EuroTier

The world´s leading trade fair for animal production

Innovation Award 2016

Innovations magazine

- 4 Gold medals
- 21 Silver medals
- 251 Company innovations

Organizer

DLG

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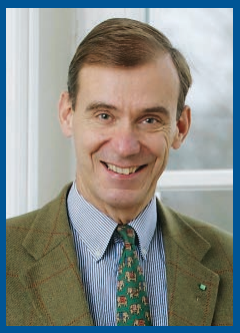
Sustainable agriculture needs innovations



Intelligently, dynamically and responsibly – that is how modern agriculture needs to act to fulfil the increasing demands on quality and sustainability of production processes but also social expectations. Innovative thinking and trend-setting technology are therefore vital.

This year, once again, Hanover is the market place for global innovations. With new conceptional approaches, EuroTier 2016 shows the force of modernisation hidden in animal production technology. The acclaimed innovations receiving the Innovation Award are representative of the high level of technology, networked knowledge and creative will of the entire sector. The aim is to bring economic efficiency in harmony with the demands of agricultural livestock. In doing this, the following applies: technical expertise and animal welfare are inseparably linked in modern agriculture. They are the preconditions for achievement and success.

From holding and feeding technology to modern software solutions and digital application technologies – inventive genius and a view of the entire sector are prerequisites for the creative mission, which will at the same time make animal holding more competitive and animal-friendly.

Modern agriculture needs innovations, creative solutions and ideas. The Innovation Award EuroTier 2016 represents the most demanding global competition. 251 innovations have applied for the innovation prize steeped in tradition; four innovations have been awarded the gold medal, a further 21 received a silver medal. This is once again convincing evidence of the trend-setting relevance of the international animal production technology.

I congratulate all the prizewinners on their success.

Carl-Albrecht Bartmer
President of the DLG e.V.

New name, new logo

Innovation Award EuroTier

The DLG Innovation Prize, presented at EuroTier, is one of the leading innovation awards of the international agricultural sector. The significance is underlined with the new name "Innovation Award EuroTier", which is the prize for modern agricultural technology.

The new name "Innovation Award EuroTier 2016" in connection with a new logo emphasises not only the international importance of the recognised innovations, but also profiles the prize as a quality award for entrepreneurial innovation.

One of the independent commissions of experts used by the DLG picked the winners (Winner Innovation Award EuroTier) according to strict criteria from all the submitted and approved for the innovation registrations. All the winners of the gold and silver medals 2016 were selected from this group by the DLG in the framework of the opening event for the EuroTier.

Four gold and 21 silver medals

251 innovations from 167 firms from 21 countries have been submitted to the DLG innovations commission. This underlines once again the leading position of EuroTier as the world's largest showcase for innovations covering machinery, equipment, fixtures and fittings and production facilities for professional animal production. Striking is that over half the innovation registrations came from overseas exhibitors. Four innovations were awarded a gold medal; a further 21 received a silver medal. The award-winning innovative products have not been presented and/or featured at any other important trade fair or international show to date. They must be fully functional at the time of the trade fair and on the market in 2017 at the latest.

Innovation Award in profile

Applying for and receiving the award

All exhibiting companies at EuroTier can enter the awards competition and submit their innovations which will be examined and discussed in depth by an independent commission. The decision on whether a product is worthy of the EuroTier Innovation Award is taken by simple majority vote. The prize will then be awarded at a ceremony on the eve of EuroTier.

Innovations Commission

The EuroTier Innovations Commission is a panel of independent scientists, researchers and consultants. Forward-looking farmers have also been on the commission since 2003 to reflect the needs and views at farmgate level. The members on the commission guarantee that their decisions are unbiased and based on profound expert knowledge. All innovations submitted in time and before the closing date will be assessed to the same strict criteria for eligibility for the EuroTier Innovation Award in gold or silver.

- **Prof. Dr. Heinz Bernhardt,** TUM, Freising
- **Dr. Jörg Bauer,** LLH Bauer GbR, Edertal
- **Prof. Dr. Hamdi Bilgen,** Ege University, Izmir (Turkey)
- **Wilfried Brede,** STA, Alsfeld
- **Gerd Franke,** Landesbetrieb Landwirtschaft Hessen, Kassel
- **Sebastian Glaser,** Glaser Haas GbR, Biblis
- **Prof. Dr. Michael Grashorn,** Universität Hohenheim, Stuttgart
- **Ewald Grimm,** KTBL, Darmstadt
- **Prof. Dr. Eberhard Hartung,** Universität Kiel (Chairman)
- **Prof. Dr. med. vet. Ludwig E. Hölzle,** Universität Hohenheim , Stuttgart
- **Kees de Koning,** Universität Wageningen (Netherlands)
- **Dirk Krowas,** MLUA Oranienburg
- **Christian Meyer,** LVFZ Futterkamp, Blekendorf
- **Dr. Steffen Pache,** LfULG, Köllitsch
- **Thomas Peine,** Gründau-Niedergründau
- **Andreas Pelzer,** Landwirtschaftszentrum Haus Düsse, Bad Sassendorf
- **Wilfried Richarz,** LWK-NRW, Bonn
- **Dr. Roland Rösch,** Fischerei Forschungsstelle Baden-Württemberg, Langenargen
- **Prof. Dr. Hans Schenkel,** Universität Hohenheim, Stuttgart
- **Prof. Dr. habil. Matthias Schick,** WBF Agroscope, Ettenhausen (Switzerland)
- **Reinhard Schulte-Sutrum,** LWK-NRW Haus Düsse, Bad Sassendorf
- **Georg Stähler,** Teichwirtschaft Wermsdorf
- **Dr. Olaf Steinhöfel,** LfULG, Köllitsch
- **Axel Strauß,** Geflügelhof Strauß, Reinheim-Georgenhausen
- **Dr. Manfred Weber,** LLFG, Iden
- **Dr. Wilfried Wolter,** Regierungspräsidium Gießen, Wetzlar

Assessment criteria

Key for the selection of the award-winning innovations and products are their practical importance, animal welfare, the effects on business and HR management, the environment and the energy situation. Possible labour-saving and work-safety effects are also taken into consideration during the award.

EuroTier Innovation Award in Gold

A EuroTier Innovation Gold Award is conferred on a product that presents a new concept and a changed functionality and the application of which gives rise to a new process or marks a substantial improvement to an existing process. The following criteria are critical for a product to earn a gold medal:

- Relevance at farm level
- Animal welfare
- Benefits in profitability and processes
- Benefits to environment and energy use
- Benefits for work load and safety

EuroTier Innovation Award in Silver

A EuroTier innovation Silver Award is conferred on an innovation that has been enhanced to such an extent that a substantial improvement in its function and process can be expected from it. At the same time, it need not meet all the criteria applicable for a EuroTier Innovation Gold Award. The following criteria apply for a Silver Medal:

- Relevance at farm level
- Benefits to work load and quality of the work
- Improved reliability

Innovations & Trends at EuroTier 2016

The EuroTier is the world's largest market for innovations in the areas of process technology, equipment, management and software, stable facilities, as well as agricultural and industrial building construction for the entire animal production industry. Above all, the huge number of exceptionally interesting new and further developments, as well as the substantial improvements to already well-known products, shows that the very high level of invention of the manufacturers in the agricultural animal production area continues and is constantly focused on innovation.

It is the awarded products in particular that represent the ideal guideline for all the EuroTier visitors looking specifically for innovations, and therefore help to make visiting the trade fair more efficient. In addition to the innovations awarded gold or silver medals, the internet list "Candidates 2016" (see page 14/15) also includes those products that are new to their respective company but are already on the market.

The overall 14 specialist areas, to which the majority of the awarded products have been recommended this year, include of course the classics like "Animal management and feeding technology for cattle and pigs". But medals could also be awarded in the specialist areas "Animal management and feeding technology for poultry", "Herd management electronics and software" and "Equipment, accessories and spare parts". Furthermore, medal holders can also found in the areas "Farm inputs and equipment for their use", "Climate control and environmental technology", "Milking and cooling technology" and "Poultry and egg processing and marketing". Thus, the gold and silver medals awarded at EuroTier 2016 reflect the very broad spectrum of specialist areas.

Trends in cattle farming and milking technology

Most innovative developments this year at EuroTier are clearly in the area cattle farming and milking technology. There have been some very innovative solutions developed in calf husbandry in some cases, which better "conserve" the essential components in the milk and at the same time do not neglect hygiene in the area of calf husbandry. They considerably promote the health and animal management of the individual animals, improve animal welfare of the calves and heifers, and both consider and make holistic use of the "accumulated" animal data. It is becoming more and more important to technically link different areas, like for example animal identification, sensory data about behaviour and/or health monitoring and the localisation of the animal inside and outside for complete data collection throughout the entire (useful) life cycle of an animal. "Visualisation" of the needs of the calves has clear priority and is reflected in the very innovative solutions. There are also innovative approaches in "redisplaying" visual animal identifications as well as "visualisation" of the achieved homogeneity of feed mixtures.

Furthermore, in the time- and labour-intensive areas of feed provision as well as cubicle care and the "intelligent" litter distribution, successful attempts are being made to not only ease and reduce the work, but also to increase work quality and minimise possible (feed) losses. For this, there are very innovative approaches in the "automation" of the covering and uncovering of silo systems.

It is also shown that the efficiency and effectivity as well as the use of energy and additives can be optimised with residue-free cleaning and disinfection in the milking systems.

Trends in pig farming

The majority of the innovations this year in pig farming are in the area homogeneous and deposit-free feed mixtures and easily recognisable dosing and distribution processes adjusted for multiphase feeding. These supply full doses, prevent feed residues and allow for the increasing use of CCM in the feed mixtures.

Contact-free processes for optical weight and body determination have not only managed the very innovative step from stationary to mobile systems, but also to so-called "software solutions", which can be immediately used on all the hardware systems of modern 3D communication technology. Here, steps are taken towards new, more flexible ways of expanding the system and its marketing and use.

Trends in poultry farming

In the poultry farming area, the innovations focus on optimisation of drinking water supply and exact dosing of liquid feed additives. With feed additives the aim is to reduce the susceptibility of day-old chicks and poultry of all age-groups to pathogens through stabilisation of the gut flora. Furthermore, one innovation focuses on the most possible stress-free transportation of the animals, particularly at the processor. This shows that new-type modular designs of "transportation units" can have a multitude of positive effects.

Other trends

Other trends receive special attention in the innovation solutions section: Be it in the drinking water area, where automatically-induced rinsing processes, continuous monitoring of the water quality and alarm functions, for example, for lack of water were realised. Or in the use of water for cleaning and disinfection, here the path leads to fully-automated cleaning analyses and/or to solutions which make cleaning work considerably less tiring.

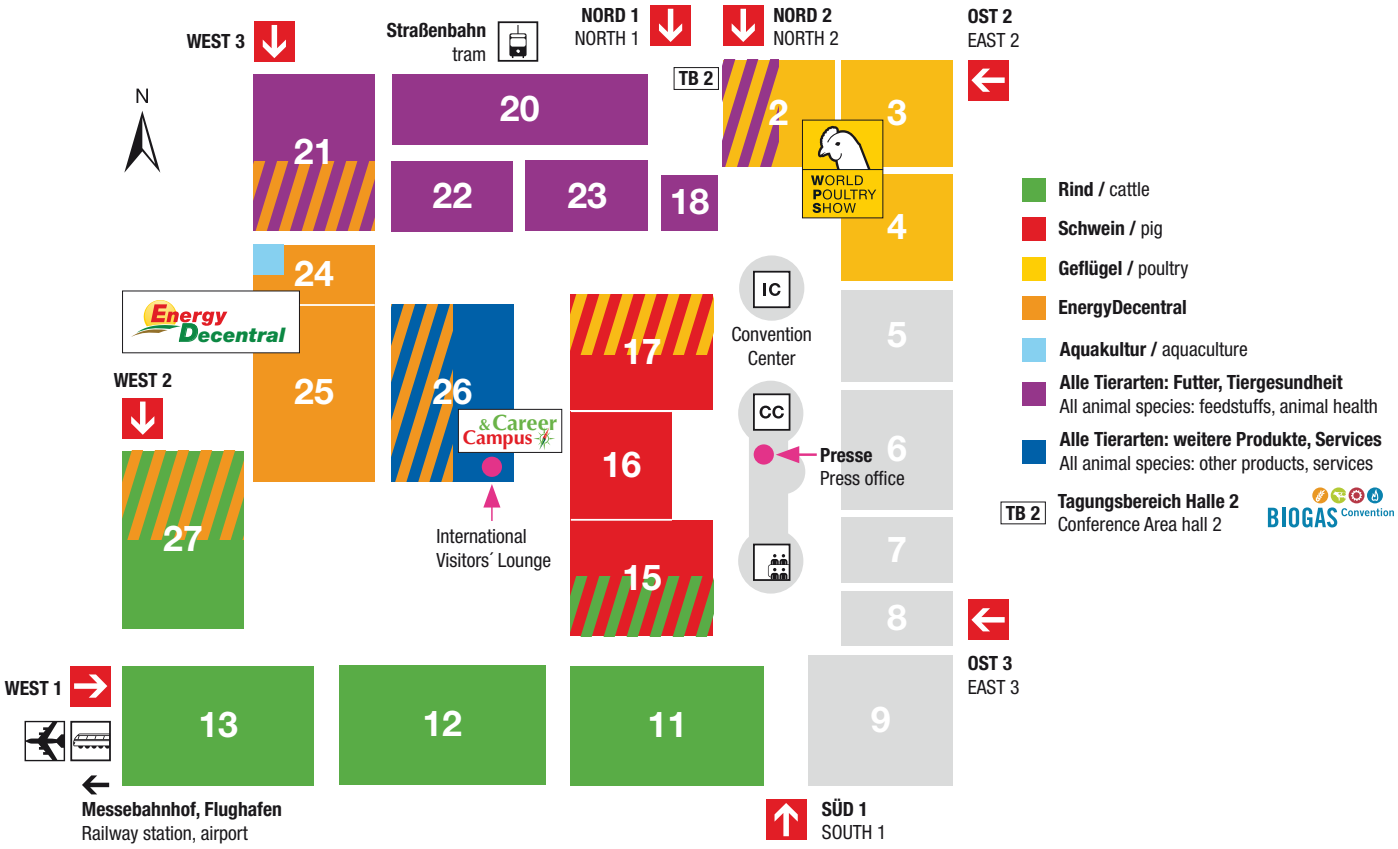
Constant monitoring of stable air quality has failed up to now, especially when recording noxious gas concentrations, above all with continuous operation sensory systems with sufficient precision. This also seems to be a thing of the past.

Prof. Eberhard Hartung, Chairman of the EuroTier Innovations Commission, Institute of Agricultural Engineering, Kiel University

Where you can find Gold and Silver medals at the EuroTier:

product	exhibitor	stand
GOLD		
Wicky	WASSERBAUER GmbH	**12 F58**
Smart Calf System	Förster-Technik GmbH	**13 E21**
Eartag LIFE	Smartbow GmbH	**11 B54**
Piggy Check	Meier-Brakenberg GmbH & Co. KG	**17 D13**
SILVER		
Clip-On	AKROH Industries B.V.	**11 A22**
EASY!Force gun for hot and cold water high-pressure cleaners	Alfred Kärcher Vertriebs GmbH	**26 D07**
The Cuddle Box	SPINDER B.V.	**12 B04**
Milchtaxi 4.0 (Milk Taxi)	Holm & Laue GmbH & Co. KG	**13 D08**
Triomatic T40 New Edition with new cutting system	Trioliet B.V.	**27 E17**
VISIOMIX	Dinamica Generale S.p.A.	**27 G23**
TARSA cow mats	Gummiwerk KRAIBURG Elastik GmbH & Co. KG	**12 A50**
Einstreu-Meister (Bedding Master)	Hartmann GmbH & Co.KG	**12 C05**
V-READY to Feed Optical Mix Control	Bernard van Lengerich Maschinenfabrik GmbH & Co. KG	**27 G07**
Pasteur HT 250	Martin Förster GmbH	**13 D43**
Cleaning Analysis – DCA	DeLaval International AB	**13 E33**
H_2O ALERT	BeKoSENSE B.V.	**13 D30**
Square Line	V.V.M. TechTrade GmbH	**16 C04**
Konus mixing auger	TEWE-Elektronic GmbH & Co. KG	**16 A04**
CHAINFEED Hopper Rotodos	TEWE-Elektronic GmbH & Co. KG	**16 A04**
CulinaFlex	Big Dutchman International GmbH	**17 B27**
Easy@	EW Nutrition GmbH	**22 C12**
Optima E-Control	LUBING Maschinenfabrik GmbH & Co. KG	**3 B18**
ATLAS (Advanced Bird Transport Solution from Grower to Processor)	Marel Stork Poultry Processing B.V.	**4 A08**
Poultry Star®	BIOMIN GmbH	**22 B04**
Polytron C300	Drägerwerk AG & Co. KGaA	**21 D15A**

The award winning innovations are portrayed from page 6 in the above-mentioned order.



Cattle management and feeding technology

Wicky

WASSERBAUER GmbH Fütterungssysteme – Waldneukirchen, Austria | **hall 12, stand F58**

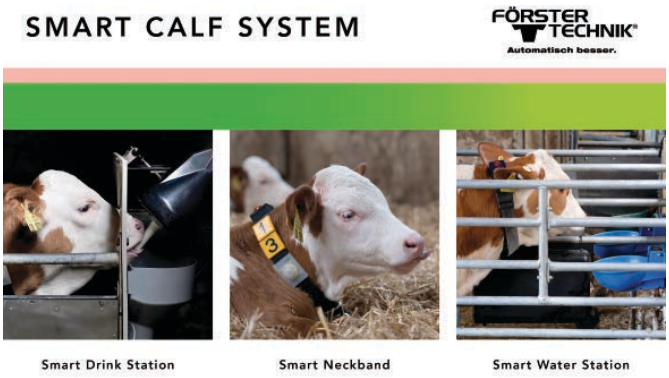
Uncovering mobile silos for removing silage and covering them again after removal is not only laborious, but also not without danger. Especially with tall silos, where there is a risk of falling from the edge. However, silage should be covered again all the way to the front edge after forage is removed, as its quality deteriorates otherwise. The Wicky silage cover developed by Wasserbauer GmbH presents a new approach for rolling up the sheeting on mobile silos automatically, even with sheets of different shapes and sizes. This new solution presents a number of substantial advantages compared to the fully manual removal of silage sheeting. The risk of persons falling from the silo edge is minimised, as nets, sand bags and other objects placed on sheets can already be removed early on. Additionally, the Wicky system helps maintain high silage quality by largely preventing problems such as superficial secondary heating or birds feeding on silage etc. This is achieved by silage sheeting being automatically retracted in keeping with feeding requirements, an approach that is in contrast to the pre-emptive uncovering of silage that is common practice on many farms. Other remarkable features include radio remote control for activating and controlling the battery-operated drive and the ability to use conventional silage sheeting without any special adaptation to the Wicky system.

Cattle management and feeding technology

Smart Calf System

Förster-Technik GmbH – Engen, Germany | **hall 13, stand E21**

Changes in drinking patterns and reduced fluid intake are usually the first signs of disease in calves and often occur before any other visually identifiable symptoms develop. However, it is generally difficult to detect changes in behaviour and reduced volumes of fluid intake, especially on larger farms or with changing staff. Also, trying to locate a particular calf in a large area constitutes an additional challenge. The Smart Calf System by Förster-Technik delivers a comprehensive range of modules for monitoring calves both continuously throughout the day and directly as they take in milk feeds or water. The system also supports the electronic location of calves. The Smart Calf System comprises the modules Smart Drink Station, Smart Neckband and Smart Water Station. It collects important data for monitoring calf health directly from animals, including data on activity and butting behaviour on the teat. As a first, the system incorporates a workflow module with LED display on the Smart Neckband, which facilitates the quick location of animals for monitoring. Actions performed on calves can then be confirmed via a sturdy feedback switch directly on the Smart Neckband and fed back to the higher-level management system. This delivers substantial improvements of the overall system. The Smart Water Station, the third module of the Smart Calf System, allows the water intake of individual animals to be electronically recorded.



Herd management electronics and software

Eartag LIFE

Smartbow GmbH – Weibern, Austria | **hall 11, stand B54**

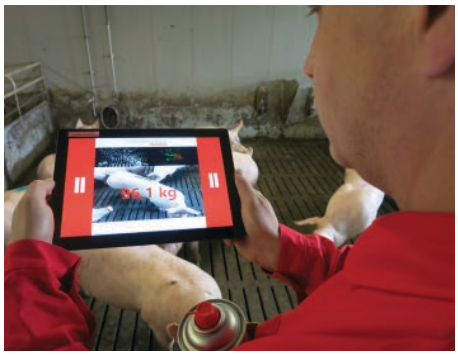
Eartags, in contrast to any other animal identification systems, remain on animals from birth through to destocking from farms. Previous attempts at integrating additional functions such as animal monitoring sensors in eartags proved to be infeasible, not least due to the difficulty of supplying sufficient energy to sensors. Eartag LIFE is an eartag system for cattle that can also be used for official animal identification, real-time location and health monitoring purposes. Due to their low weight, these eartags can be used on calves from birth, allowing data to be collected seamlessly throughout animals' full life cycle, from birth to destocking, for the first time. Individual animals can be located via integrated LEDs, even where they form part of larger groups. Location functions can be accessed both in animal housing and on pastures. The sensors' energy supply is sufficient to last for several years. The system saves farmers time in terms of behaviour monitoring, general animal husbandry tasks and quality assurance and therefore provides benefits across the full spectrum of cattle farming operations.

Pig management and feeding technology

PiggyCheck

Meier-Brakenberg GmbH & Co. KG – Extertal, Germany | **hall 17, stand D13**

The selling weight plays a central role in the optimal marketing of pigs for slaughter. The PiggyCheck application developed by the company Meier-Brakenberg is a novel artificial intelligence-based software that uses a 3D camera to allow the weight and body of fattening pigs to be determined directly, without contact, while pigs remain in their boxes/housing. This substantially facilitates the process of grading fattening pigs prior to slaughter. Users can also have the system calculate additional information on the weights of particular pig sections. The software can be run on conventional smartphones or tablets with 3D cameras. It creates single images or video sequences of pigs from the camera, from which it then generates depth images. Images can be taken from above, the side or diagonally, and information on an animal's weight is displayed on users' smartphones or tablets as soon as pictures have been taken. The software then provides a marketing suggestion in the form of a traffic light display. The data collected via PiggyCheck are stored in the Cloud and can be used for more detailed analysis. After animals have been slaughtered, their data are reconciled with the live body data collected earlier to allow users to draw additional conclusions regarding genetics and feeding regimes based on precise statistics. The insights gained from this process can then be incorporated in future decision-making. PiggyCheck is available in the form of a monthly subscription that can be cancelled at any time.



The actual investment costs are limited to purchasing the necessary hardware. The main advantages of the innovative, practice-focused PiggyCheck application over conventional approaches are portability, substantial work management benefits and revenue-optimised sales management.

Equipment, accessories and spare parts

CLIP-ON

AKROH Industries B.V. – Zwolle, Netherlands | **hall 11, stand A22**

On many dairy farms, it is standard practice to identify cows by means of numbers placed on their collars, above all because the easily readable numbers facilitate visual identification. However, numbers on cows' collars frequently become soiled, damaged or even lost. Tightening or replacing individual numbers can be very time-consuming, as animals need to be restrained to allow their collars to be removed, and collars often even need to be disassembled completely. AKROH Industries' CLIP-ON identification numbers make this process considerably easier. With these products, collars can remain on cows if numbers need to be changed or supplemented. Numbers to be replaced can be removed with combination pliers, and new numbers are simply clipped on. This results in considerably less stress for animals, as it may not even be necessary to restrain cows to ensure they keep their heads sufficiently still. Benefits for users include reduced effort and time as well as the additional option of easily including colour codes in visual identification.

Equipment, accessories and spare parts

EASY!Force gun for hot and cold water high-pressure cleaners

Alfred Kärcher Vertriebs GmbH – Winnenden, Germany | **hall 26, stand D07**

In conventional high-pressure cleaning guns, the trigger is manually pulled towards the grip of the gun to activate the flow of water. This requires considerable finger strength and corresponding counter-pressure from the ball of the hand, which can cause fatigue or even strain during prolonged application. This is why Kärcher has developed its novel EASY!Force cleaning gun. The function of this gun is based on a reversal of the conventional principle; that is the ball of the hand is used to push the trigger towards the gun grip to start the flow of water. Once the EASY!Force gun's safety lever has been released, finger and hand strength is only required briefly to operate the gun. During continued use, minor counter-pressure applied by the ball of the hand against the gun trigger grip is sufficient to maintain and guide a steady, high-pressure spray of water. As soon as the ball of the hand is lifted off the trigger grip, the flow of water stops immediately, as a small safety lever on the grip immediately extends out to block the trigger grip. Once the operator is ready to continue work, the gun safety lever is simply released and the spray of water can be triggered once again through light pressure from the ball of the hand.

Cattle management and feeding technology

THE CUDDLE BOX

SPINDER B.V. – Harkema, Netherlands | **hall 12, stand B04**

Many dairy farmers separate cows and calves immediately after birth in order to prevent infections. However, there are significant benefits if cows are allowed to lick their new-born calves: calves dry more quickly and their circulatory system is stimulated, as are a number of hormonal processes in the mother cows, which promote lactation above all. The Spinder CUDDLE BOX provides a system that ensures easy and safe access between mother cows and their calves, and farmers and mother cows. The front section of the CUDDLE BOX comprises a plastic box, in which new-born calves can be placed safely and kept clean. Cows can easily reach their calves through head rails. A long swing gate right next to the box allows cows to be easily and safely restrained by a single person. As a result, cows can be reached and even milked in the CUDDLE BOX just as easily and safely.

Cattle management and feeding technology

Milchtaxi 4.0 (Milk Taxi)

Holm & Laue GmbH & Co. KG – Westerrönfeld, Germany | **hall 13, stand D08**

On many dairy farms, milk needs to be transported to calves across considerable distances. This is where so-called milk taxis come into play. However, if performance-focused, animal-specific feeding programmes are to be implemented with mobile feeding from a feeder bucket, the use of milk taxis requires committed staff who know the animals in their care well, especially when there is a large number of calves. Holm & Laue's Milchtaxi 4.0 allows calves to be fed according to age-appropriate feeding curves for the first time, even if calves are penned individually. Pen numbers are automatically recognised via Smart IDs, and calves are then fed milk according to their individual feeding curves. Users only need to press a control button, and the predefined volume of milk is delivered to the feeding bucket. This system allows all calves to be fed with great precision and the fed milk volumes to be documented accurately. The milk volume in the container is displayed precisely, and the system calculates the required amounts of powdered milk and water. The Milchtaxi 4.0 transmits its current operating status, i.e. milk container fill level and temperature and ongoing processes such as heating and pasteurisation, to the farm computer via the Wi-Fi-based CalfGuide app. The data are then recorded and documented on the farm computer to ensure that there is a clear, complete record of what was fed when and how.

Cattle management and feeding technology

Triomatic T40 New Edition with new cutting system

Trioliet B.V. – Oldenzaal, Netherlands | **hall 27, stand E17**

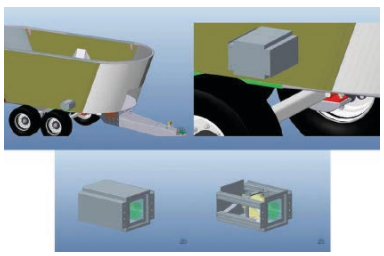
One of the main risks when removing silage is that material not currently needed may become loosened, which generally results in secondary heating and subsequent quality losses. In automated feeding systems, this problem can also occur with silage blocks or bales supplied to the system. The Dutch company Trioliet B.V. has developed a pioneering new cutting system with rotary cutters to address this problem. Combined with the Triomatic T40 New Edition, this system allows forage to be removed from silage blocks or bales with minimal loosening of residual silage to ensure that quality impairments due to secondary heating are minimised. Moreover, the system largely maintains the structure of removed forage and permits forage to be removed with superior precision within a range of +/- 2 kg, which was previously difficult to achieve. Trioliet lists low maintenance and energy requirements as additional benefits of their innovative product.

Cattle management and feeding technology

VISIOMIX

Dinamica Generale S.p.A. – Poggio Rusco (MN), Italien | **hall 27, stand G23**

Feed mixing technology often falls short of expectations as feed components are chopped unevenly. VISIOMIX by Dinamica Generale is a system that works with computer-assisted image processing and analysis technologies to record and evaluate structural changes in feed mixtures inside TMR feed mixer wagons in real time during the mixing process. The novel VISIOMIX system therefore allows undesirable structural changes to be identified during the mixing process for the first time, enabling users to respond by adjusting the duration of the mixing process or adding more structural components to feed rations. Previously, mixing success could only be assessed from the finished product in the feeding trough, either by using a grading sieve or another device for grading particle size.

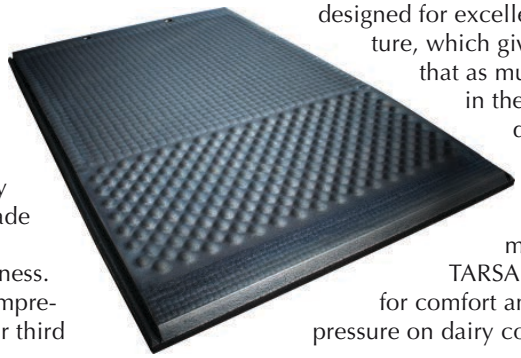


Cattle management and feeding technology

TARSA cow mats

Gummiwerk KRAIBURG Elastik GmbH & Co. KG – Tittmoning, Germany | **hall 12, stand A50**

Demands regarding mat durability and the level of comfort they provide to animals are essentially diametrically opposed, that is high animal comfort is often offset by poorer durability and vice versa. This is not the case, however, with the TARSA comfort zone cow mats recently developed by Gummiwerk KRAIBURG Elastik. These mats substantially differ from conventional rubber mats in terms of material selection, design and structure. The TARSA dairy cow mats, which consist of three layers made of different rubber compounds and foam, comprise zones of different degrees of softness. A particularly striking innovation is the comprehensively redesigned tarsal zone in the rear third of these novel cow mats. This zone is formed of semi-spherical hollow segments made of high-quality virgin rubber to deliver superior elasticity and suppleness. The material is specially designed for excellent durability. The unique mat structure, which gives it its shape, additionally ensures that as much bedding as possible is retained in the tarsal zone, where it produces good drying properties. Cows are able to rest their tarsal joints with minimal pressure, while the mat troughs, which remain filled with bedding material, provide ventilation. The TARSA mats for raised cubicles are designed for comfort and durability as well as reduced pressure on dairy cows' tarsal joints.



Cattle management and feeding technology

Einstreu-Meister (Bedding Master)

Hartmann GmbH & Co. KG – Edelsfeld, Germany | **hall 12, stand C05**

Transporting and spreading bedding material is physically hard, monotonous work that additionally often causes dairy cows stress, as it brings infrequent and therefore unfamiliar intrusion into their resting areas by people and vehicles. The Einstreu-Meister is a rail-bound, self-propelling device for the automated transport of chopped straw to and its distribution in dairy cow cubicles. The Einstreu-Meister is equipped with patented sensor controls, which enable it to identify individual cubicles based on the pre-defined cattle housing layout and to differentiate between occupied and empty cubicles. If there is a cow inside the cubicle, no fresh bedding is applied for the time being to prevent cows from being covered with bedding material from above. The bedding volumes not distributed in occupied cubicles are documented in a database and then applied during one of the next rounds as soon as the respective cubicles are empty. This process is repeated until the pre-defined volume of bedding has been supplied to all cubicles. Combined with a specially developed filling and loading station, the battery-operated Einstreu-Meister constitutes a smart robot that allows the process of distributing bedding to cubicles to be automated.

Cattle management and feeding technology

V-READY to Feed Optical Mix Control

Bernard van Lengerich Maschinenfabrik GmbH & Co. KG – Emsbüren, Germany | **hall 27, stand G07**

One might be led to believe that mixing feeds was just a matter of intuition and experience, as operators generally cannot see inside feed mixer wagons and therefore need to rely on their gut feeling, which may or may not be accurate. READY to Feed Optical Mix Control by Bernard van Lengerich is an optical measurement system that employs computer-assisted image processing and analysis technology to evaluate the homogeneity of feed mixtures in TMR feed mixers during the mixing process, with results being visually displayed to users via a traffic light system.
This manufacturer therefore offers a novel system that, for the first time, gives users an indication of the homogeneity of feed mixtures in real time throughout the mixing process, which allows mixing times to be standardised and optimised. The previous subjective mixing quality assessment by visual inspection is therefore superseded by objectively measured parameters. This in turn prevents feed selection by cows, reduces undesirable changes in feed structure caused by the mixing process and minimises energy consumption.

Cattle management and feeding technology

Pasteur HT 250

Martin Förster GmbH – Engen, Germany | **hall 13, stand D43**

Pasteurised colostrum not only has a lower microbial count, but the immunoglobulins contained in it are also better absorbed than from fresh colostrum. The new Pasteur HT 250 has been specially developed to meet the needs of rearing calves during the first weeks of their lives.
The Pasteur HT 250 employs a high-temperature short-term heating process with continuous throughput at temperatures of 72 °C to 75 °C with heat holding times of 15 to 30 seconds. Due to its innovative process technology, the system is able to pasteurise both colostrum from the second milking onwards and milk containing colostrum without causing the milk to curdle. The milk is cooled down to drinking temperature in the heat exchanger immediately after the high-temperature stage. This process chain is run continuously. The pasteurised milk is discharged from the Pasteur device at drinking temperature and can be fed immediately to ensure that new-born calves are optimally supplied with important antibodies.

Milking and cooling technology

Cleaning Analysis – DCA

DeLaval International AB – Tumba, Sweden | **hall 13, stand E33**

When milking systems are cleaned automatically, the only option for ensuring that all internal pipeline surfaces come into contact with cleaning solution consists of propelling an appropriately dimensioned slug through the full length of the pipeline system at an appropriate speed. However, this makes it difficult to monitor the effectiveness of cleaning. DeLaval cleaning analysis DCA is a novel systems engineering tool that allows the effectiveness and efficiency of mechanical and thermal cleaning processes of milking systems to be monitored and measured. This fully automated cleaning analysis tool calculates the speed and length of each slug propelled through the milk pipeline based on a proprietary algorithm (patent pending). The slug characteristics are precisely determined using two wireless vacuum sensors and displayed graphically. The DCA then analyses the number, volume and strength of these slugs throughout all stages of cleaning. The data collected in this manner then allow vacuum levels, water volumes and cleaning solution concentrations to be individually and optimally adjusted to ensure that each milking system is correctly cleaned. Precise monitoring of cleaning performance can help prevent increases in microbial counts in supplied milk. This in turn helps preserve consistently high milk quality and avoids forced price reductions in case of non-compliance with thresholds.

Herd management electronics and software

H_2O Alert

BeKoSENSE B.V. – Genderen, Netherlands | **hall 13, stand D30**

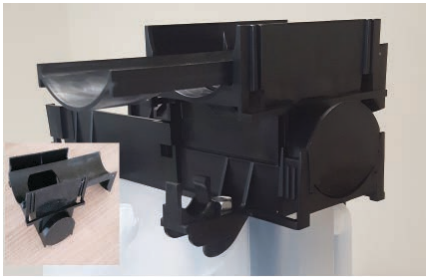
Livestock drinking troughs are often prone to soiling and frequently out of operators' sight, especially when cattle are out on pasture. Yet the availability of good-quality water is essential for animal health and performance. The H2O Alert water quality monitor developed by BeKoSENSE features sensors that allow the quality of animals' drinking water to be monitored 24/7. The monitoring system is coupled with an app that transfers data to mobile systems in real time and triggers alarms as required. Measured values, the results of water quality analyses and cleaning water temperatures in milking systems (milk lines and tanks) are additionally stored and documented continuously. This ensures that farmers have relevant data for business analyses and documentation of compliance with their responsibilities along the entire chain of production at their disposal at any times.

Pig management and feeding technology

Square Line

V.V.M TechTrade GmbH – Steinfeld-Mühlen, Germany | **hall 16, stand C04**

Metering devices, particularly those installed on feed conveyor systems, regularly present the problem that settings are difficult to read during everyday workflows. However, Square Line by V.V.M. TechTrade allows the installation position of metering dispensers to be variably selected.



Metering dispensers can be rotated to enable them to be installed both longitudinally and horizontally to the conveyor pipe. Farmers can then adjust the position of metering controls optimally in keeping with their workflows, and metering dispenser settings can be easily read at all times.

Pig management and feeding technology

Konus mixing auger

TEWE-Elektronic GmbH & Co. KG – Vreden, Germany | **hall 16, stand A04**

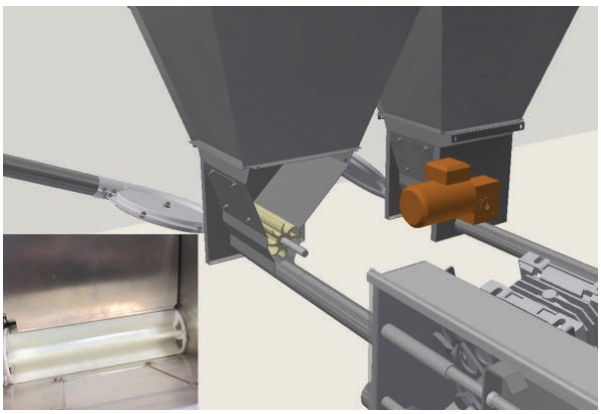
Mixer devices in conventional batch mixing systems for dry feeds are usually located at the centre of mixing tanks, from where they draw feed mixtures up and allow them to drop back into the tank. This approach frequently causes deposits to form on the tank walls and moist feed components to be blended in poorly. However, TEWE's Konus mixing auger represents substantial progress in mixing technology for dry feed batch mixing systems. The auger, which runs along the inside edge of the Konus mixing tank, draws feed up along the side walls, from where it then drops back down towards the inside. This reversal of the processing flow not only ensures that tank walls remain clean, but also achieves more homogeneous mixing of components. This is particularly important where larger quantities of moist feedstuffs such as CCM or whole grain silage are to be incorporated. The system delivers a more homogeneous mixture, which can then be distributed and metered more easily via conveyors and dispensers without significant bridging. This in turn allows farmers not only to adapt mixtures very precisely to animals' needs, but also to use dry feeding systems for feeding rations with higher crude fibre contents.

Pig management and feeding technology

CHAINFEED Hopper Rotodos

TEWE-Elektronic GmbH & Co. KG – Vreden, Germany | **hall 16, stand A04**

The use of automated feeding systems has become widely established practice in pig farming. One of the core requirements for the practical implementation of automatic feeding is the full, reliable drainage of silos or buffer tanks and the even, continuous dispensing of feed onto chain conveyors. Many farms already use hoppers to achieve these goals. These are generally equipped with augers or spirals that dispense feed towards the side from the bottom of the dispenser hopper. However, the design of conventional dispenser hoppers prevents them from being fully drained, which can result in undesirable hygiene problems, particularly when feeding moist feedstuffs such as CCM. The company TEWE has developed its CHAINFEED Hopper Rotodos, a dispenser hopper for silos and buffer tanks that is equipped with a rotor for dispensing feed onto chain conveyors. The motor-operated rotor is made of low-wear plastic and provides eight chambers at the bottom of the dispenser hopper. As the rotor rotates around its horizontal axis, feed is evenly dispensed onto the chain conveyor across the full width of the dispenser hopper. This design ensures that the dispenser hopper is emptied completely and therefore also allows CCM to be used in batch mixers. The compact CHAINFEED Hopper Rotodos presents an innovative alternative to existing systems and can additionally be used as a dispenser hopper underneath silos. The design of the rotor unit allows it to be used as a secure hatch between the filled silo and the chain conveyor, where it dispenses feed evenly onto the conveyor and therefore protects the conveyor system against unnecessarily high loads and wear.



Pig management and feeding technology

CulinaFlex

Big Dutchman International GmbH – Pig Division, Vechta, Germany | **hall 17, stand B27**

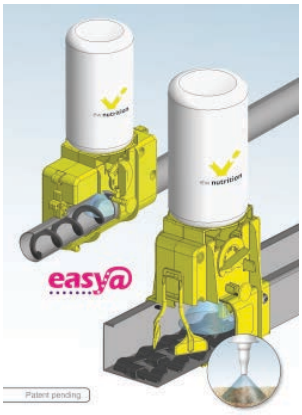
The automated feeding of suckling piglets requires feeding systems to deliver a particularly high hygiene status. It is essential that feed residue is minimised and air intake prevented, as this can result in feed residue spoilage in the feeding system. Big Dutchman has developed the novel CulinaFlex hygiene valve for the company's suckling piglet feeding system in order to address both of these challenges. The system combines a conventional membrane valve in the supply line to the trough, above the branch pipe, with the CulinaFlex hygiene valve, which is located inside the branch pipe itself. This novel valve acts like a pinch valve, that is the branch pipe contains a hose with an air-tight seal to the top and bottom of the external pipe wall. Feed is then supplied through the hose, and after feeding is completed, compressed air is delivered into the cavity between the pipe and hose via an air valve. The resulting positive pressure compresses the hose and pushes feed residue down towards the trough. The CulinaFlex hygiene valve then remains closed until the next feed to prevent any external air from entering the drainage hose. As a result, the hose does not dry out and preserves an anaerobic environment. At the time of the next feed, air is released from the cavity, and feed can once again pass into the trough through the hose, which is no longer compressed.

Poultry management and feeding technology

Easy@

EW Nutrition GmbH – Visbek, Germany | **hall 22, stand C12**

Poultry farmers commonly administer products for enhanced animal performance and health in poultry housing. These can be given via birds' drinking water or feeds. Dispensing via drinking water is costly and requires high-precision metering devices, while mixing products in with complete feedstuffs in feed mixing units is generally also too expensive due to stringent legal requirements. However, it is to be expected that the use of these products will only increase, as zootechnical measures (such as beak trimming) come to be prohibited. The Nutrition Easy@ system developed by EW Nutrition allows products to be directly dispensed into feeds with high precision. Additives are offered as aqueous solutions, combined with a spraying system. This system, which is attached to the feed line as a unit, sprays the supplement solution onto bird feed at a rate that is controlled by the feed line speed. It is very easy to operate, and the accuracy it delivers is within the analytical tolerance range defined by the Association of German Agricultural Analytic and Research Institutes (VdLUFA). The Nutrition Easy@ system allows bird feeds to be supplemented with active agents quickly, easily and securely. It therefore supports approaches towards improved animal welfare.



Poultry management and feeding technology

Optima E-Control

Lubing Maschinenfabrik GmbH & Co. KG – Barnstorf, Germany | **hall 3, stand B18**

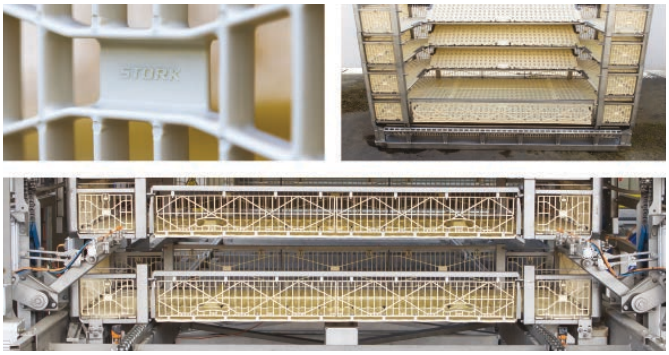
Drinking systems for poultry housing are almost exclusively operated at low pressures. However, pressure ratios within these systems can vary depending on fluctuations in the water supply, climate conditions, the time of day or birds' drinking water intake from the relevant drinking line. Excessively high or low pressures in turn can affect the functionality of valves in the system, which can result in insufficient water being available to birds or drinking lines leaking. The Optima E-Control system monitors and regulates the pressure in water lines to ensure that it remains constant. This substantially reduces the risk of wet litter in bird housing. The system additionally allows flock-specific or farm-specific pressure curves to be defined to maintain an optimal water supply at all times. Optima E Control also offers a function that triggers an alarm when insufficient water is available and caters for automatic flushing. Optima E-Control constitutes promising progress in optimising the water supply for poultry. The system enhances animal welfare by keeping litter dry, among others, and helps reduce the production of emission-related substances such as ammonia.

Poultry and egg processing and marketing

ATLAS (Advanced Bird Transport Solution from Grower to Processor)

Marel Stork Poultry Processing B.V. – Boxmeer, Netherlands | **hall 4, stand A08**

Poultry is exposed to very high stress levels, particularly just before slaughtering, with the period between animals' removal from transport containers and their being anaesthetised being particularly critical. Marel's ATLAS (Advanced Bird Transport Solution from Grower to Processor) system is a modular unloading system that allows birds to be transferred to conveyor belts with less stress.
The system is a rigorous further development of the existing container system. The individual transport modules of larger transport containers are automatically separated into individual modules as they are supplied to the slaughter line, without birds needing to be unloaded at different levels or without them needing to be handled or treated in any other manner. This ensures that the animals do not have direct contact with people after they are loaded. As a result, the animals suffer considerably less stress, which delivers significant benefits in terms of animal welfare.



Farm inputs and equipment for their use

Poultry Star®

Biomin GmbH – Getzersdorf, Austria | **hall 22, stand B04**

Establishing and stabilising a healthy intestinal flora is an essential aspect of animal health in poultry farming. Poultry Star verifiably supports these important objectives both during the initial intestinal colonisation just after chicks hatch and as part of successful re-colonisation, for example after a course of antibiotics.
Poultry Star is a feed supplement specially developed for poultry on the basis of a host-specific multi-strain synbiotic that promotes early intestinal colonisation and a healthy intestinal flora. The product's effectiveness is based on the combined use of carefully selected probiotic microorganisms and prebiotic fructooligosaccharides. This combination is able to increase the resilience of day-old chicks and poultry of any age to pathogenic microbes.
It optimises the microbial colonisation of birds' intestines and improves both overall immunity and performance parameters such as weight gain and feed efficiency.
The product received EU approval as an intestinal flora stabiliser in 2015. It is available in two formulations for use in mixed feeds and administration via drinking water.

Climate control and environmental technology

Polytron C300

Dräger - Drägerwerk AG & Co. KGaA – Lübeck, Germany | **hall 21, stand D15A**

In the past, continuous monitoring of ammonia concentrations in animal housing and the control of air quality based on the results of such monitoring was mainly prevented by the lack of sufficiently precise sensors that were robust enough for long-term use. The Dräger Polytron C300 is the first electrochemical sensor for the continuous measurement of ammonia concentrations in animal housing that delivers both reliable function and long-term stability. As sample gas is supplied to the sensors via diffusors, the sampling process requires no pumps or hoses. The measuring range covers the full range of concentrations relevant for animal housing. The sensor is sufficiently robust to withstand environmental conditions in animal housing and allows ammonia concentrations to be monitored during practical operation. Its data can be fed into animal facility software as control parameters for maintaining good environmental quality and promoting animal welfare.

product	producer
Farm inputs and equipment for their use	
ACTIFOR Start	DELACON Biotechnik GmbH
Activo® NoDys	EW Nutrition GmbH
ANKA Bio-Safe Hoof Trimming Crush	ANKAPODOL S.L.
Anta®Phyt MG	Dr. Eckel GmbH
Antibiotic free concept (AFC)	European Protein A/S
AveMix 02 CS and AveMix XG 10	AVEVE Biochem
BEWI-FATRIX SynerG+	BEWITAL agri GmbH & Co. KG
BEWI-MILK AM 11	BEWITAL agri GmbH & Co. KG
Browser® XXL Close Up 2.0	AHRHOFF GmbH
COBIOTEX	MENNO CHEMIE-VERTRIEB GMBH
DairyPilot FlavoVital®	Josera GmbH & Co. KG
DELISTART K-LINK	Nutri-Ad International NV
DESICAL agroCoating SANIFloor	DESICAL Hufgard GmbH
DICOSAN	NOREL S.A.
Eco-friendly LFT-D composite material slat floor	Zhengzhou Lingyu
ELVOR HP	SAS SOFIVO
FORMI® Alpha	ADDCON GmbH
Gelamin picking bowl	GFT - Gesellschaft für
Gelamin Silberbird CS	GFT - Gesellschaft für
Hygen Pro Strept	Lípidos Toledo, S.A.
Insecto Speen	Protix Biosystems B.V.
Intest-Plus Quattro	Palital GmbH & Co. KG
IoShield® Spray	Ecolab Deutschland GmbH
Kryptic Pro	G Shepherd Animal Health
LysiGEM	KEMIN EUROPA nv
Lysoforte Liquid	KEMIN EUROPA nv
MiaDiasan	MIAVIT GmbH
Milkra FresserStart/Plus	Trouw Nutrition Deutschland GmbH
Poultry Star®	BIOMIN GmbH
Nucleoforce Piglets 2Kg	Bioiberica S.A.
Nutri AccuPower Drench System™	R2 Agro A/S
NutriTek	D V Technologies inc
pHix-up und pHix-up+	TIMAB Industries
Pigger Cream	Liprovit b.v.
PRINT-AROME	NOREL S.A.
Prominend Elite	Liprovit b.v.
ProtectOx™ DW	R2 Agro A/S
RaicoSil Hay	AGRAVIS Raiffeisen AG
RONOZYME RumiStar	DSM Nutritional Products
Santurion	VITALAC
SCHAUMANN-SixPig	H. Wilhelm Schaumann GmbH
siMMin	Pulte GmbH & Co. KG
Sow FiberLac™	R2 Agro A/S
SpeiZi™	R2 Agro A/S
TMR Tracker™ App	Digi-Star Europe B.V.
Tonisity Px	Tonisity Inc.
YANG	LALLEMAND SAS
Feed storage and mixing equipment	
Air-Box	Ambros Schmelzer & Sohn
BÖCK Super7	Böck Silosysteme GmbH
Peecon ERS - Hybrid boost for feedmixer	PEECON
Peecon Future anti-spill edge for feed mixer	PEECON
Peecon XYZ 24/7 full automatic silage cutting and distribution system	PEECON
Twin Aeration Scope	Ambros Schmelzer & Sohn
Equipment, accessories and spare parts	
BactiBag	IMV Technologies
BioFlo PCAI Catheters	Common Sense Insemination
Clip-On ID Number	AKROH Industries B.V.
EASY!Force Pistole für Heiß- und Kaltwasserhochdruckreiniger	KÄRCHER
eXact iDip agrar	COS OHLSEN
FleXLED ECO	Big Dutchman International GmbH
HSW ECO-MATIC connected by VETIC	Henke-Sass, Wolf GmbH
HSW ECO-MATIC TWIN	Henke-Sass, Wolf GmbH
Keron hygiene apron	Albert Kerbl GmbH
IDAL s2 (Intradermal application of Liquids) with the associated IDAL vaccines PRRS, PCV, M. hyo	Intervet Deutschland GmbH
Innovative M-Mode Backfat Meter	Wuhan
Lacmé L-Box	LACME SAS
Locate'n'Spray™ and Flash'n'Fill™	Ambic Equipment Ltd.
Foam cart	Meier - Brakenberg
Schmelzer piping system	Ambros Schmelzer & Sohn
Semen Bag® (Boar semen package controlled for reprotoxic substances)	MAGAPOR S.L.
Sidewall plastic clamp	Ebbers Metalworks B.V.
Te Pari Revolution Electronic Injector Gun	Te Pari Products Ltd.
Washpower Procleaner X100	Washpower A/S
Xcess valve	Apex Valves
Zeus	Big Dutchman International GmbH

product	producer
Cattle management and feeding technology	
Antahi Trusti Tuber	DAIRY SPARES SARL
AquaClim mattress	BIORET AGRI
AsconFreestalls, AsconFreiliegeboxen, AsconVrijligboxen	Wateler ATB B.V.
BETEBE circular driving aid	BETEBE GmbH
Calfhome	DELTEX SAS
Calf-Tel ECS and Calf-Tel Pen-System Front (Gen. 3)	L.T. Hampel GmbH - Calf-Tel
ClimaFlexBox	Schrijver Stalinrichtung B.V.
Drinking bowl with servo spray valve	AquaGlobe AB
Bedding machine for cow cubicle maintenance	Hartmann GmbH & Co.KG
ENRO Smart Control	SCHAUER Agrotronic GmbH
Flex Pen	Agri-Plastics Mfg.
Futterboy - robot for topping up feed supply	SCHAUER Agrotronic GmbH
Haprodia Bovibad	HAPRODIA GmbH
HCP TeatLock	Heemskerk GmbH & Co. KG
HIKO-Hygiene watering system	HIKO GmbH
KTBfive" calf transport box	Oswin Haase Nachf.
Largest silage block cutter	AP Machinebouw B.V.
MicroFeeder PITSTOP+	enAgro
MicroFeeder PITSTOP+	Vitfoss
Milchtaxi 4.0 with Smart-ID, Smart-MIX und CalfGuide	Holm & Laue GmbH & Co. KG
MilkShuttle Duo: combined milk feed and drinking water supply for suckling calves	URBAN GmbH & Co. KG
Mobile calf unit	VDK Products B.V.
MS OptiCare	Schippers GmbH
Pasteur HT 250	Martin Förster GmbH
Kipp-Profi cattle hoof care stand	Pesenhofer & Weiß GmbH
Rosensteiner Kipp Top	ROSENSTEINER Gesellschaft mbH
SILOKING TruckLine Compact 8	SILOKING
SILOKING TruckLine Compact 8	Hochschule Weihenstephan-Triesdorf
Smart Calf System	Förster-Technik GmbH
TARSA	Gummiwerk KRAIBURG
The Cuddle Box	SPINDER B.V.
TMR Tracker™ automatic ration transfer module	Digi-Star Europe B.V.
"Henryetta" training cow	Minitüb GmbH
Feeder bucket cleaning machine	Melktechnik Illertal GmbH
Transfeed Rover	SCHAUER Agrotronic GmbH
Triomatic T40 New Edition with new cutting system	Trioliet B.V.
VISIOMIX	Dinamica Generale S.p.A.
V-READY to Feed Optical Mix Control	Bernard van Lengerich
Wicky	WASSERBAUER GmbH
Pig management and feeding technology	
Agroconnect - Standard for data exchange between process computers and farm management systems	Fancom B.V.
Automatic cleaning of feeding system after use of antibiotics	Lührs Gerätebau GmbH
Babyfeed	SCHAUER Agrotronic GmbH
CHAINFEED Hopper "Rotodos"	TEWE-Elektronic GmbH & Co. KG
CHAINFEED Antriebsrad "Drive Plus"	TEWE-Elektronic GmbH & Co. KG
CHAINFEED feed chain with crosspiece	TEWE-Elektronic GmbH & Co. KG
Closed Loop Feeding	Hölscher + Leuschner
Combi-Feeder	ACO Funki A/S
Combi-Floor	ACO Funki A/S
Compident 8 demand feeding	SCHAUER Agrotronic GmbH
CONNECTED FARROWING	ASSERVA SAS
Corner Trough for Free Farrowing Systems, VD6 volume doser and Pneumatic Va+170:172lve for dry feed with Y-outlet	Master Trading A/S
CulinaFlex	Big Dutchman International GmbH
Deltaprofile for flooring	Master Trading A/S
Electronic connection between AquaDoc and Dosatron DIA	Lührs Gerätebau GmbH
Electronic connection between AquaDoc and Dosatron DIA	Dosatron
Excellent 4PX PLUS und WEDA-Morpheus App	WEDA
FermCube und ExtraFerm	WEDA
FermCube und ExtraFerm	ForFarmers Langförden GmbH
FT-30 pen	ACO Funki A/S
Knick Pipe	V.V.M. TechTrade GmbH
KONUS mixing auger	TEWE-Elektronic GmbH & Co. KG
MagicFeed	WEDA
MamaDos sow feeding	SCHAUER Agrotronic GmbH
"de Raamloop" pig fattening unit	Schippers GmbH
maXipig	IUL, S.A.
Monro	V.V.M. TechTrade GmbH

product	producer
MoreFlex free farrowing pen and VariFlex farrowing pen	WEDA
MoreFlex free farrowing pen and VarioFle farrowing pen	Justus-Liebig-Universität Gießen
MS Biza Nature	Schippers GmbH
Multi-phase dry feeding	ACO Funki A/S
Nutrix+ 2.0	WEDA
Pig Cough Monitor – Cloud Solution	Fancom B.V.
pig free balcony	VAN OSCH UDEN B.V.
Pig Growth Management	SKOV A/S
PIG TRACK	ASSERVA SAS
Piggy Check	Meier - Brakenberg
Porky´s Pickup XL	Meier - Brakenberg
PREMIUM PIGSTY FLOOR antibacterial	PREMIUMFLOOR GmbH
Small Feed	V.V.M. TechTrade GmbH
Smart Control	SCHAUER Agrotronic GmbH
SonicClean	Big Dutchman International GmbH
SowTakeAway	Hölscher + Leuschner
Squara Line	V.V.M. TechTrade GmbH
Strawfeed	TEWE-Elektronic GmbH & Co. KG
U-profile for 40mm penning	Master Trading A/S
VERBA Variomix	L. Verbakel B.V.
Volume dosing unit with integrated valve	ACO Funki A/S
WaveFeeder	Big Dutchman International GmbH
Poultry management and feeding technology	
AgriShift® HL-UVA 3 LED	Once Innovations, Inc.
Allround poultry grid	PREMIUMFLOOR GmbH
BrooDy	VDL AGROTECH B.V.
DOL 539 catching function for broilers	SKOV A/S
Easy@	EW Nutrition GmbH
I-Flush; total hygiene solution	IMPEX BARNEVELD B.V.
Infinia - Integrated Farm Information Management System for Poultry & Pigs	Fancom B.V.
Infini-T Auger	Technical Systems Pty (Ltd)
IQON	ROXELL bvba
KoChiBo Feeder	TEXHA PA, LLC
LANDMECO PAN FEEDING KICK-OFF 330°	LANDMECO A/S
Natural Beak Smoothing	ROXELL bvba
Optima E-Control	LUBING Maschinenfabrik
Ostara	ME International
PickPuck	Big Dutchman International GmbH
SmartCenterPro™	Pas Reform Hatchery Technologies
SMARTPOULTRYTUBES - VETSMARTTUBES tube ventilation systems for poultry housing	VETSMARTTUBES GmbH
TURBOMATE	GIORDANO POULTRY-PLAST S.p.A.
Twist	GIORDANO POULTRY-PLAST S.p.A.
Viatrift® outlet	HUESKER Synthetic GmbH
Aquaculture management and feeding technology	
AQUAVI® Met-Met	Evonik Nutrition & Care GmbH
DHA Natur™	ADM Animal Nutrition, Inc.
Spotmix Fish II	SCHAUER Agrotronic GmbH
TOPO FISH Management couplings	SCHAUER Agrotronic GmbH
TOPO FISH Management Kopplungen	LINN Gerätebau GmbH
Climate control and environmental technology	
»Heat-X« Rotate	REVENTA GmbH
Ammonia scrubber	Pellon Group Oy
Automatic cleaning, waste air treatment	SCHULZ Systemtechnik GmbH
Combi pressure system	Tulderhof Ventilation BV
DR1-D digital controller with NH3-dependent volume flow control	Möller GmbH
Dräger Polytron C300	Drägerwerk AG & Co. KGaA
EazyVent with inflatable plastic sheeting	Lock Antriebstechnik GmbH
EC52 with Munters Drive	Munters Italy S.p.A.
EOC53	TERMOTECNICA PERICOLI S.R.L.
PS-HD ECO high-pressure fan	Prüllage Systeme GmbH
NH3 and CO2 monitoring with long-term stability in animal housing - NH3- Stable measuring concept	ExTox Gasmess-Systeme GmbH
Pura aer	DEVRIETECH B.V.
SmellFighter 3	JH Agro A/S
Exchange washer	Schönhammer Wärmetauscher-
Exchange washer	Rheinischen Friedrich-Wilhelms-Universität Bonn
Exchange washer	RIMU Agrartechnologie GmbH
VETSMARTTUBES® tube ventilation system for milking parlours and milking robots and full air conditioning fresh air systems for pig housing	HUESKER Synthetic GmbH
VETSMARTTUBES® tube ventilation system for milking parlours and milking robots and full air conditioning fresh air systems for pig housing	VETSMARTTUBES GmbH

product	producer
Herd management electronics and software	
"Add on" online pump maintenance and monitoring	EURO-P Kleindienst GmbH
365ActiveBox with 365Time App	365FarmNet Group GmbH & Co KG
365ActiveBox with 365Time App	GEA Farm Technologies GmbH
365Feeding	365FarmNet Group GmbH & Co KG
365Feeding	GEA Farm Technologies GmbH
AgriSyst SalmonellenMonitor	AgriSyst B.V.
Broiler-Insight / Lay-Insight	Porphyrio NV
DeLaval 4milk application	DeLaval International AB
DELOS	ODAS GmbH
Eartag LIFE	Smartbow GmbH
EstrusControl – for monitoring the estrus times of gilts to identify the age of onset of puberty	Big Dutchman International GmbH
EstrusControl – for monitoring the estrus times of gilts to identify the age of onset of puberty	Justus-Liebig Universität Gießen
Extension App Plattform (PR-FC Store)	Prüllage Systeme GmbH
FarmCloud	Metrica Partilhada, Lda
Ferkelindex Lebensleistung 5. Wurf (FILL5)	BHZP GmbH
Gesipor 3.0	MAGAPOR S.L.
H2O ALERT	BeKoSENSE BV
HYBRIMIN Futter5	HYBRIMIN Computer + Programme
Kälbermama Alma Talk: comfortable calf monitoring and machine control via speech-based operation	URBAN GmbH & Co. KG
MooMonitor+ Herd Management App	Dairymaster
Olmix Myco'Calculator	OLMIX SA
PigVision MultiSite Reporting, WinVet, PigVision Mobile, SmartPigs	AgroSoft A/S
SmartPork-Management-Tool	Universität Bonn
smaXtec Heat & Calving Detection	smaXtec animal care sales GmbH
VETSMARTTUBES 3D housing climate simulation to select the right artificial ventilation system and plan new housing construction or conversion measures	VETSMARTTUBES GmbH
Milking and cooling technology	
ADF inVent	ADF Milking Ltd.
alcona tank monitor	alcona Automation GmbH
CMIQ-Sensor mit CMIQ-Monitoring	GEA Farm Technologies GmbH
DeLaval Cleaning Analysis - DCA	DeLaval International AB
Ekomilk Horizon and Ekomilk Scan+	Ekomilk / Bultech 2000 Ltd.
Optical animal ID number identification on collar	Milan GmbH
SAC Attachtool for milking robot	S.A. CHRISTENSEN & Co.
SAC Goat Rotary milking for large herds	S.A. CHRISTENSEN & Co.
SAC Uniflex Liner RDS	S.A. CHRISTENSEN & Co.
Animal housing and shed construction	
EZD 52 divided rack-and-pinion gear	Lock Antriebstechnik GmbH
H+L Loose Housing	Hölscher + Leuschner
LUFOLIGHT Light Manager LM5.2s	elkom - Elektronik GmbH
NatureLine	SCHAUER Agrotronic GmbH
Paneltim® 20mm and 35mm panels in PP COPO & PEHD	PANELTIM N.V.
Windstreek	VDL AGROTECH B.V.
Dung, solid manure and slurry technology	
Automatic chain tensioner	Beerepoot GmbH
AVC-3D – Auto Vibro Clean 3D	Big Dutchman International GmbH
BETEBE Vakusep	BETEBE GmbH
Flicker-Meter iFM-1	iLox GmbH
Slurry drying with OptiSec	Big Dutchman International GmbH
Hercules Cross Conveyor	VENCOMATIC Group B.V.
IMCaM – manure belt ventilation 2.0	Big Dutchman International GmbH
Slurry processing system TOTFET	Mecàniques Segalés, S.L.
Transportation, farm and grazing technology	
Cab Control™+	Digi-Star Europe B.V.
KL25.5e	Kramer Werke GmbH
New Heering V-shape, shaping the future of day old chick (DOC) transport	Heering B.V.
PATURA P8000 Tornado Power	PATURA KG
V-COMFORT Turbo Air Flow	Bernard van Lengerich
Poultry and egg processing and marketing	
ATLAS; Advanced bird transport solution from grower to processor	Marel Stork
EggsCargoSystem® Plus+	Twinpack Special Products B.V.
Input unit	LUBING Maschinenfabrik
MS Hatchfog Ultra	Schippers GmbH

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EuroTier, 15–18 November, Hanover/Germany
DLG stand, hall 26 D28

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