



®

FARMERSSM

BUSINESS NETWORK

Changing Paradigms in Grain Farming

Early Lessons from a Network Innovation Comp

KEVIN MCNEW
Chief Economist



@FBNfarmers

WHAT IS FBN?

Network of farmers democratizing
information, providing unbiased
analytics, and advancing transparency
for the farm economy



@FBNfarmers

+8,000
MEMBERS

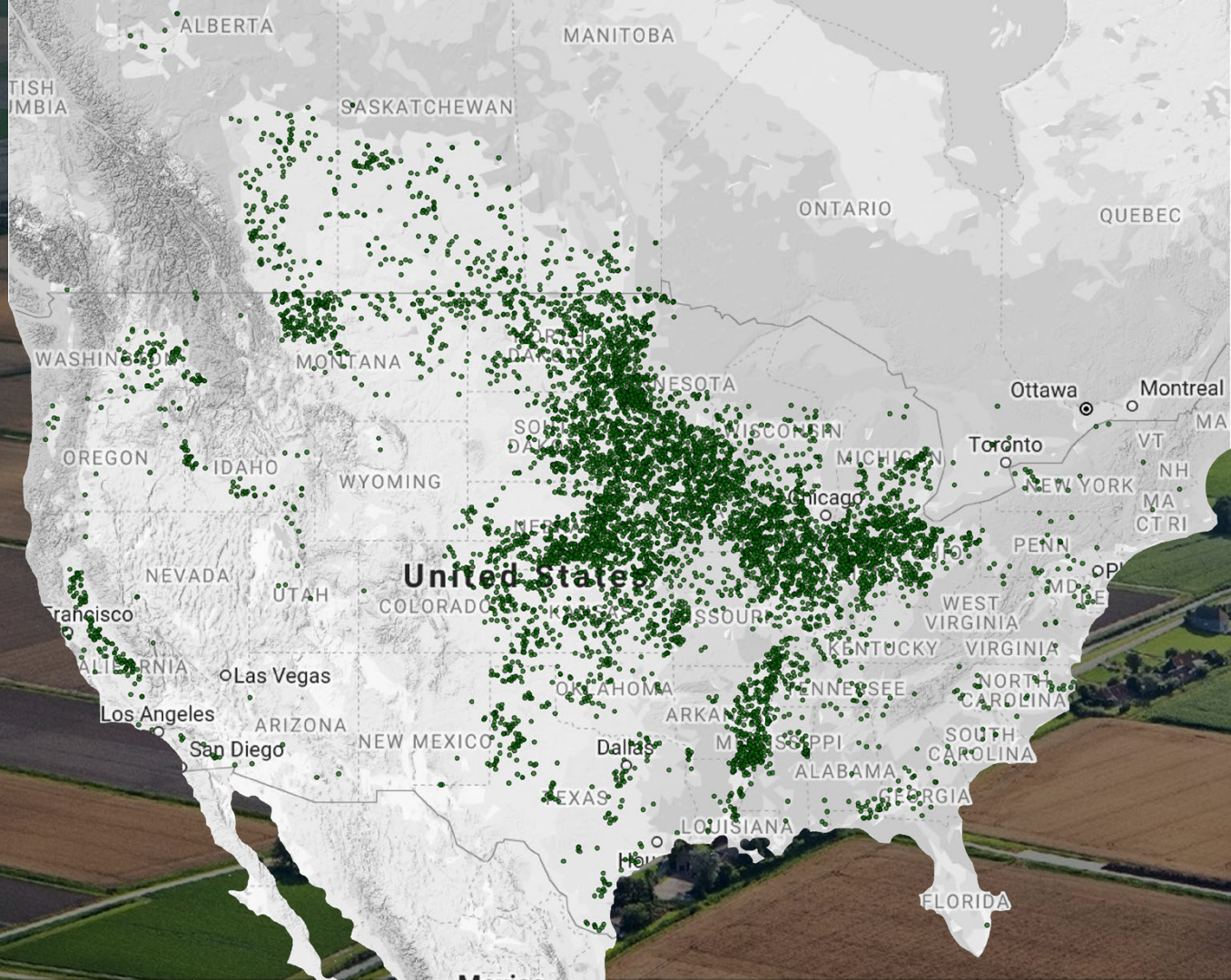
+30 MA

+100K
SEED/CHEM
PRICES

+20K SEED TAGS



@FBNfarmers





Seeds, Chem, Fertilizers,
Machinery & Services

ANALYTICS

Agronomics,
Price Transparency, Markets



CROP MARKETING

Production Contracts,
Future Contracts,
Advisory

FINANCE INSURANCE HEALTH

WHY A FARM NETWORK

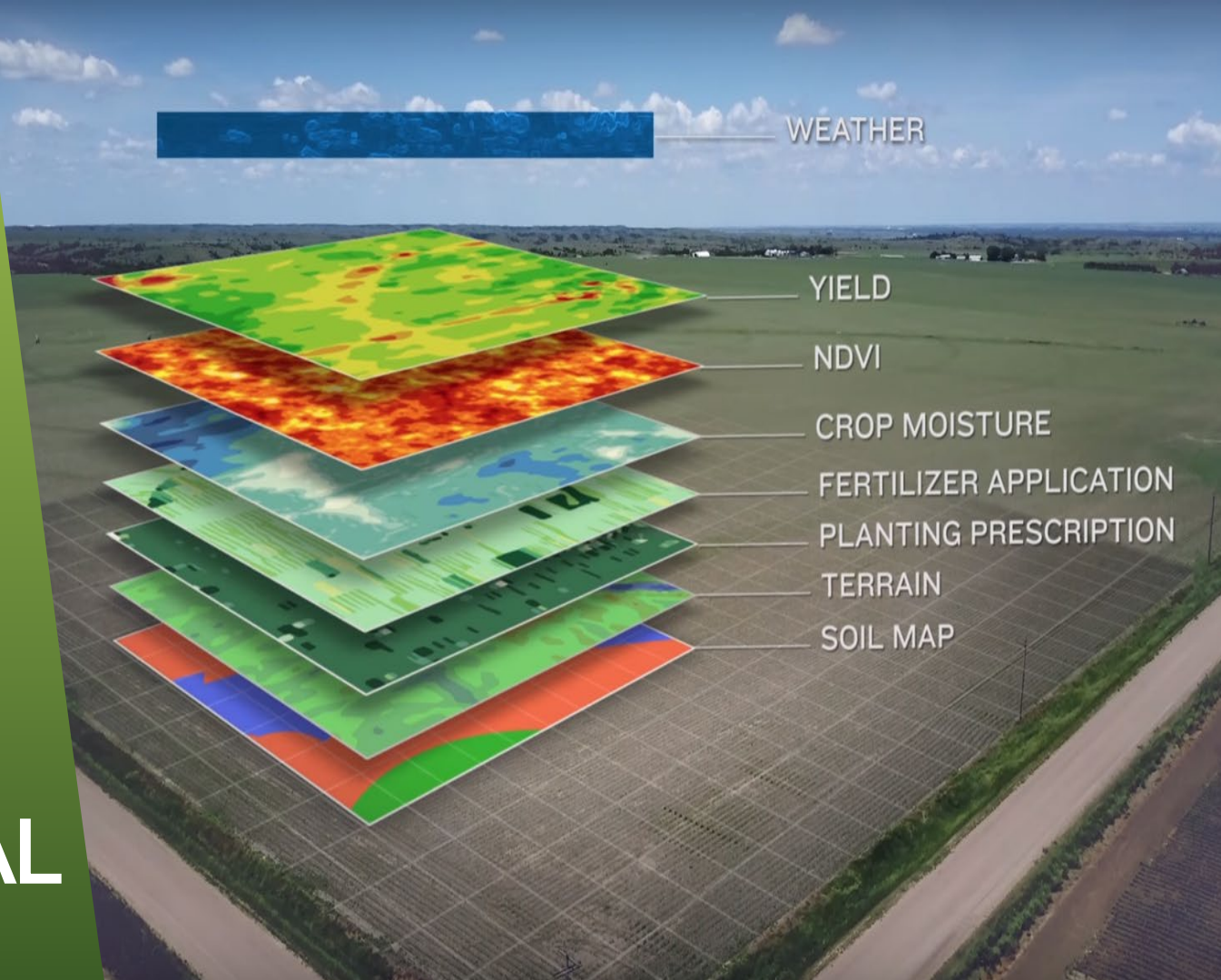
- TRANSACTION VALUE
 - Collective Buying/Selling
- INFORMATION VALUE
 - User Generated Knowledge



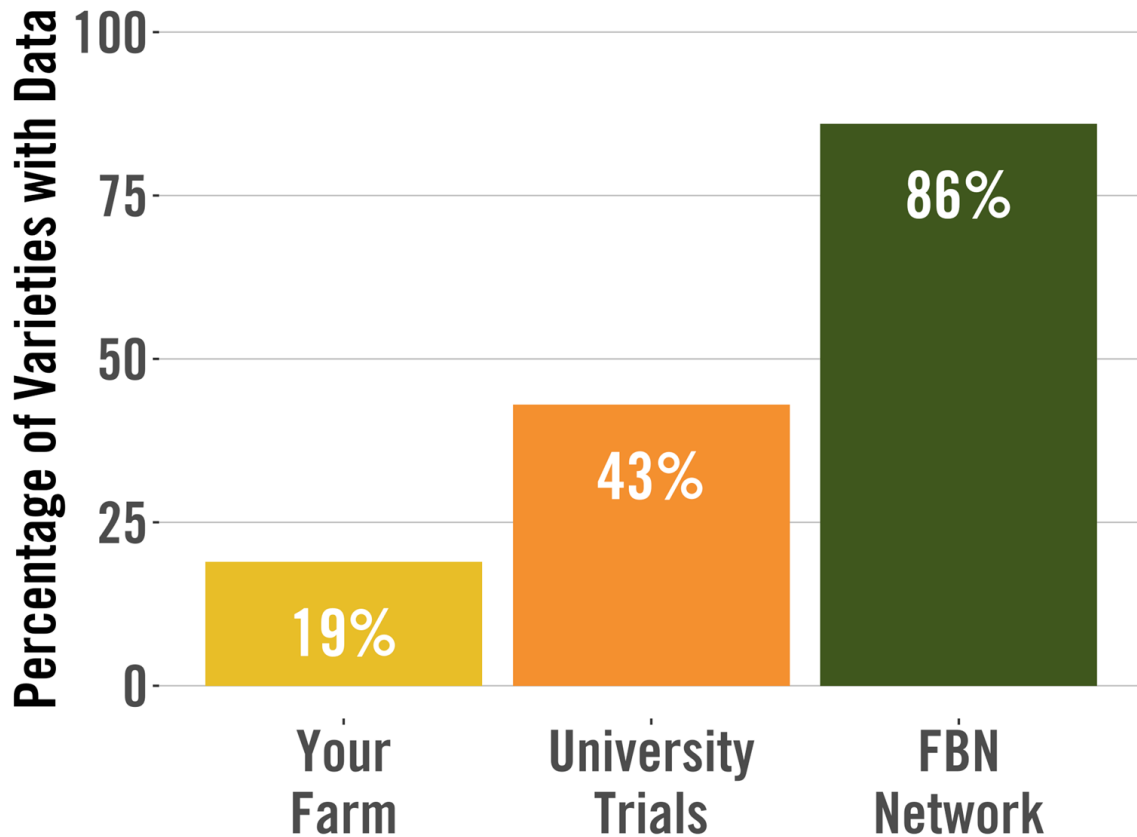
WHY A FARM NETWORK

- INFORMATION VALUE
 - Bigger AND Better Data
 - Objective- not commercially motivated
 - Improved Decision Making

MAKING THE WORLD YOUR PLOT TRIAL



Availability of Variety Yield Data



#F2F17

ANALYTICS REVOLUTION

- Bigger Datasets / Faster Computations
- Open Source Tools, Ease of Adoption
- Focus on Prediction, Not Hypothesis Testing



MACHINE LEARNING AT THE FARM LEVEL

- THING PICKING (CLASSIFICATION)
- NUMBER PREDICTION (REGRESSION)

YIELD PREDICTION

Beta - Corn Yield Estimate

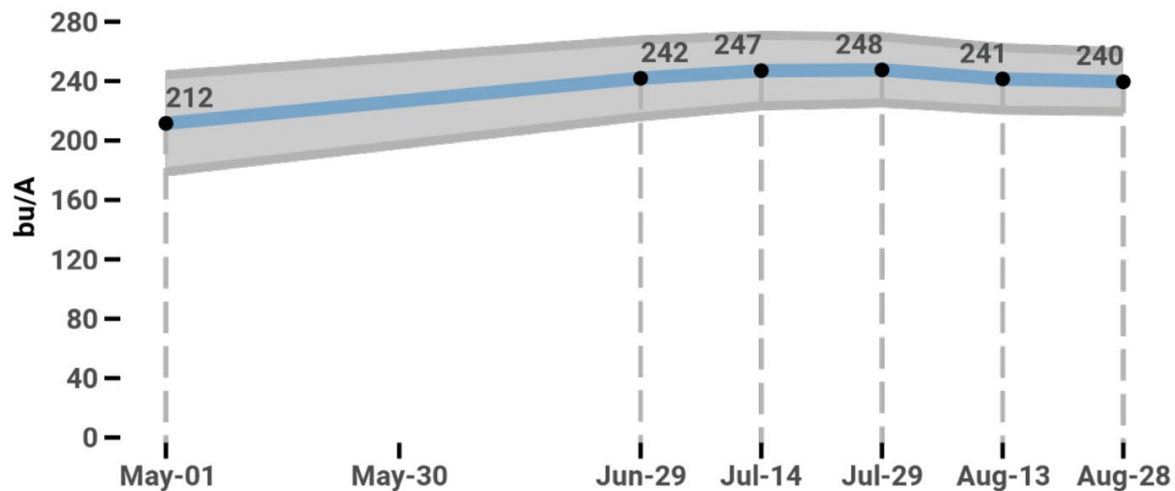
Field Scenarios & Trend

Good	260 bu/A
Average	240 bu/A
Bad	220 bu/A

2 Week Trend

- 1.9 bu/A

Estimated yield over time



Yield vs Seed Rate



P1197 (PIONEER®)

All data for this variety

GLY GLU CB RW D



111 days
Maturity



213.24 bu/A
FBN AVG YIELD



510,879.88
Total acres in FBN

Year
All

State
All

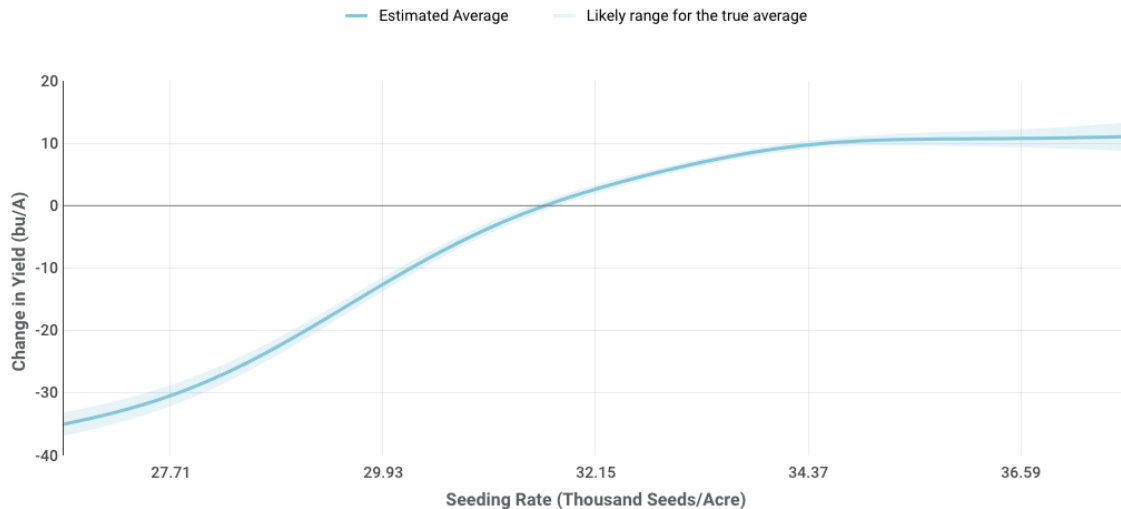
Texture
All

Previous Crop
All

Irrigation
All

Drainage
All

- Nitrogen
- Row Spacing
- Seeding Rate**
- Planting Speed
- Planting Date
- Planting Temperature
- Harvest Date
- Moisture
- GDUs
- Precipitation
- Soil Productivity Index



2017 Corn Yield Increase for Farmers Planting Top Variety for Their Soil

Average Yield Increase (bu/A)

15

10

5

0

All FBN

Soils with at Least
50 Varieties

6 bu/A

17 bu/A

NETWORK
DATA
UNCOVERS
YIELD GAINS

WHAT IS TRANSPARENCY?



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WHAT IS TRANSPARENCY?

EASILY OBTAIN PRICES

COMPARE PRICES OF
DIFFERENT CHOICES

WHAT IS TRANSPARENCY?

EASILY OBTAIN PRICES

COMPARE PRICES OF
DIFFERENT CHOICES

UNDERSTAND HOW
PRICES ARE SET
(Costs + Premium)

AWARE OF EXISTING
PRICE DISCRIMINATION

25% of US Grain Farms Buy Inputs Online*

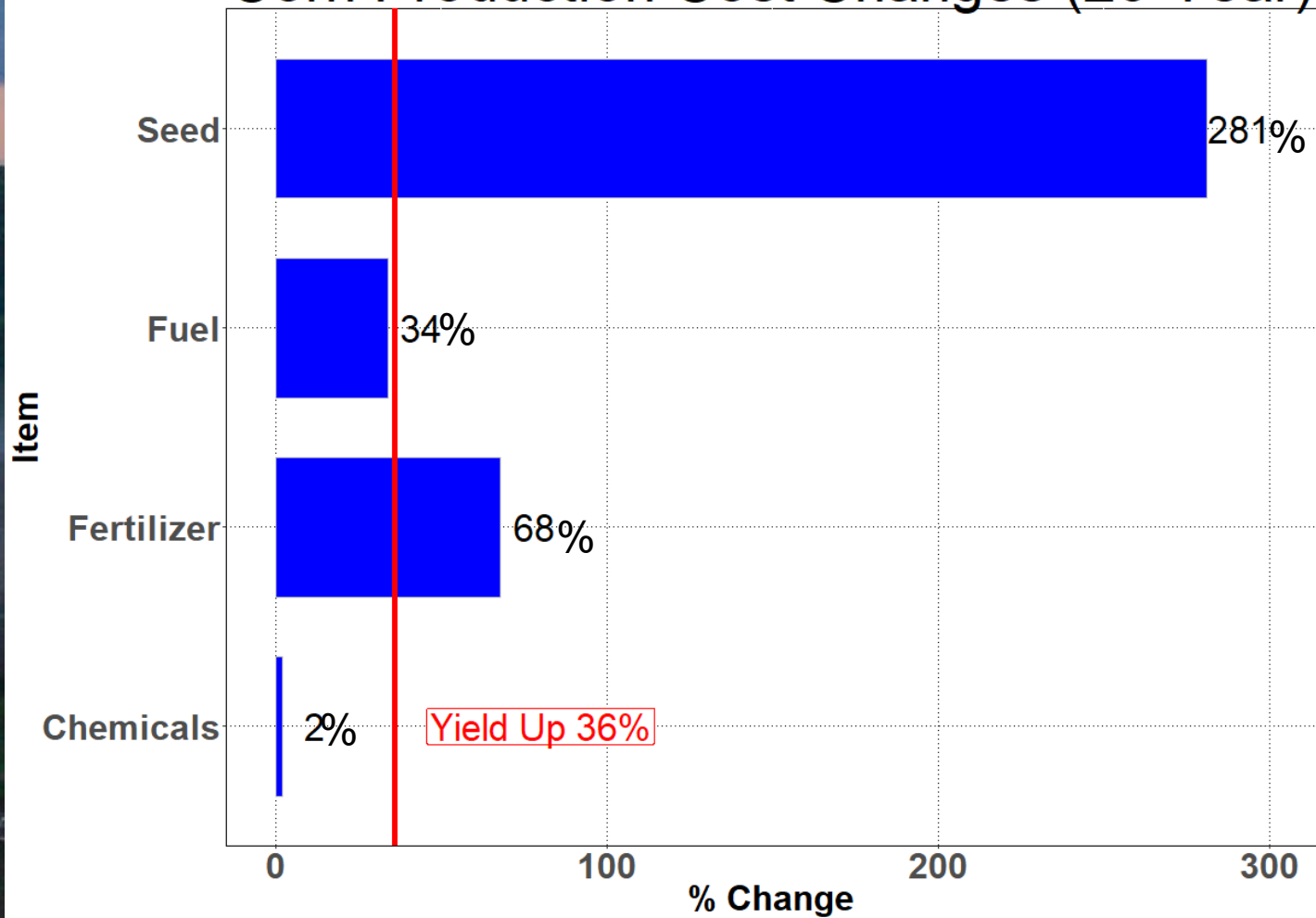


**E-Commerce Disruption
Pushes Ag Retailers to Focus
on Distribution and Service**

*USDA/NAASS 2017

Traditional ag retailers that bundle products and services together under the product are losing some customers to e-commerce sites that provide only the product.

Corn Production Cost Changes (20-Year)



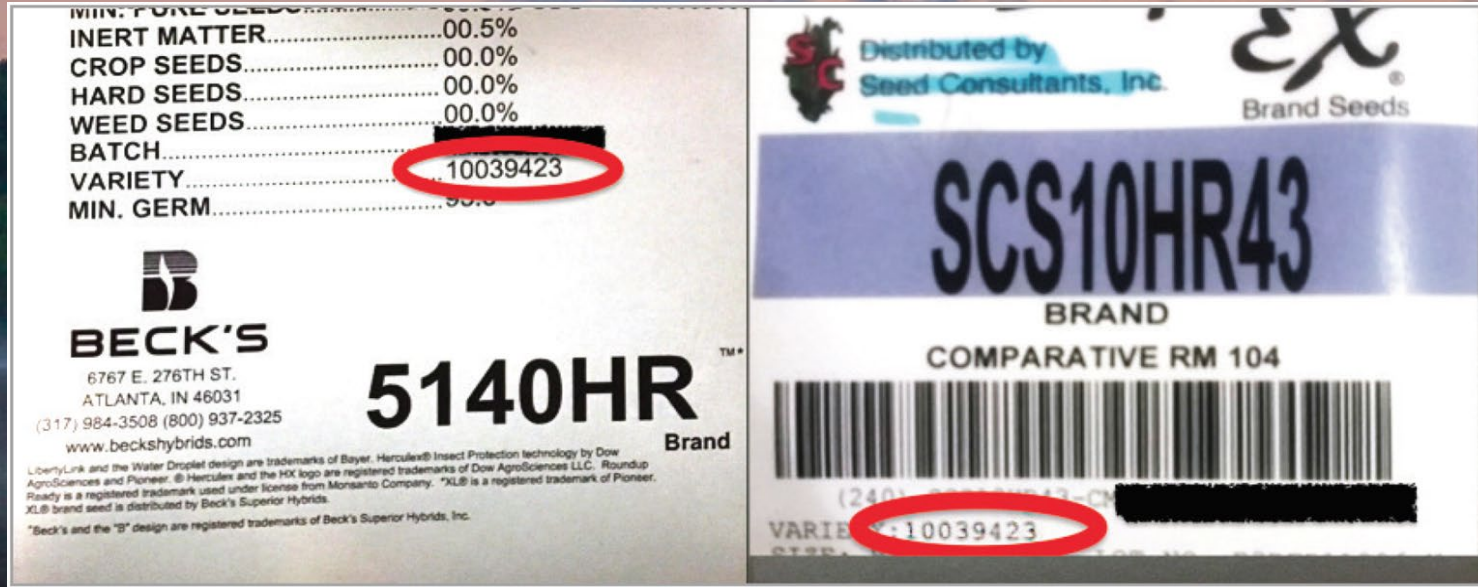


SEED INDUSTRY PRACTICES

- LACK OF PRICE TRANSPARENCY
- SEED RELABELING
- ZONE PRICING



ANATOMY OF A SEED LABEL



SAME VARIETY (GENETICS), DIFFERENT BRANDS *CURRENT AS JULY 30, 2018

SEED RELABELING IS SIZABL

- 50% of Corn and Soy Seeds are Sold under Multiple Brands
- 67% of Seed Companies Engage in Relabeling



*CURRENT AS JULY 30, 2018

WHY IS SEED RELABELING AN ISSUE?

- Over Paying for Seed
- Lack of Genetic Diversity
- 5-10% of Farmers inadvertently Plant the Same Variety from Multiple Brands (FBN\$RR).



*CURRENT AS JULY 30, 2018



DKC64-34 (DEKALB®)

SmartStax®

GLY

GLU

CB

RW

D



114 days
Maturity



229.21 bu/A
FBN AVG YIELD



44,626.56
Total acres in FBN

Min Price

200

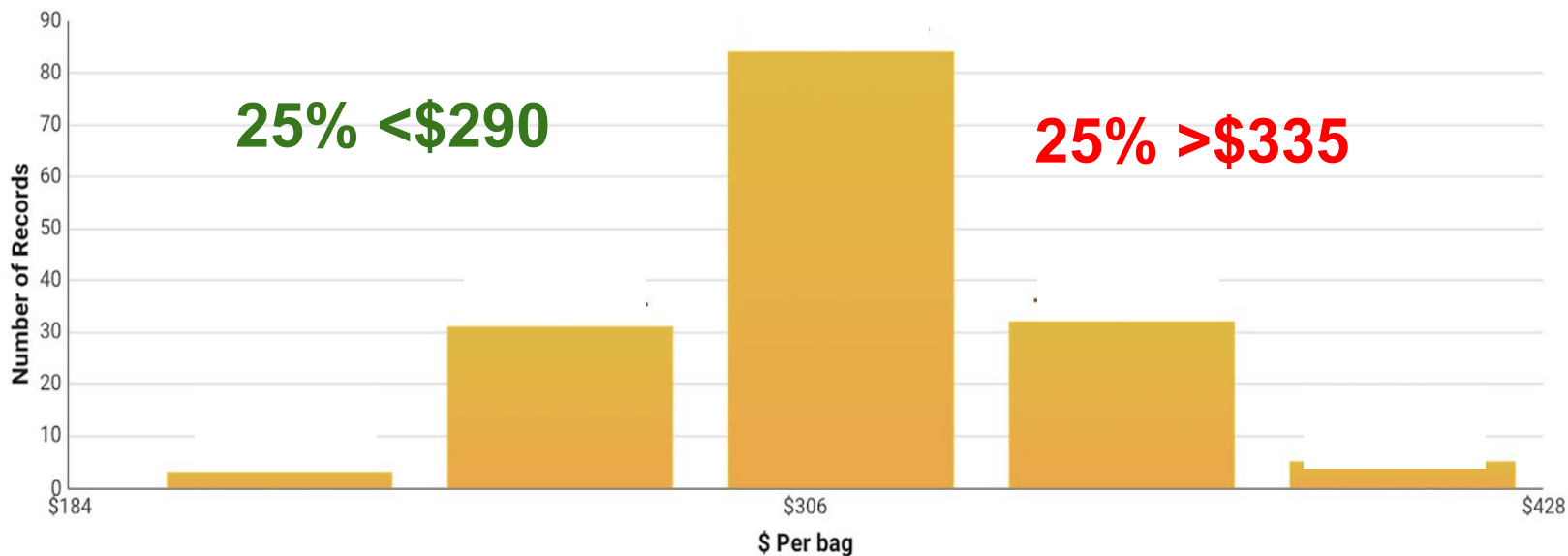
Average Price

315

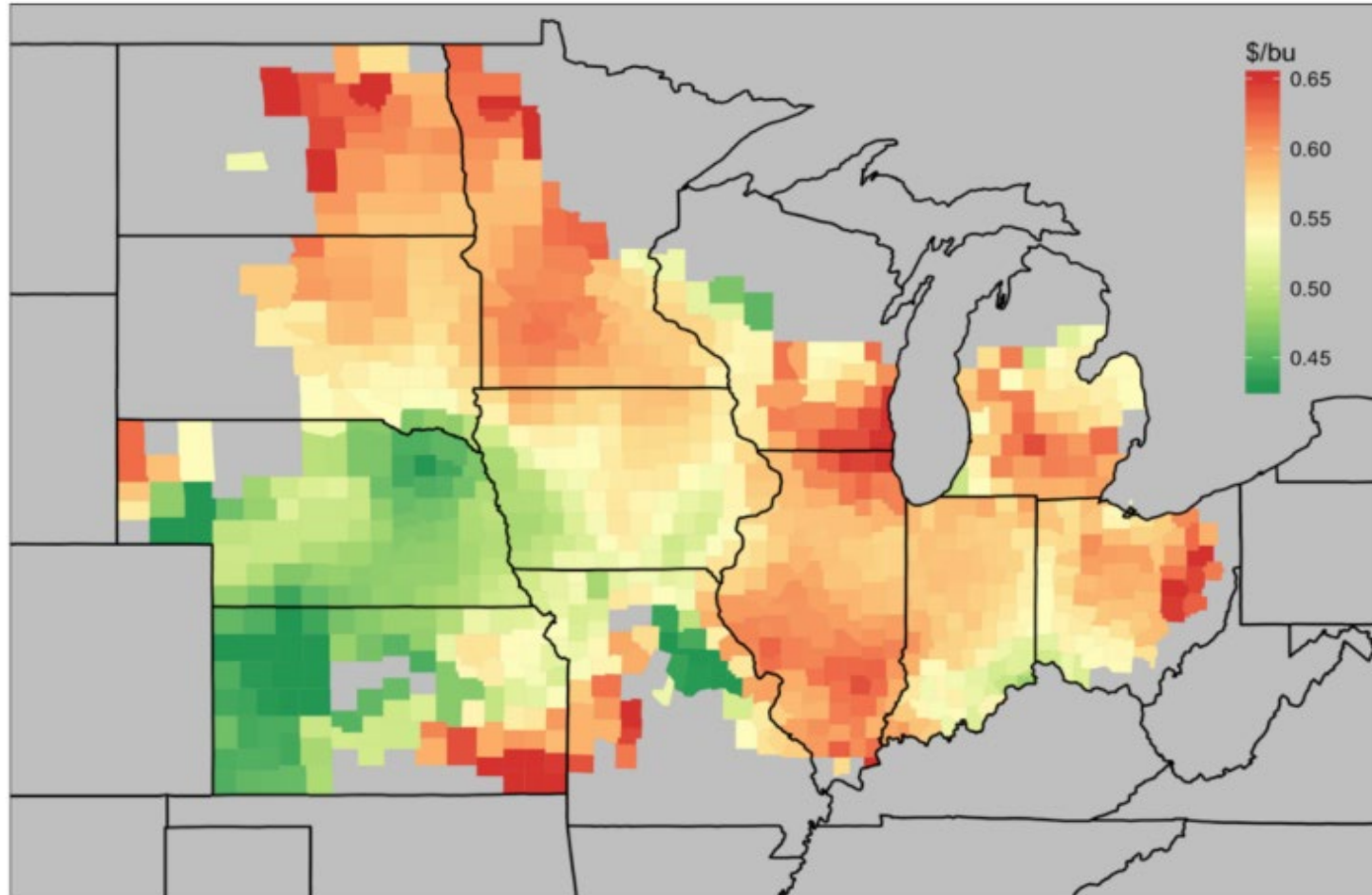
Max Price

420

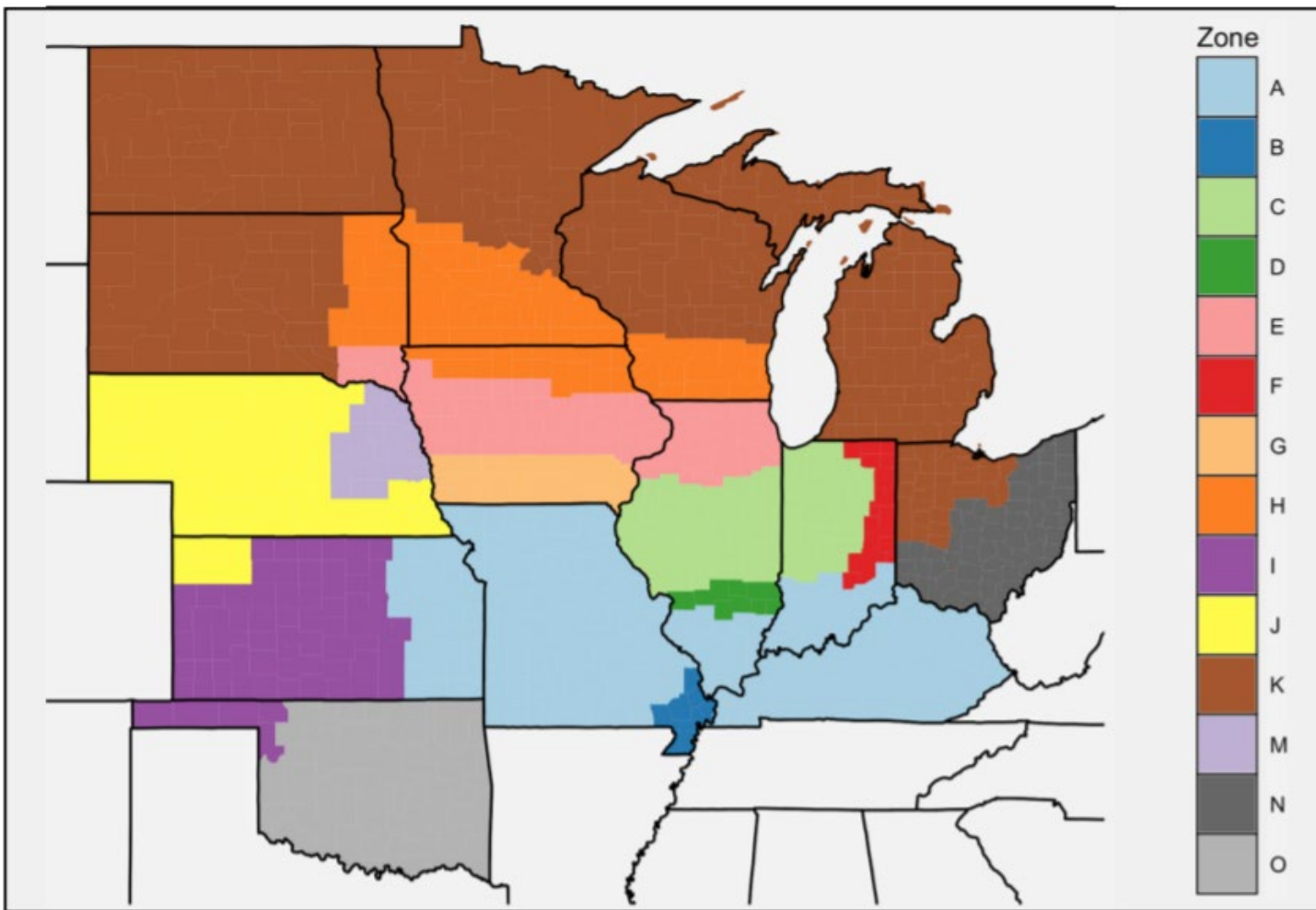
50% \$290-\$335



MEDIAN COST OF SEED PER BUSHEL OF YIELD BY COUNTY



ESTIMATED BAYER® (NOW INCLUDING MONSANTO®) PRICE ZONE MAP



SUSTAINABILITY

Meet society's food needs
today without
compromising tomorrow's
resources.

Four Major Food Companies Launch Sustainable Food Policy Alliance to Drive Progress in U.S. Public Policies that Shape What People Eat

Founding member companies include Danone North America; Mars, Incorporated; Nestlé USA; and Unilever United States

[To Press Releases list](#)

Washington, D.C., Jul 12, 2018



SUSTAINABILITY

Consumers Want
to Know About
Practices Impacting ...

SOIL

WATER

AIR



SUSTAINABILITY FILLS THE GAP



Organic
/IP



Chemical
Application



CRP



Crop Rotation
& Diversity



Cover Crops



Tillage
Practices



Nutrient
Management



Erosion
Management



Water
Management



Buffer
zones



Conventional

How We Deliver Value Today

NETWORK+DATA=>CONSUME



NETWORK + DATA + ANALYTICS + TRANSPARENCY

**Consumer
Preferences -
Not easily
transmitted thru
market signals**

**NETWORK - Identify
Candidate Suppliers**

**DATA + ANALYTICS
Benchmarking,
Performance, Enforcement**

**TRANSPARENCY
For Producers and
Consumers**

KEYS FOR NETWORK PROSPERITY

Network- Technology Enhanced, Representative
for Users

Data- Ubiquitous, Unique

Analytics- Prescriptive Focused

Transparency Creating Insights on Markets
and Performance



@FBNfarmers



THANK YOU
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