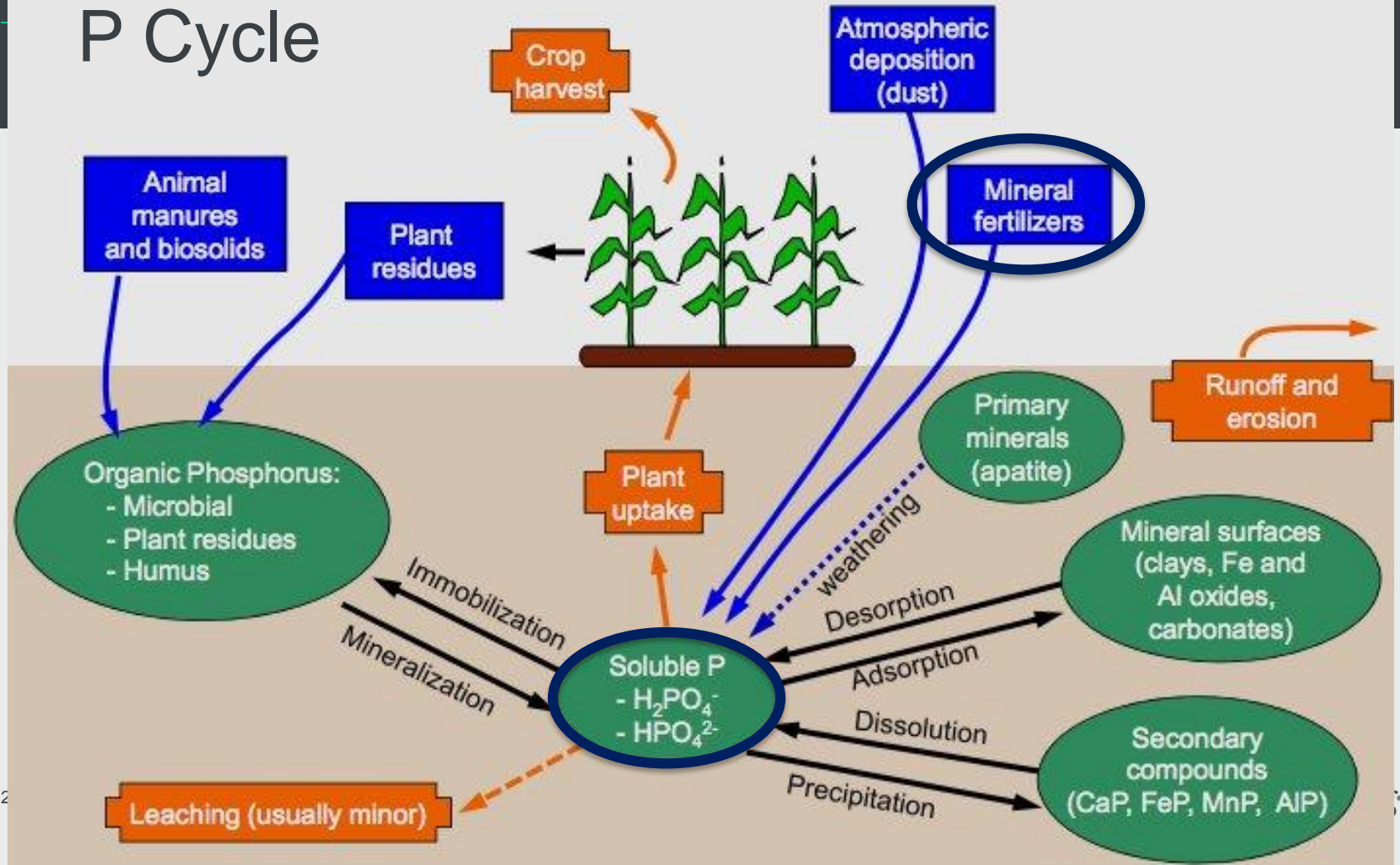
The Fine Print: He believes high soil test values equals high amount of phosphorous into the plant.

How does fertilizer interact with the soil?

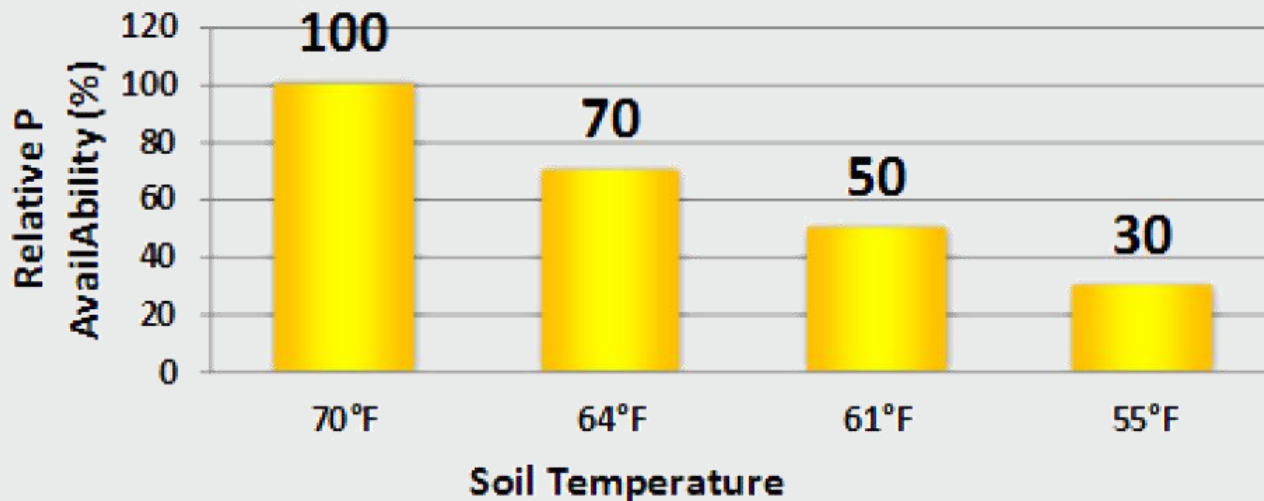
6,000 lbs of Phosphorous



P Cycle

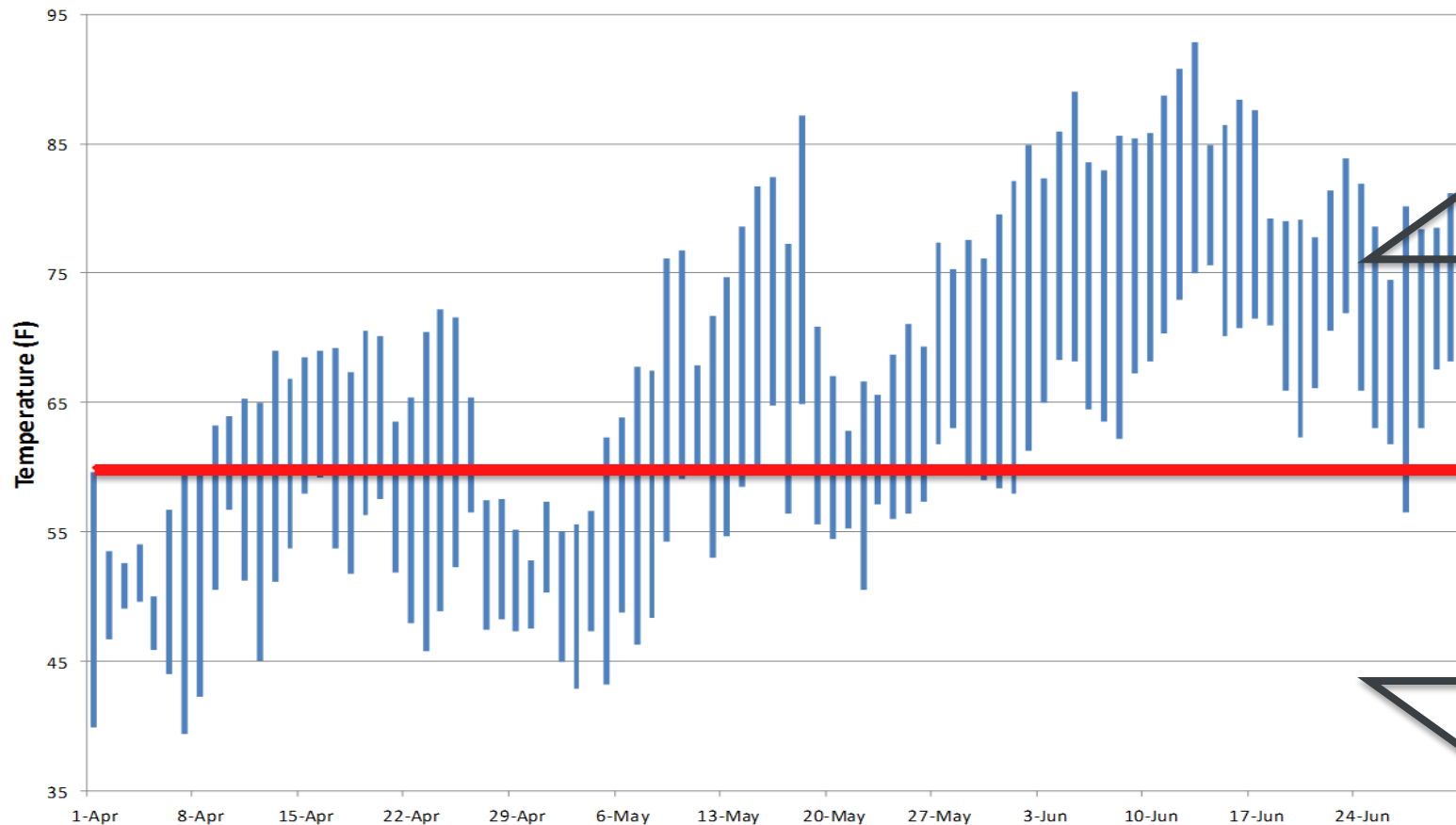


**Table 2: Effects of Soil Temperature on the
Relative Availability of Phosphorus***



* Soil Temperature Effects P Use: Using starter fertilizer for corn grain, sorghum, soybeans - Hergert and Wortmann - Extension Soils Specialists, University of Nebraska - Lincoln

Temperature, 4" Bare Soil Central IL 2017

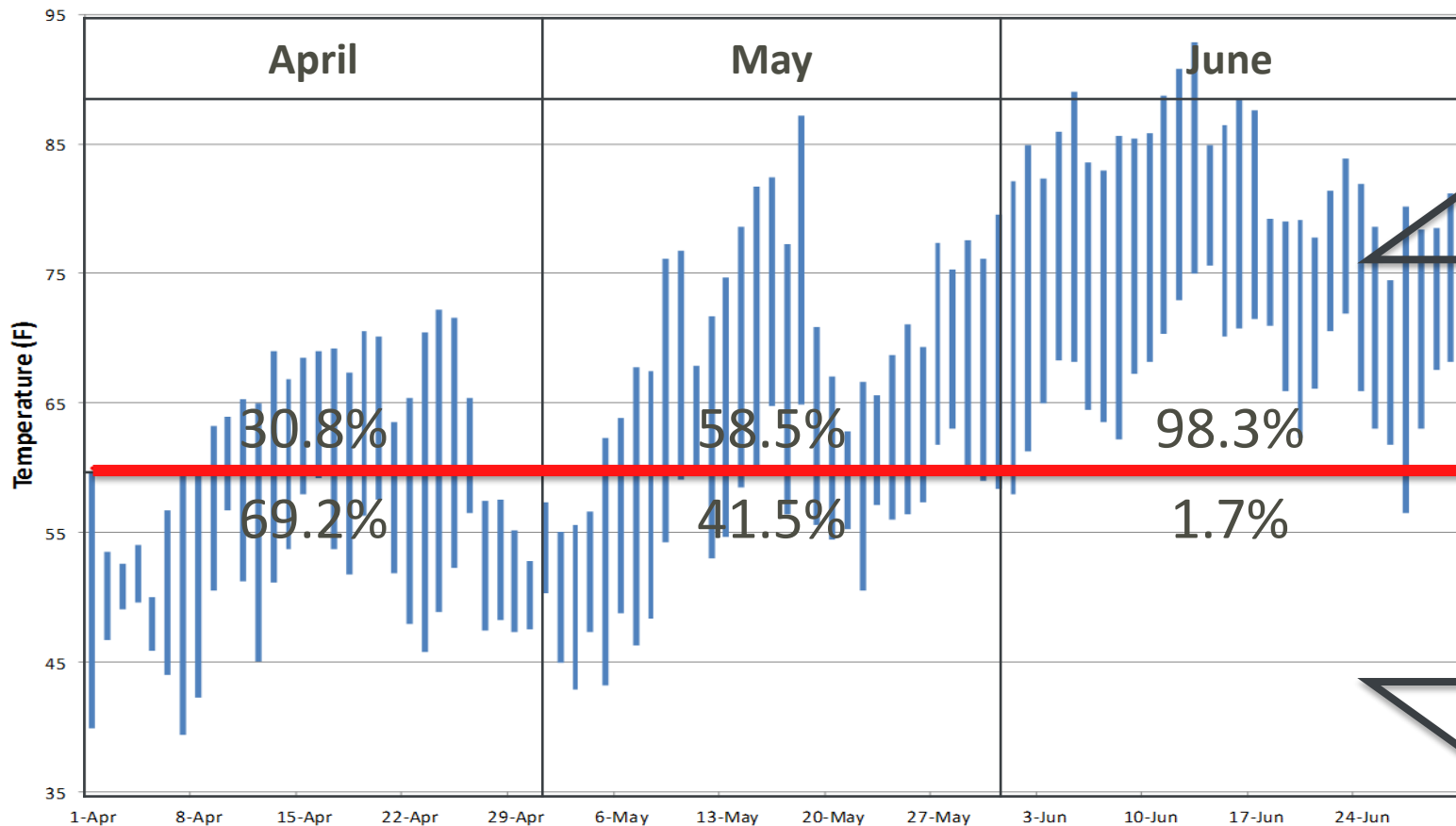


Phosphorus
Available

60 F

Phosphorus
Not
Available

Temperature, 4" Bare Soil Central IL 2017

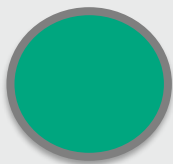


Phos.
Available

60 F

Phos.
Not
Available

Band



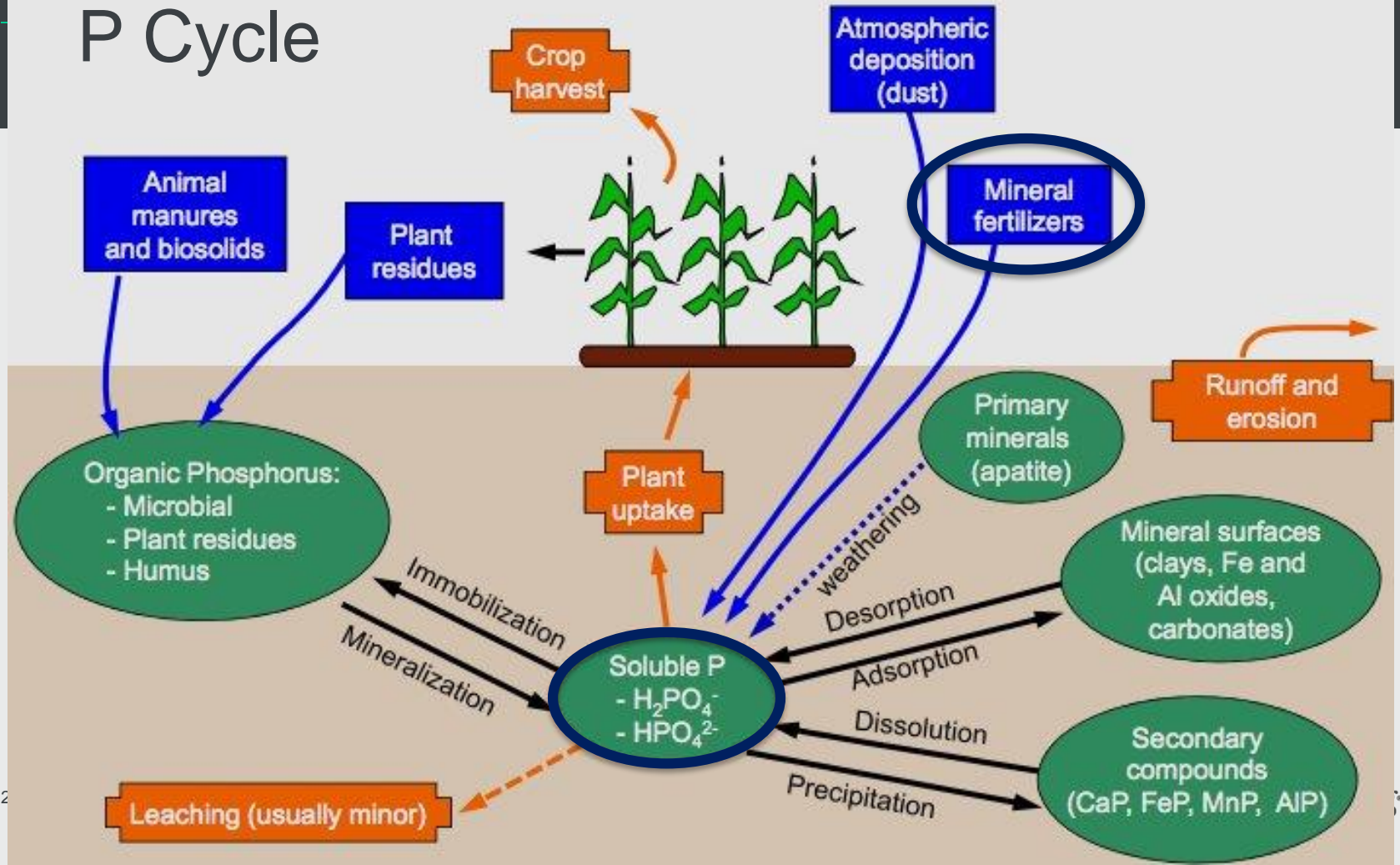
Power of Surface Area

Broadcast



Soil biology has the power
to tie up readily available
N, P, and K fertilizers

P Cycle



Starter Skeptic

“I am not going to slow down planting”

“Too much hassle”

The Fine Print: He understands most of the value of starter but doesn't want the hassle.

Reducing Hassle

Trouble-Free Attachments



Reducing Hassle

System Installation and Setup



Reducing Hassle

Logistics and Delivery



Questions on Starter Fertilizer?

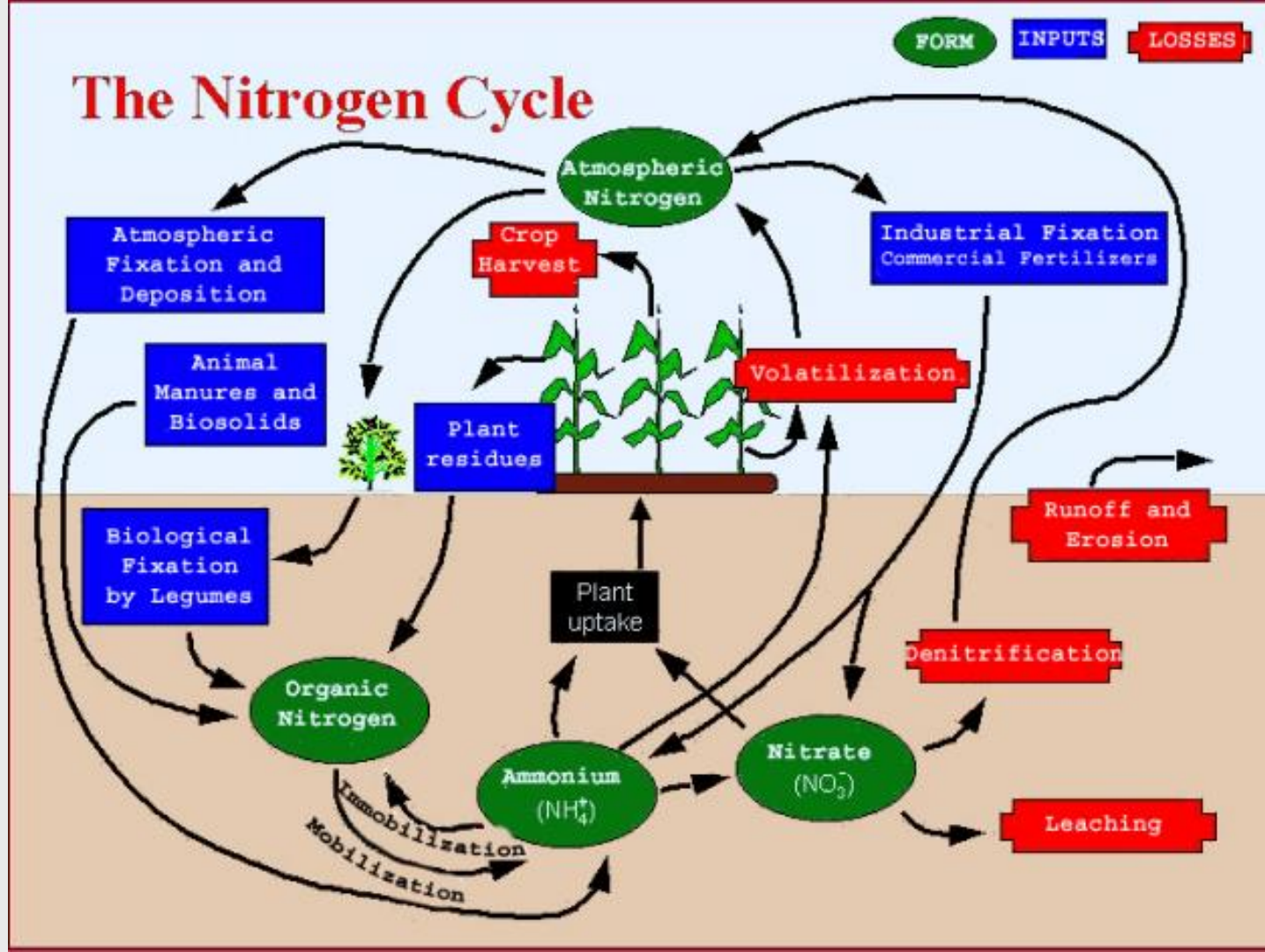
Pursuit of Nitrogen Efficiency

PRESENTED BY

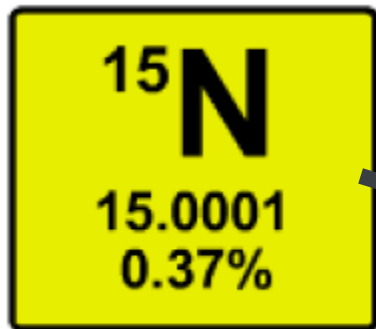
Kyle Muhlbauer

Regional Manager

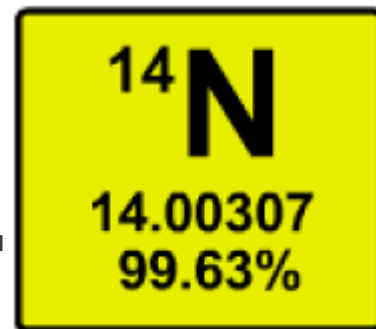
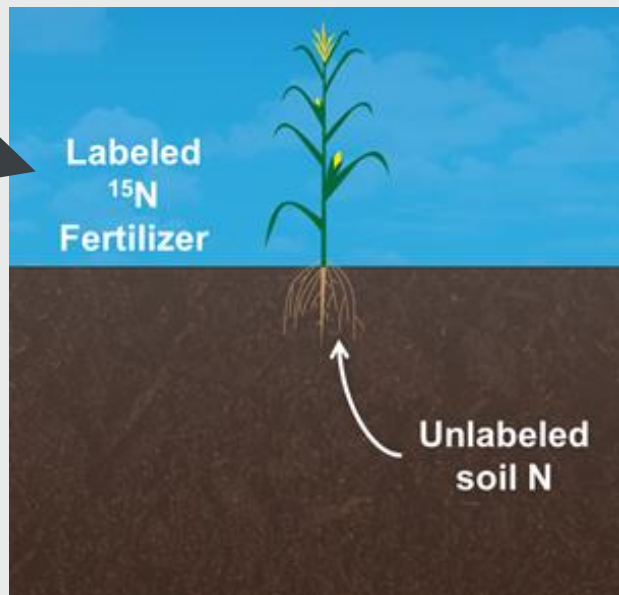
The Nitrogen Cycle



N15 Plots



Heavier



Lighter

N15 Plots

Broadcast



Banding



N15 Plots, Harvest



Cropsmith Inc.
38
Tim Smith - owner



N15 Plots, Lab Analysis

Mass Spectrometer

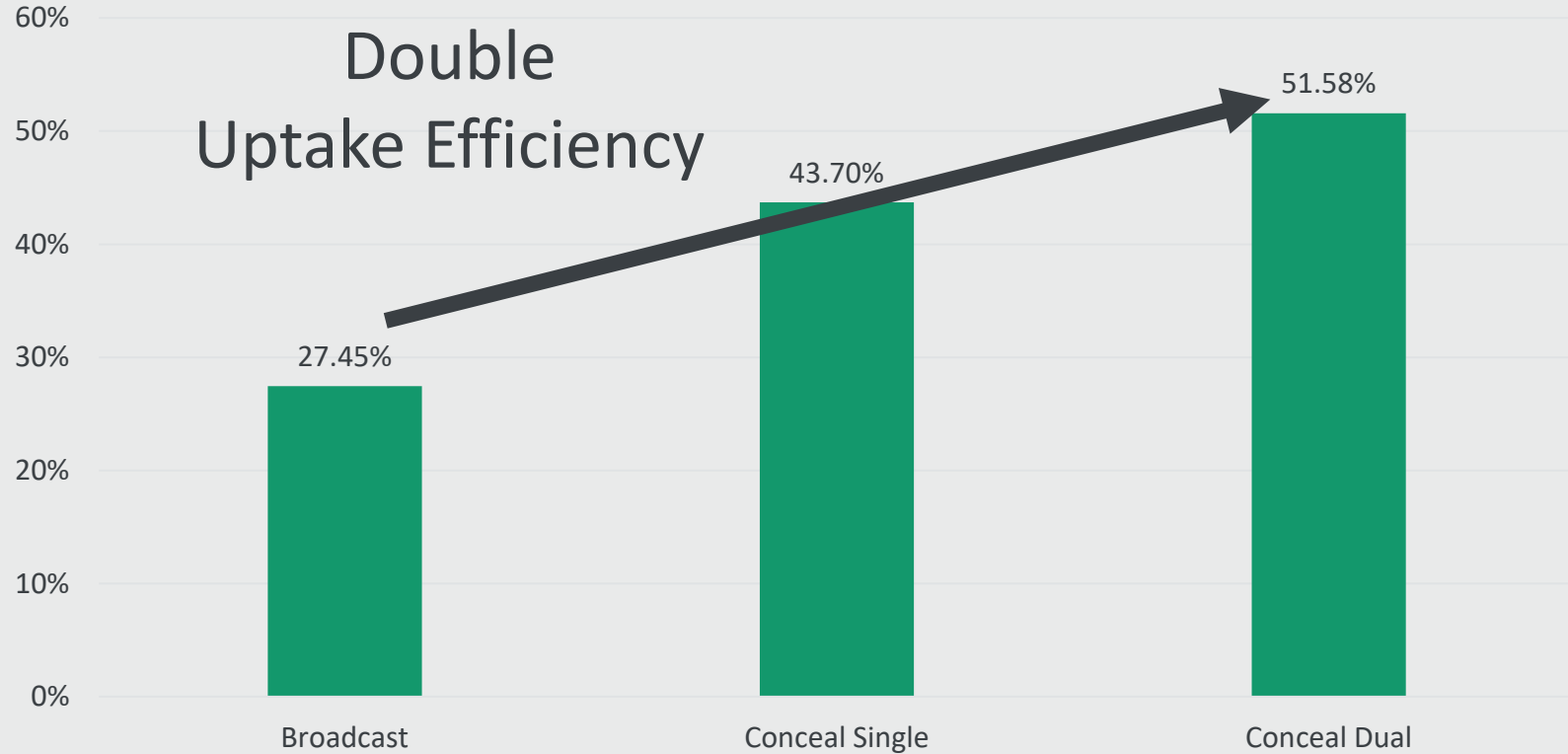


Dr. Mulvaney

Kelsey Griesheim

University of Illinois

15N Nitrogen Tracer Plots
FNUE, Fertilizer Nitrogen Uptake Efficiency

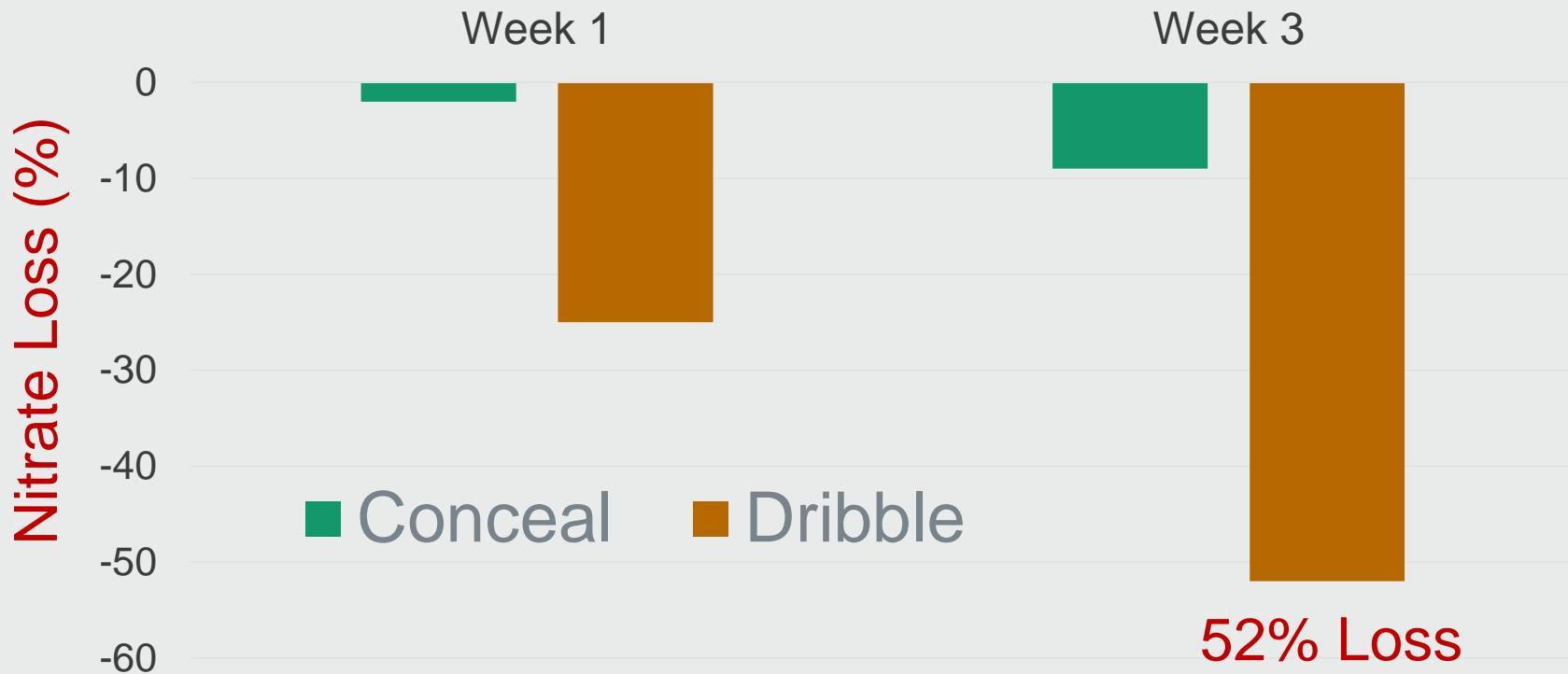


LOSSES



Volatilization Study

Conceal vs Dribble



Planter Nitrogen ROI

**R&D & PTI
Multi-Year
Plot Average**



Conceal
Nitrogen on the Planter

\$40/A



Precision Planting Opportunities

Equipment Rebate Programs

NACHURS®

2019
**PRECISION
EQUIPMENT REBATE**
• FOR NEW NACHURS & PRE



Team up with Precision Planting® and
Perfectly calibrated planters and perfectly calibrated crop nutrition



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\$400*
REBATE PER ROW
ACT NOW - LIMITED TIME ONLY

✓ Precision Planting®

2020 Incentive Program for SmartBox®

Purchase SmartBox equipment from Precision Planting® for the 2020 season
– Use AMVAC® product incentives to help offset the cost of your new system.



Choose the corn hybrids
that best fit your needs,
conventional or traits.

Earn 1/3 of total price paid
for SmartBox per year with
qualified product purchases.
Greatly reduce the cost of your



Precision Planting Opportunities



Precision Planting Opportunities

📍 Tremont, IL Jan. 21, 22, 23 or 24	📍 Lincoln, NE Jan. 22 or 23
📍 Fargo, ND Jan. 22 or 23	📍 Starkville, MS Jan. 22
📍 Burlington, CO Jan. 22	📍 Fort Wayne, IN Jan. 22
📍 Denton, TX Jan. 22	📍 Harrisburg, PA Jan. 22
📍 Ames, IA Jan. 22 or 23	📍 Lewis Center, OH Jan. 22

Winter Conference 20|20

Sessions to help you maximize your farm

<https://precisionplanting.wistia.com/medias/fs1vp4c2xd>

Precision Planting Opportunities

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THANK YOU

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