Drs. Tom Beacorn and Lynne Luna, students in the Master of Avian Medicine program, University of Georgia, summarized the following papers that were presented at the Southern Conference on Avian Diseases, Atlanta, Georgia, January 18-19, 1999.

Summaries from the 1999 Southern Conference on Avian Diseases

Avian Leukosis Subgroup J: An Overview of Progress in Research and Control of the Disease

ALV-J is an avian retrovirus that causes high mortality in meat birds. Great efforts have been ongoing to eradicate this disease at the primary breeder level. Presently, there are continued pressures for better diagnostic tools for ALV-J and for a greater understanding of how this disease interacts with other immunosuppressive diseases in poultry. Dr. Zavala reported that the interaction between ALV-J and Marek’s Disease Virus resulted in no effects on bursal weight, however the combined infection did lead to lymphomas, myelocytomas and lymphocytic neuritis. It appears as though the combined ALV-J + MDV infection creates a situation where the ALV-J induced viremia is more persistent.

Continued on page 2
In comparing diagnostic assays available at the present time for ALV-J, Dr. Zavala reported on the successful use of the C/E and C/O cell lines for the propagation of ALV-J from field samples. The C/E cell line presently is the most sensitive of the two propagation systems. Lastly, the sample type, handling and diagnostic assay can result in different diagnostic results.

Guillermo Zavala  
Department of Avian Medicine  
University of Georgia, Athens, Ga 30602

Characterization of an 072 Infectious Bronchitis Virus isolate (OK96) and Evaluation of Vaccine efficacy for Protection against Experimental Challenge

The IBV isolate, (OK96) came from a 30 week old broiler breeder hen which demonstrated a high IBV antibody level as detected by ELISA. There was an increase of egg shell problems and decreased egg production; however, the flock showed no obvious clinical signs. With the use of RT-PCR and RFLP, the (OK96) isolate was shown to be a Delaware 072-IBV. Virus neutralization assays found the isolate to be neutralized by several different IBV serotypes. Vaccine challenge against (OK96) in 2-week-old SPF leghorns using Mass, Conn, Ark 99, 072 or Mass/Conn was done via eyedrop. The vaccines were followed 2 weeks later with an (OK96) challenge. Using histopathology of tracheas and lungs and virus isolation, there was no protection by these vaccines against the (OK96) challenge. Indirect fluorescent antibody (IFA) staining showed this isolate to be S1-/-NM+. The monovalent and polyvalent vaccines offered little protection against (OK96) challenge. The (OK96) isolate is still believed to be a Delaware 072-IBV which causes respiratory, lung, and reproductive lesions without any obvious renal involvement.

L.A. Newberry, 1  B.L. Plumlee 2  and J.K. Skeeles 1  
1. Center of Excellence for Poultry Science, Department of Poultry Science, University of Arkansas, Fayetteville, AR,  
2. Fort Dodge Animal Health Inc., Fort Dodge, IA.

Broiler Performance Data (Company)  
Live Production Cost

<table>
<thead>
<tr>
<th></th>
<th>Average Co.</th>
<th>Top 25%</th>
<th>Top 5 Cos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed cost/ton w/o color ($)</td>
<td>131.58</td>
<td>128.87</td>
<td>119.35</td>
</tr>
<tr>
<td>Feed cost/lb meat (¢)</td>
<td>12.71</td>
<td>11.98</td>
<td>11.61</td>
</tr>
<tr>
<td>Days to 4.6 lbs</td>
<td>45</td>
<td>46</td>
<td>45</td>
</tr>
<tr>
<td>Med. cost/ton (¢)</td>
<td>2.77</td>
<td>1.72</td>
<td>1.39</td>
</tr>
<tr>
<td>Chick cost/lb (¢)</td>
<td>3.93</td>
<td>3.61</td>
<td>3.22</td>
</tr>
<tr>
<td>Vac-Med cost/lb (¢)</td>
<td>0.06</td>
<td>0.06</td>
<td>0.04</td>
</tr>
<tr>
<td>WB &amp; 1/2 parts condemn. cost/lb</td>
<td>0.31</td>
<td>0.22</td>
<td>0.15</td>
</tr>
<tr>
<td>% mortality</td>
<td>5.48</td>
<td>4.65</td>
<td>4.96</td>
</tr>
<tr>
<td>Sq. Ft. @ placement</td>
<td>0.76</td>
<td>0.75</td>
<td>0.73</td>
</tr>
<tr>
<td>Lbs./Sq. Ft.</td>
<td>6.70</td>
<td>6.75</td>
<td>7.40</td>
</tr>
<tr>
<td>Down time (days)</td>
<td>14</td>
<td>15</td>
<td>13</td>
</tr>
</tbody>
</table>

Data for week ending 2/20/99

Broiler Whole Bird Condemnation (Region)

<table>
<thead>
<tr>
<th></th>
<th>SW</th>
<th>Mid-West</th>
<th>S. East</th>
<th>Mid-Atlantic</th>
<th>S. Central</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Septox</td>
<td>0.359</td>
<td>0.411</td>
<td>0.275</td>
<td>0.434</td>
<td>0.310</td>
</tr>
<tr>
<td>% Airsac</td>
<td>0.153</td>
<td>0.083</td>
<td>0.582</td>
<td>0.233</td>
<td>0.299</td>
</tr>
<tr>
<td>% I.P.</td>
<td>0.057</td>
<td>0.068</td>
<td>0.255</td>
<td>0.210</td>
<td>0.215</td>
</tr>
<tr>
<td>% Leukosis</td>
<td>0.010</td>
<td>0.005</td>
<td>0.006</td>
<td>0.024</td>
<td>0.003</td>
</tr>
<tr>
<td>% Bruise</td>
<td>0.011</td>
<td>0.012</td>
<td>0.021</td>
<td>0.014</td>
<td>0.015</td>
</tr>
<tr>
<td>% Other</td>
<td>0.021</td>
<td>0.015</td>
<td>0.041</td>
<td>0.018</td>
<td>0.091</td>
</tr>
<tr>
<td>% Total</td>
<td>0.611</td>
<td>0.593</td>
<td>1.180</td>
<td>0.983</td>
<td>0.983</td>
</tr>
<tr>
<td>% 1/2 parts condemnations</td>
<td>0.412</td>
<td>0.377</td>
<td>0.286</td>
<td>0.308</td>
<td>0.392</td>
</tr>
</tbody>
</table>

Data for week ending 2/20/99
Heterophil Function in Broilers Naturally Infected with Avian Leukosis Virus Subgroup J

ALV-J has a high tropism for cells of the myelomonocytic lineage and is known to induce myelocytic and monocytic neoplasms. ALV-J doesn’t affect monocytic function, as does ALV-B; it has been hypothesized that heterophil function could also be altered.

ALV-J positive and negative broilers were produced and were determined to be positive or negative based on ELISA and RT-PRC testing. Blood was collected from the broilers at 6 and 9 weeks of age. Heterophils were isolated from theuffy coat and purified. PCR was utilized to detect the presence of ALV-J proviral DNA in the heterophils. Viability of the heterophils was assessed from both ALV-J and ALV negative heterophils. Both ALV-J infected and non-affected heterophil function was assessed by the ability to kill Staphylococcus aureus and by the ability to phagocytose latex beads.

ALV-J proviral DNA was found in the heterophils of ALV-J infected birds, but not in non-infected birds. ALV-negative heterophils were found to be more viable, had better S. aureus killing ability, and were more effective in the phagocytosis of latex beads than were heterophils from ALV-positive birds.

Nancy L. Stedman
Thomas P. Brown, Denise I. Bounous, Randy L. Brooks
Departments of Veterinary Pathology and Avian Medicine
University of Georgia, Athens, GA 30602

Assessment of Mycoplasma synoviae seroconversion in Broiler Chickens after Intramuscular Injection of Killed Infectious Bursal Disease Vaccine

This study was done in order to help determine the cause of a dramatic increase (~33% to ~60%) in false positive reactions on Mycoplasma synoviae (MS) serum plate agglutination (SPA) tests in broiler breeder pullets of a Northeast Georgia broiler production company. The MS SPA tests were part of the normal monitoring program of this company. The only correlation relating to the timing of the increase in MS false positives was a change in one of the killed oil emulsion IBD vaccines being used in the pullets. Before the change, vaccine “A” was used at 10 weeks of age and vaccine “B” at 18 weeks. The protocol was then switched so that vaccine “B” was being used at 10 weeks, and vaccine “C” at 18 weeks.

For this study, vaccines "B" and "C" were each administered IM to 25 4-week old broilers provided by the company. MS plate tests were run on each bird at 3 days prior to vaccination and every 2 weeks thereafter for 6 weeks. All serum samples testing positive by SPA were then tested with hemagglutination inhibition (HI).

A dramatic increase in MS false positives was seen at 2 weeks with vaccine "C" (88.5%), while vaccine "B" remained within control levels (12%). Each subsequent test showed both vaccines within control levels. All sera were negative by HI, verifying the positives as false, or non-specific.

Jean E. Sander and G. Lynne Luna
Department of Avian Medicine
University of Georgia, Athens, GA 30602
Broiler Production Increases To Accelerate

Broiler production is expected to rise 5-6 percent in 1999 as higher producer profitability makes production increases more attainable and attractive. Producer net returns continue quite strong as lower feed costs and higher whole bird prices increase returns. In response to high net returns, pullet hatch for potential placement in the hatchery supply flock was 2 percent above a year ago in January and has averaged about 4 percent larger for the last year. The broiler-type hatching egg production flock was 4 percent larger than a year ago on January 1. Broiler prices are expected to drop about 4 cents from 1998's 63 cents per pound due to increased supplies and a continuing lackluster export market. However, prices for whole birds are expected to continue stronger than a year ago through the first quarter, but should be slightly weaker than a year ago for most of the year as production increases accelerate. Plentiful pork supplies are providing competition for low-priced poultry products in the export market. Price strength later in 1999 would require a recovery of the Russian and Asian export markets and a reduction in competing red meat supplies. Larger increases in the broiler-type chick hatch since November indicate that production should increase more strongly. Egg sets in incubators for broiler production were up between 3 and 5 percent in November through early February for the 15 States surveyed. Most of these birds will be ready for slaughter during the first quarter, according to the Economic Research Service (ERS).

Turkey Net Returns Positive

Reductions in feed costs (29 percent below a year ago) and slight increases in turkey prices allowed producers to more than break even in January, following losses of over 10 cents per pound last year. Returns are expected to continue near break-even for the first half of the year. Turkey production declined about 4 percent from a year ago in 1998 as lower poult placements limited slaughter. Production is expected to be nearly unchanged in 1999. Total turkey supplies will be about unchanged from last year as lower exports and smaller ending stocks nearly offset the decline in production and carryin stocks. Per capita supplies are expected to be slightly lower. Prices are expected to be about 1 cent higher at both wholesale and retail.

Larger Egg Production Expected

Egg production increased nearly 3 percent in 1998 and brought wholesale large egg prices down about 5 cents per dozen. Egg production is expected to continue increasing but at a slightly slower 2-percent rate. Increasing production is expected to continue pressuring on egg prices with the 1999 forecast 3-4 cents lower. Declining feed costs are expected to offset some of the price decline and keep egg production profitable for most producers in 1999.

Broiler Exports To Decline

According to the Economic Research Service (ERS) U.S. broiler exports are expected to decrease to 4.4 billion pounds in 1999, after many years of growth. Decreasing exports to Russia are a major factor in the decline. While adverse economic conditions have affected consumer expenditures in a number of countries, poultry products remain the least expensive meat product in many of these areas. Another factor that could affect U.S. broiler exports is the continuing economic problems faced by Brazil, one of the world's largest broiler exporters. The devaluation of its currency means Brazilian producers would be in a position to reduce prices in an attempt to promote exports and to increase foreign exchange earnings. A weak domestic economy is also expected to depress Brazil's broiler consumption, which would leave more of its production available for export.

Continued on page 5
In 1998, exports of broiler meat totaled 4.7 billion pounds. Exports to Russia and other NIS countries have declined sharply since September. Broiler exports to the Baltic countries and Poland will likely show year-over-year growth, but this is due to the large amounts of products imported before the Russian economic crisis began. The economic problems affecting many Asian economies have not yet affected broiler exports as shipments to Hong Kong/China and Japan will be higher in 1998. However, U.S. exports of turkey, other chicken, and eggs and egg products to these markets will be down significantly.

**Broiler Eggs Set in 15 Selected States Up 3 Percent**

According to the National Agricultural Statistics Service (NASS) commercial hatcheries in the 15-state weekly program set 181 million eggs in incubators during the week ending February 27, 1999. This was up 3 percent from the eggs set the corresponding week a year earlier. Average hatchability for chicks hatched during the week was 82 percent.

**Broiler Chicks Placed Up 5 Percent**

Broiler growers in the 15-state weekly program placed 143 million chicks for meat production during the week ending February 27, 1999. Placements were up 4 percent from the comparable week in 1998. Cumulative placements from January 3, 1999 through February 20, 1999 were 1.13 billion, up 4 percent from the same period a year ago, according to NASS.

**January Egg Production Up 3 Percent**

U.S. egg production totaled 6.97 billion during January 1999, up 3 percent from the 6.77 billion produced in 1998. Production included 5.89 billion table eggs and 1.08 billion hatching eggs, of which 1.02 billion were broiler-type and 66.0 million were egg type. The total number of layers during January 1999 averaged 322 million, up 3 percent from the total average number of layers during January 1998. January egg production per 100 layers was 2,164 eggs, down fractionally from 2,169 eggs in January 1998. All layers in the U.S. on February 1, 1999, totalled 322 million, up 3 percent from a year ago. The 322 million layers consisted of 263 million layers producing table or commercial type eggs, 56.2 million layers producing broiler-type hatching eggs, and 2.76 million layers producing egg-type hatching eggs. Rate of lay per day on February 1, 1999, averaged 69.2 eggs per 100 layers, down fractionally from the 69.4 a year ago.

Laying flocks in the 30 major egg production states produced 6.59 billion eggs during January, up 3 percent from January 1999. The average number of layers during January, at 305 million, was up 3 percent from a year ago.

**Egg-Type Chicks Hatched Down 4 Percent**

Egg-type chicks hatched during January totaled 35.7 million, down 4 percent from January 1998. Eggs in incubators totaled 33.9 million on February 1, 1999, up 3 percent from a year ago. Domestic placements of egg-type pullet chicks for future hatchery supply flocks by leading breeders totaled 166,000 during January 1999, down 12 percent from January 1998, according to NASS.

**Broiler Hatch Up 3 Percent**

The January 1999 hatch of broiler-type chicks, at 735 million, was up 3 percent from January of the previous year. There were 607 million eggs in incubators on February 1, 1999, up 3 percent from a year earlier.

Leading breeders placed 7.06 million broiler-type pullet chicks for future domestic hatchery supply flocks during January 1999, up 4 percent from January 1998.
Managing Rapid Growth in Broilers and Turkeys ACPV Workshop Vancouver 1999

The American College of Poultry Veterinarians will be sponsoring a workshop prior to the 48th Western Poultry Disease Conference. The workshop will present information and discussion on the problems and solutions of managing today’s birds for rapid growth.

It will be held on Saturday, the 24th of April, 1999. The meeting will take place at the Landmark Hotel and Convention Center in Vancouver, British Columbia, Canada.

Pre-registration for the workshop will be $125.00 U.S. For further information, please contact:
Lina Layiketz
Conference and Event Services
1 Shields Avenue
University of California
Davis, CA 95616
Phone: (530) 757-3331 • Fax:(530) 757-7943 • E-mail: confandeventsSVCS@ucdavis.edu

Broiler Whole Bird Condemnation (Company)

<table>
<thead>
<tr>
<th></th>
<th>Average Co.</th>
<th>Top 25%</th>
<th>Top 5 Co.’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Septox</td>
<td>0.370</td>
<td>0.304</td>
<td>0.236</td>
</tr>
<tr>
<td>% Air sac</td>
<td>0.269</td>
<td>0.113</td>
<td>0.078</td>
</tr>
<tr>
<td>% I.P.</td>
<td>0.171</td>
<td>0.084</td>
<td>0.049</td>
</tr>
<tr>
<td>% Leukosis</td>
<td>0.013</td>
<td>0.005</td>
<td>0.009</td>
</tr>
<tr>
<td>% Bruise</td>
<td>0.016</td>
<td>0.017</td>
<td>0.007</td>
</tr>
<tr>
<td>% Other</td>
<td>0.040</td>
<td>0.016</td>
<td>0.009</td>
</tr>
<tr>
<td>% Total</td>
<td>0.880</td>
<td>0.538</td>
<td>0.389</td>
</tr>
<tr>
<td>% 1/2 parts condemnations</td>
<td>0.377</td>
<td>0.327</td>
<td>0.218</td>
</tr>
</tbody>
</table>

Data for week ending 2/20/99
Meetings, Seminars and Conventions

1999

March

March 16-18: Midwest Poultry Federation Convention, River Centre, St. Paul, MN. Contact: Midwest Poultry Federation, 2380 Wycliff St., St. Paul, MN 55114-1257. Phone (612) 646-4553.

March 18-20: VIV-Asia, International Trade Fair on Intensive Animal Production, Queen Sirikit Centre, Bangkok, Thailand. Contact: Royal Dutch Jaarbeurs, P.O. Box 8500, 3505 RM Arnhem, The Netherlands. Phone +31 30 29 40379.

March 24-25: Canadian Turkey Conference, Sheraton Hotel, Ottawa. Contact: Canadian Turkey Marketing Agency, 4020 Barrett Dr., Suite 102, Raleigh, NC 27609. Phone (919) 783-8218.


April

April 9-13: North Carolina/South Carolina Joint Turkey Federations Spring Meeting, Embassy Suites Hotel, Myrtle Beach, S.C. Contact: North Carolina Turkey Federation, 4020 Barrett Dr., Suite 102, Raleigh, N.C. 27609. Phone (919) 783-8218.

April 13-14: Arkansas Poultry Symposium, Holiday Inn, Springdale, AR. Contact: Judy Kimbrell at Arkansas Poultry Federation. Phone (501) 375-8131.


April 14-16: ‘Turkeys’ 21st Technical Turkey Conference, Shrigley Hall Hotel, Pott Shrigley, Nr Macclesfield, Cheshire, UK. Contact: Conference Office, PO Box 18, Bishopdale, Leyburn DL8 3YY, US. Fax: +44 (0)1969 663764.

April 24-27: 48th Western Poultry Disease Conference, Landmark Hotel & Conference Centre, Vancouver, BC. Contact: Lina Layiktez, Conference and Event Services, 1 Shields Avenue, University of California, Davis, CA 95616. Phone (530) 757-3331; Fax: (530) 757-7943; E-mail: confandevents@vcdavis.edu.

Apr 29-May 2 — Georgia Poultry Federation Annual Spring Mtn., Brasstown Valley Resort, Young Harris, GA. Contact: Georgia Poultry Federation, P.O. Box 763 Gainesville, Ga. 30503. Phone:770-532-0473.

May


May 6-7: National Breeders Roundtable, St. Louis, MO. Contact: USPOULTRY, 1530 Cooledge Road, Tucker, GA 30084-7303. Phone (770) 493-9401; fax (770) 493-9257; e-mail myile@poultryegg.org or Internet www.poultryegg.org.

May 12-13: Texas Poultry Federation Board Meeting, Dallas. Details from Texas Poultry Federation, P.O. Box 9589, Austin, TX 78766-9589. Phone (512) 451-6816; fax (512) 452-5142.


May 22: GPF Night of Knights, Cobb Galleria Centre, Atlanta, GA. Contact: Georgia Poultry Federation, P.O. Box 673, Gainsville, Ga. 30503. Ph: (770) 532-0473.

1999 June

June 3-5: Alabama Poultry & Egg Convention, Sheraton Birmingham. Details from Alabama Poultry & Egg Association, P.O. Box 240, Montgomery, AL 36101-0240, Phone (334) 265-2732; Fax (334) 265-0008.

June 4-5: Arkansas Poultry Festival, Arlington Hotel, Hot Springs, Ark. Contact: Judy Kimbrell, Arkansas Poultry Federation, P.O. Box 1446, Little Rock, Ark. 72203. Phone (501) 375-8131.

June 10-12: Poultry Neonatal Health and Disease Workshop, Life Learning Center, Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada. Contact: Dr. Bruce Hunter, Dept. of Patholobiology, Ontario Veterinary College, University of Guelph, Guelph, Ontario, NIG 2WI. Phone (519) 824-4120, ext. 4625.

June 18-19: Georgia Veterinary Medicine Association, Jekyll Island, Georgia. Contact: Beth Monte, Georgia Veterinary Medical Assn., 3050 Holcomb Bridge Road, Norcross, GA 30071. Phone: (770) 416-1633.

June 18-19: 51st Delmarva Chicken Festival, Crisfield, Md. Contact: Delmarva Poultry Industry, R.D. 6, Box 47, Georgetown, Del. 19947. Phone (302) 856-9037.

June 22-24: 26th Poultry Science Symposium, Poultry Feedstuffs, Supply, Composition and Nutritive Value, Pueblo, Edinburgh, Scotland, UK. Contact: Dr. Jim McNab, Roslin Institute (Edinburgh), Roslin, Midlothian EH25 9PS, Scotland, UK. Fax +44(0) 131-440-0434.