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Are We Addressing the Cause of Nutrient Problems?

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Online at: http://www.oznet.ksu.edu/waterquality/Reg_Conf/presentations.htm

CAFO Perspective

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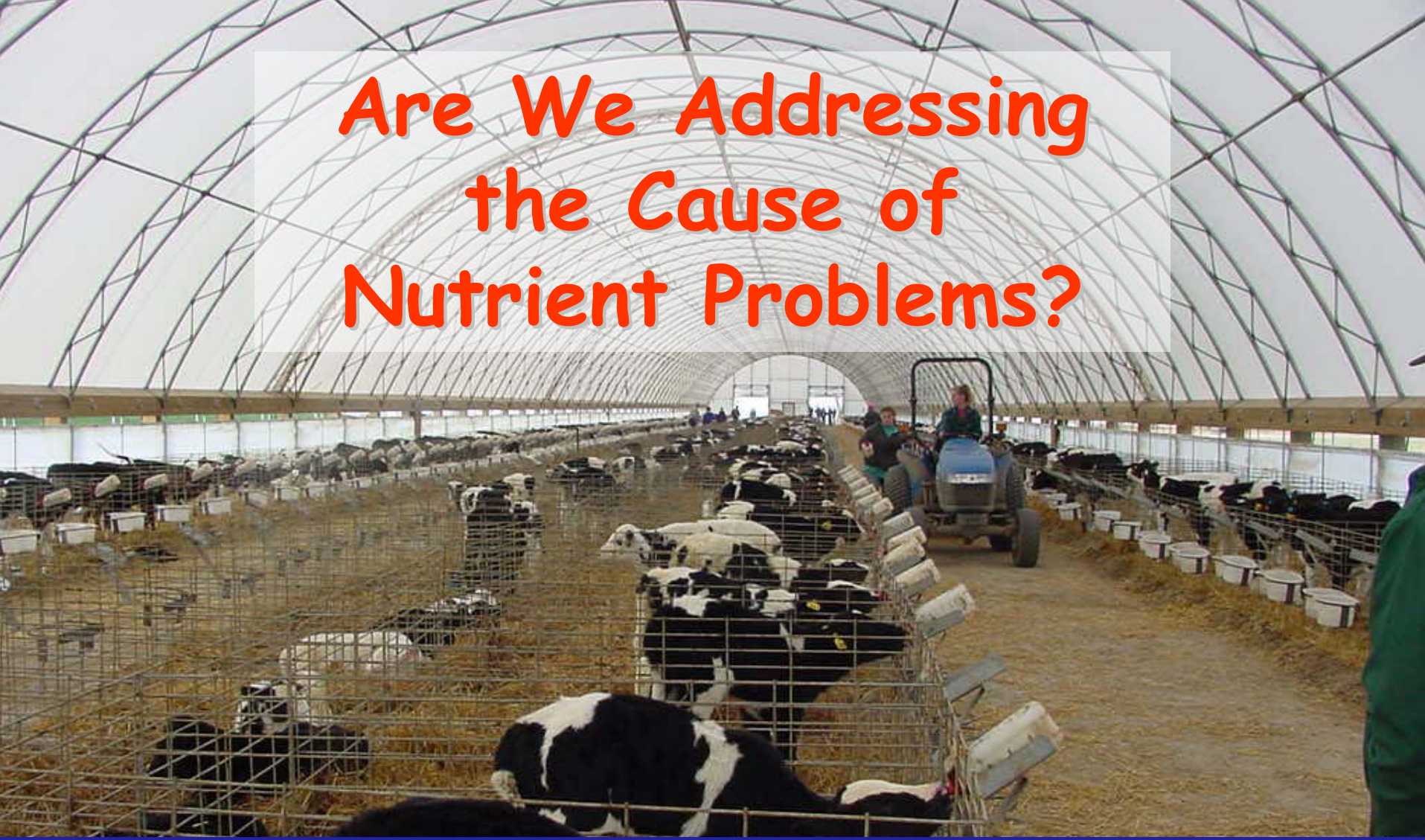
Are We Addressing the Cause of Nutrient Problems?



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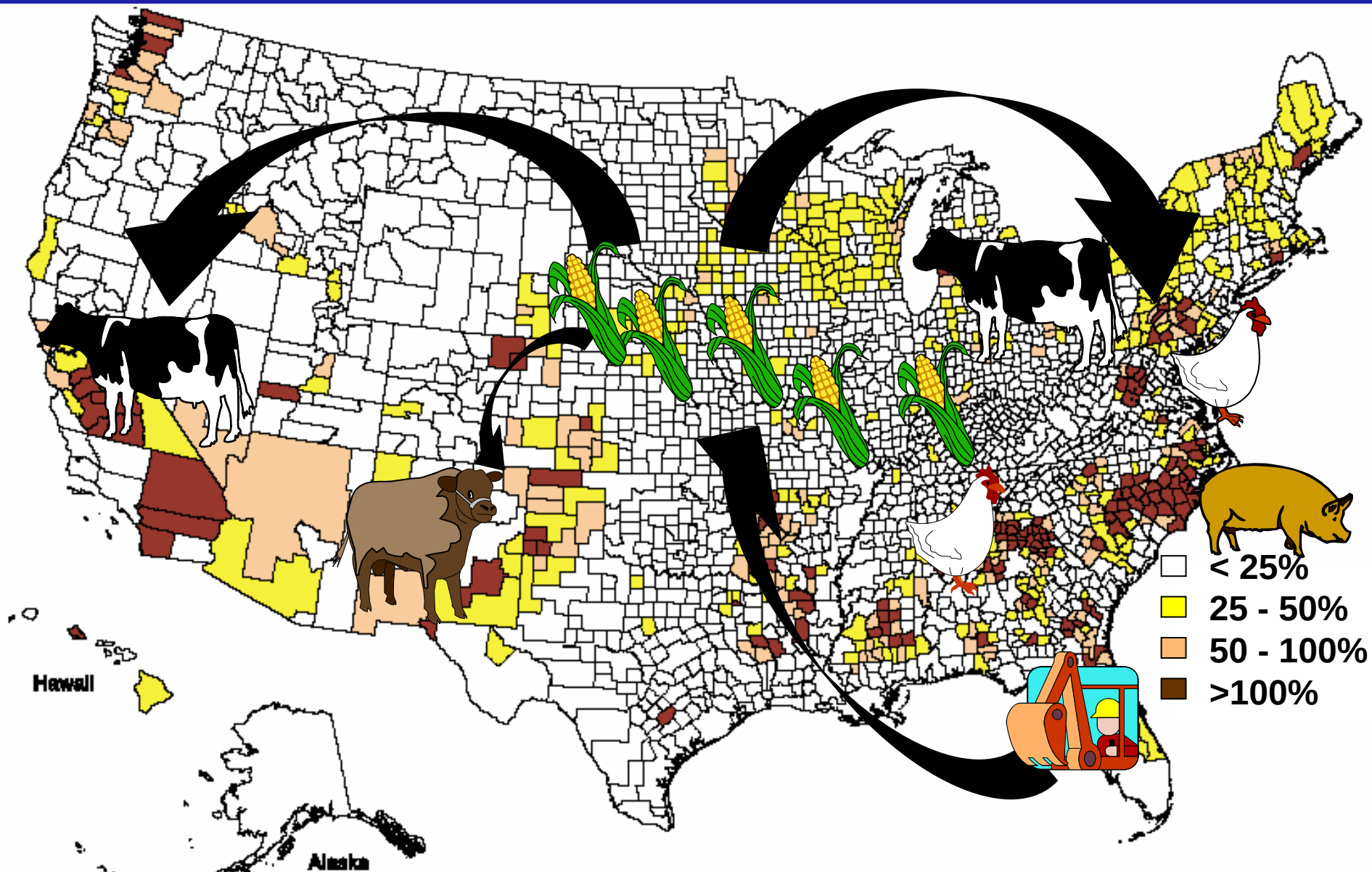
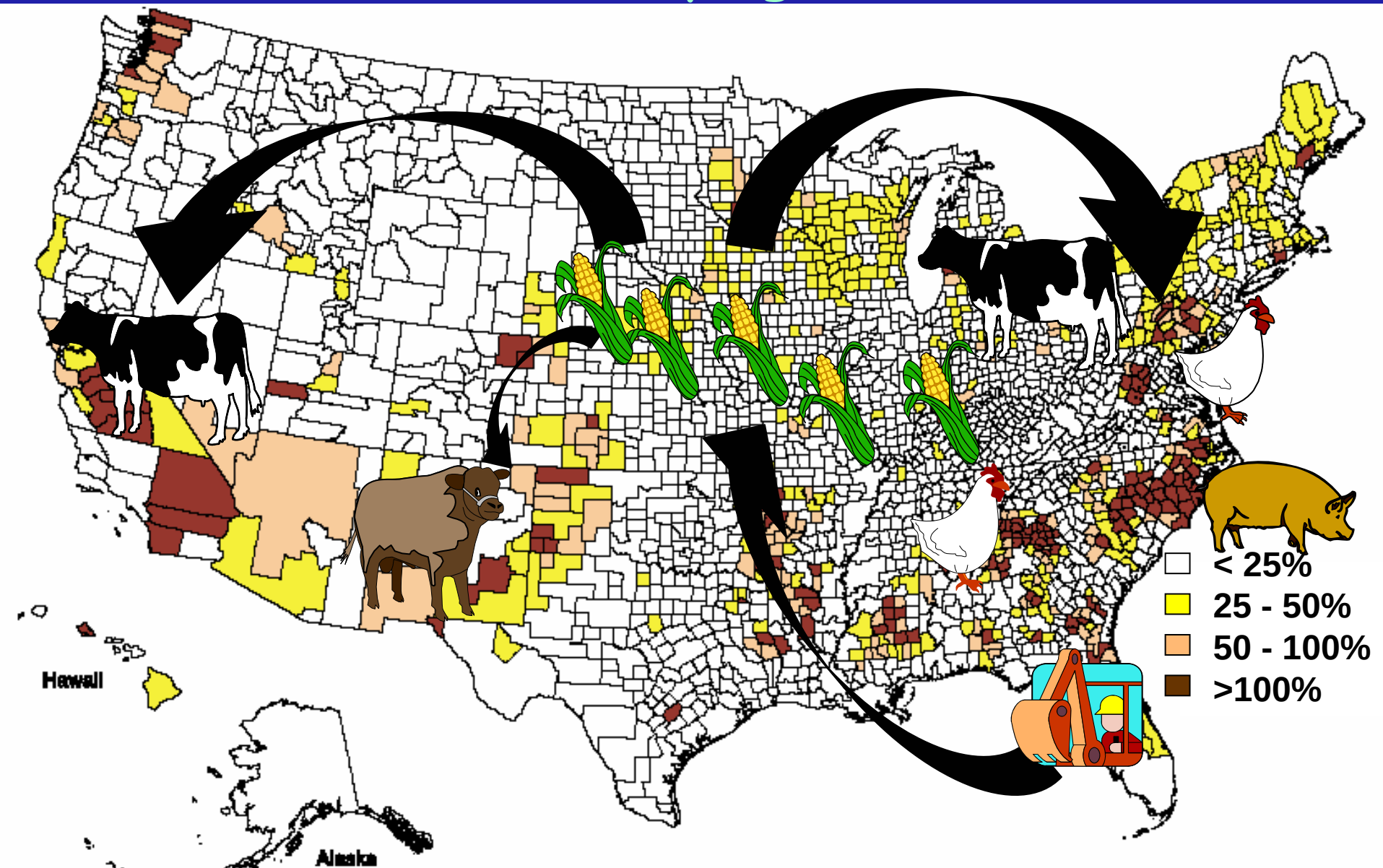
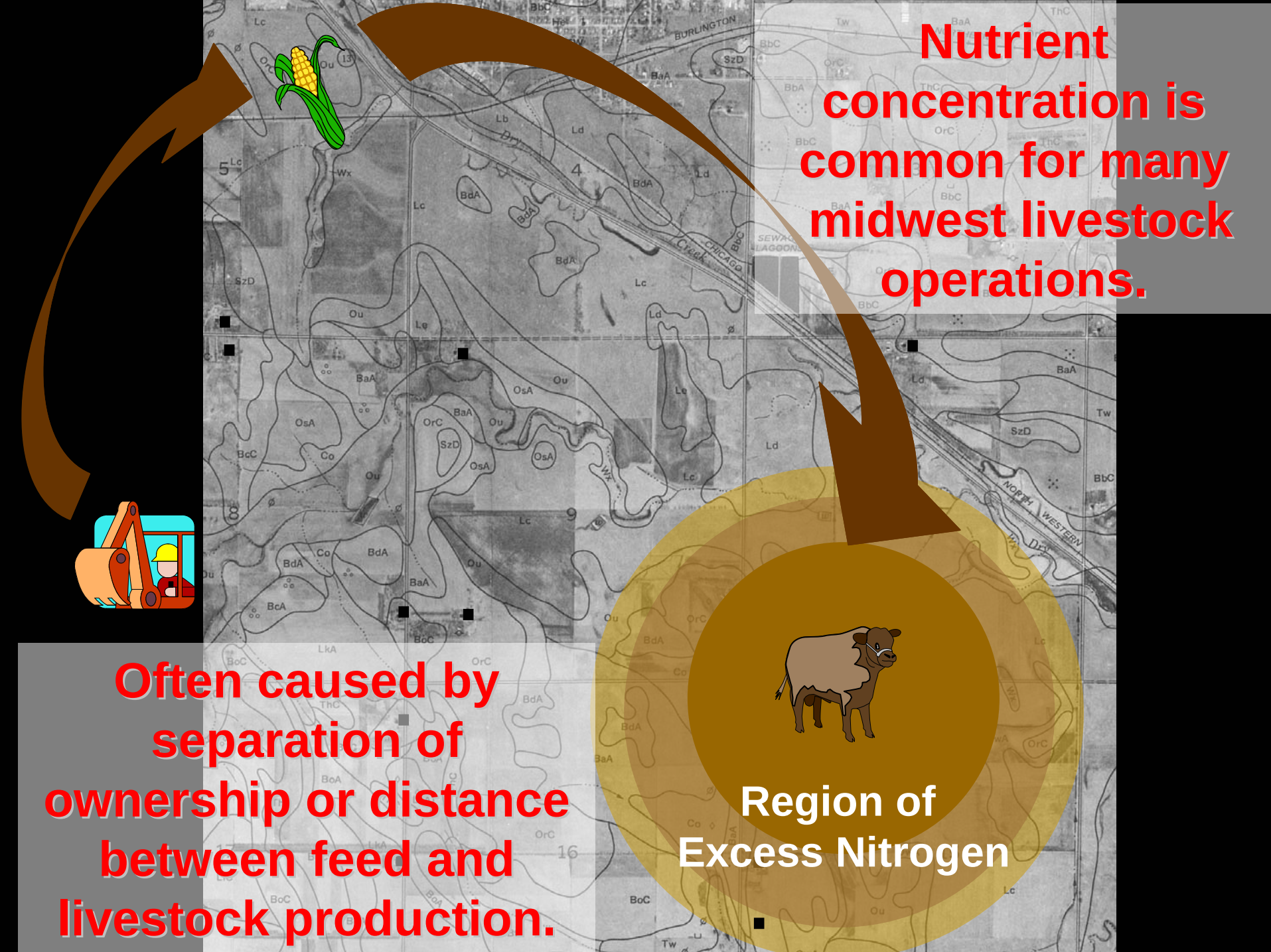
Manure P vs. Crop Land P Use



One-Way Flow of Nutrients Is Underlying Cause




Nutrient concentration is common for many midwest livestock operations.
Region of Excess Nitrogen
Often caused by separation of ownership or distance between feed and livestock production.

Solutions

3. Reduce Purchased Feeds

2. Export Manure

1. NMP

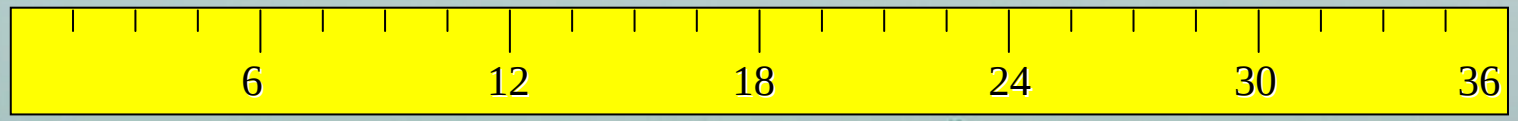
Region of Excess Nutrients

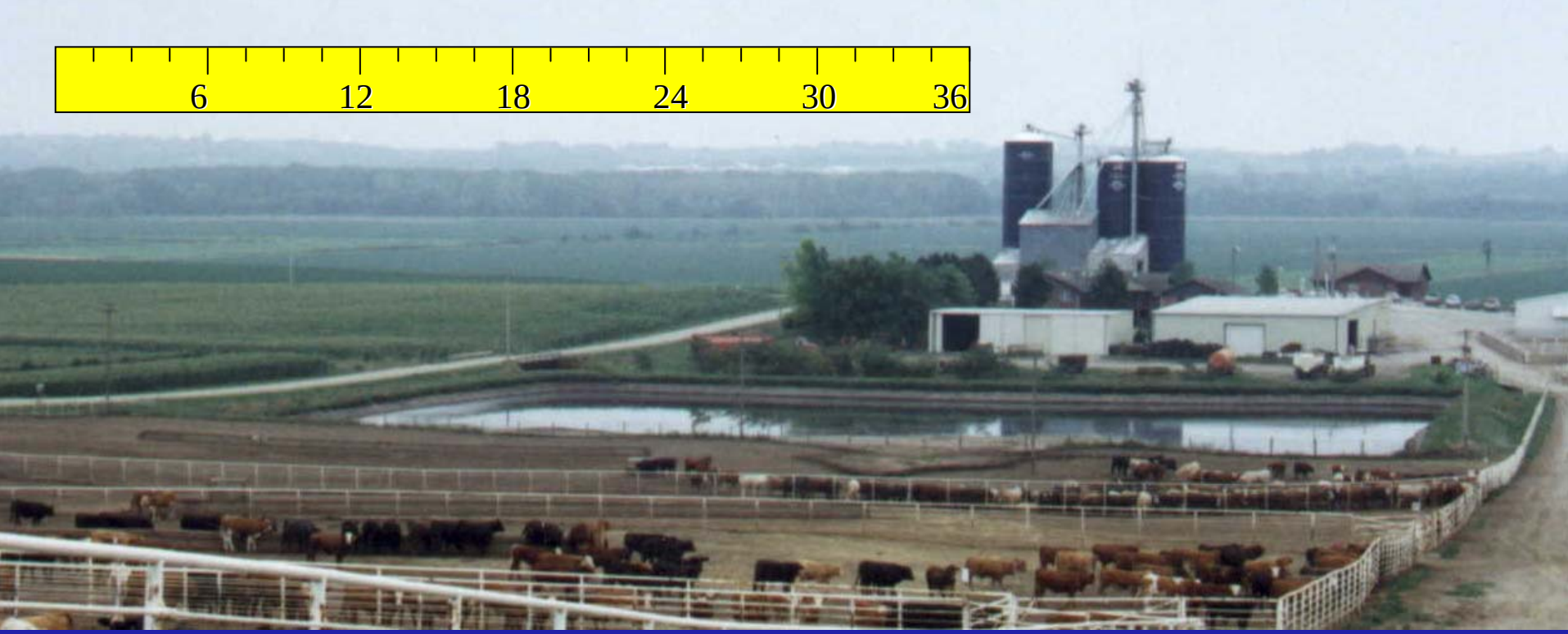
Future NMP Checklist?

Does the CAFO's NMP:

- ✓ Quantify excess nutrients?
- ✓ Recommend strategies for reducing feed inputs?
- ✓ Recommend strategies for marketing manure?

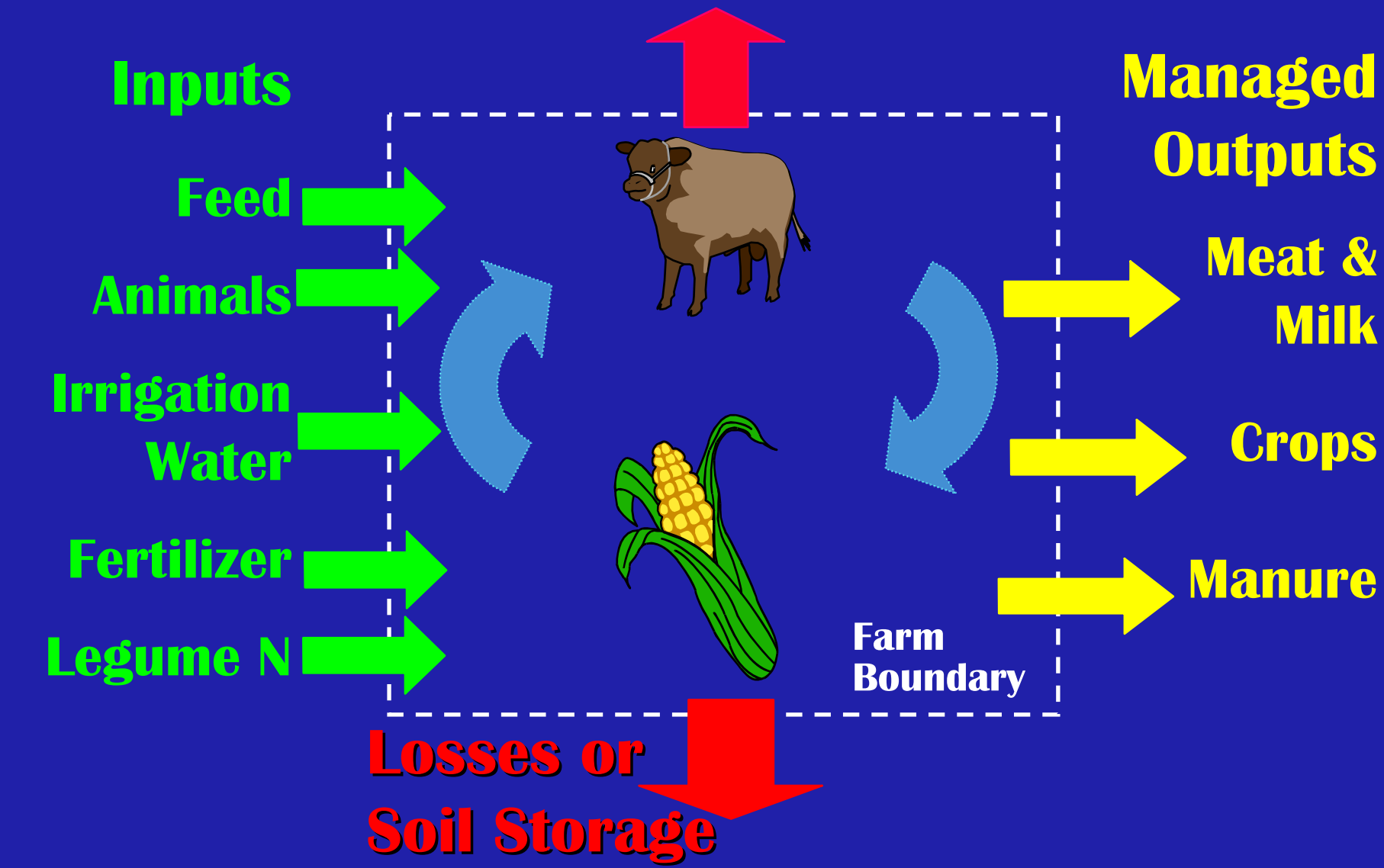
Should an NMP Measure Environmental Performance?



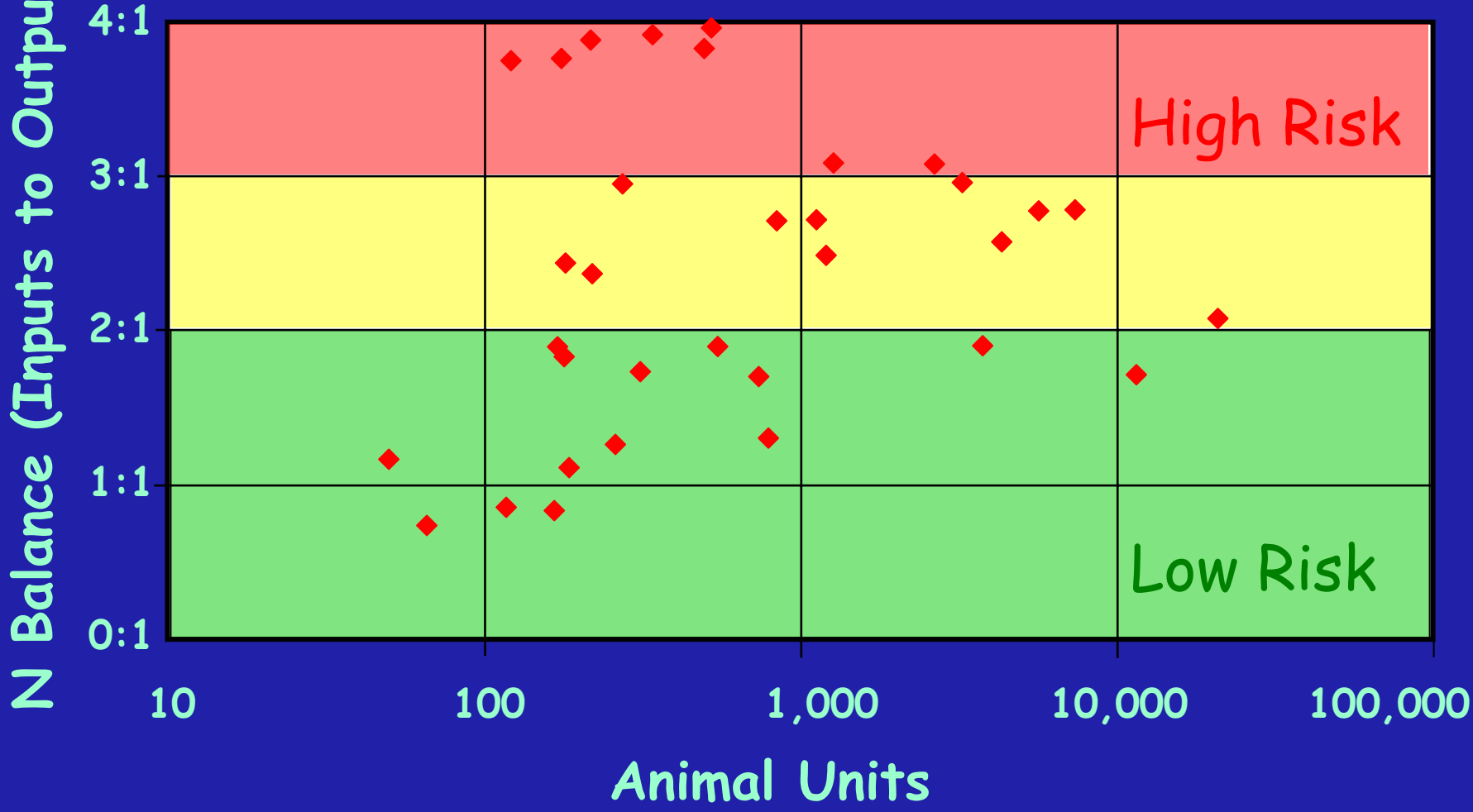


What Do We Want To Measure?	Measurement Tool
• Individual field nutrient performance	Field Nutrient Balance
• Farm's nutrient performance	Whole Farm Nutrient Balance

Whole Farm Nutrient Balance



Whole Farm N Balance



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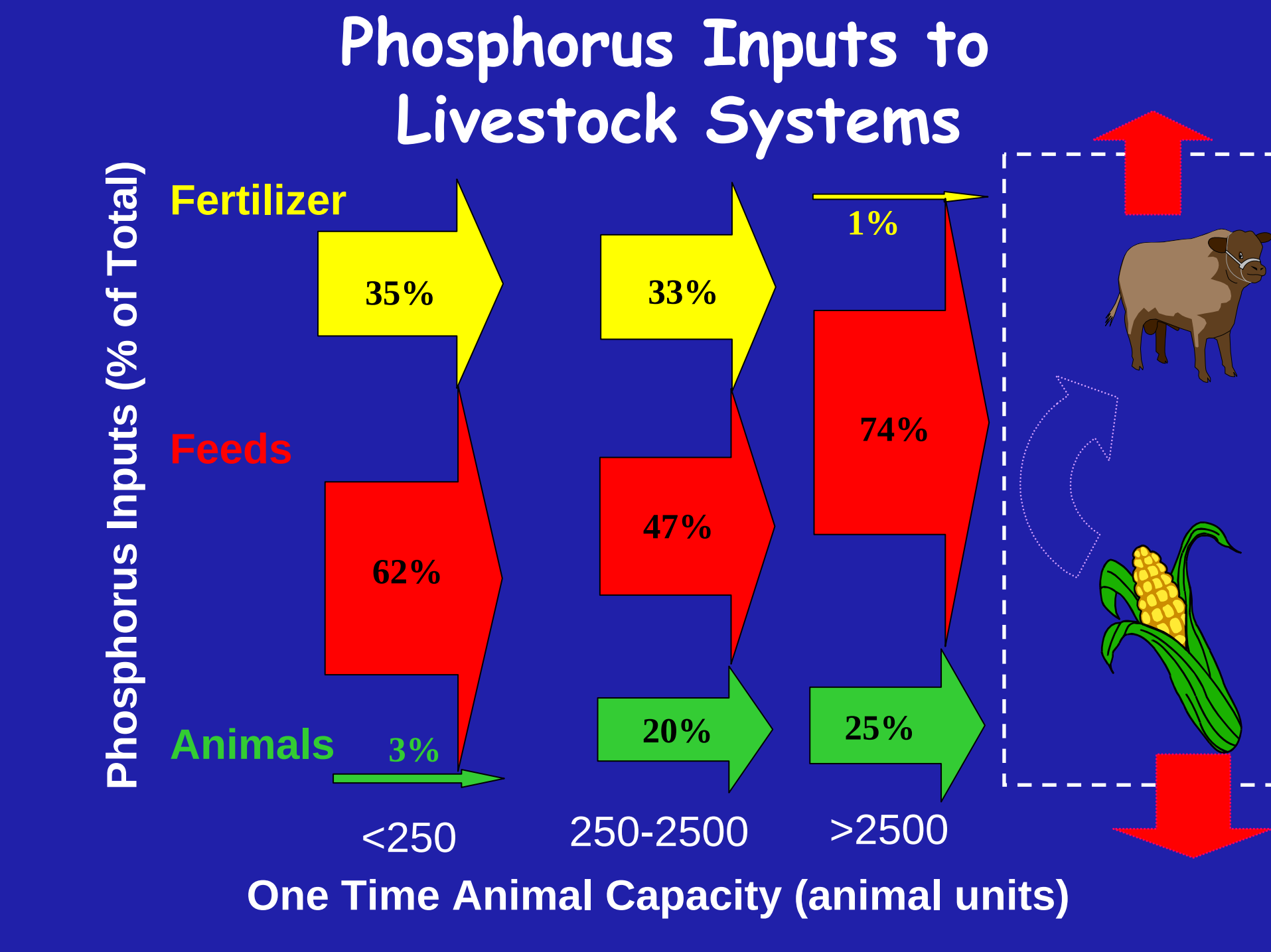
Phosphorus Inputs to Livestock Systems



Future NMP Checklist?

Should the CAFO's NMP:

- ✓ Measure individual field nutrient balance?
- ✓ Measure whole farm nutrient balance?

Should An NMP Estimate Ammonia Emissions?

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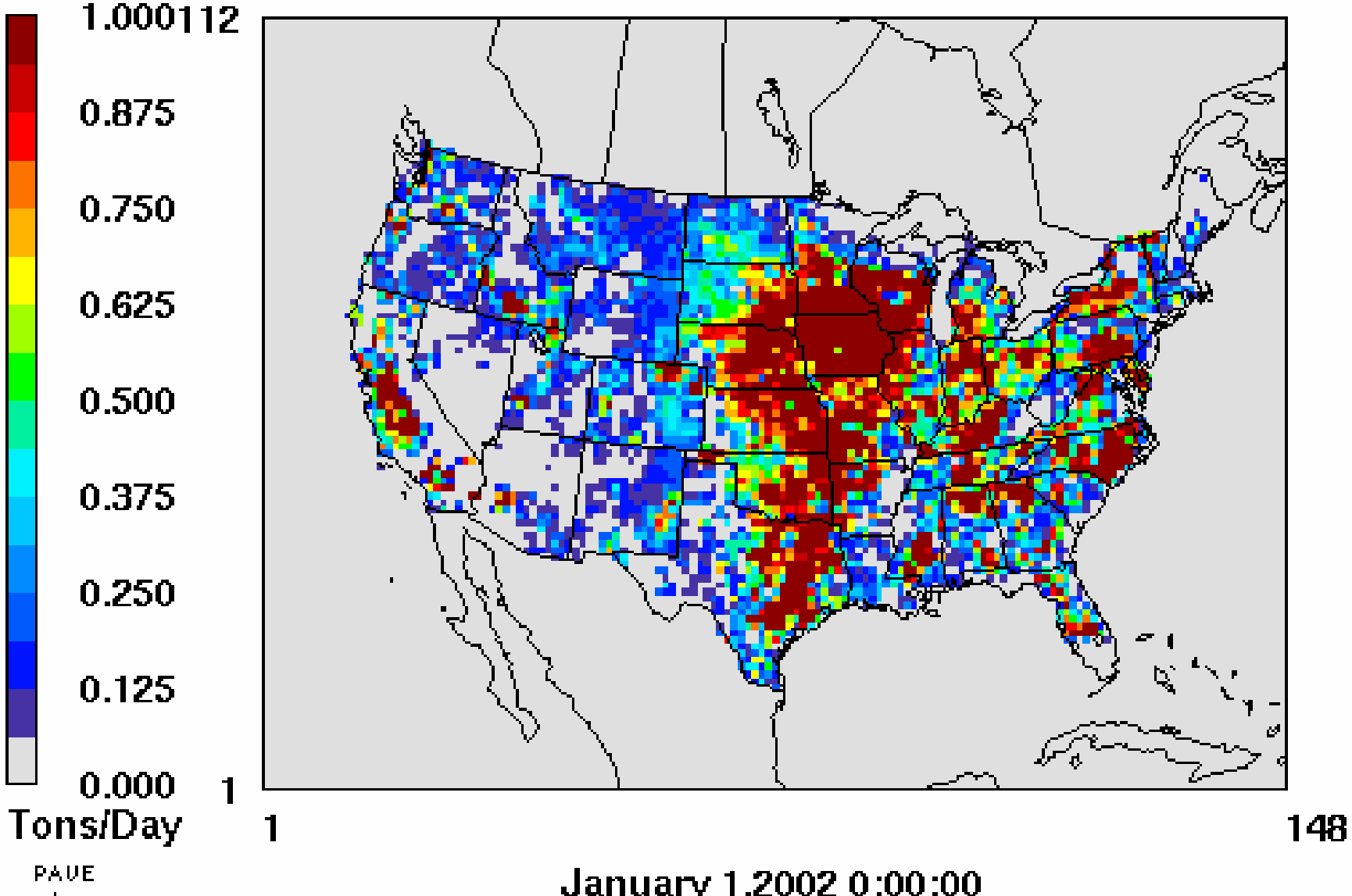
Daily Ammonia Emissions from Livestock (36 km grid)

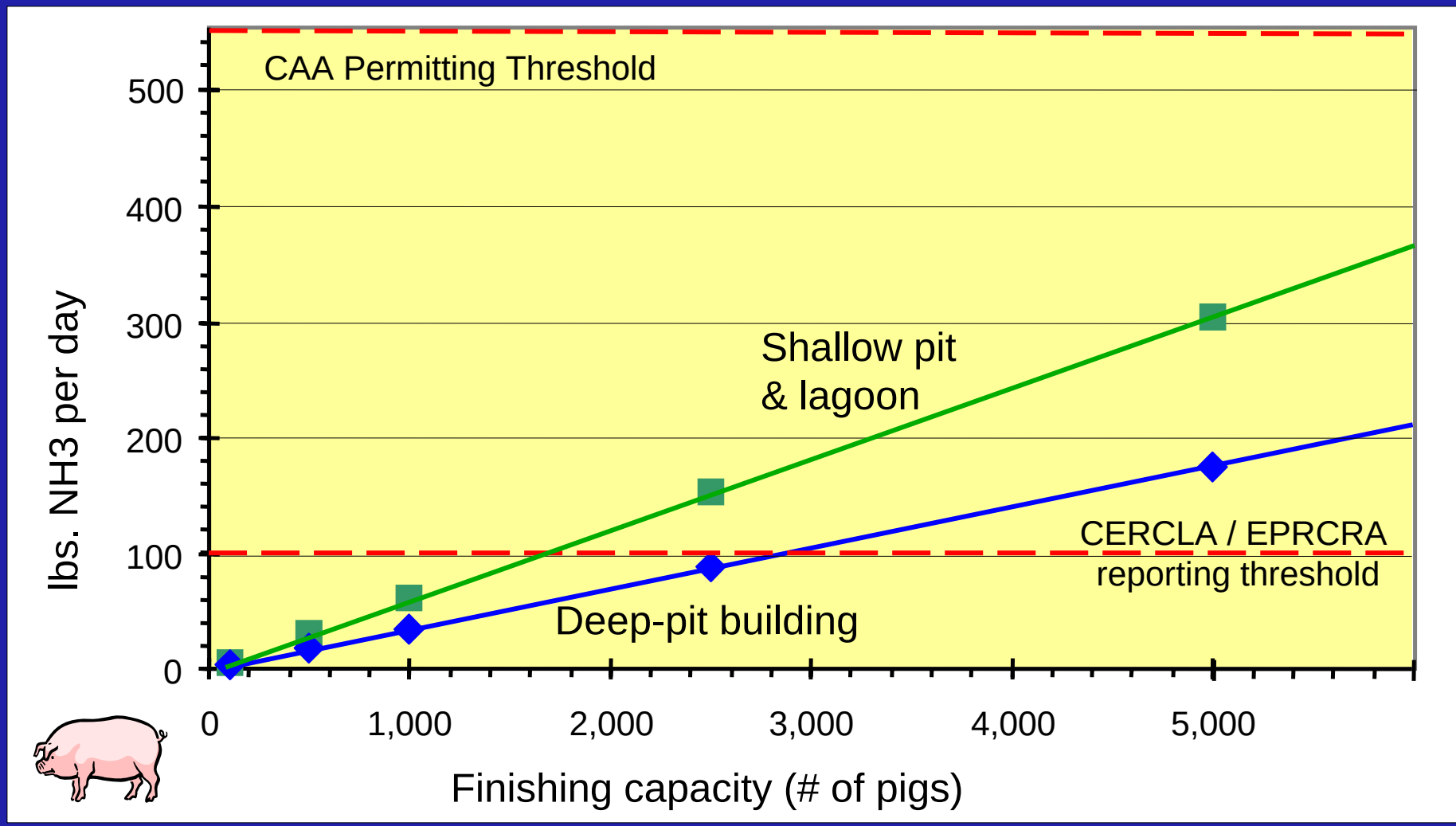


Ammonia Emissions Regulatory Thresholds

- CERCLA & EPCRA - Reporting threshold of 100 lbs/day

- Clean Air Act – Permitting threshold of 100 tons /year

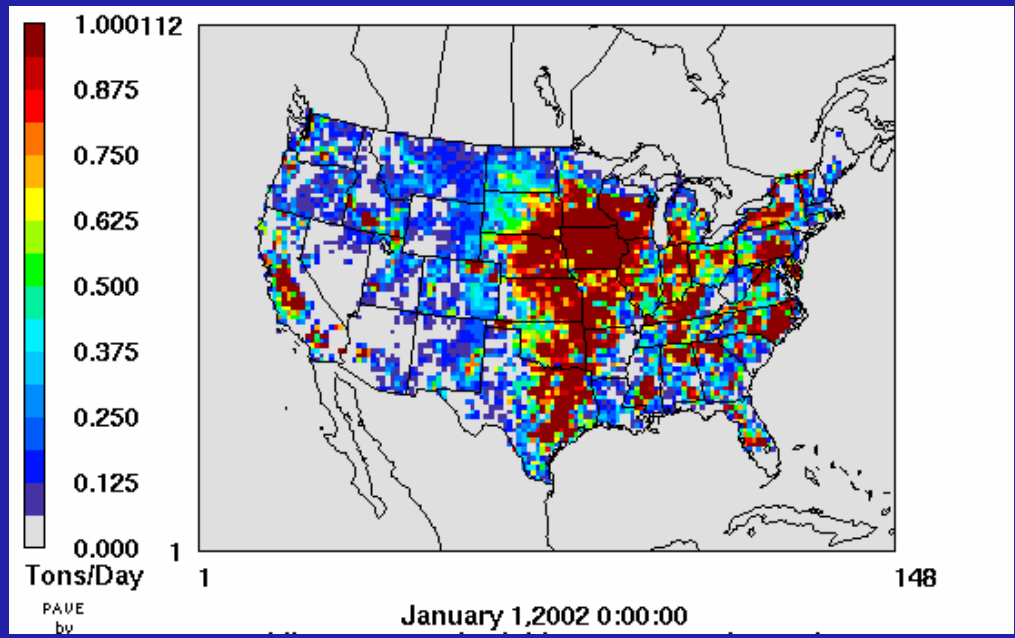
Ammonia Emissions - Swine Finishing Operations



Primary assumptions involve year-round housing, buildings occupied 48 weeks a year, and 75% of N lost from lagoon as NH3... Stowell, UNL

Future NMP Checklist?

- ✓ Does the NMP estimate ammonia emissions?



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Take Home Message

Should our NMPs:

- ✓ Quantify excess nutrients?
- ✓ Recommend strategies for reducing feed inputs and marketing manure?
- ✓ Measure nutrient performance?
- ✓ Estimate ammonia emissions?

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