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The Poultry Informed Professional

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COMMENTS FROM THE EDITOR!

Due to multiple circumstances, The Poultry Informed Professional will be on holiday beginning in June. We will recommence publication in October. At that time, we will move from a monthly poultry news magazine to every other month.

The reason for this change is two-fold. The first is editor fatigue. I have assumed the position of Director of Clinical Services for the Department of Avian Medicine which has resulted in a significant increase in daily responsibility. Secondly, as experienced by most everyone, budget reductions have resulted in us having to reduce our costs in any areas. I hope that this change in the magazine's publication schedule will enable us to provide you with almost as much information as before, but on a less frequent basis. Please do not hesitate to contact us by either fax or email. We always appreciate everyone's comments.

See you in October!

Sincerely, *Chuck Hofacre*

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Broiler Performance Data (Region) Live Production Cost					
	SW	Midwest	Southeast	Mid-Atlantic	S-Central
Feed cost/ton w/o color (\$)	145.10	135.84	152.50	153.90	148.71
Feed cost/lb meat (¢)	13.48	12.35	14.04	14.93	13.73
Days to 4.6 lbs	44	42	42	43	43
Chick cost/lb (¢)	4.13	3.86	4.13	3.65	3.98
Vac-Med cost/lb (¢)	0.08	0.02	0.07	0.05	0.06
WB & 1/2 parts condemn. cost/lb	0.22	0.18	0.13	0.22	0.18
% mortality	5.33	4.35	3.79	4.83	3.98
Sq. Ft. @ placement	0.75	0.75	0.79	0.79	0.81
Lbs./Sq. Ft.	7.02	7.15	6.79	7.38	6.73
Down time (days)	14	13	14	14	14

Data for week ending 05/03/03

COMMERCIAL EGG TIP...

Implications of Bird Density Reductions: A Nutritionists Perspective

Nicholas M. Dale
Extension Poultry Scientist
The University of Georgia
Cooperative Extension Service
College of Agricultural and
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Athens, Georgia

Sooner or later, every-
one involved in the
commercial rearing of
poultry comes to real-
ize that a change
made in one phase of
the production process
will almost certainly

have implications on other aspects. It is thus reason-
able to wonder what effect decreased cage density
might have on flock nutrition. This decrease in den-
sity for white Leghorns, to 59 square inches (23 cm²) 2
per hen in 2003 and reaching 72 square inches (28
cm²) 2 in 2012, has been accepted by a large segment
of the commercial egg industry. While feed is always
a major cost of producing eggs, the increased grain
and oilseed prices projected for the coming year
make the issue even more relevant. What can be
assumed from the outset is that the cage density
changes currently being implemented will have no
immediate drastic effects on feed formulation.
However, we need to be cognizant of whatever sub-
tle changes may occur in the nutrient requirements of
our flocks so as to be fully aware of the issues to be
considered and the choices we may be called upon to
make. Several points should be kept in mind as the
new densities are implemented.

1. Will strain performance change? If so, feed intake
may also be affected, with possible modifications in
nutrient levels. While any change in strain popularity
is at this point speculative, it is suggested that the
smaller framed hen will benefit less from reduced

density than somewhat larger birds. It is theorized
that strains of hens which do not reach their genetic
potential for egg production under current density
conditions may well become more competitive.
Possible feed intake changes with such strains will
necessitate a review of current nutrient levels.

2. Feed efficiency will almost certainly decrease.

Most nutritionists agree on this point. In part, the
decrease in efficiency will be due to the increased
spillage of feed resulting from greater access to the
feeder. Also, decreased hen density will permit
greater opportunity for physical activity, this imply-
ing greater caloric expenditure on non-productive
functions. The only scenario under which feed effi-
ciency would not decline would be one in which egg
production increases to more than offset feed
wastage and increased movement.

3. House temperatures will decrease (in existing
housing), probably leading to increased feed con-
sumption, with a number of possible consequences.
According to some, it will be increasingly difficult to
control egg size and, in older flocks, shell quality. On
the other hand, it may become easier to achieve early
egg size. If the level of egg production remains con-
stant, while feed intake increases, it may be possible
to achieve some cost savings with modest reductions
in protein, amino acids, and other nutrients. In one
scenario, metabolizable energy levels would remain
the same, with increased feed intake providing extra
energy for physical activity. However, concern has
been expressed by some industry figures that hens

Broiler Whole Bird Condemnation (Region)

	SW	Mid- West	S. East	Mid- Atlantic	S. Central
% Septox	0.257	0.270	0.112	0.227	0.170
% Airsac	0.133	0.085	0.090	0.157	0.090
% I.P.	0.038	0.024	0.022	0.027	0.076
% Leukosis	0.001	0.001	0.001	0.011	0.001
% Bruise	0.005	0.003	0.006	0.005	0.008
% Other	0.015	0.005	0.032	0.014	0.010
% Total	0.450	0.388	0.263	0.441	0.354
% 1/2 parts condemnations	0.434	0.424	0.309	0.464	0.456

Data for week ending 03/29/03

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

	Average Co.	Top 25%
Feed cost/ton w/o color (\$)	148.77	140.37
Feed cost/lb meat (¢)	13.76	12.26
Days to 4.6 lbs	43	42
Chick cost/lb (¢)	4.10	3.89
Vac-Med cost/lb (¢)	0.06	0.03
WB & 1/2 parts condemn. cost/lb	0.19	0.12
% mortality	4.46	3.59
Sq. Ft. @ placement	0.78	0.74
Lbs./Sq. Ft.	6.88	6.57
Down time (days)	14	15

Data for week ending 05/03/03

may overeat and thus develop excess body fat and fatty livers, along with a possible increase in mortality. On this point, honest disagreement can be found among experienced nutritionists. Some feel that metabolizable energy levels should be reduced (i.e., less fat, more fiber) to reduce the likelihood of excessive metabolizable energy consumption. The experience of others, however, is that such formula changes will only stimulate additional feed intake. It is possible that both points of view are valid, depending on the degree of temperature reduction. To confuse matters more, response to energy adjustment in the feed may well vary between houses, depending on outside temperature, degree of insulation, air movement and other factors.

4. Where to place low density cages? Any monitoring of house temperature will identify rows of cages with somewhat higher temperature than others. In order to meet short-term cage density goals, some cages in the house will have fewer birds than others. If these cages are placed in warmer areas of the house, it might be hoped that the increased environmental temperature would serve to buffer any increase in feed consumption.

5. Will increased feeder space lead to greater bird uniformity? In a given cage, one or more hens is frequently found to be of markedly lower body weight.

This presumably reflects a lower degree of assertiveness in gaining time at the feeder. If such hens were to constitute 20% of a flock, it may well be that in order to achieve optimum production we have inadvertently overfed 80% of the birds in order to achieve satisfactory production from the more timid hens. If greater feeder space leads to improved body weight uniformity, we may in the future be able to reduce margins of safety on some nutrients in our laying hen formulas.

As is clear from the above discussion, we have a great deal to learn about the optimum management of flocks afforded reduced cage density. This is hardly the time to offer dogmatic solutions. Rather, it has been our objective to review how our feeding programs may (or may not) be affected by changes in cage density. In either case, we need to be alert to flock responses in order to modify existing programs so as to achieve optimum efficiencies of production.

Note: The suggestions of Dr. Steve Leeson, University of Guelph, Dr. David Roland, Auburn University, and Dr. John Kuhl of Nest Egg Nutrition are gratefully acknowledged.

FOR YOUR INFORMATION...

Free CD-Rom is available from Hubbard ISA/BUTA

A CD-Rom entitled "Multiple-Choice Questions in Poultry Diseases" is available free from Hubbard ISA/British United Turkeys of America.

The CD-Rom contains 500 multiple-choice questions written by Dr. Tahseen Abdul-Aziz. The questions cover various aspects of poultry medicine, with a special emphasis on lesions, and clinical and laboratory diagnosis of poultry diseases. A list of answers appears at the end of the questions, and each question is linked to the correct answer by a customized icon. The CD includes Adobe Acrobat Reader version 5.0, which automatically opens the CD.

To request a free copy, contact Sharon McDougall, Hubbard ISA Veterinary and Technical Services, 155 Landlock Drive, Statesville, NC 28625-2180. You may also fax your request to (704) 878-6513, or email Sharon.Mcdougall@merial.com

When Did the Broilers Die on Arrival at the Plant Die?

It is estimated that the broiler industry loses over \$20 million annually from DOA's; the more information that we can utilize to reduce these losses, the better..

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The University of Georgia
Dept. of Avian Medicine*

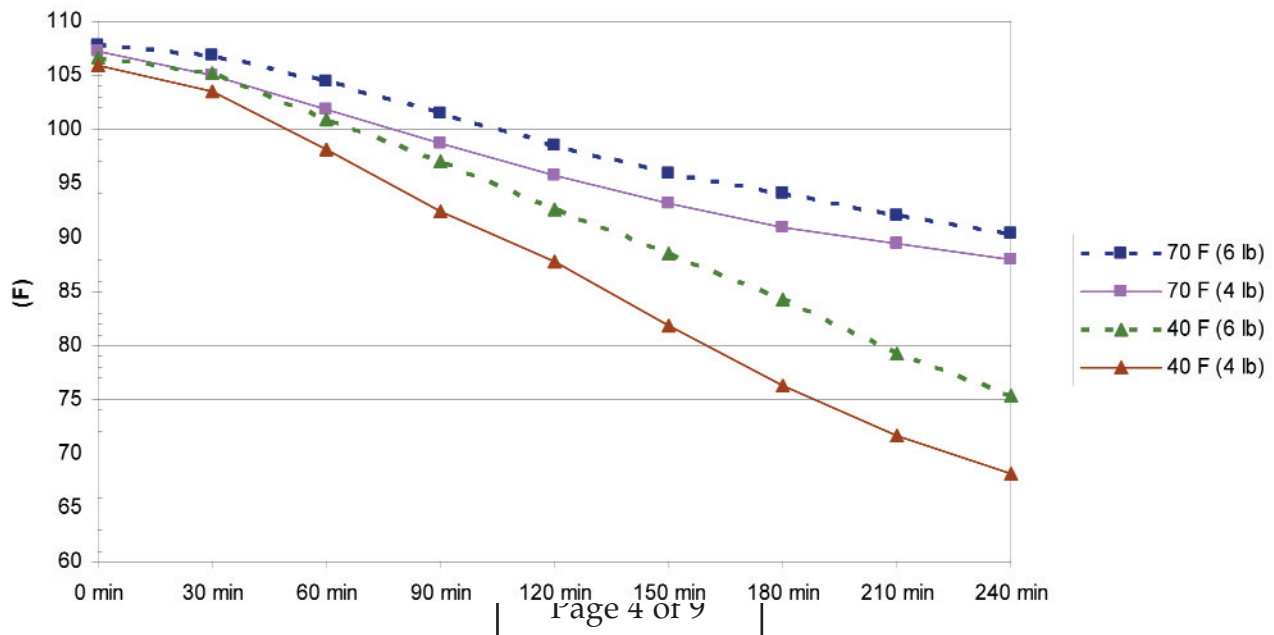
The dead on arrival (DOA) broiler represents a significant cost to all broiler complexes. At this point of production, we have essentially invested all of the inputs of live production into the broiler and are unable to recover these costs at processing. One tool we can utilize in reducing and troubleshooting DOA's is through necropsy of these birds and attempting to determine a likely cause of death for the mortality. However, even with the best necropsy technique, we are often left wondering when and where did this mortality occur. One method of determining the approximate time of death that has been investigated is the use of rectal temperature measurements at the time of DOA analyses.

Forensic specialists in wildlife species have long been using rectal temperatures to approximate the time of death. An important factor in these measurements is the ambient temperature of the surrounding

environment. Obviously, a cooler ambient temperature will result in quicker cooling of the carcass following death. Another factor that can have an influence over the "cooling curve" of the DOA bird is the body weight. A smaller bird will have a greater relative surface area and will cool more quickly than a larger bird. The "cooling curves" of birds at two different body weights and two different ambient temperatures can be seen below.

By measuring the rectal temperatures as the DOA's are removed at livehang, it can be possible to determine a range of time where the DOA may have occurred. If the information of when the birds were caught, when the trailer left the farm, when the birds arrived at the holding shed, and when the birds were dumped can be found; we can more accurately determine potential problems in the process. Rectal temperature readings can also render more information from your DOA necropsy findings. For example, if you had found a bird at necropsy with a ruptured liver, it may be difficult to attribute this to either catching or as the birds were dumped. With a simple

Rectal Temperature Cooling Curves



rectal temperature measurement, we could probably rule out one of these potential causes.

The greatest limitation of using rectal temperatures to determine the relative time of death is that we never know what the bird's temperature is at the time of death. Under some debilitating conditions, it is likely that the initial temperature at death could be

elevated or depressed. There is also the potential for the microenvironment on the livehaul trailer to influence these cooling curves. However, recent field experiences have shown that the time of death can still be estimated to a practical level.

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

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 Whole Bird Condemnation (Company)

	Average Co.	Top 25%
% Septox	0.218	0.216
% Airsac	0.115	0.058
% I.P.	0.042	0.017
% Leukosis	0.003	0.003
% Bruise	0.006	0.004
% Other	0.019	0.001
% Total	0.403	0.319
% 1/2 parts condemnations	0.443	0.336

Data for week ending 05/03/03



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

Broiler Eggs Set in 19 Selected States Down 1 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 May 3, 2003. This was down 1 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 Down 1 Percent

Broiler growers in the 19-State weekly program placed 171 million chicks for meat production during the week ending May 3, 2003. Placements were down 1 percent from the comparable week a year earlier. Cumulative placements from December 29, 2002 through May 3, 2003 were 3.00 billion, down 2 percent from the same period a year earlier.

March Egg Production Down 1 Percent

U.S. egg production totaled 7.36 billion during March 2003, down 1 percent from last year. Production included 6.26 billion table eggs and 1.11 billion hatching eggs, of which 1.04 billion were broiler-type and 64.0 million were egg-type. The total number of layers during March 2003 averaged 338 million, up slightly from a year earlier. March egg production per 100 layers was 2,181 eggs, down 1 percent from March 2002.

All layers in the U.S. on April 1, 2003, totaled 338 million, up slightly from a year ago. The 338 million layers consisted of 278 million layers producing table or commercial type eggs, 57.3 million layers producing broiler-type hatching eggs, and 2.63 million layers producing egg-type hatching eggs. Rate of lay per day on April 1, 2003, averaged 70.8 eggs per 100 layers, down slightly from a year ago.

Laying flocks in the 30 major egg producing States produced 6.87 billion eggs during March 2003, down 1 percent from a year ago. The average number of layers during March, at 315 million, was down slightly from a year ago.

Egg-Type Chicks Hatched Down 1 Percent

Egg-type chicks hatched during March totaled 36.7 million, down 1 percent from March 2002. Eggs in incubators totaled 34.3 million on April 1, 2003, up 3 percent from a year ago.

Domestic placements of egg-type pullet chicks for future hatchery supply flocks by leading breeders totaled 315,000 during March 2003, up 33 percent from March 2002.

Broiler Hatch Down 2 Percent

The March 2003 hatch of broiler-type chicks, at 775 million, was down 2 percent from March of the previous year. There were 638 million eggs in incubators on April 1, 2003, down 1 percent from a year earlier.

Leading breeders placed 6.3 million broiler-type pullet chicks for future domestic hatchery supply flocks during March 2003, down 7 percent from March 2002.

Eggs in Incubators on May 1 Down 2 Percent

Turkey eggs in incubators on May 1, 2003, in the United States totaled 31.8 million, down 2 percent from May 1 a year ago. Eggs in incubators were slightly below the April 2003 total of 32.0 million. Regional changes from the previous year were: East North Central, down 8 percent; West North Central, down 4 percent; North and South Atlantic, up 9 percent; South Central, down 20 percent; and West, down slightly.

Poults Placed During April Down 5 Percent From Last Year

The 24.9 million poults placed during April 2003 in the United States were down 5 percent from the number placed during the same month a year ago. Placements were down slightly from the March 2003 total of 24.9 million. Regional changes from the previous year were: East North Central, down 5 percent; West North Central, down 7 percent; North and South Atlantic, up 3 percent; South Central, down 21 percent; and West, down 5 percent.

Poultry Processing Plant Inspections Expected To Resume

American and Russian officials have indicated that the remaining disagreements about veterinary standards have been resolved. This action opens the way for the resumption of Russian inspections of U.S. processing plants. The processing plants need to be certified by Russian officials if they continue to export products to Russia. Russia is the largest market for U.S. broiler products, accounting for almost a third of all broiler exports. Even with the poultry import quota scheduled to begin May 1, Russia is expected to remain by far the largest market for U.S. broiler exports in 2003. With weekly chick placements averaging lower than a year earlier, broiler production forecasts are lower than previously expected. Total expected production in 2003 is nearly 32.2 billion pounds, marginally lower than in 2002. Broiler prices are expected to average 60-63 cents per pound in 2003, compared with 55.6 cents in 2002.

Chick Placements Indicate Lower Broiler Production for Second Quarter

With weekly chick placements through April 5 averaged 2 percent lower over the last 5 weeks than for the same period a year earlier, the forecast for broiler production in the second quarter of 2003 is now 8.15 billion pounds. This is 50 million pounds lower than the previous forecast and down about 1 percent from the previous year. The forecasts for the third and fourth quarters remain at 8.2 and 8.1 billion pounds, making the overall expected production for 2003, nearly 32.2 billion pounds, marginally lower than in 2002.

The most recent Poultry Slaughter report contained a revised January 2003 broiler production estimate of 2.774 billion pounds, 26 million pounds higher than the earlier estimate, but still slightly lower than the previous year. The preliminary estimate for February places broiler production at 2.386 billion pounds, down 3 percent from the previous year. The decline was the result of fewer birds slaughtered. The number of birds slaughtered fell 4 percent in February, but was partially offset by a 2-percent gain in the average weight of birds going to slaughter, rising from 5.09 pounds in February 2002 to 5.18 pounds in February 2003.

Even with uncertainties in the export market and the Middle East conflict, prices for a number of broiler products were higher in the first quarter than a year earlier. The 12-city whole

broiler price averaged 60.3 cents a pound, 8 percent higher than in 2002. Prices have also risen for breast meat products. Prices for boneless-skinless breasts in the Northeast averaged 139.9 cents per pound during the first quarter, 14 percent higher than the previous year. Prices for rib-on breasts averaged 84.4 cents per pound, up 32 percent from the first quarter of 2002. The increases in breast meat product prices are primarily a reflection of lower broiler production. Except for a small amount exported to Canada, most of these products are sold on the domestic market.

Prices for other broiler products have also moved higher, but most are still below their year-earlier levels. Leg quarter prices averaged 20.3 cents per pound in the first quarter of 2003. This is up significantly from the 18 cents per pound they averaged in the fourth quarter of 2002, but still below the first-quarter 2002 average of 23.8 cents per pound. The same pattern can be seen for wings, thighs and drumsticks, all which have increased in price since the end of 2002, though prices remain below those of a year earlier. With a forecast of lower production through the first three quarters of 2003, domestic broiler prices for whole birds and breast meat products are expected to strengthen further. In addition, given the current outlook for a more stable export market and an assumption of no new trade disruptions due to disease outbreaks, prices for products such as leg quarters and wings that are more heavily export oriented are also expected to gradually strengthen.

Turkey Placements Continue Lower

During 2002, turkey placements were lower in 8 months compared with 2001 levels (and 6 of the last 7), with total placements for the year down 1.5 percent from the previous year. This pattern has continued during the first 2 months of 2003 with placements during January and February totaling 49.2 million birds, down 1.8 percent from the same period in 2002. The lower placements of the second half of 2002 have translated into a 3-percent reduction in turkey meat production during the first two months of 2003. Turkey production in the first quarter of 2003 is expected to be about 2 percent below a year earlier. Second quarter production will likely decline about 1 percent from 2002. Annual 2003 turkey production is expected to be nearly 5.7 billion pounds, down less than 1 percent from last year.

Meetings, Seminars and Conventions

2003 May

May 29-31: Chicken Cooking Contest, Baltimore Convention Center, Baltimore, MD. Contact: National Chicken Council, 1015 15th St., N.W., Suite 930, Washington, DC 20005-2625. Phone: 202-296-2622

May 29-June 1: Georgia Veterinary Medical Association 2003 Annual Conference, Sandestin Golf and Beach Resort, Florida. Reservations (800) 320-8115

2003 June

June 5-7: VIV Poultry Yutav, World Trade Center Yesulsky, Istanbul, Turkey. Contact: Jaabeurs Exhibitions and Media, P.O. Box 8800, 3503 RM Utrecht, The Netherlands. Phone: +31 30 295 2772; Fax: +31 30 295 2809

June 6-7: The Poultry Federation's Festival, Arlington Hotel, Hot Springs, AR. Contact: Judy Kimbrell, The Poultry Federation, P.O. Box 1446, Little Rock, AR 72203. Phone: 501-375-8131

June 11-13: 75th Annual Northeastern Conference on Avian Disease, University of Maine, Orono, ME. Contact: H. Michael Opitz, 134 Hitchner Hall, University of Maine, Orono, ME 04469-5735, Phone: (207) 581-2771; Fax: (207) 581-2729; Email: mopitz@umext.maine.edu; Website: <http://www.umaine.edu/livestock/necad.htm>

June 14-16: Agrena 2003, 5th International Exhibition of Poultry & Livestock Production, Cairo International Conference Centre, Egypt. Contact: Crose Fairs Organisers, 87 El Alameen Street, Sahfeen, Mohandeseen, Cairo, Egypt. Phone/Fax: +20 2 30 38 994; Email: crose@access.com.eg; Website: www.agrena.com

June 16-18: U.S. Poultry Financial Management, Sawgrass Marriott Hotel, Ponte Vedra Beach, FL. Contact: U.S. Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA 30084-7303. Phone 770-493-9401; <http://www.poultryegg.org>

July 19-23: 140th AVMA Annual Convention, Colorado Convention Center, Denver, Colorado. Contact: American Veterinary Medical Association, 1931 North Meacheam Road, Suite 100, Schaumburg, IL 61073-4360. Phone: 847-925-8070; Fax: 847-925-9329; Email: avma.org; <http://www.avma.org>

June 20: Delmarva Chicken Festival, Dover, DE. Contact: Delmarva Poultry Industry, 16686 County Seat Highway, Georgetown, DE 19947. Phone: 302-856-9037; Fax: 302-856-1845; Email: dpi@dpichicken.com

June 25-27: Georgia Egg Association's 42nd Annual Meeting, King & Prince Hotel, St. Simons Island, GA. Contact: Robert Howell, Georgia Egg Commission, 16 Forest Park, GA 30297. Phone: 404-363-7661; Fax: 404-363-7664 or email: goodeggs@bellsouth.net

2003 July

July 6-10: 92nd Poultry Science Association's Annual Meeting, Madison, WI. Contact: PSA, 111 N. Dunlap Ave., Savoy, IL 61874. Phone: 217-356-3182; Fax: 217-398-4119.

July 15-16: U.S. Poultry Hatchery-Breeder Clinic, Marriott Marquis, Atlanta, GA. Contact: U.S. Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA 30084-7303. Phone 770-493-9401; <http://www.poultryegg.org>

July 19-23: 140th AVMA Annual Convention, Colorado Convention Center, Denver, Colorado. Contact: American Veterinary Medical Association, 1931 North Meacheam Road, Suite 100, Schaumburg, IL 61073-4360. Phone: 847-925-8070; Fax: 847-925-9329; Email: avma.org; <http://www.avma.org>

July 19-23: XIII Congress of the World Veterinary Poultry Association and the American Association of Avian Pathologists, 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/>
July 28-30: U.S. Poultry Information Systems, Sawgrass Marriott Hotel, Ponte Vedra Beach, FL. Contact: U.S. Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA 30084-7303. Phone 770-493-9401; <http://www.poultryegg.org>

2003 August

Aug. 10-14: 14th European Symposium on Poultry Nutrition, Lillehammer, Norway. Contact: Mrs. M.F. Bagley, Centre for Poultry Science, P.O. Box 4377, Nydalen, N-0402 Oslo, Norway. Phone: +47 22 79 87 73; Fax: +47 22 79 87 71; Email: wpsa@fjorfe.org; Website: www.wpsa.no

Aug. 21-23: Livestock Asia 2003, The Mines, Kuala Lumpur, Malaysia. Contact: Mr. Richard Yew, AMB Exhibitions Snd Bhd, Suite 1701, 17th Floor Plaza Permata, 6 Jalan Kampar, off Jalan Tun Razak, 50400 Kuala Lumpur, Malaysia. Phone: +603 4045 4993; Fax: +603 4045 4989; Email: info@ambexpo.com; Website: www.alliedmedia.org

Aug. 25-Feb. 27 2004: International Course on Poultry Husbandry, IPD Plant, Dier, Barneveld, the Netherlands. Deadline for Applications: April 1, 2003. Contact: IPC Plant, Dier Barneveld, Department of International Studies and Programmes, P.O. Box 64, 3770 AB Barneveld, the Netherlands. Phone: +31 342 406500; Fax: +31 342 406501; Email: barneveld@ipc-training.nl

2003 September

Sept 17-18: U.S. Poultry Production & Health, The Peabody Hotel, Memphis, TN. Contact: U.S. Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA 30084-7303. Phone 770-493-9401; <http://www.poultryegg.org>

Sept 23-26: XVI European Symposium on the Quality of Poultry Meat & European Symposium on the Quality of Eggs and Egg Products, Saint-Brieve, Brittany, France. Contact: ISPAIA, Zoopole Development, BP7-22400 Ploufragen, France. Phone: +47 22 79 87 72, Fax: +47 22 79 87 71. Email: wpsa2003@zoopole2550.fr

Sept 30-Oct. 2: Poultry Service Industry Workshop, The Banff Center, Alberta, Canada. Contact: Karen Mann, Agri-Food Systems Branch, O.S. Longman Building, 6909-116 Street, Edmonton, Alberta, Canada T6H 4P2. Phone: 780-427-6629; Fax: 780-422-3438; Email: karen.mann@gov.ab.ca

2003 October

Oct 7-10: XVIII Latin American Poultry Congress, Hotel Los Tajibos, Santa Cruz, Bolivia. Contact: Casilla Postal 1133, Santa Cruz, Bolivia. Phone: 591-333-4807; Fax: 591-333-1528; Email: infomes@xviii-alabolivia.org

Oct 9-10: U.S. Poultry Protein & Fat, The Peabody Hotel, Memphis, TN. Contact: U.S. Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA 30084-7303. Phone 770-493-9401; <http://www.poultryegg.org>

Meetings, Seminars and Conventions

Oct. 11-15: *Anuga Food Show*, KslnMesse, Cologne, Germany. Contact: KslnMesse, GmbH, Messeplatz 1, D-50679 Klsn, Germany. Phone: +49 821 33 05; Fax: +49 821 34 10. Email: m.schlvetter@koelnmesse.de

Oct. 17: *Campylobacter Workshop*, Holiday Inn, Johannesburg Airport, South Africa. Contact: Positive Action Conferences, P.O. Box 4, Driffield, East Yorkshire, YO25 9DJ, England. Phone: +44 1377 256316; Fax: +44 1377 253640; Email: conf@positiveaction.co.uk; Website: <http://www.positiveaction.co.uk>

Oct. 22-24: *National Meeting on Poultry Health and Processing*, Clarion Resort Fountianebleau Hotel, Ocean City, Maryland. Contact: Karen Adams, Delmarva Poultry Industry, Inc., Phone (302)856-9037, Email: adams@dpchicken.com

Oct. 23-24: *U.S. Poultry Women in Management*, Park Vista Hotel, Gatlinburg, TN. Contact: U.S. Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA 30084-7303. Phone 770-493-9401; <http://www.poultryegg.org>

Oct. 27: *Mycoplasma 2003*, NH Utrecht Hotel, Utrecht, The Netherlands. Contact: Positive Action Conferences, P.O. Box 4, Driffield, East Yorkshire, YO25 9DJ, England. Phone: +44 1377 256316; Fax: +44 1377 253640.

Email: conf@positiveaction.co.uk; Website: www.positiveaction.co.uk

Oct. 28-31: *VIV Europe 2003*, Jaarbeurs-venue, Utrecht, the Netherlands. Contact: Jaarbeurs Exhibitions & Media, P.O. Box 8800, 3503 RM utrecht, the Netherlands. Phone: +31 30 295 27 72; Fax: +31 30 295 28 09; Email: viv.europe@jem.nl

Oct. 31: *Campylobacter Workshop*, NH Utrecht Hotel, Utrecht, The Netherlands. Contact: Positive Action Conferences, P.O. Box 4, Driffield, East Yorkshire, YO25 9DJ, England.

Phone: +44 1377 256316; Fax: +44 1377 253640; Email: conf@positiveaction.co.uk; Website: <http://www.positiveaction.co.uk>

2003 November

Nov. 12: *U.S. Poultry Grain Forecast and Economic Outlook*, Atlanta Airport Hilton Hotel, Atlanta, GA. Contact: U.S. Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA 30084-7303. Phone 770-493-9401; <http://www.poultryegg.org>

2004 January

Jan 28-30: *2004 International Poultry Exposition*, Georgia World Congress Center, Atlanta, GA. Contact: US Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA 30084. Phone: 770-493-9401; Fax: 770-493-9527.

2004 February

Feb. 23-25: *2004 Poultry Focus Asia 2004*, Queen Sirikit National Convention Centre, Bangkok, Thailand. Contact: Positive Action Conferences, P.O. Box 4, Driffield, East Yorkshire, YO25 9DJ, England. Phone: +44 1377 256316; Fax: +44 1377 253640; Email: conf@positiveaction.co.uk; Website: <http://www.positiveaction.co.uk>

2004 March

Mar. 7-9: *53rd Western Poultry Disease Conference*, Sacramento, California. Contact: Dr. R.P. Chin. Email: rpchin@ucdavis.edu

Mar. 10-11: *Nebraska Poultry Industries Annual Convention*, New World Inn & Conference Center, Columbus, Nebraska. Contact: Nebraska Poultry Industries, Inc., University of Nebraska, A103 Animal Sciences, P.O. Box 830908, Lincoln, NE 68583-0908. Phone: 402-472-2051

2004 April

Apr. 21-23: *VIV China*, Beijing, China, China International Exhibition Center. Contact: CNAVS Trade Fair Office, c/o Beijing Tech convention & Exhibition Center, Rm 3011, Yuanliwuye Building, No. 23, Hui Xin East Road, Beijing 100029-P.R. China. Phone: +86 10 649 88 358; Fax: +86 10 649 50 374 or Email: fair@public.east.cn.net

2004 May

May 11-13: *Victam Europe 2004*, Jaarbeurs Trade Halls, The Netherlands. Contact: Victam International, P.O. Box 197, 3860 AD Nijkerk, The Netherlands. Phone: +31 33 246 4404; Fax: +31 33 246 4706; Email: expo@victam.com

2004 June

June 8-12: *XXII World's Poultry Congress*, WPSA Turkish Branch, Istanbul, Turkey. Contact: congress Organiser: ITU Joint Venture, Cumhuriyet Cad. 18/5, 80230 Elmadag, Istanbul, Turkey.

Phone: +90 212 231 3021; Fax: +90 212 232 1522; Email: wpsa2004@wpsa2004.org

June 16-19: *5th International Symposium on Turkey Diseases*, Berlin, Germany. Contact: Prof. Dr. H.M. Hafez, Institute of Poultry Diseases, Free University Berlin, Koserstrasse 21, 14195 Berlin, Germany. Phone: 49-30-8385-3862; Fax: 49-30-8385-5824; Email: hafez@zedat.fu-berlin.de