

Reducing Corn Production Costs in 2016

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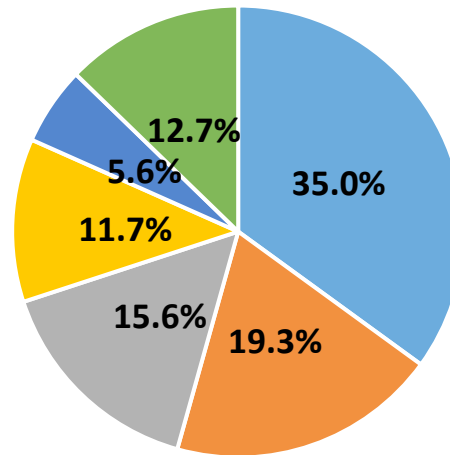
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Reducing Corn Production Costs Webinar
February 1, 2016

Cost Shares for Corn in West Central Indiana, 2015

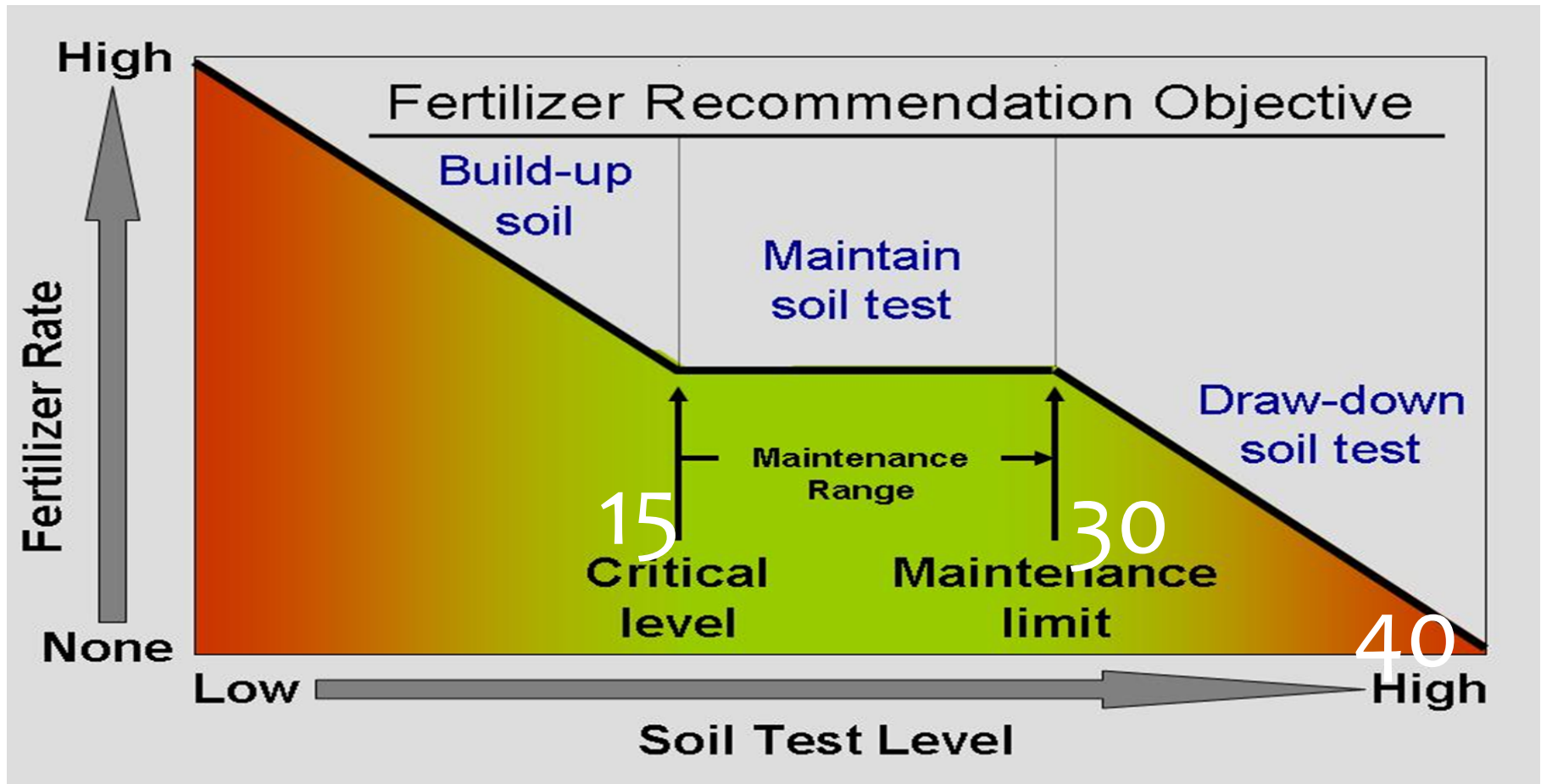
■ Land ■ Fertilizer ■ Seed ■ Machinery ■ Labor ■ Other



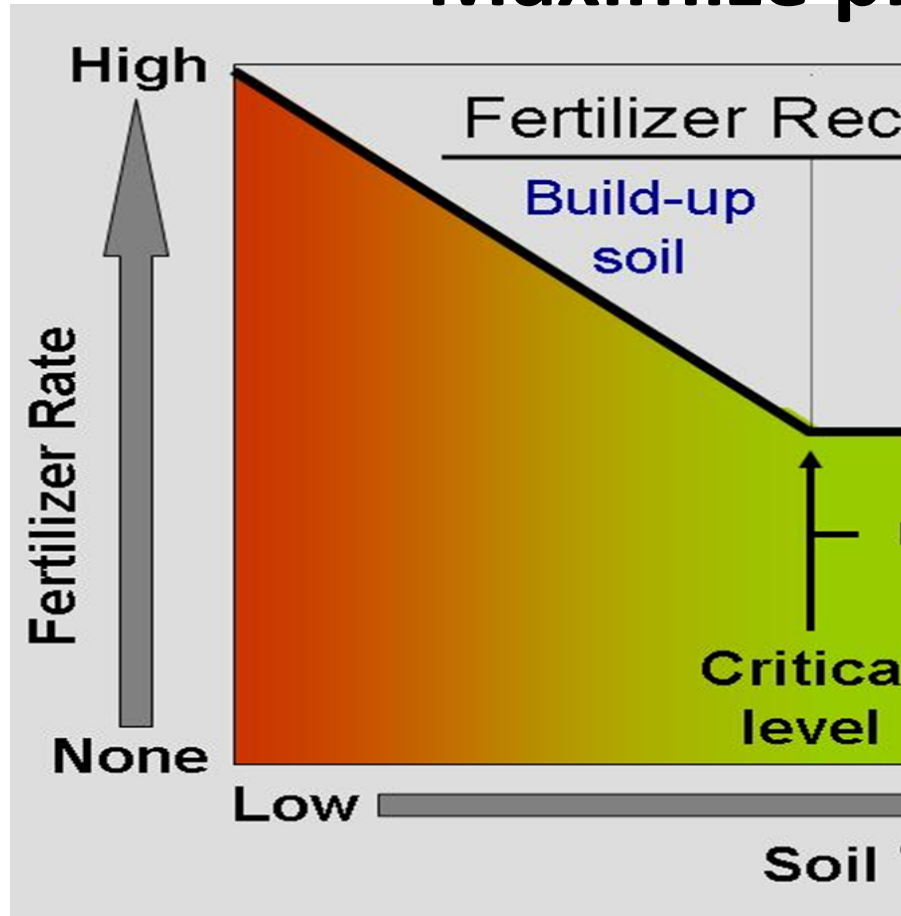
Rotation Corn; Costs per Bushel in 2015 and 2016 Budgets

Item	2015	2016	Percent Change
Fertilizer	\$0.89	\$0.70	-20%
Dryer and Machinery Fuel	\$0.30	\$0.21	-30%
Total Variable Cost	\$2.70	\$2.42	-10%
Total Cost	\$4.98	\$4.57	-8%
Corn Price	\$3.80	\$3.50	-8%

Soil test P (ppm) assoc. with limits for corn and soybean



Maximize profit this year

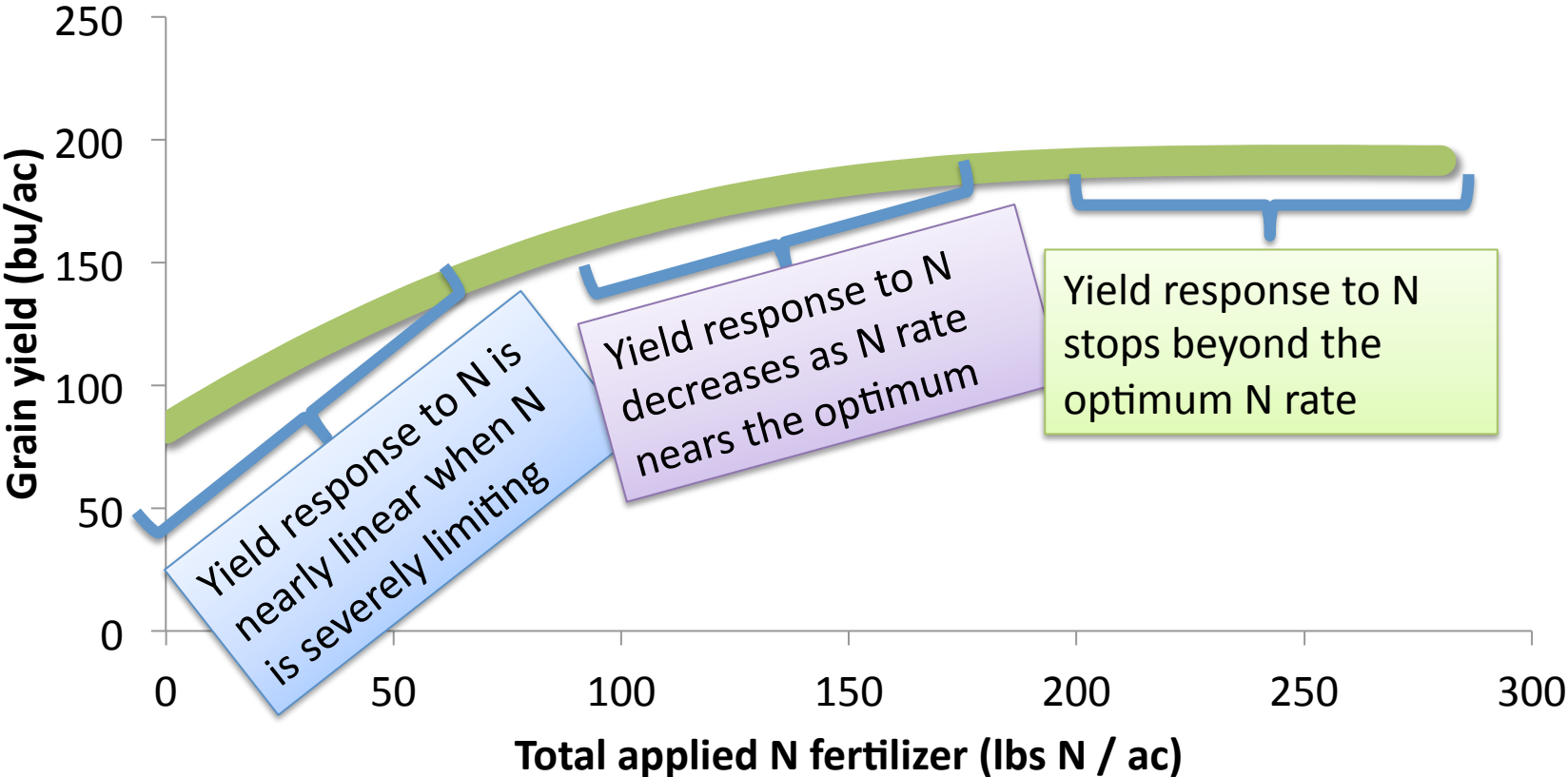


- About 50 lb nutrient/acre should maximize profit at upper end of LOW
- and 100 lb nutrient/acre at lower end of LOW

Nitrogen rate rec.

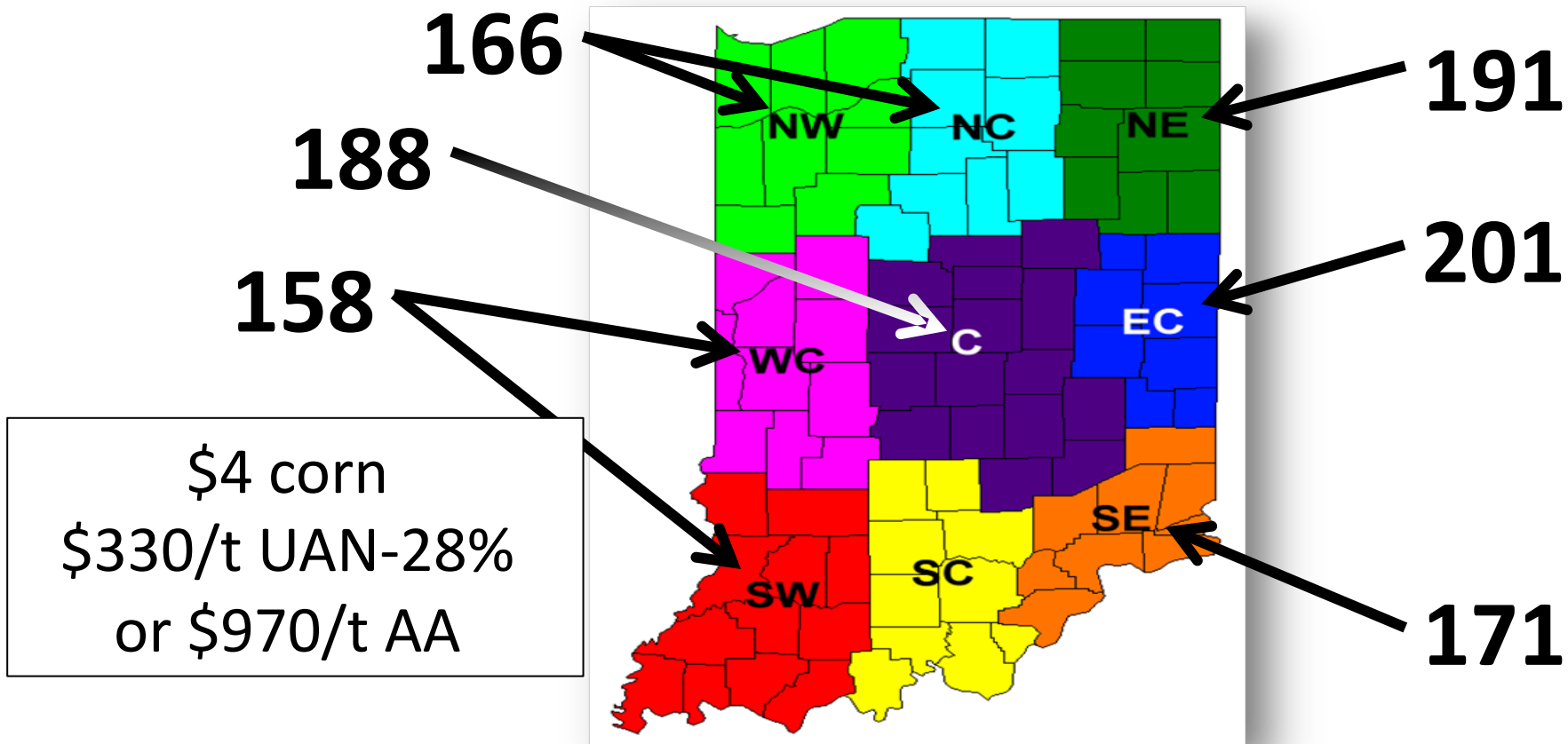
- Recs. apply to efficient timings and placement of N
- N Loss Risks are higher if:
 - Fall or early spring anhydrous
 - Early spring liquid N
 - Surface-applied urea

Yield response to N is not linear



Economic optimum N rate

- Most profitable N rate over time, not every single year
- Opt. N rates in any situation can vary plus or minus 30 to 40 lb N/acre
- Recs. are based on corn after soybean trials (add 40-50 lb N/acre more for corn after corn)
- Varies with price of fertilizer and grain



Economic Optimum

Economic rec's for corn/soybean in WC/SW Indiana

Westcentral & southwest Indiana

+40-50 for C/C

N cost	Grain price						
	\$2.50	\$3.00	\$3.50	\$4.00	\$4.50	\$5.00	\$5.50
\$0.30	163	166	169	171	172	173	174
\$0.40	156	161	164	166	168	170	171
\$0.50	150	155	159	162	164	166	168
\$0.60	143	150	154	158	161	163	165
\$0.70	136	144	150	154	157	160	162
\$0.80	130	139	145	150	153	156	159

Based on 38 field-scale trials conducted 2006-2014. These rates assume N management practices that minimize the risk of N loss prior to plant uptake.

Nitrogen guidelines

Purdue University Department of Agronomy
Applied Crop Research Update

Updated February 2015
URL: <http://www.kingcorn.org/news/timeless/NitrogenMgmt.pdf>

Nitrogen Management Guidelines for Corn in Indiana

*Jim Camberato¹ and RL (Bob) Nielsen
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9-YEAR SUMMARY OF CORN RESPONSE TO NITROGEN FERTILIZER

This report summarizes the yield response of rotation corn to fertilizer nitrogen (N) rate in field-scale trials conducted around the state of Indiana since 2006. These results are

<http://www.agry.purdue.edu/ext/corn/news/timeless/NitrogenMgmt.html>

Transgenics or not?



- Seed costs can be reduced by using less expensive hybrids that do not contain transgenic traits (aka non-GMO hybrids).
 - Upwards of \$100 savings per 80k unit.
 - At 34,000 seeds per acre, translates to seed cost savings upwards of \$43/acre.

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Hybrid selection is not simply about genetic yield potential

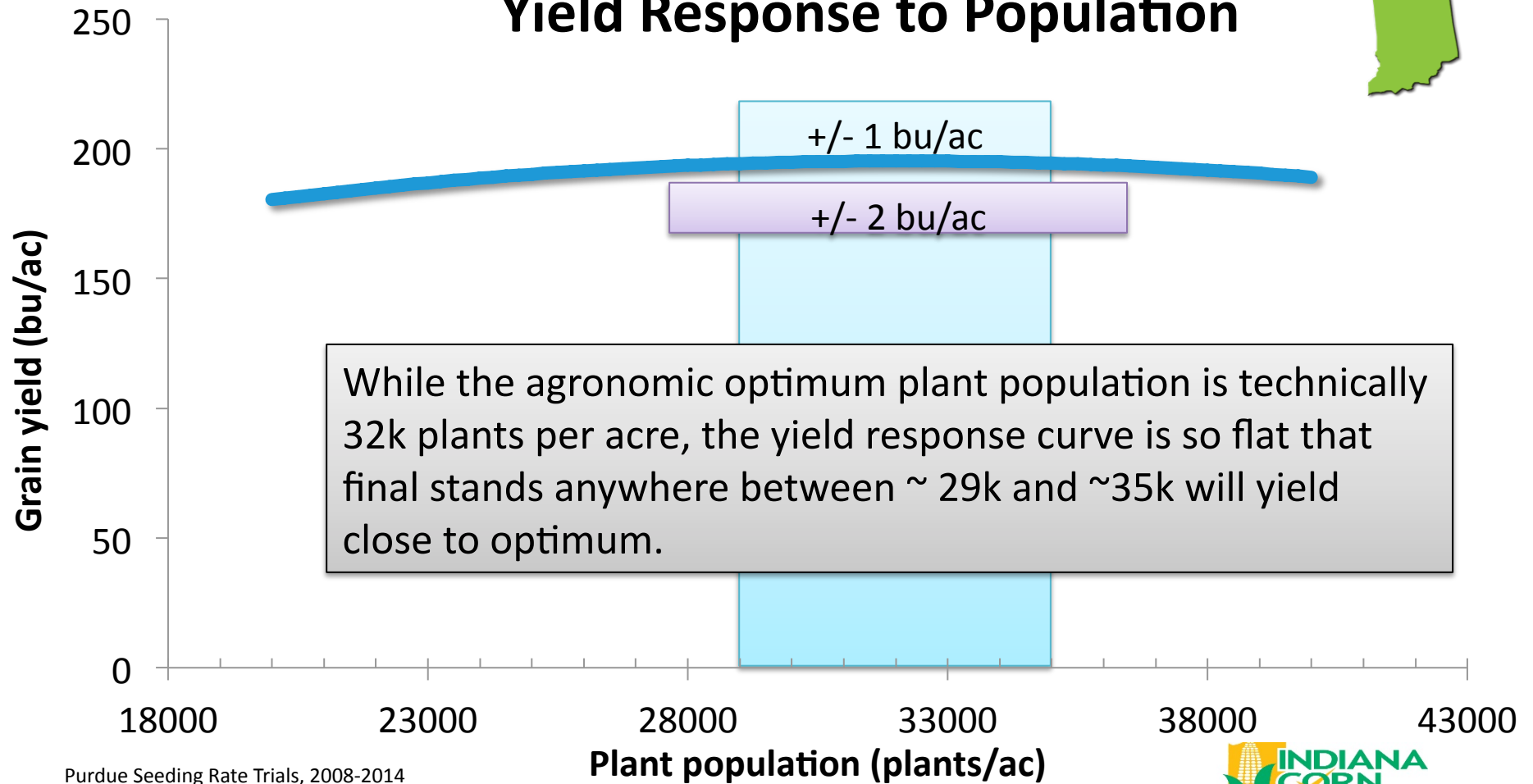
- But, also the ability of hybrids to perform consistently well across a wide range of growing conditions (i.e., stress tolerance).
- Tolerance to a wide array of stresses is important because we cannot accurately forecast next year's growing conditions.

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Most Effective Indicator of Hybrid Stress Tolerance:

- Hybrid performance in as many variety trials as you can find within a given geographic region.
- Multiple trials hopefully provide a range of growing conditions that your fields may experience in the future.
- Look for hybrids that consistently yield near the top of the majority of the trials.

Yield Response to Population



While the agronomic optimum plant population is technically 32k plants per acre, the yield response curve is so flat that final stands anywhere between ~ 29k and ~35k will yield close to optimum.

Bottom line on plant population

- Our research: Two “sweet spots” for plant population for corn in Indiana.
 - Productive soils: Low 30’s FINAL stand
 - Challenging soils: Mid 20’s FINAL stand
- Our research: Variable rates not widely beneficial for most fields in Indiana.
- **Economic rates are at least several thousand less than agronomic rates.**



Online summary...

www.kingcorn.org/news/timeless/SeedingRateGuidelines.pdf

Purdue University Department of Agronomy
Applied Crop Production Research Update

Updated January 2015

URL: <http://www.kingcorn.org/news/timeless/SeedingRateGuidelines.pdf>

Yield Response of Corn to Plant Population in Indiana ¹

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