



Implications for Animal Manure Management of Increased Availability of Corn Coproducts


Rapid Ethanol Expansion

December 2007 Energy Bill mandates by 2022

Corn based ethanol 15 BGY
 Total ethanol 36 BGY


Estimates as of August 30, 2007


| | BGY | BBu | MTon |
|---------------------|------|-----|------|
| Operation-Expansion | 6.7 | 2.4 | 20.6 |
| Operation-Construct | 11.6 | 4.1 | 35.1 |
| Operation-Broke grd | 14.3 | 5.1 | 43.3 |
| Operation-Planned | 36.2 | 5.1 | 43.3 |





Guiding Principles

- Compared to corn
 - DGS are higher in fiber
 - DGS are higher in N, P, and K
 - P is more digestible
- Cattle can utilize more in the diets than can swine and poultry




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|  | <h2 style="text-align: center;">Guiding Principles</h2> |
| | <ul style="list-style-type: none">• Ethanol production does not create nutrients, it concentrates them• Animals excrete nutrients that they don't need• Nutrients have potential value where they are needed |

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|  | <h2 style="text-align: center;">Objectives</h2> |
| | <ul style="list-style-type: none">• How will increased feeding of corn processing coproducts impact manure excretion?• How will increased manure with higher nutrient density impact nutrient management and land application?• Are current nutrient management recommendations and regulations adequate if coproduct feeding increases dramatically? |

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|  | <h2 style="text-align: center;">Next up</h2> |
| | <ul style="list-style-type: none">• Dr. Galen Erickson, Beef Nutritionist University of Nebraska• Dr. Joel DeRouchey, Swine Nutritionist, Kansas State University • We will take questions at the end. Please type them in the Chat Box on the left site of your screen. |


New Policies and Regulations

- Book values no longer adequate
- 1-yr vs 4-yr P-based applications
- P-Index will trigger transition from N based rates to P based rates to No Manure.
 - High erosion areas impacted quickest
 - DG will speed transition if manure is not exported




Roundtable Outputs

- Series of fact sheets summarizing our knowledge on the impact of DGS on manure management
 - Overview of current knowledge
 - Implications for each species including a case study with the impact on application costs and manure value
 - Available on the Heartland website



Summary


- Manure nutrients are a small part of the change resulting from ethanol
 - Land use, fertilizer, livestock production
- Nutrients are concentrated, not created
 - Monogastrics may increase N and reduce P excretion
 - Ruminants will over feed N & P and increase excretion of both.



Take Home Message


What Changes with DGS

- Swine and poultry
 - Very little: slightly higher N, similar P
- Beef and dairy
 - Higher N excretion and ammonia loss
 - Higher P excretion
 - More rapid P accumulations
 - Higher costs, time, and land requirements if one spreads manure at P-based rates
 - Potentially higher gross and net value for manure



Take Home Message

- Current and proposed regulations appear to be well positioned to protect water quality
 - Sample manure and soil and plan based on analysis.
 - Manure nutrient book values are a problem because products and inclusion rate differ
- Will greater use of DGs encourage NH₃ public policy?



Thank you!

- We will take questions
- Please enter your questions in the Chat box on the left side of your screen

