

“MANAGING CONDITIONS TO OPTIMIZE BIRD HEALTH”

UNIVERSITY OF
MARYLAND
EXTENSION



GROWER LUNCH BREAKS NOTES OCTOBER 21, 2020

The University of Delaware Cooperative Extension Agent, **Georgie Cartanza**, gave a quick paced look at poultry house ventilation and some aspects of bird health that we very helpful.

Before Georgie began, Jon Moyle welcomed and mentioned the **Maryland and Delaware COVID Relief for Poultry Farmers**. They offer \$1,000/poultry house with a \$5,000 house limit/farm with an additional \$1,500 for those that were depopulated. To take advantage go to the following links:

Maryland Farmer COVID-19 Relief Program: <https://mda.maryland.gov/pages/farmer-relief.aspx>

Delaware Announces Grant Program for Contract Poultry Growers Impacted by COVID-19:
<https://news.delaware.gov/2020/10/19/delaware-announces-grant-program-for-contract-poultry-growers-impacted-by-covid-19/>

Link to Watch Georgie's Zoom presentation:

➤ <https://drive.google.com/file/d/1TXhplrrCJmpkqLH5GeE0DoA9oo4KoT1U/view>

Link to Georgie Cartanza's Power Point slides:

➤ https://drive.google.com/file/d/1RpE_vdwaueG_wVHa1v7-yz_91SmWubJ8/view?usp=sharing

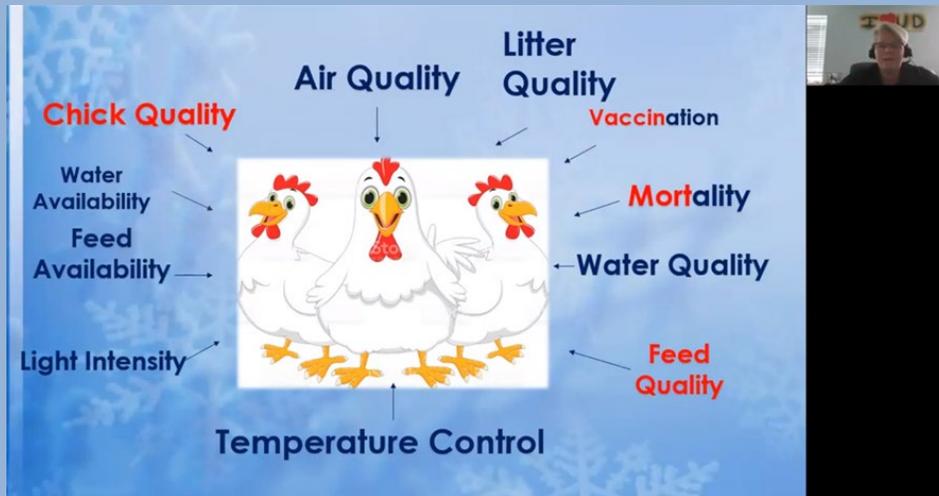
Managing Conditions to Optimize Bird Health in Cool Weather

By Georgie Cartanza, University of Delaware Cooperative Extension

Wintertime becomes much more challenging - many things have changed in the last couple of years

- * Antibiotics
- * Need to be proactive approach to management
- * Housing capacity vs production numbers
- * PIP's and extended layouts

‘The ball game has changed and has become more competitive.’



All these things contribute to the overall health of the birds

Blue things: Chicken Growers has in their power to control

Red things: Influenced by the poultry company

Vaccination - birds can be vaccinated but, if put in a house that has stressors, that vaccination will not do as well

Mortality - can receive the best chicks in the world, but if placed in an environment that is not conducive to growing well, then the chances of mortality is increased

Reducing mortality – create an environment that limits stress, keeps birds comfortable, is the most important thing poultry **growers** can do to improve overall bird health and reducing mortality

Note: Culling is an important part of animal husbandry – first three weeks – stunted, if somethings not right, it's better to have them struggle to get access to food and water.

The Goal – get most amount of pounds of meat for the least amount of feed. **What is the cost?**

- Taking the first 4 digits of your farm weight is how many pounds of feed it would take to change the conversion by 0.01 points.
- So, if farm wt. is 429,900, take first 4 digits, 4299, of feed to go from a 1.74 to a 1.73 – you would need to use 4299 pounds less feed.
- You have an investment in EACH bird. Depending on when it dies, you have an investment of feed and chick cost. How much feed are you throwing into the compost if you lose the bird early to stressors?

[\(George's slides during her talk go into great detail – take a look at the recording!\)](#)

Litter Management

- **Purpose:** **Absorbs** moisture – **Dilutes** fecal matter – **Insulates** from cool ground (minimum of 3-4") – Provides a **protective cushion** for chickens to sit on
- Cost of Poorly Managed Litter:
 - Increased bird stress
 - Higher mortality
 - Reduced weight gains
 - Reduced income
 - Higher ammonia levels
 - Higher feed conversions
 - Animal welfare is compromised (blind birds, foot pad burns)

Moisture Bank Account

Making Deposits:

- Water from birds drinking
- Poor ventilation
- Seepage in the house
- Combustion of fuel (1 gallon H²O for every 1 gallon propane)
- Birds going to bathroom
- Poor drinker management
- Poor job of ventilation

Bird Health is affected if we do a Good Job with moisture bank account:

- Dryer litter – more comfortable birds
- Less Ammonia - less respiratory stress and disease
- Better Gut Health – less Coccidiosis and Necrotic Enteritis
- Less Stress – all leads to **less mortality**

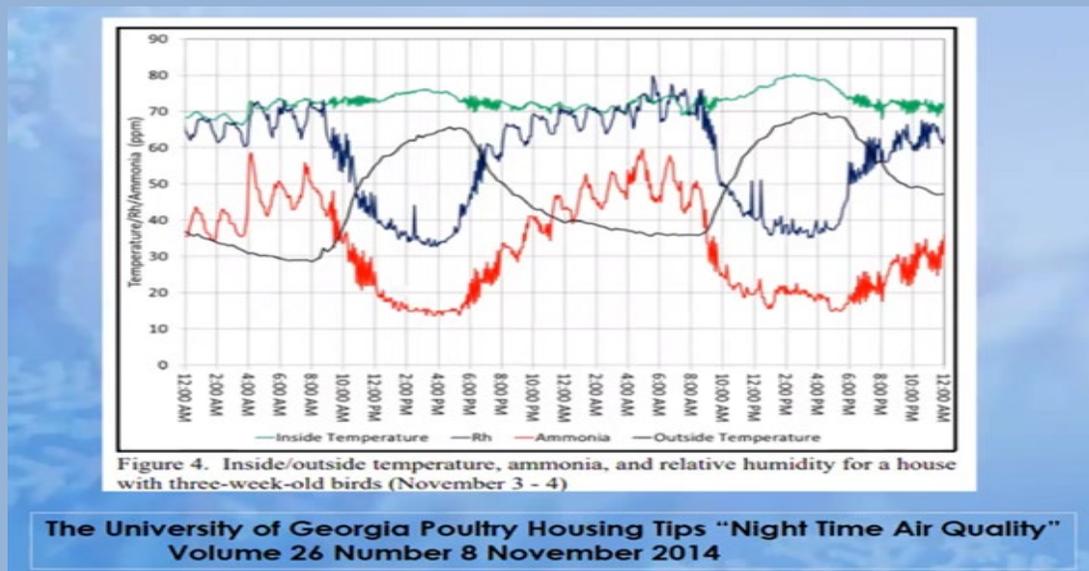
Ammonia Levels

Effects of Ammonia on Trachea

- Cilia in the bird trachea catches dust and dirt in the air
- When we expose birds to high ammonia levels, the Cilia slow down and can actually be burned off and made shorter by exposure.
- Respirator disease may occur – chickens may shake their heads – LT disease (eyes turn football shaped)
- If we can limit stressors on birds, lot less susceptible to getting viruses
- Air Sacculitis is a respiratory disease that may be caused by respiratory challenge caused by ammonia

Should I cut back on nighttime ventilation?

U of GA diagram as the outside temp heats up in daytime, ammonia and humidity levels go down but at night, they go up. Reducing ventilation at night when they bed down is tempting, but have a positive effect at night by NOT reducing ventilation at light, especially when the lights are on. If we don't, we are exposing the birds to more ammonia than you can imagine. Veteran growers noses may not be accustomed to ammonia and we may not realize how much birds are being exposed to.



Creating an Environment at Bird Level for Optimum Health

Ammonia Blindness and Foot Pads

Birds can recover from ammonia blindness, but they are never going to be the bird they could have been, so you never have the efficiency of taking that feed and turning it into body wt.

Pad burns may limit bird to get to food and water and again can cost you body wt. in the long run.

House Tightness

Keep house gaps closed. Can affect tunnel

Pics of doors with gaps, tunnel fan louvers, fan patches needed, tunnel curtains with holes, vent boxes, check dust patterns, foundations, ceiling holes. If you can see light coming through holes, you are losing pressure and control.

Clean vent boxes – to help air flow and minimize exposure of dust on birds

Circulating Fans

Heat rises/ammonia stratifies towards the birds

- Circulating fans can be beneficial even in minimum mode continuously, redistributes heat at the ceiling and have it come back down to bird level.
- Georgie used the example of putting wet clothes in a dryer. Even with heat, if it doesn't agitate, the clothes will take forever to dry. This is how circulating fans can be beneficial, even in minimum ventilation mode.

Heater Maintenance

- Do everything to create an environment to be less stress on birds. If your heater is covered in dust/dirt, and is getting overheated and kicking out, you can't create a good consistent temperature at bird level. Make sure to clean.

Radiant Heater Reflector Shields

- The devil is in the details. Clean heater reflectors to increase your fuel optimization. The underside gets overlooked a lot when cleaning is done.

With a picture example, Georgie shows that just one gap in the curtain, a heater runs much longer with lower temp, not achieving the best temp for the chicks, who are huddled up, not eating/drinking. Take the time to close all gaps as soon as possible. On the opposite side of the house, curtain is closed, birds are well distributed and active and comfortable where the gaps are closed.

Gut Health

- Health Challenge - High Stress - Soothe the Gut
- Need good absorption of food, for nutrition from feed, to make sure they stay healthy with least amount of stress

Feed Management

- First 2 weeks are establishing health, wt. gain. Feed conversion is the best with chicks. Feed presentation has to be palatable to the birds.

Poopology

- Get to know what bird poop should look like and when it's not, what you need to correct.

Drinker Management

- Are your drinker lines getting too low or too high pressure leads to wet floors – you need the right drinker pressure at the right time to optimize bird comfort

Water

- Clean drinker lines between flocks (Proxyclean/CID 2000)
- Flush drinkers
- Trigger nipples
- Check PH
- Shock well (once/year) then make sure to flush for 6 hours

Good Animal Husbandry

- There is no magic bullet
- Temp control limit fluctuations, adjust for bird comfort
- Qir quality – limit exposure to ammonia levels greater than 22ppm reduces weight, increases feed conversion, increases mortality
- Moisture & Litter management
- DO NOT let birds run out of feed – check and fix any disruptions. If birds get out of regular feed patterns, wts. will fluctuate and it's a missed opportunity for you to get best out of your birds
- Easily accessible water

“LUCK IS WHEN PREPARATION MEETS OPPORTUNITY!”

JOIN US NEXT WEEK!



[November 4 “Value of Litter Management” – DuPont – Dr. Jordon Gruber](#)

Register at: <https://umd.zoom.us/meeting/register/tJ0kfuyhqjsgNzp8wlhemiV6PeHRsJpxntO>

SET YOUR CALENDAR:

[December 2 “Recognition of Common Broiler Diseases” – Zoetis – Dan Bautista, DVM](#)



(We would like to know if you are experiencing problems getting into the Zoom meetings – please email soscar@umd.edu or call one of the Extension Team members)

See all Grower Lunch Break Notes at: <https://extension.umd.edu/poultry/publications/grower-lunch-break-notes>

