

Egg Industry

News for the Egg Industry Worldwide

WATT

Inside

- 3 Editorial with Simon Shane
- 4 PSA Review: Science continues to improve production
- 10 Approaching today's poultry, egg industry
- 12 The many applications of eggs
- 14 Back into profit in August
- 15 Products
- 16 Preparing pullet houses to receive chicks
- 18 News
- 18 Marketplace

p4

PSA Review: Science continues to improve production

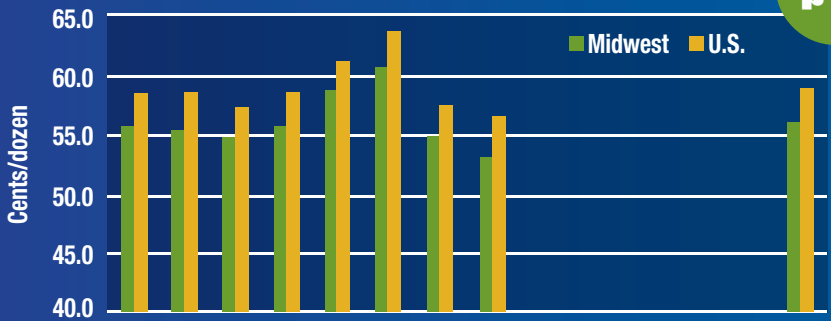


Scientific papers are looked at that carry direct implications for egg production.

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Cost of production—U.S. vs Midwest 2009

p12



Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg
Midwest	55.9	55.6	54.9	55.9	59.0	60.8	55.1	53.4					56.3	56.3
U.S.	58.6	58.7	57.4	58.6	61.3	63.7	57.5	56.7					59.1	59.1

Comparison of egg production costs in 2009 from Jan. to Aug. between the Midwest and rest of the U.S. Courtesy of Don Bell, Univ California, Riverside

Projecting egg prices

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www.WattAgNet.com/11162.html



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EDITORIAL

WITH DR. SIMON SHANE

Celebrating eggs across the world

October 9th is celebrated as the International Egg Commission, World Egg Day. The designation is intended to publicize the value and benefits of eggs in member countries. Suggested activities include seminars highlighting nutritional value, distribution of brochures to consumers and institutional buyers and arranging omelet breakfasts. In the U.S. the AEB promotes consumption of eggs through generic advertising. The interesting question is whether the activities of organizations applying check-off funds actually serve their purpose. Per capita egg consumption in the U.S. has not shown any significant rise over the past decade although individual



Simon Shane

brands of enriched eggs have shown long term, annual increases in sales albeit off a small base. The AEB has undoubtedly striven to counter adverse perceptions of the undesirable aspect of cholesterol in eggs and the Organization has promoted nutritional benefits of lutein and a balanced amino acid profile together with the inherent functional

qualities of eggs which appeal to the commercial sector. The advent of the IEC International Egg Day should be an occasion for reevaluation of objectives and an assessment of the contribution to sales and prices from generic promotion. Since there is no easy method of evaluating effectiveness, it can be accepted that absent the activities of the AEB and the many levels of operation, egg consumption may in fact decline, impacting profitability and restricting growth of the industry.

A look inside

This edition includes reviews of recent scientific meetings which offer the prospect of increased efficiency and advances in safety and quality of eggs and derived products. The collective contributions of scientist affiliated to federal laboratories, land grant universities and laboratories operated by the allied industry benefit us all if we are able to apply valid and realistic recommendations.

As we move into Fall, it is time to consider winterization and to prepare housing and facilities for the consequences of cold temperatures and storms. *Egg Industry* wishes you good farming and profitability.

Simon

sshane@nc.rr.com

Egg Industry

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303 N Main St Ste 500,
Rockford, Illinois 61101-1018 USA
Tel: (815) 966-5574,
Fax: (815) 968-0941,
<http://www.wattpoultry.com>

CONTENT DIRECTOR

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

ASSOCIATE EDITOR

Eric Eyberger: eeyberger@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: beemenfv@xs4all.nl

Tineke van Spanje: spanje@xs4all.nl

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PSA review: Science continues to improve production

Presentations on various topics pertaining to egg production and poultry well-being explore industry insights and implications.

The 2009 Poultry Science Association Meeting included a number of presentations which have direct implications for commercial egg production. The significant papers are reviewed within topic categories.

Welfare

Welfare is a significant issue relating to the design of housing, production management and consumer acceptance. Presentations at the PSA Meeting encompassed rearing, colony vs. conventional cages and nutrient composition in eggs from hens housed in cages compared to range production.

Article 170 – A Comparative Examination of Rearing Parameters for Brown Egg-Type Pullets Grown for Either Range or Cage Production

This presentation is derived from data assembled from the random sample test conducted by Ken Anderson at North Carolina State University. His studies have recently been extended to floor-housed flocks in both cage-free houses and on pasture. Hy-Line brown pullets were reared using either cages allowing 48 inch² per pullet or brooded in floor pens allowing 1 ft²/pullet with trans-

fer to range at 12 weeks of age. Pullets reared in cages were heavier than pen/range reared birds by 0.2 lb. Total feed consumed was 13% lower in pen/range reared pullets attributed to foraging after 12 weeks of age. It was noted that pullets must gain familiarity with ranges, roosts and nests and learn foraging behavior prior to onset of production.

Article 174 – A Comparison of Humoral Immune Function in Response to a Killed Newcastle Vaccine Challenge in Caged vs. Free-Range Hy-Line Brown Layers

In an attempt to evaluate stress in hens subjected to either cage or range housing, subjects were injected with an inactivated Newcastle disease emulsion to compare antibody titers as influenced by housing system. Caged hens demonstrated a significantly higher level of antibody production compared to free-range hens. Heterophilia (increased ratio of heterophil blood cells to lymphocytes) consistent with higher levels of stress was documented. These findings are consistent with the acknowledged higher mortality in free-range hens compared to flocks housed in cages.

Article 246P – Effect of Different Cage-Systems on Laying Hen Welfare

Scientists at the Shandong Agricultural University compared the performance of laying hens in conventional cages with aviaries and furnished cages. Feed conversion ratio was significantly lower in standard tiered cages and egg output was significantly higher than in the alternative non-confined systems. There was no difference in either egg production or feed conversion between aviaries and furnished cages. After experiencing fear, the plasma non-esterified fatty acid levels were significantly lower in caged hens compared to alternative systems. It is significant that the study did not evaluate corticosteroid levels or heterophil ratios which are standard measures of stress. Plasma creatine kinase, uric acid, glucose or non-esterified fatty acids which were determined would not generally be regarded as direct indicators of the level of stress. The authors' conclusion that there is greater stress in conventional cages cannot be supported by either the experimental design or the data obtained.

Article 225 – Comparison of Nutrient

Composition in Eggs from Hens Housed in Cage vs. Range Production Facilities

Dr. Ken Anderson evaluated the validity of the public perception concerning the presumed superior nutrient qualities of range eggs in product derived from the NC Random Sample Test. Egg pools were sent to four laboratories to determine cholesterol, omega-3 fatty acids, saturated fat, beta carotene, Vitamin A

and Vitamin E level was affected by housing system but both treatments showed a decline at 62 weeks of age.

Beak treatment

Article 172 – Effects of Degree of Beak Trimming on the Performance of White Leghorn Hens

The effects of beak treatment on performance of Lohmann LSL and Shaver

✓Pullets were housed in cages through 17 weeks of age and were evaluated during a 40-week production cycle. Hot blade trimming allowed three levels of reduction in beak length (14%, 31% and 39% shorter than controls) when evaluated at 38 weeks of age.

The infrared treatment resulted in beaks that were 30% to 36% shorter than the control. Body weight was reduced for hens subjected to hot blade trimming at the most severe level at both 20 and 38 weeks but the effect was absent at 60 weeks of age. The important observation was that hen-day egg production was not affected by any of the methods of beak trim. In contrast mortality was increased due to cannibalism in the control hens. Feed intake was decreased proportionally to the severity of beak trim but without affecting egg quality parameters.

Article 171 – Effects of Degree of Beak Trimming on the Behavior and Feather Condition of White Leghorn Hens

In a related presentation the Sas-

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and Vitamin E. Total fat content in samples varied from a high of 8.9% to low of 6.8%. Eggs from range production had higher total fat, monounsaturated fat and polyunsaturated fat than eggs produced by caged hens. The omega-3 levels were stated to be 0.17% in range eggs compared to 0.14% in caged eggs. There was no impact on cholesterol with values of 327 and 331 mg/100 g for caged and ranged hens respectively. Neither vita-

hens were evaluated by scientist of the University of Saskatchewan.

Treatments included the following:

✓Day old infrared beak trim at two intensities,

✓Day old hot-blade beak trim using appropriate templates for either Bovans or CV-20 strains. Degree of trim ranged from mild through moderate to severe.

✓A non-treated group served as the control

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katchewan group evaluated behavior as influenced by the methods of beak trimming. Compared with the controls, infrared treatment resulted in object pecking at 3 and 16 weeks. There was a decrease in aggressive behavior and frequency of drinking, and an increase in object pecking irrespective of treatment

during the production cycle. Feather condition as evaluated at 38 and 60 weeks of age in hens subjected to any of the beak trimming treatments was superior to controls with entire beaks.

Article 248 – The Effect of Beak Trimming, Bird Density and the Use of Perches on Productivity of Hy-Line W-98 Single Comb White Leg Pullets from 1-16

Week of Age

A study was conducted in Honduras to evaluate the possible interaction of beak trimming and perching. Body weights were not significantly affected by perches at the three levels of stocking density (1.3 ft²/pullet, 1.1 ft²/pullet, 0.9 ft²/pullet). Beak trimming reduced body weight significantly and reduced feed intake. Neither of the treatments nor their interaction influenced mortality, uniformity or the blood heterophil to lymphocyte ratio. There does not appear to be any undesirable effect of beak trimming in floor-reared pullets. This trial did not take into account the beneficial effect of installing perches during rearing on subsequent socialization of the flock which influences aggression, vent peck and failure to deposit eggs in nests, which are all common problems encountered in floor systems.

Safety

In contrast to previous PSA meetings, there were only a few papers dealing with food safety in relation to eggs, most of which represented contributions from the USDA Agriculture Research Service.

Article 173 – Potential for Horizontal Transmission of Salmonella and Campylobacter among Caged and Cage-Free Laying Hens

A trial conducted at the USDA-ARS Russell Research Center involved infecting shedder hens with *Salmonella* and *Campylobacter* by both the oral and intra-vaginal routes. These hens were then placed among non-infected susceptible hens in either colony cages, on all-wire slats or litter flooring. *Salmonella* was recovered from 2 out of 4 ceca of contacts in colony cages. From hens housed on wire slats, *Salmonella* was recovered from 2 out of 3 ceca and 1 out of 3 spleens from the challenged hens and 2 out of 12 ceca from non-challenged contacts. There was only a slow spread of *Campylobacter* among hens on wire slats. *Campylobacter* was recovered from 1 out of 3 ceca of challenged hens and 7 out of 12 ceca of co-mingled contact hens. *Salmonella* was not recovered from any of the infected or contact hens housed on litter. The results of this trial are difficult to interpret. One

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possibility is that mature hens with intact intestinal flora resist colonization. It is evident that hens housed on wire slats or in cages which inhibit coprophagy are generally refractory to *Campylobacter* infection since the organism cannot persist in a dry environment and requires moist fecal material in which to survive. The logical extension of this study would be to evaluate the shedding of SE in hens receiving successive doses of live attenuated SE vaccine as pullets compared to controls.

Article 228 - Room Environment Influence on Eggshell Bacterial Levels of Non-Washed and Washed Eggs from Caged and Caged-Free Laying Hens

There is renewed interest in the EU regarding the washing of eggs which is a standard U.S. practice. Eggs were collected from hens housed either on wire slats or from litter pens and were assayed for aerobic bacteria and coliforms. Non-washed eggs produced by hens on litter had higher numbers of bacteria and coliforms compared to eggs produced

on slats. Washing significantly reduced total plate count by 1.6 log₁₀ cfu/mL. Washing significantly reduced coliform counts by 0.5 log₁₀ cfu/mL. Housing hens in cages with manure removal belts resulted in the lowest total plate counts for both non-washed and washed eggs compared to housing in a room with cages, slats or shavings. Since all commercial eggs are washed in accordance with USDA directives specifying temperature, chlorine level and pH of sanitizer, shell contamination in U.S. eggs should be low. It is noted that eggs produced on currently available on-belt manure drying systems are generally free of dust, resulting in cleaner eggs than those derived from high-rise houses.

Molting

Although producers conforming to UEP Guidelines now initiate molt using diets of low energy and salt content, there are still aspects of molting which are worthy of scientific evaluation including welfare and dietary formulation.

Article 242P - Molting Hens Using

Soy Hulls: 1. Physiological Response

A study conducted in Brazil considered the physiological stress of hens subjected to either feed removal or alternative molting programs. The response of hens was determined by assaying blood plasma, cholesterol, glucose, triglycerides, high and low density lipoproteins at 79 through 92 weeks of age using Hy-Line W-36 hens with induction of molt at 80 weeks of age (most molting in the U.S. commences at 65 weeks). The control comprised 10 days of fasting followed by cracked corn for 8 days and a pullet developer for 10 days. This regimen corresponds closely to previous U.S. practice. Alternative molting diets consisted of soy hulls for 4 to 12 days followed by low energy diets comprising soy hulls for 8 or 12 days, in turn followed by 10, 6, or 2 days of a low energy diet containing soy hulls and then 4 days of cracked corn and 10 days of pullet developer. Molted hens showed lower triglyceride levels than control birds regardless of molting diet. No differences were observed among treatments with respect

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to plasma assays. Data was not provided on subsequent performance of hens molted using alternative programs.

Article 234P – Molting Hens Using Soy Hulls: 2. Behavioral Responses

This companion paper dealt with be-

havioral patterns in hens subjected to either fasting or feeding diets containing soy hulls. Aggressive pecking was not observed in the study but there was no indication of previous beak treatment. In all treatments, molted hens showed frustration in their resting, preening and non-aggressive pecking behaviors compared to controls which were not subjected to

molt. These effects declined with age through 83 weeks. Neither of the papers from Brazil dealing with formulation of soy hull diets and behavior represents advances in our knowledge of molting.

Article 244P – Molt Induction Using Dietary Myceliated Grain

Myceliated grain is available as a by-product of corn fermentation. Molt diets were prepared using the ingredient and were compared with non-fed and full-fed hens. Alternative molting diets evaluated included 90% alfalfa meal plus 10% myceliated meal. Hens which were either starved or fed 100% myceliated meal ceased production by the fifth day of evaluation. Body weight loss was significantly higher in the fasted hens (57%) compared to 8% with full fed hens with values ranging from 35% to 44% for the various diets containing myceliated meal. Myceliated meal, available as a commercial product, AF-90 was the subject of a presentation made at the Southern Poultry Science Society Meeting in January 2009. At this time it was not considered to be an acceptable ingredient to be used in molting diets based on cost relative to inert ingredients such as soy and oat hulls.

Article 84 – Evaluation of Limit Feeding Varying Levels of DDGS in Non Feed Withdrawal Molt Program for Laying Hens

Dr. Ken Koelkebeck of the University of Illinois is considered the lead researcher in the field of alternatives to initiating molt by fasting. Various combinations of wheat middlings, corn, soybean hulls and DDGS were contrasted over eight treatments extending for 28 days. Body weight loss ranged from 7% in the corn/DDGS and DDGS treatments to 25% (corn/soy hulls) with other combinations intermediate between the extremes. No consistent differences were observed among treatments throughout the post-molt period with respect to egg weight or egg production. This trial demonstrated that DDGS fed at a level of 14 lb/100 hens a day for 16 days followed by 12 lb/100 hens a day for 12 days during the molt period did not completely eliminate egg production but post molt performance was not different to feeding combinations of corn and soybean hulls. Additional studies on DDGS in molt diets are proceeding.

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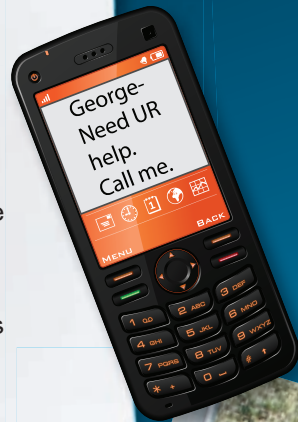
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Approaching today's poultry and egg industry

Dr. Doug Grieve, president of Hy-Line International, gives Egg Industry insight on what his company is doing and hopes to do for the poultry industry.



Dr. Doug Grieve, DVM

Dr. Doug Grieve obtained his undergraduate, MS and DVM degrees all from Michigan State University. He was appointed to Hy-Line in 1994 as a Technical Service Veterinarian, became the Director of Global Technical Services in 2006 and was then promoted to company president.

EI: How is Hy-Line responding to the challenge of welfare compliance?

DG: Our selection programs consider temperament and behavior in the group environment. Hy-Line selects families using birds that have entire beaks on the basis of performance in both cages and floor systems. It is necessary to provide a hen that is calm, has good livability and is well suited to the environment for which it is intended.

EI: How are the strains currently under development performing in the context of commercial parameters?

DG: Traits must be changed or selected to conform to the demands of the market. Challenges include restoration of nesting behavior for non-confined flocks and enhancing socialization. Our current selection standard is the UEP Guideline which is based on principles as assessed by a scientific panel. Basically, we believe that pressure is good for the industry and we are responding by adapting our strains to provide optimal performance under emerging housing and management situations.

EI: Sustainability will become an important determinant of profitability and marketability in years to come. How is Hy-Line responding to this consideration?

DG: We have maintained intensive selection for improved feed conversion efficiency over many generations. Programs initiated by Dr. Jim Arthur, which are now under the capable leadership of Dr. Neal O'Sullivan, are incorporating feed utilization, manure output and feather cover in selection programs. With our international perspective, Hy-Line has certainly adopted a "green view" with respect to production and we are trying to anticipate and satisfy the needs of our customers through our breeding program

EI: Currently almost a third of all eggs produced in the U.S. are converted to liquid products. Does this reality influence breeding?

DG: Both our W-36 and W-98 egg strains provide a high percentage of solids. Egg mass and percent egg yolk are the drivers for optimizing a commercial variety for the egg processing industry. We believe that the proportion of eggs that will be broken will steadily increase and we must be in a position to offer products which benefit this market.

EI: Have recent changes in the structure of the industry influenced Hy-Line geneticists and management specialist?

DG: Our approach to pullet rearing and management is being re-evaluated. We recognize that a uniform flock of pullets of adequate weight and maturity will contribute to maximum egg yield. Management of pullet flocks will receive greater attention in the future with respect to nutrition, housing, ventilation and prevention of disease. This is exemplified in a technical service school to be held in North America in 2010 which will concentrate on commercial production. Hy-Line International has a long history of schools for our customers, but to date our schools have been structured for our international customers to optimize production at the parent level. The new approach will be to improve production technology in North America to assist customers in reaching the inherent genetic potential of our products.

EI: How are you approaching increased demands for product safety?

DG: As primary breeders at the top of the reproduction pyramid, it is incumbent on Hy-Line to achieve the highest possible standards

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of biosecurity which ultimately are reflected in food safety. We must continue to maintain surveillance over vertically transmitted diseases that we have successfully eradicated. We maintain a strong program to prevent introduction of *Salmonella* Enteritidis. Consistent with trends in Europe and of our sister company Aviagen, we are aggressively pursuing a program of eliminating all *Salmonella*. Over the years, we have virtually eliminated lymphoid leucosis and our lines down to the parent level are free of mycoplasmosis.

EI: *Where do you envisage the industry will be in five years time?*

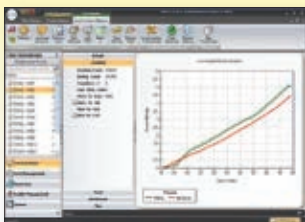
DG: We earnestly hope that the industry will expand. It is our anticipation that shell egg production in cages will represent the mainstay of the industry. Obviously there will be expansion in enriched eggs and a concurrent demand for cage-free conventional and organic products. Whether the U.S. will follow the path of the EU towards floor systems and enriched cages remains to be seen. California Proposition 2 and subsequent voter initiatives or counter-legislation will ultimately change the centers of production, favoring the Midwest and Northern tier states which also have advantages in terms of grain availability.

EI: *Do you have any message for the industry?*

DG: Hy-Line will continue to apply breeding programs based on both quantitative genetics and traditional phenotypic selection requiring the application of stockmanship. Hy-Line was the first primary breeder to develop an in-house molecular genetics laboratory, and this new technology is yielding results. Our team will accelerate the rate of progress in important traits while assuring a high level of safety and compliance with the demands of environmental legislation. **E**

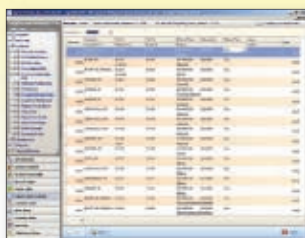
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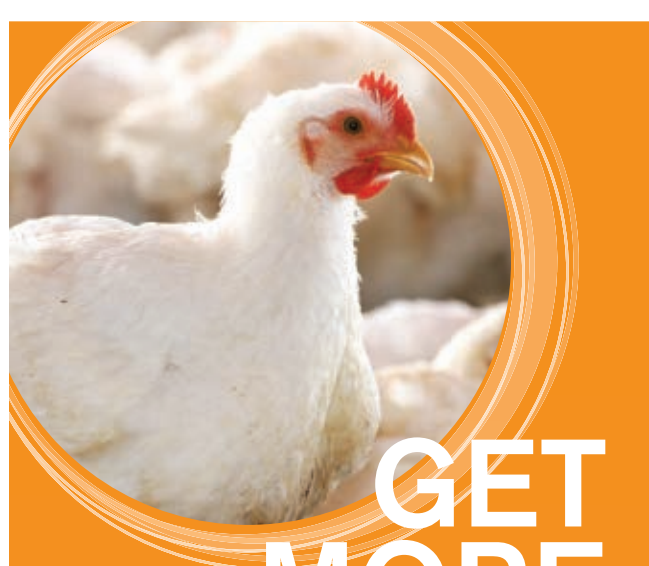


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The many applications of eggs

ISA and Hendrix Genetics focus on achieving new heights in egg production.

Dave Libertini, VP of Americas for Hendrix Genetics, and Eugene Fridman, sales manager for ISA North America, touch upon the importance of the egg and the industry surrounding it.

Egg Industry. Could you describe recent changes in the multiplication programs and distribution of Bovans, ISA and Shaver products in North America?

Dave Libertini/Eugene Fridman. Perhaps I should start by saying what hasn't changed. ISA is committed to delivering healthy, productive and efficient layers to the industry. With our global network of pure line farms, including our units in Canada, we offer a secure source of genetic solutions for the global egg industry.

We believe in offering alternatives – Bovans, Shaver and Dekalb White products and ISA and Bovans Brown products – which give producers a chance to choose whatever suits their needs best. For years, we have focused our breeding program on feed conversion, durability and productivity which translates into profit for our customers in difficult economic times.

EI. Could you comment on current challenges facing the industry and possible solutions?

DL/EF. What we see is that all livestock production faces challenges with higher input costs, fluctuating demand and changing needs of consumers and society. We believe the egg industry is in a great position to turn these challenges into opportunities.

Eggs are a very cost effective source of nutrition for consumers – especially im-

portant when the economy is challenging. We think that in the long term, demand for eggs by society will grow.

Our focus in breeding means that today's layer converts feed and produces more eggs than ever before. A hen which can produce 500 eggs in one extended cycle is in our future.

EI. How do you view the future of liquid and dried egg production?

DL/EF. It is amazing to see how the further-processing of eggs has evolved. What started as an industry which used only surplus shell eggs has evolved into major segment of the North American food industry. We envisage an extension of this trend and expect that up to 50%

Eggs are a very cost effective source of nutrition for consumers...

of eggs will be used for this purpose. Of course, this increase would be partly as a result of extending the volume of exports.

As a breeding company, we are focused on both internal and external egg quality. We are fortunate that many of the characteristics the industry requires – shell quality, solid content levels among others – have relatively high heritability and that means we can improve each generation.

EI. Please share your unique perspectives on what we have achieved and where we may have erred as an industry over the past few years.

DL/EF. The egg industry has done an excellent job connecting with consumers and dealing with misperceptions about

the health value inherent to eggs. Today, most consumers view eggs as a healthy, nutritional food compatible with daily use.

But there is more to be done. Eggs really are a “wonder” product with so many applications. We need to continue to educate consumers that eggs are produced in a safe, humane way which respects animals and the environment but at a price which everyone can afford. We have a compelling story to tell in this area.

EI. How can the industry improve product safety and quality?

DL/EF. Product safety and quality are the foundations of the business – without trust from the public, we would not sur-

vive. All of us in the industry, starting with Hendrix/ISA as primary breeders, need to remain vigilant and focus on biosecurity. Product safety requires a constant effort, following best practices.

EI. Are there any other topics you consider relevant or a message from Hendrix to the industry?

DL/EF. As the successor to renowned North American breeding companies in the past and the repository of their genetic lines, we understand the trust the industry has placed in ISA and our parent, Hendrix Genetics. We take our role very seriously and we are totally committed to the North American industry. Our goal is to grow with our customers and achieve prosperity together.

EI

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Back into profit in August

Both the price and cost of eggs in August show a rise after a decline in summer months.

The latest summary of costs reflecting August 2009, distributed by Don Bell of the University of California, Riverside confirms a restoration to profitability following the down months of May through July, given an average U.S. production cost of 56.7 cents/dozen and a USDA price of 57.9 cents/dozen (Urner-Barry Midwest price of 99.9 cents/dozen) profit attained 1.2 cents/dozen or 2.2 cents/dozen respectively.

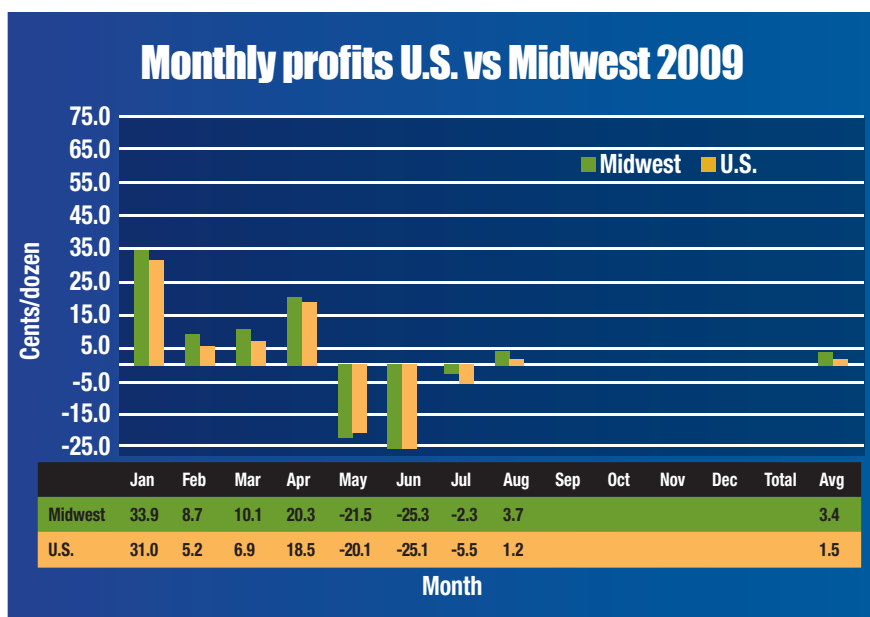
The beneficial effect of stable to declining feed cost (\$205/ton July; \$201/ton August) was largely responsible for the improvement coupled with a higher realization for the month. During the preceding three months loss averaged 16.9 cents/dozen with USDA cost of 43.9 cents and a 60.8 cents/dozen production cost. It is noted that effective January 2009, production costs incorporate a value of 14.7 cents/dozen for labor, depreciation and interest.

Thinking ahead

Projections of national flock size show a seasonal peak value of 281.3 million hens on December 1. During the January to June 2009 period, flock size averaged 282.3 million hens. For the corresponding period in 2010, Don Bell projects a 1.1% decrease to an average of 278.3 million hens.

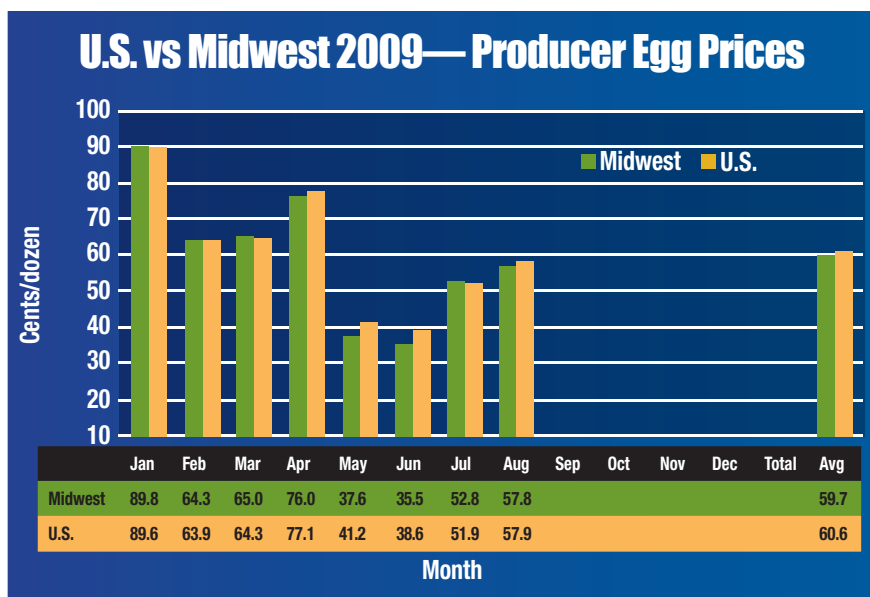
The August to December 2009 UBMW quote is forecast to be 105.2 cents/dozen with a range of 99.9 cents/dozen in August rising to 117.3 cents in November and December. Of this year, the forward projection for the first half of 2010 provides an average of 101.5 cents/dozen with a range of 90.1 cents/dozen in May from a high price of 109.7 cents/dozen in January.

Since breakeven, UBMW will be in the range of 100 to 103 cents/dozen, losses are anticipated for most producers of generic eggs during the second quarter of 2010. **E**



Comparison of monthly egg profits in 2009 from Jan. to Aug. between the Midwest and rest of the U.S.

Courtesy of Don Bell, University of California, Riverside



Producer egg prices in the Midwest and rest of the U.S. for Jan. through Aug. 2009.

Courtesy of Don Bell, University of California, Riverside

PRODUCTNEWS

Celsius egg shell dryer

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Celsius, www.celsius.nl

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Preparing pullet houses to receive chicks

Many steps and tasks are involved in making a house acceptable for new pullets.

John Brown DVM, MAM

In the days leading up to chick delivery, managers must prepare to receive the consignment. This requires planning and attention to detail.

Preparation for receiving the next flock should begin the moment the previous flock of pullets is moved to the layer house. Loose pullets that may have escaped the moving crew must be caught and humanely disposed of. Sanitation is the primary consideration in the preparation of a house to receive the next flock of chicks. Dust and cobwebs must be blown down from rafters, ceiling, equipment and the walls.

All organic material, including dead birds, manure and remaining feed in the feed lines, hoppers and feed bins must be removed and disposed of in a remote location and not dumped near the entrance to the house. Any equipment that can be removed from the house should be removed, sanitized, and stored in a clean storage area during the cleanout period.

The house must be washed down with hot water and detergent using a high pres-

sure sprayer, since they serve as reservoirs of numerous infections which can impact flocks. After a thorough wash-down, the clean house should be disinfected using a low-pressure sprayer or a fogger to dispense a quaternary ammonium compound in accordance with the manufacturer's statutory label instructions. If required, an approved insecticide can be dispersed before placement of clean litter in floor systems. Special provisions are required for organic floor flocks to conform to the requirements of the National Organic Plan.

Getting ready

The area surrounding the pullet house must be cleaned. Trash and remaining litter must be removed to prevent re-tracking of pathogens into the house. All vegetation growing close to the house must be clipped to ground level and grass must be mowed. The concrete aprons and perimeter areas surrounding the building should be disinfected.

Rodent bait in approved receptacles should be placed outside the house and in work areas and storage stations inside the pullet house. Ideally preparations should be completed a few days prior to the arrival of the chicks. Down time is very beneficial in allowing bacteria and viruses that were not killed by the cleaning and disinfection procedure to loose virulence.

All cleaned equipment should be repaired as necessary, reassembled, reinstalled and tested. Electrical and watering installations must be tested.

Approximately 24 hours before the scheduled arrival of the chicks, house temperature should be raised to the recommended level. The air in the house will be at the desired temperature long before the cages or floor will attain an acceptable



Pullet houses must be detail cleaned after old chicks go and before new consignments arrive.

level, thus requiring a prolonged period of heating prior to placement of the flock. Rolls of chick paper must be placed on the floor of cages especially in the vicinity of nipples and a small amount of feed should be sprinkled on the paper before the chicks arrive. The feed troughs must be completely full to attract the chicks to the feeder system. The complete watering system including all nipples must be checked to confirm normal function with an acceptable rate of delivery.

High intensity (3-5 foot candles) of lighting is very important to help the young chick to locate feed and water. During the first two days 22 hours of light is recommended. If starting chicks in cages on two levels, ensure that house lighting illuminates the nipples on both levels. Lighting control clocks should be set to the recommended program.

Starting chicks in a clean, warm, bright environment will allow the flock to attain a strong start.

EI

Dr. John Brown earned his DVM from Auburn University in 1982 and an MAM from the University of Georgia in 1984. He has been involved in the egg production industry since this time as a field technical service veterinarian affiliated with DeKalb and Centurion advising on aspects of disease prevention and management of pullet and laying flocks.

To read advice on how to properly manage pullets & hens visit www.WattAgNet.com/10631.html

sure sprayer to thoroughly remove any remnants of organic matter. Water lines should be flushed and then charged with a strong sanitizing agent and allowed to remain in piping for at least 24 hours before re-flushing with potable water. All necessary repairs to the building must be completed, paying close attention to areas where rodents or free-flying birds may


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INDUSTRY NEWS

AEB reports increased use of egg products

The summer 2009 edition of *Egg-saminer* directed to the institutional market lists innovative products which increase the demand for liquid egg. Some of the items noted include Weight Watchers Banana Nut Muffins, Eating Right Kids Frozen Entrée Line from Safeway and Healthy Choice Natural Entrees. The AEB has issued a 2009 edition of the *Egg Product Buyer's Guide* which includes nutritional information.

Renewable fuels association justification for diversion of corn

The Renewable Fuels Association (RFA), representing U.S. ethanol producers have circulated statistics relating to the estimated 2009 corn crop which suggest that diversion to ethanol production has not impacted livestock production. The report fails to take into account the fact that demand for corn created in large measure by diversion to ethanol has displaced acreage previously used to produce soybeans. Prior to the advent of large-scale ethanol production the ration of corn to soybeans on a dol-

lar per bushel basis was 1:2. It is now 1:3. The price of corn is currently moderated by anticipation of a bountiful season with high yields from an expanded acreage. What the RFA do not take into account is the indirect costs to livestock producers of the consequential rise in price of soybeans which is borne by both producers and consumers as a hidden Federal (gasoline) tax. The apparently favorable situation with respect to corn would however be vastly different in a drought year when yields would be depressed. Sharp rises in the cost of corn would result from disequilibrium between supply and demand. **E**

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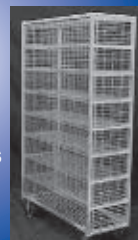
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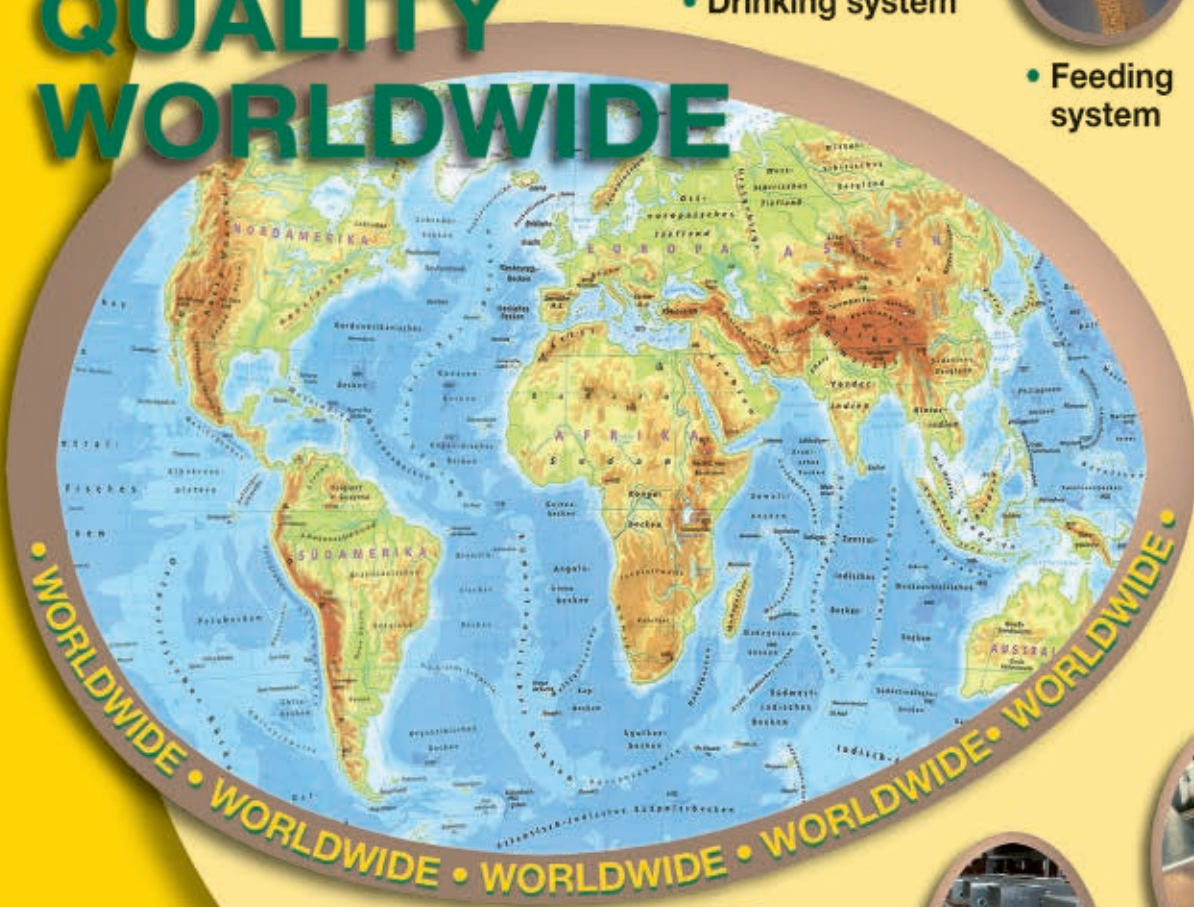
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