Key Research Needs in Precision Ag: A view from Agronomy, Protein maps

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Seed Quality at Harvest: US Soybean Protein

Assefa, Ciampitti, et al. 2019
Seed Quality at the field level

Protein dilution with Yield over time time time

\[ y = -0.04x + 118; \ p < 0.05 \]

\[ y = 0.09x - 138; \ p < 0.05 \]

\[ y = 7.5x - 14316; \ p < 0.05 \]

\[ y = 11.2x - 21363; \ p < 0.05 \]

\[ y = 14.3x - 27387; \ p < 0.05 \]
Looking at protein variation within-the field

JD_Samp_M_North

Ciampitti et al., 2019
Looking at protein variation within-the field

Ciampitti et al., 2019
First looking at wheat yields

Ciampitti et al., 2019
First looking at wheat yields

Ciampitti et al., 2019
Looking at protein variation within-the-field

Segregation for quality within the field

Ciampitti et al., 2019
Take Home Messages

- Timely characterization of seed quality at harvest will guide protein segregation at the farm-scale,

- Improve the estimation of nutrient budgets, minimizing environmental impacts, and

- Provide a foundation for improving fertilization plans for the following crop in the rotation.
THANKS!

QUESTIONS?

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