

“THE VALUE OF LITTER MANAGEMENT – MANAGING PATHOGEN LOAD IN POULTRY LITTER”

UNIVERSITY OF
MARYLAND
EXTENSION



GROWER LUNCH BREAK NOTES NOVEMBER 4, 2020

DuPont's Animal Health Manager, **Dr. Jordon Gruber** started his talk with a laugh, excusing the fact that he will be having 'poop' jokes throughout his presentation. His contact information: Jordon Gruber, Ph.D., Jordon.d.gruber@dupont.com, 302-274-8810. Also, Robert 'Bob' Moore is a good contact for relaying information at Robert.b.moore@dupont.com

Jennifer Rhodes introduced **Dr. Gruber** stating he earned a BS from Clemson University, Ph.D. in Biochemistry at the Medical Univ. of South Carolina, and did a post doctorate in cellular growth and has his own start-up company engineers antimicrobial solutions for animal production and is now with DuPont Animal and Nutrition.

So much information covered in this talk – please take advantage of the following:

Link to watch the recorded Zoom:

https://umd.zoom.us/rec/share/JdVeZVrGnYfll0hJ5_ftSfJfDj27P8lQFnZDMEoYdmoPYFWM6qtxYXldU2_olvh.HMQwGO88BmZXKEUk

Double click on picture to see the slides from Dr. Gruber's presentation:



- **Not a product pitch** – focused on applications and empowering growers
 - He's usually in the Delmarva Region (non-Covid times)
 - The DuPont Central Innovation Hub and Central Microbiology Lab is located in Wilmington
 - "Just your regional poop expert..."
 - Good gut health is also good poop
 - DuPont has the largest database of poultry poop studies and analyses
 - With USDA, field sampling program for poultry litter

zoom Grower Lunch Breaks - Shared screen with speaker view

What are we going to cover – (it is a lot about poop)



1. Running your entire operation on poop
2. Convincing you to invest in poop
3. Next steps, without stepping in it




1. Poultry feces as an indicator for health, stress, nutrition, and management
2. Standard operating procedures for litter management, good and bad outcomes, why the time is worth it
3. Take-aways for Winter house management for bacterial pathogens in litter

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This is the time why investing resources in environmental management and its relationship to poop and the performance of your flock is so key and where that return of investment comes from

- Feces is a direct indicator of several nutritional challenges and stress. As soon as you see changes in litter, that immediately has implications of issues and stress of general health
- Bacteria: largest component of feces; constantly deposited into the environment through feces; is essential for gut function but can harbor pathogens
- Litter is the place where bacteria *and* pathogens can grow – birds will be constantly be in contact with it
- Early on for chicks, risk for bacterial infection from litter – based on the bacteria is in litter. At 21 days, their immune systems mature
- Health or pathogenic bacteria will form cycles in your houses
- A good **microbiome** can be looked at as a new brick wall – setting up a system to defend itself
 - Or it's a crumbling wall that accelerate break-down of system because pathogens take advantage of weak microbiome and cause disease: stress (heat, physical, social, production; nutrition changes; health program changes; and poor environment (accumulated moisture)
- **How to fight back against bacterial pathogens or reduce them**
 - Poor feces formations. Are you seeing issues in feces? Is it acute, on-going? Anticipated? Is it related to a known change in something? Then:
 - what does your water consumption look like
 - Recent feed delivery
 - Evidence of disease?
 - Is this happening again?
- **Start the communication as soon as possible.** Frequent checks of house-associated issues and engage in list of water-solubles
- Respond to acute events – back to basics of moisture control
 - Fans vs relative humidity vs temperature
 - Bird movement within the house – get them moving
 - Fix issues immediately – look to target zones if needed
 - Document severity of issues and how many days birds are affected

To clean out or not to clean out? Seasonality? Pathogens? Else?

Risks	Rewards
<ul style="list-style-type: none"> • Loss of microbial control in litter • Loss of cocci cycling program • Loss of composting system in litter • Risk to increased pathogens in flocks 1 post • Risk to flock-to-flock transmission issues 	<ul style="list-style-type: none"> • Physically remove pathogens • Remove poor composting material and poor litter • Reduce previous chronic infection issues • Restart proper aerobic/anaerobic cycling in litter (ammonia)

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16

- Grower toolbox for treating litter and managing bacteria
 - Management of moisture from fans, cool cells, internal temperature, and built-up litter
 - Manage prep of environment for birds before placement
 - Windrow **correctly** with temperatures and time, invest in decake, set up houses - 130 degrees
 - Prepare for changes in downtime
 - Topicals before birds are placed – first line of defense in a system
 - Think about alternatives

Take always: Relay on previous flocks and seasonality to give you a prediction for your fecal/environment for pathogens & risk
 Environmental management: it is an investment – you get what you put in...
 Know your litter strategy

JOIN US NEXT WEEK! Wednesday, November 18, at Noon

“A Fresh Look at Clean Air: Maryland Ambient Air Quality Study Roundtable”

Register at: <https://umd.zoom.us/meeting/register/tJ0kfuyhqjzpGNzp8wIhemiV6PeHRsJpxntO>

SET YOUR CALENDAR:

December 2 “Recognition of Common Broiler Diseases” – Zoetis – Dan Bautista, DVM



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