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North Carolina Poultry Industry Joint Area Newsletter

SPRING 2015

INSIDE THIS ISSUE:

2015 NC Broiler Supervisor's Short Course

Dr. Edgar O. Oviedo

Prestage Department of Poultry Science, North Carolina State University, Raleigh NC

On April 8, the service tech personnel from the main broiler companies with business in North Carolina participated in the 2015 NC Broiler Supervisor's Short Course. This is an annual event that was held this year at the Union County Agricultural Center in Monroe, North Carolina. This year the program included talks related to fan selection and maintenance, getting ready for the summer, litter management to improve paw quality, research updates on foodpad dermatitis and enterococcus spondylitis, infectious bronquitis situation in NC, new distribution of Extension Services, water line and cool cell pad maintenance, and brooding management for Ross 708.

The group of speakers included Dr. Sanjay Shah from NC State University, Blake Gibson from Jones-Hamilton Company, Dr. Luke Borst from NC State University, Dr. Scott Gustin from Tyson Foos Inc., Dan Campeau and Richard Goforth from NC Cooperative Extension, Jesse McCoy from IVESCO, Carlton Collins from Aviagen, and Dr. Edgar O. Oviedo from NC State University.

During the same event the 2015 Broiler Service Persons Awards were announced. This award is recognition of the Integrator Companies, the NC Poultry Federation, and NC State University to those individuals that have done an outstanding service for the Companies and their growers in the previous year. The following is a picture of the award recipients with Richard Goforth on the left and Dan Campeau on the right from NC Cooperative Extension. From left to right, we have Derek Phillips from Tyson – Monroe, Justin Fields, Ed McDonald, and John Hamilton from Mountaire Farms, Wesley McKenzie from Perdue – Candor, Tony High from Pilgrim's – Marshville, Wesley Swain from Wayne Farms, and Jason Hackney from Pilgrim's – Sanford.

During the meeting, the first section was about Management. Dr. Sanjay Shah listed and described factors that affect fan efficiency such as engines, belt and screen types, cones, and maintenance.

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Dr. Shah also discussed the proper house management for the summer, insulation, cool cell pad management and timing to use tunnel ventilation. Blake Gibson presented key points for litter management that could help to minimize paw quality issues. Blake talked about litter types, best management practices for waterline, ventilation, and litter. Dr. Edgar Oviedo showed results of three research projects aiming to explore management practices that could reduce footpad dermatitis and paw quality.

Dr. Oviedo explained how suboptimal incubation can increase the susceptibility footpadermatitis since it affects the normal development of different footpad skin layers. It was also discussed the role of brooding conditions on final paw quality at the plant. Broilers from whole house brooding were shown to have less severity of footpad lesions than those raised under partial house brooding in three experiments. Other factors that were observed to improve paw quality in the studies presented by Dr. Oviedo were litter amendment, proper house ventilation, and nipple drinker types.

In the second section about poultry diseases, Dr. Luke Borst talked about the etiology of kinky back caused by *Enterococcus cecorum*. Dr. Borst presented current knowledge about the disease, the efforts to identify strains of the bacteria, vaccine development for breeders, and factors that may increase the incidence of this new disease that include suboptimal incubation, intestinal health issues, some feed additives and growth rate. Dr. Scott Gustin discussed the current situation of bronchitis infectious disease in North Carolina and the plans to minimize the number of outbreaks, including biosecurity, vaccination programs and some management practices.

The only two Poultry Area Specialized Agents in the State, Dan Campeau and Richard Goforth explained how they will handle in the near future the Services offered by the Cooperative Extension in the whole State. Ten years ago, there were five Poultry Area Agents to cover this important industry that has expanded contributing with more than 1/3 of the state agriculture value. However, due to government budget constraints, changes in demographics and objectives of the Cooperative Extension, this number has decreased to three positions. It is expected that a new Area Specialized Agent will be hired for the Eastern part of the State in the next months.

In the afternoon session about house management, Jesse McCoy talked about water line management, reducing biofilm and proper water line cleaning. Jesse highlighted the regulations about using products registered with EPA to clean water lines and details to put attention on labels. Jesse also clarified adequate use of each product for water cleaning and stressed the importance of flushing lines to avoid leaving residues in the water lines after cleaning. Finally, Carlton Collins did a good overview of aspects like feed, light, air temperature, water and space that may affect brooding for Ross 708 broilers.

Avian Influenza: The Threat is Real

What Is AI?

Avian influenza (AI) viruses can infect chickens, turkeys, pheasants, quail, ducks, geese and guinea fowl, as well as a wide variety of other birds. Migratory waterfowl have proved to be a natural reservoir for the less infectious strains of the disease known as low pathogenicity avian influenza (LPAI). Pathogenicity is the ability to cause disease. AI viruses can be classified into low pathogenicity (LPAI) and high pathogenicity (HPAI) based on the severity of the illness they cause. HPAI spreads extremely quickly and kills most infected birds. Once the virus is established, it can spread rapidly from flock to flock. However, some LPAI virus strains are capable of changing into HPAI viruses. This is why all types of AI are considered a major threat to poultry. The goal of poultry growers should be to keep all forms of AI from becoming established in the U.S. poultry population.

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Report Sick Birds at:

1-866-536-7593

OR

NC Department of Agriculture

919-733-7601

What Are the Signs?

The clinical signs of birds affected with all forms of AI may show one or more of the following:

- Sudden death without clinical signs
- Lack of energy and appetite
- Decreased egg production
- Soft-shelled or misshapen eggs
- Swelling of the head, eyelids, comb, wattles, and hocks
- Purple discoloration of the wattles, combs, and legs
- Nasal discharge
- Coughing, sneezing
- Lack of coordination
- Diarrhea

Note: Many birds with LPAI (the mild form) may not show any signs of disease.

How Is AI Spread?

Exposure of poultry to migratory waterfowl, to poultry from countries where AI is present, to poultry equipment, and people pose risks for introducing AI into U.S. poultry. Once introduced, the disease can be spread from bird to bird by direct contact. AI viruses can also be spread by manure, equipment, vehicles, egg flats, crates, and people whose clothing or shoes have come in contact with the virus. AI viruses can remain viable at moderate temperatures for long periods in the environment and can survive indefinitely in frozen material. It is important to know the warning signs of bird diseases such as avian influenza (AI) or "bird flu" and exotic Newcastle disease or END (a disease with signs similar to AI). While it may be hard to tell if your bird has one of these diseases, if you know the signs, you may be able to tell if something is wrong. Early detection can help prevent the spread of disease.

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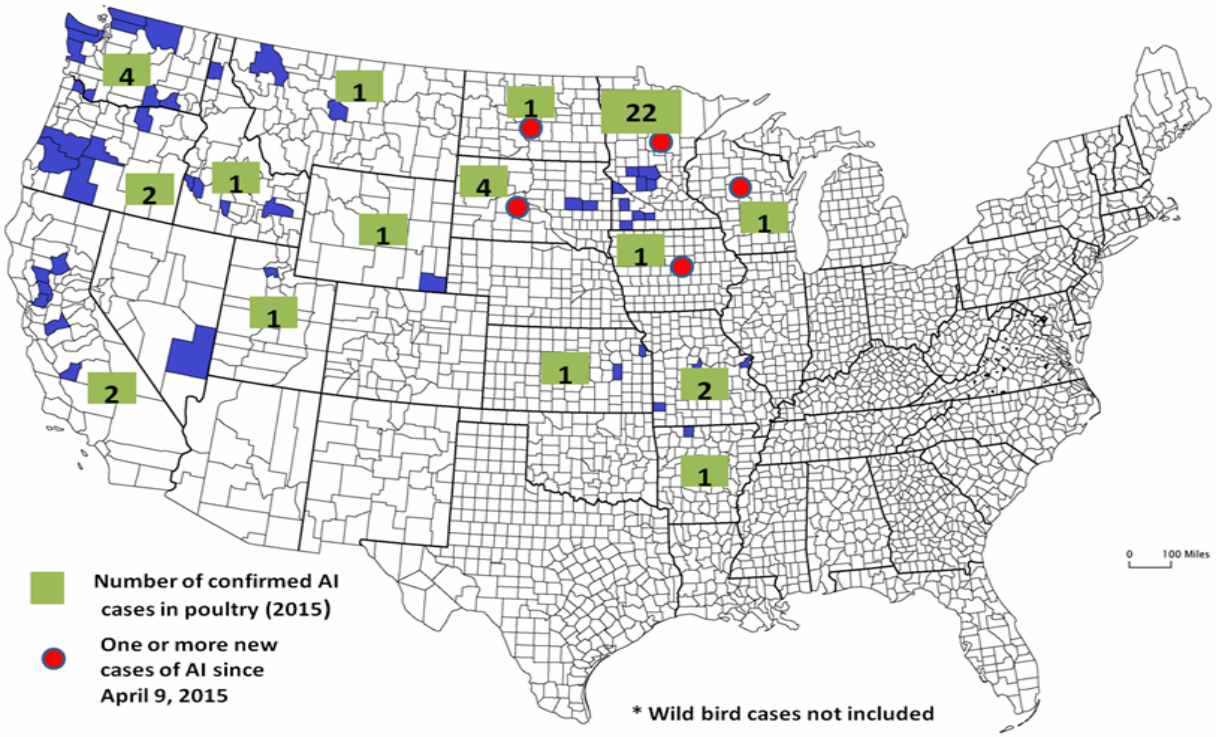

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Protecting your birds is the best defense against AI. The following preventative measures can help your birds stay healthy if practiced regularly:

Keep It CLEAN.

If you practice these steps and make them part of your bird care routine, you will be doing a lot to help the health of your flock. These are a few important things to remember:

Wash your hands thoroughly before entering your bird area and before and after working with your birds.

Scrub your shoes with disinfectant. This may seem like too much work, but your boots and shoes can easily track disease to your birds. Or keep a separate pair of shoes or boots near your cages to wear only when working with your birds. Wear clean clothes that you use only when you feed and care for your birds.

Clean and disinfect equipment that comes in contact with your birds or their droppings, including cages and tools. This includes your own equipment.

Keep it AWAY.

Restrict access to your property and your birds. Wild birds can carry diseases that could spread quickly to your flock. Here are some things you can do to keep disease away from your birds:

If **visitors** have birds of their own, do not let them near your birds. Avoid visiting farms or other households with poultry.

If you've been near **other birds or bird owners**, such as at a feed store, pet store, or bird club meeting, clean and disinfect your clothing, shoes, cages, and equipment before going near your birds.

Properly dispose of dead birds. Bird deaths are a fact of life. But if one of your birds dies, call the county extension agent, State department of agriculture, or your veterinarian for guidance.

Precautions For Cage-Free Poultry

It is recommended that poultry producers who raise birds in outdoor, non-confinement systems should try to prevent contact with wild birds and wild bird droppings.

Birds should not be allowed **access to surface water** that could potentially transmit AI or other avian pathogens through contamination with wild bird excrement.

Implement preventive measures for high-risk areas. As much as possible keep birds indoors.

**** Birds should not be allowed access to surface water that could potentially transmit AI and other avian pathogens through contamination with wild bird excrement. ****

Biosecurity ideas for the Commercial Poultry Grower to reduce the risk of High Path Avian Flu

By Dan Campeau

Understand that the natural reservoir is migratory waterfowl for High Path Avian Flu.

1. Have one set of foot wear designated to work inside Poultry houses- May want to keep in back of truck.
2. Do not wear the same footwear to Ag Supply Stores, local restaurants, Churches or wherever poultry growers congregate that you would to wear inside your chicken houses.
3. Use foot baths at entrances to each chicken house.
4. Use designated footgear to work on farm….i.e. do not work around farm ponds and pond water that have been contaminated with duck or geese feces using same footwear that you normally use to do your commercial poultry chores with.
5. Do not drive your farm trucks near edges of farm ponds if you are driving in close proximity to your chicken houses. You do not want your commercial birds exposed to wild duck or geese feces.
6. Limit visitors to your poultry houses.
7. Make sure all your neighbors comply with NC law stating that all farm animals (including poultry) have to be contained on owner's property.
8. Ask your feed drivers if they are washing their tires off between farms.
9. Step up your rodent control program.
10. Do not let wild birds inside your chicken houses. Fence them out if you have a problem.
11. In case of emergency have a designated place on your farm to bury your birds so it will follow state law and not affect the ground water quality on your farm.

Are You a Fan of Your Fans?

By Richard Goforth

With the ever increasing cost of energy no matter the form it is essential producers consider the operational cost of equipment as a key component in any purchasing decision. For poultry growers one key area to practice this idea comes when selecting fans for a house. It is recommended that growers consider fans that have a minimum efficiency of at least 20 cfm/watt at a .10 static pressure. This means the fan moves 20 cubic feet of air per minute using 1 watt of electricity under 1 inch of water pressure. It is important that fans are judged based on at least a .10 static pressure since they must operate at this level or below and efficiency is reduced by increasing static pressure. Main tunnel or exhaust fans have been shown to run approximately 4000 hours per year on a large bird broiler farm and about 3500 hours for small bird broiler farms. Considering that reasonably efficient fans use about 1kwh per hour of operation the bill adds up fast. Lets look at an example of cost savings between to 48" 20,000 cfm fans:

Fan A = 17 cfm/watt uses	**Fan B = 22 cfm/watt uses**
1.18Kw x .$09/Kwh =	**.91Kw x $.09/Kwh =**
$.106 / hour x 4000hs =	**$.082 / hour x 4000hs =**
$ 424 / year to run	**$328 / year to run**

This example shows that by increasing efficiency by just 5cfms/watt, we save almost $100/year to operate Fan B.

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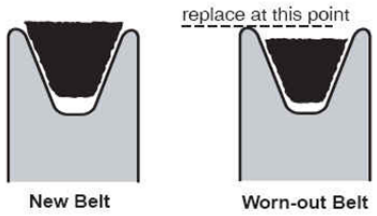
Of course this improvement is not free more efficient fans tend to cost more up front but if fans are selected carefully they will pay for themselves in only a year or two of operation. Fan selection is not only important during initial construction but these principles should be considered when adding or replacing worn fans to a house. Even if you only replace one fan in a house you can realize significant energy savings if that fan can be utilized as one of the primary exhaust or tunnel fans that the controller turns on first.

Fan selection criteria should also include factors such as warranty, brand reputation and durability, and availability of service and parts, but remember that a fan you can't afford to operate is no bargain. Information on fan performance can be found at www.bess.uiuc.edu. Each year Bess Labs test fans the manufactures submit and they publish the results for all to see. This site lets anyone compare multiple fans directly to each other so you can see apples to apples as the saying goes.



Once you have selected your fans it is important to also maintain them so they will remain as efficient as possible and prolong their operational life. It is important to remove dust and dirt buildup regularly, and replace or repair broken screens, guards, and shutters. Check belt tension and wear and adjust or replace as needed. Proper fitting belts should ride high in the V groove as shown in this diagram.

Plantings and other debris should be kept at a distance of 10ft for every 1ft of fan diameter i.e. 4ft fan should have 40ft of clearance to prevent placing backpressure on the fan that will decrease efficiency and put extra stress on the motor. If you have any questions about fan selection contact your Area Poultry Agent with NC Cooperative Extension for assistance.

Information for this article was based on several publications from Michael Czarick, Extension Engineer, UGA. mczarick@uga.edu www.poultryventilation.com

Poultry and 4-H Competition

The North Carolina Avian Bowl and Judging competitions will be held on July 7th, 2015 at the NC State Animal and Poultry Teaching Unit. Registration for the 2015 North Carolina Avian Bowl will be open on May 1st, 2015. Additional information can be found on:

http://poultry4hyouth.ces.ncsu.edu/poultry-and-4-h-competition/

Presentations and Outdoor Cookery will be held in conjunction with 4-H Congress on Saturday, July 18th, 2015. Additional information can be found on:

http://poultry4hyouth.ces.ncsu.edu/poultry-and-4-h-competition/

There will be opportunities during 4H Congress for attendants to take campus and field lab tours across the campus and extended facilities. This will truly provide students an opportunity to fully see what NCSU and CALS has to offer and expose them to a multitude of options for careers. These types of activities take an enormous amount of planning and through collaborative efforts and volunteers. With everyone's participation, the activities enable children to develop personally and professionally. Celia Gibbs, age 11, Secretary of the Barnyard Bandits 4-H Club, says, "I now love to do presentations and speeches, but I wasn't always like that. Before I started 4-H I was super shy, but now I can talk to six foot tall judges in sterile white lab coats. The skills I took away from my experiences are amazing. In school these skills are helpful too. I won class representative, and get good grades when I have to give oral reports and presentations. This year was great. I even got to go to 4-H summer camp. That was an awesome experience too. I learned valuable skills and had an amazing time. I had an extraordinary year."

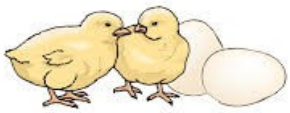
North Carolina Youth Market Turkey Show

The 2015 Youth Market Turkey Show will take place on October 16th, 2015! During the month of March well over 300 youth around the state registered online for the Youth Market Turkey Show which is sponsored by the NCSU Prestage Department of Poultry Science. This event is very popular, accommodating youth between the ages of 5-18 as of June 1, 2015 and who will be enrolled in grades K-12 on the day of the show.

The first 300 youth who registered and paid their $10 registration fee by June 1st will pick up their hen poults on Thursday and Friday, June 11th and 12th from 9:00-5:00 at the NC State Animal and Poultry Teaching Unit. The hen poults this year will be donated by Butterball Inc. of Goldsboro, NC. We are extremely grateful of their support of this program and with the youth who have an interest in growing the champion turkey!

On October 14th, the youth will bring their best hen to show for check-in at the poultry tent located at the North Carolina Fairgrounds. Most importantly every participant must bring their **MARKET TURKEY ENRTY FORM!** This form will include their updated mailing address as well as the youth's social security number, so premium checks can be issued after the show. The youth do not have to be present at check-in. Agents, teacher or parents may check the birds in on the contestant's behalf. We will be checking birds in from 8:00AM-5:00PM at the poultry tent. Classes will then be created by age for the show that will begin on Friday, October 16th at 9:00AM. More information can be found on the 4-H and Youth Website:

http://poultry4hyouth.ces.ncsu.edu/youth-market-turkey-show/



4-H Embryology

Embryology

Historically, the month of April has been a busy month for the embryology program and 2015 has been no different. Requests were made as early as February and continue to be made. Due to inclement weather and school closings, there were worries that the eggs would not be properly attended to, but with the help of teachers, principals, and even the janitorial staff, one particular embryology program was still successful even during the closings. As you can see below, the students were happy with the final outcome. So far dozens of eggs have been provided by NCSU Chicken Educational Unit as well as our local commercial hatcheries. A special thanks goes to a Prestage Poultry Science Alumnus, Clay Lindley and Amick Farms, for their ability to accommodate the last minute needs of the embryology program and help complete a rather large order for eggs.

We would like to thank each of our volunteers, agents, faculty and staff who provide the constant support to all of the programs that provide invaluable opportunities to the students who participate in each of these events.

NC State University A&T State University COOPERATIVE EXTENSION
Empowering People · Providing Solutions

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