Little or no cross protection between serotypes.

Infectious bronchitis (IB) is a highly contagious, acute upper respiratory tract disease in chickens. Clinical signs of the disease are coughing, sneezing, tracheal rales, gasping and nasal discharge. Mortality may occur in very young birds, whereas decreased weight gain and feed conversion are usually observed in older birds. A drop in egg production and egg quality are observed when layers are infected. The clinical signs can become extremely severe when secondary invaders such as E. coli complicate the disease.

Infectious bronchitis virus (IBV) is classified as a coronavirus and isolates of the virus have been grouped into different serotypes using antibodies. The serotype grouping of IBV isolates is important because it is well known that little or no cross protection between serotypes occurs in chickens. Thus, it is extremely important to identify the serotype of the virus causing disease so that birds can be properly vaccinated.
**Variant or new viruses readily occur.**

One characteristic of this virus that makes it extremely difficult to control is its ability to rapidly change and adapt to the host. When that occurs, well-characterized viruses that we refer to as serotypes, become what are known as variant viruses. By definition, variant viruses are any "new" isolate of IBV that hasn’t been previously identified and grouped with antibodies. Changes that occur in IBV can result in a variant virus, and usually occur in the gene that codes for the spike protein. The spike protein is located on the outside of the virus particle, and neutralizing and serotype specific antibodies are directed against the outer portion of that protein.

**IBV variants are circulating in healthy chickens all the time.**

With the advent of molecular based diagnostic tests for IBV we now have the ability to specifically identify variant viruses. IBV can be detected and the serotype identified with a polymerase chain reaction (PCR) based diagnostic test that uses restriction enzymes (enzymes that cut the PCR product) to generate a restriction fragment length pattern (RFLP) unique to each different serotype and variant of the virus. What we have learned using that technique is that many different IBV variants are circulating in perfectly healthy chickens all the time.

Changes in the spike protein gene that result in a variant virus do not appear to correlate with pathogenicity. In other words, non-pathogenic variant IB viruses can and do exist. Consequently, pathogenicity studies are necessary to verify that a newly identified variant virus is capable of causing disease.

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**Samples can be submitted for PCR analysis by contacting the Department of Avian Medicine Diagnostic Laboratory.**

Phone: 706-542-5657

Email: pdrdxdlb@arces.uga.edu

or

sthayer@arces.uga.edu

An import permit and instructions for submitting samples from outside the U.S. can be obtained at the above phone or email.

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**Broiler Performance Data (Company)**

<table>
<thead>
<tr>
<th>Live Production Cost</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>130.22</td>
<td>123.06</td>
<td>N/A</td>
</tr>
<tr>
<td>Feed cost/lb meat (¢)</td>
<td>12.24</td>
<td>11.52</td>
<td>N/A</td>
</tr>
<tr>
<td>Days to 4.6 lbs</td>
<td>44</td>
<td>44</td>
<td>N/A</td>
</tr>
<tr>
<td>Med. cost/ton (¢)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Chick cost/lb (¢)</td>
<td>4.01</td>
<td>3.64</td>
<td>N/A</td>
</tr>
<tr>
<td>Vac-Med cost/lb (¢)</td>
<td>0.07</td>
<td>0.04</td>
<td>N/A</td>
</tr>
<tr>
<td>WB &amp; 1/2 parts condemn. cost/lb</td>
<td>0.25</td>
<td>0.18</td>
<td>N/A</td>
</tr>
<tr>
<td>% mortality</td>
<td>4.52</td>
<td>3.78</td>
<td>N/A</td>
</tr>
<tr>
<td>Sq. Ft. @ placement</td>
<td>0.77</td>
<td>0.76</td>
<td>N/A</td>
</tr>
<tr>
<td>Lbs./Sq. Ft.</td>
<td>6.75</td>
<td>6.83</td>
<td>N/A</td>
</tr>
<tr>
<td>Down time (days)</td>
<td>15</td>
<td>14</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Data for week ending 5/15/01 N/A = Not Available

**Broiler Whole Bird Condemnation (Region)**

<table>
<thead>
<tr>
<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>0.330</td>
<td>0.353</td>
<td>0.253</td>
<td>0.325</td>
</tr>
<tr>
<td>% Airsac</td>
<td>0.141</td>
<td>0.075</td>
<td>0.117</td>
<td>0.185</td>
</tr>
<tr>
<td>% I.P.</td>
<td>0.048</td>
<td>0.033</td>
<td>0.119</td>
<td>0.076</td>
</tr>
<tr>
<td>% Leukosis</td>
<td>0.004</td>
<td>0.003</td>
<td>0.008</td>
<td>0.031</td>
</tr>
<tr>
<td>% Bruise</td>
<td>0.007</td>
<td>0.005</td>
<td>0.012</td>
<td>0.010</td>
</tr>
<tr>
<td>% Other</td>
<td>0.024</td>
<td>0.006</td>
<td>0.015</td>
<td>0.017</td>
</tr>
<tr>
<td>% Total</td>
<td>0.555</td>
<td>0.474</td>
<td>0.524</td>
<td>0.644</td>
</tr>
<tr>
<td>% 1/2 parts condemnations</td>
<td>0.498</td>
<td>0.509</td>
<td>0.485</td>
<td>0.441</td>
</tr>
</tbody>
</table>

Data for week ending 5/15/01
### 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>0.286</td>
<td>0.236</td>
<td>N/A</td>
</tr>
<tr>
<td>% Air sac</td>
<td>0.174</td>
<td>0.150</td>
<td>N/A</td>
</tr>
<tr>
<td>% I.P.</td>
<td>0.085</td>
<td>0.081</td>
<td>N/A</td>
</tr>
<tr>
<td>% Leukosis</td>
<td>0.019</td>
<td>0.006</td>
<td>N/A</td>
</tr>
<tr>
<td>% Bruise</td>
<td>0.011</td>
<td>0.016</td>
<td>N/A</td>
</tr>
<tr>
<td>% Other</td>
<td>0.019</td>
<td>0.005</td>
<td>N/A</td>
</tr>
<tr>
<td>% Total</td>
<td>0.593</td>
<td>0.495</td>
<td>N/A</td>
</tr>
<tr>
<td>% 1/2 parts condemnations</td>
<td>0.528</td>
<td>0.321</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Data for week ending 5/15/01  
N/A = Not Available

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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.

The Poultry Informed Professional Newsletter is published with support from Bayer Corporation.
Broiler Eggs Set In 15 Selected States Up Slightly
Commercial hatcheries in the 15-State weekly program set 187 million eggs in incubators during the week ending May 19, 2001. This was up slightly 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 Placed Down Slightly
Broiler growers in the 15-State weekly program placed 150 million chicks for meat production during the week ending May 19, 2001. Placements were down slightly from the comparable week in 2000. Cumulative placements from December 31, 2000 through May 19, 2001 were 2.93 billion, down slightly from the same period a year earlier.

Four Additional States in Weekly Program
Beginning May 16, 2001 four additional States are being published for the first time in the weekly program for broiler eggs set in incubators and broiler chicks placed for meat production. The four additional States are Kentucky, Louisiana, Missouri, and Oklahoma. Data collection and weekly estimates began with the week ending April 7, 2001. Commercial hatcheries for the 19-States set a total of 207 million eggs in incubators during the week ending May 19, 2001. Broiler growers in the 19-States placed 167 million chicks for meat production during the week ending May 19, 2001.

April Egg Production Up 1 Percent
U.S. egg production totaled 7.09 billion during April 2001, up 1 percent from last year. Production included 6.01 billion table eggs and 1.08 billion hatching eggs, of which 1.01 billion were broiler-type and 66.0 million were egg-type. The total number of layers during April 2001 averaged 337 million, up 2 percent from the total average number of layers during April 2000. April egg production per 100 layers was 2,106 eggs, down 1 percent from 2,130 eggs in April 2000. April 2001 contained 21 weekdays and four Saturdays, compared to 20 weekdays and 5 Saturdays in April 2000.

All layers in the U.S. on May 1, 2001, totaled 337 million, up 3 percent from a year ago. The 337 million layers consisted of 277 million layers producing table or commercial type eggs, 56.9 million layers producing broiler-type hatching eggs, and 2.96 million layers producing egg-type hatching eggs. Rate of lay per day on May 1, 2001, averaged 69.4 eggs per 100 layers, down 2 percent from the 70.6 eggs a year ago.

Laying flocks in the 30 major egg producing States produced 6.65 billion eggs during April 2001, up 1 percent from April 2000. The average number of layers during April, at 316 million, was up 2 percent from a year earlier.

Egg-Type Chicks Hatched Up 14 Percent
Egg-type chicks hatched during April totaled 42 million, up 14 percent from April 2000. Eggs in incubators totaled 37.0 million on May 1, 2001, up 1 percent from a year ago. Domestic placements of egg-type pullet chicks for future hatchery supply flocks by leading breeders totaled 293,000 during April 2001, down 5 percent from April 2000 report.

Broiler Hatch Down Slightly
The April 2001 hatch of broiler-type chicks, at 745 million, was down slightly from April of the previous year. There were 635 million eggs in incubators on May 1, 2001, down 1 percent from a year earlier.

Leading breeders placed 640 million broiler-type pullet chicks for future domestic hatchery supply flocks during April 2001, down 5 percent from April 2000.

Turkey Eggs in Incubators on May 1 Up 2 Percent From Last Year
Turkey eggs in incubators on May 1, 2001, in the United States totaled 32.3 million, up 2 percent from May 1 a year ago. Eggs in incubators were down 2 percent from the April 1 total of 32.9 million. Regional changes from the previous year were: East North Central, up 8 percent; West North Central, up 11 percent; North and South Atlantic, down 2 percent; South Central, down 7 percent; and West, down 12 percent.

Poults Placed During April Up 4 Percent From Last Year
The 26.2 million poults placed during April 2001 in the United States were up 4 percent from the number placed during the same month a year ago. Placements were up slightly from the March 2001 total of 26.1 million. Regional changes from the previous year were: East North Central, up 14 percent; West North Central, up 15 percent; North and South Atlantic, down 1 percent; South Central, down 9 percent; and West, down 9 percent.
Meetings, Seminars and Conventions

2001

June


June 27-29: 3rd Annual Conference on Avian Diseases, Theme of meeting, “The Future of the Poultry Industry.” Hosted by: The University of Maryland. Website: www.vetmed.umd.edu

June 29-30: Alabama Veterinary Medical Association Meeting, Marriott Grand Hotel, Point Clear, Alabama. Contact: Joel L. Cline, DVM., J.B. Taylor Diagnostic Lab., 495 Alabama 203, Elba, AL 36323. Phone: 334-897-6340

July

July 14-18: AVMA-AAAP Meeting, Boston, MA. Hotel Reservations: Internet (online reservations) http://www.avma.org

July 17-18: Hatchery-Breeder Clinic, Sheraton Atlanta Hotel, Atlanta. Details from U.S. Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA 30084-7303; Phone: 770-493-9401; Fax: 770-493-9257; E-mail: seminar@poultryegg.org

July 20-21: Alabama Poultry & Egg Association Annual Meeting and Convention, Sandestin Beach Hilton, Destin, Fla. Details from AP&EA, P.O. Box 240, Montgomery, AL 36101; Phone: 334-265-2732; Fax: 334-265-0008.

August

Aug. 24: International Course on Poultry Husbandry, Contact: IPC Livestock Barneveld College, P.O. box 64, 3770 AB Barneveld, The +Netherlands. Phone: +31 342 414881; Fax: +31 342 492813; E-mail: io@ipcdier.hacom.nl


Sept. 4: Northern Ireland Poultry Industry Conference, Loughry College, Cookstown, Co. Tyrone, N. Ireland. Contact: Basil Bayne, Greenmount College, 22 Greenmount Road, Antrim BT41 4PU, Ireland. Phone: +44 (0) 28 9442 6796; Fax: +44 (0) 1849 426606; E-mail: basil.bayne@bdani.gov.uk

Sept. 7-9: 3rd Ukrainian Poultry Conference, Crimea, Ukraine. Organised by Poultry Institute of the Ukrainian Academy of Agrarian Sciences and the Ukrainian Branch WPSA. Contact: Dr. Taghirov Makhshud, Organising Committee Secretary, Poultry Research Institute,Birky, Zmiiv District, Kharkiv Region 63421, Ukraine. Phone: +380 (0) 57 574 78005, 7806, 34439; Fax: +380 (0) 57 574 39458; E-mail: poultry@zmiiev.kharkov.com

Sept. 11-13: The Poultry Federation (Arkansas, Missouri, Oklahoma) Nutrition Conference, Clarion Inn, Fayetteville, Ark. Details from Judy Kimbrell, The Poultry Federation, P.O. Box 1446, Little Rock, AR 72203; Phone: 501-375-8131; Fax: 501-375-5519

Sept. 9-12: IX European Symposium on the Quality of Eggs and Egg Products & XV European Symposium on the Quality of Poultry Meat, Contact: Dr. S. Yalcin, Secretary of WPSA Turkish Branch, Ege University, Faculty of Agriculture, Dept. of Animal Science, 35100 Izmir-Turkey. Phone +90 232 388 4000/1449 (ext.); Fax +90 232 388 1864. E-mail: yalcin@ziraat.ege.edu.tr

Sept. 12-14: 2nd Poultry Genetics Symposium, Organised by the Institute for Small Animals Research, Godollo, Hungary and WPSA Working Group 3 ‘Breeding and Genetics’. Contact: Dr. Hidas András. Institute for Small Animals Research, H-2100 Godollo, Jaszegi ut, (P.O. Box 147). Phone: +36 28 420 387; Fax: +36 28 430 184; Email: hidas@katki.hu


Sept. 20-21: World Veterinary Poultry Association XII International Congress, Current developments and prospects for poultry disease prevention and control, Cairo, Egypt. Contact: Cairo International Conference Centre, Prof. Dr. A.A. Sami Ahmed, President, Organising Committee, P.O. Box 2399, Cairo, Egypt. Phone: +202 2442587; Fax: +202 2474955; E-mail: mipco@thewayout.net


2001

October

Oct. 2-3: Alabama Broiler Industry Seminar, Auburn University Hotel and Dixon Conference Center, Auburn, AL. Details from AP&EA, P.O. Box 240, Montgomery, AL 36101; Phone: 334-265-2732; Fax: 334-265-0008.

Oct. 4-7: Fieravicola, 40th International Poultry Show, Forli, Italy. Contact: Phone: +39 0543 793511; Fax: +39 0543 724488; E-mail: info@fieravicola.com; Internet: www.fieravicola.com

Oct. 9-12: XVII Latin American Poultry Congress, Guatemala City, Guatemala. Contact: Anavi, Avenida De La Reforma 8-60, Zona 9, Edificio Galerias Reforma, Torre II, 9th Nivel, Oficina 904, Guatemala City, Guatemala. Phone: (502) 331 1381; Fax: (502) 339 2338; Email: latino@terra.com.gt; Internet: www.XVIII-latinoavicola.org.gt
Meetings, Seminars and Conventions

Oct. 17-19: National Meeting on Poultry Health and Processing, Clarion Resort Fontainebleau, Ocean City, Maryland. Contact: Karen Adams at adams@dpichicken.com or Fax: 302-856-1845.

2001
November

Nov. 1-3: Effective Broiler Breeder Management, Holiday Inn, Utrecht, Netherlands. Contact: Elaine Robson, Positive Action Conferences. Phone: +31(0)1377 256316; Fax: +31(0)1377 254463; Email: conf@positiveaction.co.uk

Nov. 5: Salmonella 2001 Conference, Holiday Inn, Utrecht, Netherlands. Contact: Elaine Robson, Positive Action Conferences. Phone: +31(0)1377 256316; Fax: +31(0)1377 254463; Email: conf@positiveaction.co.uk

2002
April

April 24-26: VIV China 2002, China International Exhibition Centre, Beijing, P.R. China. Contact: Royal Dutch Jaarbeurs, P.O. Box 8500, 3503 RM Utrecht, the Netherlands. Phone: +31 30 295 5662; Fax: +31 30 295 5709; E-mail: viv.china@jaarbeursutrecht.nl

May

May 27-31: X International Seminar in Avian Pathology and Poultry Production (In Spanish), Georgia, USA. Contact: Dr. Pedro Villegas, Department of Avian Medicine, The University of Georgia, Athens, GA 30602-4875, USA. Fax: +1-706-542-5630; E-mail: sem2002@arches.uga.com

August


September

Sept. 6-10: 11th European Poultry Conference, Bremen, Germany. Contact: 11th European Poultry Conference, 2002, Congress Partner, Birkenstr 17, D-28195 Bremen, Germany. Phone: +49 421 3033130; Fax: +49 421 303333; E-mail: Bremen@cp6.de

October