H5N1 INFLUENZA VIRUS IN WILD BIRDS: AN UPDATE.

Since our article “HPAI in Wild Birds” in 2004 (SCWDS BRIEFS Vol. 19, No. 4), highly pathogenic avian influenza (HPAI) virus H5N1 continues to be found in wild birds in Asia. Many of these events probably were associated with spillover of virus from infected domestic birds or carcasses. In recent mortality events primarily involving swans and gulls, a changing pattern is emerging: it appears that this virus may be moving with migrating wild birds through Asia and into eastern Europe. Outbreaks in wild birds that have been supported by virus isolations of HPAI H5N1 have occurred in western China, Mongolia, Russia, and, most recently, Croatia. Although this is a disturbing situation in terms of potential wildlife impacts and viral spread to domestic birds, our understanding of the epidemiology of HPAI H5N1 is incomplete.

Epidemiological factors related to species susceptibility, virus shedding, and environmental persistence of virus may enhance transmission in wild bird populations. However, little information is available to evaluate the potential for HPAI H5N1 to be maintained in wild bird populations in North America or to evaluate risks associated with specific

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taxonomic groups or species. SCWDS currently is working to provide some of this information through experimental inoculation and environmental persistence studies with HPAI H5N1 (see “SCWDS Avian Influenza Studies Funded,” SCWDS BRIEFS, Vol. 21, No. 1).

The involvement of wild birds with HPAI H5N1 in Asia has resulted in elevated concerns for the introduction of this virus into North America and potential risks associated with the handling of wild birds, especially ducks. To address these concerns, and to provide biologists with a working knowledge of avian influenza terminology and the potential risks as they currently exist in North America, the following fact sheet was prepared to share our current understanding of the HPAI H5N1 situation in wild birds. This will be updated as necessary and will be available on our website www.scwds.org.

### Highly Pathogenic Avian Influenza Virus H5N1 and Wild Birds

#### What are avian influenza viruses?

- Avian influenza viruses (AIV) are Type A influenza viruses that are associated with avian species. They have been isolated from more than 100 species of free-living birds world-wide.

- Classification of these viruses is based on their hemagglutinin (H) and neuraminidase (N) subtypes. There currently are 16 H and 9 N recognized subtypes, and all of these subtypes are represented in viruses isolated from wild birds.

- Wild birds represent the historic source for Type A influenza viruses affecting both domestic bird and mammalian species.

- The host adaptation that occurs after the movement of these viruses from wild birds to domestic animals to humans often results in the evolution of “new” viruses, which can become adapted to the new host population. These “new” viruses (which include the human Type A influenza viruses) differ from the original viruses found in wild birds and are no longer associated with wild avian populations.

- The movement and adaptation of Type A influenza viruses from wild birds to new host species (especially mammals) is not a common event, which is evident from the limited number of human Type A influenza viruses.

#### What is a Highly Pathogenic Avian Influenza virus?

- Highly pathogenic avian influenza viruses are influenza viruses that cause high mortality in domestic poultry.

- Highly pathogenic avian influenza viruses are associated with the H5 and H7 subtypes.

- **Not all H5 and H7 subtypes are highly pathogenic.**

#### What is A “Bird Flu” and what is “HPAI H5N1”?

- “Bird Flu” is a nonscientific term that was coined to describe the HPAI H5N1 viruses that have been present in Asia since 1997. This term has caused a great deal of confusion because it is often used as a synonym for avian influenza.

- HPAI H5N1 is a highly pathogenic H5N1 virus that has persisted in Asia at least since 1997. It is established in domestic poultry populations in Asia (primarily chickens and domestic ducks).

- In 1997, a human death resulting from HPAI H5N1 virus infection in Hong Kong was reported; there have been over 100 human cases with approximately 60 fatalities since that time. All human cases have occurred in Asia, and almost all of these cases have been linked to direct contact with infected poultry.

- In 2002/2003, wild bird mortality in Hong Kong was attributed to infection with HPAI H5N1 virus. Wild bird mortality associated with HPAI H5N1 has continued through 2005, and the current distribution suggests movement of this virus via migratory birds.

#### What do we know about avian influenza viruses in wild birds?

- Our knowledge regarding the epidemiology of avian influenza in wild birds is extensive but not complete.

- Most AIVs have been isolated from birds that are associated with water, with most isolations originating from species in the Anseriformes (ducks, geese, and swans) and Charadriiformes (gulls, terns, and shorebirds).

- In ducks, the prevalence of AIV peaks in late summer and early fall. Outside of this period, infection rates often are lower than 1%.

- In gulls and shorebirds, peak infection rates are associated with spring migration, but these rates differ greatly between species and are generally low.

*Continued on Page 3*
• These temporal patterns result in consistent spatial patterns. For example, avian influenza viruses can be isolated from ducks on wintering grounds, but the prevalence of infection is very low.

• Viruses recovered from wild birds include all of the H and N subtypes, but these subtypes are not equally represented. In North America, viruses representing the H5 and H7 subtypes are present, but these are not HPAI viruses and are not common.

• None of these naturally occurring North American AIVs from wild birds have been associated with mortality or morbidity in any wild bird species.

• Prior to 2002/2003, when the HPAI H5N1 was linked to wild bird deaths in Asia, there was only one historic case of any wild bird mortality associated with AIV infection (an H5N3 in South Africa in the 1960s caused mortality in common terns). This HPAI virus may have originated from infected poultry flocks, and it did not persist in wild bird populations.

• Thousands of influenza isolates have been made from ducks and other birds in North America during the last 30 years. Despite this ongoing surveillance, there is no indication that any HPAI viruses exist in North American wild bird populations.

Do we have HPAI H5N1 in North America?

• There is no evidence to suggest that an HPAI H5N1 virus is present anywhere in North America.

Is there currently a public health risk associated with HPAI H5N1 in wild birds?

• In the United States there currently is no recognized public health risk associated with wild bird contact.

• All human deaths associated with bird-to-human transmission of avian influenza viruses have occurred in Asia, and all have involved the HPAI H5N1 viruses. Human cases in Asia have occurred in connection with extensive infections in domestic poultry.

• Other H5, H7, and H9 avian influenza viruses have been transmitted directly from infected domestic birds to humans. These events have involved HPAI and Low Pathogenic Avian Influenza (LPAI) viruses, but all have involved contact with infected poultry.

• There has never been a single documented case of avian influenza virus transmission directly from wild birds to humans.

• There is no indication that wild waterfowl species hunted in North America are infected with HPAI H5N1.

• Although there currently is no recognized risk associated with hunting waterfowl and HPAI H5N1 in North America, basic hygiene, including hand-washing, when handling any wild animals or carcasses is always recommended, as is proper preparation and thorough cooking of food.

• With regard to pandemic influenza, the primary public health risk associated with HPAI H5N1 in Asia relates to the potential for genetic changes (mutations within the H5N1 or recombination with human influenza viruses) that would allow for efficient human-to-human transmission. If this were to occur, transmission of this “new” virus would no longer require an avian source.

Is there a domestic animal health risk associated with HPAI in wild birds?

• Worldwide, there have been many documented cases of low pathogenic avian influenza virus transmission from wild birds to domestic birds. This is especially true for free-ranging domestic flocks that have direct contact with wild ducks.

• In the United States, there are no documented cases of HPAI transmission from a wild bird to domestic birds, and it is believed that most HPAI viruses evolve after an H5 or H7 virus becomes established in domestic bird populations.

• In Asia the recent expansion in distribution of HPAI H5N1 suggests that domestic flocks are being infected with this virus through contact with migratory wild birds.

What is the possibility of HPAI H5N1 entering North America via migratory wild birds?

• Some migratory bird species move between North America and Asia and Europe, however, genetic studies of avian influenza viruses from Eurasia and North America suggest that there is very limited exchange of AIVs between continents (even with very common influenza viruses).

• It is not possible to discount the possibility of an HPAI H5N1 introduction, but such an event based on the known epidemiology of other avian influenza viruses would likely be a very low probability event.
What is the possibility of this virus being maintained in wild bird populations?

- There is limited information on which to evaluate this possibility.
- Experimental studies have demonstrated bird-to-bird transmission of HPAI H5N1 in mallards, but these studies were completed under confinement conditions that are not representative of natural conditions.
- Experimental studies with HPAI H5N1 strains have consistently demonstrated higher respiratory rather than cloacal shedding of virus. In wild birds, low pathogenic avian influenza viruses generally are associated with cloacal shedding, and transmission occurs via a fecal/oral route through contaminated water. It is not clear if the extent of fecal shedding with HPAI H5N1 is consistent with the naturally occurring AIVs that are maintained in wild bird populations.
- It is known that other AIVs can persist for extended periods of time in water. Information on environmental persistence of HPAI H5N1 in water is lacking.

Do we have surveillance for HPAI H5N1 in the United States?

- Surveillance for AIV was taking place in the United States and other North American countries prior to the emergence of HPAI H5N1.
- Wild bird surveillance has and will be expanded to include larger geographic areas and areas of potential introduction, such as Alaska.

Additional information on HPAI can be found at these websites:

- The Centers for Control and Prevention (www.cdc.gov/flu/avian)
- USDA-APHIS-Veterinary Services (www.aphis.usda.gov/1pa/issues/avian_influenza/index.html)
Broiler-Type Eggs Set In 19 Selected States Up 2 Percent
According to the latest National Agricultural Statistics Service (NASS) reports, commercial hatcheries in the 19-State weekly program set 215 million eggs in incubators during the week ending January 7, 2006. This was up 2 percent from the eggs set the corresponding week a year earlier. Average hatchability for chicks hatched during the week was 83 percent. Average hatchability is calculated by dividing chicks hatched during the week by eggs set three weeks earlier.

Broiler Chicks Up 1 Percent
Broiler growers in the 19-State weekly program placed 175 million chicks for meat production during the week ending January 7, 2006. Placements were up 1 percent from the comparable week a year earlier.

November Egg Production Up 1 Percent
U.S. egg production totaled 7.54 billion during November 2005, up 1 percent from last year. Production included 6.48 billion table eggs, and 1.06 billion hatching eggs, of which 996 million were broiler-type and 60 million were egg-type. The number of layers during November 2005 averaged 347 million, up 1 percent from a year earlier. November egg production per 100 layers was 2,175 eggs, up slightly from November 2004.

All layers in the U.S. on December 1, 2005, totaled 348 million, up 1 percent from a year ago. The 348 million layers consisted of 291 million layers producing table-type eggs, 54.9 million layers producing broiler-type hatching eggs, and 2.6 million layers producing egg-type hatching eggs. Rate of lay per day on December 1, 2005, averaged 72.4 eggs per 100 layers, down 1 percent from December 1, 2004.

Egg-Type Chicks Hatched Down 15 Percent
Egg-type chicks hatched during November 2005 totaled 32.8 million, down 15 percent from November 2004. Eggs in incubators totaled 34.7 million on December 1, 2005, down 3 percent from a year ago.

Domestic placements of egg-type pullet chicks for future hatchery supply flocks by leading breeders totaled 181,000 during November 2005, down 20 percent from November 2004.

Broiler-Type Chicks Hatched Up 2 Percent
Broiler-type chicks hatched during November 2005 totaled 747 million, up 2 percent from November 2004. Eggs in incubators totaled 658 million on December 1, 2005, up 2 percent from a year earlier.

Leading breeders placed 7.30 million broiler-type pullet chicks for future domestic hatchery supply flocks during November 2005, up 2 percent from November 2004.

Turkey Eggs in Incubators on December 1 Up 2 Percent
Turkey eggs in incubators on December 1, 2005, in the United States totaled 28.3 million, up 2 percent from December 1 a year ago. Eggs in incubators were 3 percent above the November 1, 2005 total of 27.4 million eggs. Regional changes from the previous year were: East North Central up 3 percent, West North Central up 1 percent, North and South Atlantic up 15 percent, South Central down 32 percent, and West down 1 percent.

Poults Placed During November Down 2 Percent From Last Year
The 21.8 million poults placed during November 2005 in the United States were down 2 percent from the number placed during the same month a year ago. Placements were up 2 percent from October 2005. Regional changes from the previous year were: East North Central up 10 percent, West North Central up 3 percent, North and South Atlantic down 8 percent, South Central down 15 percent, and West down 9 percent.

Broiler Meat Production Up 5 Percent in October
According to the latest Economic Research Service (ERS) reports, broiler meat production totaled 3.04 billion pounds in October, up 4.7 percent from October 2004. Over the first ten months of 2005 broiler production has totaled 29.5 billion pounds, 3.7 percent higher than the previous year. The increased meat production in October was the result of both an increase in the number of birds slaughtered, up 1.9 percent, and an increase in the average live weight of birds at slaughter, up 2 percent to 5.5 pounds. So far in 2005, the average weight at slaughter for broilers has been 53.35 pounds, which is 1.7 percent higher than in the same period in 2004. The growth in live weight at slaughter combined with gains in the number of chicks being
placed for growout, points towards continued increases in broiler meat production through December and into 2006. Over the last five weeks (October 29 to November 26, 2005), the number of chicks being placed for growout has averaged 167 million per week, an increase of 2 percent over the same period of the previous year.

Cold storage holding of broiler products at the end of the third quarter was revised upward to 753 million pounds. This is a 9.6 percent from the end of the second quarter, but still 21 million pounds less that at the end of the third quarter 2004. Stocks of most broiler products have risen over the last quarter, but stocks of breast meat and leg quarters have accounted for most of the increase. Stocks continued to grow in October with breast meat totaling 145 million pounds, up 7 percent from the previous year. Stocks of leg quarters had reached as low as 54 million pounds earlier in the year, but by the end of October had grown to 113 million pounds, however this is still 3 percent lower than at the same time in 2004.

Larger production and growing stocks have put downward pressure on most broiler prices. The two most dramatic declines have been for boneless/skinless breast meat and leg quarters. Boneless/skinless breast meat prices in the Northeast market averaged $1.03 per pound in November, down 18 percent from last year and down from a high of $1.53 per pound in February. Leg quarter prices in the Northeast market averaged 29 cents per pound in November, only 2 percent lower that last year, but through most of 2005 leg quarter prices had been very strong, averaging over 40 cents per pound from June to October. Prices for leg quarters have fallen chiefly due to uncertainties in export markets. The price of whole broilers was also lower in November at 67 cents a pound, down 2 percent from the previous year and 2 cents lower than the October price.

In the weekly AMS Broiler Market News Report, there is a breakout of the total number of broilers being slaughtered into three different size classes. Since the end of September the number of broilers with a live weight of over 5.25 pounds (the heaviest size class) has averaged a double digit growth rate compared with the same period in the previous year. This growth in the percentage of all broilers being slaughtered that fall into the biggest size class has driven up the average live weight at slaughter and since most broilers of this size are cut up for parts, it has placed more parts meat on the market placing downward pressure on prices.

October Turkey Meat Production Up 4 Percent
Turkey meat production in October was reported at 483 million pounds, up 3.6 percent. A 3.6-percent increase in the number of birds being slaughtered accounted for the increase as the average live weight of birds at slaughter was 26.9 pounds, down slightly from last year. Even with the increase in October, turkey meat production so far in 2005 is up less than 1 percent from the same period in 2004. Although a higher number of birds were slaughtered in October, this is the opposite of what was happening in the turkey industry at the beginning of 2005. In the first quarter of 2005, the number of birds being slaughtered was down 6 percent from the previous year, but total meat production was up 1 percent because the average live weight of turkeys at slaughter was 29.3 pounds, 6.5 percent higher that the previous year. For most of 2005 the average live weight of turkeys at slaughter has gradually been declining. As supplies have tighten in 2005, turkeys are being slaughtered at slightly lighter weights to keep supplies moving to consumers.

With little overall growth in turkey meat production and a strong export market, stocks of turkey products have gradually fallen and prices for almost all turkey products have increased. Cold storage levels for turkey products at the end of the third quarter were revised downward to 478 million pounds, down 9.4 percent from the same period in 2004. The decline was due to a mixture of lower stocks of whole turkeys and turkey products.

Prices for turkeys and most turkey products were moving in the opposite direction from broiler products. Prices for whole hens in the Eastern market averaged 87.8 cents per pound in November, up 9.5 percent from the previous year. Throughout 2005, prices for whole birds have been at or above the previous year. Prices for turkey parts have also been strong, with prices for breast meat averaging $1.18 per pound in October, up 21 percent from a year earlier. Prices for drumsticks and fresh mechanically separated meat were also higher, 7 and 16 percent above the previous year.

Over the first 10 months of 2005, the number of turkey poult being hatched for growout has averaged 19 million per month, down slightly from the same period in 2004. This indicates that turkey meat supplies are expected to remain tight through the remainder of 2005 and through at least the first quarter of 2006.
Meetings, Seminars and Conventions

2006 February

February 9-11: National Turkey Federation (NTF) Annual Convention 2006, Orlando, Florida USA. Contact: National Turkey Federation, 1225 New York Avenue, NW Suite 400, Washington, DC 20005 USA. Phone: +1 202 498-0100; Fax: +1 202 889 0203; Email: info@turkeyfed.org; Website: www.eatturkey.com

February 20-22: Poultry Focus Asia 2006, Queen Sirikit National Convention Center, Bangkok, Thailand. Phone: +44 1377 256316; Fax: +44 1377 253640; Email: conf@positiveaction.co.uk; Website: www.positiveaction.co.uk

February 20-22: Poultry Annual Convention, New World Inn & Conference Center, Columbus, Neb. Contact: Nebraska Poultry Industries Inc., University of Nebraska, A103 Animal Sciences, P.O. Box 830908, Lincoln, Neb. 68583-0908. Phone: 402-472-2051

March 9-11: Poultry Focus Asia 2006, Queen Sirikit National Convention Center, Bangkok, Thailand. Phone: +44 1377 256316; Fax: +44 1377 253640; Email: conf@positiveaction.co.uk; Website: www.positiveaction.co.uk

2006 March

March 4: OPA Annual Banquet, Renaissance Hotel, Columbus, Ohio. Contact: OPA Poultry Association, 5900 Sharon Woods Blvd., Columbus, Ohio 43229. Phone: 614-582-6111; email: jhakens@opapoultry.org; http://www.opapoultry.org

March 5: ACPV Workshop, Sacramento, CA. Contact: Babak Sanit, DVM, Poultry Ontario Ministry of Agriculture, Food and Rural Affairs, Guelph, ON N1G2W1. Phone: 519-824-4120 Ext. 54650; Fax: 519-763-2253; Email: babak.sanit@omaf.gov.on.ca

March 6-8: 55th Western Poultry Disease Conference, Sacramento, California, USA. Contact: Conference & Event Services, Davis, California. Phone: +1 530-752-0198; Email: confandeventsvcs@ucdavis.edu; Website: conferences.ucdavis.edu/wpdc

March 7-8: Louisiana Poultry Seminar, Shreveport, LA. Contact: Louisiana Poultry Federation, Poultry Science, 120 Ingram Hall, Louisiana State University, Baton Rouge, LA 70803. Phone: 225-578-2219; tlavergne@agconl.lsu.edu

March 8-9: NPI Annual Convention, New World Inn & Conference Center, Columbus, Neb. Contact: Nebraska Poultry Industries Inc., University of Nebraska, A103 Animal Sciences, P.O. Box 830908, Lincoln, Neb. 68583-0908. Phone: 402-472-2051

March 15-16: Environmental Management Seminar, Raleigh, N.C. Contact: U.S. Poultry & Egg Association, 1530 Coddle Road, Tucker, GA 30084-7303. Phone: 770-495-9401; seminar@poultryegg.org; http://www.poultryegg.org

March 21-23: Midwest Poultry Federation Convention 2006, St. Paul, Minnesota USA. Contact: Midwest Poultry Federation, 108 Marty Drive, Buffalo, Minnesota 55313 USA. Phone: +1 763-682-2171; Fax: +1 763-682-5546; Email: Nicole@midwestpoultry.com; Website: www.midwestpoultry.com

March 29-30: Feed Mill Management Seminar, Nashville, TN. Contact: U.S. Poultry & Egg Association, 1530 Coddle Road, Tucker, GA 30084-7303. Phone: 770-495-9401; seminar@poultryegg.org; http://www.poultryegg.org

2006 April

April 3-6: 6th International Symposium on Avian Influenza, St. John’s College, Cambridge, UK. Contact: Dr. I. Capua. Fax: +39 49 8084360; Email: icapua@izsvenezie.it or Dr. D. Swayne. Fax: +1 706 546-3161; Email: dswayne@sepri.usda.gov

April 11-12: VA. Poultry Health & Management Seminar, Roanoke, VA. Contact: Virginia Poultry Federation, 333 Neff Ave., Suite C, Harrisonburg, VA 22801. Phone: 540-433-2451; hobery@vapoultry.com; http://www.vapoultry.com

April 24-27: Middle East Poultry Show 2006, Dubai World Trade Centre, Dubai, United Arab Emirates. Contact: Mediac Communication & Exhibitions LLC, PO Box 5196, Dubai, United Arab Emirates. Phone: +971 4 2692004; Fax: +971 4 2691296; Email: mediaccemirates.net.ae; Website: www.mediacom.com

April 28-29: FPF Poultry Days, Beach & Yacht Club at Disney, Orlando, FL. Contact: Florida Poultry Federation, 4508 Oak Fair Blvd., No. 290, Tampa, FL 33610. Phone: 813-628-4551; fpf290@aol.com

2006 May

May 4-7: GPF Annual Meeting, Brasstown Valley Resort, Young Harris, GA. Contact: Georgia Poultry Federation, P.O. Box 763, Gainesville, GA 30503. Phone: 770-532-0473

May 9-11: British Pig & Poultry Fair 2006, Warwickshire, United Kingdom. Contact: Haymarket Land Events, Royal Agricultural Society of England, Stoneleigh Park, Warwickshire CV8 2LZ England. Phone: +44 24 76 690969; Fax: +44 24 76 690960; Email: alice.tell@haynet.com; Website: www.pigandpoultryfair.org.uk

May 15: Respiratory Diseases 2006, NH Utrecht Hotel, Utrecht, Holland. Phone: +31 14377256316; Fax: +31 1437725640; Email: conf@positiveaction.co.uk; Website: www.positiveaction.co.uk

May 16-18: VIV Europe, (Postponed from November 2-4, 2005), Jaarbeurs, Utrecht, The Netherlands. Contact: VNU Exhibitions Europe BV, PO Box 8800, 3503 RV Utrecht, The Netherlands. Phone: +31 30 295 2785; Fax: +31 30 295 2609; Email: viveurope@vnuexhibitions.com; Website: sites.vnuexhibitions.com/sites/viv

May 20: GPF Night of Knights, Cobb Galleria Center, Atlanta, GA. Contact: Georgia Poultry Federation, P.O. Box 763, Gainesville, GA 30503. Phone: 770-532-0473

May 22-26: International Seminar in Poultry Pathology and Production, organized by The University of Georgia and the Colombian Poultry Veterinary Association (AMEVEA), at the University of Georgia, Athens, Georgia. Contact: Sem2006@uga.edu

May 24-26: VIV Russia 2006, Moscow, Russia. Contact: Website: sites.vnuexhibitions.com/sites/viv

2006 June

June 8-10: PT Poultry Festival, Little Rock, AR. Contact: Judith Kimbrell, The Poultry Federation, 321 S. Victory St., Little Rock, AR 72201. Phone: 501-375-8131; jad@alltel.net; http://www.thepoultryfederation.com

June 16-17: Delmarva Chicken Festival, Snow Hill, MD. Contact: Delmarva Poultry Industry Inc., 16680 Country Seat Hwy, Georgetown, Del. 19947. Phone: 302-858-9037; dpf@dpichicken.org; http://www.dpichicken.org

2006 July

July 15-19: AVMA/AAAP Convention, Honolulu, Hawaii, PA. Contact: American Veterinary Medical Association, 1931N. Meacham Road, Suite 100, Schaumburg, Ill. 60173. Phone: 847-925-8070; avmainfo@avma.org.
Meetings, Seminars and Conventions

July 13-16: SCPF Annual Conference, Crowne Plaza Resort, Hilton Head Island, S.C. Contact: South Carolina Poultry Federation, 1921-A Pickens St., Columbia, S.c. 29201. Phone: 803-779-4700; martyg@scpoultry.com

July 16-19: Poultry Science Association (PSA) Annual Meeting 2006, Edmonton, Alberta, Canada. Contact: Mary Swenson, Poultry Science Association, Inc., 1111 N. Dunlap Avenue, Savoy, Illinois 61874 USA. Phone: +1 217 356 5285; Fax: +1 217 398 4119; Email: marys@assochq.org; Website: www.fass.org or www.poultryscience.org


2006 August

Aug 4-5: TEPA Summer Getaway, Nashville, TN. Contact: Tennessee Egg & Poultry Association, P.O. Box 1272, Brentwood, Tennessee 37024-1272. Phone: 615-370-0001; annccox@aol.com; http://www.tnpoultry.org

2006 September

Sept. 10-14: 12th European Poultry Conference, Veronafiere Congress Centre, Verona, Italy. Contact: Secretariat XII WPSC European Conference, Department of Food Science, University of Bologna, Via San Giacomo 9, 40126 Bologna, Italy. Phone: +39 041 209 4221; Fax: +39 051 251 936; Email: epc2006@wpsa.it; Website: www.epc2006.veronafiere.it

Sept. 27-29: VIV China 2006, (Postponed from June 2006-dates not yet specified), Beijing, P.R. China. Contact: VNU Exhibitions Europe B.V., PO Box 8800, 3503 RV Utrecht, The Netherlands. Phone: +31 30 295 2772; Fax: +31 30 295 2809; Email: viv.china@vnuexhibitions.com; Website: sites.vnuexhibitions.com/sites/viv/or Mr. RuiFen Xu, CNAVS Trade Fair Office. Phone +86 10 649 50 373; Fax: +86 10 649 50 374; Email: rfxu@china-av.net

2006 October

October 10-14: World Poultry Science Association (WPSA) European Poultry Conference 2006, Verona, Italy. Contact: Secretariat - XII WPSA European Conference, Department of Food Science, University of Bologna, Via San Giacomo 9, 40126 Bologna, Italy. Phone: +39 041 209 4221; Fax: +39 051 251 936; Email: epc2006@wpsa.it; Website: www.epc2006.veronafiere.it

2006 November

November 14-17: EuroTier 2006, Hanover, Germany. Contact: DLG (Deutsche Landwirtschafts-Gesellschaft e.V.), Eschbacher-Landstrasse 122, 60489 Frankfurt-am-Main, Germany. Phone: +49 69 24788 265; Fax: +49 69 24788 113; Email: eurotier@DLG-Frankfurt.de; Website: www.eurotier.de

2007 January

Jan. 31-Feb. 2: 2007 International Poultry Exposition, Georgia World Congress Center, Atlanta, Georgia, USA. Contact: US Poultry & Egg Association, 1330 Coolidge Road, Tucker, Georgia 30084 USA. Phone: +1 770 493 9401; Fax: +1 770 493 9257; Website: www.poultryegg.org

2007 March

March 20-22: Midwest Poultry Federation Convention 2007, St. Paul, Minnesota USA. Contact: Midwest Poultry Federation, 108 Marty Drive, Buffalo, Minnesota 55313 USA. Phone: +1 763-682-2171; Fax: +1 763-682-5546; Email: Nicole@midwestpoultry.com; Website: www.midwestpoultry.com

2008 August

August 10-15: XXIII World’s Poultry Congress, Convention and Exhibition Centre, Brisbane, Australia. Contact: WPC 2008 Congress, Intermedia Convention & Event Management, PO Box 1280, Milton, Queensland 4064, Australia. Phone: +61 7 3858 5594; Fax: +61 7 3858 5510; Email: wpc2008@im.com.au; Website: www.wpsa.info

Broiler Whole Bird Condemnation (Company)

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Data for week ending January 14, 2006

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.
## Broiler Performance Data (Region)

### Live Production Cost

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<td>144.02</td>
<td>144.39</td>
<td>147.14</td>
</tr>
<tr>
<td>Days to 4.6 lbs</td>
<td>41</td>
<td>40</td>
<td>42</td>
<td>43</td>
<td>41</td>
</tr>
<tr>
<td>Chick cost/lb (¢)</td>
<td>4.12</td>
<td>3.18</td>
<td>3.95</td>
<td>3.88</td>
<td>3.53</td>
</tr>
<tr>
<td>Vac-Med cost/lb (¢)</td>
<td>0.05</td>
<td>0.05</td>
<td>0.06</td>
<td>0.07</td>
<td>0.04</td>
</tr>
<tr>
<td>WB &amp; 1/2 parts condemn. cost/lb</td>
<td>0.23</td>
<td>0.19</td>
<td>0.13</td>
<td>0.19</td>
<td>0.18</td>
</tr>
<tr>
<td>% mortality</td>
<td>4.73</td>
<td>4.23</td>
<td>4.48</td>
<td>5.56</td>
<td>4.96</td>
</tr>
<tr>
<td>Sq. Ft. @ placement</td>
<td>6.43</td>
<td>8.05</td>
<td>6.84</td>
<td>7.19</td>
<td>7.46</td>
</tr>
<tr>
<td>Lbs./Sq. Ft.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Down time (days)</td>
<td>14</td>
<td>18</td>
<td>15</td>
<td>14</td>
<td>12</td>
</tr>
</tbody>
</table>

Data for week ending December 31, 2005

## Broiler Whole Bird Condemnation (Region)

<table>
<thead>
<tr>
<th></th>
<th>SW</th>
<th>Midwest</th>
<th>S. East</th>
<th>Mid-Atlantic</th>
<th>S-Central</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Septox</td>
<td>0.244</td>
<td>0.339</td>
<td>0.179</td>
<td>0.250</td>
<td>0.200</td>
</tr>
<tr>
<td>% Airsac</td>
<td>0.046</td>
<td>0.058</td>
<td>0.042</td>
<td>0.067</td>
<td>0.068</td>
</tr>
<tr>
<td>% L.P.</td>
<td>0.008</td>
<td>0.021</td>
<td>0.012</td>
<td>0.010</td>
<td>0.063</td>
</tr>
<tr>
<td>% Leukosis</td>
<td>0.000</td>
<td>0.002</td>
<td>0.002</td>
<td>0.001</td>
<td>0.000</td>
</tr>
<tr>
<td>% Bruise</td>
<td>0.001</td>
<td>0.006</td>
<td>0.04</td>
<td>0.002</td>
<td>0.005</td>
</tr>
<tr>
<td>% Other</td>
<td>0.008</td>
<td>0.009</td>
<td>0.016</td>
<td>0.019</td>
<td>0.010</td>
</tr>
<tr>
<td>% Total</td>
<td>0.308</td>
<td>0.440</td>
<td>0.255</td>
<td>0.350</td>
<td>0.347</td>
</tr>
<tr>
<td>% 1/2 parts condemnations</td>
<td>0.832</td>
<td>0.386</td>
<td>0.239</td>
<td>0.386</td>
<td>0.369</td>
</tr>
</tbody>
</table>

Data for week ending December 31, 2005

## Broiler Performance Data (Company)

### Live Production Cost

<table>
<thead>
<tr>
<th></th>
<th>Average Co.</th>
<th>Top 5 Co.'s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed cost/ton w/o color ($)</td>
<td>144.21</td>
<td>138.99</td>
</tr>
<tr>
<td>Feed cost/lb meat (¢)</td>
<td>13.57</td>
<td>13.06</td>
</tr>
<tr>
<td>Days to 4.6 lbs</td>
<td>41</td>
<td>40</td>
</tr>
<tr>
<td>Chick cost/lb (¢)</td>
<td>3.82</td>
<td>3.48</td>
</tr>
<tr>
<td>Vac-Med cost/lb (¢)</td>
<td>0.06</td>
<td>0.05</td>
</tr>
<tr>
<td>WB &amp; 1/2 parts condemn. cost/lb</td>
<td>0.18</td>
<td>0.20</td>
</tr>
<tr>
<td>% mortality</td>
<td>4.93</td>
<td>3.93</td>
</tr>
<tr>
<td>Sq. Ft. @ placement</td>
<td>7.15</td>
<td>7.59</td>
</tr>
<tr>
<td>Lbs./Sq. Ft.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Down time (days)</td>
<td>14</td>
<td>16</td>
</tr>
</tbody>
</table>

Data for week ending December 31, 2005

## Broiler Whole Bird Condemnation (Company)

<table>
<thead>
<tr>
<th></th>
<th>Average Co.</th>
<th>Top 5 Co.'s</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Septox</td>
<td>0.237</td>
<td>0.297</td>
</tr>
<tr>
<td>% Airsac</td>
<td>0.059</td>
<td>0.035</td>
</tr>
<tr>
<td>% L.P.</td>
<td>0.032</td>
<td>0.021</td>
</tr>
<tr>
<td>% Leukosis</td>
<td>0.002</td>
<td>0.004</td>
</tr>
<tr>
<td>% Bruise</td>
<td>0.004</td>
<td>0.005</td>
</tr>
<tr>
<td>% Other</td>
<td>0.013</td>
<td>0.012</td>
</tr>
<tr>
<td>% Total</td>
<td>0.347</td>
<td>0.373</td>
</tr>
<tr>
<td>% 1/2 parts condemnations</td>
<td>0.387</td>
<td>0.501</td>
</tr>
</tbody>
</table>

Data for week ending December 31, 2005

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The University of Georgia is committed to the principle of affirmative action and shall not discriminate against otherwise qualified persons on the basis of race, color, religion, national origin, sex, age, physical or mental handicap, disability, or veteran's status in its recruitment, admissions, employment, facility and program accessibility, or services.