23rd Annual Distillers Grains Symposium
– Symposium Overview –

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www.distillersgrains.org
Welcome!

• 23rd Annual Symposium!

• How many…?
OUR END USERS
BOTH TYPES OF ALCOHOL
Brief Outline

• Distillers Grains Technology Council
• Historical perspectives
• Coproducts in 2019
• Challenges and opportunities
• 2019 Symposium Overview
Distillers Grains Technology Council

Member-driven organization

www.distillersgrains.org
What Do We Do?

• **Our Mission**
  The goals of our organization encompass a broad interest in current issues affecting the beverage, fuel, and livestock industries

• **Service Support**
  To provide educational and technical services to member producers and users of distillers grains

• **Advocacy**
  To be the principle voice on nutrition, safety, and regulatory issues affecting distillers grains

• **Market Development**
  To encourage, administer, and support research and promotion into new and existing market opportunities for distillers grains, and advancing the awareness of coproduct value
What Do We Do?

• Yearly symposium
• Other conferences & trade shows
• Educational papers & publications
• FDA / AAFCO / GIPSA
  – Meetings
  – Written comments on proposed Federal Regulations
• Provide support to
  – Fuel ethanol companies
  – Beverage companies
  – Livestock producers
• Weekly information/news feed to FULL MEMBERS
• Quarterly Board meetings
• Literature library going back to late 1800s
Historical Perspectives
DGTC has worked with beverage, fuel, and livestock industries > 70 years (began in 1945)
Distillers Grains Technology Council

• Late 1800s
  – Distillers coproducts increasingly used in animal feeds (not rivers anymore) due to state environmental regulations

• 1913
  – First AAFCO definition for DDGS
  – Exports to Europe occurring

• 1945
  – Seagram’s Distillers Corporation & Hiram Walker & Sons hosted a meeting of industry, university and government attendees to discuss feed uses of distillery coproducts
  – Distillers Feed Research Council founded
    • Cincinnati, OH

- Prohibition:
  1920: 18th Amendment
  1933: 21st Amendment
  1966: all states fully repealed

2019
Distillers Grains in Animal Feeds

- “Grain distillers have developed equipment and an attractive market for their recovered grains” (Boruff, 1947)

- “Distillers are recovering, drying, and marketing their destarched grain stillage as distillers dried grains and dried solubles” (Boruff, 1952)
Distillers Grains Technology Council

Distillers Feed Research Council Meeting, March 15, 1951, Cincinnati, OH

Distillers Feed Research Council Meeting, January 24, 1950, Cincinnati, OH
Coprodutcs in 2019
A typical corn ethanol fuel plant
Annually:
- 47 million bushels of corn
- 130 million gallons of denatured ethanol
- 480,000 tons of coproducts
Fermentation Products

**Theoretical Yields**
1 kg glucose = 0.51 kg ethanol
+ 0.49 kg carbon dioxide

**Practical Yields**
90 – 95% of theoretical
+ yeast cell mass
+ secondary products

**Anecdotally:**
- 1 lb corn = 1/3 lb ethanol
  + 1/3 lb CO$_2$
  + 1/3 lb DDGS
- 1 bu corn = 2.8 gal ethanol
  + 18 lb CO$_2$
  + 17 lb DDGS
Evolving Processes

Now:

1 bu corn =

2.8 gal ethanol
+ 18 lb CO₂
+ 16 lb DDGS + 1 lb oil

What we do impacts livestock producers
Fuel Ethanol Growth

Growth of U.S. fuel ethanol industry

- Ethanol Production
- Coproduct Generation

Corn oil extraction
"10 million ton question"
RFS
1550 distilleries in U.S. in Jan 2019
360 new distilleries in 2019 alone (ADI, 2019)
DDGS Quality & Value

Livestock producers vs. Ethanol/spirits manufacturers

Price vs. Availability

Livestock producers

Ethanol/spirits manufacturers

Availability
Why do you feed coproducts?

- 54% of those who responded to this question said that the main reason they feed coproducts is price or price related
- Response listed as "other" is health benefits
- 24% said that they feed coproducts due to increased animal performance – this is compatible with the 22% who said that they did in fact see increased animal performance
Challenges and Opportunities
DDGS – Some Key Issues
2005

• “Mountains of distillers grains”
• 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

• Consistency / variability
• Transportation
  – Domestic
  – International
  – Flowability
• Other value-added uses
  – Human foods
  – Industrial products
DDGS – Some Key Issues

2019

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DDGS – Some Key Issues

2019

• FSMA (Food Safety and Modernization Act)
  – Production practices & safety
• Effects of process evolution on livestock performance
• Are we capturing the TRUE VALUE from distillers grains?
  – Proteins
  – Fibers
  – Nutraceuticals

• We will learn about these and other issues
  – Our speakers are industry leaders
2019 Symposium

- Wide array of topics
  - Markets, economics, domestic, exports
  - Beef, dairy, swine, poultry
  - Processing (upstream and downstream)
  - Regulatory issues
  - Networking opportunities
    - Breaks
    - Lunches
    - Large reception tonight
    - Exhibitors / sponsors
    - Scholarship winners
2019 Symposium

• Housekeeping items
  – Please silence your cell phones
  – Rest room locations
  – Trade show / meals
  – Emergency evacuation
  – Parking
  – Speakers, please stay on time
Consider becoming a DGTC member:

- Application forms available at registration desk
- www.distillersgrains.org

Thank you!
Enjoy the Symposium!
DISTILLERS GRAINS TECHNOLOGY COUNCIL

“Increasing the awareness of the value of Distillers Grains”