



The Poultry Informed Professional



Published by the Department
of Avian Medicine, University of Georgia
Editor: Charles Hofacre, Associate Professor, Department
of Avian Medicine

Phone (706) 542-1904 Fax (706) 542-5630
e-mail: sclanton@arches.uga.edu

Poultry Housing Tips

Importance of Air Movement Vs. Bird Age

It is common knowledge that the older a bird gets the more problems hot weather can cause. There are a number of reasons for this. First, older birds produce significantly more heat than younger birds. For instance, 24,000 one-pound broilers will produce the same amount of heat as that produced by four conventional brooders operating constantly. But, 24,000 seven pound broilers produce the same amount of heat as 30 conventional brooders. More heat, more problems. Next, older birds are better feathered and therefore better insulated than smaller birds making it more difficult for the birds to rid themselves of the heat they are producing. As birds get older there is less space between individual birds. Less space means more heat is trapped between the birds significantly increasing the temperature of the air at floor level. Finally, older birds have less surface area per pound of weight than younger birds and therefore cannot lose heat to the surrounding air as easily as small birds. All of these factors add together to make heat stress related problems much more severe as birds age.

Continued on Page 2

Broiler Performance Data (Region) Live Production Cost					
	SW	Midwest	Southeast	Mid-Atlantic	S-Central
Feed cost/ton w/o color (\$)	135.55	126.79	140.18	139.01	136.18
Feed cost/lb meat (¢)	12.75	12.16	13.45	13.93	12.91
Days to 4.6 lbs	45	43	43	43	43
Med. cost/ton (¢)	2.89	1.88	3.04	2.94	2.94
Chick cost/lb (¢)	3.97	3.94	3.99	3.53	3.81
Vac-Med cost/lb (¢)	0.08	0.02	0.19	0.10	0.13
WB & 1/2 parts condemn. cost/lb	0.22	0.19	0.24	0.25	0.25
% mortality	3.97	3.46	4.47	5.05	4.83
Sq. Ft. @ placement	0.81	0.79	0.81	0.79	0.84
Lbs./Sq. Ft.	5.97	6.76	6.41	7.03	6.40
Down time (days)	9	14	12	10	13

Data for week ending 6/17/00

Contents

Poultry Housing Tips... Pages 1-3
 Poultry Housing Ventilation... Pages 3 & 4
 Broiler Performance Data (Region) Page 1
 Broiler Performance Data (Company) Page 4
 Broiler Whole Bird Condemnations (Region) Page 5
 Broiler Whole Bird Condemnations (Company) Page 5
 Detection of Avian Pheumovirus... Page 6
 Excerpts.. "Broiler Hatchery" "Chicken and Eggs" and "Turkey Hatchery, ... Pages 7-8
 Meetings, Seminars and Conventions Page 9

Poultry Housing Tips

Continued from Page 1

Though most growers realize that hot weather affects older birds much more than younger birds, what they may not realize is how the effect hot weather changes over time. The effect of hot weather on broiler performance increases dramatically from week to week, and thus the benefits of air moving over the birds also increases dramatically from week to week.

The increase in importance of air movement, and therefore cooling as birds age can be seen in the results of a study conducted at the USDA Southern Regional Poultry Research Lab located in Starkville, Mississippi.

The study was quite simple. Grow birds to three weeks of age at standard industry temperatures. At three weeks of age split the birds into two groups. Raise one group of birds at an air temperature of 85°F with no air movement, and the other group of birds at the same air temperature but with air moving over them at 400 ft/min. Finally, monitor the weight and feed conversion of each group of birds on a weekly basis.

As you might expect, there was a large difference in weight between the birds grown with and without air movement. In fact, air blowing over the birds at 400 ft/min increased weight gain by well over a pound (Figure 1). The reason for the difference in weight is quite apparent when Figure 1 is examined more closely. The birds with no air moving over them were growing slower and slower each week. In fact, it would not be hard to make the argument that the birds would have probably stopped putting on weight altogether had they been kept to eight weeks of age. In contrast, the birds with

400 ft/min air blowing over them continued to gain weight at a rapid pace as they got older. Quite simply, the birds with air blowing over them were significantly cooler so they continued to eat and put on weight.

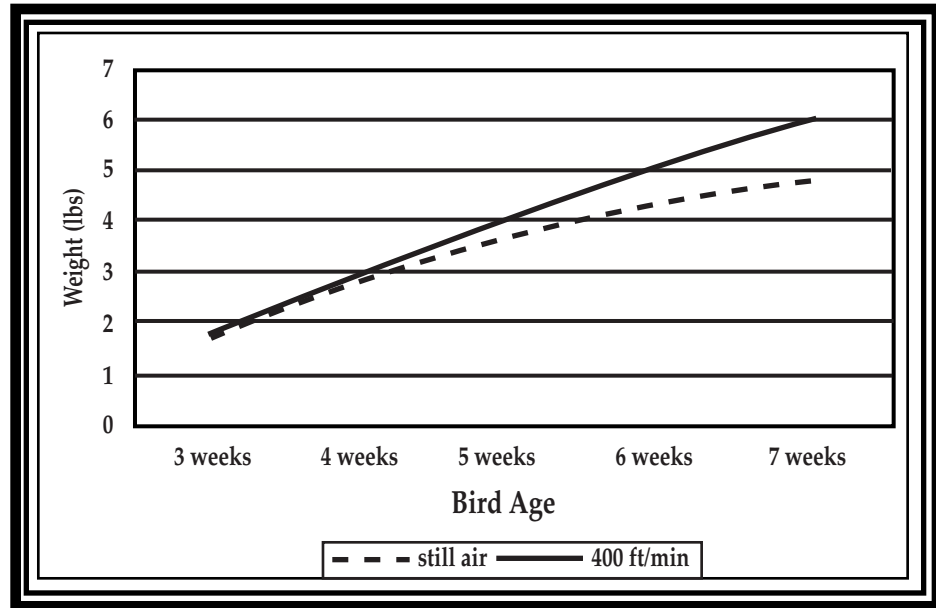


Figure 1. The Effect of Air Movement on Bird Weights

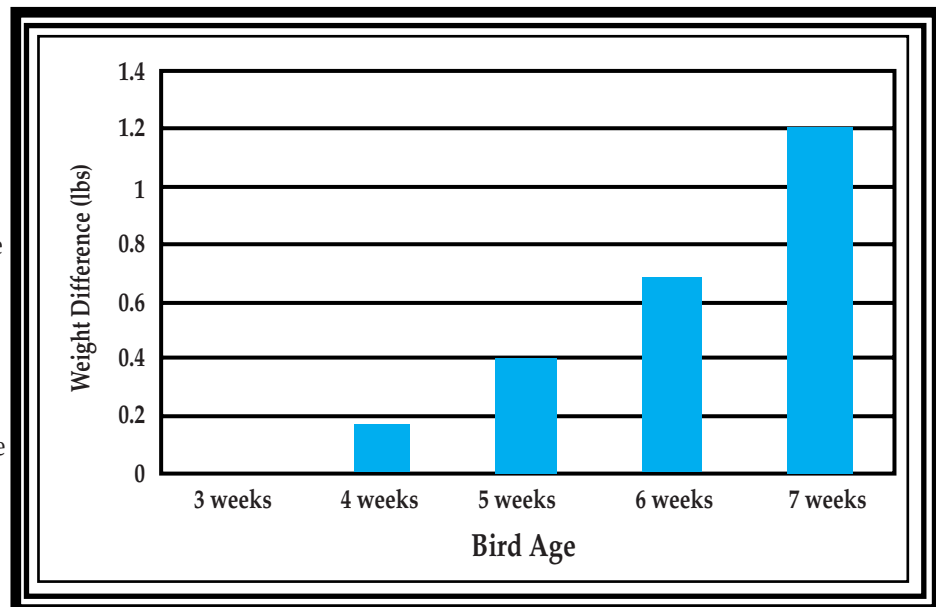


Figure 2. Weight Difference - 400 ft/min vs Still Air

Poultry Housing Tips

Continued from Page 2

Of special interest is how the difference in weight increased as the birds aged. When the birds were four weeks old there was only 0.16 lbs difference in weight between the two groups of birds (Figure 2). By week five the weight difference more than doubled to 0.40 lbs. Week six, the weight almost doubled again to 0.7 lbs. And finally, the weight difference almost doubled again to 1.2 lbs during week seven. So every week the benefit of moving air over birds when they are hot approximately doubles.

Yes, it is important to keep younger birds cool. But, as can be seen by the above graphs, when the birds get older it is crucial to keep as much air moving over the birds when they are hot as possible. This is the time when the greatest problems occur and therefore the greatest benefits can be gained. During those last couple of weeks make sure your shutters are clean, belts are not worn and are tight. If you have evaporative cooling pads make sure that the pads are not clogged with dust and your tunnel curtains are opened fully.

Michael Czarick
Extension Engineer

Michael P. Lacy
Extension Poultry Scientist

We are pleased to have had the opportunity to provide you with some of the information available from our Poultry Science and Agricultural Engineering colleagues at the University of Georgia, Cooperative Extension Service, College of Agricultural and Environmental Sciences. We thought it might be useful to provide access to all of the material they offer.

Following is a sample menu for the publications available on Poultry Housing Ventilation. These and other publications can be accessed through the **Biological and Agricultural Engineering website:**
<http://www.bac.uga.edu/extension>

Bio & Ag Engineering

POULTRY HOUSING VENTILATION

Poultry Housing Tips Newsletter

2000 Newsletters
1999 Newsletters

1998 Newsletters
1997 Newsletters

1996 Newsletters
1995 Newsletters

1994 Newsletters
1993 Newsletters

VOLUME 12

- No. 6 (May, 2000) Is an Air Speed of 600 ft/min in a Tunnel House Harmful?
- No. 5 (April, 2000) The Importance of Replacing Worn Fan Belts
- No. 4 (March, 2000) Reducing Temperature Stratification in Houses with Forced Air Furnaces
- No. 3 (March, 2000) Heating System Thermostat/Sensor Location
- No. 2 (Feb., 2000) The Importance of Having Proper Gas Pressure
- No. 1 (Jan., 2000) Obtaining Uniform Air Inlet Openings

VOLUME 11

- No. 11 (Dec., 1999) Tools for Poultry Producers
- No. 10 (Nov., 1999) House Tightness, Environmental Control and Energy Usage
- No. 9 (Oct., 1999) Environmental Management and Disease Prevention
- No. 8 (Aug./Sept. 1999) The Importance of House Tightness During Hot Weather
- No. 7 (July, 1999) Importance of Air Movement Vs. Bird Age
- No. 6 (June, 1999) Recent Developments in Wind-Chill Charts
- No. 5 (May, 1999) Air Temperature/Speed Meter
- No. 4 (April, 1999) Tunnel Ventilation Fan Performance Ratings
- No. 3 (March, 1999) Exhaust Fan Performance Factors
- No. 2 (Feb., 1999) Basic Light Controlled Breeder Pullet House Ventilation System Specifications
- No. 1 (Jan., 1999) Electronic Thermostats

VOLUME 10

- No. 12 (Nov./Dec., 1998) Basic Power-Ventilated Broiler House Operation
- No. 11 (Oct., 1998) Dimmable Fluorescent Lights

- No. 10 (Sept., 1998) Circuit Breaker Overheating
- No. 9 (Aug., 1998) Are Your Water Supply Pumps Large Enough?
- No. 8 (Aug., 1998) Potential Problems with Evaporative Cooling Pad Structures
- No. 7 (July, 1998) The Importance of Air Speed in Tunnel Houses
- No. 6 (June, 1998) Poultry Housing Tips Topics
- No. 5 (May, 1998) Extreme Weather Tips
- No. 4 (April, 1998) Problems Associated with Insufficient Light Trap Area
- No. 3 (March, 1998) Light Traps for Breeder Pullet Houses
- No. 2 (Feb., 1998) Tunnel-Ventilated House Summertime Preparation
- No. 1 (Jan., 1998) Litter Treatments & House Moisture

VOLUME 9

- No. 14 (Dec., 1997) Lighting System Operating Cost
- No. 13 (Nov., 1997) Light Dimmers and Electricity Usage
- No. 12 (Oct., 1997) Controlling Litter Moisture
- No. 11 (Sept., 1997) Average House Temperature
- No. 10 (Aug., 1997) Tunnel/Sidewall Inlet Broiler House Operation
- No. 9 (Jul, 1997) Fogging Nozzles Vs. Soaking Hoses
- No. 7 (June, 1997) Fogging Nozzles and Temperature Reduction in Tunnel-Ventilated Houses
- No. 6 (May, 1997) Temperature and Relative Humidity...Part 2
- No. 5 (April, 1997) Temperature, Relative Humidity and Evaporative Cooling
- No. 4 (March, 1997) Benefits of Controlling Relative Humidity
- No. 3 (Feb., 1997) Controlling Litter Moisture and Ammonia
- No. 2 (Jan., 1997) Reducing Broiler House Heating Costs
- No. 1 (Jan., 1997) High Efficiency 48" Fans Reduce Electricity Cost 20 to 30 Percent

Poultry Housing Ventilation

Continued from Page 3

VOLUME 8

- No. 12 (Dec., 1996) Reducing Side Wall Curtain Leakage
- No. 11 (Nov., 1996) Inlet Machine Installation
- No. 10 (Oct., 1996) Getting Chicks Off to a Good Start
- No. 9 (Sept., 1996) Flying Chicken Houses?
- No. 8 (Aug., 1996) Fogging Pad Update
- No. 7 (July, 1996) Reducing Electricity Costs in Tunnel-Ventilated Broiler Houses
- No. 6 (June, 1996) Windchill Effect
- No. 5 (May, 1996) Managing Fogging-Pad Runoff
- No. 4 (April, 1996)
- No. 3b (March, 1996) Evaporative Cooling Options for Tunnel-Ventilated Houses...an Overview
- No. 3 (March, 1996) Problems with Evaporative Cooling Pad Distribution systems
- No. 2 (Feb., 1996) How Much Evaporative Cooling Pad Do I Need?
- No. 1 (Jan., 1996) How Many Timer Fans Should I Use?

VOLUME 7

- No. 12 (Dec., 1995) Radiant Brooder Installation and management
- No. 11 (Nov., 1995) Adjusting Minimum Ventilation Using Relative Humidity Meters
- No. 10 (Oct., 1995) Lighting System Operating Cost
- No. 9 (Sept., 1995) Reflective/Ceramic Roof Coatings
- No. 8 (Aug., 1995) Direct Drive 48" Fans Vs. Belt Driven 48" Fans
- No. 7 (July, 1995) Summertime Floor Air Temperatures
- No. 6 (June, 1995) Tunnel Inlet Opening and Air Movement
- No. 5 (May, 1995) Summertime Check List
- No. 4 (April, 1995) Cable Life and Pulley Size

- No. 3 (March, 1995) Timer Fan Electricity Usage
- No. 2 (Feb., 1995) Ten-Minute vs. Five-Minute Interval Timers
- No. 1 (Jan., 1995) Small Curtain Opening vs. Adjustable Air Inlets

VOLUME 6

- No. 12 (Dec., 1994) Environmental Controller Failure ... Bird Loss
- No. 11 (Nov., 1994) Environmental Controllers
- No. 10 (Oct., 1994) Negative Pressure Ventilation Without Adjustable Air Inlets
- No. 9 (Sept, 1994) Using Cold Water in Evaporative Cooling Systems
- No. 8 (Aug., 1994) Fogging Pad Installation
- No. 7 (July, 1994) Fan and Light Bulb Operating Costs
- No. 6 (June, 1994) Air Deflectors in Tunnel-Ventilated Houses
- No. 5 (May, 1994) Guidelines for Operating Tunnel-Ventilated Broiler Houses
- No. 4 (April, 1994) Wind Speed in Tunnel-Ventilated Broiler Houses
- No. 2 (Feb., 1994) Condensation ... What causes it and how to get rid of it
- No. 1 (Jan., 1994) 10 Simple Steps for Effective Negative Pressure Ventilation

VOLUME 5

- No. 8 (Oct/Nov., 1993) Negative Pressure Ventilation - How Many Fans Do I Need?
- No. 7 (July, 1993) Selecting Exhaust Fans for Tunnel-Ventilated Broiler Houses
- No. 5 (May/June, 1993) Fogging Pad Cooling Systems ... A First Look
- No. 4 (April, 1993) Is your Inlet Machine Too Slow?
- No. 3 (March, 1993) Exhaust Fans with Shutter Opening Devices - electricity usage
- No. 2 (Feb., 1993) Negative Pressure Ventilation - electricity usage
- No. 1 (Jan., 1993) Negative Pressure Ventilation - Inlet machines

Broiler Performance Data (Company) Live Production Cost

	Average Co.	Top 25%	Top 5 Cos.
Feed cost/ton w/o color (\$)	137.42	132.21	127.57
Feed cost/lb meat (¢)	13.14	12.21	12.32
Days to 4.6 lbs	43	45	42
Med. cost/ton (¢)	2.87	2.18	1.44
Chick cost/lb (¢)	3.92	3.87	3.00
Vac-Med cost/lb (¢)	0.12	0.04	0.03
WB & 1/2 parts condemn. cost/lb	0.24	0.16	0.19
% mortality	4.46	3.21	3.63
Sq. Ft. @ placement	0.81	0.78	0.81
Lbs./Sq. Ft.	6.35	6.04	6.74
Down time (days)	12	13	11

Data for week ending 6/17/00

Broiler Whole Bird Condemnation (Region)

	SW	Mid-West	S. East	Mid-Atlantic	S. Central
% Septox	0.261	0.311	0.144	0.261	0.220
% Airsac	0.104	0.065	0.295	0.170	0.192
% I.P.	0.059	0.039	0.071	0.063	0.115
% Leukosis	0.004	0.003	0.019	0.025	0.007
% Bruise	0.006	0.006	0.009	0.007	0.010
% Other	0.019	0.005	0.049	0.016	0.010
% Total	0.452	0.429	0.588	0.543	0.554
% 1/2 parts condemnations	0.442	0.328	0.394	0.450	0.448

Data for week ending 6/17/00

Broiler Whole Bird Condemnation (Company)

	Average Co.	Top 25%	Top 5 Co.'s
% Septox	0.244	0.215	0.262
% Airsac	0.181	0.080	0.133
% I.P.	0.074	0.028	0.018
% Leukosis	0.015	0.006	0.003
% Bruise	0.008	0.008	0.006
% Other	0.019	0.005	0.004
% Total	0.541	0.343	0.425
% 1/2 parts condemnations	0.416	0.290	0.317

Data for week ending 6/17/00



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

Detection of Avian Pneumovirus in Tissues and Swab Contents from Infected Turkeys

Janice C. Pedersen, Dennis A. Senne, B. Panigraphy and Donald L. Reynolds

National Veterinary Services Laboratories, Veterinary Services, Animal and Plant Health Inspection Service, U.S. Dept. of Agriculture and Veterinary Medical Research Institute, College of Veterinary Medicine, Iowa State University

*Presented at the 72nd Northeastern Conference on Avian Diseases
June 14-16, 2000, Newark, Delaware*

Avian Pneumovirus (APV) is an acute upper respiratory tract infection of turkeys caused by a non-segmented, single-stranded, negative sense RNA virus belonging to the family *Paramyxoviridae*, genus *Metapneumovirus*. It was first isolated in the United States in 1997, from commercial turkeys in Colorado. Studies characterizing the Colorado virus have shown it to be antigenically different from previously characterized subgroups A and B, leading to a proposed subgroup C classification. The current virus isolation techniques for APV are time-consuming, lack sensitivity, and are labor intensive. Part of the difficulty in isolating the virus is due to a short viremia that has usually subsided by 7 - 8 days post infection. Sensitive and rapid diagnostic tools are needed for control and possible eradication of this disease. This study was designed to compare virus isolation (VI) and reverse transcription-polymerase chain reaction (RT-PCR) for the detection of APV and the identification of diagnostic specimens.

In the two experiments that were conducted in the study, turkeys were inoculated oculonasally with 10^4 TCID₅₀ of APV/turkey/Colorado/97. In the first study, 30 turkeys with 10 collection points were utilized. The second study included 42 turkeys with 14 collection points. Tissues sampled for virus isolation and nucleic acid detection included turbinates, lung, sinus, trachea, and tracheal swabs. Yolk sac inoculation of chicken embryos was utilized for virus isolation. RT-PCR was performed with a nested (two-step) PCR assay using primers designed for the F gene protein of APV/turkey/Colorado/97. During the second stage PCR, two separate procedures were conducted: a conventional PCR and TaqMan PCR. Virus isolation and RT-PCR techniques were compared for sensitivity, specificity, and duration of detection. APV nucleic acid was detected as early as 1-day post inoculation (DPI) and as late as 17 DPI, while virus was isolated only between 3 and 7 DPI. Tracheal swabs were ideal specimens for nucleic acid detection while turbinate and sinus tissues were the best specimens for VI and RT-PCR. Tracheal swabs are easy to collect and allow the sampling of live birds. Both RT-PCR's were found to be more sensitive and less labor intensive than VI.

William A. Stanley, DVM

The RT-PCR is More Accurate Than the Monoclonal Antibody Technique for IBV-Serotyping

Jillian M. Licata (University of Delaware) presented at the 72nd Northeastern Conference on Avian Diseases (Newark, Delaware, June 14-16, 2000) a comparative study between the reverse transcription-polymerase chain reaction (RT-PCR) and the monoclonal antibody (MAb) techniques for serotyping 14 field isolates of infectious bronchitis virus (IBV). The isolates were obtained from commercial poultry flocks in Pennsylvania and initially confirmed as IBV by a universal group specific MAb. However, discrepancies between the two systems were found during the serotyping process. Some of these isolates identified by RT-PCR within the Connecticut serotype demonstrated over 91% protein similarities by direct automated cycle sequencing (DACS). These RT-PCR results also agreed with the antigenic characterization by the reciprocal virus-neutralization (VN), contradictory to the MAb discrepancies. This molecular and VN correlation corroborates that RT-PCR as the most rapid and reliable approach for IBV serotyping.

Miguel Ruano, DVM

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 and Outlook" Reports

slower than the 6.7-percent increase of 1999. While first-quarter 2000 production was 4 percent higher than in the previous year, the production increase for the second quarter is expected to be considerably lower, as preliminary estimates for federally inspected production in April were down 8 percent from the previous year. However, two fewer workdays in April means daily production still showed a small increase from last year. In addition, the broiler hatchery supply flock at the beginning of June is only slightly larger than a year earlier and broiler chick placements through the middle of June are only up 1 percent compared with the same period in 1999. Also, the cumulative slaughter of broiler-breeder type hens is up 3 percent from the previous year.

Exports Strong Through April

Broiler exports in the first 4 months of 2000 are estimated at 1.857 billion pounds, up 25 percent from a year earlier. Much of the growth is due to a resurgence in exports to Russia. Exports to the Russian market (either through the Baltic States or directly to Russia) were estimated at over a third of total exports. Exports were also strong to Canada and Mexico. After increasing almost 25 percent in 1999, exports to Hong Kong have slowed and are about even with the previous year. Broiler exports also rose strongly to China, Korea, and the Philippines, with shipments to each country more than 25 percent above a year earlier through April.

Turkey Producers Report Lower Poult Placements

Federally inspected turkey production totaled 1.284 billion pounds in first-quarter 2000, up 6 percent from the previous year. However, turkey production is expected to show only small gains in the rest of 2000. Meat production fell in April compared with a year earlier and producers reported a smaller number of eggs being placed in incubators and a lower number of poults being placed. The cumulative number of eggs in incubators at the start of each month was 2 percent lower than in 1999 and the number of poults placed through April totaled 193 million, even with a year earlier.

Turkey exports in 2000 are now forecast at 425 million pounds, up 12 percent from 1999. Because Mexico is by far the largest market for U.S. turkey exports, the continued growth in the Mexican economy will play a critical role in turkey shipments for the remainder of 2000 and for 2001. Over the first 4 months of 2000 shipments to Mexico totaled almost 76 million pounds, up 35 percent from the same period in 1999. These exports also benefited from strong shipments to Russia. With shipments totaling over 31 million pounds so far in 2000, trade to Russia is already double that of all of 1999. However, turkey exports to Russia have varied widely in the past, going from 74 million pounds in 1998 to only 15 million in 1999. U.S. exporters have also seen expanded shipments to Hong Kong. Changes in turkey exports to Hong Kong seem to run counter to growth in U.S. broiler exports to Hong Kong.

Lower Prices, Higher Egg Exports

Falling wholesale egg prices in May pushed net returns to egg producers into negative territory. While the number of table egg layers at the beginning of May was 2 percent higher than the previous year, the cumulative number of table-type eggs hatched over the first 4 months of 2000 was about 5 percent lower than in 1999. While wholesale prices are expected to be somewhat stronger in June, higher feed prices and energy costs are likely to continue to pressure producer margins.

After declining strongly (down 17 percent) in 1999, shell egg exports have strengthened somewhat over the first 4 months of 2000. While shipments to Canada are down, overall trade was boosted by shipments to EU countries where the eggs were used to relieve a temporary shortfall in EU production.

Higher Costs Expected To Dampen Poultry Growth

According to the most recent Economic Research Service (ERS) report, the combination of rising feed costs and energy prices and lower product prices is expected to reduce margins for broiler and egg producers. While broiler and egg production is expected to grow moderately in 2000 and 2001, the increases are expected to be smaller than in previous years. Feed costs have risen during the 5 months of 2000, as soybean meal prices have averaged \$175 per ton, about 30 percent higher than the very low levels in the first 5 months of 1999. Rising energy prices are also expected to contribute to higher processing and transportation costs. In contrast to gradually rising costs, wholesale broiler, turkey, and egg prices are expected to remain close to their 1999 levels or decline slightly.

Broiler Production Increases To Continue

Broiler production is forecast to increase 4 percent in 2000, considerably slower than the 6.7-percent increase of 1999. While first-quarter 2000 production was 4 percent higher than in the previous year, the production increase for the second quarter is expected to be considerably lower, as preliminary estimates for federally inspected production in April were down 8 percent from the previous year. However, two fewer workdays in April means daily production still showed a small increase from last year. In addition, the broiler hatchery supply flock at the beginning of June is only slightly larger than a year earlier and broiler chick placements through the middle of June are only up 1 percent compared with the same period in 1999. Also, the cumulative slaughter of broiler-breeder type hens is up 3 percent from the previous year.

Broiler Eggs Set In 15 Selected States Up 1 Percent

According to the most recent National Agricultural Statistics Service (NASS) reports commercial hatcheries in the 15-State weekly program set in incubators 182 million eggs during the week ending June 24, 2000. This was up 1 percent from the eggs set the corresponding week a year earlier. Average hatchability for chicks hatched during the week was 82 percent. Average hatchability is calculated by dividing chicks hatched during the week by eggs set three weeks earlier.

Broiler Chicks Placed Up 1 Percent

Broiler growers in the 15-State weekly program placed 150 million chicks for meat production during the week ending June 24, 2000. Placements were up 1 percent from the comparable week in 1999. Cumulative placements from January 2, 2000, through June 24, 2000, were 3.67 billion, up 1 percent from the same period a year earlier.

May Egg Production Up 2 Percent

U.S. egg production totaled 7.11 billion during May 2000, up 2 percent from the 6.94 billion produced in 1999. Production included 5.97 billion table eggs and 1.14 billion hatching eggs, of which 1.07 billion were broiler-type and 68.0 million were egg-type. The total number of layers during May 2000 averaged 327 million, up 2 percent from the total average number of layers during May 1999. May egg production per 100 layers was 2,176 eggs, up slightly from 2,166 eggs in May 1999. May 2000 contained 23 weekdays, one holiday and four Saturdays, compared to 22 weekdays, one holiday and five Saturdays in May 1999.

All layers in the U.S. on June 1, 2000 totaled 325 million, up 2 percent from a year ago. The 325 million layers consisted of 266 million layers producing table or commercial type eggs, 56.8 million layers producing broiler-type hatching eggs, and 2.83 million layers producing egg-type hatching eggs. Rate of lay per day on June 1, 2000, averaged 69.4 eggs per 100 layers, down 1 percent from the 69.8 a year ago.

Laying flocks in the 30 major egg producing States produced 6.66 billion eggs during May, up 2 percent from May 1999. The average number of layers during May, at 306 million, was up 1 percent from a year earlier.

Egg-Type Chicks Hatched Up Slightly

Egg-type chicks hatched during May totaled 40.9 million, up slightly from May 1999. Eggs in incubators totaled 33.4 million on June 1, 2000, down 11 percent from a year ago. Domestic placements of egg-type pullet chicks for future hatchery supply flocks by leading breeders totaled 343,000 during May 2000, up 21 percent from May 1999.

Broiler Hatch Up 1 Percent

The May 2000 hatch of broiler-type chicks, at 775 million, was up 1 percent from May of the previous year. There were 639 million eggs in incubators on June 1, 2000, up slightly from a year earlier.

Leading breeders placed 7.44 million broiler-type pullet chicks for future domestic hatchery supply flocks during May 2000, down 4 percent from May 1999.

Turkey Eggs in Incubators on June 1 Show Slight Increase From Last Year

Turkey eggs in incubators on June 1, 2000, in the United States totaled 32.8 million, up slightly from June 1 a year ago. Eggs in incubators were up 4 percent from the May 1 total of 31.4 million. Regional changes from the previous year were: East North Central, down 2 percent; West North Central, down 3 percent; North and South Atlantic, up 3 percent; South Central, unchanged; and West, up 7 percent.

Poults Placed During May Down Slightly From Last Year

The 26.0 million poults placed during May 2000 in the United States were down slightly from the number placed during the same month a year ago. Placements were up 4 percent from the April total of 24.9 million. Regional changes from the previous year were: East North Central, up 7 percent; West North Central, down 7 percent; North and South Atlantic, up 9 percent; South Central, up 1 percent; and West, down 14 percent.

Meetings, Seminars and Conventions

2000 July

July 18-19: U.S. Poultry and Egg Hatchery-Breeder Clinic, Birmingham, Alabama. For information check the US POULTRY website at www.poultryegg.org or contact 1530 Cooledge Road, Tucker, GA 30084-7303. Phone: 770-493-9401; Fax: 770-493-9257.

E-mail: research@poultryegg.org.

July 22-26: AVMA 137th Annual Convention, Salt Lake City, Utah. Contact: American Veterinary Association, 1931 North Meacham Road, Schaumburg, IL 60173. Phone: 847-925-8070, Fax: 847-925-1329.

2000 August

Aug. 12-15: International Conference on Animal Science and Veterinary Medicine 'Towards the 21st Century', Beijing, China. Contact: Ms Xu Jinhua, Organising Committee of ICASVM 2000, Institute of Animal Science, Chinese Academy of Agricultural Sciences, No. 2 Yuanming Xilu Road, Beijing 100094, China.

Aug. 19-21: 89th Annual Meeting - Poultry Science Association, Preceding XXII World's Poultry Congress. Montreal's Convention Centre, Montreal, Quebec. See PSA website for more information. <http://www.psa.uluc.edu/meet/psa2000/psa2000.html>

Aug. 20-25: XXI World's Poultry Congress, Convention Centre, Montreal, Quebec, Canada. Contact: Rosaleen Rinzler, WPC 2000 Congress Secretariat, Events International Meeting Planners Inc., 759 Victoria Square, Suite 300, Montreal, Quebec, Canada H2Y 2J7. Phone: 514-286-0855.

2000 September

Sept. 13-15: Effective Broiler Breeder Management, Utrecht, Holland. Contact: Elaine Robson, Conference Organizer, Positive Action Conferences, P.O. Box 4, Driffield, East Yorkshire 4025 9D1 England. Phone: +44 0 1377 256316; Fax: +44 0 1377 254663

E-mail: Conf@positiveaction.co.uk
Website: www.positiveaction.co.uk

Sept. 18-20: Effective Poultry Health

Management, Utrecht, Holland. Contact: Elaine Robson, Conference Organizer, Positive Action Conferences, P.O. Box 4, Driffield, East Yorkshire 4025 9D1 England. Phone: +44 0 1377 256316;

Fax: +44 0 1377 254663

E-mail: Conf@positiveaction.co.uk
Website: www.positiveaction.co.uk

Sept. 20-21: Poultry Production and Health Seminar, Sheraton Hotel, Birmingham, AL. Contact: U.S. Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA 30094. Phone: 770-493-9401

Sept. 21-23: Effective Table Egg Layer Management, Utrecht, Holland. Contact: Elaine Robson, Conference Organizer, Positive Action Conferences, P.O. Box 4, Driffield, East Yorkshire 4025 9D1 England. Phone: +44 0 1377 256316;

Fax: +44 0 1377 254663

E-mail: Conf@positiveaction.co.uk
Website: www.positiveaction.co.uk

Sept. 27-29: VIV America Latina, International Trade Show for Intensive Animal Production and Processing, Expo Center Norte, Sao Paulo, SP Brazil. Contact: Royal Dutch Jaarbeurs Brasil, Phone: +55 15 262 3133; Fax: +55 15 262 3575; E-mail: rdjbr@uol.com.br

2000 October

Oct. 3-4: Broiler Workshop, Auburn University, Auburn, AL. Contact: Alabama Poultry & Egg Association, P.O. Box 240, Montgomery, Alabama 36101-0240. Phone: 334-265-2732.

Oct. 6-7: Kentucky Poultry Festival, Galt House, Louisville, KY. Contact: Carole Knoblett, Kentucky Poultry Federation, P.O. Box 21829, Lexington, KY 40522-1829. Phone: 606-266-8375.

Oct. 12-14: Layer Symposium, Lexington, KY. Contact: Carol Johnson, Alltech Inc., 3031 Catnip Hill Pike, Nicholasville, KY 40356. Phone: 606-887-3242

Oct. 13-14: Poultry Protein & Fat Seminar, DoubleTree Hotel, Nashville, TN. Contact: U.S. Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA 30094. Phone: 770-493-9401.

Oct. 15-17: Broiler Symposium, Lexington, KY. Contact: Carol Johnson, Alltech Inc., 3031 Catnip Hill Pike, Nicholasville, KY 40356. Phone: 606-887-3242

Oct. 18-20: National Meeting on Poultry Health and Processing, Sheraton Ocean

City, Ocean City, Maryland. Sponsored by Delmarva Poultry Industry, Inc. Contact: Sharon Webb. Phone: 302-856-9037; Fax: 302-856-1845; E-mail: dpi@ce.net

2000 November

Nov. 7-10: Expoaviga, International Poultry & Livestock Technology Show, Montjuic Trade Fair Center, Fira de Barcelona, Spain. Contact: F. Xavier Castells, Manager, Expoaviga, Avda. Reina Mo. Cristina, s/n 08004 Barcelona, Spain. Fax: +34 93 23 32602.

Nov. 14-15: Breeder/Hatchery Workshop, Auburn University, Auburn, AL. Contact: Alabama Poultry & Egg Association, P.O. Box 240, Montgomery, AL 36101-0240. Phone: 334-265-2732.

Nov. 14-16: XVI Central America Poultry Congress, Hotel El Panama, Ciudad de Panama, Panama. Contact: Dr. Evelio Quiroz, Presendente APECA, Apartado No 6-3994, Estafeta El Dorado, Panama. Fax: +507 261 1352

Nov. 16: CFIA Poultry Nutrition Conference, Sheraton Imperial Hotel, Research Triangle Park, NC. Contact: Owen Robertson, Carolina Feed Industry Association secretary-treasurer, 2116 N. Shoreline Drive, Sanford, NC 27330. Phone: 919-776-3054

Nov. 27: Coccidiosis 2000, Hannover, Germany. Contact: Elaine Robson, Conference Organizer, Positive Action Conferences, P.O. Box 4, Driffield, East Yorkshire Y025 9D1 England. Phone: +44 (0) 1377-256316; Fax: +44 (0) 1377-254663.

Nov. 8 - Dec. 1: EUROTIER International Exhibition for Livestock & Poultry Production, Hannover, Germany. Contact: Daniel M. Koning, DLG, Eschborner Landstrasse 122, D-60489 Frankfurt, Germany. Fax: +49 69 2478 8113.

2001 January

Jan. 17-19: 2001 International Poultry Exposition, Georgia World Congress Centre, Atlanta, Georgia, USA. Contact: US Poultry & Egg Association, 1530 Cooledge Road, Tucker, Georgia 30084, USA. Fax: +1 770-493-9257.