

JULY - SEPTEMBER 2022

LIVESTOCK & POULTRY

MIDDLE EAST & ASIA

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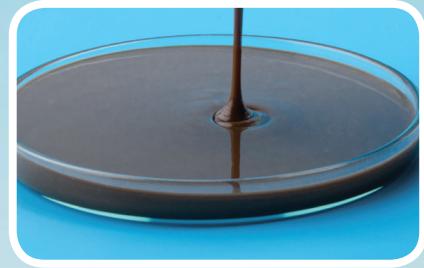
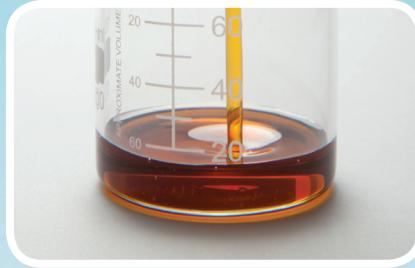
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LIVESTOCK & POULTRY

MIDDLE EAST & ASIA



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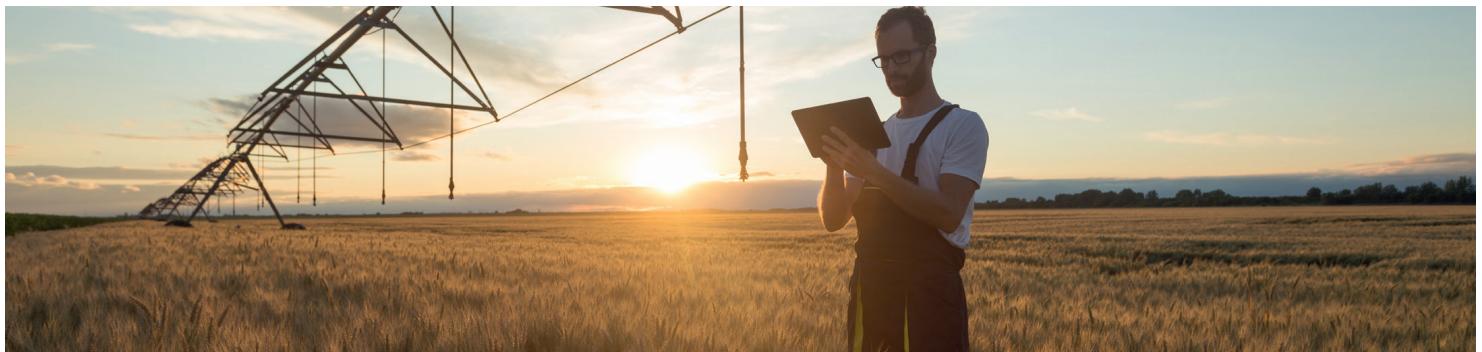
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- Additional Mandatory Feed **Fraud Prevention** and Feed Defence module
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- **Transparency** on the certification scope of certified feed business through our public list
- **Facilitate** the worldwide trade of Specialty Feed Ingredients and their Mixtures

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News //

INNOVAFEED & CARGILL EXTEND THEIR PARTNERSHIP TO BRING HEALTHY NOVEL INGREDIENTS TO AQUAFARMERS

The aquaculture industry is focused on its role in ocean stewardship and addressing the sustainability of food systems. Cargill and Innovafeed are committed to actions that identify and grow planet-friendly ingredients, find new ways to reuse by-products and develop fish nutrition that promotes and enhances the health of farmed fish.

The agreement combines Innovafeed's expertise in formulating precision insect ingredients and Cargill's global

animal nutrition capabilities to scale up the use of insect ingredients in multiple types of animal feed. Under this new contract, Cargill will benefit from high-performance and sustainable ingredients for salmonids. Insect-based feed has become a competitive alternative to other sources of protein at all levels, including nutrition, production, and sustainability.

Reducing CO₂ emissions in the aquaculture industry is core to the Cargill's SeaFurther Sustainability Initiative. Leveraging Innovafeed's

high-quality insect meal in aquafeed saves up to 16,000 tons of CO₂ for every 10,000 tons of insect protein.

Together, Cargill and Innovafeed maximize the use of resources to create a high-quality feed with much less waste. Co-products of the agriculture industry are used to feed black soldier fly larvae. Once the larvae reach a certain stage, protein and oil are extracted from the larvae, which can be used in Cargill's feed for aquaculture species, and young animals.

KEMIN INDUSTRIES LAUNCHES NEW PROBIOTIC SOLUTION, ENTEROSURE™

Kemin Industries, a global ingredient manufacturer that strives to sustainably transform the quality of life every day for 80 percent of the world with its products and services, has launched ENTEROSURE™ to control the growth of pathogenic bacteria in poultry and livestock. Kemin unveiled its latest intestinal health product at a global launch event in Dubai. The company's newest probiotic solution promotes a healthy microbiome, drives intestinal resilience, manages gut health challenges and improves animal productivity.

Enteric disease challenges are an ever-present pressure on livestock and poultry producers, who are already facing significant performance and economic impact from the global trend toward

reduced antimicrobial use and the rising cost of raw materials. These challenges require an effective and comprehensive solution that helps drive intestinal resilience to prevent disease before it develops—all while safeguarding animal health, welfare, growth and performance.

"Leveraging the pioneering research that launched CLOSTAT™, our novel solution addresses the changing needs of animal producers," said G.S. Ramesh, Worldwide Group President – Animal Nutrition and Health, Kemin Industries. "ENTEROSURE, through its proprietary blend of probiotic Bacillus strains, expands on the scientifically proven efficacy of CLOSTAT's Bacillus subtilis PB6 against Clostridium perfringens by also managing the growth of Escherichia coli and other

Enterobacteriaceae, such as *Salmonella*."

Intestinal resilience is a crucial factor in producers' hierarchy of needs for their animals; up to 80 percent of antimicrobial use is intended to achieve resilience in the gastrointestinal system, a vital component in animal production. Kemin continues to drive innovation through its probiotic research program to support intestinal health management.

The company undertook a multiyear, global project to discover advanced solutions to enhance intestinal resilience while maintaining a robust program to improve feed conversion and weight gain and combat pathogens that contribute to dysbiosis, diarrhea, wet litter issues, foot-pad lesions and mortality.

EUROTIER 2022: WORLD-LEADING LIVESTOCK TRADE FAIR: SHOWCASING INTERNATIONAL SOLUTIONS WITH PROFESSIONAL TECHNICAL PROGRAM

As a world-leading trade fair for professional animal husbandry and livestock management, EuroTier 2022 will kick off with an attractive exhibition portfolio and technical program, featuring numerous market leaders and leading industry experts. Around 1,600 exhibitors from 55 countries will be presenting their innovations, products and services at the leading international livestock venue from 15 to 18 November, Hanover, Germany.

According to the latest EuroTier and EnergyDecentral Visitor Tracker survey, interest among potential visitors is currently very high. Some 98 percent of the national and international farmers surveyed are currently planning to visit EuroTier 2022, with 62 percent already certain that they will attend in Hanover. With spotlights, expert forums, conferences and industry events, the technical program focuses on "Transforming Animal Farming". Part of the program will be held as digital events, starting in October on www.dlg-connect.com, a digital knowledge-sharing platform launched and developed by DLG (German

Agricultural Society), EuroTier's organizer. The EnergyDecentral trade fair, to be held in parallel, will focus on the possibilities of decentralized energy generation in the current energy debate.

With around 1,600 expected exhibitors, 13 halls and some 240,000 square meters of exhibition space, as well as a high quality international technical program, EuroTier will once again be the highlight of the international livestock industry in mid-November, attracting an international and professional audience to this world-leading trade fair for animal farming and livestock management.

"With exhibitors from 55 countries, including numerous market leaders, and our international event and congress program with its long-running EuroTier features such as the TopTierTreff alongside a new start-up exhibition area 'DLG-AgrifutureLab' as well as the EnergyDecentral trade fair, EuroTier will be setting standards in terms of product and topic diversity. In short, EuroTier is the international industry platform and network of professional exchange," says Ines Rathke, EuroTier project manager, DLG.



Guiding Theme 2022

TRANSFORMING ANIMAL FARMING



- 160,000 highly qualified visitors
- 2,600 exhibitors, of which over 60% from abroad
- Over 250,000 sqm exhibition space
- Cooperation with strong specialist partners from the industry
- Many international events and activities
- Presenting solutions, discussing opportunities, rethinking processes – that's EuroTier 2022

2022 | 15 – 18 NOVEMBER
HANOVER, GERMANY

THE WORLD'S LEADING TRADE FAIR

BALADNA SIGNS DEAL TO ESTABLISH AN INTEGRATED DAIRY FARMING BUSINESS IN MALAYSIA

Baladna has entered into a shareholders' agreement with Malaysian companies FGV Holdings Berhad (FGV) and Touch Group Holdings Sdn Bhd (TGH), to develop an integrated dairy farming business in Malaysia.

Expected to be commercially operational by 2025, the project will produce 100 million litres of fresh milk per annum within the first three years and is expected to reach 300 million litres of fresh milk within 10 years. Based on Baladna's highly successful "grass to glass" concept, the joint venture will be fully integrated, from crop production to feeding the cows, to the processing and

sale of the highest quality fresh milk.

Baladna will own 40% of the joint venture, FGV owning 40% and Touch Group will own the remaining 20%. The project, covering an area of 3,259 hectares in FGV Chuping Agro Valley (FCAV), is expected to involve an investment of circa QAR 3.6 billion in phase one.

Commenting on the initiative, Piet Hilarides, CEO of Baladna said: "As a partner, Baladna will use its extensive experience in fresh milk production and brand development to substantially improve Malaysia's self-sufficiency in milk. We are delighted to be able to

partner with FGV Holdings Berhad and Touch Group Holdings"

The project also aims to position FGV Chuping Agro Valley (FCAV) as one of the leading agro-valley hubs in Malaysia, creating more than 2,000 job opportunities via the integrated dairy farming business. For Baladna, Qatar's largest locally owned food and dairy supplier with a production output of 500,000 litres of milk per day across more than 250 products, the initiative is part of an outward orientation towards key international markets. The initiative is part of Baladna's ambition to become an international dairy producer.

BRAZILIAN POULTRY EXPORT REVENUE INCREASED BY 33 PER CENT TO USD 5.260 BILLION

Brazilian poultry exports to Arab world increased by 6 per cent to 2.828 million tonnes in the first seven months of 2022 compared to the same period previous year while revenue boosted by a staggering 33 per cent to USD 5.260 billion. This was stated in a report released by the Brazilian Association of Animal Protein (ABPA) recently.

The international exports from Brazil climbed both in volume and revenue in the first seven months of 2022 with UAE and Saudi Arabia topping the list.

Osmar Chohfi, the President of the ABCC said: "These results strengthens Brazil's efforts to maintain exports above 400,000 tonnes per month until the end of the year. The figure indicates

a strong international demand for Brazilian goods. Arab nations continue to be one of Brazil's primary trading partners worldwide and the trade relations between the region and the largest South American country are only expanding. To further encourage more robust export and import activities, the Chamber has backed several efforts for establishing direct logistic lanes between Brazil and the Arab countries. Additionally, we have also favoured the restart of free trade agreement discussions following the pandemic."



Revenue in July rose by 20.7 per cent to USD 892 million. The United Arab Emirates (UAE) took the top spot with 37,800 tonne import, registering an 11 per cent growth while Saudi Arabia came third with 37,200 tonne import, witnessing an increase of 52.7 per cent.

AMLAN INTERNATIONAL LAUNCHES TWO NEW NATURAL ALTERNATIVES TO ANTIBIOTICS FOR POULTRY AND LIVESTOCK

The removal of in-feed antibiotics from poultry and livestock production has left a huge gap in the protection of animals from the devastating effects of enteric disease. To help producers recapture this protection, Amlan International, the animal health business of Oil-Dri® Corporation of America, has launched two new natural products — Phylox® Feed and NeutraPath® — that help optimize intestinal health and production economics in the absence of antibiotics.

Phylox Feed is a natural alternative to anticoccidial drugs and vaccines that can help producers increase profitability. Coccidiosis, caused by *Eimeria* species, is an enteric disease that can have a significant economic

impact on animal protein production. The synergistic blend of bioactive phytochemicals in Phylox work together with multiple modes of action to damage *Eimeria* cell structure and function while strengthening intestinal integrity and boosting immunity. Phylox can be effective for full-time use or in rotation, and/or in a bio-shuttle program when resistance is a concern. In addition, Phylox does not need to be withdrawn from feed prior to slaughter. Phylox is an ideal solution for all poultry species, including broilers, egg layers and broiler breeders, all of which can be sensitive to fungal and bacterial toxins during grow-out and egg production when exposed to fecal oocysts that are being shed as coccidia cycle. Research has shown

that Phylox can be fed concurrently with anticoccidial vaccines, preventing disease breakthrough while immunity is being developed by the bird without interfering with vaccine efficacy.

NeutraPath is a natural pathogen control product for antibiotic-free production that uses multiple modes of action to increase livability and improve feed conversion. Using a proprietary and co-active blend of essential oils, fatty acids and Amlan's proprietary mineral technology, NeutraPath reduces pathogenic bacterial load and colonization, and improves intestinal health and structural integrity, all of which contribute to improved performance and increased production yields.



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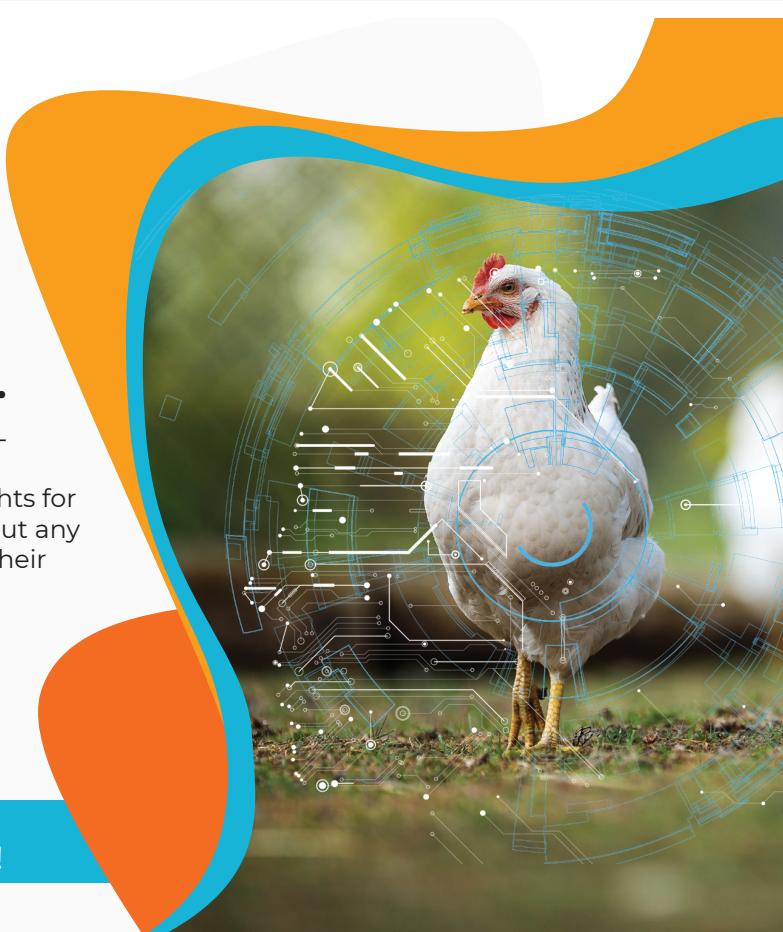
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FRIESLANDCAMPINA, RABOBANK AND LEY START PILOT TO REDUCE NITROGEN



FrieslandCampina, Rabobank and Lely are joining forces to reduce nitrogen emissions at dairy farms. They are entering into a partnership for the installation of 96 Lely Spheres, spread across all Dutch provinces. The Lely Sphere is an installation that reduces nitrogen emissions up to 70 percent in the barn of a dairy farm. The three parties hope that after this pilot project the concept will be

applied on a broader scale in the sector.

The Lely Sphere is a circular barn system that separates solid manure and urine and converts nitrogen emissions into valuable fertilizer. These can be reused by the farmer for precision fertilisation on the land. In this way a more closed mineral cycle is achieved, the use of artificial fertilizer decreases and the climate in the barn improves.

Recent scientific reports show that with the Lely Sphere, ammonia emissions are reduced by up to 70 percent in the barn. The barn system is officially recognised and included on the RAV list in 2021 ('Regeling Ammoniak Veehouderij').

With this partnership FrieslandCampina, Rabobank and Lely want to make the investment in a Lely Sphere accessible for farmers. FrieslandCampina will provide a financial contribution to the farms, Lely gives a discount on the purchase of the system and Rabobank offers a loan with advantageous conditions. In addition, the parties trust that this initiative will also encourage regional and national authorities to take initiatives to stimulate sustainable agriculture through innovation, and to make the necessary financial resources available.

NEOGEN® LAUNCHES PROZAP® GAMMA-DEFENSE INSECT CONTROL SOLUTION

Neogen® Corporation (NASDAQ: NEOG) announced that it has added a new insect control solution for poultry producers to its Prozap® product line.

Prozap Gamma-Defense is a micro-encapsulated, slow-release insecticide for use in and around poultry and other livestock housing, buildings, and structures for the control of litter beetles, flies, fleas, ticks, and other listed pests. The highly concentrated insect control solution is formulated with gamma-cyhalothrin,

the newest and most potent pyrethroid available.

"Prozap Gamma-Defense is a powerful insect control solution for poultry producers," said Coyee Hunt, an Animal Safety Product Manager at Neogen. "This formula is proven effective against adult and immature darkling, hide, and carrion beetles, common pests that can have a significant impact on poultry production. Prozap Gamma-Defense provides strong protection against pests while offering a versatile label for

application and control of problem insects on the farm."

When treating for litter beetles, one quart treats up to 48,000 square-feet and can be applied in 21-day cycles. The versatile formula can be applied within poultry housing structures at clean out or in between flocks, and can be utilized as a barrier treatment outside the structure. Prozap Gamma-Defense can be used on the entire footing, cracks and crevices, or in banded applications.

ANDRITZ SHOWCASES TWO NEW ANIMAL FEED INNOVATIONS THAT INCREASE THROUGHPUT AND PROCESSING LINE EFFICIENCIES

ANDRITZ has introduced two groundbreaking innovations at VICTAM International 2022.

Introducing the Paladin 2000 3-roll automatic roll adjustment system for Paladin pellet mills, and Metris Vibe – a groundbreaking, integrated solution for condition monitoring.

- The 3-roll automatic roll adjustment system for the Paladin 2000 pellet mill enables different distances to be set between the die and the rolls. It gives feed manufacturers the ability to select the perfect distance between roll and die for different recipes on a single pellet mill, ensuring a higher-quality and more stable product, including a broader range of by-products.

Also, to support the efficiency of the 3-roll automatic roll adjustment system, operators have the additional advantages of having roll slip control, a quick die changing device, and increased motor power available as options.

Tangible operating and process benefits are what customers can expect to see, including improved

pellet quality, increased capacity and improved power utilization with an assembly that is durable, versatile and simple to operate.

- Metris Vibe is a wireless vibration and temperature sensor that can monitor the health status of mechanical equipment regardless of the original manufacturer. Durable and wireless, the sensor works in all rough environments and delivers lower operating costs through predictive maintenance as well as increased uptime, reduced maintenance, higher production reliability, and improved safety.

The Vibe sensor measures the vibration and temperature input of key equipment, analyzing corresponding data points and comparing them with the extensive vibration data contained in the diagnostic database.

Its predictive capabilities not only minimize the risk of a catastrophic failure, operator injuries and high equipment repair costs, they also deliver increased productivity by minimizing unplanned production stoppages, thus maximizing

availability and delivering uptime advantages.

Proactive advice and alerts are provided through the sensor's powerful operating program via mobile app or web browser – anytime and anywhere. Securely integrated independently of customers' IT systems, this helps on-site maintenance teams identify the root cause of a problem quickly and enables inspections and maintenance to be focused and performed according to specific conditions before a more severe problem develops.

ANDRITZ Feed & Biofuel is one of the world's leading suppliers of process solutions, technologies and services for the animal feed, aqua feed, pet food, and biofuel industries. The technologies and services focus on maximum utilization of raw materials, increased production efficiency and sustainability as well as lowest possible total cost of ownership, while achieving the highest levels of safety, quality and control, from feedstock to final product.

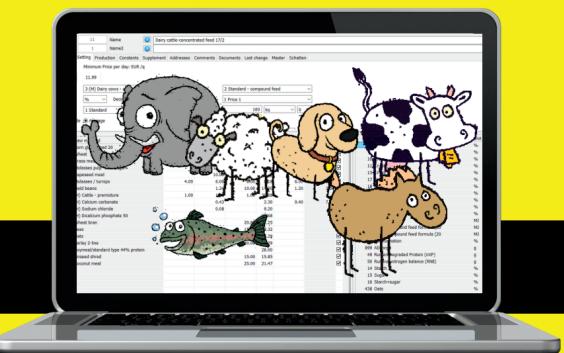
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THAILAND'S PANUS POULTRY CHOOSES ROYAL PAS REFORM FOR EXPORT-DRIVEN EXPANSION

Thailand-based poultry specialist Panus Poultry Co. has installed Royal Pas Reform SmartSetPro™ setters and SmartHatchPro™ hatching at a major hatchery expansion, located 110 km from Bangkok in Phanat Nikhom. Driven by a significant increase in demand for its international-quality products from Europe and Japan, the hatchery will eventually produce 2.4 million day-old chicks per week.

Panus Poultry, which was

established in 1997, is a fully integrated poultry company and includes breeder farms, hatcheries, broiler farms, primary processing and further processing plants. A subsidiary of PNP Group, in 2018 Japanese meat processor NH Foods, also known as Nipponham, acquired a



30% stake in Panus Poultry to boost its exports to Japan.

TADWEER & AL AIN MUNICIPALITY SIGN AGREEMENT TO DEVELOP SLAUGHTERHOUSE WASTE AND FALLEN STOCK TREATMENT SERVICES

Abu Dhabi Waste Management Center (Tadweer) has signed an agreement with Al Ain Municipality for enhancing cooperation and coordination in developing services for the transport, treatment, and proper disposal of slaughterhouse waste and fallen stock.

The agreement seeks to establish an ongoing partnership between the two parties, and exchanging expertise, resources, studies, and research that would help develop and improve the services for slaughterhouse waste treatment. It aims to enhance joint action in ensuring the safe and proper disposal of animal waste produced by municipal slaughterhouses, livestock markets, and fallen stock, with the goal of transforming this waste into an economic resource that serves the

Emirate of Abu Dhabi, as well as providing a safe, healthy, and sustainable environment, and maintaining the public image of Abu Dhabi.

The agreement was signed by His Excellency Dr. Salem Khalfan Al Kaabi, Director General of Abu Dhabi Waste Management Center (Tadweer), and His Excellency Ali Khalifa Al Qamzi, Director General of Al Ain City Municipality, in the presence of senior officials from both sides.

His Excellency Dr. Salem Khalfan Al Kaabi, Director General of Tadweer, said: "The agreement reflects the Center's commitment to supporting joint action and building partnerships with relevant parties in order to unify efforts towards providing a healthy and safe environment in Abu Dhabi. This comes in line with Tadweer's efforts for achieving the national

objectives that seek to divert waste away from landfills, employ environmental and technological solutions that support the national economy, and contribute to providing a sustainable system for waste management and pest control in the Emirate of Abu Dhabi."

"Through our cooperation with Al Ain City Municipality, we look forward to developing the services for transporting the waste produced by Al Ain slaughterhouses and fallen stock and disposing of them properly, in accordance with the top criteria and practices. We also aim to raise awareness about the proper methods of disposing of waste, in order to ensure the health and safety of the society and limit the impact of improper disposal of fallen stock and waste produced by slaughterhouses and livestock markets," he added.

DSM INTRODUCES MICROBIOME METABOLISM MODULATOR SYMPHIOME™ TO IMPROVE POULTRY HEALTH AND SUSTAINABILITY

Royal DSM, a global purpose-led science-based company, announces the introduction of Symphione™, a first-of-its-kind precision biotic designed to precisely orchestrate microbiome metabolism in poultry flocks in order to support good gut health, growth, welfare and sustainability.

Enhancing profitability by improving the health and welfare needs of a flock is challenging for poultry producers. To meet this challenge, DSM developed Symphione™, a first-of-its-kind precision biotic that orchestrates microbiome metabolism and optimizes the bird's resilience to enteric stress, aids in nutrient utilization, improves welfare, and reduces emissions.

Research has revealed that while gut microbiota composition

varies dramatically even between equally healthy, productive birds raised in the same house, the gut microbiome metabolism is rather consistent between those raised on different farms, on different diets and under different management programs.

By looking at the gut microbiome as a whole and focusing on desirable metabolic pathways, Symphione™ directs the metabolic function of the microbiome to bring overall harmony to the gut. Symphione™ is the first commercial launch of a precision biotic—a new class of feed ingredients that precisely modulate specific metabolic pathways in the microbiome to benefit the bird and its environment.

A peer-reviewed study of

Syphione™ (Jacquier et al., 2022) showed improved litter score, ammonia output and gait score. As a consequence of improved welfare and gas emission indicators, Symphione™ improved body weight gain (BWG) by 44g on day 35 and feed conversion ratio (FCR) by 11.4 points. In the second study, BWG was improved by 112 g, and FCR by 4.7 points. Symphione™ strengthens DSM's strategic sustainability initiative, We Make It Possible, by focusing on improving farm animals' lifetime performance as well as further advancing our DSM Food System Commitments.

Syphione™ can be safely pelleted and withstand temperatures above 90°C.

HUBBARD INTRODUCES REDBRO FOR THE BCC MARKET

Hubbard introduces the REDBRO, the latest addition to the Hubbard Premium product range and specifically developed for the Better Chicken Commitment (BCC) market. With the REDBRO it is possible to make higher animal welfare available to a larger group of consumers in a sustainable way and to keep it affordable. This new breed has been extensively and satisfactorily tested in the field in recent years and has now found its way to various customers. The first broilers are now on the market.

The Hubbard REDBRO is a completely new slower-growing breeder female specifically developed with the Better Chicken Commitment/European Chicken Commitment (BCC/ECC) and Global Animal Partnership (GAP)

in mind. Many food service companies and retailers that have committed to the BCC, ECC or GAP are looking for a higher welfare chicken that is affordable to a larger group of consumers. The Hubbard REDBRO is a key solution to this as it is developed to provide the optimal combination of very good animal welfare, economics and environment.

When compared at the same bodyweight to the Hubbard JA787, the progeny of the Hubbard REDBRO breeder female mated with a Hubbard Conventional breeder male has similar animal welfare outcomes, about 8 % faster growth rate, 0.4 % higher breast meat yield, with 9 points better feed conversion. This makes it the most



economic choice with a lower carbon footprint than any other slower-growing chicken currently available in the market. Based on several years of field and pen trials in Europe and North America, the Hubbard REDBRO is accredited by ECC/BCC in Europe, GAP/BCC in North America, and the RSPCA and Red Tractor Enhanced Welfare in the UK.

TECNO ANNOUNCES NEW CUSTOMER-CENTRIC STRATEGY AND REFRESHED BRAND IDENTITY

Tecno, a global leader in the design and manufacturer of housing systems for laying hens, recently announced its new strategy focused on helping customers find the right fit to reach their highest potential. Harry Luimes, Director and General Manager at Tecno, unveiled the strategy, including a refreshed brand logo and website, to employees and partners during the brand's annual meeting.

"The egg business keeps changing, and those evolving standards mean more complexity for our customers. Helping customers navigate those challenges drives us every single

day," said Luimes.

"Tecno remains fully dedicated to the egg industry around the world, and we're innovating to meet the needs of each customer while advancing the industry. Our strategy matches the right system to the customer's operation, ensuring the highest performance in egg quantity and quality."

"Our customers want their hens to be comfortable, safe and nourished," added Stefan Caspari, Senior Vice President and General Manager, AGCO Grain & Protein. "Tecno uses decades of experience to truly understand where our customers want to go and the

right innovations to help them get there."

Tecno's brand identity has been refreshed as part of the new strategy. The Tecno logo has been modified to give it a streamlined look with a modern feel; 'The Eggsperience' tagline remains unchanged.

"The Eggsperience is much more than a tagline for us," explains Luimes.

"It defines our process of standing with our customers from idea to installation and beyond to ensure their hens have the right environment to reach their highest potential."

NEW BREEDER BOOK AIMS TO AID IN MANAGEMENT, PERFORMANCE, AND SUSTAINABILITY

"This book is perhaps needed now more than ever as we see the escalating increase in meat protein production and consumption worldwide." This statement, written in the preface of a new publication on breeder production that Novus International, Inc., highlights an industry reality – demand for safe, quality, nutritious meat protein is growing but producers face challenges.

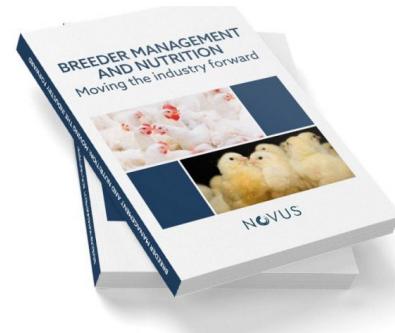
Titled, Breeder Management and Nutrition: Moving the industry forward, the book's 14 chapters were carefully curated to serve as a reference for current broiler breeder production best practices and considerations as well as to be a catalyst for new ideas in management, nutrition, and industry sustainability.

"We know in order to meet the production goals of tomorrow, each part of the industry must

work together today," said Sandrine Durox, Novus poultry solutions manager who serves as book co-curator together with Novus Executive Regional Technical Services Manager Silvia Peris and Professor Johan Buyse of KU Leuven, who served as scientific coordinator. "This book brings together the knowledge and know-how of academics, researchers, industry leaders, breeding companies, nutrition companies, veterinarians, and nutritionists to consider how each part of the broiler breeder's lifecycle can be impacted to optimize performance and positively impact the producer and the industry."

Those in the industry and academia will likely recognize the book's contributors:

Eddy Decuyper of KU Leuven, Aitor Arrazola of Perdue University, Rick van Emous and



Annemarie Mens of Wageningen Livestock Research, Henk Enting of Cargill, Dinabandhu Joardar of Cargill, Edgar O. Oviedo-Rondón of North Carolina State University, Rebecca Forder of the University of Adelaide, Johan Buyse of KU Leuven, Juan Carlos Abad and Robin Jarquin of Cobb-Vantress, David Cavero Pintado and Xabier Arbe Ugalde of H&N International, and Stanislaw Budnik, Juxing Chen, Silvia Peris, Hugo Romero-Sánchez, and Mercedes Vázquez-Añón of Novus.

NUTRECO INCREASES STAKE IN INDIA-BASED ERUVAKA

Nutreco, has recently announced it will increase its stake in Eruvaka to 93.7%, from 25.45% in 2018. The acquisition of a controlling majority stake will enable Nutreco's aquaculture business line Skretting to deliver in-house on-farm software and smart equipment to shrimp farmers around the world to increase their productivity and reduce the risk for their operations. Nutreco's plan is to



gain full ownership of Eruvaka in the course of 2023.

Founded in April 2012 in Vijayawada, Andhra Pradesh, India-based Eruvaka develops cloud-based aquaculture pond management solutions, including real-time monitoring and smart feeders. Technology features include automatic and intelligent sonic feeding, alerts, pond diagnostics, data recording, analytics and automation.

Nutreco CEO Fulco van Lede says, "I am delighted that Nutreco is taking a majority stake in Eruvaka. Our purpose of Feeding the Future drives us to invest in innovative technologies that improve the

sustainability of our food supply chain. This investment demonstrates our commitment to supporting aquaculture farmers in incorporating smart solutions that make their business more productive and efficient.

Eruvaka CEO Kunal Choudhary says, "Eruvaka has formed the basis for the exceptionally successful Skretting 360+ concept. We have been able to work with farmers to reduce uncertainty, provide peace of mind, increase productivity and reduce risk."

This technology has been integrated into Skretting's offering for clients in Latin America since 2018 and has enabled farmers to reduce production costs and increase yield and sustainability parameters, while significantly reducing their risk.

THE TOTAL ANIMAL FEED AND HEALTH EVENT IN BANGKOK, THAILAND

VICTAM Asia in co-location with Health & Nutrition Asia are ready to kick-off from September 7-9, 2022, at the IMPACT Halls 9 and 10, in Bangkok, Thailand.

Everything is set for an unmissable 3-day B2B event full of networking activities, business opportunities and a rich content program. More than 400 exhibitors will be showcasing their latest solution in animal health, feed ingredients and additives, genetics, and feed technology.

This unique event will introduce you to many innovations developed in the last years and now finally gathered under one roof, after a long pause.

New feed probiotics, infrared spectrometers, new diet elements to improve animal's absorption of energy from fats and oils, innovative pig genetic programs, heavy cleaning solutions for drinking systems, milk replacers and sesame meals, and many other new products to help you optimize your animals' health and feed conversion, will be showcased onsite where experts are ready to guide you through the best solutions for your own business development.

VIV has the largest worldwide network in animal health and

nutrition and is best-connected in Asia.

VICTAM is the world's largest feed & grain event. The co-location of their respective shows offers a unique platform to dive into the most relevant player in the field of feed, nutrition, pharma, genetics, health and veterinary technology, health monitoring and management.



VICTAM
Asia **2022**
IN CO-LOCATION WITH **HEALTH & NUTRITION ASIA**



FANCOM AND VDL AGROTECH BECOME PARTNERS IN DRY FEED SOLUTION



From now on Fancom and VDL Agrotech have joined forces to complete Fancom's dry feed solutions portfolio. What this means is that Fancom can now facilitate the complete process, from silo to feeding station. VDL Agrotech is known for its high-quality,

sustainable and innovative tube feeding systems, which are an excellent match for Fancom.

"We therefore believe that, in addition to the

already well-known Intellitek, Farotek and Rondomat, we can now offer the most intelligent, most complete and best quality dry feed solutions. In fact, we are convinced that the strong benefits of the VDL products will become even more apparent through coordination with Fancom;

resulting in less wear and lower energy costs. Fancom's solutions will benefit from the addition of VDL equipment because it will strengthen our product benefits; no feed waste and feeding precision."

In combination with the Fancom controllers Lumina 71 or Aura 70 and the expertise of the Fancom employees, we are now able to guarantee optimal technical results during the life stages of a pig. Whether you opt for a single or multi-phase feeding solution, Fancom has the expertise in-house.

VIV QINGDAO 2022 IS OFFICIALLY POSTPONED

VIV Qingdao is the leading international trade show for pig, poultry, dairy & aquaculture industries in China. Since 2000, the exhibition is well known for its key role in fostering international business between China and the global feed to food industry as well as providing a premium platform in the Chinese market for worldwide innovations and technologies.

The managing team of VIV Qingdao announces that, due to the persisting Covid-19 restrictions and the direct effects on China international activities, a high-quality exhibition with substantial business opportunities for all attendees, unfortunately, cannot be guaranteed. After a serious and careful consideration, VNU Asia, the organizer of VIV Qingdao

hereby confirms that the 2022 edition of the show, which was supposed to open its doors from 22-24 September this year at the Qingdao Cosmopolitan Exposition, is officially postponed.

As an important member of the VIV worldwide series of events, VIV Qingdao always strives to provide the industry with top quality trade services. The decision to postpone the show is thus taken by the organizer in the best interest of all the exhibitors and visitors. The new dates will be announced in the coming months.

In the meantime, the VIV Qingdao team will continue offering meaningful content program for the animal protein industry via a series of professional online Webinars with emphasis on the main industry trends. Successful

experiences and best practices to help overcome the current, difficult trade situation with China will be shared by leading industry players. The online Webinars will be held by VNU Asia, with the support of VNU Europe and the cooperation of key partner organizations including the Netherlands Agro & Food Technology Center (NAFTC), Zhong Guan Cun Chinese Veterinary Medicine Industry Technology Innovation Strategic Alliance, National Animal Husbandry Science and Technology Innovation Alliance, China Pig Industry Chain Ecosystem Platform (CPICP), Beijing Boyar Communication, AgriPost.cn, Lu Mu Media as well as the feed associations, veterinary bureaus, breeding associations and other Chinese and foreign institutions involved in the animal husbandry business.

WSAVA WORLD CONGRESS TO HIGHLIGHT GLOBAL INEQUITY IN ACCESS TO VETERINARY MEDICINES

As WSAVA World Congress returns as a face-to-face event for 2022, its signature 'Shaping the Future' session is set to highlight the serious problems faced by veterinarians in Latin America and other regions of the world in gaining access to essential drugs needed to provide appropriate care for their patients. For example, many veterinarians struggle to access to opioid analgesics to treat pain, resulting in the unnecessary suffering of millions of companion animals.

The Shaping the Future session will be led by Professor Paulo Steagall, Co-chair of

the WSAVA's Therapeutics Guidelines Group (TGG). Both the causes and consequences of the difficulties veterinarians experience in accessing vital medicines will be explored by speakers from different parts of the world and TGG members during the session. They will also discuss potential solutions during a panel discussion.

Taking place from October 29-31 October in Lima, Peru, WSAVA World Congress offers a packed scientific program in which global experts explore cutting-edge thinking and new trends in companion animal veterinary care. Speakers from

Peru and wider Latin America are well-represented with lectures in both Spanish and English. Some of the English lectures will be translated simultaneously into Spanish to maximize their accessibility to delegates. Lectures by some of the WSAVA's 2022 Award recipients are also included in the program.

WSAVA President Dr Siraya Chunekamrai said: "After three years apart we're all looking forward to reuniting our dynamic global veterinary community in Lima later this year and hope that as many of our members as possible will be able to join us."

PLANT-BASED DOG TREATS WITH EXTRA BITE



Ingredients specialist Trigea uses the nutritive and functional properties of wheat texturates for its latest application concept: plant-based chew sticks. The unique application, which can be adapted by manufacturers according to individual requirements, is a high-quality source of plant protein but needs very few ingredients. The chew sticks consist mainly of the extruded wheat protein Trigovit® Tex Granules. After a short soaking time in water, it forms a firm,

meat-like and flexible structure – without the need for binders – and can be formed into any desired shape, such as sticks, for example. The plant-based chews are particularly flexible and can be bent up to 25 per cent more than conventional products. They have no flavour of their own and therefore serve as ideal flavour carriers for individual flavourings.

The texturates get their special fibrous structure through the thermo-mechanical process of extrusion. During rehydration, the starch within unfolds its binding properties. The material is further bonded by a mechanical pressing process, so that no additional binder is needed. In addition to the granules, the Trigovit® Tex range offers texturates in other sizes, shapes and colours,

so that a variety of different treats for dogs and cats can be produced. The recipe can also be individually supplemented with flavours or vitamins, for example. The basic concept of Trigea's product development includes two per cent glycerine as a moisturiser, and the company uses only GMO-free wheat from Europe as raw material. Dry Trigovit® Tex is also easy to store and handle.

Maximilian Hegge, Sales Manager at Trigea, comments: "Consumers are increasingly paying attention to ingredient lists. A short label can be a competitive advantage because many products in this segment are still unable to achieve this. Our idea for chew sticks should serve as a source of inspiration, as countless pet food innovations can be achieved using this concept."

BASF TO STRENGTHEN ITS COMMITMENT AS A LEADING INGREDIENTS PARTNER IN NUTRITION, FLAVOR AND FRAGRANCE INDUSTRIES

BASF's Nutrition & Health division is strengthening its position as ingredients partner for the animal nutrition and human nutrition industries by combining the strategic and operational responsibility in one global business unit, Nutrition Ingredients. In doing so, the focus will be on leveraging and further strengthening core product platforms and assets for vitamins and carotenoids that are deeply rooted into the BASF Verbund as well as expanding the business with feed enzymes.

In 2021, BASF completed an investment in a vitamin A plant expansion in Ludwigshafen, Germany to enhance vitamin A supply and will now expand its world-scale vitamin A formulation plant for animal nutrition with start-up scheduled in mid-2023. Moreover, in January 2022, BASF has expanded the production capacity of its feed enzymes plant in Ludwigshafen, which will further support the growth plans of customers in the animal nutrition industry.

The new Nutrition Ingredients

global business unit based in Germany will build on large-scale product platforms supported by the division's technology leadership and will be led by Senior Vice President Julia Raquet.

BASF will continue to serve its customers in animal nutrition and human nutrition with dedicated teams. Beyond vitamins and carotenoids, feed enzymes will focus on high-quality ingredients to support animal nutrition customers in maximizing the nutritional value of feed.

ALLER AQUA'S FUNCTIONAL FEEDS HELP OVERCOME STRESS AND PATHOGENIC BACTERIA



Fish are the cornerstone of global food security and nutrition. Tilapia is one of the most popular fish cultured in the world with high demand for consumer goods.

It is also one of the most important types of aquacultures because the fish can be grown in various agricultural systems and is omnivorous.

Tilapia is particularly important in developing contexts in the world as it is inexpensive and easy for small farmers to grow.

The Egyptian aquaculture

sector is the largest producer of farmed fish in Africa, and tilapia is the foremost cultured species in Egypt counting for 67% of all cultured species.

Nowadays

Egypt's tilapia farming faces many obstacles and constraints that have a negative effect not only on moving forward with significant progress but also on a significant decline in economic growth rates as poor water quality and fish mortality.

Functional feeds are feeds that contain special additives to perform a special function in a specific period. The concept of functional aquafeeds represents an evolving concept for fish and crustacean diets.

In the design of functional

feeds, a wide range of feed additives can be used to extend beyond the satisfying basic nutritional requirements of the target species to improve growth and feed utilization, but also to support the health and stress resistance of the animals.

Two types of functional feeds produced by Aller Aqua Egypt were used to counteract the suboptimal conditions of tilapia farming in Egypt. These feeds are antistress, support temperature fluctuations and are anti-pathogenic.

The experiments recommended the use of functional feeds from Aller Aqua to prevent mortality during summer periods and to overcome bacterial disease spread among the tilapia farms with the need to improve water properties.

It also improved the economic profitability of the farm.

ANIMAL HEALTH IMPORTANT FOR HELPING CUT GREENHOUSE GAS EMISSIONS, NEW REPORT SAYS

Improving animal health can help cut greenhouse gas (GHG) emissions, but more granular approaches to measuring progress are vital if countries are to be able to include it in their national climate commitments, a new report shows.

Diseases affecting animals, how long they live and how productive they are all have a significant impact on GHG emissions, says the report by the Food and Agriculture Organization of the United Nations (FAO), Global Dairy Platform and the Global Research Alliance on Agricultural Greenhouse Gases, entitled "The role of animal health in national climate commitments."

This means greater investments are needed to establish systems for measurement, reporting and verification (MRV). There is currently no standardized method to include improved animal health in most countries' GHG national inventories or nationally determined contributions (NDCs).

As a result, the importance of animal health is often not clearly reflected in countries' commitments to fight climate change.

"This report marks a breakthrough in highlighting the importance of animal health and guiding countries towards a much more granular approach in evaluating its role and how it needs to be incorporated into national commitments to help mitigate the climate crisis," said FAO Deputy Director-General Maria Helena Semedo.

"The livestock sector provides vital nutrition and livelihoods for more than a billion people worldwide," said Donald Moore, Executive Director of Global Dairy Platform. "This brief demonstrates how governments and industry can work together on climate solutions and is part of the global dairy sector's Pathways to Dairy Net Zero initiative," he said.

"While this report clearly demonstrates the opportunity for improved animal health to



contribute to climate mitigation, it also highlights the need to address critical data gaps and build capacity in low- and middle-income countries, in particular.

Governments and the sector should support long term investments in research and create the enabling environment for animal health policies and programmes to realise their full potential," said GRA Special Representative, Hayden Montgomery.

The report shows how countries can develop an MRV system at national level to be able to include animal health improvements in national climate commitments.

COBB500™ THE FIRST BROILER TO BE IMPORTED TO KYRGYZSTAN IN THE COUNTRY'S HISTORY

Kyrgyz Broiler has chosen Cobb-Vantress' Cobb500™ broiler to be the first broiler parents to be imported into the country of Kyrgyzstan. The partnership furthers Cobb-Vantress' commitment to expansion and serving more markets worldwide.

Currently, Kyrgyzstan is about 15-20% self-sufficient in poultry meat production, with the rest of the chicken meat being imported from neighboring countries Ukraine

and Kazakhstan. With its latest investment in the Cobb500 broiler, Kyrgyz Broiler will continue its domestic growth. In recent years, the government has supported the company in becoming Kyrgyzstan's first commercial company to start producing local chicken meat and is encouraging the company to expand.

"This is a tremendous opportunity to expand and bring quality broiler meat to a new and growing market. We're

happy to be doing business with Kyrgyz Broiler, and we're committed to providing quality products across the globe," said Abdullah Vahab, business manager for Cobb Europe.

Based in Kyrgyzstan's capital city of Bishkek, Kyrgyz Broiler doesn't sell any hatching eggs or day-old chicks to the market. It supplies fresh chicken meat to the market, whole chickens, and chicken parts such as breasts and wings to the market.

FONTERA RAMPS UP OPPORTUNITIES IN COMPLEMENTARY NUTRITION PARTNERSHIP

Fonterra and Royal DSM, a global purpose-led company in health, nutrition and bioscience, are establishing a new start-up company to accelerate the development and commercialisation of fermentation-derived proteins with dairy-like properties.

The start-up is a next step in Fonterra and DSM's long-standing joint development relationship. They have been working together since 2019 to build a comprehensive understanding of how to use precision fermentation science and technology to produce proteins similar to those found in dairy.

To date, this work has created valuable intellectual

property for which Fonterra and DSM have filed patents. The new start-up company will enable the acceleration of commercial product solutions utilising this intellectual property, while continuing to focus on further precision fermentation research and development.

Fonterra and DSM are also collaborating to reduce on-farm greenhouse gas (GHG) emissions, by exploring applications for DSM's methane-inhibiting Bovaer® technology in the New Zealand pasture-based farming system.

Fonterra's Chief Innovation and Brand Officer, Komal Mistry-Mehta, says "The

new start-up is an exciting opportunity to combine DSM's world-leading expertise in precision fermentation science and technology with Fonterra's world-leading dairy science and technology.

"With fermentation-produced proteins having a wide array of potential applications for customers and consumers, this partnership aligns well with the Co-op's strategy to be a leader in dairy innovation and science.

"By exploring the opportunities of nutrition science solutions, we can unlock the growth potential of our advanced specialty ingredients and play more boldly in this category."

REACHING FOR GENETIC POTENTIAL WITH CONVERT™ BIG CALF POWDER

Whatever happens to a calf day 1, week 1, or month 1 of its life determines if it will live up to its genetic potential. This statement is true for both replacement heifers with tremendous milking potential and steer calves for muscling and marbling. Colostrum consumption and the use of CONVERT Day-One Gel or Bolus are critical for initial protection of the calf. However, the calf requires continued protection as it loses its passive immunity from colostrum and then develops its active immune system.

The CONVERT™ BIG Calf Powder is designed to bolster digestive and whole-body health daily from birth through weaning.

The BIG Calf Powder is designed to protect calves as they successfully journey from birth through Death Valley and on to a healthy weaning process. The BIG Calf Powder features:

- Direct-fed bacteria to protect the small intestine for nutrient absorption by restricting intestinal pathogen growth and enhancing immune function.
- L-form (Cell Wall-deficient) bacteria to enhance immune function and stabilize the small intestine.
- Egg-based specialized proteins to restrict two E. coli strains, two Bovine Rota virus strains, Bovine Corona virus, two Salmonella



species, Cryptosporidium and two Clostridium perfringens strains.

- Enzymes to enhance diet utilization.

The BIG Calf Powder readily mixes with whole milk or milk replacer at the rate of 1 g/calf/d. The product also easily blends into colostrum at a suggested 5 g/calf/feeding to equal the beneficial components of 15 ml of Day-One Calf Gel or one Calf Bolus.

A NY calf raiser and his veterinarian are recording improved calf lung scores after adopting a program of Day-One Calf Gel at birth and supplementing the BIG Calf Powder via robotic milk replacer feeders. An OH calf raiser adds the BIG Calf Powder to colostrum consumed at birth and then mixes with milk replacer is reporting drastically reduced death loss.

THE INTERNATIONAL EXHIBITION FOR ANIMAL BREEDING



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SPACE 2022 – 35 YEARS DEDICATED TO THE LIVESTOCK INDUSTRY

SPACE 2022 will be held from Tuesday 13 September to Thursday 15 September at the Rennes Exhibition Centre.

Hit by the Covid 19 pandemic for the past two years, in-person visits to the Expo were cancelled in 2020, only to return in 2021 under conditions adapted to health safety measures. For this reason, for its 35th anniversary, SPACE has ambitions to make its next edition stronger than ever.

It looks to engage in the challenges of livestock farmers, bring together all the different animal production sectors in a forward looking approach, and, thanks to state-of-the-art developments and innovations

presented by the exhibitors, show visitors what the livestock industry is really about today. It's an industry that undergoes continual shifts as it pays close attention to citizens and consumers, one that does what it takes to meet societal demands both in terms of rearing practices and their impact on global climate.

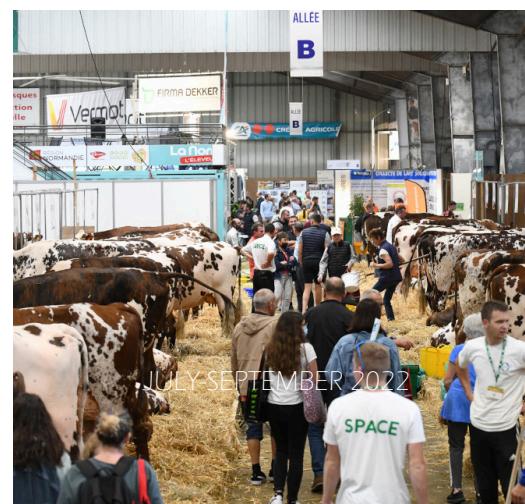
The same full gamut of exhibitors

Nearly 1,100 exhibitors are registered to participate in this next edition, of which 185 are new and 318 are from countries outside France.

This year, the poultry farming industry will occupy halls 10A

and 10B, while that of animal nutrition will be well-represented in halls 9 and 5.

The energies sector will fill up half of hall 4, and the Agretic and Village by CA start-up areas will cover 100m² each. Businesses from the pig and cattle sectors have also registered in high numbers. And nearly 200 stands will display



equipment in the outdoor area.

International attention holds strong

Despite the climate of a global health crisis, international visitors made their way back to the trade show for its 2021 edition. For this 36th edition, we hope to find that same dynamic of earlier years, but with an even greater international attendance.

SPACE is one of the world's most noteworthy trade shows for the livestock industry and a key event for the professionals that are a part of it.

Despite complicated travel conditions due to the Covid 19 pandemic, which continued to rage well into September 2021, nearly 5,000 international visitors from 96 countries showed up to the last edition.

In a global context still shaken from the unpredictable health crisis we have all experienced, combined with an unsettling geopolitical climate, in particular due to the conflict in Ukraine and its resulting economic consequences, it is quite difficult to measure what the foreign attendance will be this September.

However, we've already received many requests from international visitors in regard to the SPACE 2022 calendar of events, suggesting high attendance numbers in September and optimistic outlooks.

Livestock animal presentations

As of last year, the programme of livestock animal presentations and competitions takes place over three days. Tuesday is mainly dedicated to beef breeds, notably with the Blond d'Aquitaine National Challenge. On Wednesday, the Jersey dairy breed will be in the spotlight with its national competition.

In addition to the competitions, breed officials are planning an international event by hosting the European Jersey Forum and members from the World Jersey Cattle Bureau. On Thursday, most of the day will be devoted to the Prim'Holstein Atlantique competition.

The event will also feature 10 interregional competitions, breed presentations and the Genomic Elite Multi-breed Auction. 550 cattle of 13 different breeds will provide a continuous spectacle in the main ring during the three days of the Expo. Visitors will also have the opportunity to see 200 animals of 11 sheep and goat breeds, with the Ile de France breed presented in a national competition on Tuesday.

Aquaculture on the roster

SPACE has been hosting conferences on aquaculture for several years. On the strength of this initial success, SPACE now plans to be a key event for French and international



businesses in this fast-growing sector.

Each year, more than 80 businesses from the aquaculture sector come to exhibit at SPACE, including those working in the fields of animal feed and nutrition, farming equipment, consulting, research, genetics, etc.

This booming sector attracts the attention of SPACE visitors: 26% of French visitors and 50% of international visitors have an interest in aquaculture. 10% of the international visitors in 2021 had jobs in this sector.

With this in mind, we added several features to the Expo to showcase the aquaculture sector. We created an itinerary guide, made it visually easy to identify stands and organised two conferences (each lasting a half day) set for 13 September.





SAUDI AGRICULTURE: SHOWCASING THE LATEST AGRICULTURAL INNOVATIONS & TECHNIQUES

The 39th edition of the international exhibition for agriculture, Food, Aquaculture, Packaging and Agro-industry is the largest B2B event of agriculture sector in the region showcasing leading technologies and solutions, cutting-edge engineering, and innovations.

Organized by the Riyadh Exhibitions Company (REC) Ltd, the event will take place from 17 – 20 October 2022 at the Riyadh International Convention & Exhibition Center.

Over the course of the last thirty-nine years, Saudi Agriculture has been the meeting place of industry leaders and its leading business development platform. The event aims to bring businessmen, industry professionals, decision-makers, and sellers alongside each other to showcase their innovative solutions on an exclusive platform.

The 39th edition of Saudi Agriculture is incorporated with the 27th edition of Saudi Agro-Food, the 10th edition of Saudi Food Pack and the 4th edition of Saudi Aquaculture.

Dedicated to the food, food

production, processing and packaging industry, Saudi Agro-Food gathers the region's leading professionals in the agriculture and food industries to benefit from business opportunities in a custom-made setting for showcasing up-to-date technologies, products, services and solutions for all stages of food processing and packaging food presentation and promotion industry; as well as all types of popular and new food products.

Saudi Food Pack – a platform for discussion and progression on the topical subject of packaging and food production. A highly targeted exhibition incorporating pressing environmental issues and how

new technologies, materials and processes can contribute to a more ecological route for manufacture of food, together with the production process and disposal of packaging.

Saudi Aquaculture is dedicated to creating sustainable fisheries, the development of farming freshwater as well as marine plants and animals in a structured environment including the effective use of natural resources in neighboring countries. An insight into a cyclical, feasible approach to farming which also protects the food chain by producing plants for the fish to feed on.



39th
EDITION

Saudi Agriculture

INTERNATIONAL TRADE EXHIBITION
AGRICULTURE • FOOD • AQUACULTURE
AGRO-INDUSTRY • PACKAGING

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SOMMET DE L'ÉLEVAGE

4 > 7 October 2022
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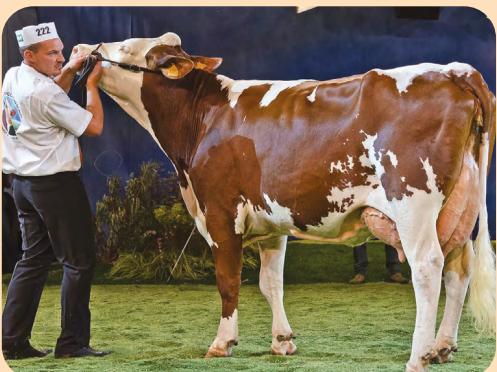


95,000 visitors | 1,500 exhibitors | 2,000 animals

The best of French animal genetics

Located in the heart of the Central Highlands (Massif Central), in the largest beef cattle breeding region in Europe, the LIVESTOCK SUMMIT of Clermont-Ferrand (France) is one of the main international trade shows specialized in livestock production (dairy cattle, beef cattle, sheep, horses...).

2,000 elite animals on show



A complete offer for all livestock sectors

Animal nutrition, genetics, animal health and hygiene, milking and dairy equipment, services and equipment for livestock, farm buildings, renewable energies, agricultural machinery...



◆ 180,000 m² of exhibition space

◆ 95,000 professional visitors
2,500 international visitors
from 65 countries

◆ 1,510 exhibitors
(310 foreign exhibitors
from 33 countries)

◆ Leading European forum
for the beef cattle industry
OUR PLUS :
The reference event for
upland livestock farming

JOIN OUR GUIDED TOURS TO LIVESTOCK FARMS

Discover the cattle, sheep, horse and goat breeds of our region as well as agribusiness enterprises (agronomics research centre, biogas plant, cattle export centre, feed-lot, cheese factory...).

25 guided visits with technicians and interpreters.

Departure and return by bus every day from the exhibition grounds.



Program and online registration on
www.sommet-elevage.fr

VIP reception for international visitors!

Free entrance, personal welcome, interpreters, guided tours of the exhibition and B2B meetings with exhibitors...

Our International Business Club is at your disposal to help you effectively develop your network at the show.

Please stop by! Visitors and exhibitors willing to meet with you can leave personal messages addressed to you on our Networking wall.



Events 2022

> INTERNATIONAL LIVESTOCK EVENING

Presentation of French cattle, sheep and horse breeds, for foreign delegations - Wednesday 5 October, 19:00, Zénith arena

> Charolais breed national show (400 animals)

> European Congress of the Hereford breed (animal competition, conference, farm visits)

> Montbéliarde breed national show (100 animals)

> Cattle, sheep and horse breeds competitions:

Limousin, Salers, Blonde d'Aquitaine, Aubrac, Angus, Holstein, Brown Swiss, Normande, Simmental, Ile-de-France, Texel, BMC, Percheron, Ardennais...

> More than 70 conferences

on major issues in the farming sector

> Mongolia: country guest of honor of the 2022 SOMMET

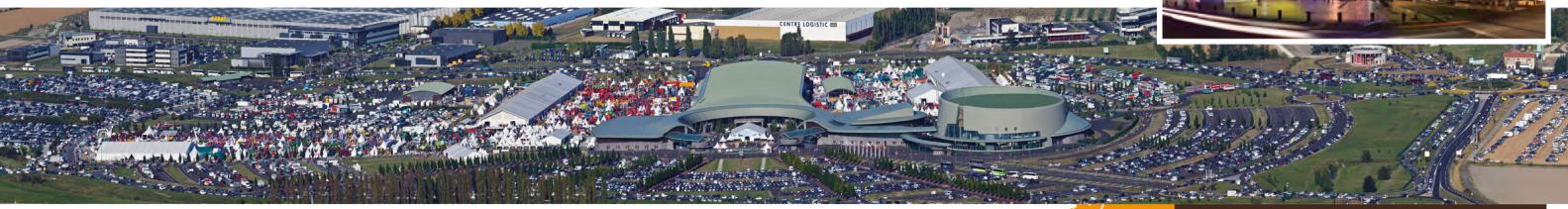


THE LEADING EUROPEAN FORUM FOR THE LIVESTOCK INDUSTRY

INTERNATIONAL VISITORS

Book your free entrance badge
and register for our farm visits
directly online: www.sommet-elevage.fr

During your stay, discover the various
touristic sites of our region!



USEFUL INFORMATION

Transport

Free shuttle service between the airport, the railway station, the town-centre and the fairgrounds (Entrance n°2)
Full details on www.sommet-elevage.fr

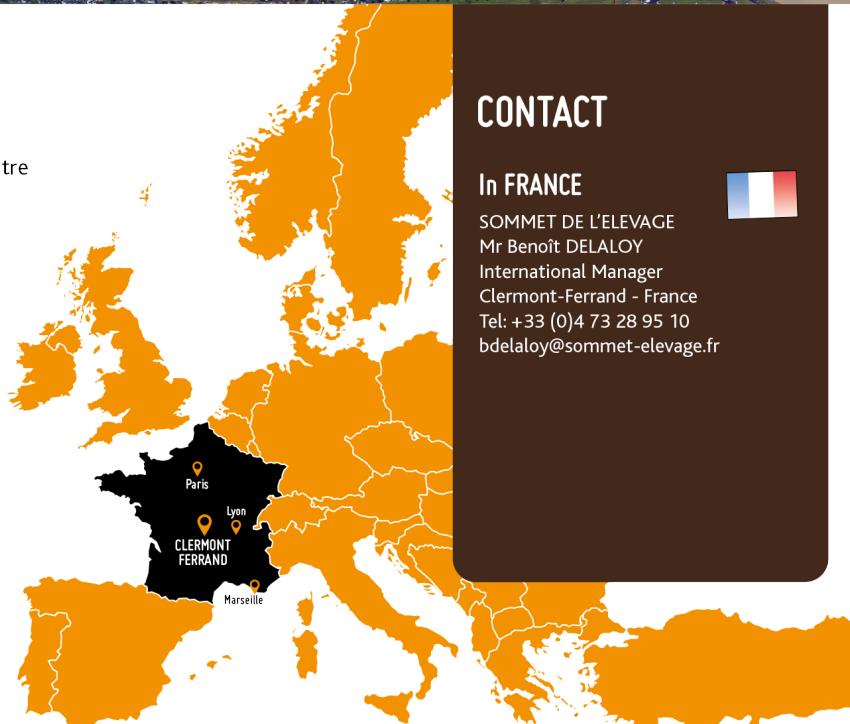
Accommodation

AGRILYS – agricultural travel agency
(accommodation, national and international transportation)
Tel : +33 (0) 1 82 83 33 55 - Mail: sommet@agrilys.fr

Clermont-Ferrand Tourist Office
Tel : +33 (0) 4 73 98 65 00
Mail : congres@clermontauvergnetourisme.com

Free entry

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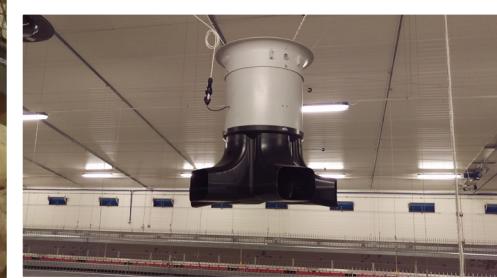


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bdelaloy@sommet-elevage.fr





IMPROVE AIR DISTRIBUTION IN WIDE HOUSES WITH CHILL UNITS

Bromargo is one of Poland's leading poultry businesses with hatcheries, rearing farms, breeding farms, and a specialized fleet for the transportation of hatching eggs and chicks.

To accommodate the request for two nest areas in each breeder house, Bromargo chose to build extra wide houses up to 24 meters. A wide house with more breeders is an efficient way of increasing production. However, the width of the house and the two rows of nest areas soon turned out to be a challenge for the air distribution inside the house.

A challenge in wide houses

Usually, in an ideal scenario, air enters through wall inlets, follows the ceiling, reaches the middle of the house, and drops to the ground, where it reaches the birds

and continues toward the walls. Because of the house width, the air could not reach the center of the house before it dropped to the ground. Another big challenge was the two rows of nesting areas running from one end of the house to the other. The nests became big obstacles for the air causing minimum air movement between the nests and the walls. Lack of air movement between the nests and walls caused wet litter, which led to increased ammonia concentrations and an increased risk of footpad dermatitis. The uneven climate caused the birds to huddle together in groups, resulting in many floor eggs rather than laying them in the nests.

Recirculate the air to go further

The solution proved simple but very efficient – DA 65-600 chill

units to recirculate the air. We suspended the chill units from the ceiling, where they recirculate the air and distribute it throughout the house. The chill unit can throw the air far, making it possible also to reach the areas between the walls and the nests, causing a nice uniform climate in the house.

Since installing the chill units, Bromargo experienced a significant improvement in the house climate. The chill units have caused so much air movement in the house that they no longer struggle with wet litter. The improved climate caused a more comfortable environment for the birds in the nests, resulting in fewer floor eggs. The farm manager also noticed less huddling by the birds and a more even distribution of birds on the floor.

For more information, visit
www.skov.com



PRECISEAG IS USING ARTIFICIAL INTELLIGENCE TO BRING ABOUT A POULTRY BIOSECURITY REVOLUTION

Traditional Poultry Health Assessment

If your poultry farm has experienced a devastating disease outbreak, then you know just how important biosecurity is. In fact, it should be the top priority for any poultry farmer, big or small.

Current prevalent methods of poultry health assessment worldwide rely on observations from farmers, farmworkers, and veterinarians. Frequently laboratory analyses are required as a follow-on. However, all this process takes time, frequently days, and by the time a diagnosis is complete, the disease has spread.

Additionally, human perception is **OVERWHELMINGLY** susceptible to error. This has been evident over the years, with most of the disease outbreaks being attributed to the missteps or miscalculations

of individuals or groups. Human error is always a possibility, no matter how well-trained or experienced the staff may be. So what is the solution?

The Technology Advantage

In search of an answer to this persistent problem, the industry has turned to artificial intelligence to assist the people on the front lines of the global food supply. A new AI-powered solution, PreciseAG.ai uses critical imagery data collected by cameras to detect anomalies in the health of poultry stock. The results are instantly delivered to the right

people in real-time, allowing for quick and decisive action to be taken before disease has a chance to spread.

With solutions like PreciseAG.ai at the forefront of this new revolution, the future of poultry farming looks brighter than ever before. Commercial producers, animal health professionals, and even government agencies can deploy PreciseAG.ai's solution anywhere, regardless of the size of the farm. This is a huge step forward in the fight against poultry diseases.

With early intervention, expensive measures like quarantining chickens and halting the movement of poultry products can be avoided. In the long run, this will lead to considerable savings for the industry at large.

The best part...there is no change to daily operations during initial flock checks, no equipment to install or maintain, and no extra work for the farm management or staff.

For more information, contact
info@preciseag.ai

A promotional graphic for the PreciseAG mobile application. It features the company logo 'ai PreciseAG' and the tagline 'Because everyone eats chicken'. Two smartphones are shown side-by-side. The phone on the left displays the app's login screen with fields for 'Enter your mail' and 'Password', and a large orange 'Sign In' button. The phone on the right shows a camera viewfinder focusing on a white chicken's head, with a small camera icon in the bottom right corner of the viewfinder. Below the phones, the text 'LIVESTOCK & POULTRY ME' is visible.

DUCK FARMING: IMPORTANT ASPECTS AND COMPLETE MANAGEMENT

Authors

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Duck farming occupies an important position in India. As per livestock census 2019, the duck population of India is 27.43 million constituting 8.52 percent of the total poultry population and contributes about 7-8% of the total egg produced in the country. Ducks lay more eggs (about 300) per bird per year than chicken and

the weight is also greater than hen egg by about 18-20 g. Duck has higher red muscle fibre in the breast compared to chicken and is considered as red meat. Ducks have a profitable life from commercial point of view as they lay economically in about second year, so this reduces the cost of production. Ducks supplement their feed by eating fallen grains, snail, earthworms, insects, and small fishes. Ducks are hardy, easily brooded, and resistant to common avian diseases. It is more economical to raise ducks either for egg or meat purpose. Among the egg laying breeds Khaki Campbell and Indian runner are the best in India. Khaki Campbell hens can produce an egg a day which

is white in colour and more than 300 eggs per year. White Pekin is the most popular duck for meat purpose. It is fast growing and has low feed consumption with fine quality meat. Duck's feed conversion ratio is 1:2.3 to 2.7. Drake (male) weighs about 4 kg and duck weighs about 3.5 kg at maturity. Other meat type ducks are Aylesbury, Muscovy, Rouen, Cayuga, Buff and Swedish breeds. Ducks breeds like Crested White, Carolina, Grey calls, White Calls, and Black East Indies are also used for Ornamental purpose.

Advantages of Duck rearing

- Ducks have longer egg-production life.
- Their eggs are heavier and



fetch a better price.

- Their meat is also a delicacy and relished by the people.
- They kill snails, slugs and other crop pests.
- They are good foragers and are able to meet part of their feed requirements from the wild.
- Ducks have longer, economical laying period than chicken.
- They are hardy and more resistant to many avian diseases.

Common duck breeds:

Egg type:

1. Khaki Campbell 2. Nageswari,
3. Indian Runner, 4. Chara Chemballi

Meat type:

1. Pekin, 2. Muscovy, 3. Ruel Kagua

Housing of ducks:

Ducks do not require elaborate houses. The house should be well ventilated, dry, and rodent-proof. Any type of brooder house may be used for brooding ducklings. The temperature under the brooder should be 30-35 °C for the first week and it should be reduced by 30 °C every 4-7 days till it reaches 24 °C during the fourth week. Duckling may be brooded in wire floor, litter or batteries. A continuous water channel is constructed inside the house. Duckling may be reared in intensive, semi-intensive, or range system. In range system, a flock of 1000 can be reared in one acre. According to season and weather conditions, artificial weather is necessary.

Adult stock: Under intensive system, a floor space of 4 to 5 sq. ft. is essential, where as in semi-intensive system, a floor space of 3 sq. ft. in shelter and 12-17 sq. ft. in outfield is sufficient. A feeding space of 6-7 cm. is sufficient.

Laying bird: For laying bird 30x30x45 cm. size box is sufficient for three birds. For layer light of 16 hours is sufficient. In layer mating ratio of 1:6 to 7 and for meat breeds a ratio of 1:4 to 5 is sufficient.

Feeding of ducks:

Baby ducklings should eat waterfowl starter crumbles, a blend specially formulated for their growth and development. Chick starter can be used as a substitute, with cautions. If a chick starter is used, we must provide a niacin supplement in the feed or water. Under intensive system, dry mash pellets or crumbs should be provided in water source. Ducks have no teeth – they need grit in the form of small rocks to grind their food.

Breeding of ducks:

Water is a must for breeding purpose. Usually, ducks don't mate without water. One male duck is sufficient for breeding 10 female ducks. Usually, high quality and productive duck breeds start laying eggs at their five months of age. Each egg weights about 50 to 60 grams. Usually, duck eggs takes about 28 days to hatch.

Gender Determination: It is not so difficult to determine the gender of newly born duckling. Raise up the tail of the duckling and press on its vent. If you notice there is a penis like thorn, then it will be male. And if not then it will definitely be a female duck. The easiest way to determine male ducks is that the tail feathers of male ducks are curled up.

Brooding Management of ducks:

Incubation: Incubation period in duck is 28 days longer than chicken.

Brooding (0-4 Weeks): The brooding period (0-4 weeks) is very critical for duckling and highest mortality may be observed, if proper care is not taken. 1 sq. meter area for 100 ducklings or 100 sq. cms. per ducklings is sufficient for brooding. A temperature of 29 to 32 °C is maintained during the first week. It is reduced by about 30 °C per week till it reaches 24 °C at the end of fourth week. If temperature is higher than the recommended level, air circulation should be increased. In case of winter, a 60 watt bulb at 1-1.5 meter height from the ground level is enough to maintain the required temperature. Feed may be sprinkled or provided in the trays for encouraging the new born ducklings to pick up feed. From day two onwards, ad libitum feed is provided in trough type of feeders. As the duckling grows bigger, suitable feeders are used. Water in the drinkers should be offered frequently, 5 to 7.5 cm (2 to 3") deep is sufficient to drink and not dip themselves. Try to keep ducklings dry.

Feeding (5-16 Weeks):

Supplementary feeding is essential for better results. Birds allowed to field should also be supplemented with concentrate feed at least half dose of recommended feed. The concentrate feed may be purchased or formulated with local feed ingredients. The feed should contain 16% protein for layer bird and 20% protein for broiler finisher bird. Starter ration (0-8weeks) & grower ration should contain 22-24 & 20% protein respectively.

Feed ingredients for 10 kg

feeds (Adult bird): Maize-4 kg, Rice Polish-3kg, Mustard Cake-1kg, Min mix- 350g, Salt- 250g,



Vita. mix-250, Antibiotics-75g, Coccidiostate-75g. All ingredients should be free from alfatoxins. Feed birds in the morning and late afternoon.

Hatching of Eggs:

Hatching of eggs refers to the production of baby chicks from fertile eggs. Ducks usually begin laying at about 6–7 months of age and should be laying at a rate of about 90% within 5 weeks of the onset of laying.

Selecting egg for incubation:

Some eggs have little or no chance of hatching. Because of this, and to conserve incubator space, set only those eggs that are likely to produce ducklings. Do not select eggs that are obviously underweight, cracked or heavily mottled, or those that have poor shell texture.

Egg Storage: Eggs will probably need to be stored until there are enough to incubate. Most breeders prefer to have only one hatching day per week. The longer the eggs are kept, the less chance they have of hatching. The chance of hatching decreases greatly after 7 days.

Temperature: Set the incubator to run at 37.5°C. Maintain

this temperature throughout incubation but reduce it by 0.2°C in the hatchers.

Humidity: Set eggs at a relative humidity of 70% (a wet bulb reading of 33°C and a dry bulb reading of 37.5°C). Humidity may be allowed to fall to 65% but should be increased to 70% when hatching (chipping) begins.

Turning: Eggs should be turned through an angle of 90°. Do not turn the egg after 25th day.

Candling: Eggs are candled by shining an electric light through them so that their contents can be clearly seen, and embryonic development determined. Eggs may be tested for fertility on day 7.

Disease management:

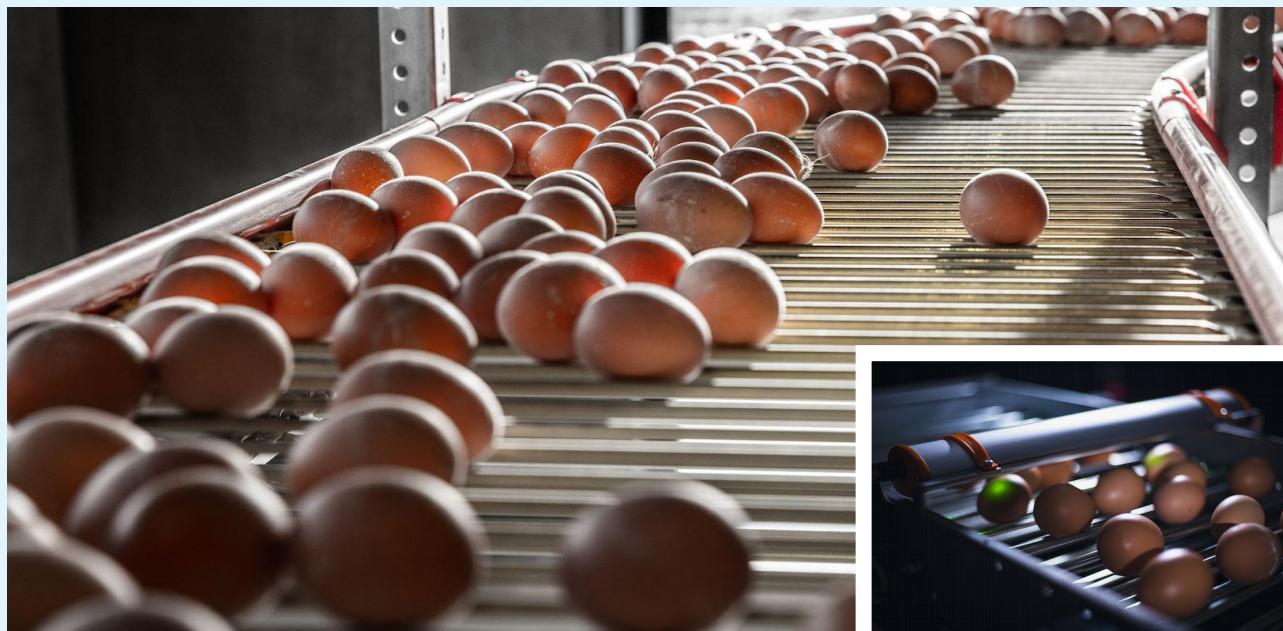
Some of the common ailments among ducklings are coryza and the respiratory distress due to exposure to chill weather during heavy mist, besides duck plaque which causes high morbidity and mortality. During summer season, swelling of joints, gasping for breath, etc. are noticed. To treat the above diseases, the farmers use a decoction made of Poduthalai leaves (*Lippianodiflora*), roots of paragrass, Omum and Vasambu

(Sweet flag; *Acoruscalamus L*). These materials are ground well, mixed in water and boiled. Vasambu, the underground stem of the aromatic marsh herb, is a medicine described in Ayurveda as having beneficial effect on the body as a stimulant tonic and antispasmodic. This keeps the living being always alert and active, provides resistance to diseases and gives more stamina. Other common ailments are Duck plague, Aspergillosis, Ornithosis and Duck cholera.

Ducks for biological control of pests:

When ducklings/ducks are used in between the paddy plants in the rice field, they feed upon the larvae and insects of all the pests of rice like brown hopper, case worm, etc. This kind of control maintains the ecosystem intact without any chemical or pesticide pollution. The duck could be used as a scavenging bird utilizing large amounts of insects, thus having a two-fold benefit of improving feed utilization efficiency and reducing insect problems in the field.

RESPONSIVE EGG FLOW CONTROL PER BARN WITH FORTICA® CONTROL SYSTEM



Hotraco has developed a new software addition to Fortica®: Responsive Egg Flow Control. This smart system enables a steady egg output to the processing point, by automatically adjusting the speed of the belts. Consequently, the number of eggs on the collection belt always perfectly matches the packing or processing capacity. This results in less shell damage, decreased collection time, less labor costs, and an optimal egg mix.

Save production costs

Hotraco's Responsive Egg Flow Control is an automatic egg counting and communication system where multiple egg counters (one per belt) communicate with the Fortica control system. The Fortica then automatically adjusts the speed of the belts to ensure a steady egg output to the processing point. The egg flow can now run smoothly,

resulting in less shell damage and saves time and costs by reducing collection time and staffing requirements.

Respond fast when production results go down

Egg flow is best monitored by using EggXact egg counters. These new egg counters are designed and optimized for reliability and durability. They use the latest technology and provide you with

real-time laying percentages per belt with 99.5% accuracy. Thanks to the continuous exchange of information, you get real-time insight into the number of eggs per belt, per day, hour, and minute in each barn. This allows you to react faster when production results go down due to failures or diseases.

For more information, visit
www.hotraco-agri.com





HOW THE PERFORMANCE OF YOUR FARMPACKER MAKES ALL THE DIFFERENCE

Moba egg grading, packaging and processing machines are packed with technology. Some designs are worth further investigation as they represent crucial customer value.

Unlike egg graders such as the Forta and Omnia, a Farmpacker does not grade eggs: it packs the eggs coming from poultry houses. The eggs are packed directly into trays, or can also be packed onto stacks and

pallets, without weighing and checking them first. During the farmpacking process, eggs are made transportable so they can be sent to a packing station, where the eggs are then graded and packed into consumer packs. In other words, a Farmpacker operates as a connecting link between chicken houses and an offline packing station.

For farmers who sell their eggs to egg grading and packing

stations, the packing process on the farm itself is crucial. The difference between using a good and a bad Farmpacker can make a large percentage difference in the number of cracked eggs, which has an enormous effect on the yearly profit. Therefore the performance of the Farmpacker can determine the success of your company.

Moba's signature: individual egg handling

To ensure that your eggs arrive safely at the packing station, Moba has developed the Mopack product line. This machine family focuses on ensuring that eggs are handled as gently as possible by implementing Moba's well-known individual egg handling principle. This principle begins the moment the eggs find their

way onto the rollers. The rollers have a unique hourglass shape that ensures the eggs settle quickly and effortlessly, stopping tumbling in milliseconds and therefore preventing egg-to-egg contact. This prevents hairline cracks and consequently cross-contamination. The principle of individual egg handling continues in the grippers and dropset and only ends when the eggs are gently placed into the trays. This ensures that the number of cracked eggs is kept to a minimum.

Technical choices that make the difference

As discussed above, the farmpacking process plays a key role in the success of your business. As your hens lay eggs every single day, it is vital for

continuity that you can pack your eggs without interruption. You need reliable equipment that you can count on to get the job done. Mopack uses proven and robust technologies based on Moba's years of experience in packing stations around the world. An example can even be found in the concept choices in the denester, used on all Moba's Farmpackers. Using a concept that denests the packages upside down prevents denester faults. This results in less downtime and helps you efficiently pack your eggs.

Easy to clean

Food safety is paramount for every egg producer. That is why Moba has designed the Mopack with easy cleaning in mind. All Moba Farmpackers are

made of stainless steel and use Moba's famous synthetic parts for the hygienic and gentle egg handling. The sensitive parts of the machine are placed above the egg flow wherever possible. The conveyors are designed so that the accumulation of dirt and egg contents is limited to the absolute minimum. All of these choices ensure that the Mopack is easy to clean.

Mopack: the partner for all your farmpacking needs

Moba offers equipment that suits your company. For low- to medium-capacity requirements, Moba offers the Mopack40, -55 and -70. These are high-performance machines that handle your eggs with great care and at high speed. For situations in which high capacity is required, Moba offers the Mopack100 and -150. The latter combines the traditional virtues of continuous movement with the capacity advantage of packing six eggs in one cycle. Moba also offers a repacker, the Mopack R. Repackers are used when egg grading is not required and farm eggs are directly packed into consumer packs.

Introducing the new Mopack EP

As the recognized leading manufacturer of egg grading, packing and processing machines, Moba is constantly looking for ways to improve your business by developing and realizing best-value solutions. That is why Moba has added a new member to our Mopack-family: the Mopack EP.

The Mopack EP



For more information, visit
www.moba.net



PREVENT FLUCTUATIONS IN MILK PRODUCTION IN GOATS

Ewald Gersthofer is a dairy goat farmer in Austria. He uses a seven-cubic-metre Trioliet stationary mixer on his farm, which is home to 180 dairy goats (in the Austrian village of Rappottenstein). The stationary mixer runs in combination with a conveyor belt feeding system, which has made the feeding process much more efficient. "The main advantage is that I can always feed my goats a consistently mixed ration", says Ewald Gersthofer.

Halving the feeding time

For the transition to mixing with a stationary feeding system, manual feeding was carried out in combination with a conveyor belt system. Since the Trioliet stationary mixer was commissioned, the feed time has been halved to a maximum of half an hour per day. When Ewald Gersthofer looks back on the amount of time that feeding used to take, this constitutes a huge benefit. This precious time can now be spent on other activities.

A consistent mixture is important for goats

Goats are sensitive animals. It is important to provide a homogeneous mixture during every feed cycle, as this prevents fluctuations in production.

Ewald Gersthofer believes that Trioliet's stationary system mixes the feed very consistently. "The main advantage is that I can always feed my goats a consistently mixed ration. With milk production per goat at 800 litres per year, the fat and protein percentages in the milk have increased, which in turn leads to a higher yield. In addition, feed utilisation is better because the components are homogeneously mixed. Previously, the concentrate feed was sorted by the goats. Now it is absorbed evenly together with the other feed components."

For Ewald Gersthofer, it quickly became clear that he needed a stationary mixer. "Obtaining a consistent mix was one of the most important factors when choosing the brand. I talked

to many fellow farmers – both livestock farmers who use Trioliet and farmers who use a different brand." After trialling a towed Trioliet feed mixer as a demo machine, he was convinced of the good mixing quality.

Good service

In addition to mixing quality, trust was important. "Trioliet has over 70 years of experience. You can see that they are quality products. The equipment is sturdy and robust. It's obvious that the quality is there." It was also important for Ewald that the dealer provides support for the product and that a local contact person is available. "A machine is only as good as its salesperson, consultant or workshop. It's a question of service, because good service means a good product. I always say that this is the optimal solution for companies like mine."

For more information, visit www.trioliet.com



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SEAWEED METHANE REDUCTION

You may have read or heard about methane as it relates to the dairy and beef industries. Methane is a simple hydrocarbon gas and a large contributor to greenhouse gases and global warming. Methane is naturally occurring on Earth; it is the main component of natural gas and is produced by ruminants as well as by the decay of organic waste.

Agriculture contributes 36% of methane emissions in the United States, mostly from livestock. As the climate continues to change, many researchers and governments are looking for ways to reduce output without affecting production of livestock. One promising solution comes from the most unlikely of sources: the ocean.

Several research groups around the world have come to the same conclusion: feeding just a small amount of seaweed

to cows could cut methane emissions by 80%. Work being done in the United States, Canada, and Australia has come to the same conclusion: a bit of seaweed could do the trick.

In the United States, UC Davis researchers fed dairy cows small amounts of seaweed a few years ago, and discovered that methane output could be reduced with no taste coming through in milk. In 2021 they published the results of a five-month long trial where beef cattle were fed three ounces of seaweed daily and grew at the same rate as the control group, but burped 82% less methane. Another taste test proved that there was no change in the taste of the beef, which might be crucial for consumers.

Another trial, this one in Prince Edward Island, Canada, found similar results. North Atlantic

Organics takes seaweed that has been tossed onto beaches by the waves, dries it out, and markets it as a feed additive for minerals and nutrients as well as a 20% reduction in methane production. The cows don't mind the small addition, and the results speak for themselves.

This breakthrough provides an important tool in combatting climate change. Ruminants play an integral role in feeding the world, so while the average American might be able to cut some meat out of their diet, there are many for whom a bit of beef or milk is life-giving nourishment. If a simple, natural additive could remove much of the methane from livestock farming, agriculture would be credited with feeding the world and saving the world.

In addition to the benefits to the environment, reducing methane production in





ruminants allows more energy from feed to be fully metabolized and used to produce larger animals or more milk. This gives producers even more reason to feed seaweed; it promotes digestibility.

There are still a few roadblocks in the process. The most effective type of seaweed is *Asparagopsis taxiformis*, which is not found in large enough quantities in the wild to be fed to millions of cattle. Seaweed

can be farmed, and this is being investigated. It would also need to be dried and made into a feed additive, which is what North Atlantic Organics is doing in Canada, however their methane reduction efficacy rates dropped significantly when compared to the UC Davis trials, which used whole seaweed.

Once there's an effective feed made, some producers would like to see government incentives to feed seaweed additives. There

are already incentives through the United States government to reduce methane output on farms. Anerobic digestors, which turn manure into energy, are currently subsidized by the USDA, but not every farm can build or operate one. A feed additive could make a large difference faster and more easily accessible.

For more information, visit
www.silostop.com



UAE VENTURE BUILDER HATCH & BOOST TACKLES REGIONAL FOOD SECURITY WITH LAUNCH OF FIRST PORTFOLIO AGRITECH STARTUP WORLD OF FARMING (WOF)

Hatch & Boost Ventures, ADGM, an Abu Dhabi-based venture builder dedicated to 'hatching' startup ideas at the intersection of impact and innovation, and boosting them into scalable ventures, has announced the launch of its first agritech startup in its portfolio, World of Farming (WoF).

As the world faces unprecedented food security challenges, exacerbated by the pressure of rising global temperatures and limited water supply, World of Farming (WoF) is introducing a first-of-its-kind hydroponic fodder (livestock feed) farming methodology for the meat and dairy industry to the Middle East market, which aims to address these challenges and enhance the sector sustainability.

The United Arab Emirates (UAE) and other Gulf nations are known to have a harsh environment for farming due to high temperatures, scarcity of arable land, and limited freshwater resources. As a result, the UAE imports 80-90% of the food it consumes, including livestock feed. In line with the UAE's National Food Strategy 2051, WoF's vertical farming model will enable local farmers to produce fresh, and cost-effective, local alternatives to international imports of animal fodder independently, efficiently, and more sustainably.

The startup will be making this possible through its patent-pending proprietary methodology called, 'The Cattleyst'. This full circular farming methodology

sustainably produces livestock feed through a closed loop system that reduces methane emissions to the atmosphere.

This approach will supply the local dairy and meat industry with highly nutritious, herbicides and pesticides free animal feed at reduced cost, using up to 90% less water and up to 90% less land than traditional farming.

"Today, animal agriculture is one of the most harmful industries

on the planet, directly responsible for 14% of Greenhouse Gas Emissions, and upwards of 50,000 acres of forest are cleared by farmers and loggers every day, around the world. This extreme clearing of land results in habitat loss, amplification of greenhouse gasses, and disruption of water cycles. Coupled with the effects of international mass shipping, and copious amounts of water consumption, the snowball



effect of unprecedented global challenges we are seeing will continue to gather pace if we don't do something about it today," said Faris Mesmar, CEO and Managing Partner of hatch & boost.

"With WoF, we are making agriculture more sustainable. WoF's vertical farming technology will enable farmers to overcome their dependence on imported livestock feed by growing fresh and nutritious animal feed on their farm. With more farmers adopting our farming approach locally, our ultimate goal is to enhance the agricultural sustainability of livestock ranching and supply chains, and the customers they serve on the regional and global scale," said Dr. Walid Saad, CEO & Co-Founder of WoF.

Currently in private BETA, WoF's proprietary software technology, uses data to monitor and adjust farming parameters to identify the ultimate environment for optimal farm output. The vertical farm tracks crops during their growth



Faris Mesmar



Dr Walid Saad

cycle using AI & imagery to determine health, rate of growth and detect diseases.

WoF aims to build, operate, and manage farms across the region, allowing farmers to enjoy cost saving benefits resulting from eliminating reliance on fodder import, nutritional losses due to long term storage, or logistics and storage costs.

"The launch of WoF comes at a time of profound geopolitical challenges and tensions across the world. Due to the current

global crisis threatening food security, supply chains disruptions are significantly impacting farmers and end customers. We look forward to scaling WoF in the coming years, to accelerate the practice of sustainable farming in the UAE and support the UAE & wider region in its development of more robust food security for our region." Dr Saad added.

WoF has recently been awarded its first customer contract to build, operate and manage a fully integrated circular farm in the UAE with a total output of 3,000 metric tons of fresh animal feed all year round. This comes after having successfully completed its first prototype earlier this year.

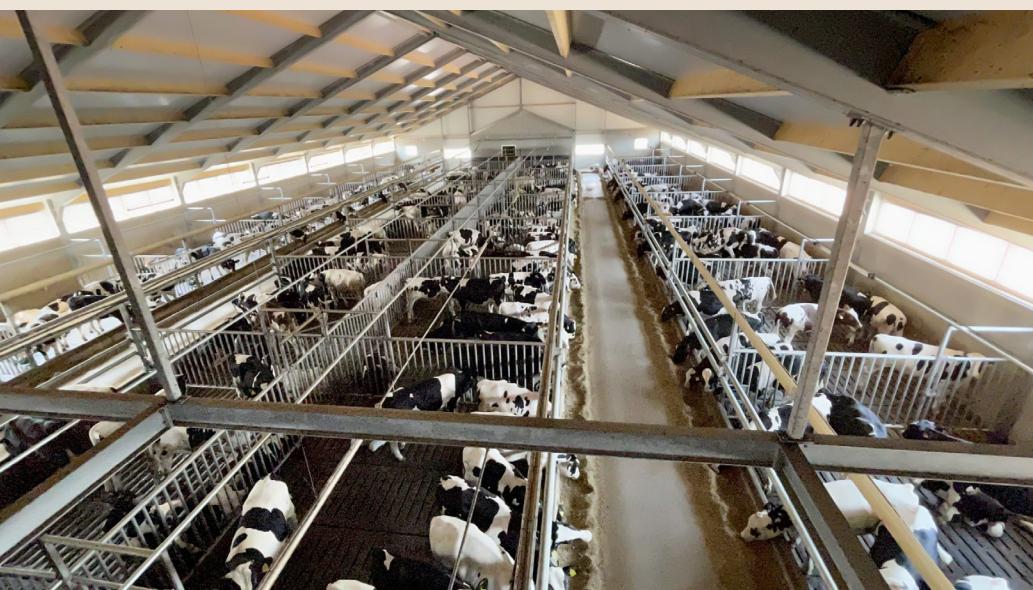
The startup is also currently fund raising to grow and scale its operations & offerings in the wider MENA, including the Kingdom of Saudi Arabia.

WoF is simultaneously working with a number of local universities to empower youth and engage them in research & development programs to develop local solutions supporting the national food security strategy.

For more information, visit
www.wof.ag
www.hatchboost.com



GROWING TOWARDS A FULLY CLOSED CALF FARM



In Barneveld, the van Laar family runs a farm with 740 calves. Construction of the new barn began in 2021 and the first calves have recently entered the barn. With the construction of the new stable, a cherished wish has become reality. It creates a closed farm. There is now the possibility to fatten all the young cattle on one location. This gives the family more grip on their part of the chain and thus takes a step towards making the process more sustainable. The new barn is equipped with a chemical air scrubber supplied through our dealer Boon Agrosystems.

Air scrubbing – a centre point

In the middle of the barn, the animals are cared for as well as fresh air supply to the departments from a central corridor. On either side are 370 animals in pens. The department is controlled on temperature and airflow by means

of a Steinen climate computer. The entire barn is 'under pressure' and the airflow is regulated by means of various inlets. The entire climate management is also provided by Boon agro systems.

In order to maintain a good air distribution, it was decided to equip each half of the house with an air scrubber. This creates an even air flow to the ventilation wall. The two air scrubbers are placed against each other with their rear sides. This creates a good ventilation pattern on both sides, making the scrubber the centre point of the climate system.

Certified air scrubbers for optimal results

Both scrubbers are supplied with water from the technical room and each complies with BWL 2007.05. V7 that reduces 95% ammonia, 30% odour and at least 35% fine dust. In consultation with the client and the dealer, it was decided to apply an increased flow rate to

the scrubbers. This was chosen because the air supplied is very sticky and this 'dilution' helps to reduce the frequency of cleaning. The result is a high-quality unit with excellent removal efficiency and low maintenance requirements.

Good preparation for easy installation and commissioning

Before the scrubbers were installed, there was frequent contact between the client, contractor Boon Agrosystems and Inno+. Because they chose to place the scrubber in the roof, extra emphasis was placed on how to integrate it. In the factory, the set-up was built and tested according to our FAT (factory acceptance test procedures). By doing this, we can guarantee a well-functioning washer once it's running on site.

Mid May, the modules were transported and placed on the prepared platform in the barn. Boon employees took care of the installation of the piping as well as the acid room with the corresponding safety measures. After all this was completed, the Inno+ trained (ICEplus+) mechanic of Boon agro systems started up the washers. The knowledge and skills these mechanics have also guarantees an optimal functioning of the washers.

Blue print for the future

With the increased focus on our sector about emissions and carbon footprint. It is essential building design in the future, integrates the technologies available to achieve the levels of reduction required. This will allow us to keep farming. This project is a showcase example of how we can achieve this.

For more information, visit www.inno-plussystems.com

SUCCESSFUL CALF REARING

The first days of a calf's life set the basic for its healthy and productive adulthood: insufficient nutrient supply or the occurrence of diseases during the rearing phase both lower the performance of the adult animals and increase the risk of health problems and early cullings.

An optimal rearing phase begins even before birth. Optimal care of the cow during the entire pregnancy, but especially in the weeks immediately before calving, should be a matter of course. But also, the reduction of stress factors as well as optimal hygiene during birth settle the way for an optimal start in life of newborn calves.

Another important, but sometimes underestimated factor is the colostrum supply. Although the importance of colostrum is much discussed, its practical implementation is still sometimes underrated. In addition to routine examination of the quality and quantity of the intaken colostrum, the transfer of immunoglobulins into the bloodstream should also be monitored regularly. These examinations can quickly

reveal weaknesses in colostrum management.

Practice Tip:

- Check each milked colostrum for its quality.
- Create a colostrum bank to be able to react quickly to insufficient quantities and qualities.
- Regularly check the immunoglobulin transfer into the calf's blood.

After colostrum supply, disease prevention plays another important role in successful calf rearing. Especially diarrheal diseases in the first 14 days of life reduce the development of young calves. Animals suffering from acute diarrhea must be immediately provided with sufficient electrolytes, buffer substances and energy to prevent their dehydration and the negative consequences thereof. It is also advisable to ensure that sick calves consume milk for as long as possible to guarantee their nutrient- and energy supply. Strict farm hygiene must be maintained to prevent diarrheal diseases. Additionally, it is recommended to build on

high resistance and immunity of the animals directly from the beginning, to strengthen their defense against diarrhea causing pathogens.

Practice Tip:

- Clean and disinfect all top and contact vials in the calf area after each housing.
- React quickly to illnesses to reduce negative effects on the development.
- Support calves preventively, depending to the underlying problem.

Respiratory diseases are the second most common in the rearing phase. Again, acutely ill animals must be cared for quickly to minimize negative effects on development and long-term consequences. To prevent respiratory problems, care must be taken to ensure an adequate supply of fresh air, optimum humidity, and a low concentration of pollutants. Additionally, respiratory health can be supported through the targeted use of phytogenic components.

For more information, visit
www.miavit.com





VES-ARTEX UNPACKED: WATER

When thinking about achieving cow comfort, our focus at VES-Artex revolves around the engineering, design and layout of fans, lighting, soaking technology and high-pressure fogging within a barn. Those elements comprise the core of what we do, but it's not everything.

Consider this: 88 percent of milk consists of water, so ensuring plenty of fresh drinking water is available to cows at all times is a key to any successful cooling strategy. On average, a cow consumes anywhere between 30

and 50 gallons of water per day, so when you calculate that out across the entire herd, that is a lot of water. We recommend as a best practice that each cow has 3 inches or more of linear drinking space within 50 feet of her living space. That ensures easy access and enough volume for cows to

stay cool and hydrated.

According to industry analysis, a cow that produces 100 pounds of milk daily is passing about 11 gallons of that water through her udder as milk. The remainder is expended as urine, manure and through the respiratory tract as humidity. That moisture maintains mucus flow through the respiratory tract to eliminate bacteria, viruses, and molds and dust particles that can cause disease. From a cooling perspective it accounts for roughly 30 percent of the cow's cooling potential. Visually, that's why you see a cow panting as her core body temperature rises.

Researchers have also found that as a cow's body temperature rises, so does the prevalence of panting. If you're looking for an easy, low-tech way to get a ballpark measure of whether cows are in heat stress, we consider 60 breaths per minute (BPM) as "no heat stress" and 85 or above as "severe heat stress."

See the chart below for the correlation between BPM, body temperature and Temperature Humidity Index, which we use as a gauge of environmental heat stress.

Making water accessible and plentiful is a high value upgrade you can make in your barn to achieve an appropriate Animal-Centered Environment that keeps cows hydrated and cool.

For more information, visit www.ves-artex.com

Heat stress level	Temperature humidity index (THI)	Respiration (breaths per minute)	Body temperature (degrees Fahrenheit)
No heat stress	Less than 68	40-60	101.5-102.5
Mild	68-71	60-75	102.5-103
Mild to moderate	72-79	75-85	103-104
Moderate to severe	80-90	85-100	104-105
Severe	90-99	100-104	Over 105



ANTA®PHYT, THE HELP YOU NEED TO COUNTERACT ELEVATED SOMATIC CELL COUNTS

Although intensive feeding helps obtain top performance in dairy cows, it also takes its toll. Ruminal disorders, a strained immune system and elevated somatic cell counts frequently follow hot on the heels of feeding high concentrate diets. Therefore, high-yielding dairy cows need the help of Anta®Phyt. The plant secondary compounds in Anta®Phyt have antimicrobial and immune-modulatory effects, which positively influence health parameters and performance of dairy cows.

Previous studies have shown the positive effect of Anta®Phyt on somatic cell count and milk yield. A field test to prove the efficacy of Anta®Phyt under practical conditions was recently carried out on dairy cows with elevated somatic cell counts.

Successful reduction of somatic cell counts

The field trial that Dr. Eckel

recently presented at the BOKU online symposium confirms the efficiency of Anta®Phyt in reducing somatic cell counts and improving the performance of cows with elevated somatic cell counts.

During the treatment period, the quantity of milk as well as the milk fat and protein content improved. This resulted in 2.01 kg more energy corrected milk per cow per day in the treatment period (Table 1).

In addition, the proportion of cows with a somatic cell count < 100,000 cells/ml increased from 38% to 49% while that of cows with a somatic cell count > 100,000 and > 300,000 cells/ml decreased by 18% and 17% respectively (Fig. 1).

Conclusion

The results show that Anta®Phyt has a positive effect on the udder health and productivity of dairy cows with elevated somatic cell counts. So it's time to take action and get herds with elevated somatic cell counts back on track with Anta®Phyt.

For more information, visit www.dr-eckel.de

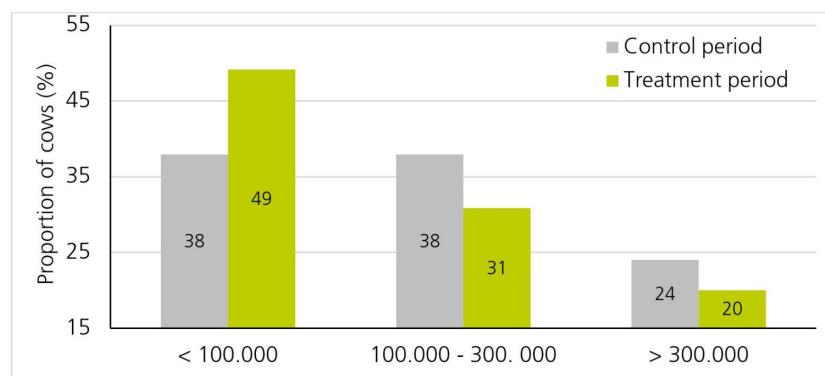
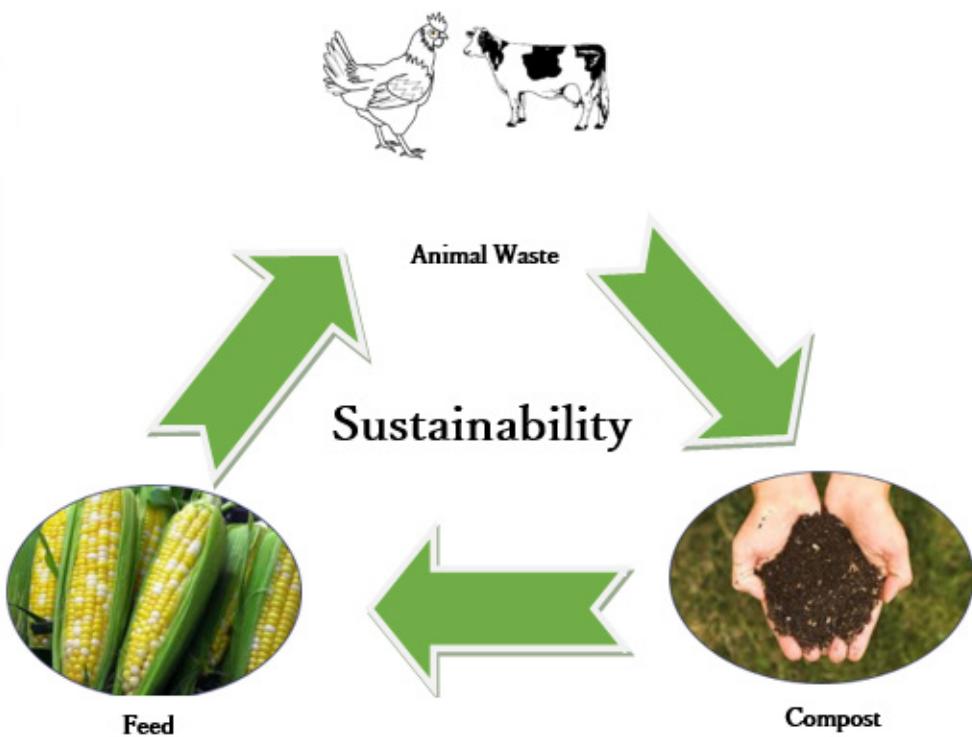


Figure 1: Comparison of somatic cell count classes in the control and treatment period

Parameter	Control period	Treatment period
Milk (kg/day)	29.33 ± 7.60	29.86 ± 7.40
Milk fat (%)	4.25 ± 0.64	4.60 ± 0.73
Milk protein (%)	3.63 ± 0.42	3.77 ± 0.36
ECM (kg/day)	30.66 ± 7.10	32.67 ± 8.40

Table 1: Milk yield and composition

IMPORTANCE OF COMPOSTING AND HOW IT IS DONE?



What is composting process?

Composting process (in terms of producing organic fertilizer/ Compost) points to a process of any kind of biodegradable waste being decomposed by microorganisms under aerobic conditions. The main keys for good composting process are correct humidity temperature and oxygen supply.

Why it is important to compost?

If livestock waste is not processed correctly it can cause environmental problems such as groundwater contamination, emission of bad odor and a huge outbreak of flies. Also, the use

of unprocessed manure as a fertilizer could cause problems such as growth of unwanted weed seeds, spread of harmful bacteria such as salmonella and E coli etc..

How to compost animal waste?

Composting manure can be done manually by using a shovel loader, but it will be a tough job if there is a large amount to be processed in addition, manual

composting is not so efficient. By automating the process, it is possible to make the work much simpler and to produce a high-quality organic fertilizer at the same time.

Kohshin Composter is automatically operated using timers and sensors. The operator's job is only to place the raw materials at the input side of the machine and to take the final products out at the output side. Therefore, 1 operator can manage multiple machines. In addition, our Composters agitate the manure 1 to 2 times a day, while supplying fresh air to the microorganisms to accelerate the composting process.

Efficient processing occurs due to the activity of aerobic microorganisms, which produce heat during decomposition that can increase the temperature to approximately 60-70°C. Maintaining a temperature of 60-70°C for several minutes to few hours can kill disease-causing pathogens such as salmonella & E-coli and weed seeds. This is one of the reasons why composted products from Kohshin Composter are safe to use.

For more information, visit
www.kohshin-s.jp



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