23rd Annual Distillers Grains Symposium
– Nutrition, Quality & Value –

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Brief Agenda

• Laboratory proficiency testing program
• Perspectives - national coproduct survey
• Coproduct quality & value
• Upcoming DGTC activities for 2019
• Next year’s symposium
Laboratory Proficiency Testing

• New program builds upon efforts by POET & mycotoxin task group 2015-2018
  – Conducted 5 ILS
  – 8 commercial laboratories
  – Focused on DON
Laboratory Proficiency Testing

• DGTC program
  – 10 commercial labs
  – > 30 ethanol plants
  – Measuring
    • DON, aflatoxin, zearalenone, fumonisbin
    • Proximate composition
    • Wet chemistry vs. secondary methods
    • Commercial vs. plant laboratories
    • Instrumentation, prep methods, etc.

  – 3 testing periods / year
  – 3 DDGS samples / testing period
  – Each analyte measured in triplicate
  – $400 / year / lab
Moisture

2018 Q4

Figure 1 PT Sample 145 Moisture by Commercial Labs

Figure 13 PT Sample 550 Moisture by Commercial Labs

Figure 25 PT Sample 696 Moisture by Commercial Labs

2019 Q1

Figure 1 PT Sample 77 Moisture by Commercial Labs

Figure 13 PT Sample 275 Moisture by Commercial Labs

Figure 25 PT Sample 516 Moisture by Commercial Labs
Protein

2018 Q4

2019 Q1
Fat

2018 Q4

Figure 3 PT Sample 145 Fat by Commercial Labs

Figure 15 PT Sample 550 Fat by Commercial Labs

Figure 27 PT Sample 696 Fat by Commercial Labs

2019 Q1

Figure 3 PT Sample 77 Fat by Commercial Labs

Figure 15 PT Sample 275 Fat by Commercial Labs

Figure 27 PT Sample 516 Fat by Commercial Labs
DON

2018 Q4

Figure 7 Sample 145 DON by Commercial Labs

Figure 19 Sample 550 DON by Commercial Labs

Figure 31 Sample 696 DON by Commercial Labs

2019 Q1

Figure 7 Sample 77 DON by Commercial Labs

Figure 19 Sample 275 DON by Commercial Labs

Figure 31 Sample 516 DON by Commercial Labs
Aflatoxin

2018 Q4

2019 Q1
Fumonison

2018 Q4

Figure 9 PT Sample 145 Fumonisin by Commercial Labs

Figure 21 PT Sample 550 Fumonisin by Commercial Labs

Figure 33 PT Sample 696 Fumonisin by Commercial Labs

2019 Q1

Figure 9 PT Sample 77 Fumonisin by Commercial Labs

Figure 21 PT Sample 275 Fumonisin by Commercial Labs

Figure 33 PT Sample 518 Fumonisin by Commercial Labs
Zearalenone

2018 Q4

Figure 11 Sample 145 Zearalenone by Commercial Labs

Figure 23 Sample 550 Zearalenone by Commercial Labs

Figure 35 Sample 696 Zearalenone by Commercial Labs

2019 Q1

Figure 11 Sample 77 Zearalenone by Commercial Labs

Figure 23 Sample 275 Zearalenone by Commercial Labs

Figure 35 Sample 516 Zearalenone by Commercial Labs
Variability – Let’s not backslide
Laboratory Proficiency Testing

• Next steps
  – Just finished 2019 Period 2 data reporting
    • Conference call with participants end of May
  – Gearing up for 2019 Period 3
    • Samples sent out in June/July
    • Still time to join the program
  – Discussions with all laboratories
    • Reduce variability
    • Align averages
  – Provide confidence to industry in lab results
National Coproduct Survey

• National survey
• Co-funded by
  – DGTC, RFA, NE Corn, IA Corn, IL Corn

• ~400 respondents throughout U.S.

• Important to understand these perspectives
  – Especially as industry evolves
Responses Grouped by State

- IA
- NE
- SD
- PA
- GA
- GA
- IN
- IN
- OH
- OH
- KS
- KS
- IL
- IL
- MN
- MN
- TX
- TX
- WI
- WI
- TN
- TN
- NY
- NY
- MO
- MO
- OK
- OK
- NC
- NC
- AR
- AR
- MI
- MI
- ND
- ND
- -
Do You Use Coproducts?

- Yes: 46%
- No: 54%
Types of Coproducts Used

- DDGS (traditional) - 44%
- DDG (no solubles) - 5%
- Reduced fat DDGS - 10%
- High-protein DDGS - 12%
- Modified DWG - 12%
- Wet DWG - 8%
- Syrup (CDS) - 6%
- Other coproducts - 3%
Where Coproducts are Purchased

- Broker: 26%
- Local ethanol plant: 41%
- Elevator/Co-op: 28%
- Other: 5%
Animal Performance After Use Of Coproducts

- Better: 22%
- Slight improvement: 24%
- About the same: 45%
- Slightly worse: 8%
- Worse: 1%
Reason for Coproduct Use

- Price is lower: 54%
- Animal performance is better: 24%
- Better availability: 16%
- Other: 6%
Variations Among Coproduct Batches

- None: 17%
- Typically little variation found: 21%
- Color variability: 16%
- % burned: 8%
- Size of coproduct particles/grains: 8%
- Protein content: 13%
- Moisture content: 4%
- Fat content: 6%
- Other: 4%
Problems When Using Coproducts

- Typically no problems found (24%)
- Nutrient variability (4%)
- Flowability/material handling (9%)
- Storage of wet or modified DWG (12%)
- Fat content too high (12%)
- Fat content too low (11%)
- Sulfur content too high (1%)
- Other (27%)
Gathering Information About Coproducts

- Ethanol Plant: 0%
- Consulting nutritionist: 31%
- Extension: 7%
- Feed company: 7%
- Veterinarian: 7%
- University researchers: 37%
- State government: 11%
- Federal government: 0%
- Popular press: 0%
Issues Limiting Use of Coproducts

- Price (36%)
- Availability
- Cost of storage
- Cost of transport
- Nutrient content
- Meat quality
- Size of operation
- Retired
- Price and availability
- Product variation
- Product variation and price
- Price and meat quality
- Knowledge of rations/use
- Nutritional content and price
- Flowability
- Flowability and nutrient content
- Flowability and price
Nutrition, Quality & Value
- Moving Forward -

- Livestock feed
  - Current generation products
  - Next generation products
  - Processed feeds
  - New species
- Standardized grading system
- Sulfur / phosphorous
- Mycotoxin contamination
- Energy consumption / cost
- Optimizing quality w/ ethanol

- FSMA / regulations
- Effects of oil removal
- Effect of fiber removal
- Processing / new technologies
- Exports

- Consistency / variability
- Transportation
  - Domestic
  - International
  - Flowability
- Other value-added uses
  - Human foods
  - Industrial products
Nutrition, Quality & Value

Evolution of grain processing products

Coprodutcts

Preferred feed ingredients

Byproducts
Nutrition, Quality & Value

Livestock producers

Ethanol/spirits manufacturers

Availability

Price
OUR END USERS
Upcoming Activities for 2019

• FSMA
• AAFCO/FDA
• Evolving products
  – In the marketplace
  – Coming through the pipeline
• Livestock nutritionist outreach = key
Thank you
- Members
- Sponsors
- Exhibitors
- Michelle Harper

Consider becoming a DGTC member:
- Application forms available at registration desk
Thank you for attending!

See you next year!

Keep in touch!

24th DISTILLERS GRAINS SYMPOSIUM
OMAHA MARRIOTT DOWNTOWN
AT THE CAPITOL DISTRICT
OMAHA, NEBRASKA

MAY 13 & 14, 2020

EXHIBITING & SPONSORSHIP OPPORTUNITIES AVAILABLE

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