



DISTILLERS GRAINS TECHNOLOGY COUNCIL

*“Increasing the awareness of the value of
Distillers Grains”*



Where Have We Been, Where Are We Going? – DGTC Proficiency Testing Program –

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Executive Director & CEO

Distillers Grains Technology Council

www.distillersgrains.org

Brief Agenda

- Laboratory proficiency testing program (LPP)
 - Past data
 - Future directions

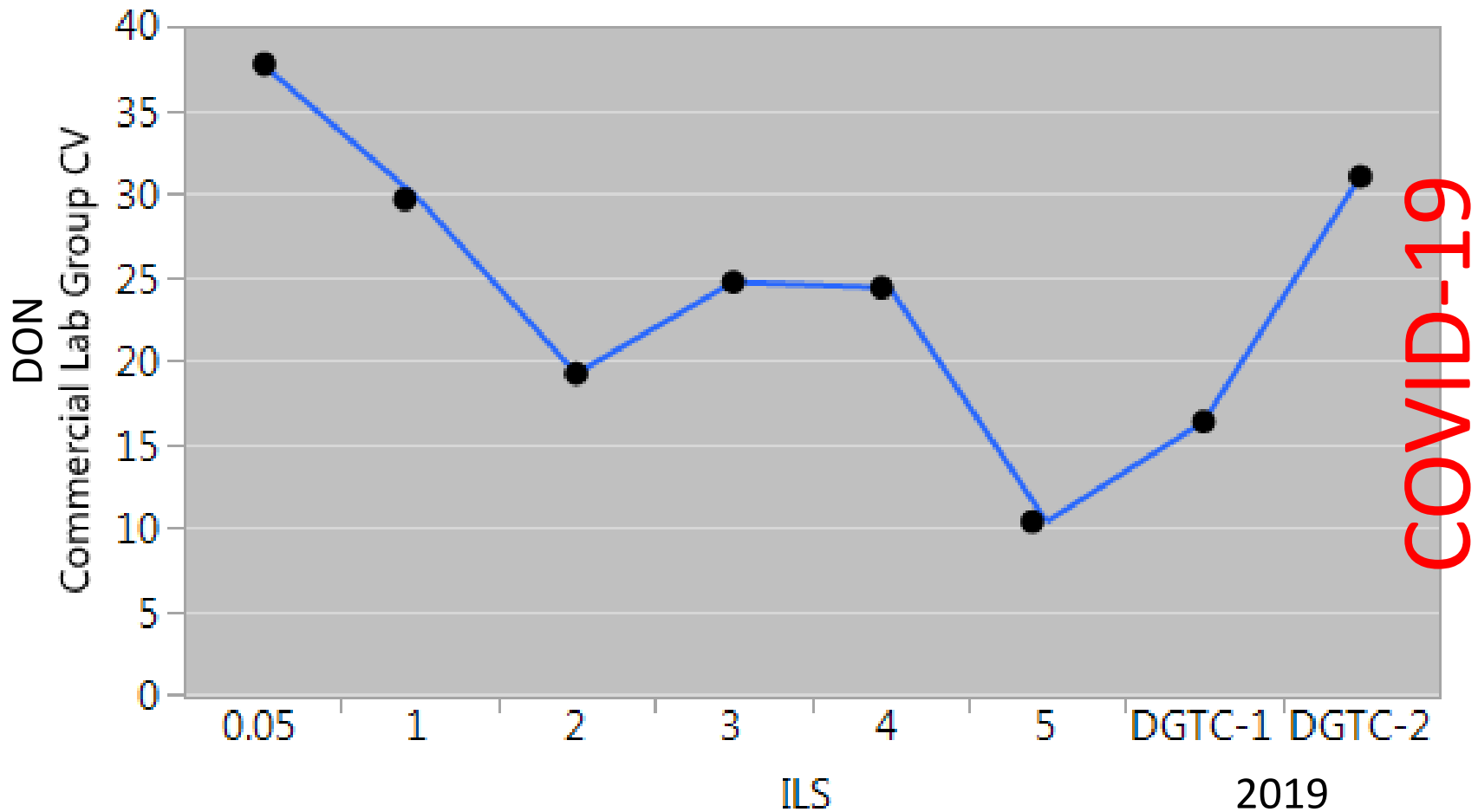
Laboratory Proficiency Testing

- 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
 - ~ 40 ethanol plants
 - Each participant directed to measure
 - DON, aflatoxin, zearalenone, fumonisin
 - 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

Variability has been a Concern

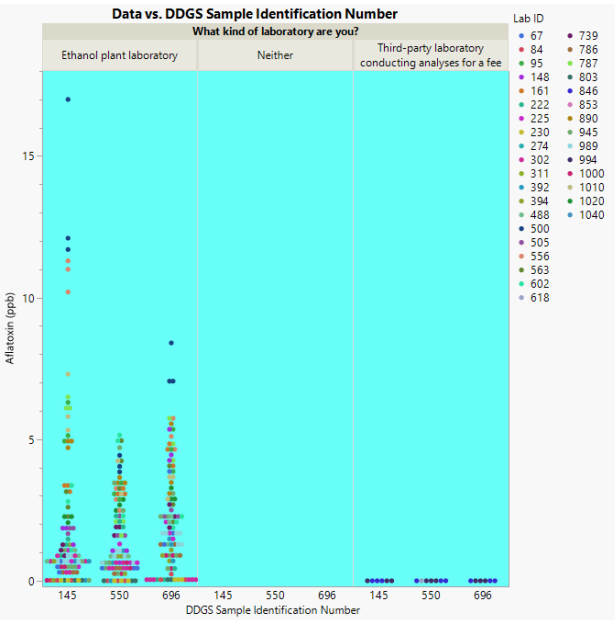


Aflatoxin

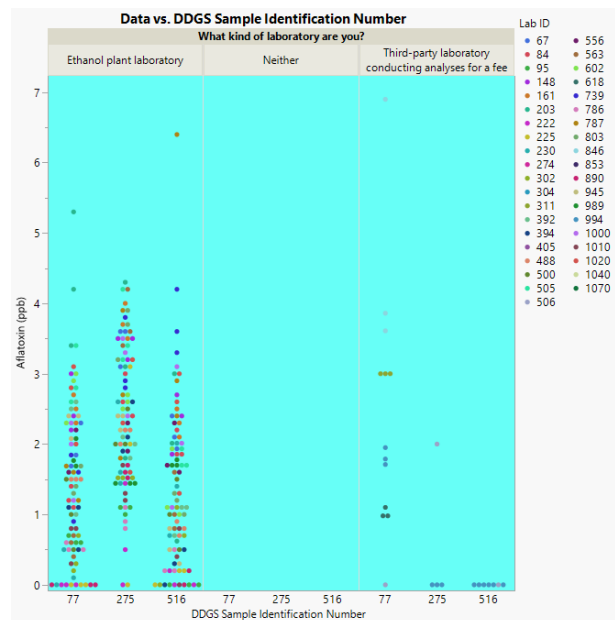


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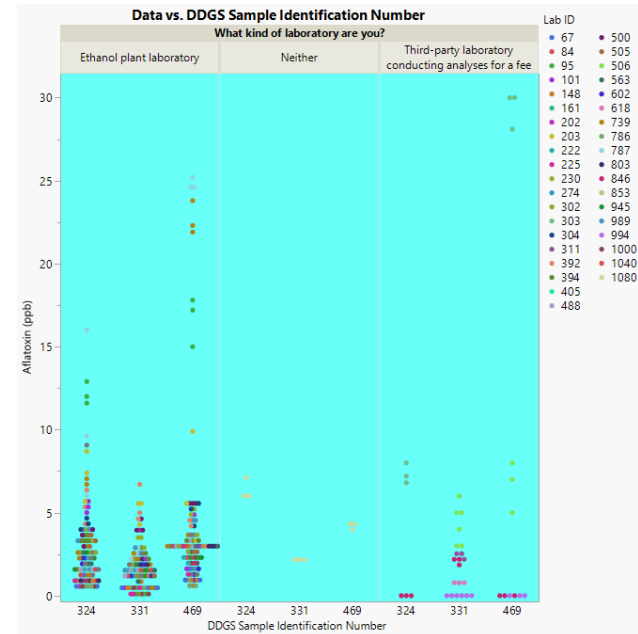
2018 Q4



2019 Q2

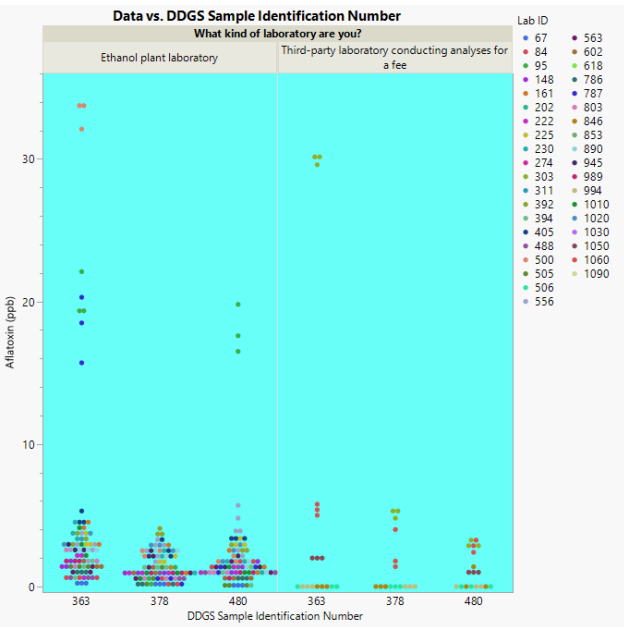


2019 Q3

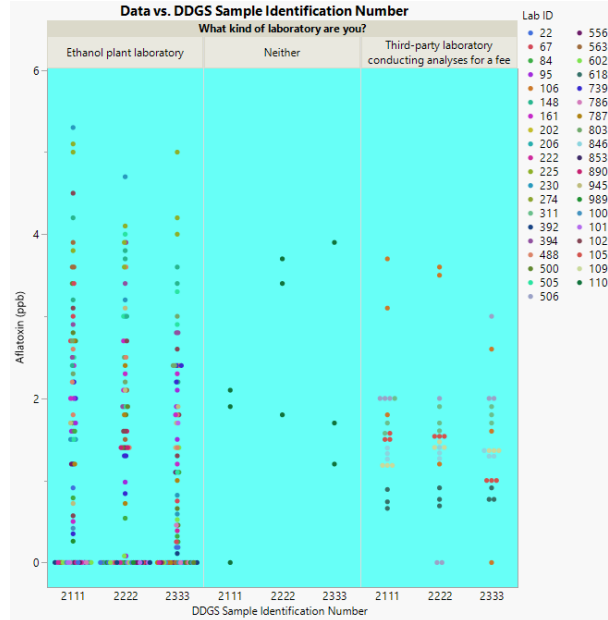


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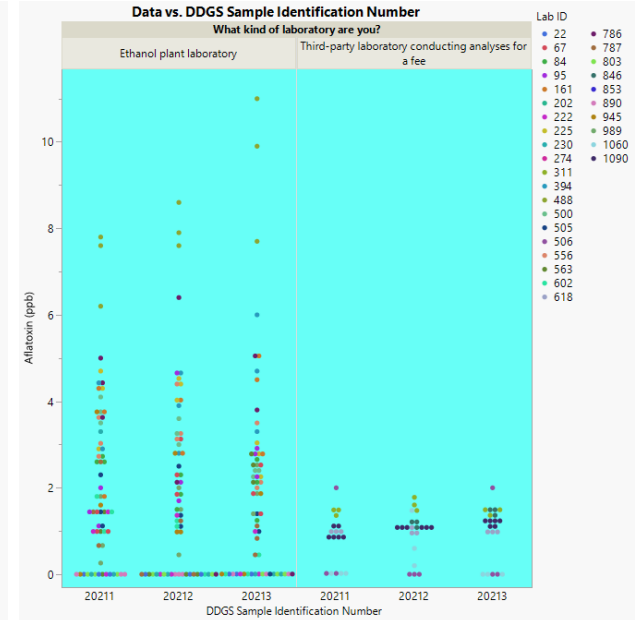
2019 Q4



2020 Q4



2021 Q3



DON

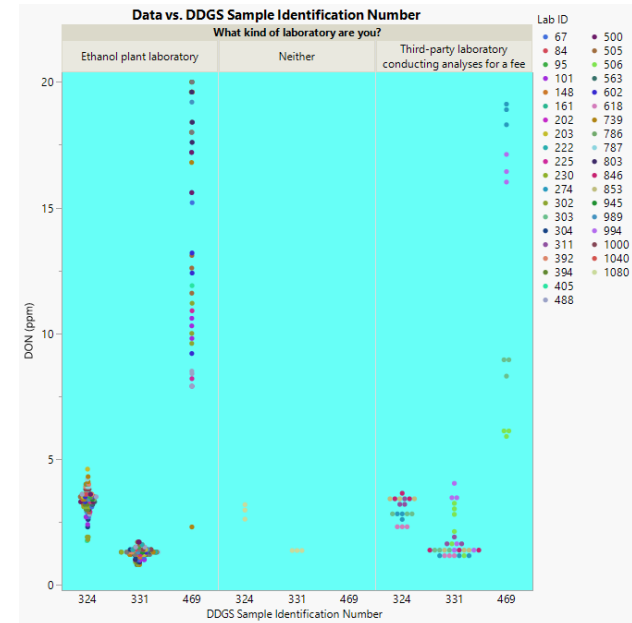
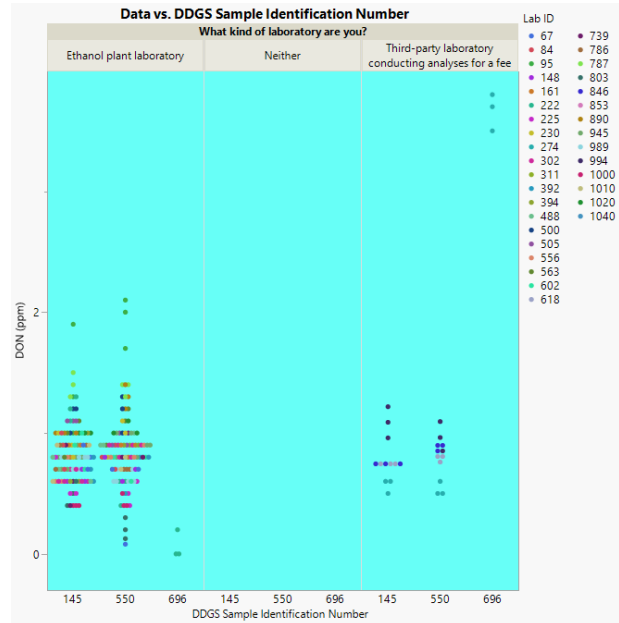
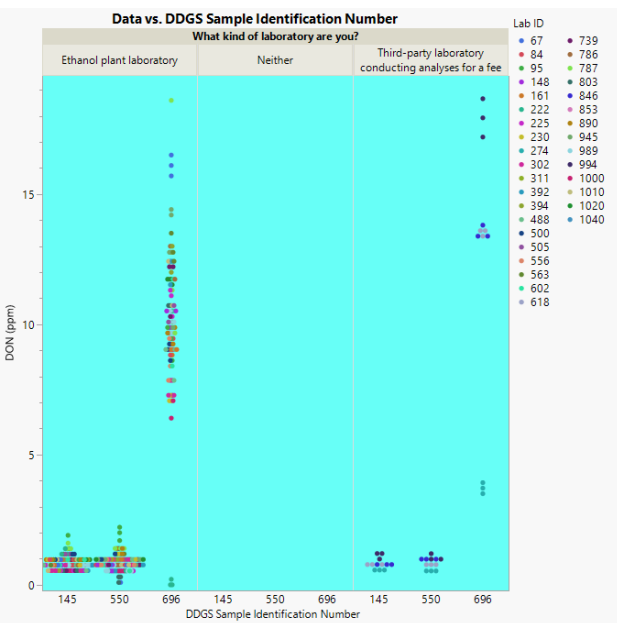


DON

2018 Q4

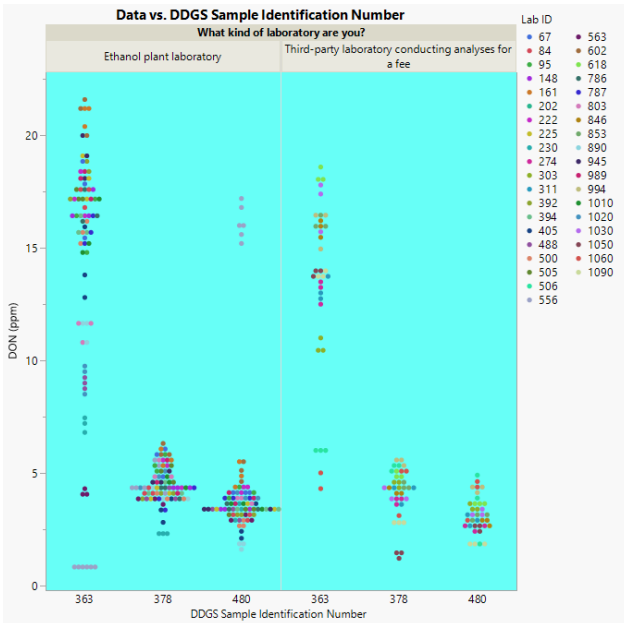
2019 Q2

2019 Q3

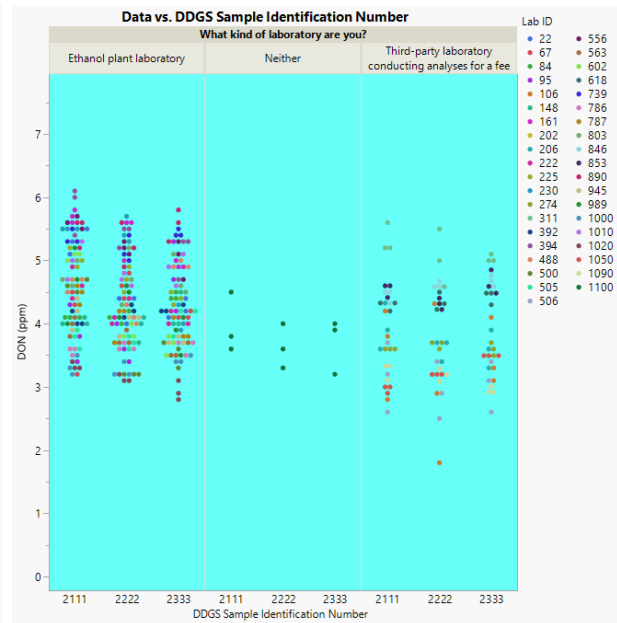


DON

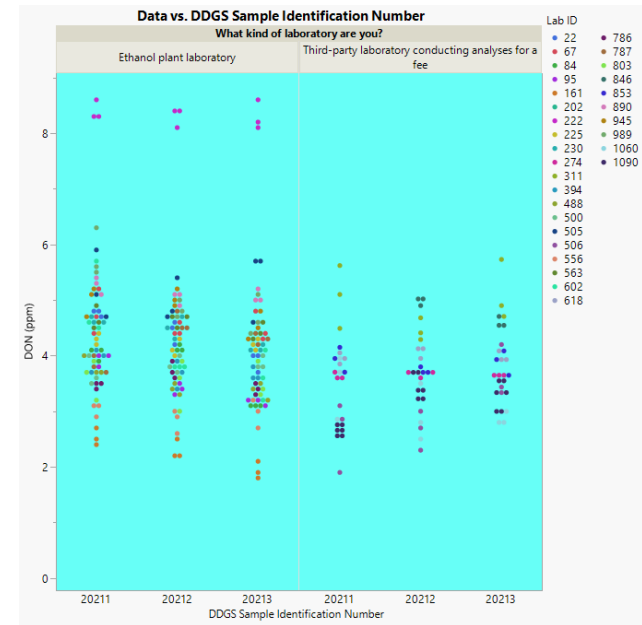
2019 Q4



2020 Q4



2021 Q3

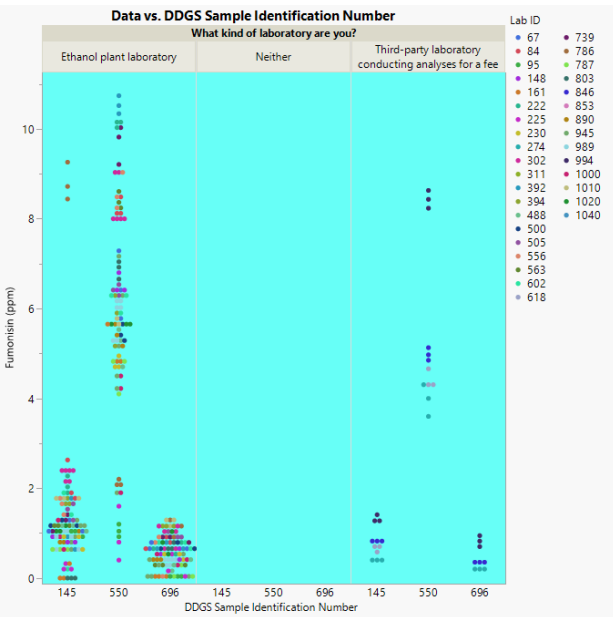


Fumonison

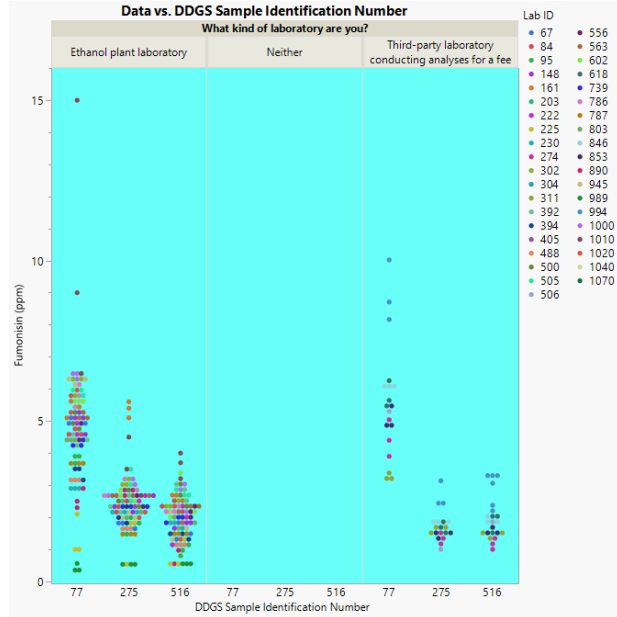


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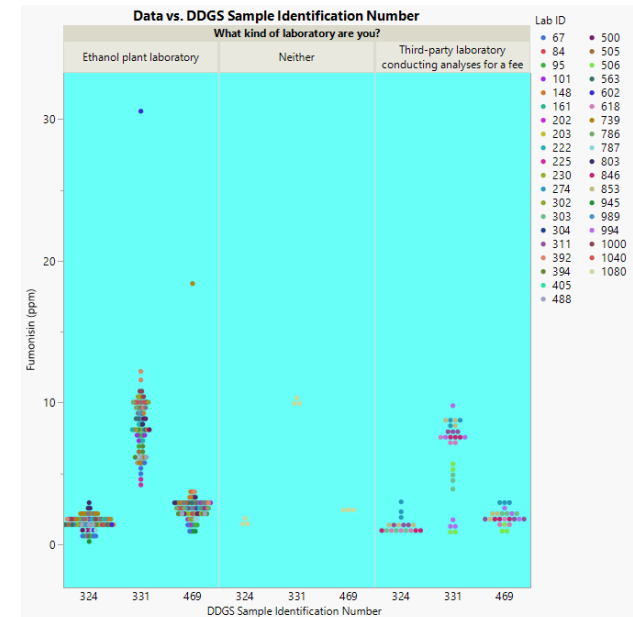
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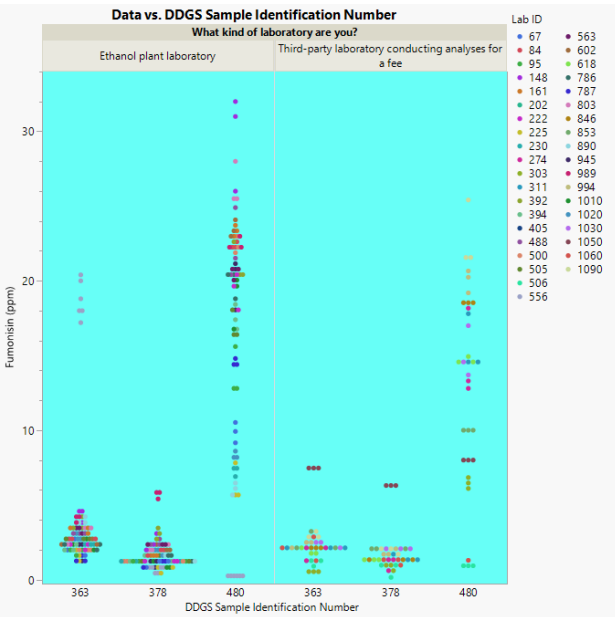


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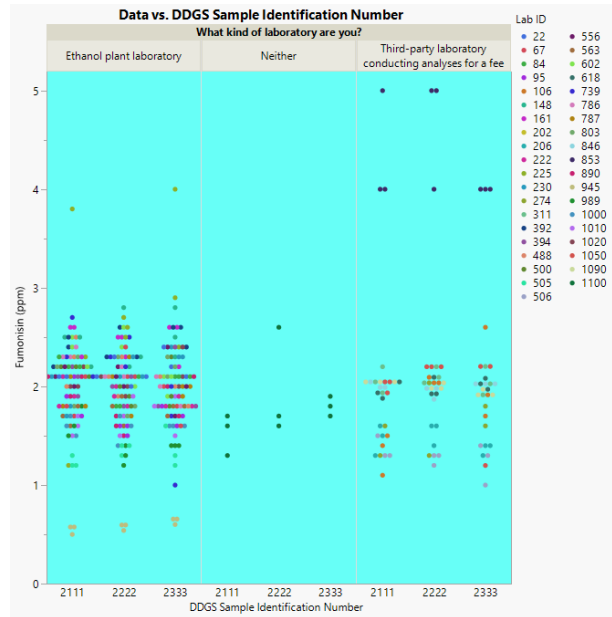


Fumonison

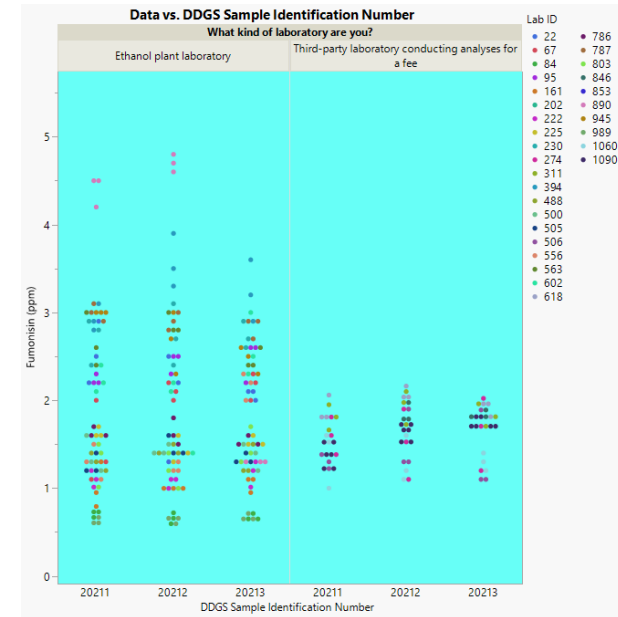
2019 Q4



2020 Q4



2021 Q3

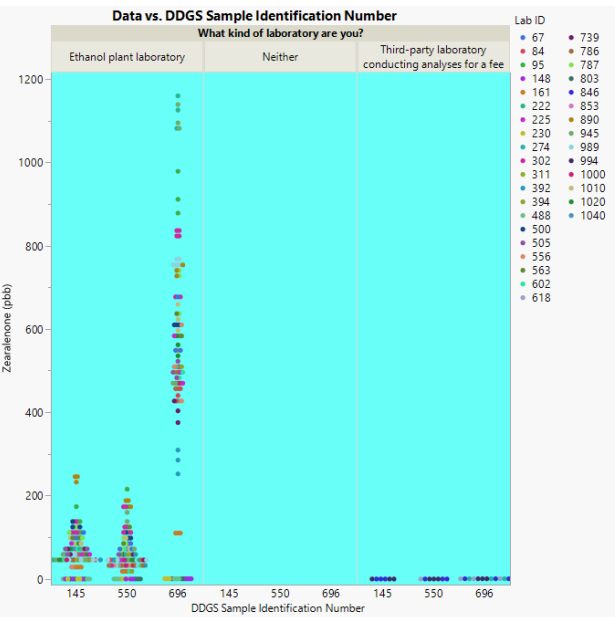


Zearalenone

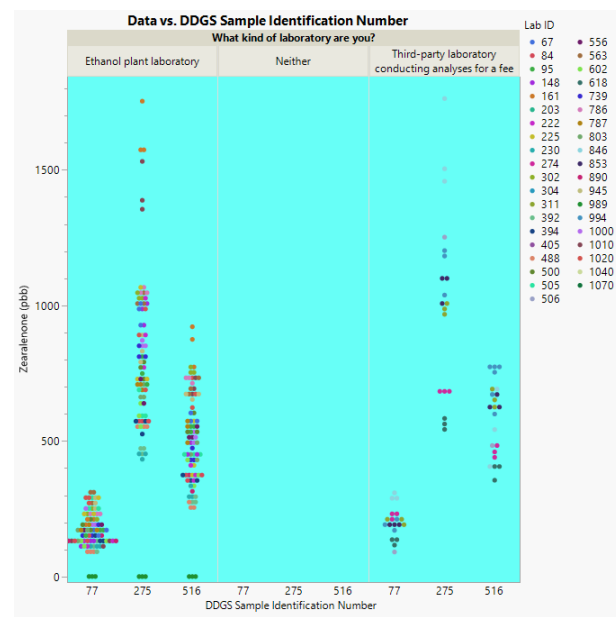


Zearalenone

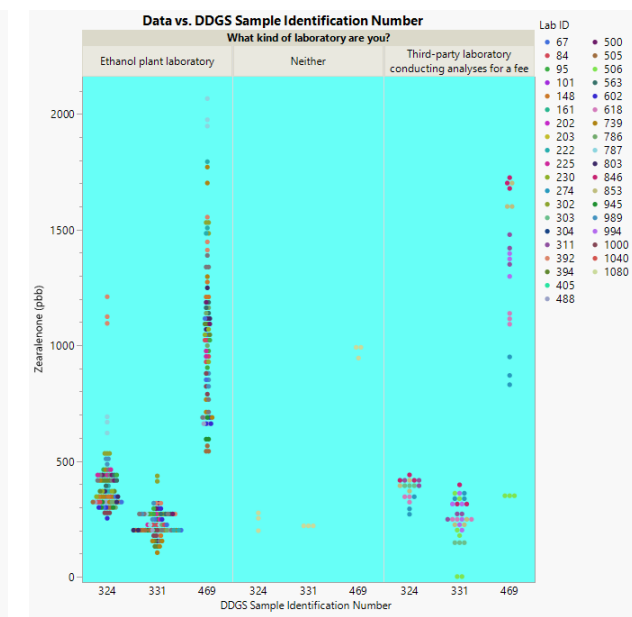
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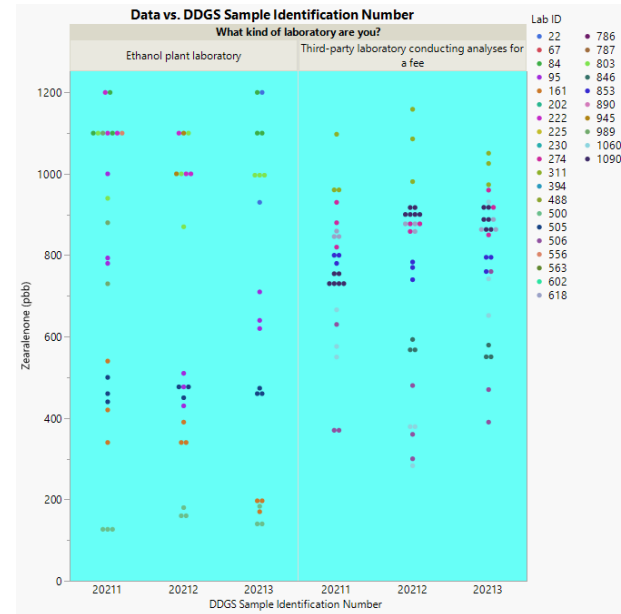
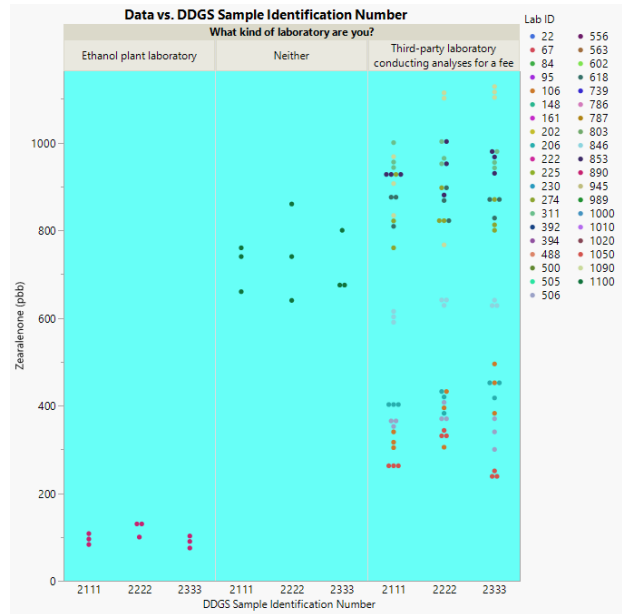
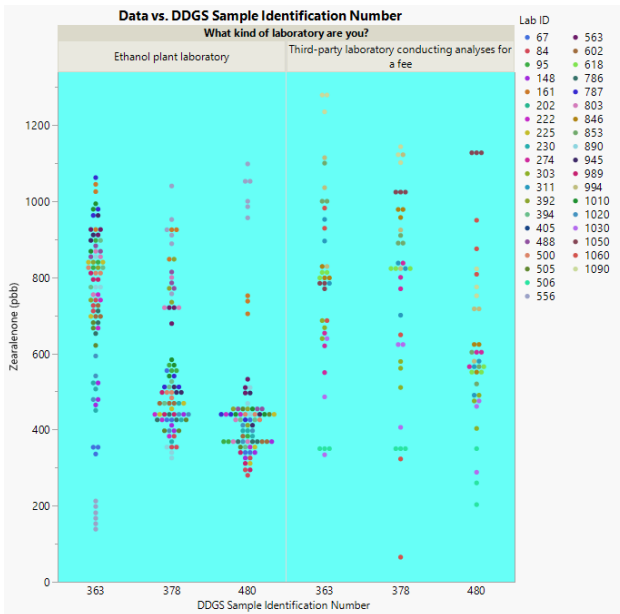


Zearalenone

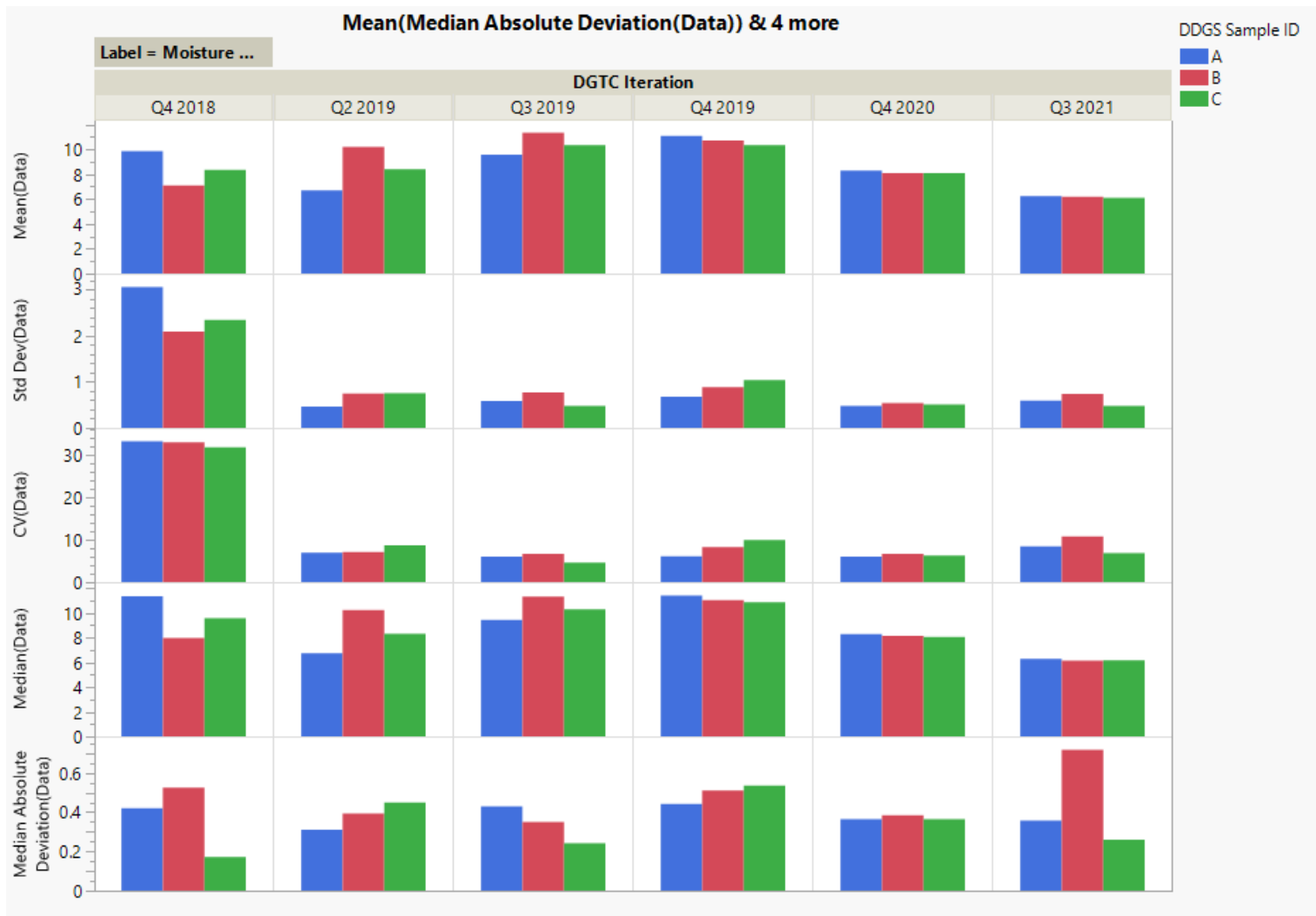
2019 Q4

2020 Q4

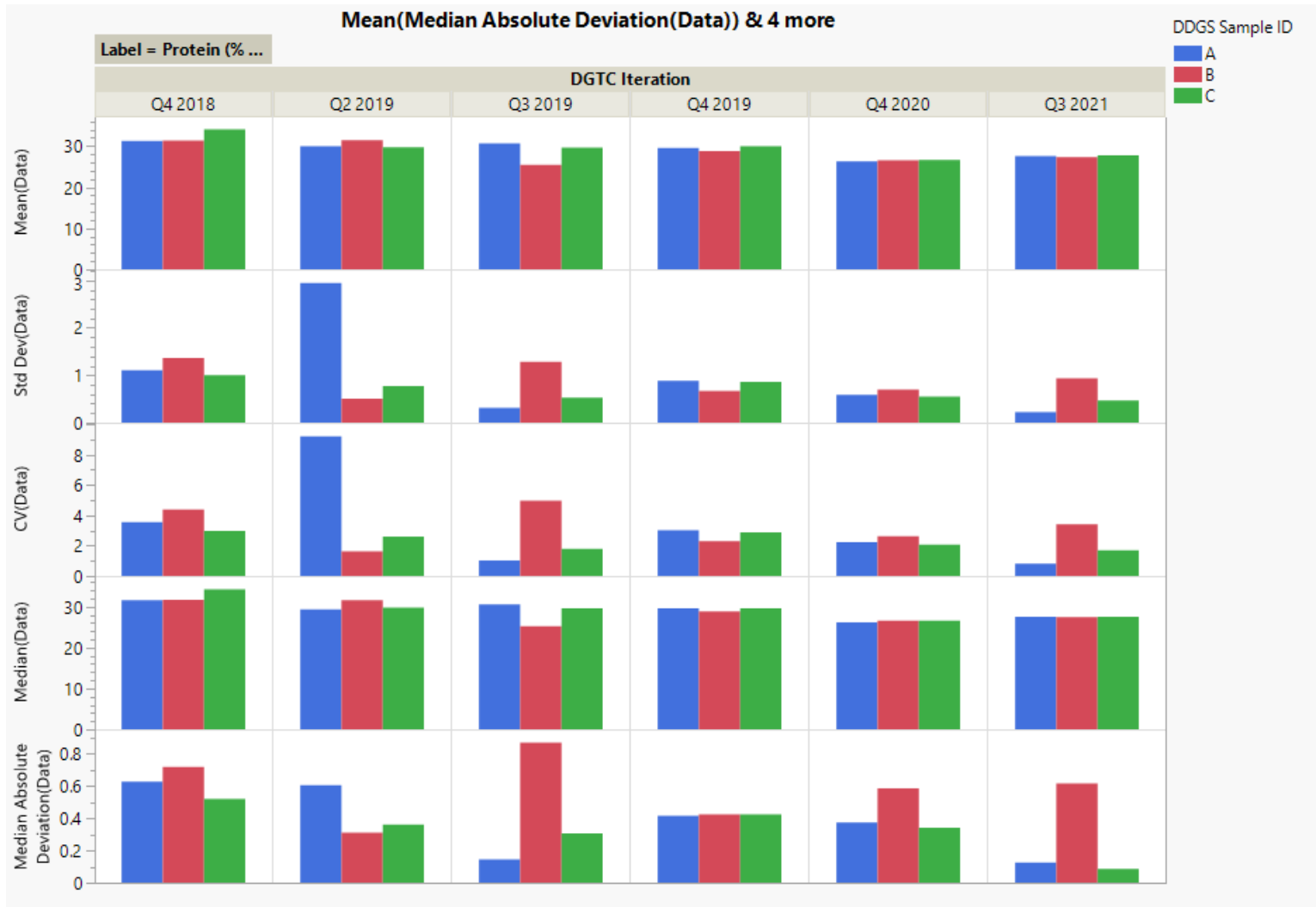
2021 Q3



Moisture



Crude Protein



Crude Fat



Crude Fiber



Ash



So What???

- Consistently inconsistent
 - Commercial laboratories / primary methods
 - Plant labs / secondary methods
 - Why?
 - Human
 - Instrument
 - Sample prep
 - Other
- Our industry needs reduced variability
 - We need increased confidence in results

So What???

- DGTC LPP is evolving
 - ASTM partnership
 - More robust
 - Error identification
 - Accuracy & precision improvements
- Conference call
 - November 9
 - For all current participants
 - Potential participants
 - If interested – contact me at karosent@iastate.edu

ASTM International

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- One of the world's largest Standards Development Organizations - global reach and influence
- Trusted, relevant, and high-quality standards
 - 30,000 volunteer members from 150+ countries
 - 90,000 customers worldwide
 - 150 main committees and 2,500+ subcommittees, covering over 90 industry sectors
- The choice for many global industries

<https://www.astm.org/STATQA/index.html>



ASTM Proficiency Testing Programs

- Statistical quality control tool - assess your lab's performance in conducting test methods
- Open to all labs regardless of location – 52% of participating labs for ASTM PTP outside U.S.
- Thousands of participants
- No need to be an ASTM member
- Programs run all year – ample time for accreditation needs





Thank you