International Hatchery Practice

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Practical information for progressive hatchery professionals

FEATURED IN THIS ISSUE

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CONTENTS

Fertile Thoughts

The production of healthy, robust chicks is fundamental to the success of the poultry industry. Yet, achieving this goal is no small feat in today's complex and interconnected world.

From breeder farms to hatcheries, every stage in the production cycle must be optimised to deliver progeny capable of thriving in diverse and often challenging environments. But are we doing enough as an industry to address critical points where interventions can have the greatest impact?

At the breeder farm level, the foundation for chick health begins with the quality and management of parent stock. Nutritional strategies, biosecurity measures, and disease prevention programs are key. Yet, despite advancements in these areas, challenges persist. Are we adequately addressing emerging disease threats and balancing the drive for higher productivity with long-term bird welfare and sustainability? How can we better tailor breeder management programs to optimise egg quality and chick viability across different production systems?

In the hatchery, the focus shifts to precision. Advances in technology now allow for unprecedented control over conditions such as temperature, humidity, and ventilation. But are these technologies being utilised to their full potential? Furthermore, targeted interventions, such as in-ovo vaccinations and probiotic treatments, are gaining traction. Are these tools being applied consistently and effectively across the globe, or do gaps remain in adoption and understanding?

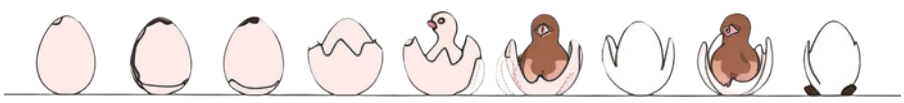
Beyond technical interventions, the human element is critical. Training and knowledge sharing among breeder farm and hatchery staff can often be the weakest link in ensuring uniform application of best practices.

How do we as an industry bridge the gap between innovation and implementation on the ground?

Finally, the global nature of the poultry industry raises important questions about equity and accessibility.

Are all producers, from small-scale farmers to large integrators, being empowered with the knowledge and resources needed to produce healthy chicks?

Producing healthy chicks is not just about solving today's problems but anticipating tomorrow's challenges. As industry professionals, we must continually evaluate our practices, question our assumptions, and embrace innovation. ■



Cover Picture: **Optimising nutrition**
(photo courtesy of Anitox – see page 9)

AGRIINSIGHT PUBLICATIONS

INTRODUCING OUR NEW WEBSITE

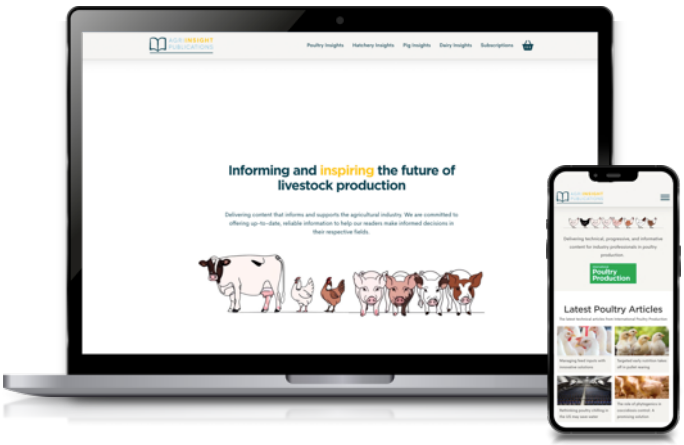
Agriinsightpublications.com

Informing and inspiring the future of livestock production

We are excited to announce the launch of our new website.

This platform has been carefully designed to give access to a wealth of technical articles published in our magazines, all organised into species-specific pages making it easy to find content relevant to poultry, hatchery, pig, and dairy.

Visit our site and explore the latest technical insights!



What you'll find on the new site:

- In-depth technical articles from industry professionals: covering topics like animal health, nutrition, management, and innovation.
- Species-specific pages: easily find content tailored to poultry, hatchery, pig, and dairy.
- Easy navigation: quickly find the information you need, when you need it.

Delivering content that informs and supports the industry. We are committed to offering up-to-date, reliable information to help **YOU** make informed decisions.

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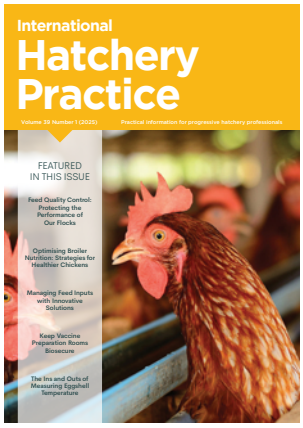

The world's unique technical and practical publication for everyone involved in poultry breeding and hatching

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World Focus

An executive summary of key international issues

USA - Mississippi

First HPAI case in poultry since 2023

Mississippi has reported its first case of highly pathogenic avian influenza (HPAI) in poultry since 2023, with the outbreak affecting a flock of broiler breeders. State officials have confirmed the detection and implemented immediate containment measures, including quarantine and culling. The case highlights the ongoing risk HPAI poses to poultry operations, particularly broiler breeders, which are critical for maintaining production supply chains. Industry professionals are urged to reinforce biosecurity protocols, including strict access controls and monitoring, to mitigate further spread.

USA - South Dakota

State university tackles new strain of avian metapneumovirus

Researchers at South Dakota State University's Animal Research and Diagnostic Laboratory are investigating strategies to combat a newly identified strain of avian metapneumovirus (aMPV). The virus, which can cause respiratory disease in poultry and impact egg production, poses a significant challenge to the industry. The team is focused on understanding the strain's characteristics and transmission dynamics to develop effective prevention and control measures. While vaccines and biosecurity remain key tools, questions about the strain's potential spread and long-term impact on flocks remain.

USA - Iowa

First U.S. egg producer adopts in-ovo sexing technology

A leading U.S. egg producer has become the first in the country to adopt in-ovo sexing technology, eliminating the need for male chick culling. The adoption reflects a growing shift in the industry toward more sustainable and ethically aligned practices. This move raises important questions for industry professionals: will in-ovo technology prove cost effective and scalable across larger operations? How will it impact production efficiency in the long term? While challenges remain, this milestone highlights the potential for innovation to reshape standard practices and respond to increasing consumer expectations.

Feed Quality Control: Protecting the Performance of Our Flocks

By Diogo Ito, Nutritionist at Hendrix Genetics, BU Layers
www.hendrix-genetics.com

Feed costs typically represent 60–70% of the total production costs, and it is well known that feed quality can greatly impact flock performance.

When looking at the costs, we do not only look at the actual costs that are involved with the formulation of the feed but also the entire support structure in the process when making our own feed: feed mill, storage silos, transportation trucks, quality controls, etc. When making your own poultry feed, you can take more control of feed quality.

However, when it involves purchasing feed produced by external feed mills, we heavily depend on internal and external quality controls to ensure that the required standards are met correctly and consistently.

Laying hens (in rearing or production, commercials or breeders) need well-balanced nutrition, as this will allow the birds to express their full genetic potential and develop into high-quality pullets that, in turn, will be able to lay first-quality eggs throughout their productive lifetime.

Changes in the use of feedstuffs (like the use of corn for bioethanol) have affected poultry diets, as feed prices went up due to increased competition. As poultry operations have grown, feed volumes have also increased, and new technologies have been incorporated.

This has reduced the visual contact that we have with the feed throughout the entire process. This must be taken into account when we discuss the importance of monitoring the quality of ingredients and feed.

Ensuring Feed Quality for Optimal Poultry Nutrition

Our goal is to address key factors to ensure the laying hens and pullets receive feed that meets the nutritional standards set by nutritionists.

Receiving Bulk Ingredients

Bulk ingredients are transported by truck and unloaded at feed mill receiving docks. Samples must be taken—either manually or using mechanical callipers—from various locations and depths of the load. This ensures a representative analysis, as particle segregation can occur during transportation.

Storing Bulk Ingredients

Monitor the flow of ingredients in silos. When emptying a silo, clear any ingredient buildup in the corners. Sampling these areas can help identify issues and enable corrective and preventive measures. Key concerns include moisture condensation, leaks, fungal contamination, and pest infestations.

Receiving and Storing Bagged Products

Bagged products should also be sampled from multiple points for quality checks. Proper storage is crucial to allow item segregation, easy stock movement, pest control, and inventory checks. Regular stock control (daily or weekly) can reveal issues with dosage, storage, or handling practices.

Understanding Raw Material Suppliers
Familiarise yourself with suppliers' structures and production processes to select reliable partners and establish effective quality monitoring. Be mindful of seasonal variations and weather impacts on ingredient quality. Take measures to minimise discrepancies between the negotiated, received, and used products.

Evaluating Ingredient Quality
Accurate knowledge of ingredient nutritional content is vital for proper feed formulation. Using incorrect nutritional matrices or failing to analyse ingredients can lead to under-nutrition and poor zootechnical and economic performance.
Employ methods like bromatology or Near Infra-Red Spectroscopy (NIRS) to analyse ingredients. Additionally, perform visual checks for colour, smell, and texture, and classify grains used in feed production. Always monitor for biological, physical, and chemical risks.

Feed Evaluation
Assessing feed quality is as important as ingredient analysis. Deviations in nutritional values may arise from sampling errors or feed production processes (storage, mixing, or distribution). Such evaluations help ensure the feed consumed by poultry meets the required standards.

Feed Particle Size
Uniform feed particle size is crucial for the proper development of the birds' digestive systems. Overly fine or coarse feed can lead to selective feeding and nutritional imbalances. Monitor mechanical feed processing factors like sieve size, hammer condition, rotation speed, and ingredient quality. Use a feed sieve to regularly check particle size.

Mixing Quality
Feed additives often have inclusion rates ranging from 5kg to as low as 10g per ton of feed. Poor mixing can cause inconsistencies in expected outcomes. Properly prepare micro-ingredients before mixing and assess the mixer's performance. Tools like microtracers can help monitor mixing quality.

Process Control and Sampling
Establish robust sampling and storage procedures for feed and raw materials. Traceability ensures that any issues in the field can be investigated effectively by analysing and comparing retained samples.

Managing Input Quality Variations
Fluctuations in ingredient quality are inevitable. Address variations within acceptable limits and take corrective actions

when minimum quality criteria are not met. Feed mill costs are fixed, and consistent animal performance is essential to cover these expenses.

Collaboration among feed mill operators, poultry teams, nutritionists, and raw material buyers is vital to maintaining livestock health and supporting business sustainability. ■

Optimising Broiler Nutrition: Strategies for Healthier Chickens

by Jorge Trindade MBA, DVM, Anitox Regional Sales Director EMEA, Anitox
www.anitox.com

Necrotic enteritis (NE), caused by toxins produced by Clostridium perfringens, is one of the most common and costly diseases that affect the poultry industry.

Recent research in broiler nutrition has unveiled the critical importance of managing microbial loads in broiler breeder feed, highlighting its profound impact on eggshell contamination, hen mortality and chick quality. Additionally, ongoing investigations into the benefits of clean feed on broilers facing challenges such as NE suggest that early intervention with sanitised feed could significantly enhance overall gut health, enabling broilers to better withstand disease pressures and achieve improved performance.

Understanding the Role of Feed in Pathogen Transmission

Quality feed is the primary vehicle for delivering nutrients to developing poultry, but feed also poses a significant risk as a carrier of pathogens. For example, in the US, a surveillance study from 2002 to 2009

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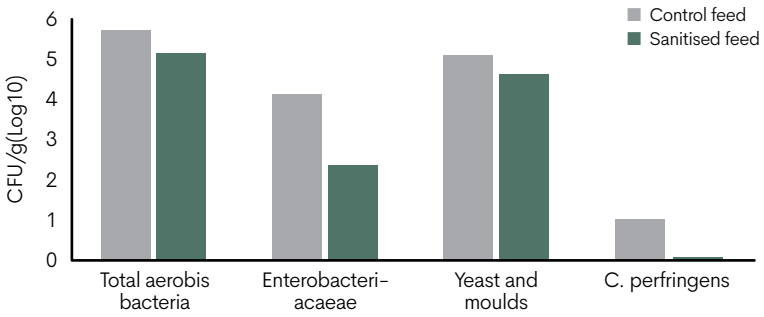


Fig. 1. Microbial load of control and sanitised rations.

▷ *Continued from page 9*

reported a 12.5% Salmonella contamination rate of feed and feed ingredient samples from manufacturing facilities. Other notable evidence includes a survey that reported the presence of pathogens in various feed ingredients, finding that 0.7% of animal-derived proteins, 2.2% of oilseed meals, and 1.3% of cereal grain samples tested were positive for Salmonella.

Salmonella in soybean meal and rapeseed meal samples was also found at varying rates. In a recent report, conducted a year-long study across five mills, discovering a high incidence of Clostridium spp. and detecting E. coli in sampled ingredients and finished feeds. Elevated microbial loads in feed are strongly correlated with increased pathogen prevalence, which poses a threat to poultry health and productivity. Analysis of thousands of feed and feed ingredient samples collected worldwide and tested by Anitox's Laboratory reveals the variability in microbial profiles among different feed types and ingredients, with animal by-products, vegetable proteins, and cereal grains being particularly susceptible to contamination.

Various factors, including ingredients, particle size, pathogens, and environmental contaminants, influence the microorganisms found in poultry feed. These microbial pathogens, in turn, can impact the development of the poultry microbiota and immune system. Pathogens, such as Salmonella, present in contaminated feed can enter the poultry gastrointestinal tract (GIT) upon consumption and potentially colonise it, with increased susceptibility in young, developing birds. Aside from the hatchery environment, feed is one of the first things a chick encounters post-hatch, and its

nutritional and microbial quality has a significant impact on initial gut health. Early introduction and colonisation of pathogenic microorganisms in the avian gastrointestinal tract can disrupt the delicate balance of the gut microbiota and impede the establishment of healthy microflora.This imbalance not only compromises intestinal integrity but also predisposes birds to various health issues, including decreased growth rates and increased susceptibility to diseases like NE.

Feed sanitation benefits broiler health and performance.

A recent study which was conducted in collaboration with the Poultry Science department at the University of Georgia, explored the effects of reducing feed microbial loads on broiler breeder performance and progeny quality.

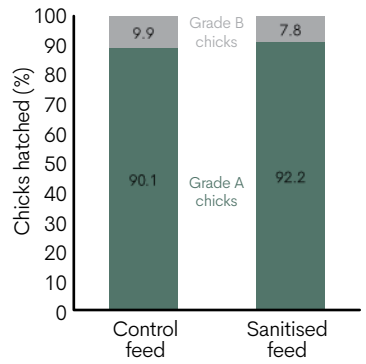


Fig. 2. Progeny of hens fed sanitised feed were more likely to receive Grade A ratings.

During this study, broiler breeder hens were subjected to either a control diet or a diet treated with a feed sanitiser from weeks 25 to 60 of their life cycle (Fig. 1). Results indicated that decreasing feed microbial loads not only improved hen mortality but also positively impacted the offspring of hens fed a sanitised diet. Furthermore, hens consuming sanitised feed produced a higher percentage of "Grade A" chicks (Fig. 2).

Reduced microbial loads on eggshell surfaces resulting from these same hens may have contributed to improved chick health post-hatch, as suggested by the observed reduction in 7-day mortality rates, particularly from the progeny of hens in late lay (Fig. 3). Further research, conducted in collaboration with Colorado Quality Research, suggests that early intervention with feed sanitisers during the first two weeks of life can enhance

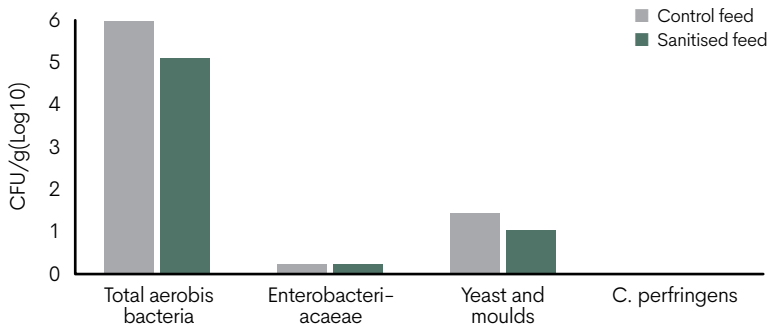


Fig. 3. Microbial load of eggshell surfaces for hens consuming control and sanitised rations.

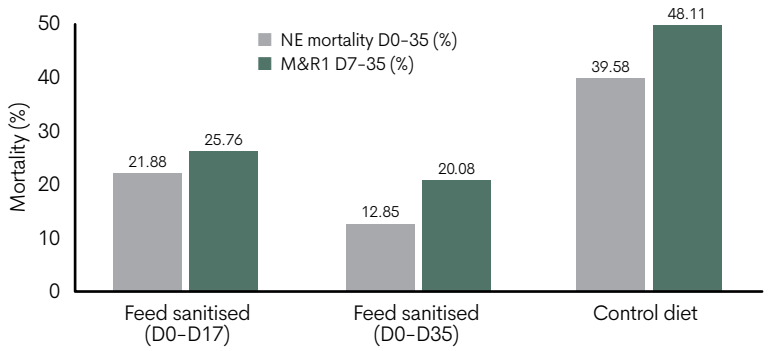
broilers' resilience against NE challenges. Broilers consuming sanitised feed demonstrated lower NE-specific lesion scoring, reduced oocyst shedding, and improved overall performance compared to those fed untreated diets. Additionally, they exhibited lower NE-related mortality and reduced mortality from day 7 to day 35, underscoring the importance of early-life nutrition in disease prevention (Fig. 4).

Managing microbial loads and reducing pathogen introduction during the early broiler life stages can have profound implications for lifetime health, growth, and performance. Feed sanitisers, applied at low inclusion rates, effectively reduced feed microbial loads and provided long-term protection against recontamination. By mitigating the risks of pathogen colonisation and dysbiosis, feed sanitisers empower producers to optimise broiler health and productivity, ensuring the delivery of high-quality poultry products to meet consumer demands.

Prioritising strategies to control microbial loads in broiler feed, especially during critical developmental windows, represents a proactive approach to promoting broiler health and performance. Continued research efforts aimed at understanding the mechanisms and long-term impacts of feed sanitisation will further enhance our ability to safeguard poultry health and welfare in the face of evolving challenges. Reducing microbial loads in feed is crucial for maintaining optimal broiler health and performance. ■

References are available from the author on request

Fig. 4. Birds fed sanitised feed demonstrated lower NE-related mortality and mortality and removal (M&R) in an NE challenge model compared to birds fed a control ration.



INSIGHTS*into*
PATHOGENS & CONTAMINATE CONTROL

UV DISINFECTION INSTEAD OF ANTIBIOTICS

www.fraunhofer.de

The frequent use of antibiotics can pose potential health risks to animals and humans.

With the help of a compact device that combines several processes, including UV disinfection, photocatalysis, and particle filtration, researchers at the Fraunhofer Institute of Optronics, System Technologies, and Image Exploitation IOSB, Institute for Advanced Systems Technology (AST) have been working alongside their partners to sustainably reduce the use of antibiotics while improving the air quality in barns to promote animal welfare.

UV disinfection, photocatalysis, and particle filtration have been combined with several processes that sterilise and remove harmful chemical compounds in the form of an innovative portable device that can be attached to the ceiling, for example.

This device should reduce the incidence of infectious diseases that require treatment with antibiotics.

The compact device can be quickly and flexibly integrated into existing poultry farming facilities. It is suited to closed barns and can also be used in piggeries. In addition, it could also prove useful against viral diseases, such as in the fight against bird flu, which runs rampant in the winter months.

The device uses UVC LEDs to continually disinfect the air in the barn. "Certain wavelengths of UV radiation have a powerful microbiocidal effect, deactivating pathogens by damaging their DNA," Thomas Westerhoff, a scientist at Fraunhofer IOSB-AST, Ilmenau, told International Hatchery Practice.

VACCINE SPRAY: AN INNOVATIVE SOLUTION FOR POULTRY HEALTH

naewoikorea.com

Vaccine Spray from Naewoi Korea Co Ltd enhances the health and productivity of organic poultry using egg shell nano technology. This natural method protects poultry from harmful viruses and bacteria, eliminating the need for traditional vaccinations.

As part of our diverse product range, including NWK 742S, NWK A-FV(H), NWK A-FV(G), NWK99, NWK 800, and NWK 9500, NWK AF-V(A) is made with 100% natural ingredients.

It's approved by the FDA, EPA, HALAL, and Green Seal USA, ensuring its safety and effectiveness. The primary active ingredient in Vaccine Spray is a sterilising substance that disrupts protein structures of germs and viruses, protecting poultry against common pathogens, including:

- Avian Influenza
- Newcastle Virus
- Salmonella
- Infectious Bursal Disease

Vaccine Spray shows significant effectiveness against viruses, reducing Avian Influenza by 99% and Newcastle Virus by 97.8% within two hours. This rapid action is critical for flock health.

Vaccine Spray offers a natural, science-based approach to poultry health. Integrating this innovative solution into your management practices can help protect livestock from harmful pathogens while promoting better growth and overall health.

INSIGHTS*into*
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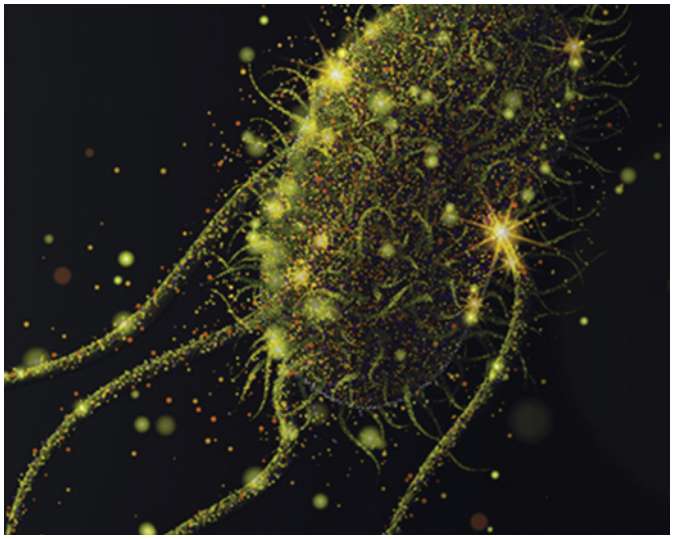

PIONEER IN FEED PATHOGEN MITIGATION

perstorp.com

Feed safety is essential to all of us and begins with a clean production system. All partners need to operate in a safe and clean way. Perstorp's ProPhorce SA can help! Keeping feed enterobacterial and Salmonella pressure under control is necessary to prevent these pathogens from impacting on your bottom line and reputation.

ProPhorce SA products offer:

- Effective antibacterial decontamination
- Assistance with enterobacterial reduction
- Efficient decontamination when used with heat treatments

The considered acceptable enterobacteria load in any classical compound feed is <4log CFU/g. While it is mandatory to fulfil <2log CFU/g in breeding layer feed. In feed production, heat conditioning is common practice to reduce Salmonella. While effective, it is often overlooked that during the cooling-drying phase recontamination risks arise.

Research has shown that optimal results are achieved with reduced heat conditioning (65°C, 2 min) in combination with a solution such as ProPhorce SA to help improve the results and to prevent recontamination. Comparison between ProPhorce SA Exclusive vs 4 competing products and formic acid 85% in mash feed (entero load log CFU/g). All samples treated at 65°C.

NEXT GENERATION POULTRY VACCINE IN INDIA

www.boehringer-ingelheim.com

Boehringer Ingelheim announced the launch of the latest advancement in Marek's disease vaccines in India. This next generation vaccine offers enhanced protection through an innovative controlled attenuation process, delivering the right balance between safety and efficacy.

Marek's disease remains a significant challenge in Indian poultry, with outbreaks continuing despite widespread vaccination efforts. The vaccine addresses this gap with a groundbreaking serotype-1 construct vaccine, offering an ideal balance of safety and efficacy against the most virulent strains.

This represents a breakthrough in vaccine engineering and is recommended for in-ovo vaccination of 18 to 19-day-old embryonated chicken eggs and one-day old chickens to protect against the virulent Marek's disease.

"Marek's Disease presents a considerable risk, resulting in significant financial impact for poultry farmers, particularly affecting young chickens with immature immune systems. As India's poultry industry expands, our vaccine is designed to aid farmers by reducing disease outbreaks, promoting flock health, and enhancing productivity." Dr. Vinod Gopal, Country Head-Animal Health, Boehringer Ingelheim India told International Hatchery Practice.

Dr. N.K Mahajan, Retired Professor and Head of the Department of Veterinary Public Health and Epidemiology, LUVAS, Hisar, added "Marek's disease continues to be a significant challenge for poultry farmers due to the increasing virulence of the virus strains. The resulting immunosuppression causes poor growth and performance, significantly affecting production and economics in the poultry industry."

FIRST-OF-ITS-KIND BIO-REACTOR

bioox.us

BioOx Air Cleaning System is a first-of-its-kind bio-reactor which captures and destroys airborne pollutants using patented biotechnology. The System uses the power of bio-oxidation, and there is not a single HEPA, UV, or ionic-based system on the market that offers complete localised air decontamination like this. While other systems struggle to filter out 0.3 microns, the bio-reactors offer complete contaminant destruction down to 0.0001 microns and can clean air in large square footage facilities, such as poultry processing houses.

BioOx bio-reactors respond quickly to viral and bacterial epidemiological outbreaks spread via air. Various experiments have proven that BioOx is effective with pathogen destruction (H1N1, Legionella, Influenza B, and MRSA were studied). The animal production industry has historically used antimicrobials to control disease; however, this may result in resistant bacterial strains. Bioreactor is a tool which may prevent and mitigate disease while not perpetuating the resistance crisis.

Furthermore, the bio-reactors both capture and destroy chemical contaminants. For example, ammonia is a chemical commonly found in poultry houses as it is created from poultry faeces.

Exposure to high ammonia concentrations negatively affects the development of the birds' immune system. In a comprehensive study with 20,000 chickens per house, the house with the BioOx Air Cleaning System running saw a 48% reduction of measured ammonia and a 32% reduction in mortality over the control house without BioOx.

A CASE STUDY IN ADVANCED ENVIRONMENTAL MONITORING

www.hygiena.com

In a recent collaboration, Aviagen, a global leader in poultry genetics, and Hygiena, a pioneer in hygiene monitoring solutions, have demonstrated how advanced technology can revolutionise hatchery practices.

This partnership, detailed in the case study "Optimisation of Environmental Monitoring Solutions in Poultry Hatcheries for Sustainable Practices," exemplifies a proactive approach to contamination control. Aviagen, with its extensive network of hatcheries and a long-standing commitment to excellence, sought to harmonise its global hygiene standards. Recognising the limitations of traditional methods, they turned to Hygiena's SureTrend platform, a cloud-based solution that enables rapid, accurate, and consistent ATP (adenosine triphosphate) testing.

The shift towards digital record-keeping offers several key advantages. Firstly, it enhances data visualisation and analysis, providing real-time insights into hygiene performance. This empowers hatchery managers to identify potential issues swiftly and implement corrective actions immediately, minimising the risk of contamination outbreaks. Secondly, the SureTrend platform facilitates seamless data sharing and collaboration among different stakeholders, improving communication and streamlining decision-making processes.

The successful implementation of Hygiena's solutions across Aviagen's global operations underscores the importance of strategic partnerships within the poultry industry. By combining cutting-edge technology with industry expertise, companies can drive innovation, improve animal health and enhance the overall sustainability of poultry production.

INSIGHTS*into*
PATHOGENS & CONTAMINATE CONTROL

SUSTAINABLE HATCHERY PRACTICES MADE SIMPLE

duraplasinc.com

Sustainability is quickly moving beyond being considered a "nice-to-have" to a "must-have." For hatcheries, this means reevaluating every aspect of their operations, including the materials and tools they use.

DURA-FLAT poultry egg are designed to provide maximum egg protection while supporting sustainable practices. Their durable, reusable, and hygienic design is redefining how hatcheries balance efficiency and environmental responsibility.

Improved hygiene and lower contamination risk
Egg safety is a top priority in hatcheries, and contamination can lead to devastating losses. Traditional materials like wood are porous, making them breeding grounds for bacteria. Cleaning these materials often requires harsh chemicals that can harm the environment and leach into water sources.

DURA-FLAT Poultry Egg Flats offer a nonporous surface, these flats resist bacterial growth and are easy to clean with mild, eco-friendly cleaning agents. This has several advantages:

- Reduced chemical usage: Harsh disinfectants are unnecessary, minimising their environmental impact.
- Lower water consumption: Cleaning DURA-FLAT requires less water compared to other materials.
- Better egg safety: The flats' design prevents contamination, protecting eggs during transport and storage.

By reducing the need for strong chemicals and excessive water, DURA-FLAT helps hatcheries lower their environmental footprint while maintaining the highest standards of hygiene.

AN INNOVATIVE SOLUTION FOR VACCINATION PLANNING ON POULTRY FARMS

www.hipra.com

HIPRA is pleased to announce the launch of a new calculator called "Poultry Farm Solution Vaccination Plan", an innovative tool that facilitates vaccination planning on poultry farms. Due to the complexities involved in creating specific vaccination protocols for each farm, HIPRA has developed this calculator to ease the task for professionals in the sector.

This new resource is designed to assist veterinarians in creating personalised immunisation programs tailored to the specific needs of each farm.

Key Benefits:

- **Complete customisation:** allows the creation of vaccination schedules adapted to the particularities of each farm, considering factors such as species, age, and specific conditions of the animals.

- **Application optimisation:** helps assess the vaccination process to maximise the health and productive performance of the birds, directly benefiting poultry producers.

With this new solution, HIPRA strengthens its position as a strategic partner for professionals in the poultry sector, providing solutions that contribute to the success of poultry farms. You can access the calculator on the hipra website.

Managing Feed Inputs with Innovative Solutions

by Vahid Khaksarzareha, Global Species Application Specialist, ADM's animal nutrition
adm.com

Optimal nutrition is essential for poultry and providing the right balance of feed inputs profoundly impacts overall bird health, feed efficiency, egg quality and reproductive success, all of which are essential to maximising productivity. For layers, the goal is to feed in a way that maximises egg production and quality, while breeders need feed to support consistent reproductive performance.

With their specialised functions, nutritional requirements for layers and breeders differ significantly. As such, poultry producers recognise the key to maximising both egg production and overall flock health lies in providing comprehensive, targeted nutrition solutions that address both specific needs throughout various stages of life cycles. By understanding the physiological demands of layers and breeders, the poultry and feed industries can deliver nutrition solutions that not only enhance productivity but also contribute to bird health and longevity. From egg quality and fertility to gut health and overall health and wellness, essential nutrients such as proteins, vitamins and minerals, alongside other feed additives, must be carefully calibrated to support the specific life stage and productivity goals of the birds.

Establishing the Foundation

Poultry productivity is fundamentally linked to bird health and wellness. Birds that are in good health are more likely to absorb nutrients effectively, maintain consistent energy levels and perform well over their productive lifetimes. An important focus area is gut health, which is central to nutrient absorption and immunity.

Studies conducted by ADM have demonstrated that an innovative and patented Copper Exchanged Clay has the capability to modulate the intestinal microbiota at low concentration thanks to the well-known anti-microbial properties of copper (Meyer et al. 2015, Gall-David et al, 2017). The role of microbiota in digestion, nutrient absorption and the link with the animal's growth performance is well established.

During specific periods, an imbalance of the gut microbiota may occur and affect the animal's performance and well-being. Improved gut health not only supports Keeping the animal in good health supports immune function but also translates into better feed efficiency and long-term productivity, allowing layers to produce more eggs and breeders to maintain reproductive performance. By addressing gut health early

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on, producers can support their flocks' short-term and long-term productivity. For breeders, a healthy gut translates into better reproductive health and fertility, while layers benefit from maintained egg production due to increased nutrient uptake efficiency.

Understanding Egg Production and Quality

Layers need nutrient-rich diets that promote consistent and high-quality egg production, while breeders require diets that support reproductive health and production of high-quality hatching eggs. Egg quality and production are critical measures of productivity. Achieving high-quality eggs requires a balanced supply of essential nutrients, such as amino acids, calcium and phosphorus, which support both the formation of eggshells and the health of the bird itself.

Laying hens are expected to produce 500 quality eggs up to 100 weeks of age, with many producers seeking solutions to extend the egg production cycle and control overall eggshell quality. However, in the last phase of the cycle, egg production declines and the likelihood of cracked eggs increases due to decreased shell quality in terms of shell weight, thickness and breaking strength 's liver and ovarian metabolism. As the production periods for laying hens extend, the reduction in egg production becomes more pronounced, resulting in decreased production profitability. For instance, ADM's Perfegg helps egg producers improve their hens' laying performance and their profitability at the end of the laying period when egg production decreases. This solution optimises the producers' investment in the genetics of pullets and also contributes to lower feed costs thanks to the improvements to FCR (Hao et al., 2021). For breeders, Perfegg contributes to improve the number of day-old chicks.

Improving Feed Efficiency

Efficiency in feed conversion is critical to profitability in poultry production as it determines how much product (egg mass or meat) is produced per unit of feed. Layers focus on sustained, high-level egg production, while breeders require a balanced nutritional intake to support fertility and avoid excess weight gain. Both of these are managed through energy-dense feeds that ensure birds receive the nutrients they need to fuel their essential functions.

For example, during peak egg production, layers require higher energy levels to maintain consistency in egg-laying. If energy needs are not met, the birds may exhibit reduced productivity, as their bodies will divert resources away from egg production to sustain essential metabolic functions, whereas excessive feed intake can lead to weight gain and can negatively impact fertility in breeders. ADM's PowerJet addresses these challenges by offering a feed additive solution that helps poultry producers strike this delicate balance. Field and R&D trials run in Morocco and France demonstrated that PowerJet™ contributes to improve the feed intake and nutrient levels while allocating the maximum of "efficient energy" to poultry's needs during peak production periods. Additionally, precise nutrition strategies seek to mitigate these challenges by recognising the unique dietary requirements of each animal. Factors such as age, weight, activity level and health status are considered in creating tailored feeding solutions for each segment. Poultry receive the proper amount and composition of nutrients they require, promoting optimal growth, efficient FCR and minimised waste.

By providing customised diets, poultry producers can help prevent under- or over-nutrition while also reducing the risk of metabolic disorders, nutrient deficiencies and other health-related issues—ultimately leading to greater profitability. At ADM, our commitment to optimising productivity in poultry stems from a holistic understanding of nutrition. For both layers and breeders, precision feed formulations that account for protein, energy, minerals, vitamins requirements and gut health are essential.

By tailoring our feed inputs to meet the specific needs of each type of bird, we are able to enhance not only productivity but also the long-term health and sustainability of both poultry and poultry operations. Through innovation in feed technology and a science-based approach to nutrition, partnering with a global partner like ADM can support poultry producers in maximising poultry productivity, ensuring both layers and breeders perform at their best. ■

Focus on Research sponsored by the Incubation and Fertility Research Group (IFRG)

Rooster Fertility: Diagnosis and Conservation

In poultry, far fewer males than females are involved in reproductive management programs. As a result, male selection has important consequences, particularly in terms of economic prospects and dissemination of genetic progress, depending on their reproductive capacity. Developing effective approaches for diagnosing male fertility and maintaining it over long periods of time are therefore two major challenges to improve the poultry industry.

Currently, the assessment of male fertility is based on the in vitro evaluation of semen quality, including semen volume as well as sperm concentration, morphology and motility. However, these criteria correlate poorly with male fertility observed in vivo. In our laboratory, we have developed a new strategy to diagnose sperm fertility based on proteomic methods, essentially Intact Cell MALDI-TOF Mass Spectrometry (ICM-MS), a method that can be applied directly to an isolated cell population and that is capable of rapidly characterising the intact endogenous peptides and proteins involved in various cellular functions. We demonstrated that ICM-MS applied to ejaculated sperm discriminates chickens according to their fertility status by comparing their semen protein profiles and could be used as a fertility diagnostic test based on predictive mathematical models in an experimental context.

At the same time, biotechnological methods for preserving male fertility are mostly based on sperm cryopreservation. This approach is one of the most widely used to conserve animal genetic resources, based on the collection of large quantities of cells, respect for animal welfare and the possibility of long-term storage and long-distance exchange. While several protocols have been proposed for cryoprotection of chicken spermatozoa, the use of glycerol as cryoprotectant in combination with straw packaging remains the most efficient approach for freezing chicken spermatozoa. However, the presence of glycerol in post-thawed semen samples causes a severe reduction in fertility, leading to the need to remove glycerol prior to insemination. Our recent work has described a new solution to remove glycerol from post-thawed chicken semen. This new method can be processed at room temperature, restores sperm fertility in vivo and can save 44% of the time compared to the classical removal procedure.

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Plumage Colour Variety Effects on Body Weight and Semen Quality in Leghorn Roosters (Gallus gallus domesticus)

The aim of this study was to point out the differences between Leghorn colour varieties in order to investigate colour-based uniqueness and commonalities in a world-wide known heritage Italian chicken breed.

Semen samples collected from 50 Leghorn roosters (N=9 Silver, LHS; N=21 White LHW; N=14 Black, LHB; N=6 Gold, LHG) were analysed. Roosters (10 months old) were reared on floor following standard chicken breeder management and semen was routinely collected by the dorso-abdominal massage technique. Individual body weight (LBW) was recorded. Three quantitative (Volume VOL; Volume/LBW ratio VWR; Concentration CON) and 11 qualitative parameters (Viability VIT; Total Motility MOT; Progressive Motility PRM; Curvilinear Velocity VCL; Straight line Velocity VSL; Average Path Velocity VAP; Linearity LIN; Straightness STR; Wobble WOB; Amplitude of Lateral Head Displacement ALH, Beat Cross frequency BCF) were analysed on fresh ejaculates just after collection. ANOVA analysis was carried out using GLM procedure of SAS® 9.4 (colour variety=source of variation; Student's t-test; LSMeansSE). PCA analysis was performed using Past 4.0 statistic software. Significant differences (p 0.05) were found in LBW, VWR, LIN, WOB, ALH. In PCA analysis, LBW describes more than 99% of the variance, VCL and LIN are the qualitative parameters which better describe samples variation. LHG were the heaviest and LHW the lightest roosters (2.510.12 vs. 1.910.06 Kg), inverse proportion with LBW was recorded in VWR (LHW=0.070.01 vs. LHG=0.050.01, mL/Kg).

LIN (%) and WOB (%) were higher in LHB samples and lower in LHG samples (44.151.96 vs. 32.633.00; 65.371.55 vs. 56.612.36). On the contrary, LHG samples showed the highest values for ALH (m) and LHB the lowest: 4.050.23 vs. 3.070.15. PCA analysis reveals the differentiating effect of body weight and at the same time the effect of VCL quality parameter as second component.

Different levels of clustering ability of the varieties on the two components have been defined. Deep knowledge of breed/variety-specific features under productive, reproductive, and behavioural aspects supplies objective data for biodiversity conservation projects.

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focus on RESEARCH

The Effects of Light During Incubation and a Post-Hatch Enrichment on White Leghorn Layer Chick Development and Behaviour

Light exposure during artificial poultry egg incubation could be a key element underlying embryo development, post-hatch performance, and post-hatch behaviour. While previous research has primarily focused on mitigating negative effects, the influence of light during incubation in relation to positive animal welfare indicators and interaction with enrichment has received less attention. Here, we investigated the effect of light during incubation and environmental enrichment on body mass and chick behavioural responses. We quantified behavioural time budgets and activity levels, environmental usage, and interactions with the enrichment of a dark shelter. White Leghorn chicken eggs were incubated in temperature controlled photoperiodic boxes under either constant full spectrum white light (n=72; 24L:0D) or darkness (n=72; 0L:24D).

The chicks were split into 8 pens across 2 experimental rooms post-hatch, and two pens per room contained a dark shelter. Body mass and behavioural data were analysed with analysis of variance (ANOVA) using the statistical software program R version 4.2.2. Results indicate that at 4 weeks old, chicks incubated under light were heavier compared to those incubated under darkness ($p<0.05$). The dark shelter enrichment did not have an effect on chick body mass development. Light during incubation had no effect on behavioural time budgets and activity levels, but the presence of the dark shelter significantly lowered foraging ($p=0.01$), decreased eating ($p=0.01$), and increased resting ($p<0.001$) behaviour. Together these results suggest that light during incubation can affect chick growth rates and this might be a consequence of alternated metabolic and physiologic processes. Data on the dark shelter showed that light during incubation does not influence how chicks would interact with the enrichment. However, chicks use this enrichment, resulting in lower activity levels overall.

These findings have the potential to synchronise behavioural patterns and therefore mitigate behavioural problems like feather pecking. The implementation of adequate light-dark cycles into commercial practice is not a huge cost, but it could have a tremendous impact on the welfare of billions of chicks. Further research into the effects of environmental conditions in early life could improve chick health as well as enhance laying hen welfare in later life.

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Effects of SPIDES and Preincubation Warming Profile on Embryonic Mortality and Hatchability of Long-Stored Eggs from Young Broiler Grandparent Flocks

Longer egg storage times (>7 d) are common in broiler parent and grandparent hatcheries to obtain the requested flock size. However, prolonged storage is known to decrease hatchability.

This study aimed to examine the interaction of short period incubation during egg storage (SPIDES) and preincubation warming (PW) profile after storage on embryonic mortality, and hatchability of long stored eggs. Hatching eggs were obtained from two Ross female line grandparent flocks at 29 and 30 wk of age for trials 1 and 2, respectively. In both trials, 10.800 eggs were stored for 14 d at 15°C. During the storage, the eggs were either kept continuously in the storage room (No-SPIDES) or were subjected to a SPIDES treatment, with 3.5 h above 32°C EST on d 5 of the storage period in a Petersime Re-Store machine (Figure 1). After storage, three preincubation warming profiles were used. These treatments were warming for 6 h (PW6), for 24 h (PW24) at 28°C, or warming eggs from 15°C (storage temperature) to 37.8°C in about 24 h (PWSI24). Preincubation warming procedures were conducted in a Petersime setter before incubation (Figure 2). After all treatments reached to incubation temperature, all eggs in each trial were incubated in the same setter and hatcher. In each trial, a tray of 150 eggs constituted a replicate, and 12 replicate trays (1.800 eggs) were set per subtreatment group. The data from both trials were combined and were subjected to 2-way analysis of variance (ANOVA) with trial as a block using the general linear model (GLM) procedure of SAS. Both SPIDES and long preincubation warming improved the hatchability ($P < 0.05$). However, the interaction between SPIDES and preincubation warming profile was observed for early embryonic mortality ($P = 0.047$) and hatchability of fertile eggs ($P = 0.042$). In No-SPIDES group eggs, hatchability was increased by both longer warming treatments (PW24 and PWSI24) compared with that of 6 h preincubation warming (PW6), due to lower early embryonic mortality, whereas no effect of preincubation warming profile was observed when eggs were subjected to SPIDES at 5 d of 14 d storage period. We concluded that the detrimental effects of a long storage period may be practically ameliorated by either SPIDES or by longer preincubation warming. However, the positive effect of SPIDES was more evident than the longer preincubation warming for the eggs from young flocks.

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Chemerin Present in Egg White, Oviduct and in Embryonic Annexes During the Embryo Development in Hens: a Potential Tool for the Genetic Selection?

One of the goals of breeding companies is

Does Vaccination Cause Stress? Comparison Between the Effects of in-ovo and Post-Hatching Vaccination on Stress Level in Chicks.

Poultry production is one of the largest and fastest-growing sectors of animal husbandry. The significant epizootic pressure increased the demand for poultry vaccinations in the hatcheries. Day-old chicks are routinely vaccinated with the manual subcutaneous injections. The in-ovo vaccination is fully automated and performed on eggs, allowing day-old chicks to be transported directly to farms immediately after sorting. The literature confirms that the in-ovo vaccination provides earlier immune protection (1) and is less stressful for the chicks (2).

The in-ovo vaccination eliminates the need for repeated vaccinations at the farm level, and thus reduces the overall stress level (3). The goal of this study is to compare the effects of the in-ovo vs. subcutaneous vaccination on the short-term stress in the embryos or day-old chicks. The experiment was conducted on the same batch of the hatching eggs for in-ovo and subcutaneous vaccination. On day 18 of the incubation the embryos were vaccinated in-ovo using Egginject (Ceva Ecat-iD). The samples were collected: blood (n=24) for glucose and corticosteroid level and pituitary gland (n=8) for the gene expression. For subcutaneous vaccination, the day-old chicks were vaccinated with Desvac Dovac (Ceva), and the sampling was repeated.

The corticosteroid is a stress hormone and biomarker for short-term stress. It was detected in the blood serum with two methods: ELISA and LC/MS. The gene expression study was based on RNA isolated from pituitary gland and it included genes responsible for activating hypothalamus-pituitary-adrenal axis (6, 7). The glucose level was significantly higher in embryos vaccinated in-ovo (196 mg/dL) vs. unvaccinated (161 mg/dL) ($P<0.05$). But, it was the same (about 188 mg/dL) in day-old chicks irrespective of the vaccination ($P>0.05$). The results of the corticosteroid levels and gene expression will be presented.

This research contributes to the knowledge on the chicken welfare, stress responses, and immunology.

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the production of viable and robust chicks. New fertility biomarkers, such as chemerin protein, may be used to improve reproductive performances in genetic program and reduce early embryonic mortality.

The aims were to (1) determine chemerin concentrations in albumen during the cycle of laying of broiler and layer hens (2) identify a potential link between chemerin concentrations in albumen and reproductive performances and (3) investigate the presence of chemerin in reproductive tract and its role in embryonic mortality. Eggs from 100 layer and broiler hens were collected during five consecutive days at three periods: before and after the laying peak, and at the end of laying. For each egg, chemerin concentration in albumen was measured by ELISA assay.

Chemerin expression in the magnum was measured by RT-qPCR. Moreover, 80 eggs were incubated to determine the chemerin expression in embryonic annexes. And, 1,200 eggs were injected with chicken chemerin antibodies (0.01, 0.1 and 1 µg/mL) at embryonic day 7 of incubation to evaluate the effect on embryonic mortality. Both breeds differed in chemerin albumen levels during their laying cycle. Chemerin amounts in albumen were positively correlated with fertility rates for layer hens ($r= 0.26$; $p= 0.01$) and negatively correlated with laying ($r= -0.51$; $p< 0.0001$), fertility ($r= -0.31$; $p= 0.03$) and hatchability ($r= -0.29$; $p= 0.01$) rates for broiler hens. Chemerin expression was higher in the magnum of layer hens compared to broiler hens. During incubation, chemerin levels in allantoic fluid were unchanged whereas significantly increased in amniotic fluid for both strains.

The inhibition of chemerin increased embryo mortality from the low dose 0.01 µg/mL antibodies for both strains ($p< 0.0001$).

The concentration of chemerin in albumen fluctuated during the cycle of laying and between breeds. This biomarker was correlated with different reproductive parameters depending of the breed. The inhibition of chemerin in egg white lead to an increase of embryo mortality suggesting a major role of chemerin in embryonic annexes for embryo growth.

The use of this new biomarker could improve reproduction rates and subsequently, contribute to economic benefits for breeding companies.

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International News

hatchery news from around the world

Reducing day-old culling in the US poultry industry

Hendrix-ISA LLC is the U.S. distributor of Hendrix Genetics, and Respeggt technology is the first technology in the U.S. that can identify the sex of embryos in both white and brown breeds

We are proud to announce the implementation of Respeggt technology to reduce the controversial practice of day-old male chick culling in the poultry industry, offering a more ethical and sustainable solution for poultry farmers in the US.

"Our decision is based on the outstanding results that Respeggt has been achieving for years in Europe, particularly with the strong Dekalb White genetics," Neal Martin, General Manager of Hendrix ISA told International Hatchery Practice. The Respeggt technology allows for the early determination of a chick's sex before hatching, eliminating the need to cull male chicks, which has been a widely debated and controversial practice. This innovative technology aligns with Hendrix Genetics' commitment to sustainability and animal welfare, offering a major leap forward in the company's goal of fostering a more responsible agricultural industry.

"This technology is a game-changer for farmers, helping increase efficiency while adhering to the highest ethical standards. Our adoption of Respeggt Technology represents a significant milestone in our ongoing efforts to improve the poultry industry," added Steve Welch, Director of Sales & Marketing.

The integration of Respeggt technology will enable Hendrix Genetics to provide farmers with a tool that identifies the sex of embryos with precision, leading to more productive and resource-efficient poultry production.

This marks a new era of innovation in the U.S. poultry industry, focusing on both the future of farming and the welfare of animals. This spring, Hendrix-ISA will start the implementation with DeKalb White birds for the Kipster farm in collaboration with MPS Egg Farms to meet Kipster's commitment to no-culling of male chicks.

www.hendrix-genetics.com

Genus Focus non-invasive in-ovo sexing

The Genus Focus offers contactless sex classification within the egg by day 12 of embryonic development. It accurately categorises eggs as female, male, or clear, suitable for all egg colours and poultry breeds, with no impact on hatchability.

Each module can scan 3,000 eggs per hour, scalable up to 8 modules for a combined throughput of 24,000 eggs per hour. This innovative solution ensures safety as it does not emit ionising radiation, preserving embryo development.

The Genus Focus technology is a modular solution based on Orbem's AI-powered imaging with Vencomatic Group's automation equipment. This state-of-the-art technology harnesses the power of AI to refine its performance.

Already transforming operations in over five countries, the Genus Focus represents the beginning of a bold journey towards a future-proof industry. With in-ovo sexing as the launching point, Orbem and Vencomatic Group are innovating production processes together with hatcheries. Join us in this revolution, where technology meets egg production to shape a more efficient, sustainable, and progressive future for all.

www.vencomaticgroup.com

USDA Approves First-Ever Import of Live Vaccine into USA

The United States Department of Agriculture (USDA) has approved importation of a live Avian metapneumovirus vaccine, Vaxxon SHS, into the U.S. market. This unprecedented approval marks a significant milestone in the fight against Avian metapneumovirus (aMPV).

Vaxxon SHS is a lyophilised live attenuated metapneumovirus vaccine to protect against Swollen Head Syndrome in poultry. Developed by Vaxxinova Italy, this innovative vaccine has demonstrated exceptional efficacy and safety through rigorous testing and evaluation.

"This landmark approval is a testament to our commitment to advance animal health and meet the needs of our customers" Brian Harberts, Managing Director, spokesperson for Vaxxinova." told International Hatchery Practice.

The USDA's decision marks an important milestone for the US turkey and poultry industry who have been devastated by aMPV."

"As a result of the collaboration with industry organisations such as National Turkey Federation, poultry producers, and the USDA, Vaxxinova US is able to offer the same vaccine to the US market that Vaxxinova has been providing to customers for the past twenty plus years".

vaxxinova.com

Aviagen

Hatchery TIPS 75

KEEP VACCINE PREPARATION ROOMS BIOSECURE

Biosecurity is crucial in ensuring the long-term health of day-old chicks. Vaccine preparation rooms play a central role in this process, being locations where vaccines and diluents are handled. If not treated with due care, bacteria and other pathogens can contaminate the vaccine batches, which are injected into the chicks as they are vaccinated. Stringent biosecurity control and isolation measures are essential.

To prevent cross-contamination in the vaccine preparation room, follow these recommendations:

- Make sure that the room is well-sealed at all points. Keep the door shut when not in use.
- Ventilation should be set up so that the room static pressure is maintained at a higher value than that of any of the surrounding rooms to stop dirty air from entering the room. Use an air sanitiser to keep bacterial levels in the air low.
- Before entering the room, staff should put on fresh PPE (lab coats, masks, gloves and face shields). Shoes should be changed before entering the room. Hands should be washed and sanitised before entry.
- Set up a regular cleaning and disinfection program of room surfaces and equipment at the end of each hatch day, using approved and effective products. Check that it is done, and include the room in the regular hygiene swabbing of the whole hatchery.
- Restrict access to the room to approved and trained staff only.
- Don't share equipment between different areas if possible. If unavoidable, ensure the equipment is thoroughly cleaned, disinfected, and swabbed before entry.
- Maintain a rolling program of staff training so that all hatchery employees know why the room needs special treatment and the consequences if anything goes wrong.

Maintaining biosecure vaccine preparation areas in hatcheries is vital for protecting animal health and the economic success of the operation. Strict adherence to biosecurity protocols ensures that vaccines are prepared and administered effectively, protecting the birds and the operators involved in the process. To achieve this goal, monitoring all possible details that might negatively influence hatch quality and field performance is necessary.

Revolutionary, non-invasive in-ovo sexing technology

In a groundbreaking development for the United States egg industry, an Iowa hatchery has become the first site to offer an automated in-ovo sex determining solution in the nation.

An identical machine is also operational at a hatchery in Texas. Chicks from the hatchery are expected to go to their first customer – NestFresh Eggs – by December 13, 2024, putting eggs sourced from in-ovo sexed hens into the marketplace by June 2, 2025.

The machine, called Cheggy, is the first non-invasive in-ovo sex determining technology of its kind to determine the sex of a chick before hatching. This is currently the most cost-effective process on the market that integrates into existing production lines. The technology was created by Agri Advanced Technologies (AAT) – a German-based company.

Cheggy is a cutting-edge solution that boasts an impressive high accuracy rate, setting a new standard in modern egg production.

Utilising hyperspectral measurement technology, the system identifies differences in the measured light spectra to accurately classify the gender based on feather colour.

Because the technology is non-invasive, it bears no risk of contamination, ensuring the quality and safety of the embryos throughout the sorting process – a key differentiator from other in-ovo sexing machines.

Cheggy is the fastest machine of its kind and can sort up to 25,000 brown layer hatching eggs per hour and unit, significantly increasing efficiency and productivity for hatcheries. In 2019, AAT started the transformation process with its Cheggy in Germany and France and is now the market leader for in-ovo sex determination of brown layer lines in Europe with 12 units in 7 countries.

Furthermore, the sustainable nature of this non-invasive technology is evident as it requires no expensive consumables and therefore produces no non-recyclable waste, making it a cost-effective solution for hatcheries.

www.agri-at.com

From revolution to industry standard

HatchTech celebrates ten years of HatchCare. Since the launch in 2014, more than 7 billion chicks have hatched in the revolutionary hatcher with feed, fresh water and light. In a decade, HatchCare has changed the industry standard."Upon the introduction, there was a lot of skepticism, but the results speak for themselves. Today, nobody will question the benefits of early feeding and drinking", Joost Ter Heerdt, Commercial Director of HatchTech Group told International Hatchery Practice.

hatchtech.com

onal News

n around the world

Latest innovation for poultry broiler production

Ceva Animal Health have launched Ceva Genesys, for automatic and accurate broiler male and female separation at hatch to achieve better flock homogeneity.

With an increase in demand for poultry meat and a rising concern about environmental impact, the need to optimise the production process for a sustainable poultry meat supply is becoming more and more critical for poultry producers.

"Since 2011, Ceva has worked side-by-side with the poultry industry to modernise hatchery processes."

"We have successfully equipped more than 150 hatcheries with the next generation of candling technology, Laser Life, or the in-ovo vaccination system, Egginject. Building on our success, we are now installing our latest state-of-the-art technology, Ceva Genesys, for gender sorting for broilers. We are pleased to offer our customers this innovation, which will bring value across their entire production chain," Sylvain Comte, Poultry Franchise Director at Ceva Animal Health told International Hatchery Practice.

Ceva Genesys allows for automatic broiler male and female sorting at hatch. By ensuring consistent gender sorting accuracy, poultry producers can optimise the rearing process to closely fit the birds' needs, consequently improving flock performance.

www.ceva.com

Animal AgTech company Targan Inc. has announced a new contract with IKO Kompania Drobiarska (IKO), for the installation of WingScan, Targan's automated feather-sexing system. Following its debut at EuroTier 2024 in Hannover, Germany, this collaboration demonstrates Targan's commitment to delivering innovative, AI-powered solutions to poultry producers across Europe. IKO is a fully integrated poultry producer in Poland, providing high-quality protein products to major retailers, wholesalers, and partners across Europe, Africa, and Asia. The WingScan system offers a throughput of 40,000–160,000 chicks per hour, depending on configuration, with up to 98% accuracy. Automated chick sexing enhances efficiency and performance, providing downstream benefits at both the farm and processing levels. By implementing gender-specific rearing strategies, producers can improve flock uniformity, ultimately optimising plant operations.

www.targan.com

International News

hatchery news from around the world

EU marketing approval for ND Clone.

Vaxxinova is pleased to announce that the European Commission has granted a marketing authorisation for the poultry vaccine Vaxxon ND Clone in the EU. The adoption follows the positive opinion from the Committee for Medicinal Products for Veterinary Use (CVMP) of the European Medicines Agency mid-October.

Vaxxon ND Clone is a live freeze-dried vaccine for active immunisation of chickens (broilers, future layers and breeders) to reduce mortality and clinical signs of disease caused by infection with Newcastle Disease virus.

Vaxxinova's licensed and autogenous vaccine solutions are already available in large parts of the world. Vaxxon ND Clone is the first EU licensed poultry vaccine for Vaxxinova in the European market and marks the introduction of a broader EU licensed poultry vaccine portfolio

vaxxinova.com

Joint venture into the Iraqi Market

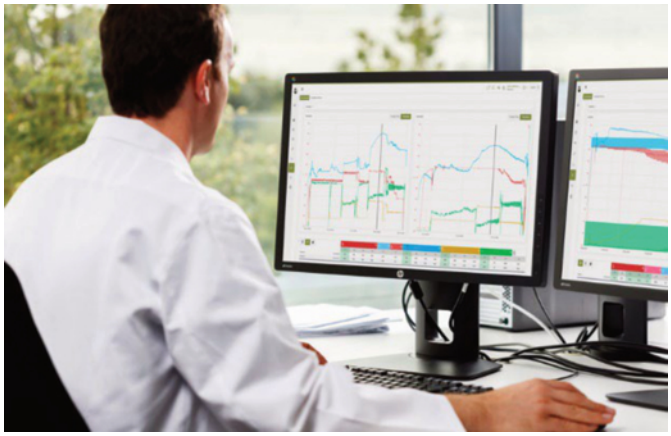
Utrix s.a.l. is pleased to announce that its portfolio of innovative solutions designed to enhance animal performance and well-being is now available in Iraq through distribution by DMA group. DMA Group is proud to collaborate with Utrix to introduce their advanced nutritional solutions to the Iraqi market.

This partnership reflects our shared commitment to excellence and innovation in the veterinary and agricultural sectors.

This partnership marks a significant step for UTRIX as it continues to expand its reach and impact in the Middle East region.

The collaboration with DMA Group is expected to bring advanced nutritional solutions and technical support to the Iraqi livestock industry, enhancing productivity and animal health for more sustainable animal production.

www.utrix.com



Hatchery digitalisation: Turning data into performance

Hatcheries play a key role in the poultry value chain.

They need to maximise the genetic potential that is inside the hatching eggs to ensure a reliable output of healthy, uniform day-old chicks.

However, they face numerous challenges to achieve this goal, such as planning millions of hatching eggs with different backgrounds, dealing with variable operator skills, and much more.

Eagle Trax is Petersime's answer to this, it enables data-driven optimisation of hatchery operations to help hatcheries overcome today's and tomorrow's challenges.

Eagle Trax incorporates powerful functionalities organised into multiple modules, ensuring the whole hatchery operation can work more efficiently and effectively.

Petersime regularly adds new functionalities and modules to the software as the company continues to focus on maximising results and driving business value.

Marked by continuous evolution, the software currently consists of five modules:

- Basic module: provides a sharp overview of the entire hatchery at any time.
- Maintenance module: facilitates efficient maintenance planning and enables predictive maintenance management.
- Trax module: is the hatchery manager's virtual assistant.
- Breeder farm module: allows hatchery managers to optimise the egg supply and hatchery production planning.
- – Grow-out farm module: allows hatchery managers to optimise the chick order and delivery planning, while automatically receiving feedback from the grow-out farm on chick mortality.

As a secure cloud-based software, Eagle Trax can be accessed anytime and anywhere, regardless of device type (pc, tablet or smartphone) or user location (office, home or field).

www.petersime.com

EVENT DIARY

2025

VIV ASIA
Bangkok, Thailand
12-14th MAR 2025
www.vivasia.nl

Turkey Science & Production Conference (TSPC)
Cheshire, UK
18-20th MAR
tspc-turkeys.com

ESPN 2025
Maastricht, The Netherlands
23-26th June
espn2025.eu

SPACE
Rennes, France
6-18th September
space.fr

23rd WVPA Congress
Kuching, Malaysia
6-10th October
wvpac2025.com

IFRG Meeting 2025
Berlin, Germany
22-24th October
ifrg.be

XXIIIrd WVPA CONGRESS
WORLD VETERINARY POULTRY ASSOCIATION
KUCHING · MALAYSIA 2025

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Sustainable Healthy Poultry for a Healthier World

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