

North Carolina Poultry Industry Joint Area Newsletter

North Carolina State University
Prestage Department of Poultry Science
234 D Scott Hall, Box 7608, NCSU
Raleigh, NC 27695-7608
Telephone: 919-515-5407
Fax: 919-515-7070
Website: <http://www.ces.ncsu.edu/depts/poulsci/>

Issue Editor: Dan Campeau
Issue Layout: Brenda Talton

Spring

2014

2014 NC Broiler Supervisor's Short Course

Dr. Edgar O. Oviedo

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

On April 9, the service tech personnel from the main broiler companies with business in North Carolina participated in the 2014 NC Broiler Supervisor's Short Course. This is an annual event that was held this year at the Moore County Agricultural Center in Carthage, North Carolina. This year the program included talks related to alternative bedding sources, management of big birds, design and management of modern tunnel ventilated houses, effects of house size on house design and energy consumption, an update on reovirus, prevention of necrotic enteritis and one special session on grower-service relations. The group of speakers included Dr. Jesse Grimes from NC State University, Dean Creasey from Cobb Vantress Global Tech Team, Dr. Joseph Purswell from USDA-ARS, Dr. Tahseen Abdul-Aziz from Rollins Diagnostic Lab., Warren Harris from Hubbard Breeders, Dr. Mitch Owen from Mitchen Leadership and Organization Development, and Dr. Edgar O. Oviedo from NC State University. (*continued on page 2*)



In This Issue:

2014 NC Boiler Supervisor's Short Course	1
Poultry Summer Science Institute	3
NC State Fair Youth Market Turkey Show.....	3
National 4-H Poultry and Egg Conference.....	4
Livestock Indemnity Program.....	5
A.S.P.I.R.E.....	6
Environmental Footprint of Poultry Meat and Eggs.....	7
Contacts.....	8

(NC Broiler Supervisor's Short Course – continued)

During the same event the 2014 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 in order from left to right with Robert Ford, Executive Secretary of NC Poultry Federation on the left and Dr. Mike Williams on the right. From left to right we have Billy Rollings from Pilgrim's-Marshville, Tommy Harris from Pilgrim's-Sanford, Cory Jones from Mountaire, Derek Phillips from Tyson-Monroe, Mike Ogburn from Perdue-Rockingham, John Hamilton from Mountaire, and Kalyn Reed from Tyson-Monroe.

During the meeting, the first section was about Management. Dr. Jesse Grimes discussed the possible materials that growers could use in NC to receive chickens. Dr. Grimes described advantages and disadvantages of each product related to their water holding capacity, availability, costs and managements associated with each litter type. Additionally, Dr. Grimes indicated the impact of diverse materials on performance and health especially on paw quality. Dr. Grimes concluded indicating that pine shavings and saw dust will probably continue as the benchmark test. Dean Creasey gave a good overview of all factors that may affect the performance of broilers. Dean emphasized the importance of incubation, transportation and good placement to obtain optimum final results. Dean also discussed the role of new equipment, electronic controllers and proper equipment maintenance for good flock performance.

Dr. Joseph Purswell demonstrated in his talks how house design for high air velocities must account for fan performance as affected by factors such as installation location and obstructions. In his research, Dr. Purswell has measured that static pressure increases with air velocity and shows the largest increase immediately downstream of the inlet. Among Dr. Purswell's findings, it can be concluded that wider houses are more efficient at developing higher air velocities; in a tunnel ventilated house, obstructions such as brood curtains or ceiling deflectors also create increases in static pressure at the fans and reduce fan performance, consequently the only provide local increases in air velocity. One of the most important findings of Dr. Purswell's research is that air velocity must be assessed by multiple readings at bird level across the house, preferably in multiple locations down the house.

This year a new special session was included in this event. Two talks were dedicated to improve grower-service person relations. Warren Harris, who is a grower and at the same time a tech representative from Hubbard Breeders used a historic review of the poultry industry to explain the challenges of growers that may affect the relationships with service people. Warren indicated that a service person has to be an effective communicator in all phases of production. The service person should understand and convey all the relevant information of modern poultry production to the producer in a way that is appreciated by the producer. This includes the best management practices that a service person should make the grower understand. Warren stated that every service person will have challenges in dealing with certain producers. Warren said "We are not in the chicken business as much as we are in the people business". Dr. Mitchell Owen complemented Warren's talk with an excellent description of the importance of building trust and relations.

On the disease section, Dr. Aziz gave an excellent review reovirus infection and the different lesions that can be observed in birds affected by these viruses. Dr. Aziz recommended the perfect samples to take to the lab. He explained what lab analyses are conducted to diagnose reovirus and how this infection is confirmed. Dr. Aziz showed the differences between reovirus infection and enterococcus infections. Finally Dr. Oviedo gave a review of necrotic enteritis and explained the possible factors that can cause this intestinal problems and how understanding these issues can help to prevent the disease.

Poultry Science Summer Institute

What is PSSI???

Debbie Ort

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

The Poultry Science Summer Institute (PSSI) is a five-day, four-night conference sponsored by the NC State Prestage Department of Poultry Science for any high school student interested in a career in the poultry industry. The institute will broaden one's understanding of the educational disciplines, scholarship opportunities, careers and industries relating to the field of poultry science. Started in 2007, the PSSI program has been a huge success and numerous alums of the camp are now current NC State students or presently hold positions in the poultry industry.

PSSI will be held this summer from July 27-31 on the NC State campus. Applications are now being accepted with a closing date of May 2nd. Upon receiving your acceptance notice, a \$50 registration fee will be required which includes your lodging on campus, all meals, field trips, workshop materials, great goody bags and entertainment.

For more information and registration about this fun and exciting educational experience, please visit our website.

<http://poultry4youth.ces.ncsu.edu/poultry-science-summer-institute/>.

NC State Fair Youth Market Turkey Show

During the month of March over 300 youth registered online for the Youth Market Turkey Show sponsored by the Prestage Department of Poultry Science. This very popular event is open to all youth across North Carolina between the ages of 5-18 as of June 1, 2014 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 will pick up their hen poulets on Thursday and Friday, June 12-13, from 9:00-5:00 at the NC State Animal and Poultry Teaching Unit. The hen poulets this year will be donated by Prestage Farms, Inc. of Clinton, NC. We are extremely grateful of their continued support of this program and with the youth who have an interest in growing the champion turkey!

On October 15th, the youth will bring their best hen to the show for check-in at the poultry tent located on the North Carolina Fairgrounds. Most importantly every participant must bring their **Market Turkey Entry Form** that will be emailed to them before this day.

(continued on page 4)

(NC State Fair Youth Market Turkey Show- continued)

This form will include their updated mailing address should it had changed since registering online, and the youth's social security number, so premium checks can be issued after the show.

Registering with the Fair is not necessary. The online registration in March and paying the fee completed the registration process. The youth do not have to be present at check-in. Agents, teachers or parents may check the birds in on the contestant's behalf. We will be checking birds in from 8:00AM to 5:30PM at the poultry tent. Classes will then be created by age for the show that will begin on Friday, October 17th at 9:00AM. More information about the show can be found on the 4-H and Youth Website.
<http://poultry4hyouth.ces.ncsu.edu/youth-market-turkey-show/>

Youth From Across the State Represent North Carolina At National 4-H Poultry and Egg Conference

*Kathy Bunton, Area Specialized Agent, Poultry & 4-H Youth Programs Coordinator,
North Carolina Cooperative Extension*

North Carolina was well represented at the 2013 National 4-H Poultry and Egg Conference held November 20th & 21th in Louisville, Kentucky. The event was held in conjunction with the North American International Livestock Expo. Eleven 4-H'ers as well as Extension Agents, coaches, and parents, traveled to Louisville to participant in this annual event.

Representing North Carolina in the Poultry Judging contest was the state winning 4-H team from Robeson County. The team was comprised of Kristen Barnes, Zachary Grainger, Kayla Allen, and Kelsey Robeson. Frankie Farbotko who was assisted by Shea Ann DeJarnette, Extension Agent, 4-H, from Robeson County, coached the team.

The North Carolina Avian Bowl team representing North Carolina was from Franklin County and coached by Alesia Moore, 4-H volunteer and club leader. Members of Franklin County team were: Joey Moore, Taylor Farley, Joseph Adams, and Kenny Richardson. The team placed 7th in the nation.

Other State 4-H'er winners representing North Carolina included: Rebecca Dietrich, Wake County, participating in Turkey Barbeque and placing 2nd, Alec Linton, Wayne County, participating in Chicken Barbeque and placing 2nd, and Chawki Deida, North Hampton County participating in Egg Preparation and placing 8th in the nation. (*continued on page 5*)

All conference attendees participated in pre-competition tours of Louisville which included stops at Church Hill Downs and The Louisville Slugger Bat Factory. They enjoyed pizza and bowling on Wednesday night as they mingled with other participants from across the nation. The event concluded Thursday night at the awards banquet where winners were recognized.

(National 4-H Poultry and Egg Conference – continued)



I would like to personally thank the sponsors of all the 4-H Youth Poultry Programs that make our state competitions and this trip possible. They include the North Carolina Poultry Federation, NC Egg Association, Farm Credit Associations of North Carolina, The North Carolina Breeder Hatchery Association, and the Wilkes Area Poultry Association.

Livestock Indemnity Program

The 2014 Farm Bill authorized the Livestock Indemnity Program (LIP) as a permanent program to provide benefits to livestock producers (including contract growers) for livestock deaths in excess of normal mortality caused by adverse weather. A contract grower must have had possession of the eligible livestock on the day the livestock died and a written grower contract. A contract grower's LIP payment will be reduced by the amount of monetary compensation received from his/her contractor for the loss of income suffered from the death of livestock under contract. Producers may apply to receive LIP benefits for losses that occurred from October 1, 2011 at local FSA offices. Final date to submit an application for 2012, 2013, or 2014 losses is January 30, 2015. The producer must include a copy of the grower contract if he/she is a contract grower and any other supporting documents required for determining eligibility.

Applicants must provide adequate proof that the eligible livestock deaths occurred as a direct result of an eligible adverse weather event. Supporting documents must show evidence of loss, current physical location of livestock in inventory and location of the livestock at the time of death.

Contact a local FSA county office for additional information.

A.S.P.I.R.E.

ACT Supplemental Preparation in Rural Education

The A.S.P.I.R.E. Program was designed to help bridge deficits in rural high school students' performance on the ACT College Entrance Examination in order to increase the number of students pursuing higher education. This program is available to all high school rising sophomore and juniors with a ≥ 3.2 GPA.

Consistent Growth on the ACT

Since
2012

398

Students have taken the Course

- The A.S.P.I.R.E. Course is in 32 different counties
- There are 44 different A.S.P.I.R.E. instructors
- Students are welcome to go to A.S.P.I.R.E. Courses outside their county

Check our website for course availability near you!

<http://harvest.cals.ncsu.edu/aspire>

An A.S.P.I.R.E. Course Includes:

- The Princeton Review ACT study manual
- The Princeton Review 1,296 practice question booklet
- 4 ACT practice exams with score analysis/breakdown
- The Princeton Review Selective College Admissions Booklet
- 30 hours of class time instruction with an ASPIRE Instructor



The A.S.P.I.R.E. Course helps students learn the tactics and strategies of how to tackle the ACT. The course cost \$165 initially with a \$100 refundable deposit after a student participates in all of the classes and practice tests.

Contact Rachel Huffman
for more information at
rehuffma@ncsu.edu
919.515.2627

To apply online please
visit our website:
<http://harvest.cals.ncsu.edu/aspire>

@ACTSupplementalPreparationinRuralEducation
 @ASPIRENCSATE

The Environmental Footprint of Poultry Meat and Eggs.

Kenneth E. Anderson, Professor, Poultry Extension Specialist
Prestage Dept. of Poultry, North Carolina State University

Animal agriculture is being challenged from many entities for its production model, animal care, management practices, disease prevention, and environmental management. This criticism is coming from both within the animal agricultural fields of research, consumers, government regulatory agencies, as well as external forces led by various animal rights groups, environmentalists, and activist vegetarians (Anderson, 2012). To objectively address some of these challenges policy makers are encouraged to utilize scientific findings related to the carbon footprint of the poultry industry. It is essential that science based evidence is considered when developing policy associated with production agriculture and the realities of food production needs to meet the demand to provide food to a growing population (Anderson, 2013). Dewey (1938) indicated that much of the commentary associated with these issues uses wording that is couched negatively even though the truth is positive. The reality is that the productivity and health of the livestock grown for food has never been better. Research in both the US and EEC since 2006 has shown that in the animal production sectors, poultry meat and egg production appears to be the most environmentally efficient, followed by pig meat and sheep meat (primarily lamb) with beef the least efficient (Williams et al., 2006). However, Dr. Williams stressed that Global Warming Potential (GWP) varied depending on the different types of poultry farming methods. Using the egg layer industry as an example Anderson et al. (2013) indicated that today's laying hens are in general smaller, have less mortality, have higher and more persistent levels of production, produce larger eggs with better shell quality, and are more efficient commercial layers in the middle of the 20th century. Pelletier et al. (2014) reported that on a per-kilogram of eggs produced basis, the environmental footprint of the U.S. egg industry in 2010, versus 1960, was: 71% lower in greenhouse gas emissions; 71% lower in eutrophying emissions; 65% lower in acidifying emissions. These research groups found that feed efficiency, feed composition, and environmental management were key components in minimization of the carbon footprint and subsequent emissions.

Much debate has focused on egg production systems and environmental impacts. Williams et al. (2006) indicated that if the egg industry moved towards all cage production, GWP would fall by 10% as compared to going all free range would increase GWP by 10%. They also showed that organic egg production requires 14% more energy than non-organic and increases most environmental burdens by 10% to 33% (except pesticides), but the land area needed more than doubles. Comparing non-organic systems, keeping 100% hens caged incurs 15% less energy than 100% free range, with similar differences for most other environmental burdens, although the housing resource is 10% higher for caged birds and land use 25% less. The overall impact for converting to all organic production systems would result in a 40% increase in GWP. The primary reasons were organic systems for egg production require more energy, and the birds have a lower feed conversion (eat more feed). Feed accounts for most of the energy required in poultry production agriculture and is a key driving factor for GWP.

If our objective is to provide a growing global need for affordable high quality animal protein products (such as eggs) with minimal environmental impacts to society it is essential that all scientific evidence is considered in an objective forum by all impacted stakeholders

Anderson, K.E. 2012. The ever changing landscape of animal production practices. National Extension Workshop: "Change & Challenge: What Lies Ahead for the Poultry Industry?" July 9, 2012. *Poultry Sci. Suppl.* 91:4

Anderson, K.E., G. B. Havenstein, P. K. Jenkins, and J. Osborne. 2013. Changes in commercial laying stock performance, 1958-2011: thirty-seven flocks of the North Carolina random sample and subsequent layer performance and management tests. *World's Poultry Sci. J.* 69: 489-513, September 2013.

Dewey, J. 1938. The Ethics of Animal Experimentation. American Medical Association, Bureau of Health and Public Instruction, Chicago, IL.

Pelletier, N., M. Ibarburu, and H. Xin. 2014. Comparison of the environmental footprint of the egg industry in the United States in 1960 and 2010. *Poultry Science* 93 :241–255 <http://dx.doi.org/10.3382/ps.2013-03390>

Press release (January 22, 2014) Comprehensive Study Finds that the Environmental Footprint of the U.S. Egg Industry Has Fallen Sharply over the Last 50 Years Due to Improved Production Techniques, Champaign, IL— According to the results of a new study published in *Poultry Science*

Williams, A.G., Audsley, E. and Sandars, D.L. (2006) *Determining the environmental burdens and resource use in the production of agricultural and horticultural commodities*. Main Report. Defra Research Project IS0205. Bedford: Cranfield University and Defra. Available on www.silsoe.cranfield.ac.uk, and www.defra.gov.uk

ANIMAL WELFARE REGULATIONS AND FOOD PRODUCTION, Kenneth E. Anderson, Chapter 11 in the “Guide to US Food Laws and Regulations”, Second Edition. Edited by Patricia Curtis. C _2013 John Wiley & Sons, Ltd. Published 2013 by John Wiley & Sons, Ltd. Pp.227-238

Contacts for the North Carolina Poultry Industry Newsletter

On-Campus:

Mike Wineland, Ph.D., Department Extension Leader
Department of Poultry Science, NCSU
www.ces.ncsu.edu/depts/poulsci/
email: mike_wineland@ncsu.edu
telephone: 919-515-5529

Field Faculty:

Kathy Bunton, Area Specialized Agent, Poultry
*Iredell, Wilkes and Alexander Counties
<http://iredell.ces.ncsu.edu>
email: kathy_bunton@ncsu.edu
telephone: 704-878-3154

Dan Campeau, Area Specialized Agent, Poultry
*Chatham, Alamance, Davidson, Guilford, Harnett, Lee, Moore and Randolph Counties
<http://chatham.ces.ncsu.edu>
email: dan_campeau@ncsu.edu
telephone: 919-542-8202
cell: 919-548-9895

Richard Goforth, Area Specialized Agent, Poultry
Anson, Cabarrus, Montgomery, Richmond, Scotland, Stanly and *Union Counties
<http://union.ces.ncsu.edu>
email: richard_goforth@ncsu.edu
telephone: 704-283-3743
cell: 704-363-2359

James Parsons, Area Specialized Agent, Poultry
*Duplin, Bladen, Columbus, Cumberland, Greene, Hoke, Jones, Lenoir, Onslow,
Robeson, Sampson and Wayne Counties
<http://duplin.ces.ncsu.edu>
email: james_parsons@ncsu.edu
telephone: 910-296-2143