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WATT Egg Industry

News for the Egg Industry Worldwide

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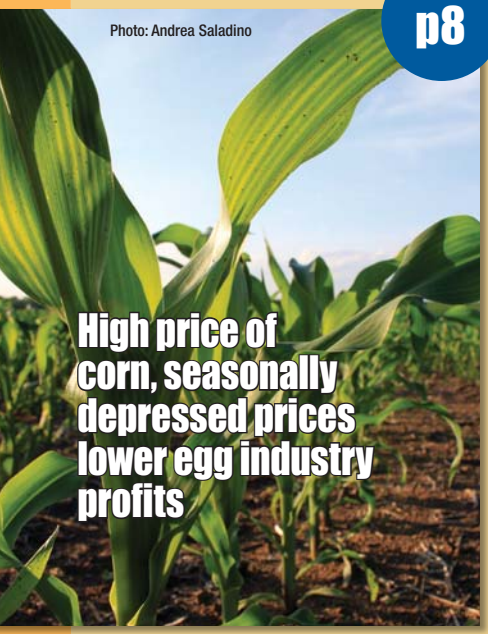

Photo: Andrea Saladino

High price of corn, seasonally depressed prices lower egg industry profits

The escalation in corn price can be attributed directly to ethanol diversion and to increased demand from China, India and some other nations.

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Vaccination options to prevent *Salmonella enteritidis*

Programs should be developed on the basis of the risks and consequences of infection

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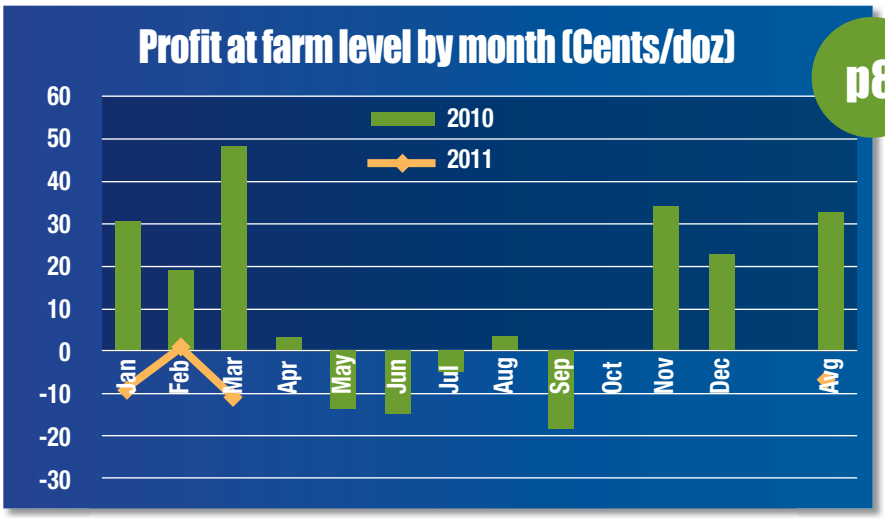

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In March 2011, producers experienced an ex-farm loss of 11.0 cents per dozen, corresponding to -21.1 cents per hen housed based on current monthly cost and revenue values. *Courtesy of Egg Industry Center*

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EDITORIAL

BY DR. SIMON M. SHANE

Turning the page

During the past two years my colleagues at WATT and I have endeavored to improve the quality of *Egg Industry*. I would like to think that we have made progress to this objective during my tenure as editor and it is time for me to move on to concentrate on ongoing projects and industry activities.

Simon M. Shane

I am appreciative of the feedback provided by my friends and contacts in the industry and our associations including the UEP and AEB. WATT has at all times been supportive of efforts to expand and improve the magazine's coverage of the industry.

There are many challenges facing our industry. Environmental, welfare and regulatory issues which were in the forefront in 2010 have been eclipsed by the escalation in feed costs due in large measure to the folly of diverting corn to the production of ethanol. Given ongoing international uncertainties and the prevailing policy of the Obama administration, there does not seem to be any immediate prospect of relief. Narrow margins will persist through the remainder of the year.

The industry has adapted well to the FDA Final Rule on Prevention of Salmonella with adoption of mandated programs of biosecurity, rodent control, environmental assays for SE and, on a voluntary basis, enhanced vaccination. We cannot afford any further recalls which depress demand and hence revenue and negatively impact our image among consumers. We have a collective responsibility to apply sound principles of prevention to ensure the safety and acceptability of our product.

I wish Terrence O'Keefe, my successor as editor, every achievement in his responsibilities. His long association with WATT and his experience in the poultry industry will serve him and his readership well in the future.

Thank you,

Simon

Egg Industry

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BPA WORLDWIDE

Efforts intensify to reduce *Salmonella enteritidis* infection in laying hens

The FDA Egg Safety Rule has resulted in efforts to comply with reasonable and proactive procedures to prevent SE

Eric Gingerich, DVM, ACPV, Diamond V

The implementation of the FDA Egg Safety Rule in July 2010 followed by the Wright County SE outbreak of August 2010 has led to significant concern and efforts to reduce SE infection by U.S. egg producers. There is a considerable financial impact arising from a flock testing positive by sampling of manure and subsequently confirmed as SE-positive by assaying egg pools.

A positive manure test of pullet housing at 14 to 16 weeks of age or of laying units at 40 to 45 weeks of age will result in a significant loss to operations. A positive environmental or manure swab requires expensive testing of four successive 1,000-egg pools, representing an expenditure of from $2,000 to $10,000 depending on the lab fees.

The egg testing process is complicated by the fact that producers must either hold eggs or divert to breaking from the time of collection until test results are received. This is due to the potential for a recall should the eggs test SE-positive. Prior to the approval of more rapid detection tests, such as PCR or immune-based test kits, a producer had to wait for up to 10 days for individual BAM-based assays before obtaining a negative result which would allow packing and distribution of retained eggs. In practice, the use of rapid detection tests following enrichment has reduced storage time to three working days plus time to transport to a laboratory.

An egg-positive confirmation is even more serious due to the cost of diverting production to breaking for at least eight weeks if four consecutive tests are negative or the remaining life of the flock. This is illustrated by the egg price quotation on February 10, 2011, of $1.17/dozen, Urner Barry Large grade Midwest eggs and $0.46/ dozen, or 5 cents off the UB breaker price of $0.51/ dozen. The calculated loss of income from diversion over eight weeks required for four successive negative egg pool tests amounted to $1.24 per hen or $124,000 per 100,000 birds.

An egg-positive confirmation is even more serious due to the cost of diverting production to breaking for at least eight weeks if four consecutive tests are negative or the remaining life of the flock.

Passing inspection

Producers who were previously not vaccinating have now adopted live *Salmonella typhimurium* vaccination programs. Operations previously using only an all-live ST program are now adding an SE bacterin. Some farms considered to be at risk have intensified their programs by introducing a second SE bacterin. Extra-label boosting of immunity with live ST vaccine during lay or just prior to molt is also practiced to maintain both tissue and humoral immunity.

Rodent control programs have been upgraded on most farms as mice are proven carriers of SE. Greater attention is now devoted to fly control in accordance with the FDA "Final Rule."

The fear of feed-related SE infections has led to many producers requiring microbiologic assay of high-risk ingredients prior to purchase to avoid possible infection of flocks with SE. In some cases, ingredient suppliers are treating their products with formaldehyde or organic acid-based commercial additives to reduce or eliminate the risk of SE contamination. Many producers have in fact eliminated animal-source ingredients from both pullet and hen diets.

There has been greater use of compounds to promote intestinal health in an effort to improve protection against SE. Probiotics in the form of Lactobacillus and Bacillus cultures to supplement diets are available. Prebiotic additives usually derived from yeast fermentation are in demand. Research has demonstrated a beneficial effect on intestinal microflora which inhibits intestinal colonization with SE. A few products have beneficial effects on the immune cells of the intestine which aid in reducing infection rates. Some producers are using a combination of fermentation metabolites, probiotics and prebiotics as insurance. In addition, some feed additives have been shown to significantly improve performance, providing a very cost effective extra dimension of protection to ongo-

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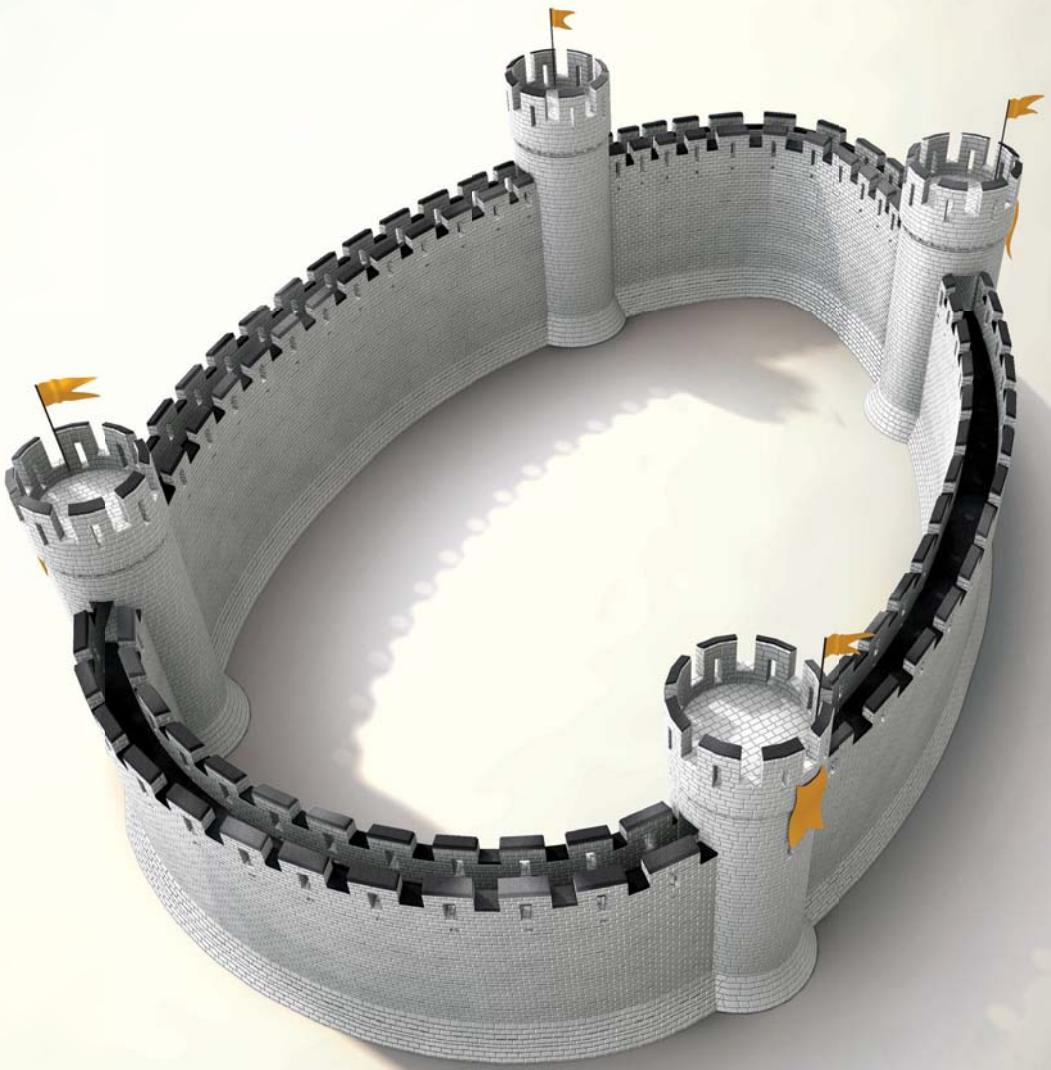

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ing SE prevention programs of biosecurity, rodent control and vaccination.

Producers using contractors operating farm packers that store eggs for more than 36 hours have invested heavily for increased refrigeration capacity in order to comply with the 45 F directive of the FDA "Final Rule." More diligent attention to maintaining the designated temperature and recording data, especially during hot weather, was evident during the past summer.

Producers are closely following the reports from FDA on the results of inspections of the high-risk producers to learn what criteria and standards are applied by the FDA during inspections. Examples of items that are cited for failure as reported in FDA 483 Reports are:

✔Records

»Failure to have a site-specific SE Prevention Plan (SEPP)

»Failure to record that chicks were obtained from NPIP-tested sources, such as vaccination and cleaning

»Failure to record times that certain activities were performed

»Failure to provide records of rodent and fly control

»Failure to document personal biosecurity measures as described in the SE Prevention Plan

✔Pest Control

»Failure to control rodents

»Failure to follow the frequency of monitoring as outlined in the company SEPP

»Failure to prevent stray animals from entering layer houses

»Failure to remove debris or vegetation from around houses

»Failure to provide fly monitoring records

✔Egg Storage

»Failure to maintain eggs in storage at a temperature of 45 F or below

✔SE Testing

»Failure to monitor pullets at 14 to 16 weeks of age

»Failure to monitor hens at 45 weeks of age

✔Biosecurity

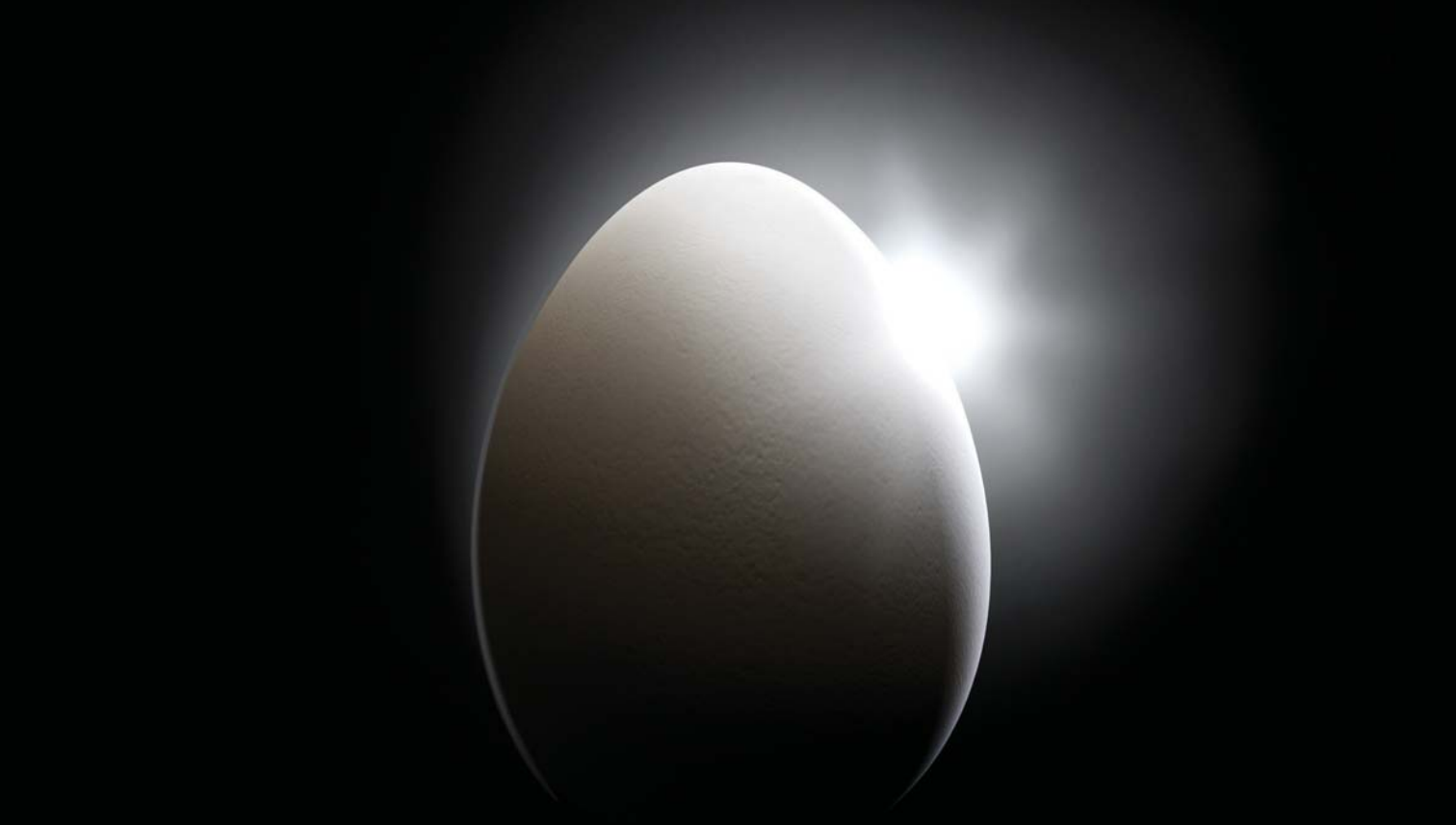
»Failure to maintain practices to prevent cross-contamination when workers move among houses

Basically, to pass inspection, it is required to have a practical, valid, written program in place and to implement the SEPP with supporting records and documentation.

The bottom line

The FDA Egg Safety Rule has resulted in intensified efforts to comply with reasonable and proactive procedures to prevent SE. These involve upgraded biosecurity, compliance with NPIP "SE Clean" directives, effective rodent and fly control, vaccination, supplementary probiotic and prebiotic supplements and refrigeration of eggs after collection through to delivery to stores or distribution centers.

Adapted from a presentation at the 2011 Midwest Poultry Federation Convention. EI



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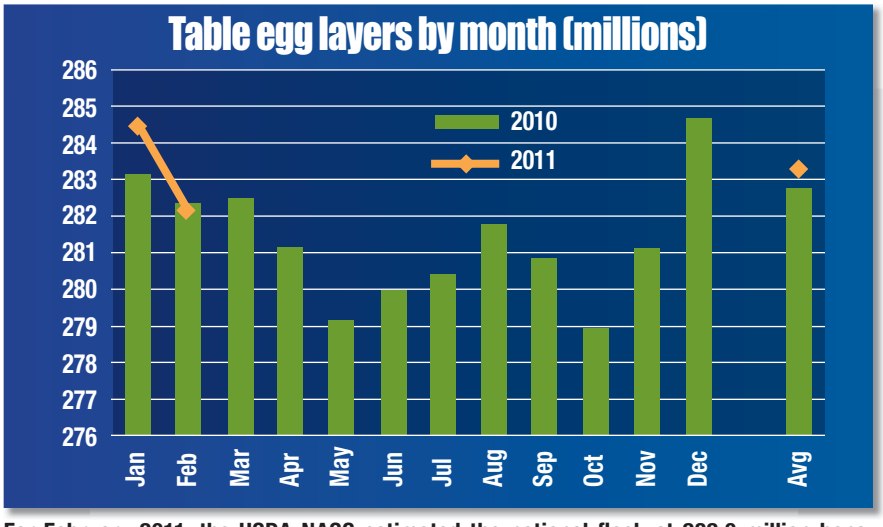
High price of corn, seasonally depressed prices lower egg industry profits

Layer feed was $288 per ton in March, or 51 cents per dozen, across the six regions surveyed by the USDA

Maro Ibarburu, program manager for the Egg Industry Center, located at Iowa State University, released the February-March Statistical Report, which was prepared in collaboration with Don Bell of the University of California at Riverside.

The outstanding factor influencing profitability in our industry continues to be the high price of corn. During March, layer feed was $288 per ton, or 51 cents per dozen, across the six regions surveyed by the USDA. This is a 46% increase over March 2010. The escalation in corn price can be attributed directly to ethanol diversion in addition to increased demand from China, India and some other nations. The profit situation is also exacerbated by seasonally depressed prices for generic eggs.

The current report as distributed by the EIC is summarized for readers of *Egg Industry*. Major trends over the past month are noted in the statistics and comments:

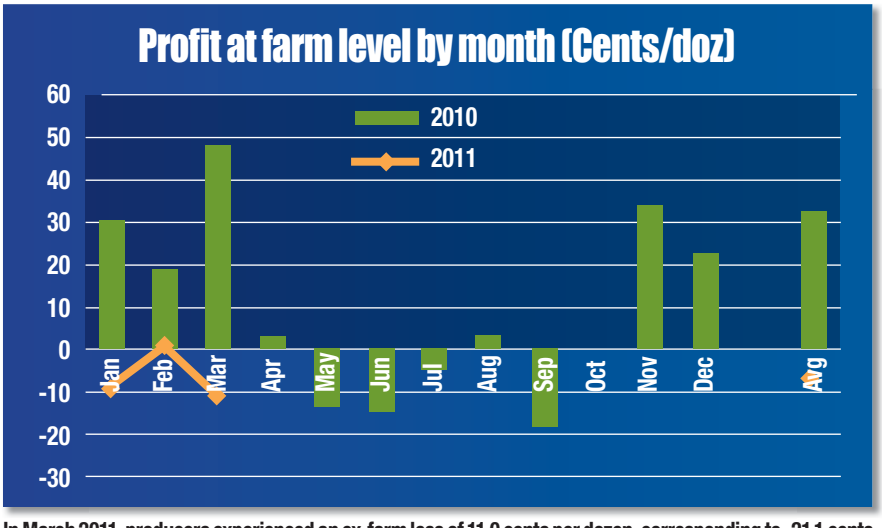


For February 2011, the USDA-NASS estimated the national flock at 282.0 million hens, which was 0.9% lower than in January 2011. ***Courtesy of Egg Industry Center***

✔The U.S. estimated (six region) cost of production for March 2011 was 76.2 cents per dozen ex-farm, 1.9 cents per dozen or 2.6% more than in January 2011. The range in production cost among regions extended from 70.1 cents per dozen in the Midwest to 80.1 cents per dozen in California, with the Southeast at 79.8 cents per dozen.

✔The negative margin represented by "income minus cost" for March 2011 rose to -11 cents per dozen, compared to -0.3 cents per dozen in February 2011 and to a positive margin of 48.6 cents per dozen in March 2010. For 2011, the average margin during the first quarter amounted to -6.6 cents per dozen compared to a positive value of 32.8 cents per dozen for the first three months of 2010.

✔In evaluating the negative margin for March 2011, it was noted that average feed cost for the six regions was 51.1



In March 2011, producers experienced an ex-farm loss of 11.0 cents per dozen, corresponding to -21.1 cents per hen housed based on current monthly cost and revenue values. ***Courtesy of Egg Industry Center***

cents per dozen, with pullet depreciation at 10.4 cents per dozen and other fixed and variable costs amounting to 14.7 cents per dozen, applying the standard EIC cost factors. These values, other than the feed and pullet categories, remained unchanged through 2010.

✔In March 2011, producers experienced an ex-farm loss of 11.0 cents per dozen, corresponding to -21.1 cents per hen housed based on current monthly cost and revenue values. In comparison, during 2010 ex-farm profit was 9.4 cents per dozen, or 232.6 cents per hen.

✔The UB simple average producer price for six U.S. regions, assuming 80% large grade eggs, declined by 1.9% to 67.4 cents per dozen for March compared to 76.5 cents per dozen in February 2011. The 2011 cumulative simple average UB price for the first three months of 2011 was 72.8 cents per dozen. The range over the six reported regions for February 2011 was 65.5 cents per dozen for the Midwest to 69.3 cents per dozen for the South Central Region.

How the grain crisis of 2011 is affecting profitability
www.WATTAgNet.com/20734.html

✔The USDA-AMS determined an ex-farm price of 69.7 cents per dozen for March 2011 compared to 80.9 cents per dozen in February. Corresponding warehouse/distribution center and store delivery prices in March 2011 were 86.4 cents per dozen and 91.9 cents per dozen, respectively. These values were approximately 12% lower than the previous month. The farm-to-store spread was 22.17 cents per dozen, which was 6.3% lower than the value of 23.7 cents per dozen for the previous month. Average ex-farm price for 2010 was 76.8 cents per dozen, which is 6.2% higher than in 2009. For the first quarter of 2011 ex-farm price was 17.8 cents per dozen, or 19% lower than the 94.8 cents per dozen during the corresponding quarter of 2010.

✔In reviewing retail prices for table eggs, the Bureau of Labor Statistics and the Department of Commerce estimated a February 2011 retail average of 170.8 cents per dozen. The simple average retail egg price for 2010 was 166.4 cents per dozen.

✔The Large-to-Medium grade white-egg price spread over six regions was 8.4 cents per dozen in March compared to 12.6 cents per dozen in February, with an average spread of 22.8 cents per dozen during 2010. Regional spreads in March ranged from 7.0 cents per dozen in the Midwest to 11.3 cents per dozen in the South Central Region.

✔During March 2011, layer feed averaged $287.80 per ton, 1.2% higher than the $291.20 per ton average based on six regions during February 2010. During March the price range among regions was $257.60 per ton in the Midwest, rising to $306.20 per ton for the Southeast and California. The differential of $48.60 per ton is equivalent to approximately 8.4 cents per dozen applying realistic industry production parameters.

✔In March 2011, there were 39.98 million table egg-strain eggs in incubators. During 2010, the volume of eggs under incubation remained almost constant at an average of 38.73 million with a range of 33.4 million in August to 42.9 million in April 2010. The average number of eggs in incubators during the first three months of 2011increased by 1.1%, with March showing a 3% increase over 2010.

✔Pullet chicks hatched in March 2011 attained 18.7 million compared to a monthly average of 20.5 million chicks during 2010.

✔Projections for pullets to be housed in future months, based on the five months-previous hatch and incorporating a 5% mortality factor, included a range in the increase of placements from 17.08 million pullets in May 2011 to 18.67 million pullets in June 2010. The 12-month average of 18.21 million pullets per month for 2010 is 5.5% greater (1.0 million pullets) than the 12-month average of 17.26 mil-

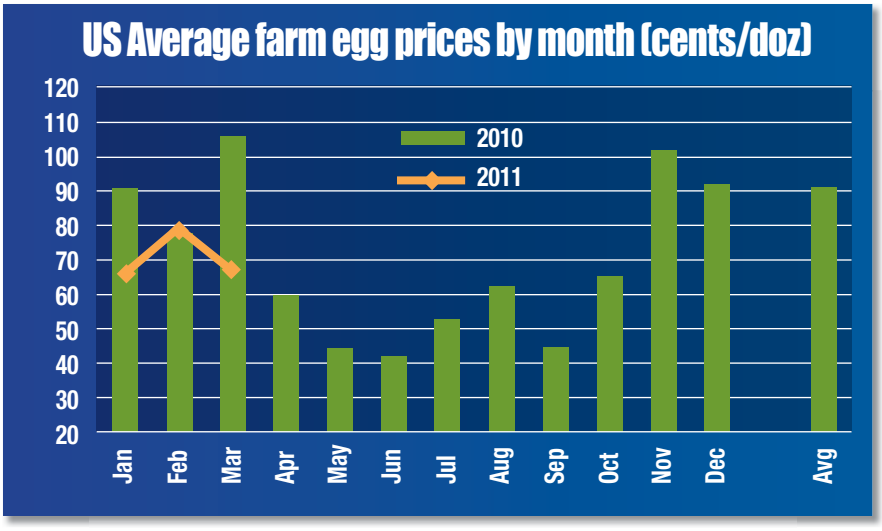
lion per month for 2009. The 2006 to 2010 monthly average was 15.96 million pullets placed each month. The projected total for January to July 2011 will be 123.7 million pullets, which is 2.3% higher than the corresponding 7 months of 2010.

✔For February 2011, the USDA-NASS estimated the national flock at 282.0 million hens, which was 0.9% lower than in January 2011. Applying the University of California model based on USDA-NASS data for chickens and eggs, it is estimated that the April 2011 flock would attain 283.4 million hens, rising to 287.6 million in December 2011, with a low value of 281.3 million hens in June 2011. Indications are that there is a general realization that prudence in expansion is dictated by the cost side of the production equation since ingredient prices cannot be constrained.

✔As at the end of February 2011, 21.9% of the national flock was over 72 weeks of age. For 2010, an average of 23.4% of the national flock had been molted compared to 24.8% during the corresponding period in 2009. There were 2.8% fewer hens over 72 weeks during January-February 2011 compared to the corresponding two-month period in 2010.

✔Six regions reported a simple average of 23.3% molted hens in March 2011, 4% less than in March 2010. The actual proportion of molted hens in the U.S. varies widely, from 12.7% in the Northeast to 34.8% in California. An average of 23.9% molted hens was recorded in the six regions during 2010. Differences among regions are attributed to production cost, revenue for eggs and realization value for spent hens.

✔During February 2011, USDA-FSIS data indicated that 5.6 million hens were processed compared to 5.9 million in January 2011. The FSIS value does not take into account any depleted flocks which are buried, rendered or shipped to Canada.



The Urner Barry simple average producer price for six U.S. regions, assuming 80% large grade eggs, declined by 1.9% to 67.4 cents per dozen for March compared to 76.5 cents per dozen in February 2011. *Courtesy of Egg Industry Center*

✔In February, the University of California projected a UB Large Midwest price of 125.0 cents/dozen for March 2011, compared to an actual value of 104.5 cents per dozen. The lowest projection for 2011 is now 77.2 cents per dozen in May with a November/December price forecast of approximately 111 cents per dozen. Projections are contingent on current trends in flock depletion and consumer demand. It is reiterated that each 10-cent-per-dozen difference between forecast and actual UB price is equivalent to $30 million per month for the industry with over 165 million hens producing generic eggs.

✔In January 2011, the top six egg-producing states with 158.85 million hens represented 57.2% of the total of 277.5 million hens in flocks above 30,000 hens as recorded by the USDA. In descending order, these states are Iowa [18.8% of total], Ohio [9.7%], Indiana [8.3%], Pennsylvania [8.6%], California [6.8%] and Texas [5.1%]. States reporting to the USDA-NASS represent 98.4% of all hens producing table eggs.

✔The rate of lay for February 2011 attained 75.3%, which is 0.3% lower than the previous month and 2.3% lower than in December 2010, during which an average of 77.4% was recorded. The rates of lay for January 2010 and 2011 were identical. Average rate of lay is a function of weighted flock age and is also influenced by climatic conditions.

✔During February 2011, 5,163 million cases of eggs were broken under federal inspection, 8.9% lower than in January 2011. In 2010, breaking was up by 3.9% over 2009. For January and February 2011, 30.5% of the 35.47 million cases produced were broken compared to 31.6% for 2010. It is noted that on a year-to-year basis the proportion of eggs broken has shown a steady decline from the 2005 high of 35.1% to 30.8% in 2009.

✔The revised egg consumption value for 2011 estimated by the USDA-ERS is now 248.9 per capita, which is 1.5 eggs or 0.6% higher than the consumption value of 246.2 eggs per capita recorded in 2010. Over the past seven years the highest per capita consumption of 257.8 eggs occurred in 2006.

✔During calendar 2010, the USDA-FAS recorded exports of 2.47 million cases of shell eggs representing approximately 1.1% of U.S. production. Major importers during 2010 were Hong Kong/PRC at 40.5% and Canada, which took 29.3% of shipments. In January 2011 339,000 cases of shell eggs were exported, representing 0.71% of production.

✔Combined exports of shell eggs and egg products expressed as "shell-egg equivalents" attained 6,869,000 cases for 2010, representing 3.2% of U.S. production. During January 2011, a combined volume of 471,600 case equivalents of liquid and shell eggs representing 2.5% of production were exported. Major importers of egg products during 2010 were Japan (23.3%), Germany (18.6%), Canada (12.9%), South Korea (5.7%) and Mexico (4.9%). EI

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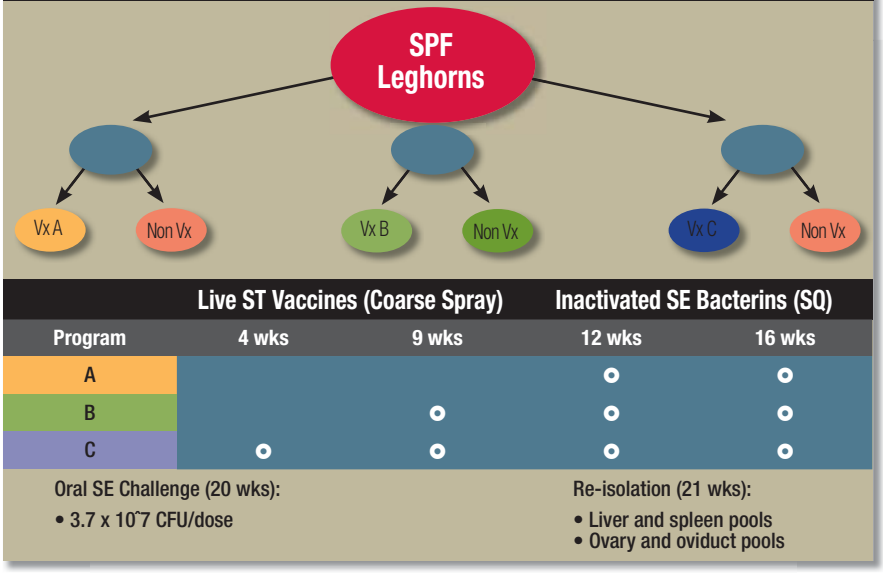
Vaccination options to prevent *Salmonella enteritidis*

Programs should be developed on the basis of the risks and consequences of infection

By Iván R. Alvarado, DVM, MS, Ph.D., ACPV, Lohmann Animal Health International

FIGURE 1: EXPERIMENTAL DESIGN



Three salmonella vaccination programs, labeled A, B and C, were tested to show how well each protected leghorn hens from SE colonization of the liver, spleen, ovary and oviducts following an oral SE challenge.

The oral route is the natural pathway of infection of chickens with *Salmonella enteritidis*. Following ingestion, the organisms invade enterocytes lining the intestinal tract and pass to the underlying mucosal associated lymphoid tissue. SE bacteria enter the blood system, probably when phagocytosed by leucocytes, eventually reaching the spleen, liver and bone marrow. Intestinal replication in internal organs and excretion of viable SE through the feces will result in extensive environmental contamination.

Infection of newly hatched chicks results in a massive multiplication of SE, with large numbers being excreted for several weeks. Older birds are less susceptible to infection. This age-related resistance has been attributed to the development and maintenance of a stable microflora, which competes with salmonella for carbon sources and receptors on the enterocytes. Established microflora may secrete metabolic products which inhibit the growth of salmonellas.

Salmonella vaccines

Several research studies have shown the benefits of using live attenuated and inactivated vaccines alone or in combination to prevent SE in flocks. Benefits of vaccinating include a reduction in organ invasion and fecal shedding and lower levels of both horizontal and vertical transmission (lower risk of egg contamination).

SE inactivated vaccines are characterized by their high antigenic concentration and capacity to stimulate the production of specific antibodies (humoral immunity) in the hen. Vertically transmitted antibodies (Immunoglobulin G) are found at high concentrations in the yolk, providing some protection against internal SE contamination. Subcutaneous administration of oil emulsion inactivated vaccines to laying hens is reported to significantly reduce the frequency of SE isolation from internal organs and decrease fecal shedding.

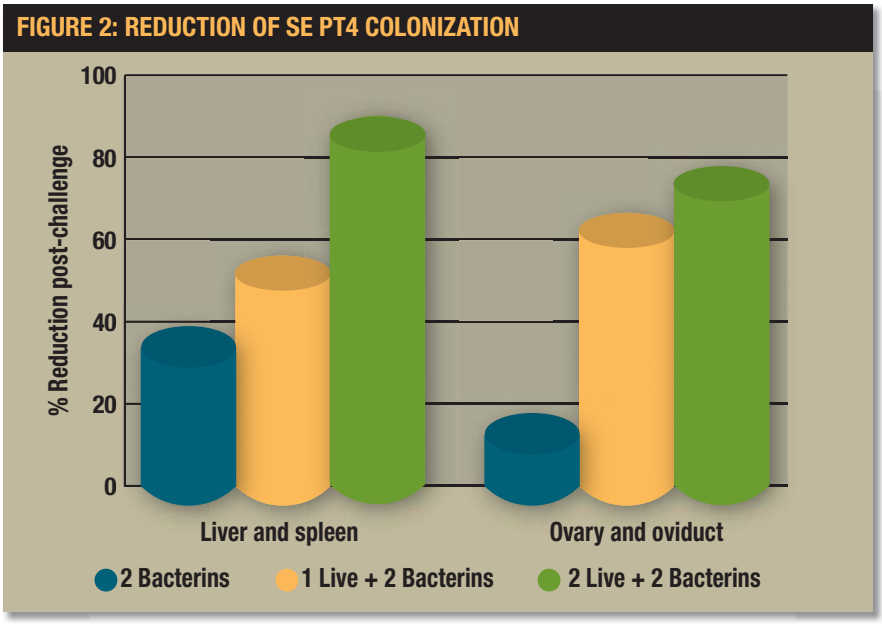
Live attenuated *Salmonella typhimurium* vaccines are associated with a more diverse protective immune response in poultry when compared with inactivated vaccines.

Live attenuated vaccines provide protection against mucosal and systemic infection, indirectly reducing intestinal, environmental and egg contamination. Live attenuated vaccines are characterized by:

Stable attenuation. Achieved by modifying genes coding for metabolic and virulence functions while preserving the expression of key determinants required for immunogenicity against SE. Double or triple mutations in genes such as *Cya/Crp* (regulation of carbon source utilization), *Aro A* (synthesis of purine or amino acids) or *Gal E* (biosynthesis of LPS) effectively reduce the risk of reversion to pathogenicity. As a result of attenuation, vaccine strains are characterized by their prolonged generation time, allowing the development of a specific immune response with the eventual elimination of the administered vaccine strain by the immune system.

Safety for non-target species and humans. This is self evident but is subjected to intensive testing for safety.

FIGURE 2: REDUCTION OF SE PT4 COLONIZATION



The highest reduction in SE-positive tissues was observed in birds vaccinated with both live and inactivated vaccines.

Efficacy. When administered to newly hatched chicks, live attenuated vaccines multiply extensively due to the absence of complex normal microbial flora found in birds older than four weeks and older birds with a fully functional immune system. The early multiplication of the normal flora prevents colonization by field strains of *salmonella*. The practical consequence is that administration of live vaccines to very young chickens by drinking water or coarse spray provides protection within hours against *salmonella*. This early protection, achieved through colonization-inhibition, is followed by the development of a normal immunity within a few weeks.

Capability for mass administration by coarse spray and in drinking water. When administered at an early age, ST vaccine strains are able to effectively infect and colonize the gastrointestinal tract, denying field SE and non-Group D *salmonella* strains access to receptor sites on intestinal cells.

Designing a vaccination program

Vaccination programs should be developed on the basis of the risks and consequences of infection, especially following the introduction of the FDA "Final Rule." The previous history of SE contamination in pullets and production units and the level and implementation of biosecurity and beneficial management practices are significant considerations in developing an effective program. Live vaccines stimulate cell-mediated immunity, leading to clearance of *salmonella* from internal organs and a reduction of *salmonella* shedding into the en-

FIGURE 3: 1 LIVE ST (9 WKS) + 2 INACTIVATED SE (12 AND 16 WKS)

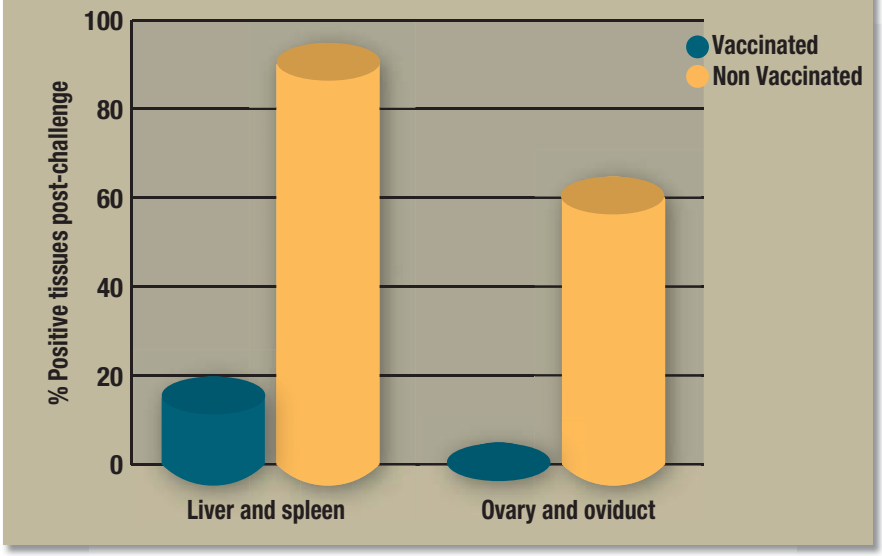
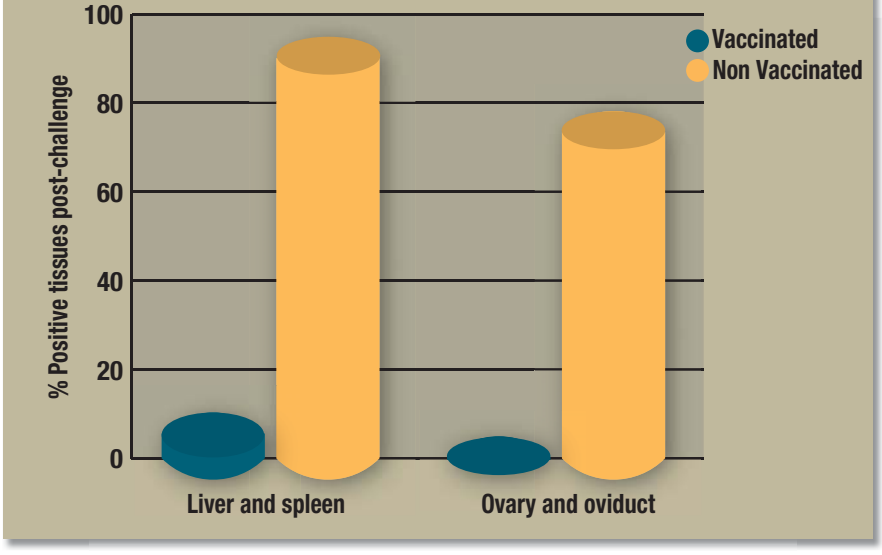


FIGURE 4: 2 LIVE ST (4 AND 9 WKS) AND 2 INACTIVATED SE (12 AND 16 WKS)



Figures 3 and 4: A significant level of protection against organ (spleen and liver pools and ovary and oviduct pools, respectively) was obtained following challenge with a high dose of SE in vaccinated hens irrespective of the vaccination program used.

vironment. Inactivated vaccines stimulate the development of antibodies, providing protection to hens during production and the internal contents of the egg.

Vaccination programs based only on live attenuated vaccines should include three doses. The first dose is usually administered at the hatchery or during the first two days of age after delivery to the rearing unit by coarse spray or drinking water. Vaccination at the hatchery allows for more uniform administration, efficient infection and colonization of the gastrointestinal tract by vaccine strains and development of early protection against field strains of *salmonella* by competitive exclusion. The second and third doses can be administered between 4-6 weeks and 14-16 weeks of age, respectively, by coarse spray or drinking water. The use of live vaccines with a high antigenic concentration is recommended for the second and third vaccinations at the rearing farm due to the presence of a stable microflora that may compete with the vaccine strains.

A live vaccination program can be reinforced by the administration of at least one inactivated vaccine to stimulate the development of antibodies to protect against colonization and excretion of SE in the environment and vertical transmission to eggs.

Combined programs can be designed to incorporate two (1 day and 4-6 weeks) or three (1 day, 4-6 weeks and 16 weeks) live vaccines with an additional inactivated vaccine at around 12 weeks. Under very high risk of SE contamination, including placements in units shown previously to be environmentally positive, the use of two live (1 day and 4-6 weeks) and two inactivated vaccines (10 and 14 weeks) should be considered.

In layer flocks undergoing molting, live vaccines may be administered according to the directions of a poultry health professional under an off-label protocol prior to feed withdrawal. This approach is recommended to prevent exacerbation of SE problems in flocks under severe stress attributable to molting when the potential for contamination may exist.

Vaccination programs vs. protection against challenge with S.E. and S. Heidelberg

Research studies conducted by Lohmann Animal Health International have been completed to evaluate the level of protection provided by different vaccination programs against SE and *Salmonella heidelberg* strains. Those studies evaluated the level of protection provided by different vaccination programs based on inactivated or live and inactivated vaccines against colonization of internal organs, ovaries and oviduct.

The studies (Figure 1) show the benefits of vaccination against SE. The highest reduction in SE-positive tissues was observed in birds vaccinated with both live and inactivated vaccines (Figure 2). A significant level of protection against organ (spleen and liver pools and ovary and oviduct pools respectively) was obtained following challenge with a high dose of SE in vaccinated hens irrespective of the vaccination program used (Figures 3 & 4). This finding confirms the development of a solid immune response against SE, achieved by the stimulation of both local (gastrointestinal tract) and cell-mediated immunity by live attenuated vaccines and humoral immunity (antibodies) attributed to highly immunogenic inactivated vaccines.

Adapted from a presentation made at the 2011 Midwest Poultry Federation Convention. EI

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New editors for *Egg Industry*, *Feed Management* and *Pig International*

WATT has announced editorial staffing changes for three of its agribusiness titles. These changes are part of a company-wide effort to strengthen our content in agribusiness and pet food markets.

Terrence O'Keefe

Terrence O'Keefe has been named the editor of *Egg Industry*. He brings over 20 years of experience in the poultry and publishing industries with him to his new assignment. Previously, O'Keefe served as editor of *WATT PoultryUSA* and *Poultry Digest* and has contributed articles to other WATT publications.

Before joining WATT as an editor, O'Keefe worked in the poultry industry in a wide range of jobs, everything from field service person to production scheduler to processing plant manager. He has worked for turkey and broiler companies in live production and processing, and worked with egg layers in graduate school. O'Keefe has master's degrees in poultry science and business administration.

Roger Abbott

O'Keefe is headquartered out of his Concord, N.C., office and can be reached at tokeefe@wattnet.net.

Roger Abbott has been named editor of *Pig International*. Abbott is an experienced journalist who has been reporting on the agricultural industry, particularly pigs, the environment and politics, for newspapers and magazines in southern Africa and Europe for the past 20 years. Abbott can be reached at rabbott@wattnet.net.

Ken Jennison

Ken Jennison has been named editor of *Feed Management*. Jennison is an experienced journalist who joined WATT in 2005 and has served as managing content editor for WATT since 2008. In that role, he has worked on all of WATT's agribusiness titles. Jennison can be reached at kjennison@wattnet.net.

Washington state House approves poultry battery cage phase-out

The Washington state House of Representatives has approved a piece of legislation that will phase out the use of battery cage housing in commercial egg-laying chicken operations, Senate Bill 5487.

The legislation will instead mandate use of an approved American Humane Association housing system, requiring more space and the use of what is known as the enriched colony model. Enriched colony housing allows hens to exhibit natural behaviors such as spreading their wings and turning around, as well as offering elements such as nests, perches and scratching areas."We salute the legislators in Washington state for their proactive work," said Tim Amlaw, vice president of American Humane Certified animal welfare program. "Extensive research shows that the welfare program they have approved for commercial egg-laying chicken operations will most certainly significantly improve animal welfare."

The House vote follows previous approval in the state Senate, where the legislation will now return for concurrence before moving to the desk of Governor Chris Gregoire for final approval.

Wageningen University study reveals method to verify organic eggs

Studies conducted at Wageningen University in the Netherlands, a leading agriculture school in Western Europe, have led to a method to distinguish between organic and generic eggs.

According to the information released, high-pressure liquid chromatography is used to examine the composition of xanthophyll pigments in the yolk of eggs. It is a universal practice in Holland and Germany to incorporate synthetic carotenoids in feed to produce a deeply pigmented yolk. These synthetic compounds are forbidden in organic diets. The presence of a synthetic carotenoid confirms that the egg is not organic, irrespective of claimed status.

Pigmenting agents containing xanthophylls are derived from marigold petals and are "natural," although a solvent extraction process is used and renders these additives unacceptable according to NOP rules. Accordingly, supplementary pigment for organic eggs in the U.S. is derived from alfalfa.

USPOULTRY, National Chicken Council join lawsuit challenging EPA Chesapeake Bay program

U.S. Poultry & Egg Association and the National Chicken Council have joined the American Farm Bureau Federation in a law-

suit challenging an Environmental Protection Agency program that will set limits on discharges to each of the individual watersheds within the Chesapeake Bay region on the East Coast of the U.S.

"The poultry industry is extremely concerned with the potential ramifications that could come from the Chesapeake Bay total maximum daily load recently implemented by the EPA," said John Starkey, president of USPOULTRY, and Mike Brown, president of the NCC. "The poultry industry has a large presence in the Chesapeake Bay watershed. It provides thousands of jobs and contributes well over $1 billion each year to the region's economy. The viability of the industry in the watershed is essential if we hope to continue providing a safe, sustainable, wholesome, economical source of protein to the United States and the world."

According to Starkey and Brown, the poultry industry has already made significant efforts to clean up the bay, but the EPA is looking for further reductions from agriculture. "The EPA has announced this program will be a model that will be implemented on a nationwide level," said Brown. "If so, the assumptions and data that went into developing this model deserves the highest level of scrutiny."

WATT Online Animal Forum live April 6, available archived through July 6

The WATT Online Animal Forum: Feeding the Globe, an event focused on helping animal agriculture executives meet the challenges of feeding the world's growing population, was live on April 6 and will be available in archived format through July 6.

The forum ran live on April 6 with a mix of live webinars, networking opportunities and information on products and services from major industry suppliers. Over 1,200 people from 100 countries registered to attend.

Registrants who want to access the archived version of the event after April 6 may do so using their registration login credentials. If you are not registered, but would like to access the archived version of the event, you will need to register to receive login information at www.wattevents.com.

American Egg Board funded $2 million in nutrition research in 2010

During 2010, the American Egg Board's Egg Nutrition Center funded a record $2 million for nutrition research and awarded grants to faculty at several universities, according to the board's annual report.

Roughly 13% of the AEB's expenditures came from nutrition campaigns, while 12% went to agriculture education and 12% went to state support and industry programs (6% each). Recipients of the grants included the University of Connecticut, the Yale-Griffin Prevention Research Center, San Diego State University, Austin University School of Medicine and the Baylor College of Medicine. Advertising took up the largest percentage of expenditures (38%), market communications claimed 7% and food service and egg product marketing each accounted for 4% of expenditures.

The board also focused on egg safety, working with the United Egg Producers to

develop an Egg Safety Crisis Plan. The AEB reallocated $1 million from existing programs for a campaign to regain consumer confidence following the egg recall in August 2010. The AEB then created the Social Media Crisis Response Plan, and it was also intended to establish a parallel Crisis Protection Plan. Efforts included advertisements in USA Today, Wall Street Journal and the New York Times, as well as statements on egg safety through various media outlets. The AEB said that these efforts "played a key role in minimizing erosion of consumer demand."

Total revenue for the AEB amounted to $21.23 million, while total expenditures reached $24.65 million — representing a deficit of $3.4 million for the year. As of the end of 2010, the AEB had total assets of $12.47 million with an accumulated excess of revenue over operating expenses of $10.3 million. The deficit between revenue and expenditure was funded from accumulated funds.

2012 International Poultry, Feed Expo dates changing

IPE 2011, courtesy U.S. Poultry & Egg Association

The 2012 International Poultry Expo and International Feed Expo are moving to a Tuesday, Wednesday and Thursday format with the following show hours:

Tuesday, Jan. 24, 2012: 12 – 5 p.m.
Wednesday, Jan. 25, 2012: 9 a.m. – 5 p.m.
Thursday, Jan. 26, 2012: 9 a.m. – 3 p.m.

The entire week in which the Expos will be held, Jan. 23 through 27, has been officially designated as "IPE/IFE Week," with an emphasis on educational programs rounding out the events. With the Expos starting at noon on Tuesday, the shift will help allow an increase in the number of education programs available at the front and back ends of the Expos. According to U.S. Poultry and Egg Association President John Starkey and American Feed Industry Association President and CEO Joel G. Newman, events like the International Poultry Scientific Forum, Pet Food Conference, Animal Agriculture Sustainability Summit and USPOULTRY and AFIA Education Programs are an important part of the Expos, providing people with an additional purpose for attending. "We are working on a tentative schedule of conferences for 2012 to include several new programs designed to provide our attendees and exhibitors with the most up-to-date, relevant information concerning the poultry and feed industry," said Starkey.

For more information, visit the IPE website at www.ipeweek12.org or the IFE website at www.ife12.org. EI

Fancom B.V. 746 egg counting system

Fancom B.V. offers the Fancom 746 egg counting system. The system counts egg production and regulates the speed of egg belts to prevent any gaps in the flow of eggs, Fancom says. The counters use infrared technology to count the eggs without touching them. The 746 egg counting computer registers production per day, per group and per counter, in numbers and laying percentages. The computer displays data from that day and the previous seven days, storing this data for 70 weeks.

www.fancom.com

Dawe's Laboratories Firm-O-Shell

Dawe's Laboratories offers Firm-O-Shell. This free-flowing, concentrated supplement is a blend of vitamins, trace materials and fermentation products designed to strengthen eggshells, according to Dawes. The product can be added to the feed of pullets, mature hens, breeders or problem hens.

www.dawesnutrition.com

Radio Frequency Co. Inc. Macrowave heating and drying systems

The Radio Frequency Co. Inc. offers Macrowave heating and drying systems. These pasteurizers apply a high frequency electric field to food products. Radio frequency heating allows direct frequent treatment to pasteurize food products and ingredients without the cost and disadvantages associated with isotopic radiation or inefficiencies attributed to indirect heating. Currently, radio frequency pasteurization systems are available for grains and finished products.

www.radiofrequency.com

Griswold Water Systems Edge

Griswold Water Systems offers the Edge wastewater management system. The product applies pulses of energy to wastewater as it flows through a reaction chamber. Flocculation and coagulation start electronically prior to chemical injection, which allows for chemical reduction and improved overall results, according to the company. The Edge comes in sizes 3" through 24" and has a very low power consumption.

www.griswoldwatersystems.com

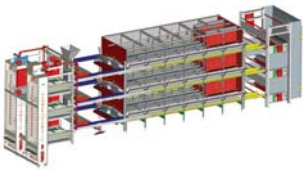
Sanovo Technology Group STAALKAT OptiGrader 600

Sanovo Technology Group offers the STAALKAT OptiGrader 600 for use in egg washing. The grader washdown system can handle 600 cases per hour. It includes gentle egg handling and advanced software that can increase the number of Grade A eggs, according to the company.

www.sanovogroup.com

Farmer Automatic of America Inc. colony cages

Farmer Automatic of America Inc. supplies EU-compliant colony cage units with either three or four tiers. Floors are epoxy coated and the longitudinal square-form perches are constructed of plastic for foot comfort. Solid partitions can be removed to increase colony size and to provide flexibility. The conventional Farmer Automatic of America Inc. feeding chain, stainless steel nipples and the patented Eggsaver features are included.



www.farmerautomatic.com

MARKETPLACE

Ad sizes start at one column by one inch and can be any size up to six column inches. Logos and photographs are acceptable. Add color for an additional $30 per color per insertion. The rate for EGG INDUSTRY is $130 per inch per insertion (1-time rate), $120 per inch per insertion (6-time rate), and $110 per inch per insertion (12-time rate). The production charge is included except for ads with excessive make-up demands.

For more information:
Ginny Stadel
Tel: 815-966-5591
Fax: 815-968-0941
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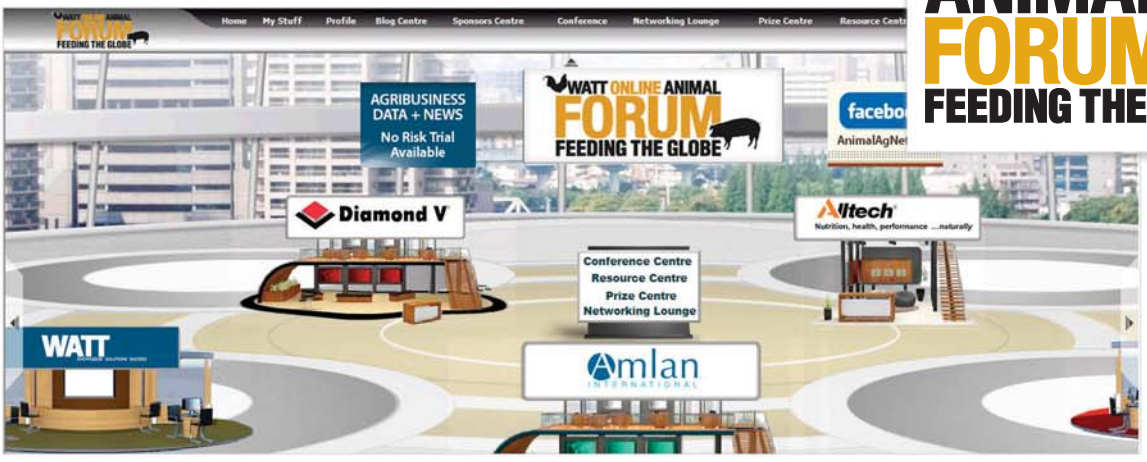

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ON-DEMAND PRESENTATIONS

Innovations from R&D in animal agriculture by Dr. Leo den Hartog, Director R&D and Quality Affairs, Nutreco, Netherlands

What animal breeding can contribute by Dr. Pieter Knap, Manager of Genetic Strategy, Genus/PIC International, Germany

Directions to better feed utilization by Stefaan Van Dyck, Director of Research and Development, Kemin AgriFoods, Worldwide

World feed ingredients outlook - impacts of China, Energy (Ethanol) and Speculation by Tim Brusnahan, Brock Associates, USA

The role of eggs in meeting world food needs by Dr. Simon Shane, Editor, Egg Industry, USA

Available until July 6, 2011 at www.WATTevents.com

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