

How is Oil Extraction Impacting DDGS Value in Swine?

March 21, 2012
Des Moines, IA

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Rules for the Day:

- ⦿ Please silence cell phones
- ⦿ No Proceedings, but we will publish a 1 page summary to attendees
- ⦿ No scheduled restroom breaks, take as needed, so you can get home tonight
- ⦿ No specific financial value comparisons will be shown, since it is a discussion of value and presentation of data.



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Where is the oil extraction occurring and how fast

Presenter: Rob Musser, PhD, NUTRIQUEST

Special thanks to contributors of samples:

Customers of ILLUMINATE and the ethanol
plants they buy from.

Our Team Present Today:

- Steve Weiss
- Ken Purser
- Paige Grabe
- Liz Schrage
- Dale Green

Chad Hagen
Luke Wells
Amber Pugh
Wayne Cast
Charlie Hackmann

DDGS Data & Service Model

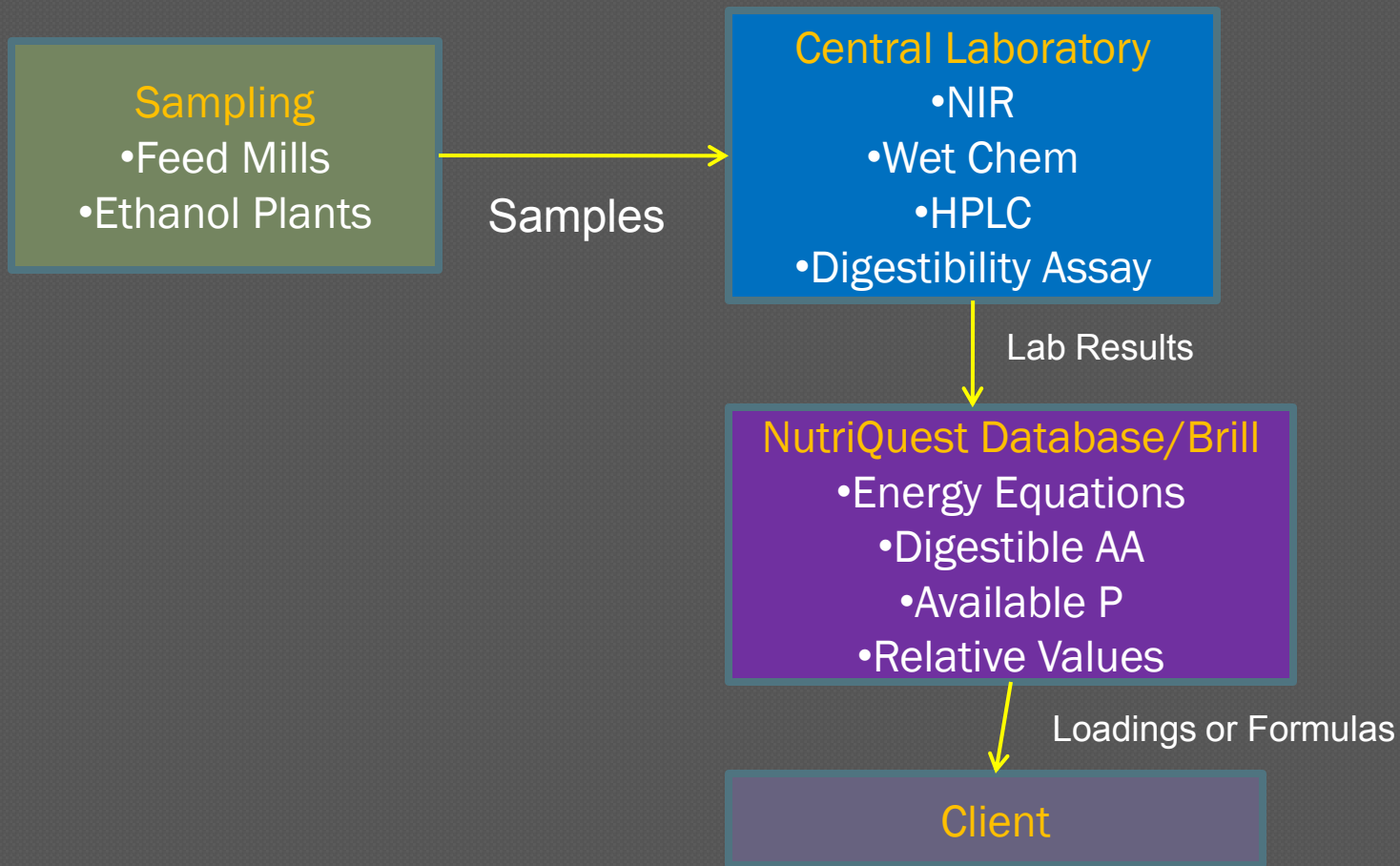


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Illuminate Status

- ◉ Introduced three years ago to swine segment
 - Used in feeding about 40-50 million pigs/yr (50%)
 - Subscribers use more DDGS and reduce feed costs
 - Now available for Poultry and growing customer base
 - Ruminant model to be coming soon
- Right Source finds Right Value for Livestock Producer

ILLUMINATE[®] Process



Measurements:

- Proximate type assays: Crude Protein, Crude Fat, Crude Fiber, Dry Matter
- Minerals: Ash and Phosphorus, but others coming (Na)
- Other assays as base: Starch, ADF, NDF, residual sugars, ADICP, NDICP, and more being added.
- Amino Acids: (Lys, Met, Thr, Trp, Val, Ile, Leu, and more)
- Digestibility (Today involves adjusted IDEEA assay, with other components for validation).
- Physical assays: Particle Size, Std Dev
- Energy: ME and NE Calculations based on analytical components.

Objective

To gain insight into the prevalence of oil extraction of DDGS over the last 12 months.

● Format:

- Show status of March 2011
- Show Status of March 2012
- Show change in last 12 months

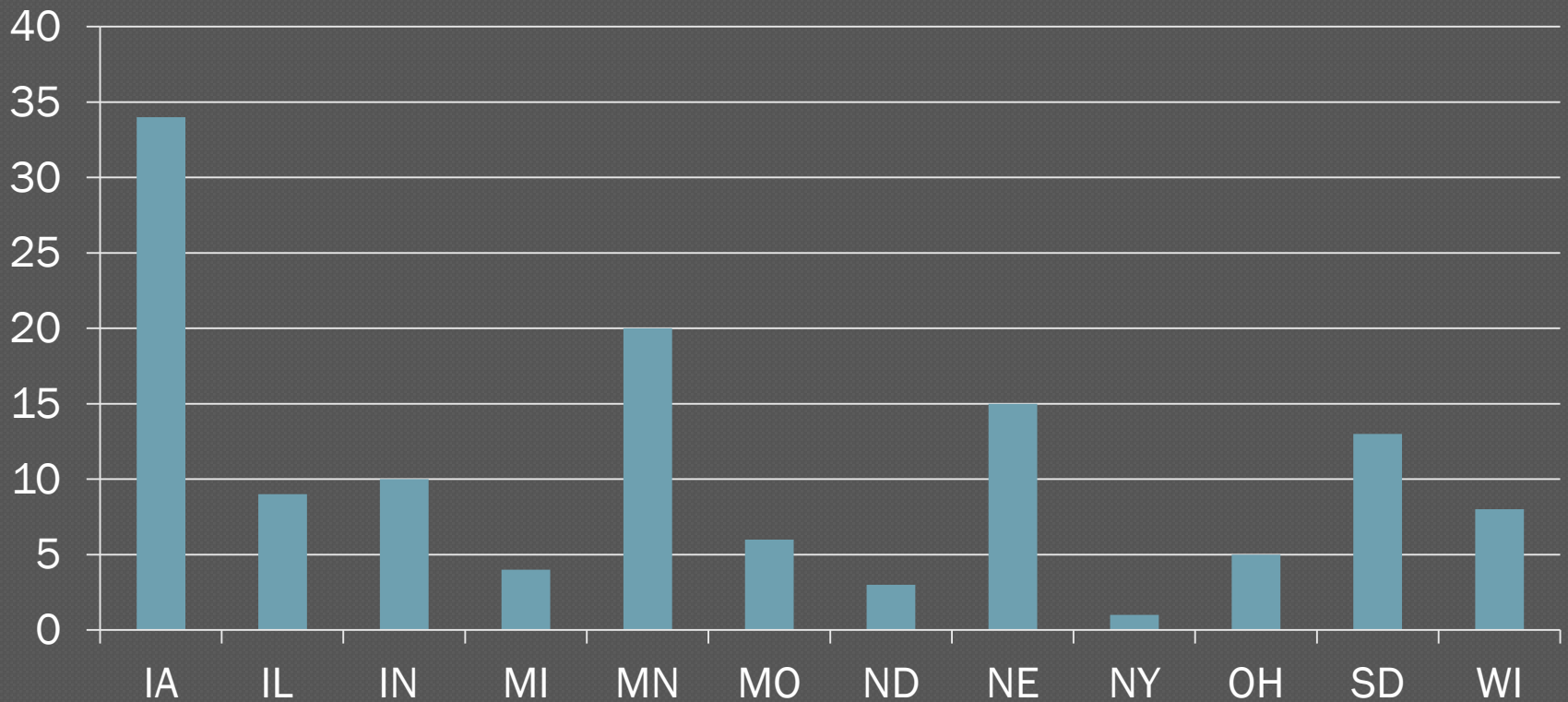
NUTRIQUEST Procedure

- ◉ DDGS samples were obtained from ILLUMINATE customers and ethanol plants as normal course of business.
- ◉ A total of 132 plants were used in the 2011 estimates and 143 for current estimates.
- ◉ Considered oil extraction if less than 10% oil (ether extract), while some areas will be producing some high 9% oil products without oil extraction.
- ◉ Sample analysis are via NIR calibrations supported by wet chemistry.

NUTRIQUEST Survey Results

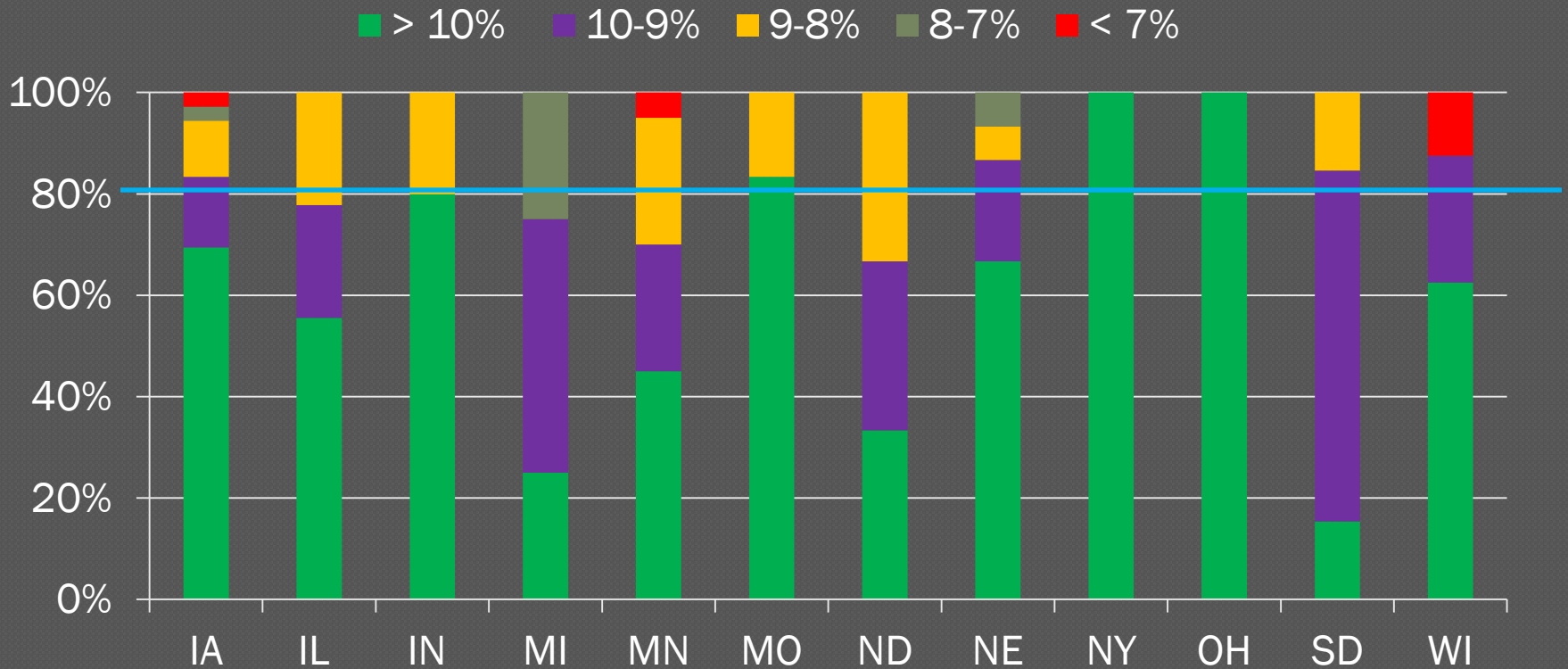
Data Coverage by NUTRIQUEST

Number of ethanol plants per State in ILLUMINATE in March 2011 (132 plants)



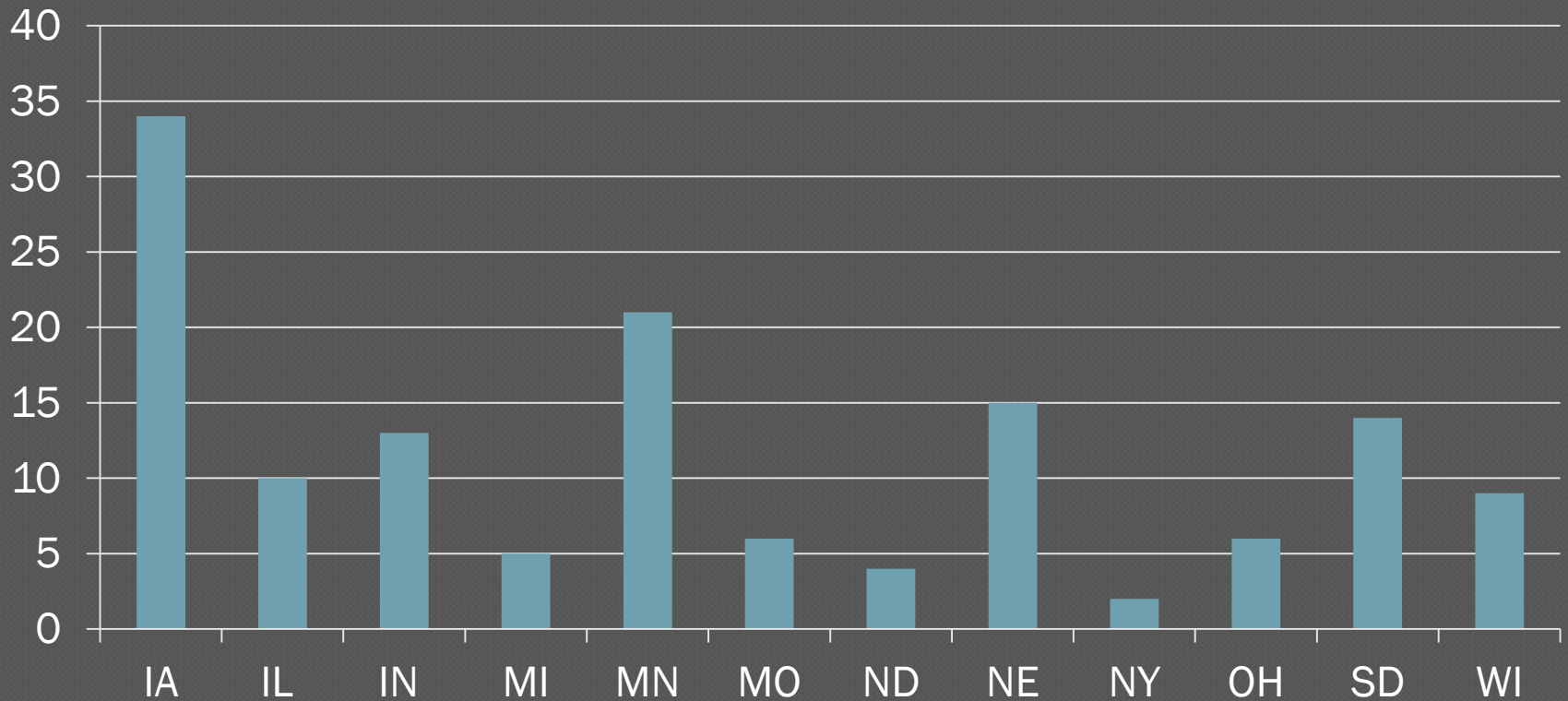
Data Coverage by NUTRIQUEST

Number of ethanol plants per State in ILLUMINATE in March 2011



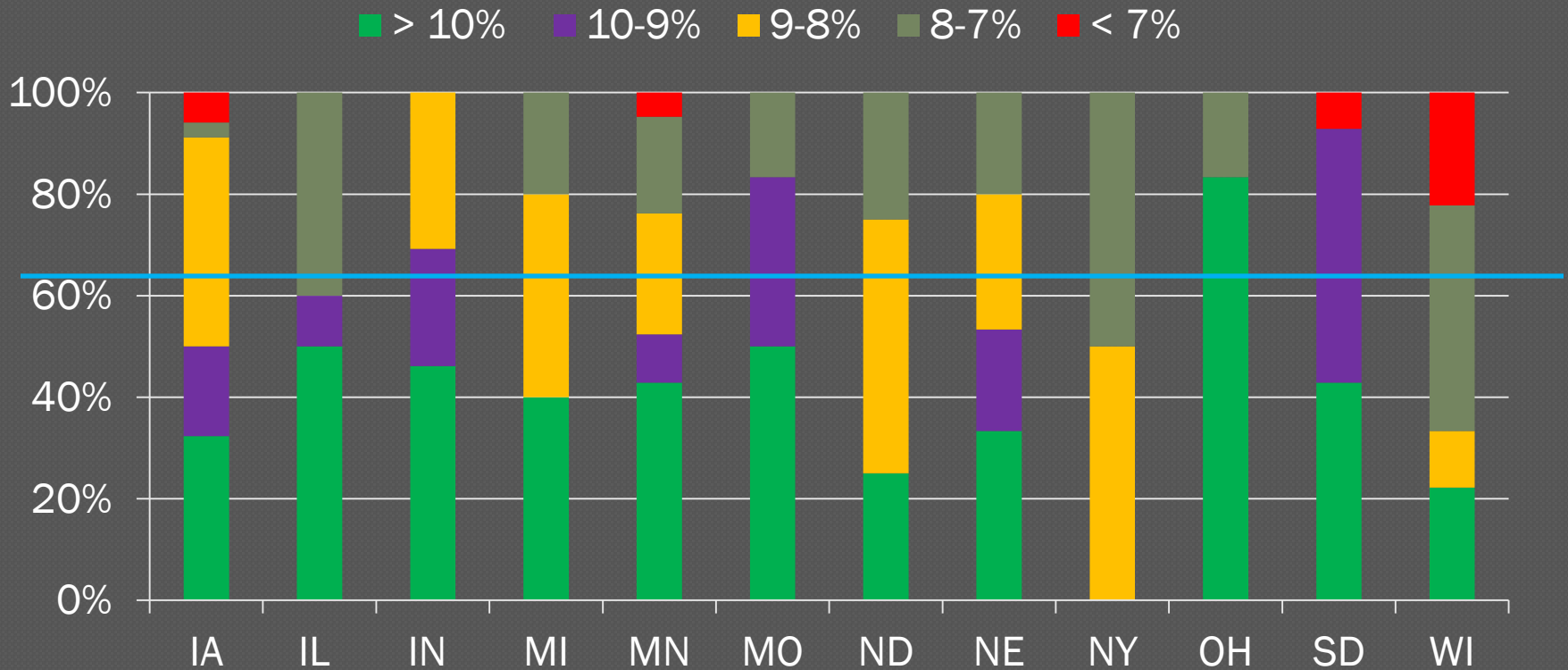
Data Coverage by NUTRIQUEST

Number of ethanol plants per State in ILLUMINATE in March 2012 (143 Plants)



Data Coverage by NUTRIQUEST

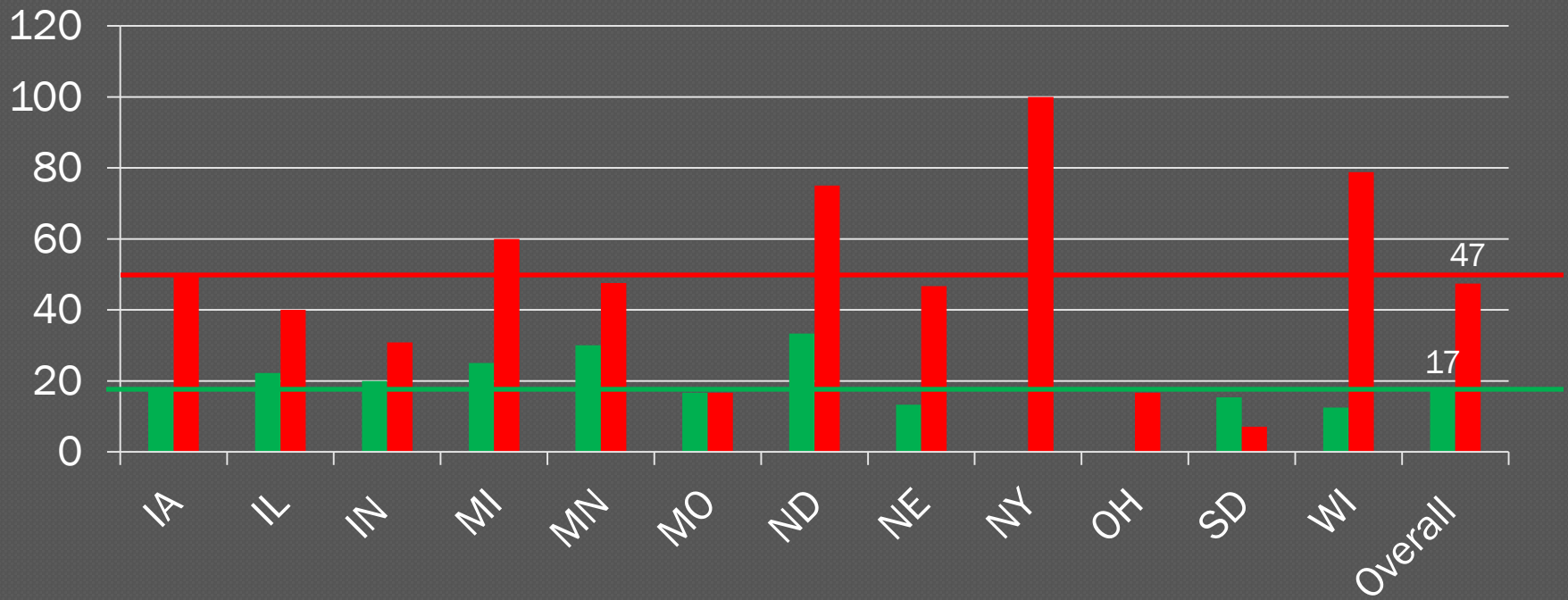
Number of ethanol plants per State in ILLUMINATE in March 2012



Data Coverage by NUTRIQUEST

Percentage of ethanol plants per State in ILLUMINATE in March 2012

■ < 9% Oil 2011 ■ < 9% Oil 2012



Summary

- In the last 12 months we have seen a doubling of plants extracting oil at less than 9%.
- Overall impact was a average drop from 10.0% oil average to 9.3% oil average.

So what does this mean for feeding value?

Thank you!