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Feed Cost/ton w/o color ($)	317.50
Feed cost /lb meat (c)	27.85
Days to 4.6 lbs	38.00
Chick cost / lb (c)	5.47
Vac-Med cost/lb (c)	0.05
WB & ½ parts condemn. Cost/lb	0.21
% mortality	3.59
Sq.Ft. @ placement	0.86
Lbs/sq. ft.	7.43
Downtime (days)	18.00

Data for week ending November 9th, 2013

Poultry Housing Tips: Relative Humidity...The Best Measure of Overall Poultry House Air Quality*

Michael Czarick and Dr. Brian Fairchild

Cooperative Extension, College of Agricultural and Environmental Sciences, University of Georgia, Athens, GA

*Published in Poultry Housing Tips University of Georgia Cooperative Extension Service Vol. 24, No. 2, February 2012

Knowing how much to ventilate during cold weather is crucial to a poultry producer's bottom line. Ventilating too little can lead to poor air/litter quality, resulting in bird health and performance issues. Ventilating too much can lead to drafty, dusty conditions and high heating costs. To best determine minimum ventilation fan runtime, farm managers should ideally monitor the three most important air quality variables: carbon dioxide, ammonia and relative humidity. (*cont. on next page*)

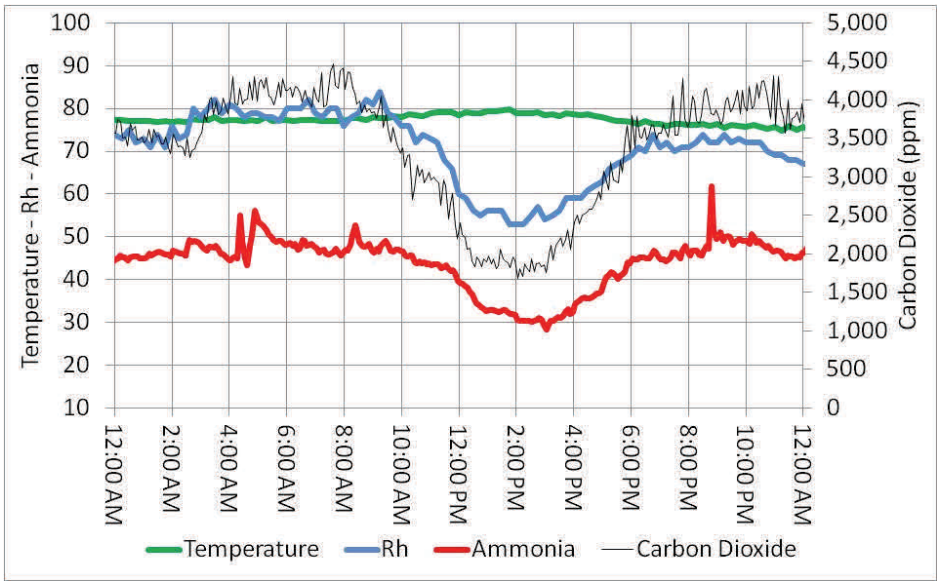

Figure 1. Temperature, relative humidity, carbon dioxide and ammonia levels in a house with 21 day old birds (December 8)

Carbon dioxide is produced by both the birds and the house's heating system. High carbon dioxide concentrations can lead to lethargic chicks and reduced weight gains and therefore should be kept below 5,000 ppm (ideally below 3,500 ppm). High ammonia concentrations can lead to poor feed conversions, reduced weight gains, and increased susceptibility to disease. In order to maximize bird performance and health, ammonia concentrations must be kept below 30 ppm (ideally below than 20 ppm) throughout the flock. Last but not least, relative humidity should be kept between 50 and 70%. Lower relative humidities will tend to result in a dusty house and high heating costs while higher relative humidities can lead to wet litter and high ammonia concentrations. Having meters to measure carbon dioxide, ammonia and relative humidity allows farm managers to set their minimum ventilation fans so they ventilate just enough to maintain proper air quality without over ventilating and driving up heating costs.

As you might suspect the problem with measuring all three air quality variables is cost. A reasonably accurate and reliable carbon dioxide meter typically costs between $300 and $500. Most ammonia meters used in the poultry industry cost between $500 and $1,000. The problem is their accuracy is questionable, require frequent calibration, have sensors that typically have to be replaced yearly and they generally cannot be left in a house for extended periods. On a more positive note, monitoring relative humidity is a fairly simple and inexpensive proposition. A reasonably accurate relative humidity meter that is capable of recording daily maximum and minimum relative humidity typically costs between $50 and $150. A relative humidity sensor can be added to most controllers for less than $300 and enables the controller, if the producer desires, to continually make changes to minimum ventilation rates to ensure the relative humidity stays within a specified range.

Though having access to all three types of meters would be helpful, realistically the only meter farm managers need to assess overall poultry house air quality is one that measures relative humidity. This is because for most of a cold weather flock, ammonia and carbon dioxide concentrations tend to

closely follow relative humidity. That is, if the relative humidity is high, carbon dioxide and ammonia levels will tend to be high. If the relative humidity is low, carbon dioxide and ammonia levels will tend to be low as well. The close relationship among ammonia, carbon dioxide and relative humidity tends to be strongest with older birds and weakest during the first week or two of the flock. This is due to the substantial amount of carbon dioxide produced by most heating systems and the use of litter treatments which can result in a situation where the relative humidity is low and carbon dioxide high or the relative humidity is high and ammonia concentrations are low.

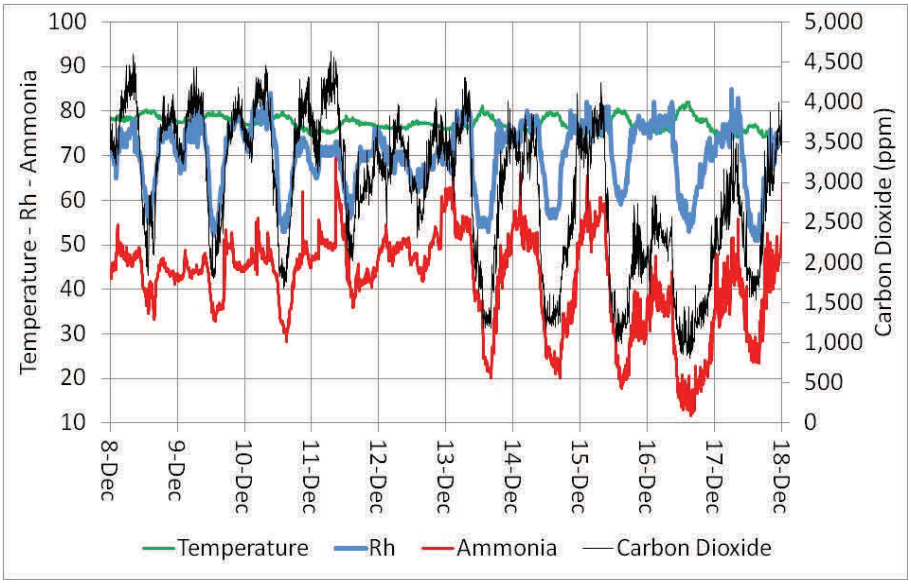

Figure 2. Temperature, relative humidity, carbon dioxide and ammonia levels in house with birds from day 21 to 28.

The close relationship among carbon dioxide, ammonia and relative humidity can be seen in Figures 1 and 2. Air temperature/Rh, carbon dioxide and ammonia were continually monitored in a 40' X 500' totally enclosed broiler house. Measurements were taken every 15 minutes starting when the birds were 18 days of age and continuing to the end of the flock at 39 days. Carbon dioxide and ammonia concentrations were measured through the use of a high accuracy photoacoustic gas analyzer ($40,000) while house temperature and relative humidity were being monitored using a poultry house environmental controller (Choretime II).

During the study period, ammonia and carbon dioxide concentrations tended to be within acceptable limits when the relative humidity was 60% or lower. Conversely, when the relative humidity was above 70%, ammonia and carbon dioxide levels tended to climb to what would generally be considered potentially harmful levels. There were of course exceptions. For instance, in Figure 3 on December 21 and 22 the relative humidity was high due to the fact it was raining but the carbon dioxide and ammonia levels were relatively low due to the fact that outside temperatures were fairly warm and a number of fans were operating to maintain proper house temperatures. But, the fact remains that for the most part a relative humidity of 70% or greater is a good indicator that minimum ventilation rates should be increased if optimal growing conditions are to be maintained.

It is important to note that most studies done on the effect that ammonia, carbon dioxide and relative humidity have on bird performance are done with birds exposed to high levels of one, not two or three at the same time. The problem is, as seen in Figures 1, 2, and 3, this is not what tends to occur in poultry houses. When ammonia is high, carbon dioxide and humidity are high as well. It is very possible the combination of high carbon dioxide, ammonia and relative humidity may have a more detrimental effect on bird performance than when just one of the three is high. Furthermore, when air exchange rates are too low (as indicated by high relative humidity, carbon dioxide and ammonia levels) pathogen levels in a house are likely to be higher than normal as well. The combination of low house air quality and higher than normal pathogen levels could very likely lead to an increased susceptibility to disease. It begs the question...How many of our production problems could be avoided if we simply used relative humidity as the basis for adjusting minimum ventilation fan runtime?

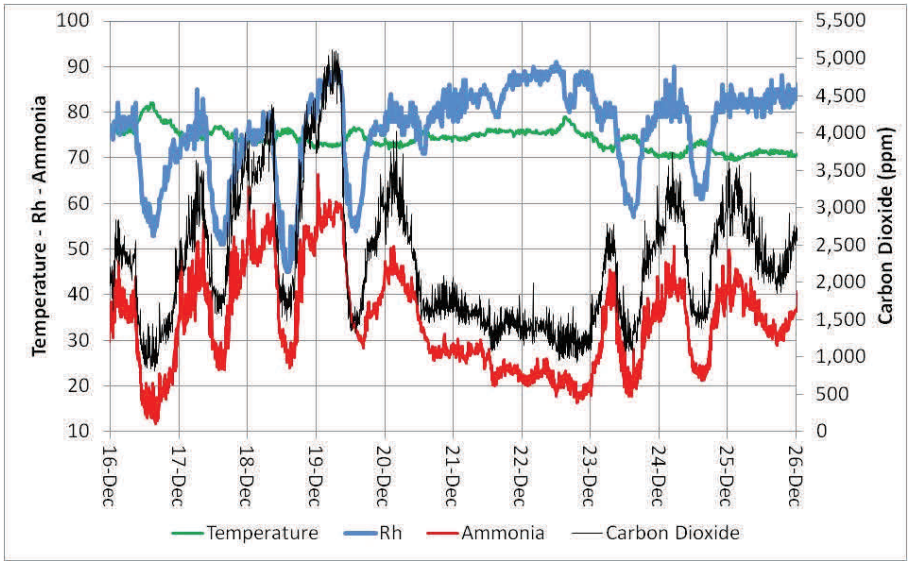

Figure 3. Temperature, relative humidity, carbon dioxide and ammonia levels in house with birds from day 29 to 39.

Though there is not an exact correlation among relative humidity, ammonia and carbon dioxide the relationships are consistent enough to indicate that when a relative humidity of 60% or lower is maintained air quality tends to be within acceptable limits. Conversely, a relative humidity of 70% or higher tends to be a fairly accurate indicator of poor air quality. During the brooding period the relationships are not quite as strong so producers need to be aware that ammonia or carbon dioxide levels may still be at harmful levels even if the relative humidity is below 60%.

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FROM THE DIAGNOSTIC LAB:

PROPER SAMPLING TECHNIQUES

Harmony Seahorn, Lab Manager
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The first step in any diagnostic testing is the sample. If the sample is not taken or handled properly then the testing cannot be reliable. In order to ensure the test and sample quality, you must take the proper sample needed, make sure that it is handled appropriately and ship to the laboratory in the best condition possible.

Serum Samples

Whole blood and/or serum

Whole blood should be collected and then kept at room temperature to allow for clotting and serum separation. Once the whole blood clots, the serum should be separated from the clot and put into a separate tube for transport to the lab. The use of a centrifuge, if available, is very helpful in separating the clot from the serum. Serum should be kept **on cold packs or refrigerated prior** to transporting to lab**. DO NOT FREEZE** serum if intended for plate agglutination. If transporting whole blood to the lab, it is best if it is done on the day of collection. Shipping clotted blood is not recommended. If whole blood gets too hot or cold the red blood cells will lyse causing hemolysis. Hemolyzed samples do not yield reliable test results and testing may not be possible for some tests.

Hemolyzed Serum

Good Serum

Swab Samples

Swabs or Transport swabs

Transport swabs are swabs that have a transport media that keeps the organism (bacterial or viral) viable until it reaches the lab. Samples that are intended for **PCR only** may be sent on cotton swabs without media since it is not necessary for the organism to be viable to be detected by PCR. Swabs should be kept cold during transport or shipping.

Choanal Cleft Swab

Tracheal Swab

Histopathology

Sampling for Histopathology

The aim of fixation is to maintain the tissue in a state that stabilizes its architecture and chemical components in a form that enables it to be processed for histological staining and long-term preservation. Formaldehyde based fixatives are routinely used in diagnostic settings on the grounds of cost, efficacy, versatility and relative safety. Buffered 4 to 10% formaldehyde solutions are best, as this limits the amount of artifact requiring interpretation by the pathologist. Good fixation is easy to achieve, providing a few simple principles are applied.

When submitting histology samples:

1. Use the proper formalin to tissue ratio (10:1) for fixation.
    - Use Davison solution for eyeballs to reduce artifacts.
2. Make sure samples are fresh. Frozen samples should NOT be used for histopathology.
3. Include the tissue with any important gross lesions.
4. When submitting neoplasia, include with the mass some normal tissue if possible.
5. When suspecting a viral neoplasia problem, submit a complete set of tissues, not just affected organs. Include brain and eyeballs with optic nerve still attached.
6. Some organs (i.e., spleen, testes) require cutting of the capsule to allow penetration of the fixative.
7. Add the tissue to the fixative to avoid one surface of the sample adhering to the wall of the container.
8. Use wide mouthed containers to avoid samples becoming trapped inside the container after fixation.

Samples for Virus Isolation and/or PCR

Tissues

Tissues should be submitted cold or frozen. Always keep samples cold when being transported or shipped. Samples for PCR testing should be handled with great care. Nucleic acids are very fragile and mishandling of a sample could lead to the degradation and therefore

making the samples inadequate for testing. Tissues or swabs should be shipped cold or stored in the freezer. At PDRC, we store our samples for PCR and virus isolation in a -80^0 freezer. Samples should not be exposed to direct sunlight or UV light. When submitting samples for viral detection it is important to submit the appropriate sample in order to get a useful diagnosis. If you have any questions as to the appropriate samples to take and submit, always contact the laboratory for further information.

Clinical Signs	Sample to submit for testing
Hepatitis	Liver
Drop in egg production	Feces/Large Intestines, vaginal swabs
Lameness	Synovial fluid, tendons, heart, liver
Respiratory	Tracheas, tracheal swabs, feces, cloacal swabs, vaginal swabs (if also present with decreased egg production), brain (if neurological presentation)
Dyspnea	Tracheal swabs, tracheas, eyelids, lungs
Nephritis, swollen kidneys, flushing	kidneys
Tumors	Heparinized whole blood, tumor, plasma
Immunosuppression	Bursa, thymus, spleen, bone marrow
Skin lesions	Scab
Fowlpox	Pock lesion for cutaneous disease or trachea if diptheritic disease
Neurological signs	brains
Enteritis, malabsorption	Intestines, duodenal loop, feces
Proventriculitis	Proventriculus

FTA Card sampling

For FTA card impressions the samples listed are recommended for optimal testing. Avoid sampling from dead birds that have begun to decompose if possible as the nucleic acid is of poor quality and test results will be compromised.

For samples where scrapings are indicated, use scalpel blade to scrape the epithelial lining of the tissue and apply to a circle on the FTA card.

Use gloves when handling samples and FTA cards. Do not touch the application circles (Pink area) of the cards with bare hands.

For sampling between houses, flocks, farms, always try to use sterile utensils. Ethanol can be used to disinfect utensils between sampling if respiratory testing will be requested.

Be sure to clearly label circles with tissue identity or number ID.

<u>Use one of the following methods to apply your samples to the FTA cards:</u>

Method 1 – For tissue impressions

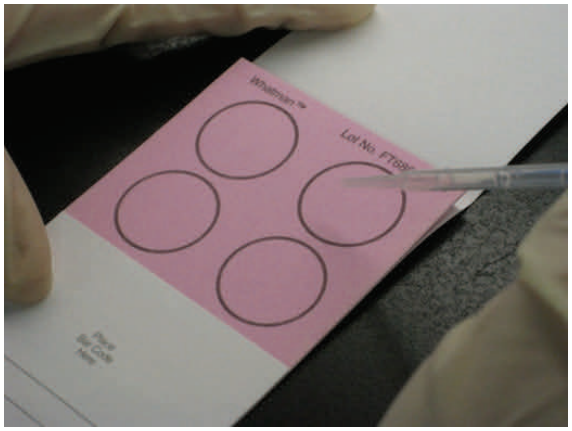
1. For tracheas – it is best to harvest the trachea and cut lengthwise. Using a sterile scalpel blade, scrape the length of trachea and apply to FTA card. This will yield more target sample for respiratory testing.
2. For other tissues – cut the tissue such as the bursa and invert so that the bursal follicles are exposed. Apply bursal impression by pressing inverted bursa onto FTA card and making smear.

Sample being applied to card

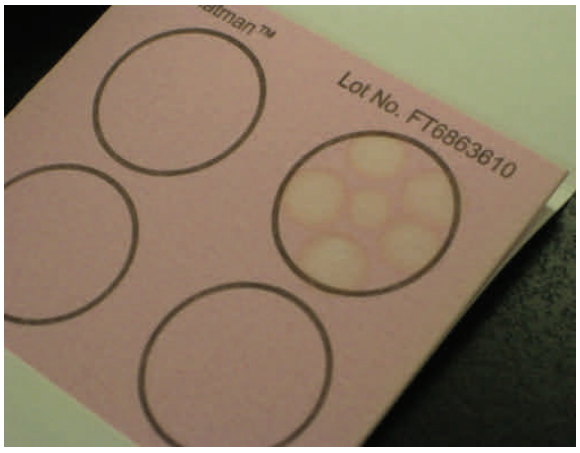
Card with sample for submission

Method 2 – For liquid samples

1. Apply 5-50 microliters of liquid sample (allantoic fluid, plasma, etc.) or samples in suspension (cell culture, blood etc.) onto the active circle of the FTA paper. You can apply samples from several birds to one circle if you want samples to be pooled. For best results, do not add samples from more than 5 birds to one circle. Testing sensitivity may be reduced.
2. Allow samples to dry on the cards for 45-60 minutes at ambient temperature. Avoid moisture and high temperatures. Store cards at room temperature or in the refrigerator or freezer in a moisture-free environment (ziplock or whirl pak bags).



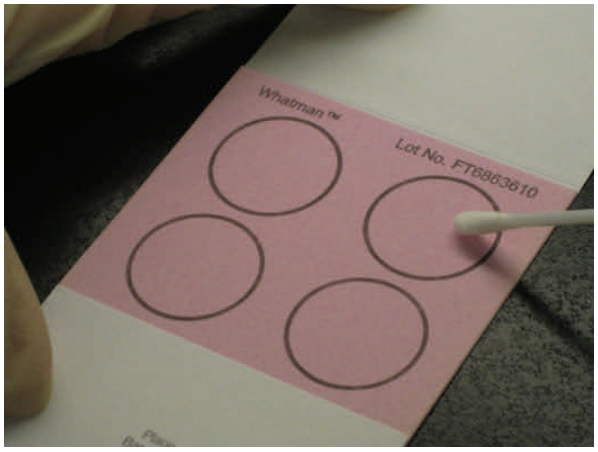
Liquid sample being applied to card



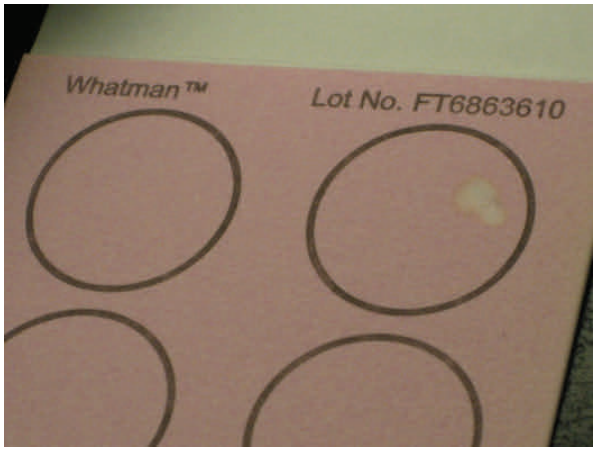
Card with liquid sample applied

Method 3 – Swab samples

Transfer contents of swabs (from tracheas or other organs) by pressing onto the FTA paper.



Sample being applied with swab



Card after sample applied with swab

<u>Recommended samples for PCR on FTA</u>:

Infectious bronchitis –

For acute respiratory disease: Tracheal scrapings and cecal tonsil contents (use separate circles on FTA card)

For renal disease: Kidney impressions and tracheal scrapings

Infectious laryngotracheitis -

Tracheal and eyelid scrapings

Newcastle disease-

For respiratory disease: tracheal scrapings

For neurologic disease: tracheal scrapings, brain impressions

Infectious bursal disease-

Bursal impressions

Viral arthritis-

Synovial fluid, liver, heart impressions

If tendon has not ruptured, an impression can also be included

Malabsorption Syndrome and other intestinal conditions-

Gut scrapings of the duodenum, ileum and/or jejunum

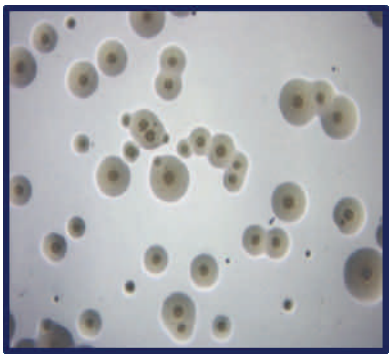
(can pool scrapings from these locations)

Mycoplasma culture samples

Mycoplasma culture

Mycoplasma culture is done by putting samples into a selective mycoplasma media to grow more organism to aide in detection and identification. At PDRC, Frey's media is the primary media used for mycoplasma isolation. Frey's media is inoculated by swirling one swab in each tube of media and pressing all remaining fluid from swab before discarding swab. It is important to only put one swab per tube in order to minimize the potential contamination from other organisms. When culturing for *M. iowae*, another media, M-ORT, will be used. These cultures are incubated at 37^0C for 24 hours. Sometimes agar plates are inoculated at the same time as media, but broth is usually more sensitive. For *M. meleagridis* and *M. iowae* primary isolation onto agar plates may be more effective than broth media. Cultures are plated onto agar after 5 days for further isolation and identification.

Mycoplasma colonies



Submission ,Shipping and Labeling

Now that you have the correct sample for the test you want and you have handled it properly, you must get it to the lab. This seems simple enough, but actually it is one of the most critical and incorrectly done aspects of diagnostic testing. It is critical that samples are labeled correctly and with as much information as possible. The laboratory can only use what information is given. When labels get moist or wet during shipment they might come off, wipe off or blur. Make sure that your labeling is legible. Include a submission sheet will **ALL** the information filled in.

Getting samples to the lab quickly is very important. If you plan to ship the samples with a courier, make sure to use one that guarantees delivery to the laboratory location the next day. This may require an inquiry as to whether shipments arrive to a central distribution center or if they go directly to the lab. This might take a few minutes of your time prior to shipping, but it can save you more time and money ensuring your samples will not sit on a dock or in a warehouse for a day or two before arriving at the lab. Being aware of the laboratory hours of operation and holiday schedule is also critical. If samples are not received the next day (i.e., on a Saturday), the reliability of the test will be questionable or testing may not be able to be performed at all.

International samples often take more time to arrive, but are usually not as time sensitive due to requirements for inactivation prior to shipment. It is important to make sure that all documents are present with the samples. All documents should be put inside and outside of the package. This allows for customs to retain documents and copies still get to the laboratory. It is important to follow all requirements listed on import permits. To get copies of the permits please visit our website or contact the laboratory for more information.

Proper containers should be used for samples and for shipping. Please transfer samples to zip top or whirlpak bags for shipment. Understand that how your samples are positioned in the box prior to shipment may not be the way they stay during shipment. Make sure all lids are secure. Do not ship glass or breakable containers. Cold packs are hard and heavy. During shipment they can and will crack or break containers. Using an insulated cooler inside a cardboard box is also preferable. When cold packs condense they will make cardboard wet, possibly making a hole in the box or causing the currier to flag the box. When including paperwork it should be in its own zip top or whirlpak bag. This will keep paperwork from getting wet or having samples leak on them. Formalin jars should be put into a ziplock bag to prevent leakage of formalin.

As with most things, what you put into it is what you get out, diagnostic testing is no different. Good samples result in accurate tests. If at any time you have questions about testing or sampling please contact us at PDRC and let us help.

If you have any other question or would like to submit samples, please visit our website.

http://vet.uga.edu/avian/diagnostic

Excerpts from the latest USDA National Agricultural Statistics Service (NASS) "Broiler Hatchery," "Chicken and Eggs" and "Turkey Hatchery" Report and Economic Research Service (ERS) "Livestock, Dairy and Poultry Situation Outlook"

Chickens and Eggs

Released November 22, 2013, by NASS, Agricultural Statistics Board, USDA

October Egg Production Up 2 Percent

Please note that Missouri will now be published separately in the **Broiler-Type Chicks Hatched** table.

U.S. egg production totaled 8.13 billion during October 2013, up 2 percent from last year. Production included 7.06 billion table eggs, and 1.07 billion hatching eggs, of which 993 million were broiler-type and 78 million were egg-type. The total number of layers during October 2013 averaged 346 million, up 1 percent from last year. October egg production per 100 layers was 2,351 eggs, up 1 percent from October 2012.

All layers in the U.S. on November 1, 2013, totaled 347 million, up 1 percent from last year. The 347 million layers consisted of 292 million layers producing table or market type eggs, 51.3 million layers producing broiler-type hatching eggs, and 3.07 million layers producing egg-type hatching eggs. Rate of lay per day on November 1, 2013, averaged 75.9 eggs per 100 layers, up 1 percent from November 1, 2012.

Egg-Type Chicks Hatched Up 13 Percent

Egg-type chicks hatched during October 2013 totaled 41.2 million, up 13 percent from October 2012. Eggs in incubators totaled 38.7 million on November 1, 2013, up 15 percent from a year ago. Domestic placements of egg-type pullet chicks for future hatchery supply flocks by leading breeders totaled 153 thousand during October 2013, down 18 percent from October 2012.

Broiler-Type Chicks Hatched Up 1 Percent

Broiler-type chicks hatched during October 2013 totaled 736 million, up 1 percent from October 2012. Eggs in incubators totaled 592 million on November 1, 2013, up 4 percent from a year earlier. Leading breeders placed 6.23 million broiler-type pullet chicks for future domestic hatchery supply flocks during October 2013, down 1 percent from October 2012.

Broiler Hatchery

Released December 4, 2013, by NASS, Agricultural Statistics Board, USDA

Please note that beginning with this publication, the **Broiler Hatchery** report is being expanded to include estimates for Other States and the United States.

Broiler-Type Eggs Set In The 19 State Total Down Slightly

Commercial hatcheries in the 19-State weekly program set 201 million eggs in incubators during the week ending November 30, 2013. This was down slightly from the eggs set the corresponding week a year earlier. Average hatchability for chicks hatched during the week was 84 percent. Average hatchability is calculated by dividing chicks hatched during the week by eggs set three weeks earlier.

Broiler-Type Chicks Placed Down 2 Percent

Broiler growers in the 19-State weekly program placed 157 million chicks for meat production during the week ending November 30, 2013. Placements were down 2 percent from the comparable week a year earlier. Cumulative placements from December 30, 2012 through November 30, 2013 were 7.85 billion, up 1 percent from the same period a year earlier.

Turkey Hatchery

Released November 14, 2013, by the NASS, Agricultural Statistics Board, USDA

Eggs in Incubators on November 1 Down 5 Percent from Last Year

Turkey eggs in incubators on November 1, 2013, in the United States totaled 26.3 million, down 5 percent from November 1, 2012. Eggs in incubators were down slightly from the October 1, 2013 total of 26.4 million eggs. **Please note that regional estimates have been discontinued:** NASS will no longer publish regional *Turkey Hatchery* estimates. Only estimates at the United States level will be published due to the limited number of hatcheries involved.

Poults Hatched During October Down 2 Percent from Last Year

Turkey poults hatched during October 2013, in the United States totaled 22.8 million, down 2 percent from October 2012. Poults hatched were up 9 percent from the September 2013 total of 20.9 million poults.

Net Poults Placed During October Down 8 Percent from Last Year

The 21.1 million net poults placed during October 2013 in the United States were down 8 percent from the number placed during the same month a year earlier. Net placements were up 8 percent from the September 2013 total of 19.5 million.

Current Month Charts

Broiler Performance Data Live Production Cost	Region					Average Company
	SW	Midwest	Southeast	Mid-Atlantic	S-Central	
Feed Cost/ton w/o color ($)	311.89	304.42	326.88	316.22	316.06	317.50
Feed cost /lb meat (c)	27.06	26.13	28.28	29.08	28.23	27.85
Days to 4.6 lbs	38.00	38.00	38.00	37.00	37.00	38.00
Chick cost / lb (c)	5.13	5.55	5.79	4.85	5.23	5.47
Vac-Med cost/lb (c)	0.04	0.04	0.09	0.06	0.03	0.05
WB & ½ parts condemn. Cost/lb	0.19	0.26	0.16	0.20	0.22	0.21
% mortality	3.52	3.24	3.24	3.91	3.82	3.59
Sq.Ft. @ placement	0.83	0.82	0.86	0.90	0.86	0.86
Lbs/sq. ft.	7.63	7.33	7.11	8.02	7.91	7.43
Downtime (days)	22.00	17.00	17.00	19.00	18.00	18.00

Broiler Whole Bird Condemnation	Region					Average Company
	SW	Midwest	Southeast	Mid-Atlantic	S-Central	
% Septox	0.155	0.289	0.103	0.171	0.115	0.152
% Airsac	0.038	0.146	0.037	0.058	0.042	0.057
% I.P.	0.006	0.032	0.008	0.038	0.024	0.021
% Leukosis	0.000	0.001	0.000	0.002	0.000	0.001
% Bruises	0.001	0.001	0.004	0.003	0.002	0.002
% Other	0.007	0.003	0.026	0.006	0.048	0.018
% Total	0.207	0.471	0.178	0.278	0.231	0.251
% ½ parts condemns	0.258	0.178	0.204	0.199	0.354	0.255

Data for week ending November 9th, 2013

Previous Month Charts

Broiler Performance Data Live Production Cost	Region					Average Company
	SW	Midwest	Southeast	Mid-Atlantic	S-Central	
Feed Cost/ton w/o color ($)	323.62	320.07	342.73	331.94	326.73	330.90
Feed cost /lb meat (c)	27.85	27.30	29.73	30.56	29.20	28.93
Days to 4.6 lbs	38.00	38.00	38.00	37.00	37.00	38.00
Chick cost / lb (c)	5.31	5.61	5.64	4.86	5.20	5.53
Vac-Med cost/lb (c)	0.03	0.04	0.09	0.06	0.03	0.05
WB & ½ parts condemn. Cost/lb	0.20	0.22	0.17	0.18	0.25	0.21
% mortality	3.44	3.12	3.33	3.97	3.59	3.49
Sq.Ft. @ placement	0.83	0.82	0.86	0.90	0.88	0.86
Lbs/sq. ft.	7.49	7.31	7.29	8.00	7.77	7.38
Downtime (days)	21.00	16.00	16.00	18.00	17.00	18.00

Broiler Whole Bird Condemnation	Region					Average Company
	SW	Midwest	Southeast	Mid-Atlantic	S-Central	
% Septox	0.146	0.256	0.100	0.145	0.131	0.149
% Airsac	0.039	0.069	0.031	0.049	0.047	0.049
% I.P.	0.007	0.015	0.009	0.031	0.026	0.019
% Leukosis	0.000	0.000	0.000	0.002	0.001	0.001
% Bruises	0.001	0.001	0.004	0.002	0.002	0.002
% Other	0.006	0.004	0.033	0.006	0.071	0.025
% Total	0.200	0.345	0.176	0.234	0.277	0.244
% ½ parts condemns	0.275	0.184	0.218	0.185	0.348	0.249

Data for week ending October 26th, 2013

Meetings, Seminars and Conventions

2014
January

January 27-30, 2014. International Poultry Scientific Forum (27-28) and the International Production and Processing Expo (28-30). These events will once again be held at the Georgia World Congress Center, Atlanta, Georgia, USA.
http://www.southernpoultrysciencesociety.org/
http://www.ippexpo.org/

2014
February

February 20-21, 2013. USDA's Agricultural Outlook Forum brings together the agricultural community to discuss policy, trade, science, rural development, and the economic outlook for the coming year. It will be held in Arlington, VA.
http://www.usda.gov/oce/forum/index.htm

2014
March

March 18-20, 2014. Midwest Poultry Federation Convention. Conferences and expo will focus mainly on layers and turkeys, but broilers are also covered. To be held at the St Paul RiverCentre, St. Paul, Minnesota, USA.
http://midwestpoultry.com/

2014
April

April 15-17, 2014. Egg Industry Issues Forum. This event is solely focused on egg industry issues and discusses housing types, feed availability, disease, food security demands, etc. To be held in Indianapolis, IN.
http://www.ans.iastate.edu/EIC/Forum.dwt

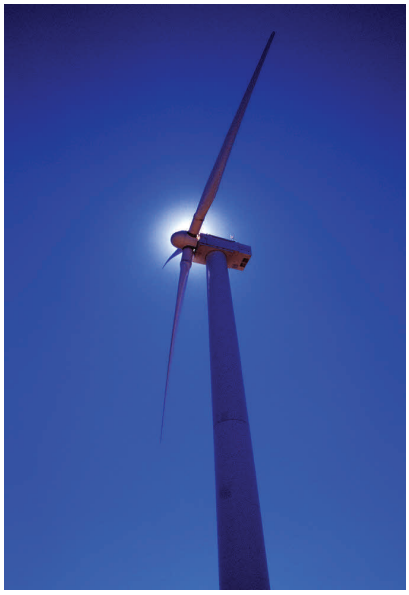
2014
July

July 14-17, 2014. Poultry Science Association (PSA) Annual Meeting. Hosted by Texas A&M University, this event will be held at the Omni Corpus Christi Hotel, Corpus Christi, Texas, USA. http://www.poultryscience.org/meetings.asp

July 25-29, 2014. Annual AVMA/AAAP Joint Meeting. The next annual meeting of the American Association of Avian Pathologists (AAAP) and the American Veterinary Medical Association (AVMA) will be held in Denver, Colorado, USA.
http://www.aaap.info/2014-annual-meeting-denver

2014
October

October 2-3, 2014. Turkey Industry Days. To be held at the Best Western Plus Coastline Inn, Wilmington, North Carolina, this conference will provide updated technical information for live production and grow-out managers, turkey supervisors and other personnel related to turkey production.
http://poultry.ces.ncsu.edu/spotlight/turkey-industry-days-october-2-3-2013/



Reminder

All previous issues of the Poultry informed Professional are archived on our website www.avian.uga.edu under the Online Documents and The Poultry Informed Professional links.

PDRC Update

We have several significant items to bring to you as we finish out 2013. First, Dr. Daniel Perez has accepted the Eidson Chair position at PDRC and will start August 1, 2014! Dr. Perez is an expert in Avian Influenza and an NIH funded research scientist. His work has focused on transmission, control and molecular aspects of the virus. Dr. Perez received his Ph.D. from the University of Nebraska (Lincoln, NE) then trained under Dr. Robert Webster at St. Jude Children's Research Hospital (Memphis, TN) before joining the faculty at the University of Maryland. We are very fortunate to have Dr. Perez join our research efforts at PDRC and look forward to working closely with him and the industry to expand our capabilities.

This semester we graduated 3 new MAM students. Please join me in congratulating Drs. Elise Myers, Chad Malinak and Yun-Ting Wang. We wish them continued success as they begin their new careers.

PDRC has acquired two new faculty positions from the President's 2nd and 3rd hiring initiatives. One position is a Virology faculty position that is a joint appointment with the Department of Infectious Diseases. The other position is a Poultry Health and Production faculty position that is a joint appointment with the Department of Poultry Science. Both positions are Assistant Professor, tenure track. Advertisements for the positions can be found on our website (http://vet.uga.edu/jobs/show/category/pdrc) or the AAAP website (www.AAAP.info).

We continue to have a number of faithful donors from the industry that help support MAM stipends and other programs at PDRC. We would not be able to accomplish all that we do without your continued support and we whole-heartedly thank you.

All the best,

Mark

Dr. Mark Jackwood, BS, MS, PhD is the head of the Department of Population Health at the University of Georgia, which includes the Poultry Diagnostic and Research Center.