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THE AMERICAN ASSOCIATION OF AVIAN PATHOLOGISTS HELD THEIR ANNUAL MEETING AT THE 139TH AVMA ANNUAL CONVENTION IN NASHVILLE, TENNESSEE, JULY 13-17, 2002. THE FOLLOWING SUMMARIES WERE PREPARED BY MAM CANDIDATES AT THE UNIVERSITY OF GEORGIA.

Broiler Performance Data (Region) Live Production Cost					
	SW	Midwest	Southeast	Mid-Atlantic	S-Central
Feed cost/ton w/o color (\$)	128.60	123.49	134.54	134.06	134.11
Feed cost/lb meat (¢)	12.15	11.57	12.49	13.23	12.47
Days to 4.6 lbs	45	44	44	45	44
Chick cost/lb (¢)	3.98	3.95	4.01	3.53	3.77
Vac-Med cost/lb (¢)	0.06	0.03	0.07	0.04	0.04
WB & 1/2 parts condemn. cost/lb	0.20	0.16	0.12	0.16	0.16
% mortality	4.79	4.07	4.13	4.71	3.91
Sq. Ft. @ placement	0.80	0.79	0.82	0.82	0.82
Lbs./Sq. Ft.	6.21	6.55	6.47	6.98	6.55
Down time (days)	11	10	11	13	13

Data for week ending 07/20/02

Contents

American Association...
..... Pages 1-4

Broiler Performance Data
(Region)
..... Page 1

Broiler Performance Data
(Company)
..... Page 2

Broiler Whole Bird
Condemns (Region)
..... Page 2

Broiler Whole Bird
Condemns (Company)
..... Page 7

Excerpts.. "Broiler Hatchery"
"Chicken and Eggs" and
"Turkey Hatchery, ...
..... Pages 8-9

Meetings, Seminars and
Conventions
..... Page 10

Hypoglycemia-Spiking Mortality Syndrome: An Update

Dr. Jim Davis
Georgia Poultry Laboratory

Dr. Davis presented a review of cases and an update of Hypoglycemia-Spiking Mortality Syndrome (HSMS) seen in broilers and broiler breeders. It occurs in birds 8-42 days-of-age raised with constant light, but can be compounded by other stressful factors. Neurological signs such as ataxia, depression, or coma are seen due to the hypoglycemia. Normal blood glucose in birds is greater than 180, but with HSMS, blood glucose is less than 100. Malabsorption of minerals, vitamins, and pigments occurs leading to problems such as rickets. The birds typically suffer from an orange-mucoid diarrhea. There is also severe depression of glycogen production, most likely caused by a co-viral infection. Dr. Davis theorized that this viral agent may be carried by rodents and darkling beetles. Recently, the problem with HSMS has been decreasing due to the use of lighting programs. The first few days of life, birds are typically on 24 hours light. The hours of light then begin to decrease, with the fewest hours of light occurring when birds are between 8-14 days-of-age. At that point, the hours of light typically begin to increase again. However, it is important to allow the birds at least 2 hours of continual darkness in each 24-hour period. This darkness results in a release of melatonin.

Sara Steinlage, DVM
MAM Candidate

The DOA – A Study in Maximum Inefficiency

Dr. Ken Opengart
Con Agra Poultry Company

DOAs (dead on arrival birds) can be a very costly area in poultry production, but are often overlooked because they fall into a gray zone between live production, live haul, and the processing plant. Dr. Opengart estimated that it costs a broiler company \$0.23/pound. Using the agristar average of .20% DOAs with 4.25 pound birds, the average cost to a company is close to \$150,000 per year, this increases if DOAs are higher than average. The number of DOAs can increase due to a variety of reasons such as, weather, time of catch, bird size, bird health, distance from the plant, yard time, the dump system, and the methods in accounting for the numbers of birds. In Dr. Opengart's experience, when problems such as DOAs arise, it is best to set up a "Corrective Action Team" consisting of all involved parties. It is this team's responsibility to investigate and solve the problem. The team starts by trying to define the process and determine where the deaths are occurring in that process. An important part of this process is examining the DOAs and categorizing the

Broiler Whole Bird Condemnation (Region)

	SW	Mid-West	S. East	Mid-Atlantic	S. Central
% Septox	0.312	0.253	0.135	0.267	0.186
% Airsac	0.105	0.073	0.086	0.082	0.066
% I.P.	0.054	0.025	0.031	0.033	0.065
% Leukosis	0.002	0.001	0.002	0.012	0.002
% Bruise	0.006	0.004	0.009	0.007	0.009
% Other	0.024	0.004	0.008	0.007	0.011
% Total	0.503	0.359	0.272	0.346	0.359
% 1/2 parts condemnations	0.390	0.450	0.319	0.378	0.476

Data for week ending 07/20/02

**Broiler Performance Data (Company)
Live Production Cost**

	Average Co.	Top 25%
Feed cost/ton w/o color (\$)	132.78	124.68
Feed cost/lb meat (¢)	12.46	11.49
Days to 4.6 lbs	44	45
Chick cost/lb (¢)	3.94	3.53
Vac-Med cost/lb (¢)	0.05	0.03
WB & 1/2 parts condemn. cost/lb	0.17	0.13
% mortality	4.24	3.32
Sq. Ft. @ placement	0.81	0.79
Lbs./Sq. Ft.	6.45	6.31
Down time (days)	12	12

Data for week ending 07/20/02

cause of death, such as Infectious, Trauma, Physiological, Environmental, and Unknown (no significant lesions). Dr. Opengart has created an instruction manual with pictures and descriptions of lesions to facilitate correct identification of lesions. When the team has this information, a cause and effect relationship can hopefully be reached and corrective actions taken.

*Sara Steinlage, DVM
MAM Candidate*

Experiences Raising Commercial Chickens Without the Use of Conventional Antimicrobial Interventions

*Dr. Spangler Klopp
Townsend, Inc.*

Dr. Klopp presented his views and experiences raising commercial birds without antimicrobials in North Carolina. Without antimicrobials, more attention must be paid to management and preventative programs that include vaccination, nutrition, and air and litter quality. Despite continual improvements, a lower rate of gain (80.8% as compared to normal rate) can be expected. Even with a decrease in density (up to 1.5 sq. ft/bird), you will still not see a compensatory weight gain in birds. Livability and condemnations will be variable as compared to traditional antimicrobial programs. Without the use of antimicrobials, up to 40.8% less lbs. of live birds can be produced per 22,000 sq. ft. (82,000 lbs. vs. 138,000 lbs.). Therefore, if the equivalent amount of chicken is to be produced, a need will arise for new housing to accommodate greater placements. This will result in a significant increase in investment for the grower and the integrator. It is hoped that these costs could be passed on to the consumer in these niche markets. Dr. Klopp stated, "If the price can be paid, anything can be done."

*Scott Gustin, DVM
MAM Candidate*

Low Pathogenic Avian Influenza (LPAI) H7N2 Experience in Commercial Poultry 2002

*Dr. Marion Garcia
Pilgrim's Pride Corporation*

Dr. Garcia's presentation summarized some of the diagnostic and clinical findings for the LPAI outbreak in and around the Shenandoah Valley in 2002. The majority of cases were diagnosed between 3/16/02 and 6/29/02. Dr. Garcia pointed out a period in the middle of the outbreaks where it appeared that the number of cases was declining rapidly. However, this change coincided with a decrease in the number of submissions that were being made. It was concluded that a poor amount of submissions can lead to poor diagnoses and decision-making. A big factor in the rapid dissemination of the disease was that a means of disposing of the birds was not found until 3 weeks after depopulation was to begin. There were several differences between how turkeys and chickens were affected and diagnosed during the outbreak. There were significantly more turkey flocks affected than chicken flocks. The disease also spread more rapidly in turkeys. In turkeys, roughly one-half of other flocks within a 5-mile radius became positive for LPAI. Turkeys were also much more likely to display clinical signs, which aided in more rapid diagnosis. Infections in chickens were more likely to be picked up through serological surveillance.

Diagnosis of LPAI was done through use of Directigen™, AGID, Virus Isolation, and PCR and observance of clinical signs. Two or more positives of the above tests were considered sufficient to depopulate the affected flock. The Directigen™ test was found to be a very fast and effective test; however, the test could result in false positives when used with dead bird submissions and false negatives when sufficient virus was not present. Other aids in diagnosis of cases were sudden drops in water consumption or egg production (up to 50%/day). Mortality was highly variable and lesions primarily involved the trachea and sinuses.

*Scott Gustin, DVM
MAM Candidate*

Application of a “DIVA” Vaccination Strategy for the Control of Avian Influenza in Italy

*Dr. Ilaria Capua
National Reference Laboratory
for Newcastle Disease and Avian Influenza
Italy*

From March till December 1999, 199 outbreaks of low pathogenicity avian influenza affected the area of Northern Italy where 65% of the Italian poultry population is raised. The isolated H7N1 avian influenza virus has an intravenous pathogenicity index (IVPI) of 0.0. The circulation of such virus resulted, at the end of December of same year, in emergence of highly pathogenic virus with IVPI of 3.0. Over 13 million birds were affected. The export of poultry was banned. As a measure of control, vaccination with an inactivated oil emulsion vaccine containing the same hemagglutinin (H) subtype as a field virus but a different neuraminidase (N) H7N3 was undertaken. The so-called “DIVA” (Differentiating Infected from Vaccinated Animals) strategy was implemented based on a discriminatory immunofluorescence test. The test discriminates the vaccinated versus field infected birds by detecting the antibodies against N1 antigen present in infected but not in vaccinated birds. Implementation of such strategy resulted in lifting of the bans for trade within the European Union. The author discussed the possible change of the regulation concerning the control of AI of low pathogenicity in the EU.

*Darko Mitevski, DVM
MAM Candidate*

Infectious Bursal Disease Vaccines and Vaccination

*Dr. Y.M. Saif
The Ohio State University*

Presented at the Symposium on Poultry Vaccines and Vaccination Practices

Infectious Bursal Disease is one of the most economically important diseases of chickens. There are 2 serotypes of the virus and all pathogenic strains belong to serotype 1. There are two major antigenic groups of serotype 1 viruses, designated classic and variant strains. Variant strains induce full protection against both the classic and homologous variant viruses, while the classic viruses induce partial protection against the variant viruses. The protection induced by vaccination depends on the degree of attenuation of the virus, the antibody status of the host, the nature of the field strains and the titer of the virus in the vaccine. In general, more invasive (less attenuated) vaccines are better immunogens but these have been shown to induce bursal lesions.

Various vaccination programs in use today include use of live and inactivated vaccines in commercial flocks in the USA; the inactivated used in breeders usually contain both classic and variant strains. The design of the vaccination program depends on the dominant field strains and their antigenic make up. There are several serologic tests to predict the protection achieved, however the virus neutralization (VN) test provides the closest prediction. Protection from IBD depends primarily on humoral response, hence the level of antibodies in a flock is a good indicator of the level of protection.

In the late 1980's very virulent IBDV (vvIBDV) was first recognized in Europe and latter in Africa and Asia. The vvIBDVs are currently not present in the USA, but in 1999 were detected for the first time in South America and in 2000 in the Dominican Republic. It is important that we stay on guard to prevent the introduction of these viruses to the USA. Countries that have dealt with these viruses had to design very intensive vaccination programs that are not currently practiced in the USA.

*Darko Mitevski, DVM
MAM Candidate*

AVIAGEN PLEDGES SUPPORT FOR PDRC EMINENT SCHOLAR



Aviagen had pledged \$50,000 for the next five years to support the Caswell Eidson Eminent Scholar at the Poultry Diagnostic and Research Center.

“The work being done at the PDRC on combined viral challenges is unique in the industry, and is imperative for the future of poultry health around the world,” said Dr. Jim McKay, vice president of biotechnology for Aviagen (left, above).

The Global Poultry Health Initiative Fund has now received sufficient funds in gifts and pledges to initiate a proposal to the Georgia Research Alliance to establish the Caswell Eidson Eminent Scholar in Avian Medicine. Gifts and deferred gifts received through February 2002 equal \$2,57 million.

“The kind of support we’ve gotten from Aviagen and others is really essential to our future,” said Dr. Stanley Kleven, professor and head, Department of Avian Medicine (2nd from left, above).

Others present when the pledge was made are Dr. John Glisson, clinical services chief, PDRC (3rd from left); Dr. Charles Hofacre, associate professor, Avian Medicine (3rd from right); Dr. Gregorio Rosales, vice president of veterinary services, Aviagen (2nd from right); and Dr. Pedro Villegas, professor, Avian Medicine.



Dr. Stanley Kleven, right, receives the American Association of Avian Pathologists Special Service Award from Dr. John Donahoe, President of AAAP in Nashville, Tennessee, July 15, 2002



Dr. Naola Ferguson, right, receives the AAAP Reed Ramsey Award from Dr. John McCarty (AAAP) in Nashville, Tennessee, July 15, 2002

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.

FOR YOUR INFORMATION

Bayer has launched a website that will keep you informed of the Notice of Opportunity of Hearing proceedings with FDA to withdraw Baytril from the U.S. market. The site gives the science behind Bayer's defence of Baytril as a tool in poultry production. It will be continually up-dated. The address is www.healthypoultry.com

Broiler Whole Bird Condemnation (Company)

	Average Co.	Top 25%
% Septox	0.218	0.265
% Airsac	0.081	0.055
% I.P.	0.050	0.057
% Leukosis	0.005	0.003
% Bruise	0.008	0.009
% Other	0.010	0.004
% Total	0.371	0.393
% 1/2 parts condemnations	0.409	0.220

Data for week ending 07/20/02



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.

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cent from the total average number of layers during June 2001. June egg production per 100 layers was 2,124 eggs, up 1 percent from the 2,100 eggs in June 2001.

All layers in the U.S. on July 1, 2002, totaled 335 million, up 1 percent from a year ago. The 335 million layers consisted of 275 million layers producing table or commercial type eggs, 57.3 million layers producing broiler-type hatching eggs, and 2.51 million layers producing egg-type hatching eggs. Rate of lay per day on July 1, 2002, averaged 70.9 eggs per 100 layers, up 1 percent from a year ago.

Laying flocks in the 30 major egg producing States produced 6.66 billion eggs during June 2002, up 2 percent from a year ago. The average number of layers during June, at 314 million, was up slightly from a year earlier.

Egg-Type Chicks Hatched Down 14 Percent

Egg-type chicks hatched during June totaled 35.3 million, down 14 percent from June 2001. Eggs in incubators totaled 32.7 million on July 1, 2002, down 8 percent from a year ago.

Domestic placements of egg-type pullet chicks for future hatchery supply flocks by leading breeders totaled 221,000 during June 2002, down 15 percent from June 2001.

Broiler Hatch Up 1 Percent

The June 2002 hatch of broiler-type chicks, at 776 million, was up 1 percent from June of the previous year. There were 641 million eggs in incubators on July 1, 2002, up 1 percent from a year earlier.

Leading breeders placed 7.21 million broiler-type pullet chicks for future domestic hatchery supply flocks during June 2002, up 6 percent from June 2001.

Turkey Eggs in Incubators on July 1 Down Slightly

Turkey eggs in incubators on July 1, 2002, in the United States totaled 33.1 million, down slightly from July 1 a year ago. Eggs in incubators were 1 percent above the June 1 total of 32.9 million. Regional changes from the previous year were: East North Central, up 4 percent; West North Central, up 12 percent; North and South Atlantic, down 9 percent; South Central, up 11 percent; and West, down 21 percent.

Poults Placed During June Down 7 Percent From Last Year

The 24.4 million poults placed during June 2002 in the United States were down 7 percent from the number placed during the same month a year ago. Placements were down 4 percent from the May 2002 total of 25.6 million. Regional changes from the previous year were: East North Central, up 7 percent; West North Central, down slightly; North and South Atlantic, down 23 percent; South Central, down 5 percent; and West, up 6 percent.

Broiler 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 209 million eggs in incubators during the week ending July 27, 2002. 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 Placed Up 2 Percent

Broiler growers in the 19-State weekly program placed 168 million chicks for meat production during the week ending July 27, 2002. Placements were up 2 percent from the comparable week in 2001. Cumulative placements from December 30, 2001 through July 27, 2002 were 5.10 billion.

June Egg Production Up 2 Percent

U.S. egg production totaled 7.12 billion during June 2002, up 2 percent from last year. Production included 6.03 billion table eggs and 1.09 billion hatching eggs, of which 1.03 billion were broiler-type and 60.0 million were egg-type.

The total number of layers during June 2002 averaged 335 million, up 1 percent from the 335 million layers during June 2001. June egg production per 100 layers was 2,124 eggs, up 1 percent from the 2,100 eggs in June 2001.

Broiler Exports to Russia Still Uncertain

According to the latest Economic Research Service reports, The outlook for U.S. broiler exports to Russia remains uncertain at this time. Negotiations between the two governments continue on a number of issues. As a result of the uncertainties in the speed of a resumption in trade, the forecast for broiler exports was reduced an additional 100 million pounds. This follows larger reductions earlier this year. The forecast for 2002 stands at 4.8 billion pounds, down 14 percent from the 5.56 billion pounds shipped in 2001. In 2003, exports are expected to total 5.5 billion pounds as the export pace increases.

Over the first 4 months of 2002, shipments of broiler meat have totaled 1.479 billion pounds, down 21 percent from the same period in 2001. While the reduction in exports to Russia is by far the largest component of the decline, it is by no means the only one. Exports to Hong Kong, the second largest market, were down 18 percent and shipments to Japan have fallen by 53 percent. The only major export markets that registered increases were Mexico and Korea. Exports to Mexico jumped by 31 percent and trade with Korea has been 57 percent higher. Mexico has been the chief bright spot in poultry meat trade so far in 2002, with its imports of turkey products also rising strongly.

Egg Production Steady, but Exports Higher

Egg production over the first 5 months of 2002 was 35.5 billion eggs, only slightly higher than a year ago. While shell egg production was up 0.5 percent from the previous year, production of hatching eggs had fallen by 0.4 percent. The real difference is in terms of eggs for broiler production and eggs for replacement birds in the egg laying flock. Broiler egg production over the first 5 months of 2002 was 5.1 billion eggs, virtually unchanged from the previous year. However, eggs for replacement birds for the egg laying flock are down 5.5 percent from the same period in 2001. This points towards falling egg-type bird numbers and slowing shell egg production, compared with last year, in the latter portion of 2002.

While shell egg production has been little changed, the number of eggs used in the breaking egg market continues to expand. Over the first 5 months of 2002, over 758 million dozen eggs were used by the breaking egg industry, 4 percent above the same period in 2001.

Egg exports over the first 4 months of 2002 totaled 54.2 million dozen, 6 percent higher than the same period in 2001. Exports to the four largest traditional markets have had mixed success in 2002. Shipments to Canada and Mexico were both down slightly, and shipments to Japan have fallen by over 50 percent. On a positive note exports to Hong Kong were up 19 percent. The real boost in egg exports so far in 2002 has been shipments to European Union countries. So far in 2002 the largest market for egg exports has been Belgium at 13.2 million dozen. All of the exports to Belgium have been in the form of egg products and is a continuation of the expansion in exports that began in 2001. Previously, Belgium had been only a minor market for U.S. eggs.

Meetings, Seminars and Conventions

2002 August

Aug 19-23: *The 7th World Congress of Genetics Applied to Livestock Production*, Le Corum Conference Centre of Montpellier, France: Contact: <http://wcgalp.toulouse.inra.fr>

Aug 26-Feb. 23, 2003: *International Course on Poultry Husbandry*, IPC Livestock Barneveld College, Barneveld, The Netherlands. Contact: IPC Plant. Dier, Phone: +31 342 414881; Fax: +31 342 492813; Email: barneveld@ipc-training.nl

2002 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 303130; Fax: +49 421 303133; E-mail: Bremen@cpb.de.

Sept. 11: *Delmarva Breeder, Hatchery & Grow-out Conference*, Delmar, Maryland. Contact: Bud Malone, University of Delaware Phone 302-856-7303.

Sept. 11: *Alabama Processors Workshop*, Alabama Poultry & Egg Assoc., Birmingham Marriott, Birmingham, AL. Contact: Wanda Linker, P.O. Box 240, Montgomery, AL 36101-0240. Phone: 334-265-2732; Fax: 334-265-0008.

Sept. 15: *9th Annual PEPA Western Hoedown*, Double T Ranch, Stevinson, CA. Pacific Egg & Poultry Assoc., Debbie Murdock, 1521 "I" St., Sacramento, CA 95814. Phone: 916-441-0801; Fax: 916-446-1063.

Sept. 24-25: *Georgia Poultry Conference*, Classic Center, Athens, GA. Contact: Dr. Dan Cunningham, Dept. of Poultry Science, 226 Poultry Science Building, University of Georgia, Athens, GA 30602-4356. Phone: 706-542-1325

Sept. 24-26: *VIV América Latina*, Sao Paulo, Brazil. Contact: Royal Dutch Jaarbeurs, P.O. Box 8500, 3503 RM Utrecht, the Netherlands. Phone: +31 30 295 57 09; Fax: +31 30 295 57 09; Email: viv.america.latina@jaarbeursutrecht.nl

Sept. 24-26: *VIV/AFIA Feed*, Sao Paulo, Brazil. Contact: Royal Dutch Jaarbeurs, P.O. Box 8500, 3503 RM Utrecht, the Netherlands. Phone: +31 30 295 57 09; Fax: +31 30 295 57 09; Email: viv.feed@jaarbeursutrecht.nl

Sept. 27-28: *Louisiana Poultry Federation's 45th Annual Convention*, Sheraton Shreveport Hotel, Contact: LA Poultry Federation, 224 Knapp Hall LSU, P.O. Box 25100, Baton Route, LA 70894-5100. Phone: 225-578-6702; Fax: 225-578-4857.

2002 October

Oct. 1-2: *Alabama Broiler Workshop*, Alabama Poultry & Egg Assoc., Auburn University Hotel & Dixon Conference Center, Auburn University, AL. Contact: Wanda Linker, P.O. Box 240, Montgomery, AL 36101-0240. Phone: 334-265-2732; Fax: 334-265-0008.

Oct. 1-4: *XVII Central American and Caribbean Poultry Congress*, Havana Convention Palace, Havana, Cuba. Contact: Dra. Myriam Perez, Poultry Research Institute, Gaveta Postal No. 1, Santiago de las Vegas, Havana, CP17200, Cuba. Phone 537-579-040. Fax: 537-579-080 or Email: viican@cenai.inf.cu

Oct. 6-10: *7th WPSA Asian Pacific Federation Conference*, Conrad Jupiter's Hotel, Gold coast, Queensland, Australia. In conjunction with 12th Australian Poultry & Feed Convention. Hotel Conrad, Jupiters Casino, Gold Coast, Queensland, Australia. Contact: APFC 2002 Conference Managers, GPO Box 128, Sydney, NSW 2001, Australia. Phone: +61 2 9262 2277; Fax: +61 2 9262 3135; E-mail: apfc2002@tourhosts.com.au; Internet: <http://www.tourhosts.com.au/apfc2002>

Oct. 6-11: *3rd International Workshop on the Molecular Pathogenesis of Marek's Disease and the Avian Immunology Research Group Meeting*, Limassol, Cyprus. Contact: MAREKS-AIRG at Target Tours, P.O. Box 29041, Tel Aviv 61290, Israel. Phone: +972 3 5175150; Fax: +972 3 5175155; E-mail: mareks-airg@targetconf.com

Oct. 8: *Delmarva Poultry Industry, Inc.*, Annual Membership Meeting, Delmar, Maryland. Contact: Lori Morrow. Phone 302-856-9037.

Oct. 8-10: *Poultry Service Industry Workshop*, The Banff Centre, Banff, Alberta, Canada. Contact: Karen Mann, Safe Food Assurance Systems Branch, 3rd Floor, O.S. Longman Building, 6909-116 St., Edmonton, Alberta, T6H 4P2, Canada. Packages ready in July 2002. Phone: 780-427-6629; Fax: 780-427-1437. Email: karen.mann@gov.ab.ca

Oct. 9-11: *National Meeting on Poultry Health & Processing*, Clarion Resort Fountainbleau Hotel, Ocean City, Maryland, USA. Contact: Karen Adams, Delmarva Poultry Industry, Inc., 16686 County Seat Highway, Georgetown, DE 19947-4881. Phone: 302-856-9037; Fax: 302-856-1845.

Oct. 16-20: *National Chicken Council's 48th Annual Conference & Fall Board of Directors Meeting*, JW Marriott Hotel, Washington, D.C. National Chicken Council, 1015 15th St. NW, Ste. 930, Washington, D.C. 20005-2605. Phone: 202-296-2622.

Oct. 29: *Carolina Feed Industry Assoc.*, Feed Production Technology School, Sheraton Imperial Hotel, Research Triangle Park, Raleigh, NC. Contact: Owen Robertson, 2116 N. Shoreline Dr., Sanford, NC 27330. Phone: 919-776-3054.

Oct. 31: *Carolina Feed Industry Assoc.*, Poultry Nutrition Conference, Sheraton Imperial Hotel, Research Triangle Park, Raleigh, NC. Contact: Owen Robertson, 2116 N. Shoreline Dr., Sanford, NC 27330. Phone: 919-776-3054.

2002 November

Nov 12-13: *Alabama Breeder/Hatchery Workshop*, Alabama Poultry & Egg Assoc, Auburn University Hotel & Dixon Conference Center, Auburn University, AL. Contact: Wanda Linker, P.O. Box 240, Montgomery, AL 36101-0240. Phone: 334-265-2732; Fax: 334-265-0008.

Nov 12-15: *EUROTIER 2002*, Hanover, Germany. Contact: German Agricultural Society, Eschborner Landstr. 122, D-60489 Frankfurt am Main, Germany. Phone 49-0-69-24788-259. <http://www.eurotier.de>

Nov 26-29: *EXPOAVIGA 2002*, Mantjuic 2 Trade Fair Centre, Barcelona, Spain, Contact: Fira de Barcelona. Phone: 34-932-332-358.

2003 January

January 22-24: *International Poultry Exposition*, Georgia World Congress Center, Atlanta, GA. Contact: U.S. Poultry and Egg Association, 1530 Cooledge Road, Tucker, GA 30084. Phone: 770-493-9401; Fax: 770-493-9527

2003 March

March 8: *ACPV Sponsored Workshop, Molecular Biology Made Easy*, Contact: H.L. Shivaprasad, 2789 S. Orange Ave., Fresno, CA 93725. Email:

March 9-11: *52nd Western Poultry Disease Conference*, Capitol Plaza Holiday Inn, Sacramento, CA. Contact: R.P. Chin, 2789 S. Orange Ave., Fresno, CA 93725

2003 July

July 19-23: *XIII Congress of the World Veterinary Poultry Association*, Denver, CO, USA. Contact: Details are posted on the web site of the American Association of Avian Pathologists. Website: <http://www.avian.uga.edu/~wvpa/>