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UK broiler producer continues to raise output and quality

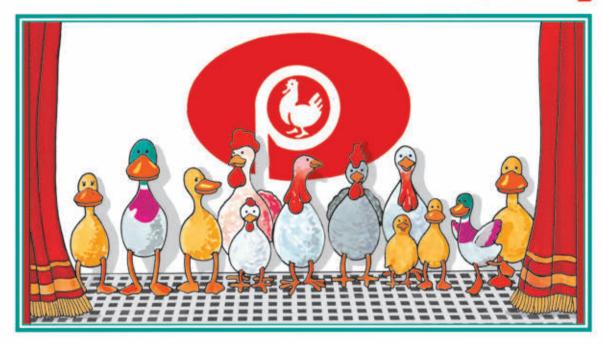
Plus:

Consumer education through the branding and marketing of eggs

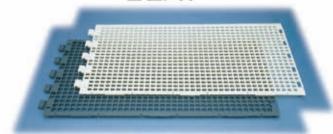
IPE/IFE shifts dates to offer more educational programs

Real-time tracking key to vailable on iPad and iPhone efficient broiler processing

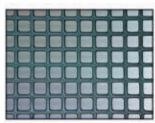
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Detailed view of the grid design

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UK broiler producer continues to raise output and quality

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WATTAgNet Exclusives



Upcoming webinar about poultry outlook for 2012

In the webinar "Poultry Outlook 2012: Grains, poultry and red meats supply and demand," four industry economists will forecast the 2012 economic

outlook for the U.S. poultry industry through analysis of supply and demand for feed grains, competing red meats, and the chicken and turkey sectors.

Join Tim Brusnahan, Brock Associates; Dr. Chris Hurt, Purdue University; Dr. Tom Elam, FarmEcon; and Dr. Paul Aho, Poultry Perspective, as they discuss the poultry outlook for 2012, followed by a panel discussion and questions from the audience.

To sign up for this webinar, set to take place January 17, 2012, go to www.WATTAqNet.com/Upcoming_Webinars.aspx



Assessment of chicken industry economics

The National Chicken Council poultry industry panelists discuss how they would characterize the year

2011 and the condition of the chicken industry. www.WATTAgNet.com/26811.html



LED lighting for broilers gives energy savings, flock performance

Light-emitting diode bulbs provide energy savings and competitive broiler growout performance in research trials, says Dr.
Susan Watkins, University of Arkansas.

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Europe's egg industry may know what to expect with cage ban



We are now only weeks away from implementation of the EU's cage ban, and the first few weeks of 2012 promise to be an interesting time. Just what will happen to all those eggs that come from hens reared in conditions that do not comply with the new rules?

Lack of compliance has certainly been a worry for those producers that have invested and made the change. Their fears, understandably, are that they will be undercut by farmers producing eggs more cheaply and could go out of business.

The degree of compliance varies. Requests for official delays were turned down, but there almost certainly will be delays in total compliance.

Time running out

Some agriculture ministers have been pressuring the EU to enforce the rules, but there seems to be no

Follow Mark Clements

as he gives the inside track on the global poultry industry in his weekly blog at www.WATTAgNet.com/ MarkClements.html

immediate solution to the problem, and while Brussels is saying that it will launch proceedings against Member States that fail to comply, this can be a long and drawn-out process.

While often accused of being far from the farmer's friend, a number of supermarkets have stated that they will only accept eggs from farms that meet the new rules. While this is commendable, it does nothing to address the wider issue of goods entering that market that are illegal.

Mockery and support

Some welfare groups have accused the EU's current stance as making a mockery of the original rules. So we find ourselves in a situation where some national governments, law-abiding farmers and welfare groups all appear to have fallen into the same camp.

To look at the situation from the other side, those farmers that have failed to comply may not have had the resources or their governments' support to help them.

Yet, the fact remains that the EU Directive was adopted in 1999, so producers have had time to implement it. The same year the Euro became an accounting unit. Since then, we have seen some nations ingnore the rules resulting in confusion. It is too early to say what will happen come January 2012, the Euro might give us some idea. □

EDITOR'S FOCUS - a regular look at industry key players

The Humane Slaughter Association

The UK-based Humane Slaughter Association is an independent international charity concerned exclusively with promoting the humane treatment of all food animals worldwide during transport, at markets and at slaughter.

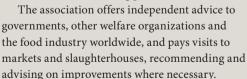
It works through research, education, training and technical advances, alongside agriculture, the meat industry, veterinary, and other welfare and professional organizations.

Among its achievements is the 1920s introduction of the now almost universally mandatory use of stunning equipment at slaughter.

The HSA provides up-to-date technical information and advice on all aspects of animal handling, transport and slaughter, and training in humane methods of handling and slaughter of livestock for farmers, vets, abattoir staff and students. Its courses include on-farm slaughter of poultry, and it produces a series of technical educational materials.

It also works on the development and application of appropriate scientific

advances into the working practice of the meat industry.

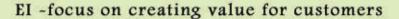


It offers funding for essential research projects through grants and awards.

In 2011, the HSA marked its centenary with a major international symposium focusing on recent advances in the welfare of livestock at slaughter.

For more information, visit: www.hsa.org.uk.





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The interface diagram of the new tunnel incubator



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Around the World

Freedom Food launches online push for layer, broiler welfare

Freedom Food, the UK's Royal Society for the Prevention of Cruelty to Animals' farm assurance and food labeling scheme, has launched an online animation called Hettie the Hen.

The cartoon, which can be viewed on the Freedom Food website, is designed to persuade consumers to select eggs from hens that have not been reared in cages. The RSPCA says that the number of consumers in the UK claiming to have bought a higher welfare product over

the last four years has doubled. Almost half have said that animal welfare is very important to them when choosing what food to buy.

Freedom Food has also launched a new online advertising campaign to clarify what its label means and tackle consumer concerns about the way that animals are farmed. The advertisement focuses on chicken and is running across news, lifestyle, food and women's websites.

Brasil Foods numbers up in third quarter 2011

Brasil Foods' net income amounted to R\$365 million (US\$213.8 million) in the third guarter of 2011, an increase of 73% over 2010 numbers, according to the company's latest report.

The company's good earnings were driven by operating performance, particularly the meats business, combined with the



capture of synergies, said Brasil Foods. This was achieved despite the challenging foreign exchange scenario and the high cost of the main raw materials, both of which contributed to a squeeze on the quarter's margins.

Domestic market sales revenue reported growth in relation to meats (18.5%) as well as dairy products (8.2%), surpassing the R\$3.8 billion (US\$2.2 billion) mark, an increase of 14%. The highlight in the period was in processed meat products (industrialized and frozen), which contributed with an increase in sales of about 24%.

Revenues from exports came to R\$2.5 billion (US\$1.5 billion), 6% higher than in the third quarter of 2010. The performance registered on the Far Eastern, European,

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Middle Fastern and American markets offset the losses arising from the ban on the Russian market. The exchange rate affected the competitiveness of the company's products sold on the international market for most of the quarter.

Brasil Foods' investments totaled R\$252.6 million (US\$147.9 million). Of the total, more than 61.4% was dedicated to projects for productivity, improvements and automation, while 32.6% went to new projects.

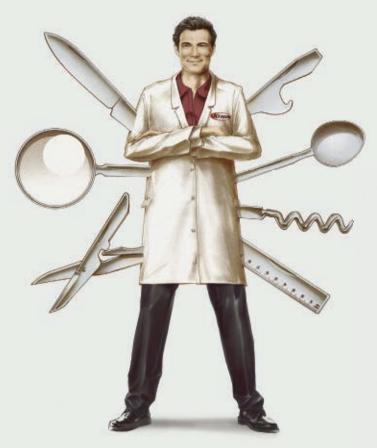
Industrias Bachoco buys poultry company OK **Industries**

Mexico-based poultry producer and processor Industrias Bachoco S.A.B. de C.V. reached an agreement to acquire U.S.based poultry company O.K. Industries Inc.

The acquisition is Bachoco's first entry into the U.S. poultry market, according to Rodolfo Ramos, the company's CEO. "Bachoco will benefit from the knowledge and expertise of O.K.'s experienced management team, a key reason behind their industry leadership," said Ramos. "This will also enable Bachoco to enhance its product offering and regional footprint, while achieving a better understanding of the U.S. chicken market."

The transaction will take effect immediately and will be complete as soon as all the authorities' requirements are satisfied.





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Around the World

Poultry, egg associations urged to stand up to supermarkets

Farming organizations across Europe and North America should campaign for tough and effective measures to deter and punish the abuse of supermarket power, said Peter Kendall, president of the UK's National Farmers Union, speaking at the North American and EU Agricultural Conference, held in Warsaw, Poland, in late October 2011.

Kendall said that farmers in Britain have been engaged in a struggle to secure a legally binding code of practice, policed by an adjudicator with statutory powers, to deter and punish retailers who illegally exploit their dominant position. "Farmers are the poor relations of the food chain, not just in Britain, but across the developed world," said Kendall. "But this has got to change. If farmers and growers are to have the incentive and the resources to invest in achieving the step change in farm productivity that the world needs, we must ensure that supply chains deliver a fair share of what consumers pay for food to primary producers."

According to Kendall, even with the progress that has been made, and the prospect of legislation in the reasonably near future, there is still a lot of work to do to ensure that any code of practice put into place is truly effective. "This means allowing third parties, like farming organizations, to make complaints on their

members' behalf, so as to preserve anonymity and prevent victimization, and it means giving the watchdog the power to impose big fines, if naming and shaming proves an insufficient deterrent," said Kendall.

World Health Organization updates avian influenza virus nomenclature

An international group of scientists was convened by the World Health Organization, the World Organisation for Animal Health and the Food and Agriculture Organization to develop a standard nomenclature system based on the H5 viral gene found in avian influenza viruses.

Phylogenetic analysis was performed using a variety of approaches on all of the publicly available H5 sequences that have evolved from the original H5N1 virus. The initial results showed that the currently circulating H5N1 viruses could be effectively grouped into numerous virus clades (taxonomy groups) based on the phylogenetic characterization and sequence homology of the gene. Based on criteria used to distinguish various groups of the gene, the system formally identified 20 distinct clades of the virus since its inception in early 2008.

As the viruses within the clades continue to evolve, new sublineages will periodically emerge, according to the scientists. Once the sublineages meet the same specific clade definition criteria as the initial clades, they will be designated as separate clades.

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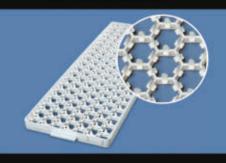
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SNIPPETS

according to reports.

- * Philippines to build public slaughterhouses in 2012: The Philippines' National Meat Inspection Service has plans to build four to five public slaughterhouses and poultry dressing plants to help boost the country's competitiveness in the global poultry meat industry in 2012,
- * Hong Kong holds avian influenza exercise: A field simulation exercise on highly pathogenic avian influenza was recently conducted in Hong Kong in order to ensure the Agriculture, Fisheries and Conservation Department

- preparedness and readiness in case a culling operation should be necessary.
- * Cameroon commissions poultry slaughtering, packaging plant: Cameroon's Ministry of the Economy, Planning and Regional Development has commissioned a poultry slaughtering and packaging plant in Bafang, West Region, with the capacity to process more than 3,000 chickens per day.
- * Malaysia business sells poultry unit: TDM Berhad sold its poultry business, under TD Poultry, to Vision Poultry for RM4 million (US\$1.3 million).

Around the World

Avian influenza claims more children in Indonesia

Two more children in Indonesia have died from avian influenza H5N1.

The first case occurred in a five-year-old girl from the Bangli district in the province of Bali. She developed symptoms on September 27, was admitted to a hospital on October 5 and died on October 9. On September 30, her ten-year-old brother developed symptoms and died one day after his sister. Their mother is also thought to have died from the virus, although this is yet to be confirmed.

Investigations revealed that there had been a die-off of household poultry where the family lived prior to them exhibiting symptoms.

Of the 181 cases of human infection confirmed to date in Indonesia, 149 have been fatal, according to the World Health Organization.

US trade agreements to generate \$1.4 billion for poultry industry

The three U.S. free trade agreements with South Korea, Colombia and Panama, signed into law on October 21, will generate an estimated \$1.4 billion in additional U.S. poultry and egg export sales annually, according to poultry and egg producers, processors and exporters supporting the legislation.

The U.S.-Korea Free Trade Agreement will greatly improve market access for U.S. poultry and egg exports to South Korea, mostly by duty reduction and elimination, according to the industry. In 2010, U.S. poultry product exports to Korea totaled \$101 million. With KORUS FTA approval, U.S. poultry meat exports to Korea could rise to more than \$150 million or 125,000 tons annually, with annual egg exports tripling to \$12 million. Over the first 10 years of the agreement, this is expected to generate \$720 million in exports.

The U.S.-Colombia FTA will cut duties, eliminate variable duties and would give the U.S. a 27,040-metric-ton tariff rate quota at

zero duty with 4% annual growth for chicken leg quarters. U.S. exports to Colombia are expected to rise from \$22 million of poultry and products to \$42 million by 2015. As duties come down over the FTA's implementation period, annual exports are expected to exceed 180,000 metric tons by 2020, which is worth \$135 million. Over 10 years, the U.S.-Colombia FTA is expected to generate \$660 million in new U.S. exports.

The U.S.-Panama FTA will eliminate duties on some poultry products within five years and establishes a preferential duty-free tariff rate quota for chicken leg quarters that starts at 660 tons and grows each year by a 10% compound rate. Trade to this market is expected to grow steadily from \$19 million in 2010 to \$32.6 million by 2020 — for a total of \$70 million in new trade over the next decade.

Argentina aims to raise broiler exports by 2017

Argentina exports 18% of its total broiler meat production and aims to increase this share to 25% by 2017, according to reports.

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IPE 2012 to include international rendering symposium

The 2012 International Poultry Expo is introducing a new education program titled, International Rendering Symposium: Focus on Quality, as a featured component of its educational programs. The program is co-sponsored by the National Renderers Association and U.S. Poultry & Egg Association.

"Rendered byproducts are an essential aspect to the poultry industry," said Dr. David Meeker, vice president of scientific services for the National Renderers Association. "Encompassing safety and quality control practices serve as the foundation to the production of a quality product. This program will include several globally recognized speakers who will focus on control methods, microbiological controls, research and useful details on using rendered products in high quality diets for various species."

Programs topics will include global rendering markets, rendering code of practice for safety and quality – certification standards, controlling *Salmonella* in feed, research in the rendering industry, the role of rendered products in aquaculture feeds, rendered products for pet food and other issue-specific subjects.

The Expo will be held from January 24 through 26, at the Georgia World Congress Center in Atlanta, Georgia, USA.

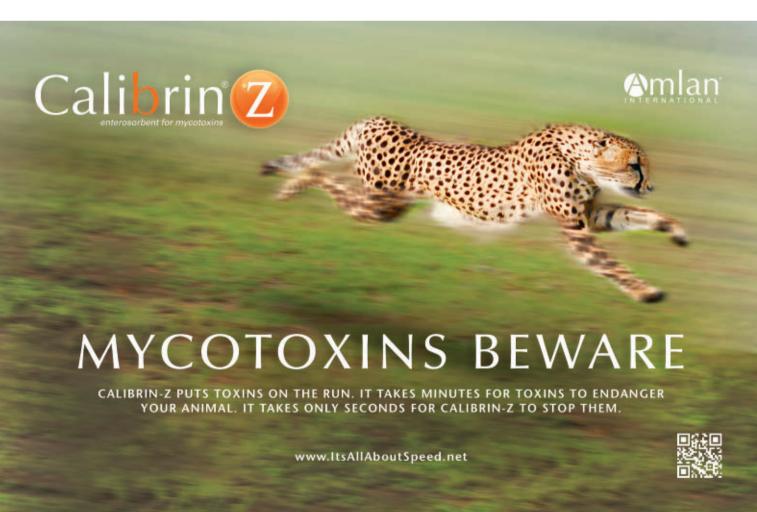
Of the 60 countries Argentina currently exports to, Venezuela is its top destination, receiving 60,000 metric tons of meat, while Chile comes in second at 30,000 metric tons of meat annually. Argentina also expects its domestic consumption of chicken meat to grow from the current 39 kilograms per head per year to 45 kilograms

by 2017. In 2003, that number was just 21 kilograms. "Argentina only recently entered the world poultry market, but its low cost structure and favorable sanitary status make it a key player to meet growing global demand, providing it continues to invest in expansion," said a spokesperson for Dutch-based agro-investment bank

Rabobank. "Although Argentina's poultry industry is relatively concentrated, opportunities remain for consolidation by large domestic companies or foreign players entering the market."

Argentina currently has roughly 40 poultry companies throughout the country, producing a total of 1.7 million tons of meat.





Around the World

Maple Leaf Foods restructures, expands prepared meats business

Maple Leaf Foods is investing \$560 million in infrastructure and technologies over the next three years to restructure and expand its prepared meats network, reduce operating costs and increase productivity.

The changes, combined with other strategic value creation initiatives, are expected to significantly increase the company's competitiveness and profitability in the near and longer term. Included in this investment is the construction of a \$395-million, 402,000-square-foot prepared meats facility. Maple Leaf will also invest in existing plants in Winnipeg, Saskatoon and Brampton. The company's plants in North Battleford, Kitchener, Hamilton, Toronto, Moncton and a small facility in Winnipeg will close by the end of 2014 as production is consolidated into new or expanded facilities. Maple Leaf will also simplify its distribution

Vietnam bank finances avian influenza control project

The State Bank of Vietnam and the World Bank have signed on to help finance the Vietnam Avian and Human Influenza Control Preparedness Project, which will help the country improve its responses to highly pathogenic avian influenza, human influenza and other newly emerging zoonotic diseases.

US\$25 million will be provided to the Ministry of Health and the Ministry of Agriculture and Rural Development to increase the effectiveness of public services in reducing the health risk to

poultry and humans from avian influenza in 11 high-priority provinces. The focus will be on controlling the disease at the poultry level, early detection and response to infection, and preparing for the medical consequences of a pandemic.

Two other avian influenza projects have been funded (at a total cost of US\$40 million) and implemented since 2004: the Avian Influenza Emergency Recovery Project and the Vietnam Avian and Human Influenza Control and Preparedness Project.

network by consolidating four distribution centers into two; a new, purpose-built facility in Ontario servicing eastern Canada; and an existing facility in Saskatoon serving as the western Canadian hub. Distribution centers in Moncton, Burlington, Kitchener and Coguitlam

will be closed by 2014.

The company's value creation plan is expected to result in EBITDA (earnings before interest, tax, depreciation and amortization) margins of 9.5% in 2012 and 12.5% in 2015. Maple Leaf expects to incur restructuring

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costs of approximately \$170 million before taxes related to these strategic initiatives, of which approximately \$120 million represents cash costs. "The final phase of this plan will establish Maple Leaf Foods as a more streamlined and profitable company, well positioned to deliver significant and sustainable value to its shareholders," said Michael H. McCain, president and CEO.

The investment will create approximately 1,150 new jobs. Facilities closures will result in a net reduction of approximately 1,550 positions, with the majority of the workforce reductions occurring in 2014.

MHP poultry sales up in third quarter 2011

The volume of MHP S.A.'s chicken meat sales increased by 23% to 99,900 metric tons in the third quarter of 2011 and by 13% to 282,000 metric tons during the first nine months of 2011, when compared to 2010 numbers, according to the company's recently released financial report.

These results are mainly a result of a production increase due to more effective

Chicken meat demand strongest at grocery level

Akshay Jagdale, an analyst at KeyBanc Capital Markets, said that the demand for chicken meat is at its weakest levels in the restaurant and food industries, and at its strongest levels in grocery stores, the *Washington Post* reported.

Mike Cockrell, chief financial officer at Sanderson Farms Inc., said that consumers are not eating out as much with high gas prices and poor economic conditions, which has meant less demand for the company's chicken at restaurants it supplies. According to Pilgrim's spokeswoman Margaret McDonald, demand for the company's chicken is not as weak at grocery stores as it is in restaurants, but it remains difficult for the company to build further at grocers due to high consumer chicken prices.

Jagdale anticipates that breast meat supply will need to be cut significantly in order for prices to rise in the restaurant and foodservice sector. However, he predicts retail chicken prices will likely remain high at grocery stores because demand is stronger here.

use of its existing capacity as well as due to a decrease in stocks, said the company. Domestic demand for chicken meat during the first nine months of 2011 remained high and MHP was able to sell close to 100% of the chicken produced. Export sales for the first nine months of 2011 increased by almost two times compared to the same period in 2010.

The average chicken meat price through the third quarter of 2011 increased by 15%, to UAH 16.11 (US\$2.01) per kilogram of adjusted weight (excluding VAT), when compared to the third quarter of 2010. Through the nine months of 2011, average chicken prices increased by 7%, to UAH 14.39 per kilogram (US\$1.80), as prices were almost flat in the first half of 2011.



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One of the UK's largest single-site broiler growers has target firmly set on satisfying demand for high-quality birds.

It is far too easy to rein in investment when times are hard, but more often than not, those businesses that keep looking to the future and keep investing are those that achieve long-term success. One of the UK's largest broiler producers falls firmly into this latter camp.

Alan Simpson took over Lower Heath Farm, in Whitchurch, Shropshire, back in 1967. The business was started producing point-of-lay pullets in two sheds with two employees. It now produces some 470,000 broilers on a seven-crop cycle.

The switch to broiler production

occurred in 1979, explains Alan Simpson's 33-year-old son Charles, who now runs the farm. A downturn in the egg market led to the family switching to broiler production with 50,000 birds per crop, and the business has grown from strength to strength since then with capacity expansions every few years.

Lower Heath Farm supplies birds to Moy Park's Ashbourne processing site, which was itself expanded by 25% last year. Moy Park supplies the farm with feed. The relationship works well, but in most other aspects, the site is largely self-sufficient. Charles explains: "There are three staff on site now and we do as much as we can ourselves. We do all our repairs and cleaning out, although power washers are brought in to wash down the houses."

Investment

The farm has recently invested GBP1.5 million (US\$2.4 million) in new facilities and houses, but ground work, including under-floor heating and piping, was carried out in house. The farm team has also recently designed and installed a preconditioning air heater, which is thought to be unique in the UK.

Last year's investment saw the construction of houses 10 to 13, incorporating the under-floor heating and the precondition air chamber. A new shavings store and farm office

com/24399.html

sends a text message should any alarms be activated, allowing speedy

To understand more

in UK facing conflicting forces

intervention if needed.

www.WATTAgNet.

about the UK market, read: Poultry farmers

While the Simpsons had planned to put in a large solar plant, this has been put on hold due to changes in government support. However, more investments are planned; including the demolition of a couple of old wooden sheds and their replacement with single span buildings, as well

as the erection of an additional 400-square-foot building. This will take the farm's capacity to some 540,000 birds.

The Simpsons have
always maintained good
relations with neighbours, and no
issues arose over the development.
Neither was planning consent would
be difficult to achieve. However, Charles
describes achieving the Integrated
Pollution Prevention and Control report
as a "nightmare," and the development
became touch-and-go for a while.

Birds and welfare

The farm rears Ross 308 birds. Charles says, "Although we've noticed that at about three and a half weeks they can be a bit finicky, they have always performed well."

Some 30% of birds leave the farm at 34 to 35 days, with the remainder moved to Ashbourne at 38 to 39 days. The split is due simply to Moy Park's requirements. Bird welfare is key to the production process. The new sheds have windows, and plans are being considered to upgrade the remaining houses. Some birds are reared for a particular supermarket chain and these have access to perches, bails and CDs.

Charles firmly believes that higher welfare is the way that the UK industry must go, not only to respond to growing consumer demand, but also as a way of differentiating from overseas competition.

"Overseas producers may have lower costs, but they do not rear to the standards that producers in the UK rear their birds," he says. He also believes that supermarket chains could do more to support UK producers who are adhering to higher standards.

Dedication

It is not only bird welfare that is central to the family's ethos; minimizing environmental impact and working with the community are also key.

Higher welfare is the way that the UK industry must go

The farm is helping in the provision of broadband Internet to a local school and over the last five years, the Simpsons have planted some 100 trees and mixed hedging in order to shelter the public from viewing the full extent of the farm and to attract wildlife. There is also



were also built. This brought the site's capacity to 470,000 birds.

The new sheds allow air to be preheated before entry, giving chickens summer conditions all year round. With warm, dry air entering the shed, litter conditions are improved, which in turn gives the customer cleaner, higher quality birds. Coupled with under-floor heating, this results in the highest possible environmental standards.

But the investment did not stop there. The Simpsons also worked with Hydor on the four new sheds, installing 13 Rotem Platinum controllers and the Rotem communicator, along with all ventilation, lighting and motors. By using the communicator, Charles can dial in at any time to check the conditions of the sheds from anywhere. Additionally, the system

December 2011 | www.WATTAgNet.com

Output and quality

The farm has recently invested GBP1.5 million (US\$2.4 million) in new facilities and houses.

a relationship with local farmers whereby litter is collected and used as fertilizer. The site also has oversized tanks sunk into the ground to enable all wash water to be collected and not pollute local water sources.

Following construction of the two most recent houses, landscaping and tidying up are the next projects on the family's agenda.

But the question remains: Why invest when so many companies are experiencing difficulties and competition is so stiff?

Charles says: "Moy Park always wants more chicken, and the market is ticking along quite nicely. Chicken is cheap and households will always



buy it. We've not really been hit by the downturn, and for those that want to expand, money is cheap to borrow. We can put up our sheds and get a return very guickly."

Despite the family's strong

business sense, it does not all come down to money.

"Chickens is what we know and enjoy, and so it makes sense to grow what we know. Why venture into something else?" □

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Improving poultry's intestinal morphology, performance with feed additives

Encouraging the optimal performance of birds' gastrointestinal tract can pay dividends in health and growth.

The proper functioning of a newborn chick's gastrointestinal tract is essential for growth and performance, so achieving optimal intestinal development and the functional capacity of young birds should never be overlooked.

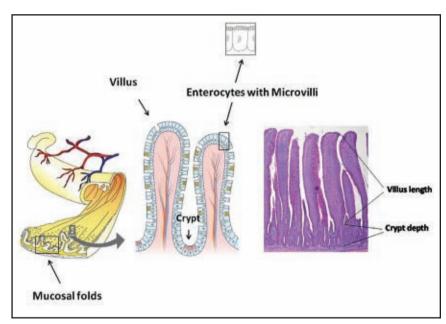
The intestine of hatchlings increases in weight as much as five times more rapidly than most of its other organs or body mass. This fast development of the intestinal mucosa with villi, crypts and enterocytes is essential for absorption of nutrients and subsequent performance.

The gastrointestinal tract can adapt and react morphologically to external factors, such as changes in diet. An increase in the mucosal surface area, for example, could result in an improved capacity to absorb available nutrients.

To understand how to best influence the development, maintenance and functioning of the gastrointestinal tract, it is import to understand how it is structured.

Rapid change

The development of the gastrointestinal tract begins soon after epithelial cells form a tube in the



Additives such as prebiotics and probiotics can increase the surface areas of the gastrointestinal tract, so increasing the absorptive area and improving growth efficiency.

embryo. The intestine - including the external muscular layers and the villi – grow quickly and the structure of the small intestine changes rapidly. Immediately after hatching, further rapid changes with significant morphological development of the small intestine occur. The gastrointestinal tract must be ready to absorb nutrients to sustain the bird as well as to provide a barrier to external challenges.

Structure of the small intestine

The inner surface of the small intestine is not flat, but is thrown into circular mucosal folds that increase its surface area and aid in mixing the ingesta.

The mucosa form intestinal villi - tiny, finger-like projections that increase the surface and absorptive area of the intestinal wall, providing efficient absorption of nutrients from the lumen. Crypts are moatlike invaginations of the epithelium around the villi. Toward the base of the crypts are stem cells, which continually divide and provide the source of all the epithelial cells in the crypts and on the villi.

Additives influence villi development

While performance parameters may be the most common way of evaluating feeding trials, they can be evaluated through histological examination of the gastrointestinal tract, as it is well known that many substances can affect the development of intestinal villi.

The gastrointestinal tract can

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Feed additives

adapt and react morphologically to factors such as dietary changes, for example to the addition of probiotics and prebiotics in the diet, and investigations to determine changes can reveal useful information on intestinal function.

Enterocyte enzymatic activity and structure are two of the most important features of the intestinal mucosal physiology, and it has been reported that the intestine can change its surface by growing in length, and/or by increasing the height of its villi.

By growing in length, and/or by increasing or decreasing the height of the villi and microvilli, it is possible to change the effective surface area. Fusion and shortening of the

villus, on the other hand, can lead to a loss of surface area for the digestion and absorption of nutrients and consequently, lower performance.

Increasing the villus height would suggest an increased surface area capable of greater absorption of available nutrients, and enterocytes

have more time to fully differentiate and to fulfill their digestive and absorptive functions.

The villus crypt is considered as the villus factory, and deeper crypts indicate fast tissue turnover to renew the villus in response to normal sloughing or inflammation resulting from pathogens or their toxins.

Because the energy required to maintain the gut accounts for some 25% of the total basal metabolic needs of an animal, any reduction of need for renewal of gut tissue can have a significant impact on the amount of energy available for growth and caloric conversion efficiency.

To learn more about feeding probiotics, read: Poultry production: How probiotics can play a role at

<u>www.WATTAgNet.</u> com/23492.html

Positive influences

Several scientific studies have shown that the addition of probiotic products to broiler diets can have a positive effect on gut morphology and consequently, on performance parameters.

These histomorphological changes are represented by

......

Several scientific

studies have

shown that

probiotics can

have a positive

effect

elongated villi and a higher villi/ crypt ratio, which indicates a lower rate of enterocyte-cell migration from the crypt to the villus. When less energy is needed for renewal of the gut epithelium, more energy is available for growth.

Feeding probiotic growth additives has been shown

to increase the villus surface area, which consequently may lead to higher nutrient absorption. It can be speculated that increased integrity of the gastrointestinal tract associated with a greater surface area of the villi results in improved production results. Probiotic feed additives could reduce both damage to enterocytes and the need for cell renewal in the gut, contributing to an increase in overall productivity.

Michaela Mohnl DI (MSc), product manager for probiotics at BIOMIN Holding GmbH, Michaela.mohnl@ biomin.net

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Consumer education through the branding and marketing of eggs



Eggs can be more than a simple staple, but consumers need to be engaged and products need to be differentiated to make the most of the opportunities that exist with growing consumer interest in the relation between health and diet.

The functional food business is taking off. Consumers see more and more fortified foods when they roll their carts through the grocery aisles, but do they understand what they are buying or how one brand is different from the next?

It is more important than ever to educate consumers about the benefits of functional foods. The egg industry can take a few cues from the US dairy industry, which has been producing and selling functional foods since the 1930s, when fluid milk processors started adding vitamin D to milk to help eliminate rickets.

Working together

There are many reasons why fortified milk is a staple in human diets throughout the world. One reason is consumer awareness. Consumers understand that drinking milk may help build strong bones and may help prevent rickets in children. One way dairy processors in the US have achieved mass awareness is through cooperation.

In the early 1990s, fluid milk processors in California agreed to allocate three cents from each gallon of milk sold to fund joint efforts to promote milk consumption.

Specialty brands are able to stand out on shelf and give consumers additional information.

From this effort, the California Milk Processor Board was born, and it eventually created the "got milk?" campaign, which now features celebrity-endorsed advertisements, merchandise and apparel.

By combining efforts, the CMPB uses marketing, advertising, social media and public relations programs to build overarching national education campaigns to raise awareness of the benefits of consuming milk. Consumers of all ages can experience the "got milk?" website, print advertisements, television commercials, events and point-of-purchase retail displays at different touch points in their lives – reading magazines, watching TV, surfing the web, shopping at the grocery store, etc.

Just as processors within the milk industry cooperate to create broader awareness, so do those involved in the US egg industry. The American Egg Board is the US egg producers' link to consumer awareness and its efforts mirror those of the CMPB. The AEB rallied together to create the long-standing "Incredible Edible Egg" moniker, which is publicized throughout the US to help increase consumer demand for eggs.

Because of the AEB and the CMPB efforts, consumers understand the benefits of incorporating eggs and milk into their diets. In both campaigns, the specific brands of eggs and milk are not a focus.

With the foundation in place, what options are available to help egg producers' brands stand out To learn more about the branding and marketing of eggs, read: Standing out in the egg industry

www.WATTAgNet.com/13620.html

from the others, especially within the specialty egg market?

Functionality - eggs and omega-3s

Egg producers can use a number of different tools in their marketing to help communicate why their eggs are different from competitors' eggs – we see this through different packaging design, advertisements, in-store promotions, etc.

The functional food space takes consumer awareness to a different level. For example, consumers in the US may make purchases based on an attention-grabbing label or a great coupon deal, but many of them are also looking out for their family's health.

Look specifically at the evergrowing omega-3 functional food market. As omega-3s help to support health and development at all stages of life, these fatty acids are big business as well. A recent Packaged Facts report shows global omega-3 food/beverage sales in 2010 were at \$8 billion, a 17% increase over 2009.

Many egg producers now offer specialty eggs fortified with omega-3s or promote this fortification on carton labels. Name brands and store brands alike claim "added omega-3 fatty acids" on packaging, but very few clarify which type of omega-3 or the amount of fatty acids the eggs contain.

Omega-3 fatty acids, often referred to as "good fats," are essential fatty acids – something the human body cannot make and must obtain from the foods we eat. That being said, not all omega-3s

are created equal; the human body uses some of the fatty acids more efficiently than it uses others.

Docosahexaenoic acid: DHA is a long-chain omega-3 fatty acid that supports brain, eye and heart health throughout all stages of life. Good sources of DHA include fatty fish (e.g.

salmon) and algae – fish get their DHA through the microalgae in their food chain.

Eicosapentaenoic acid: EPA, also found in fatty fish and algae, helps to support cardiovascular health. Of the three most common omega-3 fatty acids, EPA and DHA are the easiest for



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Consumer education

the body to use.

Alphalinolenic acid: ALA is found primarily in flaxseed, soy, walnuts and canola oils. The body converts ALA to EPA and DHA; however, the conversion is very inefficient. ALA has no known independent benefits on brain or eye health and there is insufficient data to support its role in cardiovascular health.

Hens fed a diet rich in omega-3s produce omega-3 eggs. The resulting eggs can contain as much as six times the amount of omega-3s found naturally in regular eggs. One way of doing this is enhancing the hen feed with flaxseed. Supplementing feed with fish or algal oil is another option. Of note, laying hens fed diets rich in preformed algal DHA can produce eggs with 120-150 mg of DHA per egg.

The first brands to promote omega-3 fortified products did not break down the source or the amount of omega-3s. In contrast, other specialty egg brands, including Oakdell Egg Farms, Gold Circle Farm and EggSense in the US, and DHA Omega-3 Golden Egg in the United Arab Emirates, include DHA omega-3 on the carton and a breakdown of the

Catching the consumer's attention

While they may seem obvious, it is important to revisit a few initial steps to help educate your consumers.

- * The best place to start is the consumer. Your consumer is different from X brand's consumer why? Finding out who purchases your product and why can help clarify your key brand messages. Answering these questions will help determine if further consumer education is needed. Conduct research first.
- * Build upon overall industry awareness. Look for an already existing AEBtype collaboration in your market that can provide a foundation for

- initial consumer education. Then, communicate how your brand is unique remember to communicate directly to your consumer.
- * Develop integrated marketing campaigns that reach your target audience at multiple touch points. Elements can include websites, media relations, advertisements, social media, events, in-store promotions, among many other opportunities.
- * Check in. After launching your marketing communications campaign or elements of it check in to make sure it still speaks directly to your consumer.

omega-3 type.

To make an egg brand stand out, producers need to go beyond superficial labeling to clearly state the benefits for consumers. Highlighting ingredient products and sources, nutritional information or other unique properties of eggs can go a long way in educating consumers and distinguishing one egg brand from another.

Egg producers worldwide

can collaborate to help educate consumers on the health benefits of eggs. Building a solid foundation of general awareness first gives egg producers the opportunity to dive deeper into the branding and marketing of their specific eggs.

➤ Christian Martin is director of Global Animal Nutrition, DSM Nutritional Products.















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IPE/IFE shifts dates to offer more educational programs

The 2012 International
Poultry Expo and
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Expo will feature an
entire week of dynamic
education programs
addressing current
industry issues.

The 2012 International Poultry Expo, co-located with the International Feed Expo, has moved to a Tuesday-Wednesday-Thursday format to increase the educational programs before and after the Expo. The event is scheduled for January 24-26, at the Georgia World Congress

2012 International Poultry Expo / International Feed Expo

- ★ Georgia World Congress Center, Atlanta, GA, USA
- * Show hours:
 Tuesday, January 24, 2012:
 12 p.m.-5 p.m.
 Wednesday, January 25, 2012:
 9 a.m.-5 p.m.
 Thursday, January 26, 2012:
 9 a.m.-3 p.m.
- * For more information about the 2012 IPE/IFE, go to www.ipeweek12.org.



Center, Atlanta, with the educational programs rounding out the week.

Sponsored by the U.S. Poultry & Egg Association and the American Feed Industry Association, the Expowill highlight the latest technology, equipment and services.

2012 Expo highlights

This year's education program includes the International Poultry Scientific Forum, Pet Food Conference, Animal Agricultural Sustainability Summit, Hatchery-Breeder Clinic and the AFIA International Feed Education Program. For the updates on educational programs, visit www. ipeweek12.org.

New for 2012 are:

* Charting the Course: An
Executive Conference on the
Future of the American Poultry
Industry: Incorporating the
Market Intelligence Forum, this
program, offered on January 25,
will explore challenges facing
the poultry industry, including
competition, high input costs,

Guide to plan your visit to IPE/
IFE. It's everything you need for a productive show experience.
The Guide provides:

- * Exhibitor profiles
- **★** Guide to the show floor
- **★** Schedule of educational events
- * Atlanta dining and hotel information...and more!

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social issues and government regulations, while attempting to meet an increasing demand for food.

* IPE Pre-Harvest Food Safety
Conference: A complement
to the 2011 IPE Salmonella
and Campylobacter Reduction
Conference, this educational
opportunity comprises two halfday sessions on January 25 and



Wednesday, January 25, and Thursday, January 26, 2012
The Pre-Harvest Food Safety

Conference, an educational opportunity developed by the U.S. Poultry & Egg Association, the National Chicken Council, the North American Meat Processors Association, Auburn University and the University of Georgia, will consist of two half-day sessions conducted Wednesday and Thursday.

This event will bring regulators and researchers together with experts from the poultry and allied industries, to discuss issues associated with the control of food borne pathogens in preharvest operations.



Pet Food Conference

Tuesday, January 24, 2012

Sponsored by the American Feed Industry Association and the Poultry Protein and Fat Council, the fifth annual Pet Food Conference covers various topics ranging from regulatory issues to technical aspects of production. The morning session will focus on ingredient issues and the afternoon on food safety. The new Pet Food Certification Program, a third-party certification system, will also be highlighted. More details are available at: www.petfoodconference.com.

26, to provide one of the most thorough explorations into the poultry pre-harvest arena ever.

* Charting the Course: An
Executive Conference on the
Future of the American Egg
Industry: Perhaps in no other time
in the history of egg production
and processing have the industry's
challenges been greater. This
session, offered on Wednesday,
January 25, will explore these
challenges.

International Poultry Scientific Forum

Monday, January 23, and Tuesday, January 24, 2012

The International Poultry
Scientific Forum is sponsored
by the Southern Poultry
Science Society, the Southern
Conference on Avian
Diseases and the U.S. Poultry
& Egg Association. The forum
presents information on
topics such as environmental
management, nutrition,

physiology, pathology, processing, and products and disease.

* National Renderer's Association 2012 International Rendering Symposium: Offered on Thursday, January 26, and Friday, January 27, this seminar session will focus on the quality and safety of rendered products. Speakers will describe process control methods, microbiological controls, research and the use of rendered products.



A REALISTIC ALTERNATIVE?



Market developments convey a clear message. In 2050 the world population is expected to reach 9 billion. Together with ongoing economic growth this will lead to a massive demand for meat, particularly in the developing world. This implies that production has to intensify alongside responsibly with regard to animal welfare.

As the world struggles with the dilemma between the 'acceptable' and the 'practicallity' of growing 40 billion animals, Fancom sees this as an opportunity to offer a realistic alternative, iFarming.

Through a combination of precision livestock farming and information technology it is possible to improve the basic processes in the farm, providing an animal friendly system.

Unlike traditional farming, iFarming is sustainable in metropolitan areas, combining social, economic and environmental interest and at the same time higher return on investment for the farmer.

See us at IPE-IFE booth 6112



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IPE/IFE

in diets for various species. Also new for 2012 is the Customer Connection Center, which provides meeting rooms without the distraction of the show floor. Centers will be available in each exhibit hall.

Register for the show

Attendee and exhibitor preregistration and hotel registration is now open. Online is the only way to preregister for the discounted price of \$40 through January 6, 2012. After January 6, the fee increases to \$60.

Resuming for 2012 is the "Members to Atlanta" (M2A) program, which waives the registration fee for attendees from member firms of either association engaged in the production of poultry or eggs for consumption and feed products. The program is supported through Expo exhibitor sponsorship.

2012 Hatchery-Breeder Clinic

Tuesday, January 24, and Wednesday, January 25, 2012 This clinic provides the opportunity for hatchery and breeder flock managers to learn the latest techniques for producing high-quality chicks. It covers hatchery and breeder operations so that both functions are aware of innovations

2012 International Rendering Symposium: Focus on Quality

Thursday, January 26, and Friday, January 27, 2012

This seminar will focus on the quality and safety of rendered products. Building on a background of the industry and its markets, speakers will describe process control methods, microbiological controls, current research and using rendered products in diets for various species.

and basic management principles.

- **★** Registration includes admission to the International Poultry Expo and International Feed Expo.
- * Your Hatchery-Breeder Clinic badge will allow you to visit the trade show floor.
- ★ Clinic attendees can take advantage of other educational offerings during IPE.

Charting the Course

January 25, 2012

An Executive Conference on the Future of the American Egg Industry

Join industry leaders for an Executive Conference on the Future of the American Egg Industry. Perhaps at no other time have the challenges in egg production and processing been greater.







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Zero Salmonella tolerance on poultry: Worthy goal or trade protectionism?

Can an importing country justify, on purely scientific grounds, a zero-tolerance policy for Salmonella on

raw poultry?

The global trade of poultry meat is often hampered by non-tariff barriers, which are often thinly disguised mechanisms to limit the import of poultry for the benefit of the domestic industries in the importing countries. Probably one of the most widely used - and abused - of these non-tariff barriers is a zero tolerance for Salmonella on raw poultry. In some cases, any finding of Salmonella on raw product can lead to the rejection of an entire shipment, or the de-listing of the plant of origin of the suspect product.

This raises a question that has long been asked by countries that export poultry: Can an importing country justify, on purely scientific grounds, a zero-tolerance policy for *Salmonella* on raw poultry?

Salmonella – widely occurring and elusive

We know that Salmonella occurs commonly in livestock and poultry, and can be frequently isolated from wild animals, including rodents, reptiles and birds. When poultry flocks become infected, most Salmonella are carried within the gut of the birds and subsequently contaminate the environment, including the birds' feathers, feet and skin. During post-slaughter



Performance objectives linked to human health outcomes based on risk assessment better define public health risk.

processing, Salmonella may also be transferred among carcasses by fecal or ingesta contamination, or may be spread by crosscontamination of carcasses in the rinse or chill cycles, or on equipment surfaces.

The industry, regulators and consumers all have a vested interest in interventions to mitigate *Salmonella* contamination of poultry throughout the food chain, and it is an important goal for all stakeholders to ensure that the final cooked product is safe for consumption.

Although raw poultry meat is a frequent vehicle of foodborne *Salmonella* infections in humans, it is difficult to quantify the true proportion of all salmonellosis cases that are associated with poultry consumption.

The poultry industry has a vested interest in mitigating Salmonella contamination.

Food source attribution under scrutiny

Because of the trade ambiguities and regulatory confusion resulting from different *Salmonella* sampling and testing

methodologies, an international group of 26 scientific experts from 16 countries convened in 2009 to discuss the scientific and technical issues that affect the setting of a microbiological criterion for *Salmonella* contamination of raw poultry.

The result of these deliberations was the peer-reviewed publication of "Scientific and Technical Factors Affecting the Setting of Salmonella Criteria for Raw Poultry: A Global Perspective," published in the Journal of Food Protection, 73(8):1566-1590, 2010.

Although Salmonella on raw poultry products is an important cause of human salmonellosis, it is difficult to determine the extent to which it is responsible for foodborne human illness, whether directly or indirectly via crosscontamination. It is precisely this type of information, however, that is

Read more about food safety in: Poultry industry roundtable identifies 5 keys to food safety at

www.WattAgNet.

needed to understand the true risk to public health and to determine the effectiveness of intervention strategies. Ultimately, the efficacy of regulatory activities should be assessed on the basis of risk outcomes.

Zero tolerance often misunderstood

The use of HACCP in primary processing of poultry is widely advocated and is mandatory in the United States and the European Union. In the U.S., the processing operation is the main focus for regulatory oversight and industry management of *Salmonella*, whereas in the EU processing is only one stage in the supply chain at which monitoring measures are required.

Both approaches include a microbiological criterion for Salmonella, and both require regular testing of post-chill carcasses as part of the verification of the food safety management system. The U.S. system also includes a zero-tolerance policy for visible fecal contamination on carcasses before they enter the chiller, as well as the requirement in the HACCP plan of a critical control point to help ensure fecal contamination is avoided. Otherwise, individual companies determine critical control points and they may differ among establishments.

Quantitative risk assessment needed

Applying quantitative risk-assessment practices in microbiological food safety

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Zero Salmonella

exposes the reality that zero risk is unattainable for all raw foods. Zero tolerance, which implies the complete absence of a hazard, may be regarded as the expression of a regulatory preference for the precautionary principle, but has little to do with food safety and human health. The term "zero tolerance" itself is commonly used but generally poorly defined or understood. This is troublesome because it has different meanings for different audiences.

To some people, zero tolerance implies zero risk associated with the food, or zero prevalence of a pathogen in the food. But without any way of consistently eliminating the pathogen from a raw product, the "zero" concept is misleading to consumers with unrealistic expectations of the effectiveness

Applying quantitative risk-assessment practices in microbiological food safety exposes the reality that zero risk is unattainable for all raw foods.

of regulation, who may interpret such regulations as implying no risk. If a hazard exists, there is some probability it will cause an adverse effect, no matter how small.

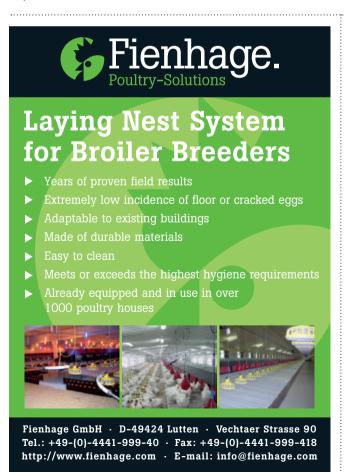
Zero tolerance also implies that both minor and major deviations

from a policy will be treated with the same severity. This is obviously not a sensible approach to identifying and resolving the source of contamination problems.

Dealing with deviations

Internationally, there is no consistency in interpreting the concept and how to deal with deviations. The purpose of a *Salmonella* monitoring policy for raw poultry should be to provide an alert that prompts a review of policies and procedures. It should also permit the finished product with minor deviation to be distributed into the marketplace, and should take into account cost and other practical considerations of withholding the product from sale.

Several other challenges exist to applying a zero-tolerance policy for *Salmonella* on raw poultry meat: defining the accuracy, sampling





intensity, sampling material and sensitivity of the testing method. At which point is the assessment to be made, pre-harvest or post-harvest? Who bears the repercussions for enforcement? And, who has and what is the enforcement capacity? How does one quantify crosscontamination of other foods or account for other transmission routes, such as person-to-person? The evidence suggests that currently there are no intervention treatments that can be applied in all countries to ensure the complete elimination of Salmonella from raw poultry products.

Measuring levels instead of prevalence

Salmonella contamination is usually expressed in terms of prevalence, but evidence from microbiological risk assessment indicates that the levels (number of

Zero tolerance may
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to do with food safety
and human health.

cells) of contamination can be even more important to public health, and efforts at any stage of production or processing that reduce the *Salmonella* cell numbers on the raw product will reduce risk.

With the development of more

sensitive methods for counting *Salmonella* and methods that are internationally acceptable, we should pay much greater attention to this aspect in the future, enabling more heavily contaminated items to be identified and suitable interventions developed.

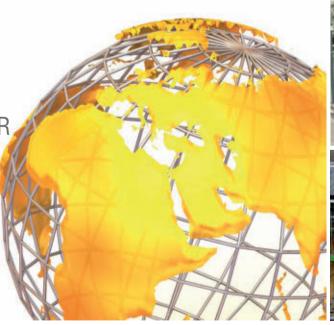
How far to take management programs?

Over the years, Sweden has developed and implemented a stringent and successful Salmonella management program for poultry. The present degree of Salmonella prevalence on raw poultry took several decades to achieve at considerable expense. For all countries, however, such measures are unlikely to be economically or technically feasible. Some lessons can be learned from the Swedes, especially about the need for Salmonella-free breeding stock and



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Zero Salmonella

feed, as well as improved biosecurity. Salmonella infection of broiler flocks and the contamination of processed carcasses differ widely among countries, largely reflecting the stringency of

measures undertaken to eliminate Salmonella in poultry production and processing. Conditions in production and processing also differ widely, as do the strategies and methods used for sampling and testing for Salmonella. These sampling methods must be

standardized, especially for raw product testing, in the interests of consumer safety and trade.

Four recommendations

Given the nature of the poultry industry, current interventions won't quarantee the absence of Salmonella from raw poultry products. Approaches differ among countries in the emphasis placed on pre-harvest and post-harvest regulatory monitoring. However, the most effective strategy for Salmonella management would be one that covers all stages of the food chain. Therefore, this strategy should be followed wherever possible.

To establish international standards and achieve global compliance, governments and industries must be willing to work toward developing and adopting harmonized approaches for data collection and analysis.

The term "zero tolerance" for specific pathogens such as Salmonella in raw food products is interpreted differently in different countries and therefore has been confusing, misleading and misapplied. Using terms such as "zero tolerance" or "absence of a bacterium" in relation to raw poultry should be avoided unless these terms are specifically defined and explained by international agreement.

New metrics, such as "performance objectives" linked to human health outcomes based on risk assessment, should be used throughout the food chain and will better define the resultant public health risk.

> N. A. Cox1, M. P. Doyle2, A. M. Lammerding3, L. J. Richardson4, R. J. Buhrl, Y. V. Thaxton5, and J. A. Cason1 1 USDA, ARS, Russell Research Center, Athens, Ga.2 Center for Food Safety, University of Georgia, Griffin, Ga.3 Public Health Agency of Canada, Guelph4 Coca Cola Company, Atlanta, Ga.5 Center for Food Animal Well Being, University of Arkansas, Fayetteville, Ark.





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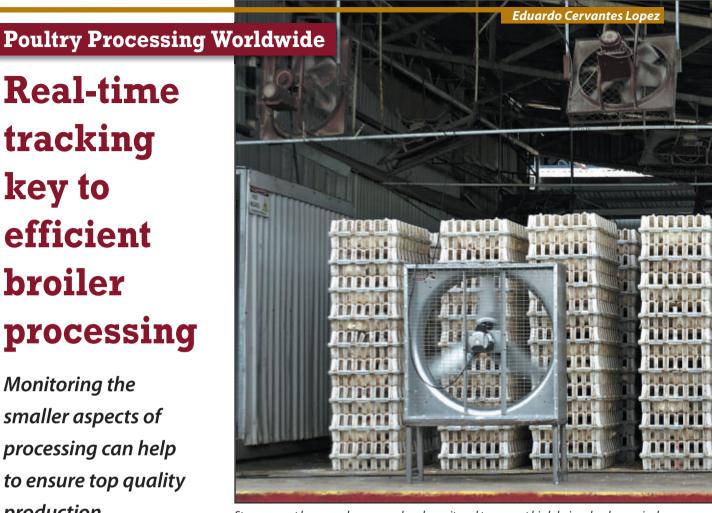
Real-time tracking key to efficient broiler processing

Monitoring the smaller aspects of processing can help to ensure top quality production.

On each and every day that chickens leave the farm and arrive at the processing plant, managers should be implementing a series of activities both before and during the actual processing if maximum quality is to be consistently achieved. These activities address both physical and sanitary issues.

A number of common activities that need to be addressed at the processing plant include:

- ★ Proper storage to prevent birds being dead on arrival;
- **★** Monitoring of the two most important environmental variables temperature and relative humidity;
- **★** Verifying sanitary conditions of the building and equipment before actual processing starts;
- * Ensuring that all equipment and tools are ready to use;



Storage must be properly managed and monitored to prevent birds being dead on arrival.

- * Checking that all personnel are ready to work;
- * Ensuring an orderly supply of birds to the hanging area to guarantee that all shackles are being used; and
- ★ Monitoring of offal to ensure that any giblets, for example the gizzard, liver, heart and neck, are being mixed into it.

Processing chickens is a fastpaced activity, reaching speeds of three birds per second, with a line speed of 12,000 birds per hour. Unfortunately, plant supervisors often forget the importance of real-time tracking. Sometimes they become so focused on reaching production targets – birds per hour – that they unintentionally overlook key aspects of the process itself,

and these have a direct impact on the quality, safety and yield of the processed birds.

Grassroots expertise

To tackle issues such as those listed above, many companies have introduced a staff committee, or "Elite Group," to ensure that all the small but important details of the process are properly taken care of. Should any of these variables deviate from the ideal, this committee immediately informs the management group so all necessary corrective actions can be implemented.

Once birds are hung on the shackles, a different set of variables needs to be monitored. These might include:

- * Chickens flapping during stunning;
- * Flapping and struggling during bleeding;



- * Chickens falling down in the bleeding tunnel;
- **★** Birds floating during scalding;
- **★** Subcutaneous fat melting away and being lost during chilling;
- **★** Water in the pre-chiller turning slightly red; and
- * Foam appearing in the chiller's water. When an abnormal situation is detected, a member of the EG should immediately inform the supervisor so that a prompt decision can be taken on remedial action.

For example, if the problem needs the intervention of the maintenance group, the supervisor can contact them directly. The maintenance group can then evaluate the situation and give an answer on the time required for corrective action to be taken.

With this information at hand, the area supervisor can continue his duties, while the members of

For more from **Eduardo Cervantes** Lopez, read: Investing in staff to increase poultry processing plant productivity

www.WATTAqNet. com/26244.html

the EG monitor that the job is being completed properly and on time by the maintenance team. Once faults have been corrected, an EG member reports this back to the supervisor.

Management activities are of paramount importance during processing. Again, a member of the EG should monitor that all product losses



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Real-time tracking

are within acceptable parameters.

For example, if the DOA parameter has a maximum level of 0.1%, for a plant that processes 100,000 birds per day, a maximum of 100 chickens per day dying from heat stress might be acceptable. During one shift of eight hours, a rate of 12 birds per hour dying would be considered normal.

Should the DOA rate suddenly increase, the members of the EG should notify the supervisor so that decisions can be taken to bring the situation back under control as soon as possible. The same monitoring system can be applied to downgrading, red chickens, overscalding, damage to chickens during plucking, loss of gizzard meat by removing the cuticle and so on.

Guiding processes

The role of the EG is very similar to that of air traffic controllers



Subcutaneous fat melting away.

at airports, as both have the responsibility of guiding processes. Performing their roles is dependent on two basic principles:

- Knowledge and extensive experience of every detail that may affect the various processes; and
- The attitude of management to take appropriate decisions in real time. The EG should comprise

specialists from various disciplines, including food, agroindustrial and veterinary medicine, among others. The committee should report to the highest authority within the plant – normally the plant manager. This will enable the EG to properly manage the most important areas during the day-to-day operation of the plant.

By paying attention to and controlling all the small details within the processing plant through the establishment of a special staff committee – the Elite Group – it is possible to raise quality, safety and the yield levels of the chickens that pass through the plant.

➤ Eduardo Cervantes Lopez is an international consultant based in Colombia. He can be contacted at: icproave@hotmail.com or via www.icproave.com. By Eduardo Cervantes Lopez





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www.norelynature.com

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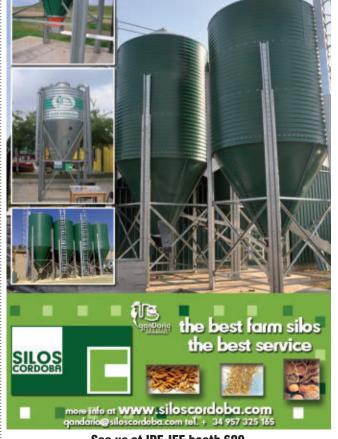
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machine from AG Int. Ltd. for bedding poultry and broiler houses. The distributor gives a more even and economical use of bedding material. Growers reported a reduced downgrading due to less hock burn and turnaround between crops is reduced, according to the company.

www.ag-products.co.uk

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www.petersime.com

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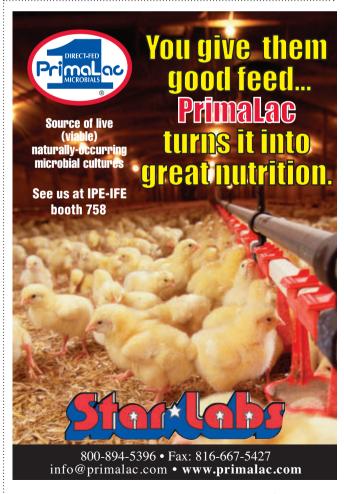
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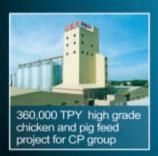
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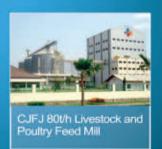




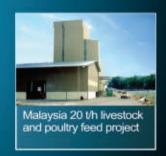


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