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Innovation Award EuroTier: Winners 2024

EuroTier 2024: November 12 to 15, 2024 in Hanover, Germany - Guiding theme: “We innovate animal farming” – More than 2,100 exhibitors from 52 countries – The DLG Innovation Commission awards 4 gold and 21 silver medals

The DLG (German Agricultural Society) has announced the winners of the EuroTier 2024 Innovation Award. The leading innovation award in the international livestock industry, including poultry, recognizes products with a function that has changed significantly, enabling a new process, or has significantly improved an existing process. All exhibiting companies at EuroTier have been eligible to enter their innovations for the EuroTier Innovation Award. This year, 255 innovations were submitted, and, following evaluation, 214 fulfilled the criteria to be included on the EuroTier innovation list. The DLG Innovations Commission awarded 4 gold medals and 21 silver medals.

The “Innovation Award EuroTier” in gold is awarded to a product with a new concept that offers a function that has changed significantly, enabling either a new process or significantly improving an existing process. The following constitutes evaluation criteria for the award of a gold medal:

- Significance to practice
- Animal welfare
- Advantages for farm and labor management,
- Improvement to the environment and energy supply
- Effects on workload and occupational safety.

A silver “Innovation Award EuroTier” is awarded to an innovation in which an existing product has been further developed in such a way that a significant improvement in function and process can be expected. However, the product does not fully meet the criteria for the “Innovation Award EuroTier” in gold. Key evaluation criteria for a silver medal are:

- Economic significance in practice
- Advantages in work performance and work quality
- Improvement in functional safety
- Positive effects on animal welfare,
- Effects on environment and energy consumption.

Gold medals:

- **Manufacturer: Cow-Welfare A/S**
Hall 12, stand B49
Product: Cow-Welfare Flex Air Stall

At increasing ambient temperatures of around 24 degrees Celsius or higher and humidity of around 70 percent, high-performance dairy cattle increasingly encounter the limits of their thermal regulation and suffer from heat stress. To avoid this, the animals significantly alter their behaviour and attempt to bring their body temperature back into balance by releasing more heat.

The most effective way to help the animals to do this with regard to the climate in the barn is by cooling through air movement and supplying fresh air. Besides ensuring free ventilation by removing external walls, fans or ventilation hoses are usually installed to transport fresh outdoor air into the barn area.

The Flex Air Stall system from Cow-Welfare now enables fresh air to be supplied directly to the cows' lying area for the first time. Fresh outdoor air is sucked into the animal housing via a hose ventilation system and forwarded into the cubicles under pressure. The fresh air is then forced directly into the lying area at an angle of 45 degrees from five openings drilled in the upper cubicle bar. In this way, the cubicle becomes the most comfortable and well-ventilated place in the animal housing, in which the cows are happy to remain.

The Flex Air Stall system promises effective cooling and a supply of fresh air for the individual, lying cow and therefore helps to prevent heat stress.

Short text:

The Flex Air Stall system from Cow-Welfare supplies fresh air directly into the lying area of individual, lying cows for the first time, and therefore supports effective cooling and helps to prevent heat stress.

- **Manufacturer: Förster-Technik GmbH**
Hall 13, Stand D35
Product: CalfGPT

The daily work and care of calves on a farm necessitates a great deal of time and attention. This is particularly important because calves are future dairy cows and this phase of their lives is crucial to subsequent milk production. Sensors and automatic feeders record a high volume of data and information in the calf area, which helps the farmer to monitor the calves' behaviour and health. Often, however, this data has to be retrieved and entered laboriously at the automatic feeders using hand-held terminals or far away from the calves on the computer in the barn office.

With CalfGPT, Förster-Technik offers an innovative management tool based on the leading AI system from OpenAI. It enables the farmer to submit freely formulated enquiries concerning the general situation or individual calves using a voice connection via the farm's own WiFi and to receive specific information about the calves and alarms on a mobile phone or tablet in direct response. Pre-formulated commands are not necessary; new information concerning individual calves can also be sent directly and verbally to CalfGPT for further documentation.

Use of the application via in-ear headphones vastly simplifies operation. In particular, the entry of findings is facilitated, as the user has both hands free for working on the animal even during 'input'. Users can additionally obtain a specific digital overview of their calf groups during other activities in the barn, such as littering or feeding, which saves time and can be achieved 'hands-free'.

Short text:

CalfGPT from Förster-Technik enables voice-controlled, AI-aided data management in the care of calves for the first time and therefore makes calf

management significantly easier.

- **Manufacturer: MIK INTERNATIONAL GmbH & Co. KG**

In cooperation with:

-Friedrich-Loeffler-Institut, Federal Institute of Animal Welfare and Animal Husbandry

-University of Applied Sciences and Arts,

Hildesheim/Holzminden/Göttingen, plasma system research and development

Hall 15, Stand D26

Product: Cold plasma mite trap EX

The red poultry mite occurs worldwide in poultry houses, especially amongst laying hens. The ectoparasites live and reproduce in the immediate vicinity of the animals and descend on them in the dark in order to suck their blood. If the mites multiply prolifically, animal health and profitability are severely impaired. The red poultry mite is currently controlled using acaricides, silicates or antiparasitic agents. No technical system for combating the red poultry mite has been available so far.

The new technology of the cold plasma mite trap EX from MIK International GmbH combats the mites by means of a mite trap. In this, the mites are exposed to a cold atmospheric pressure plasma, which is generated by dielectric barrier discharge in a discharge chamber located between a positively chargeable electrode covered by a dielectric and an earthed electrode. The effect on various stages of development, i.e. the mite itself and mite eggs, was verified in a test. The mite traps are attached beneath the perches and are equipped with an automatic cleaning system that pushes the dead mites out of the trap.

Thanks to the cold plasma mite trap EX, the use of acaricides, silicates or antiparasitic agents could be reduced in the future and a significant improvement in animal health and profitability could be achieved. It therefore outstandingly meets the criteria for the award of the gold medal.

Short text:

With the cold plasma mite trap, EX from MIK International GmbH, a technical system for residue-free control of the red poultry mite that has the potential to

replace the chemical control methods used so far is now available for the first time.

- **Manufacturer: Agri Advanced Technologies GmbH**
Hall 17, Stand B20
Product: Vaccybot

During rearing, pullets are vaccinated with multiple vaccines using needles before being transferred to the egg production facility, i.e. vaccination is carried out by means of intramuscular injection using hypodermic needles. So far, the vaccinations are carried out manually, which can involve stress and pain for the animals as well as a certain risk of pathogen transmission or broken needles in the animals and subsequently in the meat.

Agri Advanced Technologies has now developed the first fully automated procedure for breast vaccination in poultry. This is a new development that has the potential to revolutionise poultry vaccination in terms of accuracy and vaccination success. The system enables the simultaneous injection of up to six different vaccines with previously unequalled precision and speed. The innovative technology, which uses a 3D stereoscopic NIR camera and a real image colour camera in combination with intelligent algorithms, measures the passing animals that have been manually suspended in an existing sorting device in the sub-millimetre range and calculates the exact target position for the vaccination within a matter of milliseconds. The dynamic control of a 2D delta robotic arm with six axes enables the precise administration of the vaccines to an accuracy of 1 cm². This leads not only to a significant improvement in vaccination quality, but above all to a considerable reduction in stress for the animals. The system additionally improves farm and labour management by reducing the number of work steps and ensuring the consistent quality of vaccinations, which can help to improve animal health.

On the whole, automated vaccination with the Vaccybot outstandingly meets the criteria for the award of the gold medal and represents significant progress in modern poultry farming.

Short text:

The Vaccybot from Agri Advanced Technologies is the first fully automatic vaccination robot for poultry farming and has the potential to replace manual vaccination with

needles, which has been the standard procedure to date and is prone to errors. The procedure means less stress for the animals with a higher vaccination quality and improved animal health at the same time, and equates to a genuine reduction of the livestock owner's workload.

Silver medals:

- **Manufacturer: Zinpro Corporation**
Hall 22, Stand C31
Product: Zinpro® IsoFerm®

Above all, an optimum supply of feed is required to achieve high performances in cattle farming. In particular, it is essential to meet the majority of nutrient requirements via the basic feed by ensuring the best possible rumen function. On the one hand, this is the most cost-effective feeding option and, on the other, it also has a significant impact on animal health. Focus is increasingly shifting to the rumen environment and the rumen microbes, which ultimately break down the coarse feed.

The importance of isoacids as nutrients for rumen bacteria has long been known and proved. However, their application via feeding has proved difficult in the past. The application hurdles have now been cleared and the situations in which rumen microbes can benefit from additional branched-chain fatty acids have also been identified with the new, patented process for masking the unpleasant odour of isoacids and further intensive research.

Zinpro® IsoFerm® is a blend of volatile fatty acids. These occur 'naturally' in the rumen during the breakdown of branched-chain amino acids and act as growth factors, particularly for cellulolytic rumen microbes. Their targeted supplementation offers the potential to improve microbial protein synthesis and fibre digestibility, thus fostering rumen function, metabolism and efficiency. Tests show that fibre digestion is increased by up to 15 percent and microbial protein synthesis by up to 6 percent. New, preliminary test results additionally indicate their potential to reduce methane production.

Depending on a cow's metabolic situation, the addition of Zinpro® IsoFerm® can therefore lead to a higher milk yield during early lactation or better lactation curve persistence during late lactation. This results in increased farm profitability.

Short text:

Zinpro® IsoFerm® is a blend of branched-chain, volatile fatty acids whose unpleasant odour has been masked and which can therefore be used as a feed supplement. Depending on a cow's metabolic situation, increased fibre digestion and protein synthesis in the rumen are possible, which is reflected in an increase in the milk yield and improved animal health.

- **Manufacturer: AUFRATECH**
Hall 24, Stand A23
Product: EXON Dual and EXON Mini

The status quo of manually operated devices for cleaning technology in agricultural livestock management systems has not evolved for years. The devices essentially consist of a high-pressure gun that is connected to a lance on one side and a high-pressure hose on the other.

By developing what are called exoskeletons, AUFRATECH is now offering users considerable relief during cleaning work with a high-pressure cleaner. The EXON Dual and the EXON Mini have been developed to significantly reduce physical stress during high-pressure cleaning work.

A lightweight, adjustable and comfortable tubular chassis and corresponding harnesses result in significant advantages in distributing the weight of the lance over the shoulders, as the reaction forces of the cleaning lance are transferred to the torso. It is additionally possible to attach the supply hose in the waist area. A two-hand control module, which is permanently positioned in front of the user, also results in a low trigger force.

The dramatic strain on the upper limbs, especially the shoulders, is significantly reduced thanks to a comfortable and perfectly balanced posture. Vibrations are also reduced and work productivity is vastly improved at the same time.

Short text:

The EXON Dual and EXON Mini high-pressure lance systems transfer the resulting forces to an exoskeleton and thereby significantly relieve the user during strenuous cleaning work with a high-pressure cleaner.

- **Manufacturer: Agri Advanced Technologies GmbH**
Hall 17, Stand B20

Product: eggitizer

The disinfection of hatching eggs is indispensable in hygiene management and helps to prevent animal diseases in addition to improving hatching success. Previous methods, some of which used substances that are harmful to health, are banned or are at least to be regarded critically due to ecological and health and safety reasons.

The eggitizer from Agri Advanced Technologies uses electron beam sterilisation technology (eBeam) to disinfect the hatching eggs. This form of sterilisation with accelerated electrons enables deeper penetration into the eggshell than conventional treatments involving UV or ozone. The process enables better disinfection performance than conventional methods. On the whole, this improved disinfection performance is anticipated to lead to improved animal health and economic benefits while simultaneously forgoing chemical disinfectants. Better hatching results have additionally been achieved in initial tests. Overall, the eggitizer therefore makes a valuable contribution to modern poultry farming.

Short text:

The eggitizer from Agri Advanced Technologies GmbH uses electron beam sterilisation technology to disinfect hatching eggs, as a result of which disinfection performance is increased and the use of chemical agents is reduced.

- **Manufacturer: Spinder Dairy Housing Concepts**
Hall 12, Stand D03
Product: Spinder Track

Changing group sizes are an everyday occurrence in cow housing. Gates are usually permanently installed in the barn and are difficult or impossible to change. This often results in unused space in the housing unit.

Spinder now offers a solution to this problem in the form of the 'Spinder Track'. The usable housing area can be adapted to the corresponding group size at any time by means of a gate that runs on rails. The system is designed so that it can be operated and locked in the desired position by one person. Animals or people can pass through an integrated sliding gate at any time. The system can be both installed in newly constructed barns and retrofitted in existing barns and is adapted to the respective specifications of the barn. As a result, hardly any

interference with other work in the barn is to be anticipated, particularly due to the height of the rail. The Spinder Track therefore enables the optimum use of space.

Short text:

The Spinder Track sliding gate system enables a single person to easily and quickly adapt the space available in the cow barn to a changing group size.

- **Manufacturer: Gummiwerk KRAIBURG Elastik GmbH & Co. KG**
Hall 12, Stand E57
Product: espaFLEX - emission-reducing slatted flooring

National and international regulations are demanding the increasing reduction of airborne pollutants, including those from livestock management. This primarily concerns ammonia, which particularly occurs in the cattle sector when faeces and urine are not separated immediately, and the excrement remains mainly on the floor and does not dry out quickly.

To solve this problem, Gummiwerk Kraiburg has developed the espaFLEX for new and existing slatted floor surfaces. The espaFLEX mat stands out from existing products on the market thanks to its special corrugated profile with a three percent gradient structure transverse to the walking direction.

The 3 percent gradient enables urine to flow rapidly through the slots, therefore resulting in a quickly drying floor. The improved dryness of the floor surface ensures drier hooves with accordingly positive effects on hoof health. Thanks to the special design, cleaning robots continue to achieve good cleaning results due to the gentle 'undulation'.

Due to the quick drainage of urine and in combination with manure-collecting robots, lower ammonia emissions are to be anticipated in addition to the aspects of increased animal welfare and improved hoof health.

Short text:

Thanks to a 3 percent gradient transverse to the walking direction, the espaFLEX slatted floor mat from Gummiwerk Kraiburg ensures the rapid separation of

faeces and urine, thereby resulting in drier floors with positive effects on hoof health and with regard to lower ammonia emissions.

- **Manufacturer: SILOKING Mayer Maschinenbau GmbH**
Halle 27, Stand E15
Product: SILOKING heavy-duty magnet

In the area of mechanised cattle feeding, foreign bodies containing iron in the mixed ration pose a significant potential risk to the animals. The ingestion of such foreign bodies can lead to severe injuries in the digestive tract of the cattle, which can often cause the animal to become ill and sometimes even lead to the death of affected animals. To counter this problem, permanent magnets, to which these magnetisable foreign bodies adhere, have been installed in feed mixing systems for some time.

To date, however, the adhering foreign bodies have had to be manually removed individually from the integrated magnets. This procedure often resulted in injuries to the person performing the work, as blades for shredding the feed are installed in the immediate vicinity of the magnets, amongst other issues.

In the system designed by Siloking Mayer Maschinenbau GmbH, the heavy-duty magnet can now be removed together with its surrounding housing and all adhering foreign bodies for the first time. This therefore shifts the activity of detaching them from the principal danger zone, facilitates the task as a whole and significantly reduces the risk of injury.

The innovative magnet construction from Siloking Mayer Maschinenbau GmbH therefore represents a significant further development in the area of feed mixing systems.

Short text:

The Siloking heavy-duty magnet, which is installed in a housing, can be removed together with the adhering foreign bodies from the feed mixer wagon and the foreign bodies can therefore be removed with significantly less risk of injury.

- **Manufacturer: URBAN GmbH & Co. KG**
Hall 13, Stand B09
Product: Urban SipControl: monitoring and improvement of calf welfare thanks to drinking process analysis and regulation

Healthy, vital calves are the basis for successful milk production. Consequently, intensive monitoring of calves is important. Digitalisation is increasingly being used to support the monitoring, evaluation and control of relevant processes by means of sensor technology and intelligent algorithms, and therefore supports animal health and well-being in calf husbandry.

Urban SipControl is an innovative system for determining the welfare of suckling calves at automatic feeders. The system records the animal's sucking strength and the individual swallowing processes during the drinking process in high resolution and can adapt the feeding process to the individual animal by means of active flow control. Physiologically optimised feeding times in combination with low swallowing volumes can therefore be implemented for each individual animal during each drinking process. Deviations from the animals' individual sucking patterns can be used for predictive health monitoring.

Urban SipControl uses a high-resolution, inductive flow sensor to scan the pulsating volumetric flow that occurs in the suction line of suckling calves at microsecond intervals. During the drinking process, the number of swallows, the volume consumed per swallow and the calf's sucking strength are recorded and evaluated with high precision. The length of the suckling process can be adapted to the individual animal as required.

Urban SipControl therefore represents a significant further development in calf feeding at the automatic feeder.

Short text:

Urban SipControl monitors key feeding process parameters for calves and automatically adapts the length and flow rate to the individual animal during the drinking process.

- **Manufacturer: HIKO GmbH**
Hall 11, Stand: D59
Product: 'Easyfill' feeding bucket lid with filling opening

Calf rearing remains the most sensitive area in dairy farming. Above all, feeding hygiene is a high-priority issue. In fact, open feeding buckets are still seen very frequently at the calf igloos because removing and reattaching lids takes a considerable amount of time, which is often avoided, especially when feeding with a MilkTaxi. However, open feeding buckets significantly facilitate the entry of dirt and, above all, flies in the summer.

HIKO offers a simple and, above all, practical solution to this problem in the form of the 'Easyfill' feeding bucket lid. The lid is equipped with a self-closing opening through which the filler neck of the milk shuttle can be inserted at any time and the bucket filled. As handling barely differs from filling without a lid, a high level of staff acceptance is to be anticipated.

The 'Easyfill' feeding bucket lid therefore ensures that the feeding buckets remain tightly closed, thereby extensively preventing the entry of foreign objects such as dirt or flies.

Short text:

The 'Easyfill' feeding bucket lid makes hygienic calf feeding easier, even when using a MilkTaxi, and significantly reduces the entry of dirt and flies.

- **Manufacturer: BETEBE GmbH**
Hall 12, Stand F26
Product: BETEBE straw express

Up to now, bale strapping and baler twine have had to be manually removed from a straw bale after opening before it could be fed into a straw distribution system. This meant that only one new bale could be fed into the littering system at any one a time.

The BETEBE straw express enables the automatic removal of the bale strapping from the straw bales for the first time, thereby minimising the susceptibility of littering systems for cubicle, sloping floor or deep litter sheds to errors. This automatic baler twine removal makes it possible to store up to twelve bales of straw in a space-saving, vertical bale magazine. In combination with the littering

system, the system can litter fully automatically and also reduce dust development in the shed to a minimum. The space-saving system can be both installed in new barns and retrofitted.

The BETEBE straw express saves working time thanks to automatic baler twine removal and ensures greater working time flexibility and improved work quality thanks to the bale magazine.

Short text:

Thanks to automatic baler twine removal, the BETEBE straw express saves working time and ensures greater working time flexibility and improved work quality in cubicle, sloping floor or deep litter sheds thanks to a bale magazine for up to twelve square bales.

- **Manufacturer: ATX Suisse GmbH**
Hall 16 Stand, C03
Product: ATX® heat conducting function for suckling pig nests

The temperature stability of piglets is one of the most important influencing factors with respect to the survival rate of suckling pigs. The challenge, particularly in farrowing pens designed for free farrowing, is to guide new-born piglets into the warmed piglet nest as quickly as possible.

ATX has significantly evolved this heat conducting function with its ATX Thermonest ECO. The patented curtain locking mechanism can be folded over very easily with one hand, making it effective and time-saving. The curtain is folded over upwards when the lid is lowered, making operation considerably easier. The multifunctional board for conducting the heat and sealing off the nest is also a remarkable innovation. The board's function can be changed quickly, safely and in a technically mature manner in just a few simple steps. Only 7 to 10 seconds are required per pen to set up the heat conducting function before farrowing, which also makes the product interesting for large farms.

The ATX heat conducting function for suckling piglet nests therefore represents a significant evolution of the piglet nest, which particularly improves both the welfare of the piglets and handling by the livestock owner.

Short text:

The ATX heat conducting function for suckling pig nests enables the livestock owner to ensure that the new-born piglets are guided into the warm piglet nest very easily and very quickly in piglet pens for free farrowing.

- **Manufacturer: Nooyen Manufacturing B.V. Nooyen Pig Flooring
Hall 15, Stand B03
Product: Lowered Heated Piglet Nest**

'As a fixed component of the farrowing pen, the piglet nest is intended to help compensate for the differences in the heat requirements of sows and piglets during the first few days of life and to reduce suckling pig losses due to crushing. The farrowing pen also has to meet particularly high husbandry and hygiene standards.

The Lowered Heated Piglet Nest from Nooyen Manufacturing offers several advantages in this respect. The slightly lowered and inclined nest simulates a depression. The piglet nest is therefore accepted more readily and the risk of crushing losses is reduced. Litter or bedding powder can be introduced into the depression without causing excessive losses. The slightly perforated surface removes fluids and the nest remains dry and hygienically clean. The nest heating system installed in the piglet nest can be operated with hot water or electricity and ensures consistent heat from below. The piglet nest is compatible with every farrowing pen and can be easily integrated into existing systems.

The Lowered Heated Piglet Nest from Nooyen Pig Flooring therefore represents a significant improvement in the design of farrowing pens.'

Short text:

The Lowered Heated Piglet Nest from Nooyen Pig Flooring stimulates the natural behaviour of the piglets and simulates a depression. Litter or bedding powder can be introduced into the depression without causing excessive losses. The slightly perforated surface removes fluids and the nest remains dry and clean.

- **Manufacturer: ASBO B.V.**
Hall 15, Stand E19
Product: FlexiPigFloor

Livestock farming, and particularly pig farming, is constantly faced with changes resulting from new statutory requirements, marketing requirements or adaptations to the housing facilities in order to improve animal welfare and business development, for example. The maintenance of functional safety and legal compliance up to and including the renovation and repair of housing facilities also poses a constant challenge. The concrete floor with perforation also plays a central role in this. Adapting slot widths, reducing the degree of perforation or even simply renovating washed-out concrete floor elements are always a challenge.

The FlexiPigFloor system from ASBO enables the simple, durable, quick and inexpensive repair and needs-based adaptation of existing slatted concrete floors to changed slot width, slot ratio and surface design specifications.

FlexiPigFloor consists of aluminium profiles that are flexibly manufactured according to requirements and a cement-based coating. The coated profiles can be used to repair existing concrete slats as well as to adapt the slot widths to changed statutory requirements or to convert existing concrete slats into a lying area with a low degree of perforation.

FlexiPigFloor therefore offers an effective and efficient solution for renewing and restructuring slatted concrete floors. Existing flooring systems can therefore be adapted to new requirements without having to be removed.

Short text:

The FlexiPigFloor system from ASBO enables the simple, durable, quick and inexpensive repair and needs-based adaptation of existing slatted concrete floors to changed slot width, slot ratio and surface design specifications.

- **Manufacturer: Big Dutchman International GmbH (Pig & Poultry)**
Hall 17, Stand D20
Product: Sharky430

Washing aviary sheds in laying hen farming poses a challenge on various levels due to the complex and angular systems. In the manual cleaning carried out so far, some areas are difficult to reach, thus leading to a high workload and cleaning results that are not always satisfactory.

The Sharky430 from Big Dutchman International GmbH is a further developed washing robot for cleaning rearing and laying hen barns with aviary systems. To achieve this, the washing robot has been extended with a very flexible washing arm, which makes it possible to reach all of the areas in an aviary. The significant improvement of the washing robot arm with more degrees of freedom leads to a better cleaning result, as even areas that are difficult to access are reached by the washing arm. As the first highly automated and flexibly programmable washing robot that has been developed specifically for rearing and laying aviaries, it impressively meets practical requirements. The economic benefit of the Sharky430 is considerable, as it significantly increases work performance thanks to its efficiency and flexibility and improves the quality of the work at the same time. In addition, water can be saved, therefore making the work resource-efficient. The Sharky430 offers high flexibility and user friendliness thanks to its integrated washing programs for Big Dutchman aviaries and the option of individually adapting these programs.

Overall, the Sharky430 washing robot makes a valuable contribution to modern poultry farming.

Short text:

The Sharky430 washing robot from Big Dutchman enables fully automatic cleaning of aviary systems in rearing and laying hen barns, even in places that are difficult to access during manual cleaning.

- **Manufacturer: Big Dutchman International GmbH (Pig & Poultry)**
- **Hall 17, Stand D20**
- **Product: MultiVacc (vaccination machine)**

During rearing, pullets are vaccinated with multiple vaccines using needles before being transferred to the egg production facility. This vaccination method,

which has so far usually been carried out manually by means of intramuscular injection using hypodermic needles, subjects the animals to considerable stress. In addition, there is a certain risk of pathogen transmission or broken needles in the animals and subsequently in the meat, which can cause the animals pain.

The MultiVacc vaccination machine from Big Dutchman represents a significant further development in the area of poultry vaccination and offers considerable improvements in terms of the function and method. MultiVacc is the first semi-automatic vaccination machine that can simultaneously administer four breast vaccinations and one wing vaccination in an animal-friendly manner by manually catching the animals and holding them in a specific position against the device.

The economic importance of MultiVacc to farming is considerable, as its efficiency and ergonomic design significantly increase work performance and reduce the effort required for manual vaccinations. This leads not only to an improvement in the quality of work, but also to increased functional safety, as the risk of errors during vaccine administration is minimised and animal health can therefore be improved. The high hygiene standards that MultiVacc meets as well as its animal-friendly administration, which reduces stress for the animals during the vaccination process, are deserving of particular emphasis.

On the whole, MultiVacc makes a valuable contribution to vaccination safety in modern poultry farming.

Short text:

The semi-automatic MultiVacc vaccination machine from Big Dutchman can simultaneously administer four breast vaccinations and one wing vaccination to an animal held against it in an animal-friendly manner, thereby resulting in improved vaccination safety while simultaneously reducing stress.

- **Manufacturer: SKW Stickstoffwerke Piesteritz GmbH together with BETEBE GmbH
Hall 12, Stand F23
Product: ATMOWELL® technology with urease inhibitor in cattle barns**

Livestock farming is one of the focuses of national and international regulations when it comes to reducing emissions of airborne pollutants. Reducing ammonia emissions, including in cattle barns, is particularly important in this regard.

By developing a urease inhibitor for use on floors in cattle barns, developing a dosing, mixing and filling unit for this product and combining it with a scraper technology with a corresponding distribution device, SKW Stickstoffwerke Piesteritz, together with BETEBE, has brought a practical system to market maturity that enables ammonia emissions in cattle barns to be significantly reduced at the point of origin, i.e. in the animals' walking area. The system is regarded as functionally reliable and operates extensively autonomously. By combining the application technology on the returning scraper with mixing and dosing technology, daily application is easy to implement and document in terms of labour.

This therefore offers an option for reducing barn-specific NH₃ emissions and thus undesirable nitrogen inputs into nitrogen-sensitive ecosystems both in new barn construction situations and for retrofitting in existing barns.

The ATMOWELL[®] technology with urease inhibitor from SKW and BETEBE is a combination of various technologies, some of which are familiar. Taken together, these equate to a significant improvement that promises economic benefits and makes environmental targets for reducing NH₃ emissions achievable.

Short text:

The ATMOWELL[®] technology with urease inhibitor from SKW is a combination of various technologies, some of which are familiar, for use on floors in cattle barns and which significantly and specifically reduces ammonia emissions at their point of occurrence in cattle barns.

Manufacturer: Omegga GmbH

Hall 17, Stand H18

Product: Omegga One

Rearing male chicks from laying breeds is not feasible due to intensive breeding optimisation for laying performance. The routine killing of male chicks on their first day of life has been banned since 2022, thereby necessitating the reliable determination of sex while still in the egg.

With 'OmeggaOne', Omegga has significantly improved the technology for determining the sex of laying hen chicks in the egg ('in ovo') by using non-invasive and cost-efficient, AI-aided spectroscopy. The newly developed system recognises the sex up to the seventh day of incubation, whereby no chemical or

physical intervention into the egg is required and the embryonic development of the chicks is therefore not affected.

The killing of male chicks, which is unnecessary from an ethical, animal welfare and sustainability perspective, is therefore avoided and efficiency is increased by saving space and resources in the hatchery.

Short text:

The OmegaOne system recognises the sex in the egg significantly earlier than before and without the need for interventions into the egg, which could affect the chicks' embryonic development.

- **Manufacturer: MS Schippers**
Hall 11, Stand A11
Product: HyCare Digital

Rodents are a problem in agriculture that should not be underestimated, especially because they not only consume stored grain and animal feed, but can also contaminate it. In turn, contaminated grain and animal feed can cause diseases in farm animals and also in humans.

HyCare Digital from MS Schippers is a holistic system for rodent control on farms without the use of rodenticides. This system combines natural methods of rodent deterrence, such as the colonisation of predators and habitat management, with digital surveillance and trap systems. The individual surveillance points and traps can be monitored via an app. The app reports corresponding observations directly to the farmer's smartphone so that he can implement the necessary countermeasures. The triggering of traps is also reported so that they can be quickly checked and reactivated. The control measures are also documented at the same time.

HyCare Digital therefore enables targeted rodent management without placing an unnecessary strain on nature and the environment.

Short text:

HyCare Digital from MS Schippers combines tried-and-tested methods of rodent deterrence with a digital success and reporting structure, and therefore enables

targeted, documented rodent management without placing an unnecessary strain on nature and the environment.

- **Manufacturer: CowManager GmbH**
Hall 11, Stand F55
Product: Youngstock

Young animals represent the future of every herd. Monitoring their health from birth is therefore vital for every dairy farm. So far, monitoring has usually been carried out visually and the detection of diseases is extensively dependent on the experience of the employees. Sensor-based monitoring has been very difficult to implement until now because the calves' bodies change significantly over the course of their young lives and the monitoring system has to take these growth-related changes into consideration or adapt to them.

Health monitoring for calves is being presented for the first time with the ear sensor from CowManager. The algorithm uses machine learning methods to do this and therefore makes it possible to display constantly improving predictions regarding the state of health of the individual calf. The alarms are adapted to the age of the animals. Diseases are therefore recognised as early as possible, treatments are documented and health is continuously monitored from calf to cow.

In this way, the CowManager-Youngstock can reduce antibiotic consumption and further optimise animal health, equating to a significant improvement in calf management.

Short text:

By means of a sensor-aided algorithm which is capable of machine learning, the CowManager-Youngstock enables predictions regarding the state of health of the calves and thereby improves animal health while simultaneously reducing the use of antibiotics.

- **Manufacturer: Big Dutchman International GmbH (Pig & Poultry) and BioCV**
Hall 17, Stand: D20
Product: BioTag+

While pedometers or sensor collars for recording health and fertility data are already common in the cattle sector, the functions of technically similar systems in the pig sector have so far been limited to the localisation of sows in large groups, the early detection of respiratory diseases via the background noise in

the barn or initial attempts to minimise crushing losses during farrowing with the aid of camera or sound technology.

The 'BioTag+' sensor ear tag from Big Dutchman and BioCV makes it possible to record the movement and temperature data of pigs for the first time in pig farming. With the aid of algorithms, it is also possible to register individual parameters such as noises or imminent farrowing. Data communication is carried out via Bluetooth and analysis is ensured via a cloud with the aid of AI. Even in the farrowing area, the BioTag+ system enables the sows to be kept in groups until shortly prior to birth. This generally leads to increased animal welfare, less stress and easier births.

The 'BioTag+' sensor ear tag from Big Dutchman and BioCV therefore represents a crucial further development in the sensor-aided recording of animal status data.

Short text:

The 'BioTag+' sensor ear tag from Big Dutchman and BioCV enables the full sensor-aided recording of animal status data in pigs for the first time, thus facilitating livestock control and leading to increased animal welfare.

- **Manufacturer: MSD Tiergesundheit**
Hall 11, Stand B10
Product: SenseHub® Dairy Youngstock

It is crucial for dairy farms to be able to recognise and treat calf diseases as early as possible, particularly during the first few weeks of life. Sensor-aided monitoring, as used for adult animals, has so far been technically difficult to implement.

For the first time, the 'SenseHub® Dairy Youngstock' ear tag sensor enables automated round-the-clock behaviour monitoring for calves and young cattle during the first 12 months of their lives. Behavioural parameters such as activity, suckling, feeding and rumination are recorded via the electronic ear tag and can be linked to the farm's herd management system. This enables possible health problems to be recognised early on and action recommendations to be derived; the data can also be shared with the herd veterinarian or advisors.

The 'SenseHub® Dairy Youngstock' ear tag sensor can therefore be used to improve animal welfare and to reduce the use of antibiotics in calf husbandry.

Short text:

The 'SenseHub® Dairy Youngstock' ear tag sensor records important behavioural parameters of calves around the clock, as a result of which health problems can be detected early on and action recommendations can be derived from the herd management system.

- **Manufacturer: Weidemann GmbH**
Hall 27, Stand C24
Product: 1190e imp assistance function: Follow me

Constantly climbing on and off is typical for working with a wheel loader and is not only strenuous, but also poses a constant risk of injuries. Activities in which the operator switches between briefly moving the working machine forwards and another job are particularly frequent in the case of yard and wheel loaders. The 'Follow me' assistance system from Weidemann makes this work with the Hoftrac considerably easier. The follow me function enables the operator to descend from the vehicle and have the Hoftrac follow them autonomously to the location of the next job. The operator can command the Hoftrac to follow with a hand-held device and fix it in position at the destination, after which it can follow on again to the next point. In this process, a button has to be continuously pressed due to safety reasons. A virtual safety zone is established around the machine. This ensures that the operator and the area around the machine are accordingly protected.

This system enables the user to carry out work with the Hoftrac without constantly climbing on and off the machine. This also reduces the risk of accidents when climbing on and off.

Short text:

With the 'Follow me' assistance function from Weidemann, a Hoftrac autonomously follows its operator to the location of the next job, meaning that the operator has to climb on and off less frequently.

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About DLG

With more than 31,000 members, DLG is a politically independent and non-profit organisation. DLG draws on an international network of some 3,000 food and agricultural experts. Through its subsidiary, DLG International, DLG operates has subsidiaries in nine countries and also organizes over 30 regional agricultural and livestock exhibitions worldwide. DLG's leading international exhibitions, EuroTier for livestock farming and Agritechnica for agricultural machinery, which are held every two years in Hanover, Germany, provide international impetus for the local trade fairs. Headquartered in Frankfurt, Germany, DLG conducts practical trials and tests to keep its members informed of the latest developments. DLG's sites include DLG's International Crop Production Centre, a 600-hectare test site in Bernburg-Strenzfeld, Germany and the DLG Test Centre, Europe's largest agricultural machinery test centre for Technology and Farm Inputs, located in Gross-Umstadt, Germany. DLG bridges the gap between theory and practice, as evidenced by more than 40 working groups of farmers, academics, agricultural equipment companies and organisations that continually compare advances in knowledge in specific areas such as irrigation and precision farming.

www.dlg.org