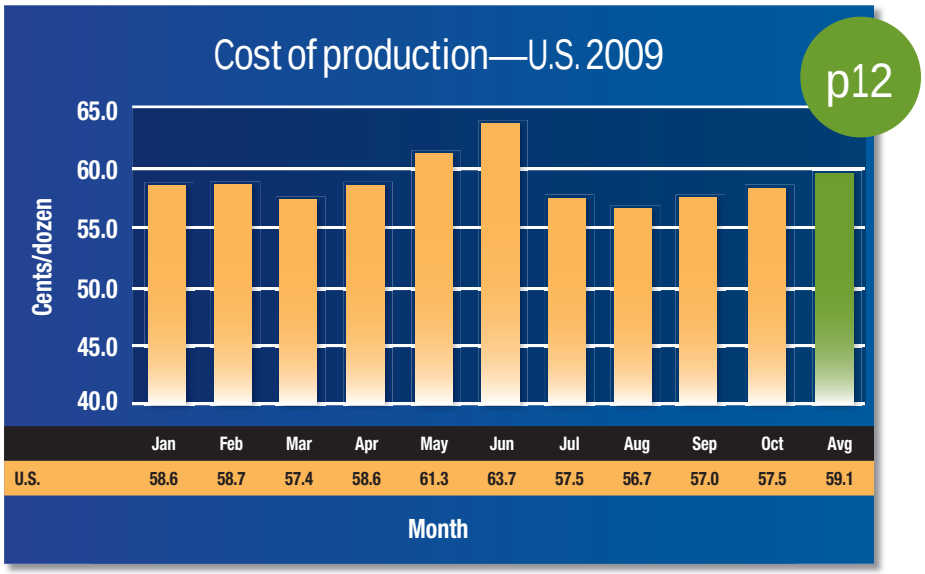
www.WATTAgNet.com DECEMBER 2009 volume 114 number 12

WATT Egg Industry

News for the Egg Industry Worldwide

Inside



Lower production costs since June have brought the year's January through October average down to 58.7 cents/dozen. See other industry statistics on page 12. Chart courtesy of Don Bell.

EDITORIAL

BY DR. SIMON M. SHANE

Challenges, successes shaped 2009

This final edition of Egg Industry for 2009 is a cause for reflection. Our industry has weathered a severe recession reflected in lower profitability compared to 2008. The months of May through September were especially tough. Prospects for the first three quarters of 2010 appear promising, provided we are not hit with disease or an escalation in the cost of feed ingredients. This unfortunately is beyond our direct control other than judicious hedging, appropriate selection of dietary specifications, prudent formulation and careful management of flocks.

Simon M. Shane

To this observer the outcome of the November ballot in Ohio was a striking success. The lessons learned from the 64% to 36% margin in favor of Issue 2 clearly demonstrate that HSUS is vulnerable and that further appeasement and capitulation is not warranted. Although we won this battle the war continues and we have to be vigilant to protect our facilities from intrusions and agents of the organizations committed to the destruction of intensive livestock agriculture.

The December edition contains updates on the IEC Conference, the most recent production statistics, current news and an interview with a veteran of the cage industry.

As the year winds down my editorial and production colleagues at WATT join me in thanking you for your support during 2009. We wish all our readers, contributors and our allied industry friends our best wishes for a harmonious and productive new year. We look forward to meeting with you all at the 2010 IPE in Atlanta.

Simon

sshane@nc.rr.com

Egg Industry

Published monthly by WATT
303 N. Main St., Ste. 500
Rockford, Illinois 61101-1018 USA
www.WATTAgNet.com
Tel: +1.815.966.5574
Fax: +1.815.968.0941

CONTENT DIRECTOR — POULTRY
Bruce Plantz: bplantz@wattnet.net

PUBLISHER
Steve Akins: sakins@wattnet.net

EDITOR
Simon M Shane: sshane@nc.rr.com

SENIOR CONTENT EDITOR
Sue Roberts: sroberts@wattnet.net

MANAGING ART DIRECTOR
Tess Stukenberg: tstukenberg@wattnet.net

PRODUCTION MANAGER
Bill Spranger: bspranger@wattnet.net

TO ADVERTISE: US/CANADA
Pam Ballard: pballard@wattnet.net
Sue Snyder: ssnyder@wattnet.net
Ginny Stadel: gstadel@wattnet.net

TO ADVERTISE: SOUTHEAST ASIA
Dingding Li: dingdingli@vip.163.com

TO ADVERTISE: INTERNATIONAL
Michael van den Dries: driesmvd@xs4all.nl
Bram Westers: bwesters@xs4all.nl
Frans Willem van Beeman: beemenfw@xs4all.nl
Tineke van Spanje: spanje@xs4all.nl

SUBSCRIPTIONS:
Subscription print edition prices: USA $84.00/yr, Canada $102.00/yr, Outside USA & Canada via Airmail $144.00/yr; $14/copy unless marked. Digital edition sent by e-mail: $36.00/yr. Prices in US Dollars. Business or occupation information must accompany each subscription order.

CHANGE OF ADDRESS:
Please report change of address to EGG INDUSTRY, WATT, 303 N Main St Ste 500, Rockford, Illinois 61101-1018 USA, Fax: (815) 968-0513, E-mail: jwessel@wattnet.net. Give BOTH old and new address.

Reducing feed phosphate cost for laying hens

Enzyme benefits offer the potential to formulate with degraded specifications without impacting performance.

Heather Stilborn, Ph.D., Stilborn Consulting, LLC

High feed ingredient prices in 2008 created a challenge for nutritionists and impacted profit. Elevated phosphate prices were attributed to a shortage caused by increased demand for fertilizer, shortage of sulfuric acid and the cost of energy needed to produce defluorinated phosphorus. Although cost has declined since the $900/ton high, current prices are above traditional levels.

A number of articles have indicated potential approaches to reduce phosphate cost including formulation with a reduced available phosphorus (avP) specification, using alternative ingredients and supplementing diets with phytase enzymes.

Time for re-evaluation

Re-evaluation of available phosphorus specification: Nutritionists have traditionally included a margin of safety for critical nutrients to compensate for potential deficiencies due to variation in ingredient quality or uniformity in mixing. The amount by which dietary avP level can be reduced below the recommendations of the breeder of the leading egg producing strain (0.5% dietary avP, assuming 22 lb/100 hens at peak) and still meet requirements depends on a number of factors.

These include the risk adversity of the nutritionist, production level, age and health status of flocks, prevailing climatic conditions and quality standards. If avP specification is lowered an incremental approach is recommended and production parameters and shell quality must be monitored in relation to intake.

Re-evaluation of nutrient levels of ingredients: avP matrix values of ingredients should be re-evaluated and adjusted as needed.

Using alternative ingredients

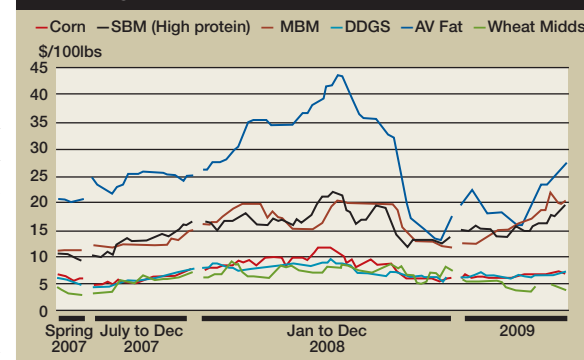
Byproducts: Incorporating animal or poultry byproducts in diets may reduce cost per ton of feed depending on availability and average unit cost of nutrients. Individual ingredients can be evaluated by parameterization or can be offered at incremental cost values in order to select an optimal inclusion level in a formula.

DDGS: Including Dried Distiller Grains with Solubles (DDGS) in layer feeds provides an opportunity to reduce cost based on the avP content of 0.55% compared to corn at 0.09%. Nutrient content can vary among ethanol production plants, requiring a quality assurance program. Currently many nutritionists routinely incorporate between 8% and 12% DDGS in layer diets.

Phytase enzymes: Approximately 70% of the phosphate in vegetable ingredients occurs in the phytin or phytic acid form unavailable to poultry. Supplementing diets with a phytase enzyme additive will lower feed cost by releasing available phosphorus from the non-absorbed bound form. This reduces the need to add mineral-source phosphate. The selection and inclusion level of phytase should be based on the manufacturer's recommendations.

Commercial phytase preparations derived from solid state fermentation have significant side enzyme activity including xylanase, cellulase and protease, enhancing the availability of energy and critical amino acids as an additional benefit.

FIGURE 1: Prices ($/100 lbs) of selected feed ingredients from 2007 to June 2009[1]



Although feed ingredient prices have moderated since 2008 costs will increase as world economies recover from recession.

Performace at a lower cost

Although feed phosphate and other ingredient prices have moderated since 2008, it is inevitable that costs will increase as the world economies recover from recession. Diversion of corn to ethanol, increased purchases of corn and soybeans by Asian nations, droughts disrupting supply and escalation in the cost of crude oil will all result in higher feed costs. Strategies outlined in this article have the potential to reduce production cost. The nutritional benefits of enzymes in relation to their cost offer the potential to formulate with degraded specifications or alternatively increased nutrient values of ingredients, without impacting performance.

Enzyme benefits offer the potential to formulate with degraded specifications without impacting performance. EI

Dr. Heather Stilborn earned her Ph.D. in nutrition from the University of Arkansas. She has over 20 years experience in poultry nutrition and has functioned as a technical advisor for companies marketing amino acids, additives and premixes in addition to providing formulation services.

Read more about feed.
"10 ideas that will change poultry nutrition and health" www.WATTAgNet.com/9979.html

'Different, better' principle guides equipment development

Choretime's Tom Lippi discusses manufacturing and industry consolidation.

Tom Lippi's interest in manufacturing was stimulated by early exposure to the plant of the A.R. Wood brooder company in Minnesota where his father was president. He earned a BME, followed by a Masters in Industrial Engineering from the University of Minnesota. After service in the U.S. Army, and a stint as an engineer at Honeywell, he was persuaded to join his father in 1973. From 1981 through 2001, he served as director of engineering research and development, V.P. of international sales and V.P. of marketing for Big Dutchman with an intervening short spell with the Brower Company.

Tom Lippi

Since 2002 he has been associated with CTB's Chore-Time brand, and since 2005 as vice president and general manager of the Chore-Time Egg Production Systems Business Unit. In July he became vice president of business and technology development for the corporation.

Egg Industry: *How do U.S. equipment manufacturers interact with the industry?*

Tom Lippi: It is a collaborative process. At Chore-Time we continually consult with egg producers regarding their requirements. We are guided by the principle of "What does the customer need?" After internal development and testing, new modules are installed at selected clients for further field evaluation.

When we are happy that installations or equipment is ready for full release we invite potential customers to visit these operations. We also unveil innovations at tradeshows such as the IPE and the Midwest Exhibition, but new releases do not always coincide with the show calendar. Our sales team has developed close relationships with our client base and they also make use of videos, farm tours, advertising and our web site to appraise the industry of new products.

EI: *How have producers worldwide benefited from innovations from the advances made by equipment manufacturers?*

TL: The first area which comes to mind is the durability of equipment. In the 1980s cages were expected to have a life of 15 years or less. Current installations may last as long as 25 years with good care. I attribute this primarily to improved ventilation since there have been no major changes in galvanizing, welding or assembly.

The second area is reliability, achieved through upgrading the design of mechanical components and control systems. Breakdowns impact production, disrupt operations and lead to increased repair costs. Through applying constant improvements we hope to contribute to customer profitability. Chore-Time believes that we should, where possible, "make equipment different and make it better." This principle guides our development engineers and manufacturing department.

EI: *Can you provide an example?*

TL: The impact of inappropriate design was clear when the first manure belt batteries were imported from Europe. Those installations which were designed for relatively small houses frequently failed in units of over 350 feet in length. Many of those early installations had to be upgraded and reinforced.

Chore-Time entered the market a little later than our overseas competitors but with the benefit of experience which was incorporated in our designs and manufacturing.

EI: *What have been the major trends in design of egg production equipment over the past 20 years?*

TL: Manufacturers have adapted cages to accommodate to a reduction in density dictated by welfare regulations. We believe that current systems allow optimal expression of genetic potential with regard to egg production, livability and feed conversion. Most systems today take into account the popularity of in-line complexes which demand gentle handling of eggs through elevators and along conveyors.

There have been remarkable strides in environmental control systems. The introduction of manure belt batteries has enabled many producers to retrofit high-rise houses with new cages to increase production. Manure belt batteries virtually eliminate flies and rodents, suppress salmonella infection and yield a potentially valuable byproduct.

EI: *From your perspective do you perceive any advantages or disadvantages associated with acquisitions and consolidation within the U.S. egg industry?*

TL: The structural changes within our industry are driven by economic factors and changes and are inevitable following the trends in many other sectors of the economy. It is obvious that consolidation creates a measure of market stability. Consolidation reflects the pattern inherent to food distribution which now comprises relatively few major supermarket chains.

From the perspective of an equipment manufacturer we are now able to influence a wider segment of the market through fewer decision makers. There appears to be a convergence of needs which obviously contributes to the efficiency of our research and development and the speed at which we can deliver new systems. The situation in the U.S. is contrasted to Canada which has many more farms but

with a fraction of our domestic output. We are often asked to modify systems and produce "specials" to satisfy the needs of our northern market. However, consolidation is also occurring in Canada. In short, Chore-Time and other manufacturers have to recognize the inevitability of consolidation and to adjust accordingly.

EI: How will Chore-Time respond to current welfare initiatives such as in California and Michigan?

TL: Chore-Time is carefully following events and can provide systems for each of the emerging segments of the industry. We will respond to welfare requirements provided they are based on scientific research and contribute to improved husbandry in both confined and non-confined flocks.

EI: What future products can we anticipate from Chore-Time?

TL: Without going into specifics we are addressing many challenges including reduction in labor, manure handling, improvement in egg quality and environmental management to limit air emissions. We will continue to anticipate current and projected needs. The introduction of an aviary system designed with American husbandry methods in mind is an example of our approach to emerging trends. We were able to review the advantages and disadvantages of earlier approaches and to incorporate beneficial aspects in our design.

EI: Would you share with us your vision for the U.S. egg industry?

TL: I believe that the egg industry has a bright future with the best years yet to come. Eggs are an inexpensive and balanced source of protein and in high demand.The quality of leadership in our egg companies is high and the current managers are good business people who are attuned to the application of science to nutrition, health and food safety. There is a greater willingness to adopt technologies from other branches of agriculture and industries and we are learning to respond and adapt more quickly to environmental and legislative restraints. EI

New frontiers in egg layer breeding industry

Whole Genome Selection allows rapid generation turnaround time for egg layer populations, which translates into better rates of genetic gain.

Neil O'Sullivan, Ph.D.

Modern egg layer breeding developed in the early 20th century, founded on a combination of traditional breeding methods with purelines, than combining the use of hybridization principles learned from corn breeders. The egg layer breeding industry, along with all animal breeding, has continued to evolve and incorporate new methodologies as they are developed by research in genetics. Progress has been rapid in the last 75 years. Will we continue to see sustained rates of genetic progress in egg layers? Will progress plateau? Or can we expect accelerated rates of genetic progress?

Currently egg layers can continue to improve with 2-3 more eggs added to the life cycle of the layer in each generation. One percent improvement in feed conversion per generation, 0.1% improvement in grow house livability and 0.2% improvement in adult livability continue to be sustained each generation. Improvements in all egg quality traits, such as reduction in percentage of undergrade eggs, improved shell appearance in color and shell strength will continue along with improved albumin quality, increased egg solids and continued reduction in inclusions in the egg such as meat or blood spots.

More from Dr. O'Sullivan "Optimizing production from floor-housed pullets and hens"
www.WATTAgNet.com/10631.html

Improvements go beyond production traits

Along with these production traits improvements, continuous improvements will continue in bird social behavior, with better feather cover, reduced feather picking and cannibalism. Birds are again being selected for nest usage, a trait ignored from the 1960s to the turn of the current century. All these traits can be measured, evaluated, and therefore can be selected for improvement using current tools of animal breeding.

Hens can now have progeny with multiple sires, opening up more genetic variation.

In animal breeding, however, the only constant is change. Housing and production systems continue to change and evolve for egg layers, from small backyard flocks of the early 20th century, to floor systems, to cage systems by the 1960s, and now to enriched cages, aviary systems, or modern floor systems for the 21st century. Breeders must be on the forefront of any change in order to respond to these changes demanded by the egg producers and the egg producers' customers.

Selections made on the current generations of breeders must reflect the needs of the customers three to four years from now. This responsiveness to change requires a close industry relationship of the geneticists in the breeding companies with the trend markers of the egg industry. It requires breeding companies to continue close collaborative research with academic institutions to convert new findings in genetics into practical applications in industrial breeding programs. It requires industry geneticists to be as comfortable working in the chicken house as in the halls of higher learning of academia.

Recent collaborative work between academic scientists from Iowa State University, University of Wisconsin at Madison, and Edinburgh University along with industry scientists of Hy-Line International, Lohmann Tierzucht and Aviagen, has been making new breakthroughs in Whole Genome Selection (WGS). This rapidly advancing new frontier of animal breeding has come about due to the availability of high throughput genotyping of birds with very large numbers of genotypes being able to now be measured on each and every bird.

Genotypes can estimate breeding values

After the chicken genome was sequenced in 2004, millions of Single Nucleotide Polymorphisms (SNP) were developed, allowing the creation of specific SNP panels tailored to egg layer chicken lines to be developed by groups like Hy-Line, Lohmann and Aviagen working together. These SNP panels allow whole genome scans to be performed on in-

dividual chickens as a routine procedure. An individual's own performance record, along with her relatives' and her progeny records can then be used to train these panels to identified SNPs associated with each of the performances traits measured (usually around 30 traits for egg layer hens) in the populations. So the genotypes can now be a new way to estimate the breeding values of the individuals of the populations. The genotyping can be performed before the bird has its own record available, allowing selection to occur before phenotyping has been done.

The technology of WGS is opening up population's structures in breeding programs. Hens can now have progeny with multiple sires, opening up more genetic variation than traditional breeding structures thus getting faster access to more natural genetic variation within populations for improved bird performance and well being. WGS allows more rapid generation turnaround time for egg layer populations which in turn will be translated into better rates of genetic gain with respect to time; here at Hy-Line we are confident we are halving the generation interval.

A key for social behavior

Finally the technique will provide accurate individual estimates of breeding values on traits which were here-to-fore selected on a family-breeding-value basis only. This is the key for traits with a social behavior component, such as many well-being and fitness traits and traits that are sex limited like egg laying. This improvement in accuracy is allowing better rates of genetic gain.

Even with the expanding basket of traits breeders must select, rates of genetic gain can continue to accelerate, and more accurate controls on inbreeding can now be concomitantly imposed in breeding programs. The science of genetics is on the forefront of delivering superior layers for the egg industry of the future. EI

Dr. Neil O'Sullivan obtained his baccalaureate and master's degrees from University College, Dublin, Ireland, in 1986 and 1988 respectively. He studied at VPI earning his Ph.D. under Prof. Paul Siegel. He is currently director of research and development for Hy-Line International with direct involvement in the complex breeding program and complementary management and nutritional factors contributing to attaining genetic potential. He can be reached via email at nosullivan@hyline.com.

Take home messages from the IEC Conference

Brand promotion still effective; colony cages see varied levels of acceptance across the globe. Simon M. Shane

The recent International Egg Commission (IEC) Conference provided a platform for producer organizations and production specialists to acquaint the world's egg industry with current trends in marketing, welfare and housing.

Branding of eggs

Dr. Jan-Benedict Steenkamp shared his views on branding with attendees emphasizing that "strong brands don't just happen, they are created."

He maintains that branding eggs represents a practical alternative to store-designations since consumers invariably seek out brand names, simplifying the purchase process.

Since most consumers make a purchase decision within 20 seconds, it is important for brands to be featured on packs. In addition, product attributes including nutritional content should be clearly visible.

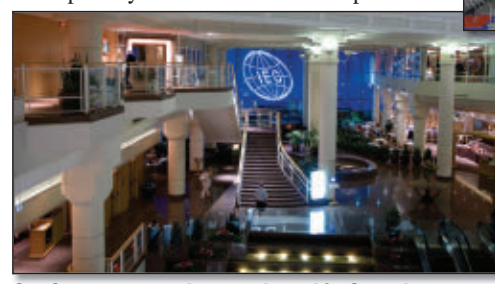
Of special importance to the U.S. industry is the distinction between generic and brand promotion. Dr. Steenkamp recognizes the role generic promotion may have in dispelling misconceptions among consumers. A specific example is the excellent work by the American Egg Board in removing the stigma of cholesterol from eggs. Similar efforts have been made by United Egg Producers regarding welfare, despite the negative campaign against confined livestock mounted by HSUS and kindred organizations.

Brand promotions can be extremely effective, providing that the attributes of the product can be appreciated by consumers. Competitive advantages accrue to successful brands despite the costs associated with advertising.

Keep up-to-date on research. "PSA review: Science continues to improve production" www.WATTAgNet.com/11666.html

Dr. Steenkamp maintains that brand promotion is most effective in concentrated markets such as the major metropolitan areas of the U.S.

With the supermarket industry representing an oligopoly in the U.S. and the EU, and the inclinations of multinationals towards store brands, producers must be flexible and be prepared to sell both generic and premium products to the major chains. At the end of the day the reality is that supermarkets own their shelves. They are, however, prepared to sell both specialty and store brands in response to consumer demand since customers loyal to a specific brand may fill their weekly baskets at a competing store with broader offerings. We are all aware of the standard question "did you find everything OK?" at the checkout counter.



Conference attendees gathered in Canada.

Enriched colony systems

The organizers of the 2009 IEC Conference arranged a panel of EU experts to review progress in adoption of enriched colony cages. In 2008, 7% of the 278 million confined hens in the EU were housed in colony cages. Germany leads the nations of the EU in adoption of the system referred to as *Kleingruppenhaltung* which can be effectively translated as "housing in small groups." In contrast, Austria has banned colony cages, effective 2020. Sweden has allowed colony systems following the phase-out of conventional cages at the end of 2002.

Belgium will ban conventional cages beginning in 2012 but will allow enriched colony cages through 2024.

Studies conducted on colony cages in the Netherlands showed that over 95% of eggs were laid in nest boxes and that 90% of the hens used perches at night. Evaluations of the behavior of hens in cages are still in progress, with attempts to correlate performance with activity of flocks in a small group. It is estimated that egg production costs 10% more in colony cages compared to conventional cages. Currently in the EU there is no premium for eggs derived from colony systems as compared to free range and non-confined flocks.

Slatted-floor system.
Photo courtesy of Big Dutchman.

A note of unfounded optimism was represented by statements expressed at the conference that enriched colony cages will comply with emerging U.S. animal welfare guidelines including California Proposition 2 and the recently enacted law in Michigan. A reading of both items appears to exclude colony cages.

The HSUS and others regard a cage of any form as "confinement" and non-compliant with their position that hens must be able to "spread their wings without touching either side of an enclosure or another bird." This provision would effectively eliminate colony cages and may extend to any non-confined barn system depending on interpretation. Advancing colony cages as a means of appeasing the HSUS and PETA will be futile since hen welfare is not the real issue. Complete abolition of intensive livestock production is the ultimate goal of these extremists. EI

Exceptional Technical Depth

At LAH, we are a team of highly specialized professionals. We focus on a select line of products that get 100% of our company's attention and time. From our R&D and production departments, to our team of sales specialists on the front line, we are here to serve you.

With a total of 180 years of working experience in the industry, the LAH sales team's background includes a wide range of undergraduate and master's degrees in poultry science, business administration, domestic animal biology and reproductive physiology. We know poultry.

Our mission is to be the most stable, reliable and efficient supplier of those vaccines that are critical to poultry health. We have the expertise, manufacturing capabilities and dedicated facilities to produce the volume that we promise our customers. But perhaps most importantly, we have the technical depth to ensure that each and every AviPro serial we produce undergoes rigorous testing for efficacy before it ever reaches the market. That's our job as your poultry health partner.

Imagine – expertise, reliability and strength, all under one umbrella of protection.
AviPro from LAH. Your Avian Professionals.

See us at the IPE-IFE, booth 4655

In photo left to right are Lohmann Area Sales Managers:
Jesse Rodriguez, Greg Hanson, Joe Pierson, Tim Hopson and Brent Swanson

LOHMANN ANIMAL HEALTH

LOHMANN ANIMAL HEALTH
207.873.3989 ■ 800.655.1342 ■ 375 China Road ■ Winslow, ME 04901 ■ www.lahinternational.com

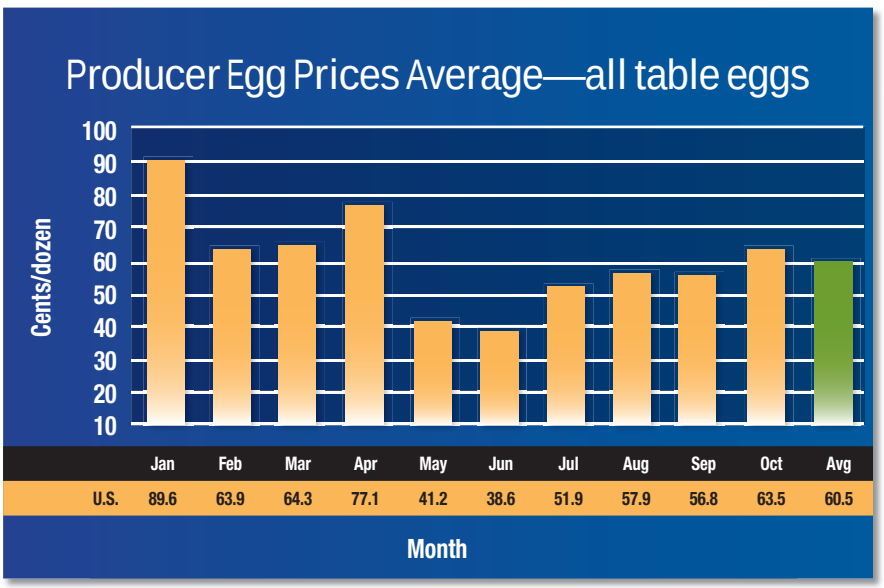
The Avian Professionals

Prices inch upwards

Production in 2010 is expected to increase by 1%.

The welcome seasonal price increase is consistent with past years reflecting greater consumer demand. The favorable price is moderated by adroit management of flock placements and molting to optimize production. The latest figures posted by Don Bell forecast a peak annual U.S. flock of 281.7 million in December declining in the traditionally low post-Easter period when flocks are projected to range from 277.5 million in May 2010 to a low of 275.8 million in August 2010.

Correspondingly U-B quotes will decline from a December 2009 value of 122.6 cents/dozen to a low of 95.8 cents/dozen in May 2010. According to the egg price forecasts by Bell only in May 2010 will prices be expected to drop below the 100 cents/dozen threshold.



Monthly gains since June's low of 38.6 cents/dozen bring 2009's average egg price through the end of October up to 60.5 cents/dozen. Chart courtesy of Don Bell.

During October 2009 for which the most recent figures were available at press time, year to date average contribution was 1.78 cents/dozen despite the 6.0 cents/dozen posted in October and the high values in January (31.0 cents/dozen) and April (18.5 cents/dozen). These positive monthly contribution figures were offset by large losses in May (20.1 cents/dozen) and June (25.1 cents/dozen) respectively.

For the last quarter of 2009, the USDA projection of total production is 1,645 million dozen, virtually identical to the 1,640 million dozen in 2008. Annual production for 2009 will amount to 6,449 million dozen and is forecast to increase by 1% to 6,510 million dozen in 2010. Correspondingly, *per capita* "disappearance" (domestic consumption and exports) will increase from 247.7 eggs in 2009 to 248.1 eggs in 2010. EI

Learn about potential organic standards.
"New organic standards proposed"
www.WATTAgNet.com/10629.html

Promoting quality: an interactive exercise

Practical solutions to eliminate fecal shell staining issues.

There is a high awareness on egg quality in our industry based on receiving a number of responses that were on target.

The first of the real-life problem situations dealt with fecal staining of shells from a white-feathered flock housed in an old facility. This defect is usually due to soiling of eggs hanging back in cages with sagging floors or alternatively contamination on dirty belts.

The immediate in-plant solutions involve:

✔Ensuring correct operation and sensitivity of the dirt detector.

✔If a candling booth is installed, removal of grossly soiled "dirties" is necessary. If throttle settings are near grader capacity an extra candler will be required to reduce the inspection load to six spindles.

✔The temperature of washers should be raised to between 120 F and 125 F with a pH of 11 to 12. Sanitizer concentration should be between 100 and 150 ppm chlorine with a surfactant to enhance cleaning.

The longer term approach is to adjust the slope of cage floors (if possible) to facilitate rollout or to consider re-caging of an obsolete installation at the end of its functional life.

A few respondents commented on wet droppings as a cause. Good point. If high water intake during summer leads to diuresis and diarrhea, retrofitting roof insulation and improving ventilation should be considered. Never impose water restriction in hot weather. Rarely is excess salt or limestone contaminated with magnesium responsible for wet droppings but nutrient content can be assayed as errors do occur in feed plants.

Thank you for your interest. EI

Watch for a new problem in January! Feel free to submit your problem situations, solutions and comments to sshane@nc.rr.com

60 Years

A Tradition of Innovation.

When Ludwig Bening founded his mechanical engineering company in 1949 he probably never imagined it would grow to become such a significant company in the livestock production markets.

Over the course of 60 years LUBING has established itself as one of the leading companies developing innovative products for poultry watering and egg conveying systems. It's our Tradition of Innovation that has contributed to our success and will continue for years to come.

We take this opportunity to express our gratitude to all of our customers who have helped in our success.

For information on our products please call us at ***423 709.1000***, or visit our website at ***www.lubingusa.com***.

And the Tradition lives on.

LUBING
A Tradition of Innovation.

LUBING Systems, LP • 135 Corporate Drive, SW • Cleveland, TN 37311 • tel 423 709.1000 • fax 423 709.1001

Disease status of US flocks – no major problems

Non-confined flocks exhibit conditions observed before confinement housing was adopted by the industry. Eric Gingerich, DVM, ACPV

In preparation for a presentation to the 113th Annual Meeting of the United States Animal Health Association, a questionnaire was sent to members of the Association of Veterinarians in Egg Production to document the disease status of U.S. flocks. The respondents were all involved in health maintenance as diagnosticians in state and federal laboratories, consultants, company veterinarians and professionals affiliated with primary breeders and the pharmaceutical and biologics industries.


Eric Gingerich

Generally the survey did not disclose any major problems relating to the health of either pullets or laying flocks. This situation is attributed to a number of factors, including:

✔Elimination of vertically transmitted diseases by primary breeders,

✔Diligent vaccination with live and inactivated agents,

✔An increased awareness of the importance of biosecurity, cleaning and disinfection, and

✔Implementing good production practices especially with regard to ventilation.

The survey was divided into five sections dealing respectively with caged pullets, caged layers, non-confined pullets, non-confined layers and emerging issues of concern.

Respondents rated the importance of diseases on a scale of 1 to 4 depending on severity and incidence.

'Starveouts' reported for caged flocks

The survey results for caged pullets confirmed problems relating to chick quality and the effect of stressful environments on viability. "Starveouts" and yolk infections were the most important conditions reported. Peripheral neuropathy, an autoimmune condition affecting the nervous system, clinically resembling Marek's disease, appears at 5 to 8 weeks of age in replacement flocks, mostly of two strains. Coccidiosis and ILT were seen occasionally but were not regarded as significant problems in pullets.

Factors that contribute to cannibalism:

✔Lack of socialization in pullet phase

✔Failure to provide perches and "escape areas"

✔Improper beak treatment

✔High light intensity

For caged layers, *E. coli* peritonitis was the most serious condition followed by cannibalism and mycoplasmosis. "Calcium depletion" which is effectively osteomalacia is observed in underweight pullets subjected to early light stimulation when approaching and after peak production. Coccidiosis and focal duodenal necrosis are observed in some flocks on a regional basis.

Fifty-year-old conditions seen

Non-confined flocks in either barns or under free-range management demonstrate the diseases and parasitic conditions observed over fifty years ago before confinement housing was universally adopted by the industry.

Non-confined pullets show coccidiosis in addition to the losses during the first week associated with "starveouts" and yolk infection. Rearing on litter leads to ascarid verminosis. It is noted that capillariasis, which is frequently encountered in backyard flocks was not cited as a condition diagnosed in commercial flocks. It is possible that these parasites affecting either the crop or the intestine are missed on field examination as they are difficult to visualize and may in fact occur in free-range hens.

Among non-confined producing flocks, cannibalism and colibacillosis were the most significant causes of mortality. Mites and ascarid worms were ranked second and coccidiosis the third most frequently encountered infection.

Organic flocks treatments needed

In reviewing conditions other than disease affecting the industry, welfare issues were considered to be the most important. Absence of approved effective treatments, especially for organic flocks was noted as a significant restraint to therapy and averting mortality. The need for a broader range of more effective vaccines was stressed. *Salmonella enteritidis* and avian influenza were ranked highly among the concerns confronting veterinarians in egg-production.

Many of the respondents noted an

increased incidence of clinical mycoplasmosis (MG) in vaccinated flocks. The F-strain vaccine appears to be less effective when administered by the spray route but frequently provides protection if instilled by eye drop. In some cases tylosin is used to suppress clinical signs of MG.

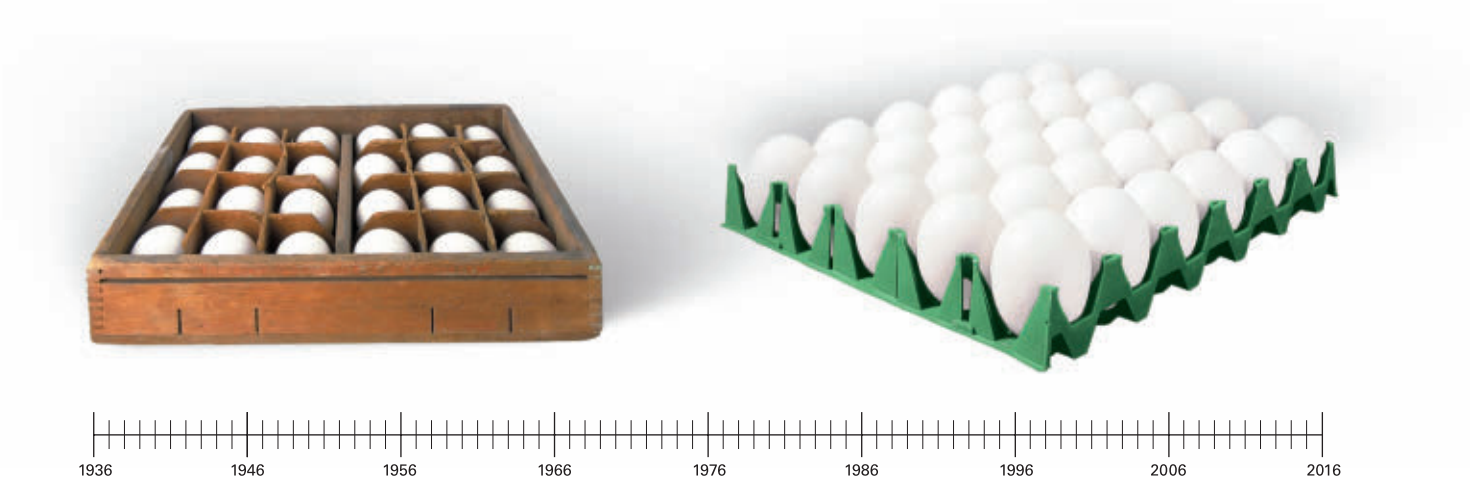
Cannibalism remains a major problem in non-confined flocks and is multifactorial in origin. Lack of socialization during the pullet phase, failure to provide perches and "escape areas," improper beak treatment when applied at either the hatchery or at 7 to 10 days without subsequent "tipping," and high light intensity can all exacerbate cannibalism which can result in up to 30% losses in a floor-housed flock from 35 weeks to depletion.

Cannibalism remains a major problem in non-confined flocks and is multifactorial in origin.

Diseases which were previously prevalent but are now seldom encountered include pox, cholera, coryza and erysipelas. Although infectious bursal disease is not recognized as a significant clinical condition, immunosuppression in all probability is responsible for a decreased response to vaccination and increased susceptibility to secondary bacterial agents including avian pathogenic *E. coli*. EI

Dr. Eric Gingerich is a staff veterinarian at the University of Pennsylvania School of Veterinary Medicine.

Feed conversion has never been more important than today.



That's why we started selecting for it generations ago.

Feed conversion is not a new concept at Hy-Line. Our never-ending research goal has been selecting layers that produce more eggs with higher egg mass on less feed. And since we started that research project in 1936, generations of efficient, high performance layers have been successfully adding to the profitability of egg producers around the world. And will be for generations to come.

***More eggs—less feed*; that's the Hy-Line advantage.**

Hy-Line®

See us at the IPE-IFE, booth 1717

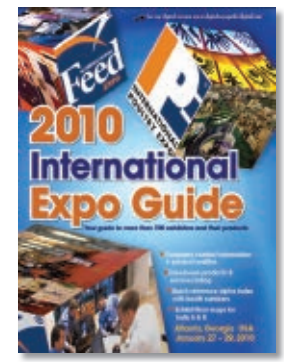
Hy-Line International, West Des Moines, IA, U.S.A.
Telephone: 515.225.6030 • Fax: 515.225.6425 • www.hyline.com

Genetic Excellence®

Global poultry, feed industries unite at IPE/IFE

More than 700 exhibiting companies will offer products, services and opportunities for learning and networking at the International Poultry Expo/International Feed Expo in Atlanta from January 27 to 29. IPE/IFE is the world's largest display of equipment, supplies and services used in the production and processing of poultry, eggs and feed products.

All segments of the industry will be represented: live production, hatcheries, processing, further processing, marketing, feed milling, rendering and all support activities.



Available now at www.digitalexpoguide-digital.com

Seminars and workshops lead by industry experts, scientists and top-level company executives will update attendees on current and prospective industry issues. Attendees are invited to take advantage of these opportunities at no charge.

FOR SALE

Diamond 8400 Electronic Egg Grader

- recently professionally reconditioned
- electronic scales
- 12 wide
- 6 packers
- crack detector
- stainless washer
- 8400 loader
- triple basket carriage (can be expanded to 16 packers)
- dirt detector optional
- all the software and hardware have all been updated.
- can be used in-line, off-line or both
- capacity of 200-300 x 15dz/hr but can be expanded to 800 x 15dz per hr
- easily fits on 2 tractor trailers
- free delivery anywhere inside Canada

For more information, please contact Tony at eggdude@xplornet.com or (613) 240-7612

Poultry Management Positions

Center Fresh Egg Farm, Sioux Center, IA and Hawkeye Egg Farm, Corwith, IA are seeking individuals with Poultry experience to join our management team. Both facilities include laying production and breaking plants, with each farm having a capacity of approximate 4 million birds.

Candidates should possess the following skills and qualifications:

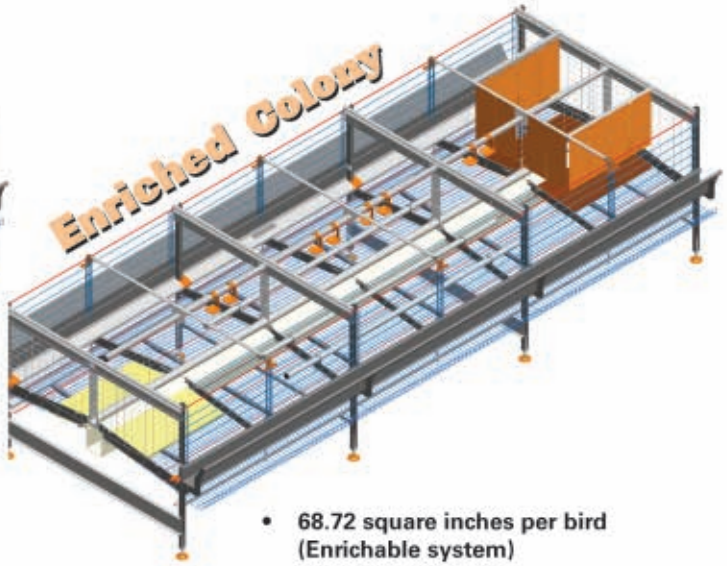
- Five years experience in layer management
- Strong leadership skills and the ability to oversee training at all levels
- Knowledge of expense management and departmental budgets
- Nutritional experience and knowledge of feed formulations preferred but not required
- Bilingual skills beneficial but not required
- Egg breaking experience preferred but not required

We offer a competitive salary and benefits package. To be considered forward your confidential resume to:

Jim Dean
Center Fresh Group
241 St Andrews Way
Sioux Center, IA 51250
jdean@cfegg.com

EOE

Adaptable Versatile Enriched Colony Housing

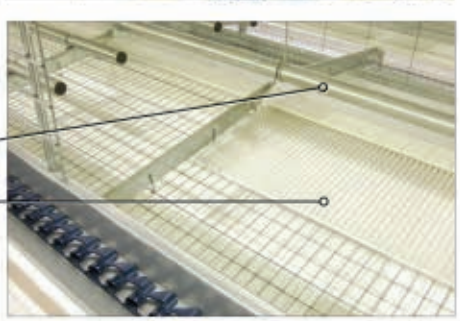


- **68.72 square inches per bird (Enrichable system)**
- **60 - 72 birds per compartment (Enriched system)**
- **Height for chickens to stand upright increased to 17.7 inches high**

AVECH (AVEK) is a system which gives you the ability to start off with an **ENRICHABLE** system, and then move into a completely **ENRICHED** system when you're ready. The **AVECH** is designed to **meet and adapt to the complexities of the different markets you serve, and the continued regulatory changes your business faces.**

With **over 24,000,000 birds (and growing) living in these systems** throughout the world, you can be confident in the proven performance, and reliability of the **AVECH** system.

Contact a Big Dutchman representative to learn more, or go to **www.enrichable.com**



AVECH™

Adaptable
Versatile
Enriched
Colony
Housing

Big Dutchman.
Innovation Breeds Success

Making a world of difference one client at a time.
+1 616 392 5981 • e-mail bigd@bigdutchmanusa.com
www.bigdutchmanusa.com

www.Enrichable.com