

# MEATINGPOINT

magazine

SUSTAINABLE TECHNOLOGY, PROCESSING & PACKAGING



## BEST PRACTICE IN MEAT CONVEYING



A **TOOL** FOR YOUR COMPANY  
TO **MONITOR** **ANIMAL**  
**WELFARE** ON THE DAY  
OF **SLAUGHTER**

**MODERN** PRODUCTION  
OF **SAUSAGE** PRODUCTS:  
**CONTINUOUS**, **EFFICIENT**  
AND **RELIABLE**

IT IS NOT **JUST** THE **FOOD**  
**INDUSTRY** WHICH IS  
**UNDERGOING**  
**METAPHORICAL** CHANGES





# MEAT PREVENTS **MALNUTRITION**

Join the Industry's Movement  
to Fight Child Hunger with  
Animal Protein-Based Solutions

The Six-Second Project partners with the global meat industry to fund animal protein-based hunger solutions in communities where children are chronically malnourished.

**Join us in the fight against hunger.**

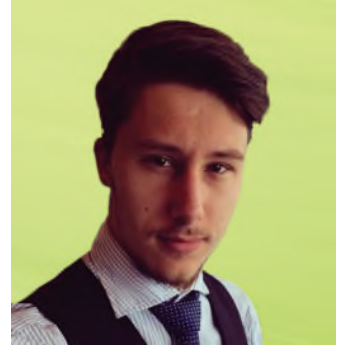
- Become a Corporate Sponsor
- Make a Donation
- Join Our Hunger Task Force
- Subscribe To/Advertise In MEATing Point Magazine. MEATing Point Donates 3% of all ad sales and €/\$6 per subscription to The Six-Second Project's hunger-fighting efforts.

Learn more at [www.thesixsecondproject.org](http://www.thesixsecondproject.org) | [info@thesixsecondproject.org](mailto:info@thesixsecondproject.org)

## Dear reader,

Welcome to the first edition of Meating Point Magazine for 2017.

In this issue we address some key animal welfare issues since there is a perception that the way in which many animals are handled and slaughtered could be greatly improved in terms of animal welfare. Thus, animal health authorities are researching ways to reduce unwanted side-effects of controlled-atmosphere stunning around the world. They investigate current concerns and how gas stunning might be improved to minimise the symptoms of discomfort. In this issue we tackle questions of animal welfare such as: Is gas stunning as humane as we think? and What are the humane choices of stunning?



Tristan Bogaard

In the spotlight is another eye opener article by Henk Hoogenkamp, who puts an insight into the topic, how the food industry is undergoing metaphorical changes, and how fast growing world population, climate change, ecosystem degradation, energy, water and land scarcity are making today's food production increasingly unsustainable. In this line he analyses the huge disruptions in the socio-economic, cultural settings and demographic of our daily life. See pages 36 - 37.

An interesting contribution is an article by Fabio Conti, Global Product Manager for Food applications at engineering company Sandvik, who looks at some of the factors that go into designing a conveying line suitable for use in meat processing operations. Read the article on pages 24 - 25.

As always we have some latest processing and packaging news and innovation, new product launches, and case-studies.

Finally, we review some of the industry's most significant upcoming "Meating" Points. Gulfood 2017, which is taking place from 26 February to 2 March 2017 at the Dubai World Trade Centre (DWTC), is a worth visiting fair and one world's largest annual food events. With 1,450 exhibitors and 20,000 visitors, CFIA, Rennes, France is one of the most important events in Europe dedicated to the food - processing sector. Visitors can access a full high-quality range focused on three distinct sectors and find customised solutions in ingredients and intermediate food products, equipment and packaging.

Among the must - visit fairs is the 55th edition of interpack 2017 to be held in Düsseldorf, Germany from 4 to 10 May 2017. Where size and internationalism are concerned, interpack is a unique platform for businesses offering products and solutions in packaging technology and related processes. Among the special topics will be the focus on Industry 4.0. A special show called innovationparc will be held, with packaging ideas and solutions designed to reduce food losses and waste.

## Enjoy your read!

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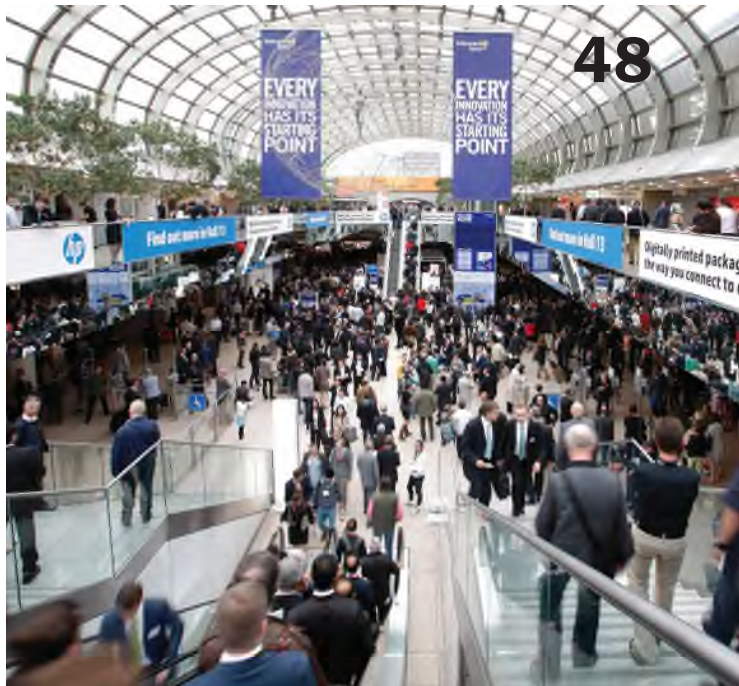
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## STORK AMF-I SETS THE WORLD'S BENCHMARK

# BREAST CAP FILLETING MEETS INTELLIGENCE

Breast cap deboning is an extremely important stage in any poultry processing plant. During this process, end products with the highest value, such as breast fillets and tenderloins, should be harvested in the most accurate and consistent way with highest yield. That's why markets around the world ask for the most efficient automated solutions to facilitate and assist in breast cap filleting. In this respect, the Stork AMF-i sets a new benchmark.

Already since its origin in 1996 the Stork AMF system was the leading solution worldwide in breast cap deboning; it became a huge success with hundreds of systems in operation globally. Time and again continuous development is opening up new product opportunities for this system, at the same time maximizing deboning efficiency, quality and yield.

### Every part of the world

The top quality, high yield fillet products created on an AMF system are perfectly fit for retail sale or for use in further processed products. This well proven breast cap filleting solution may boast hundreds of installs worldwide, and it continues to be the benchmark in breast cap deboning. The most renowned firms in every part of the world prove to Marel Poultry that the



AMF system is performing excellently under all circumstances, for all capacities.

### Fully automated

The newest AMF-i generation not only produces a wide range of breast fillet products for the retail industry but also harvests valuable by-products, such as skin, breast tendon meat and breast cartilage. Almost all filleting operations can be done automatically, thus saving manual labor. A full-scale AMF-i deboning system would comprise modules carrying out the following tasks: breast cap loading, deskinning, breast blister removal, wishbone removal, fillet halving, fillet separation, tendon trimming, tenderloin separation, keel ribbon harvesting and cartilage harvesting.

### Influence of fluctuations eliminated

Poultry processors typically handle a substantial flock weight variance, causing

significant differences in breast cap size and weight. For optimum yield and top product quality it is essential that modules are set correctly for the size of breast cap being processed. This is exactly the field in which Marel Poultry has been very innovative, and at which AMF-i now excels.

Thanks to AMF-i's intelligence, processors don't need to calibrate their input anymore, nor have to select product size related recipes for module settings. The measurement unit determines the dimensions of every single incoming product. Based on this measured data, the downstream AMF-i modules automatically adjust their settings accordingly. In this way, the influence of incoming breast cap fluctuations are eliminated, ensuring the most optimal yield per individual breast cap.

### Modular set-up

Breast caps are automatically loaded onto the rotatable product holders and conveyed through each of the system's modules by the transport mechanism. Turning stations position the holder correctly for each processing operation. Each module is responsible to handle one specific process step and modules can be switched on or off to create different end products. Every individual poultry processor can choose his own preferred line-up of modules, whichever suits them best. The system can debone a wide range of breast cap weights into a wide range of skin-on or skinless breast fillet products, varying from whole butterflies with tenderloins attached to half fillets with tenderloins harvested separately.

### Reliable cutting

Just one example of a measurement-guided





module is the Wishbone Remover-i. Removing the wishbone from the breast cap is all about reducing meat loss to a minimum with virtually no bone risk in the fillet. The Wishbone Remover-i features a size-dependent setting for the optimum processing of breast caps. Instead of using an average setting for this module, the cam-controlled knife can be set to cut in two different ways. Depending on the product's size, the right settings are automatically regulated by PLC control. This highly reliable way of cutting out the wishbone results in increased fillet yield for smaller products which can be as much as 3 grams per wishbone.

### Changing orders

Thanks to the measurement unit, consistent adaptive filleting can be done without human intervention needed. Top yield and quality are therefore guaranteed across the whole range of breast cap weights and on all breast fillet products. This gives processors optimum flexibility, which is a preponderant qualification in poultry processing nowadays, as incoming customer orders from restaurants and supermarkets can be very diverse. The AMF-i intelligence allows processors to react swiftly and adequately to fast changing order requirements from their customers.

### Highest effectiveness

The role of software is gaining importance all the time. The PLC control system makes use of sensors along the system which determine the timing of operations, such as the start and stop times of a cutting blade. Thanks to PLC control, fewer pneumatic components are needed. Innova food processing software is able to provide a clear analysis of AMF-i's

performance, availability and quality. This gives plant management the opportunity to continuously improve process effectiveness. Taking into account current line speeds, every little gain of poultry meat on an individual level means a huge profit at the end of the day. That is why every single process

operation is monitored meticulously by Innova software – it keeps the equipment perform continuously at peak level and it's the only way to achieve the highest effectiveness.

### Ongoing refinements

The AMF-i breast cap deboning system hits yield and quality targets time after time, across the whole range of breast cap weights handled by poultry processors. Nevertheless, Marel Poultry is always looking for ongoing refinement, even of proven solutions. As a consequence, the number of end product options for the AMF-i has grown over time, manual operations were reduced, the cuts became adaptive and a user-friendly control by menu was integrated. Therefore, the system's yield will keep on increasing and the poultry processing world will hugely benefit from Marel Poultry's continuous improvement efforts.

[www.marel.com](http://www.marel.com)



**Industrial Auctions BV**

Online auctions for the complete food and beverage industry



**7th of March: Online auction machinery for the complete food industry in Nettetal, Germany**

**8th of March: Online auction machinery and inventory due to expansion capacity FrieslandCampina in Leeuwarden, The Netherlands**

**16th of March: Online auction of machinery for the complete food industry on behalf of Windsor Food Machinery Ltd in Ashford, United Kingdom**

**21st of March: Online auction machinery for the complete food industry in Sevenum, The Netherlands**

**28th of March: Online auction complete palletizing line and bakery machinery due to closing Fricopan Back GmbH in Klötze OT Immekath, Germany**

**All machinery (technical details & pictures) and auctions are standing on: [www.Industrial-Auctions.com](http://www.Industrial-Auctions.com)**



## LES TRÉSORS – THE COUNTER PRESENTER ONE SYSTEM. MANY VARIATIONS.

Indasia GmbH provides their customers from the meat and butchery industries, general food industry, fish industry, dairy industry and retail, not only with top quality spices and marinades, but also with creative ideas and solutions to their problems. Therefore, this family business from Georgsmarienhütte also include holistic product solutions and concepts as part of their programme.

As well as flexibility, durability and an elegant design are the key benefits offered by the new display concept from Indasia - Les Trésors. At the heart of the concept is the exclusive counter presenter made from high quality ABS plastic. This is shatter-proof, temperature-resistant from -25°C to +80°C, dishwasher safe, food safe and has an attractive, protective surface. It is not only suitable for the service counter but can be used in many combinations.

In this way, Indasia offers its customers manifold opportunities for displaying their wares in fresh ways, ensuring success at the service counter.



Whether it is used in combination with the practical single-portion aluminium bowls, the elegant serving platters for a myriad of delicacies, or the long serving trays for particularly large ranges – the ultimate counter display tray from Indasia will suit the needs of every customer.

### Counter presenter & Aluminium bowls



Complete meals or attractive snacks can be presented, ready for sale, in the practical aluminium bowls with their lids. The end-consumer can warm the individual portions up in the oven at home or at the office canteen.

### Counter presenter & Serving platters



The practical serving platters are ideally suited for displaying premium offerings such as lamb kebabs or rump steaks.

### Counter display tray & Serving trays



Would you like a little more...? Greater space is offered by the counter display tray in conjunction with the long serving trays.

The attractive Les Trésors display concept is topped off with delicious recipes beautifully presented in a brochure, offering Indasia's customers a wealth of ideas – perfectly suited to the aluminium bowls, serving platters and trays.

An appealingly designed meat counter is essential to the success of a business. There is a reason that one says „You eat with your eyes as well as your taste buds“. With Les Trésors from Indasia, special offers and delicacies can be displayed at the counter in a way that grabs the attention – a concept with guaranteed success.

[www.indasia.de](http://www.indasia.de)



## ANRITSU WEIGHING IN WITH HIGHLY ACCURATE SYSTEMS FOR FOOD SECTOR

Award-winning supplier of food safety solutions, Anritsu Invis Ltd, is targeting the UK market with its latest range of SSV Checkweighers that have been designed to provide higher accuracy and better line productivity than conventional systems through minimising unnecessary rejects.

Anritsu, which also offers cutting-edge food safety equipment for detecting contaminants in fresh and processed products, utilises Smart Measurement Function (SMF) technology in its SSV

Checkweighers for maximising accuracy.

Conventional checkweighers use the weigh cell signal, after signal processing, to determine the weight of each product as it passes over the weigh table. If two packs are detected at the same time, a 'double product error' will occur and the system is forced to reject both products since each individual product weight cannot be determined.

Product spacing is normally established



by these systems through increasing the checkweigher conveyor speed, compared to the normal line speed, to prevent two products being on the weigh scale at the same time. Double products are then rejected with an error rate of 0.15%, while due to the increased conveyor speed, scale accuracy is 0.75g.

The versatile SSV Series is among the most advanced food weighing equipment of its type in the world, boasting innovative signal processing, multi-threaded filtering and improved scale resolution, to minimise 'double product errors'.

SSV Checkweighers, equipped with SMF, provide product spacing, while conveyor speed is maintained. By running slower, the SSV system offers higher accuracy even if two products are on the weigh scale at the same time. Double product rejection rate is down with an error rate of just 0.03% however scale accuracy is maintained at 0.35g.

Anritsu's ultra-sensitive and hygienic SSV Series is available in various models, in both waterproof and non-waterproof versions, incorporating precision-engineered construction for high accuracy, high speed and high protection suitable for a range of applications including heavy products.

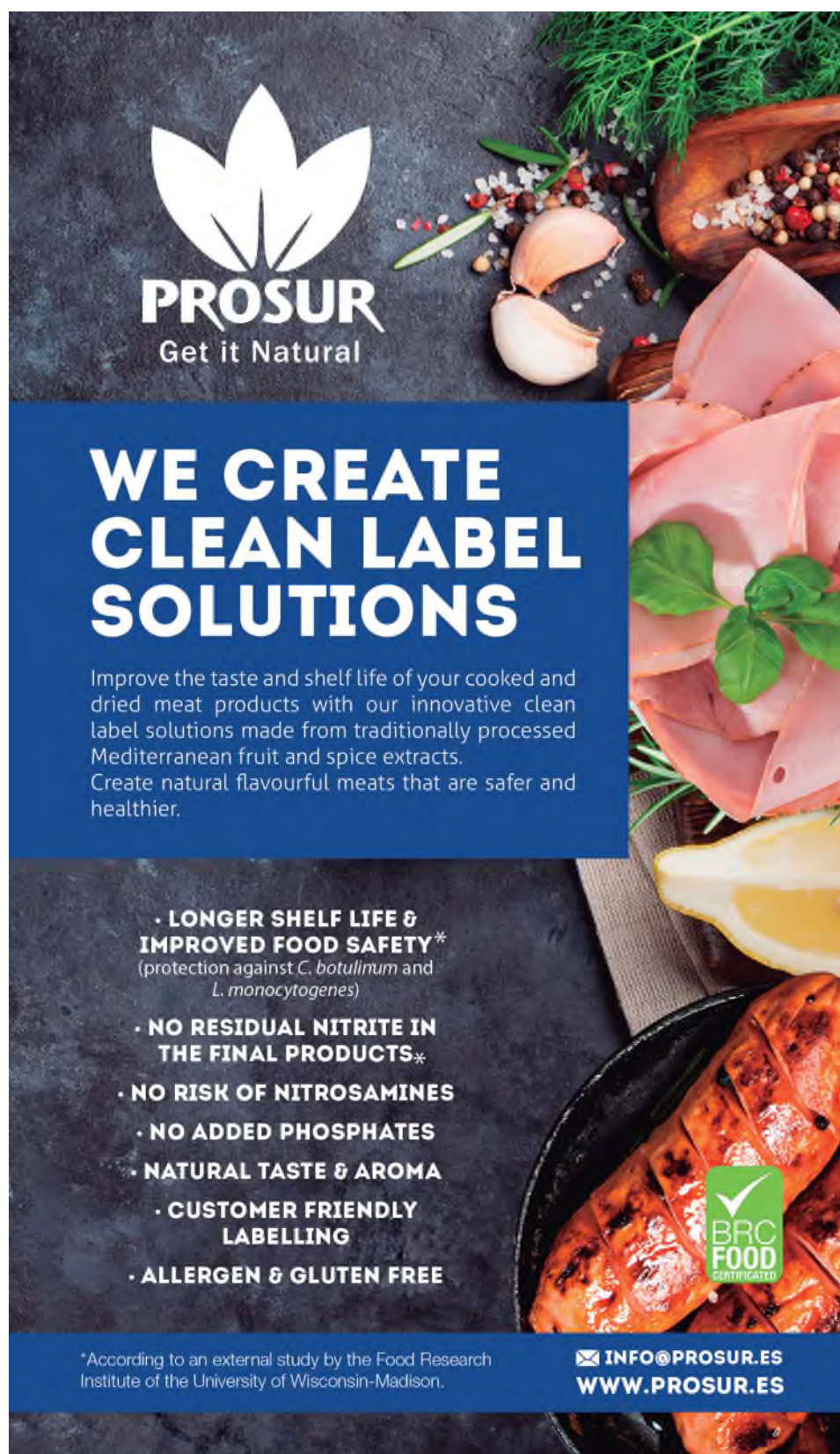
They come with a colour LCD touch screen enhancing usability and system navigation. Six standard view screens are available to quickly see product weight or trending information. The SSV supports 200 different products which can be stored in the memory of the machine.

Eddie Daniels, Anritsu's UK Sales Manager, said: "The SSV Series is extremely versatile and cost-effective technology which has been developed to offer exceptionally accurate and consistent weighing of products. Ideal for the food and pharmaceutical industries, the machines' hygienic design is perfect for unpackaged and fresh foods which require stringent sanitary control."

Anritsu has helped increase productivity of food manufacturers and promoted

consumer safety through its dynamic, high accuracy weighing solutions and reliable inspection techniques since 1964. Anritsu designs and develops all its products in-house to support

every solution with 100% confidence. Its food safety solutions have earned global recognition for their outstanding performance, capability and credibility. [www.anritsu-infivis.com](http://www.anritsu-infivis.com)



**PROSUR**  
Get it Natural

## WE CREATE CLEAN LABEL SOLUTIONS

Improve the taste and shelf life of your cooked and dried meat products with our innovative clean label solutions made from traditionally processed Mediterranean fruit and spice extracts. Create natural flavourful meats that are safer and healthier.

- **LONGER SHELF LIFE & IMPROVED FOOD SAFETY\***  
(protection against *C. botulinum* and *L. monocytogenes*)
- **NO RESIDUAL NITRITE IN THE FINAL PRODUCTS\***
- **NO RISK OF NITROSAMINES**
- **NO ADDED PHOSPHATES**
- **NATURAL TASTE & AROMA**
- **CUSTOMER FRIENDLY LABELLING**
- **ALLERGEN & GLUTEN FREE**

\*According to an external study by the Food Research Institute of the University of Wisconsin-Madison.

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**BRC FOOD CERTIFICATED**

# NEW MODELS EXTEND LASER CODING CAPABILITIES



Linx Printing Technologies is launching two laser coders that will open up the benefits of the technology to more companies and applications. Key benefits of the new Linx CSL range are even faster printing speeds and greater versatility, making the coders ideal for a wider variety of products, along with quicker and easier installation and set-up that help to make laser coding simpler and more accessible.

The Linx CSL10 (10 watt) and CSL30 (30 watt) laser coders feature a new, more powerful processing board that is able to relay the message from the control unit to the marking head more quickly, delivering higher speeds. Equally important, the coder can handle complex messages and graphics without any loss of quality, ideal for the requirements of high speed packing and bottling lines. Both models apply crisp codes onto many different packaging materials

including coated paper and card, plastic, glass, rubber, coated metal and anodised aluminium.

A new marking head has been introduced for wide web applications, enabling the coders to code across multiple lines using just a single laser where previously two machines would have been required. An area of up to 440mm x 600mm can be coded – ideal for applications such as flexible sheet for lids.

In addition, a wider range of marking heads and positions mean that the Linx lasers offer over 20,000 standard configurations, and can therefore be tailored to the precise requirements of each coding application. This unique feature makes the Linx CSL10 and CSL30 the most versatile laser coders available. Tailoring the laser application to the customer's precise requirements means optimal use is made of the laser system, contributing to the lasers' long tube life.

An increased choice of conduit lengths – 3, 5 and new 10m sizes – together with a new more flexible conduit design, detachable marking head, connectors and conduit, and quick disconnect umbilical cable, have made installation of the coders easier, particularly where the lasers cannot be placed close to the power supply or where space is limited.

These same features speed

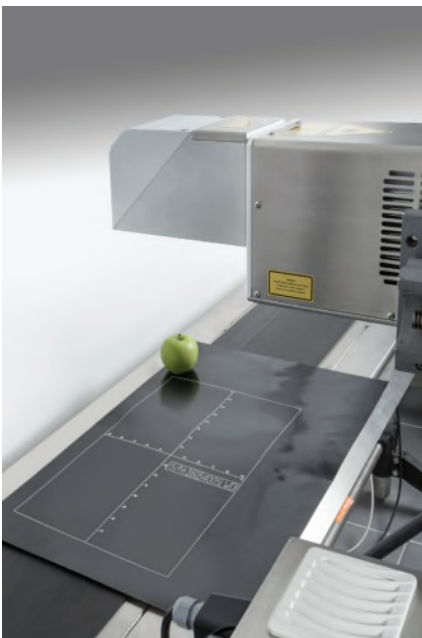
up service times and make it simpler to relocate the machines in the factory.

Both models can be specified in an IP65 version, allowing the coder to operate in harsh, wet and dusty environments such as frozen, dairy, beverage, chemicals and construction.

Both the Linx CSL10 and Linx CSL30 retain the proven features of Linx laser technology including a highly efficient operating system that delivers one of the longest tube lives on the market – around 45,000 hours – and its unique VisiCode® function for producing unsurpassed high quality codes on glass and PET while reducing energy usage by up to 50%. An enhanced version of its LinxVision® operating system allows for fast and simple set-up that minimises errors.

"With our new laser models, we are delivering a significant improvement in performance while also widening the appeal of the technology to companies who might previously have considered it too complex," explains Matt Eastham, Laser Business Manager, Linx Printing Technologies.

"The Linx CSL10 and CSL30 combine proven Linx reliability with flexibility and ease of use, all of which simplify the process of owning and operating a laser coder. And with our many years' experience of laser technology and a large global installed base, we can help companies find the ideal solution tailored to their individual needs."



[www.linxglobal.com](http://www.linxglobal.com)



# INTEGRATIVE SOLUTIONS FROM HANDTMANN AT THE INTERPACK



Turnkey solutions through to packaging



ER 330 loading robot

At the interpack, Handtmann will exhibit integrative solutions, from the portioning process to the packaging solution. They meet all requirements with respect to production efficiency, impeccable hygiene and maximum process reliability.

The basis for reliable synchronisation of several process steps is the control system in the Handtmann machines. It controls, monitors and links complex systems, and thus facilitates successful automation in all its diversity: from the portioning process to collating, gripping, feeding and depositing the products in the packaging. Systems from Handtmann ensure 100% process reliability in conjunction with packaging machines, such as thermo-forming machines or tray sealing units.

In Düsseldorf, Handtmann will be focussing on fully automatic solutions with an interface to packaging: automatic collating and

depositing of sausages into different types of packaging, multi-lane depositing of pasty products into a wide variety of containers, reliable minced meat production including portioning and separating, and an automatic cutting and portioning solution for serial portioning directly into moulds, trays or thermo-forming machines without pre-batching. And with the Handtmann HCU software for production networking, the company will demonstrate how Industry 4.0 is implemented at Handtmann.

A real highlight at the Handtmann stand is a complete solution for automatic depositing of fresh products into trays. This innovation comprises the new VF 800 vacuum filler with inline grinding system, a PVLS 143 AL cutting line, the new GM 310 collating system, a feed belt for trays and a tray denester. Handtmann Hall 5, Stand C38

[www.handtmann.de](http://www.handtmann.de)



## BREAST FILLETING MEETS INTELLIGENCE

Stork AMF-i:

- Top fillet quality and optimum fillet yield
- Intelligent breast cap measuring
- Automatic adjustment of module settings

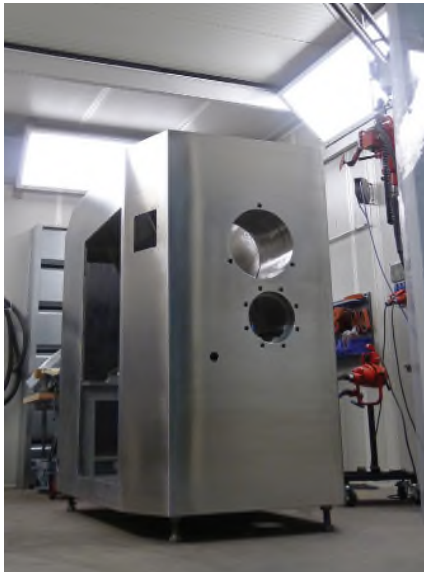
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[marel.com/poultry](http://marel.com/poultry)



ADVANCING  
FOOD PROCESSING

## K+G WETTER: MODERN GRINDING BOOTHS ENSURE PRECISE PROCESSING OF SURFACES



A brilliant shine: K+G Wetter's advanced grinding booths ensure smooth and hygienically clean surfaces.



The modern equipment in the K+G grinding booths ensures optimum polishing and grinding results as well as better ergonomics.

The highest hygienic standards are required wherever food is processed. The mechanical engineer K+G Wetter knows these requirements and offers solutions for maximum cleanliness. In the advanced grinding booths at the K+G Wetter factory in the Hessian town of Biedenkopf, the experts give the K+G machines their exceptionally smooth surfaces, on which particles are significantly less adherent. K+G Wetter has now introduced further clever details to its grinding booths for precise surface finishing. The highlight: new grinding booths are equipped with a specially developed LED lighting system. The improved illumination of components ensures optimum polishing and grinding results and thus sets the highest standards in terms of cleanliness.

### Advanced technology for maximum hygiene

For optimum results, all machines are subjected to a careful mechanical grinding process by K+G Wetter craftsmen. The experts use abrasives which, unlike other surface processes, produce a particularly homogenous appearance. "Thanks to the improved cabins, we can produce the extremely high-quality and smooth surfaces that characterize our

machines even more efficiently. Because of the homogeneous surfaces, our customers find it much easier to clean the machines," explains Volker Schlosser, Sales Manager at K+G Wetter. In addition, the stainless steel surfaces of K+G Wetter machines are designed to prevent the accumulation of cleaning water - it simply flows down the sloping planes.

### Safety as a result

The new grinding booths not only ensure great results for customers, they also impress K+G Wetter's own employees: "Our goal was to optimize both the ergonomics of grinding and the quality of the surfaces. Thanks to improved lighting in the cabins, we can control the grinding pattern more easily, quickly, and safely. This makes our work even better. At the same time, we have significantly reduced noise levels in the cabins by means of special sound-absorbing walls," explains Marco Beimborn, K+G Wetter's factory manager. Furthermore, advanced ventilation systems now ensure a constant exchange of air and, consequently, optimum working conditions.

[www.kgwetter.de](http://www.kgwetter.de)

## NEW LIMA MODELS FOR VIV ASIA 2017

LIMA will exhibit at VIV ASIA 2017, showcasing the traditional MSM - LIMA meat "S" separators for poultry, pork or fish with their best-seller LIMA RM 70 S.

This model is used satisfactorily and acclaimed around the globe by customers producing the highest quality of MSM (Mechanically Separated Meat) at high yield.

The LIMA RM 70 S with very few additional parts can be changed over into a:

LIMA RM 80 DDS / DD deboner / desinewer

Similarly, any LIMA S model can easily be changed over into a DDS / DD deboner / desinewer.



The LIMA DDS / DD range ensures to get very HIGH QUALITY meat on raw products such as poultry, pork and beef.

Typical applications:

\* Desinewing of raw materials with or without cartilage, such as, shank meat, trimmings, aponeurosis, high yields: from 80 to 98 % while C/P ratios remain under controlled values and the temperature hardly increases during the process.

\* Mechanical deboning, the same LIMA machines, equipped with the adequate deboning head enable to produce very HIGH QUALITY separated meat, in terms of structure, colour and low Calcium content, less than 1 000 ppm.

To know more about LIMA's numerous applications, please come and see the team at their booth H098-3360.

[www.lima-france.com](http://www.lima-france.com)



# NEW TR4 SERIES EASES MONITORING OF CONSTANTLY CHANGING TEMPERATURE DATA

Wireless Bluetooth data loggers facilitate real-time supervision via mobile devices



T&D Corporation, Japanese market leader for wireless data loggers, presents the new TR4 series for temperature monitoring. Operating with low energy Bluetooth 4.0 and without the need for pre-registration, loggers within the communication range are instantly detected and automatically refreshed by mobile devices

such as smartphones and tablets. Records can be monitored or stored in the free of charge, cloud-based T&D WebStorage Service with the help of two apps, available for iOS and Android.

The TR4 series comprises three competitively priced models, two of them waterproof. Each model provides different sensor types and measurement ranges to serve diverse application requirements: the TR41 covers temperature measurements from -40 to 80°C (waterproof, internal sensor); the TR42 measures from -60 to 155°C (waterproof, external sensor), while the TR45 for industrial use is available for thermocouple types K, J, T, S covering -199 to 1.700°C or for types Pt 100/Pt 1000 with a range of between -199 and 600°C. For easy monitoring, the automatically collected data is displayed in neatly arranged graphs

by the ThermoRec app or can be uploaded and shared with the ThermoStorage app. Simultaneous data collection from multiple loggers is possible. Each logger can be set to 15 different recording intervals, from one second to 60 minutes, and has a logging capacity of up to 16.000 readings. Battery life is up to one and a half years.

Their high precision and wide range measurement abilities combined with their flexibility makes the TR4 data loggers ideal for use in private, industrial or public areas. They can be utilized, for example, for heating control in housing or agricultural sites as well as to safeguard refrigerators, sales cabinets and storage facilities. Additionally, they are ideal for supervising transportation of sensitive goods like fresh or frozen food or products for medical use.

[www.tandd.com](http://www.tandd.com)

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## NEW 12 LITRE BUCKET MAKES VIKAN'S AWARD-WINNING BUCKET FAMILY EVEN BETTER

Launched in January 2017, the new 12 Litre Bucket is a welcome update to Vikan's award-winning bucket range, and includes a number of features to improve hygiene and usability, and simplify storage and handling.

### The Vikan 12L bucket at a glance:

- \* Stackable design saves storage space
- \* Snap-on lid improves security and safety
- \* Easy-to-read measures include litre, UK and US gallon marks
- \* Sloped design makes stirring, mixing and emptying faster
- \* Drainage hole prevents water accumulation during storage
- \* Available in 9 colours for hygienic colour coding

Debra Smith, Vikan's Global Hygiene Specialist, says:



"Buckets are one of the most commonly used pieces of equipment when it comes to ingredients handling and cleaning in the food and beverage industry. With the redesign of our 12 Litre Bucket, industry professionals can now choose from a range of bucket sizes that all feature smart design solutions to improve hygiene, safety and usability. The new buckets also combine

perfectly with our bowl and hand scoops to make measuring and handling easier."

The new 12 Litre Bucket is made from premium quality and highly durable materials, and is compliant with all relevant EU and FDA regulations. It is available in 9 colours: pink, green, blue, red, white, yellow, orange, purple and black. [www.vikan.com](http://www.vikan.com)

## MAGNETIC FILTER MEETS THE HIGHEST FOOD SAFETY STANDARD



The EHEDG magnetic filter recently introduced by Goudsmit Magnetics is specially designed for the food industry. This hygienic filter is suitable for CIP systems: the magnet can be magnetically operated,

without the need to open the filter housing for cleaning. The filter is constructed of Neodymium magnets that provide more effective separation of very small ferrous particles as small as 15µ, weakly magnetic particles and even iron dust from sticky substances such as chocolate, pastes, powders and fruit juices. The magnet has a maximum flux density of 11,300 gauss at the bar and removes the specified particles from both liquid and powdered products. The entire system is made of grade 316 stainless steel, is smoothly finished (Ra≤0.4µ) and is EHEDG certified.

### CIP CLEANING

Cleaning of the magnet occurs automatically. When production is stopped the magnet can be 'blown' out of the product flow so the flushing cycle can carry away the captured ferritic particles. This is done to prevent the captured particles from entering the product again elsewhere in the process. After the

flushing cycle the magnet part is ready for the complete CIP cycle. The housing is constructed so that no product remains behind after cleaning (see animation on YouTube). The magnetic filter is used in tubes and/or pipelines in the food industry, where it performs deferrization of products conveyed under pressure. This way even the smallest iron particles can be filtered out of sticky substances (chocolate, pastes, powders or fruit juices), while these particles are normally carried off again by the raw material flow. Installation of a metal detector does not solve the ferro problem, because it is not able to detect the smaller metal particles. The hygienic magnetic filter is available in five standard dimensions (Ø 50 - 125 mm), has a standard pipe connection and can also be delivered with another cleaning option - manual - which allows operators to easily separate the extractor and enclosed magnetic bars. This filter, however, is not EHEDG certified.

[www.goudsmitmagnetics.com](http://www.goudsmitmagnetics.com)



# AUTOMATED SYSTEM BOOSTS PERFORMANCE



**A** Dutch manufacturer of pre-packed meat products has automated its in-house logistics using an IT solution from CSB-Automation and CSB-System. The new system is helping ProMessa BV meet the needs of its customers more efficiently, with a delivery performance of over 99 percent, and therefore enhance its market position.

With the CSB solution, the entire materials flow at ProMessa has been automated – from packaging following production, to storage and picking, and loading onto trucks. In the past, goods and crates were moved manually, whereas today, state-of-the-art robotic technology, conveyor systems, sorters and the CSB software work seamlessly together to get the job done.

The software organises and monitors a network of machines, including two automatic crate storages, robot units, four automatic weigh labelling lines with connected sorters, a dispatch warehouse and a conveyor system. Integrated production scheduling ensures precise tuning of workflows in terms of time and quantity. Any important details, such as up-to-date order, production and inventory data, are captured and processed in real time. This high degree of networking facilitates fast and error-free processes and enormous productivity.

"We deliver a vast range of products to about 1,200 supermarkets," explains ProMessa's Managing Director Harold Rouweler. "The

logistics system helps us to pick and deliver even small quantities in an efficient manner. Our customers can order any item even on short notice. Everyone who places their orders in time usually will receive the goods on the very same day.

"We have nearly doubled our output – sometimes to more than 100,000 packages per day," he continues. "We would never have achieved such growth rates without the new logistics system, which was established in the existing buildings without any major staff increase."

In accordance with the company's FIFO policy (first in, first out), the software from CSB-System constantly reorganises the warehouse by re-stacking the plastic storage containers. Next, it groups together order data, products and containers, before supplying them to the picking lines for weigh labelling. It also calculates quantities and volumes, necessary material flows and optimal conveyor tracks for loading the trucks. At special CSB-Racks, staff can easily see which order is being processed, which products and quantities belong to what order, and which labels need to be attached.

"Our staff at the sorters can handle numerous orders in parallel without any errors, and pick items directly for the dispatch crates," says Harold Rouweler. "The work stations have an ergonomic

design, avoiding unnecessary motion. As a result, we can process our large variety of products in an efficient manner, irrespective of the quantities ordered by our customers. The order quantity virtually has no effect anymore on the logistics costs."

The entire intralogistics system was designed to offer a high level of productivity and flexibility. For example, the high-performance despatch warehouse secures optimal picking of customer orders with the CSB-System generating individual sub-orders, depending on the availability of the goods. The four weigh labelling lines are capable of compiling between 5,000 and 7,500 packages per hour in mixed containers, depending on the order structure.

ProMessa can now also respond even quicker to reorders without having to build up large stocks. Daily deliveries to customers can be realised even with very short order lead times. The delivery performance is currently over 99 percent.

"This project has demonstrated the importance of choosing the right partners for the technical advancement of our production facilities," concludes Harold Rouweler. "CSB-System and CSB-Automation are valuable partners for us because they always contribute new ideas and develop innovative, practical solutions that enhance our competitiveness sustainably."

[www.csb.com](http://www.csb.com)

## NEW APPOINTMENTS AT CRISP SENSATION POINT TO GLOBAL GROWTH

She holds a PhD in Pharmacy and has a wealth of R&D experience gained at FrieslandCampina, a major player in global dairy products industry. In her new position, Christien van Beusekom will help foster further technological improvements at Crisp Sensation to meet the requirements of today's marketplace as well as the company's licensees.

### Henk Spoon

With vast food industry experience gained in senior management roles at companies including P&G and Findus, Henk Spoon has been appointed as Crisp Sensation's



Crumb coating innovator and full service provider Crisp Sensation is delighted to announce several key appointments that signal the company's successful growth and expansion plans for markets around the world.

### Kees van Doorn

As Crisp Sensation's R&D Director since the beginning, Kees van Doorn has been deeply involved in the development of the company's unique technology. In his new post as Director Supply Chain, he will shift his attention to the global supply chain and provide support and guidance for the increasing numbers of Crisp Sensation licensees preparing for market launches.

### Christien van Beusekom

will succeed Kees van Doorn as Crisp Sensation's Chief Technical Officer.

new Chief Marketing Officer. Henk Spoon's expertise in marketing and consultancy will provide new consumer insights that will enable Crisp Sensation and its licensees to realise exciting new market opportunities that respond to the needs of consumers around the world.

### Andries Raven

Crisp Sensation's final new appointment will see Andries Raven become the company's Director of Sales for Europe & the Americas. Having previously been CEO of Vleems Food BV, one of Crisp Sensation's licensees, Andries Raven has first-hand knowledge of the brand's possibilities. He will now use his extensive commercial and international food industry experience to oversee collaborations with Crisp Sensation licensees across Europe and the Americas.

[www.crispsensation.com](http://www.crispsensation.com)

## JANE INGHAM JOINS YAMATO TO STRENGTHEN CUSTOMER CARE



Following its recent move to new premises in Leeds, weighing equipment manufacturer Yamato has strengthened its customer support team with a key new appointment.

Jane Ingham has joined Yamato Dataweigh as customer service support manager. Her role will have an emphasis on maintaining and nurturing first class customer relationships.

One of Jane's roles will be to use Yamato's SAP system to better manage customer relationships and to improve overall customer care. She will follow up on Yamato's customer surveys. She will manage and control responses to develop optimum customer service management.

Jane will liaise with engineers and keep in regular contact with customers who have new installations. In the rare event of a problem she will identify what precisely the customer is unhappy about and what Yamato can do to fix it.



Good technical knowledge and a range of experience in sales and service gained from her previous role in pharmaceutical sales makes Jane ideally suited for an engineering support role.

She said: "The key to good customer service is building good relationships with our customers. Part of my role is to promote a positive, helpful and friendly environment to ensure they have a good impression of Yamato and its checkweighers, multiheadweighers and other machinery.

"Our team strives to ensure that we provide the best customer service by taking the time to find out customers' expectations. We follow up on both positive and negative feedback we receive and use that to continuously look for ways to improve the level of customer service we deliver."

Commenting on Jane's appointment, Yamato commercial operations manager Andrea Spencer said: "We are delighted to welcome Jane to the Yamato team. She brings a wealth of experience in customer service, sales and technical support with her.

"Jane is proactive and fully understands our customers' needs. She will really drive service and customer support by following up on sales and engineers' visits.

"She will be assisting the service team in developing strong relationships with our customers. She will help to us ensure that we are meeting their expectations through gathering information to assess their needs and developing internal strategies for meeting them.

"Jane will also be helping to measure service delivery through surveys and other feedback and then acting on that feedback to further improve service delivery."

In her spare time Jane, who is Rotherham born and bred, sings in a rock choir which performs classic rock songs in shopping centres and other public venues across Yorkshire.

"When I'm not working, or singing I am kept very busy by my three grandchildren so there's never a dull moment," Jane said.

[www.yamatoscale.co.uk](http://www.yamatoscale.co.uk)

## TALENTED NEW TRIO TOPS UP KM PACKAGING TEAM



Emily Perry



Agnieszka Knap



Natalya Ricketts

**Starting 2017 at a gallop, leading European packaging specialist KM Packaging Services Ltd has boosted its technical and customer service departments with a newly hired trio of skilled staff.**

Joining the KM team as Technical Manager, Agnieszka Knap brings nearly ten years' experience in the packaging industry, fulfilling a wide remit in quality and technical roles. With an in-depth knowledge of converting and testing material properties, Agnieszka is a qualified external auditor with the remit to provide technical support for KM's product trials and development in both UK and overseas markets.

Natalya Ricketts enhances a highly experienced Customer Service Team with over 50 years of service delivery among them and, in addition to boosting the marketing function, will also respond to customer enquiries from around the globe and ensure their requirements are met. In addition, Emily Perry joins the KM Finance Department as Business Support Assistant with responsibility for the purchase ledger and company expenses, as well as

fulfilling trial despatches to customers.

KM Packaging's Commercial Director Graham Holding commented: "KM Packaging is continuing its expansion in both domestic and international markets, and we're committed to providing excellent technical and customer service to our customers across the globe. All three new team members complement the company's reputation for skills and innovation, supporting our target of extending shelf life, preventing food leakage or spoilage, and helping our customers to improve their offering to the consumer."

Leading the market in application knowledge and technical expertise, KM includes barrier shrink films, high performance antifog films and resealable film lidding - amongst other products - within its extensive ranges. Operating globally in North and South America, Europe, Africa, the Middle East and Australasia, KM's lidding solutions enable customers across the world to most effectively present, protect and preserve all kinds of chilled, frozen and convenience foods. Of course, KM's films meet FDA and CFIA requirements for use in food packaging solutions, sealing to CPET, APET, PP, Foil, Board and thermoform applications.

KM Packaging is constantly investing in new technologies and flexible packaging solutions. The company's experience and commitment to rapid turnaround mean that it can meet demand for both high volume orders and also fast delivery on short-run seasonal products.

[www.kmpackaging.com](http://www.kmpackaging.com)

## A TOOL FOR YOUR COMPANY TO MONITOR ANIMAL WELFARE ON THE DAY OF SLAUGHTER

By Margit D. Aaslyng and Lars Kristensen

**A**nimal welfare on the day of slaughter is important, not only because a company might require a high level of animal welfare, but also because it is good business. The carcass will show if there is a problem with animal welfare, e.g. as an increased drip loss or if trimming is required, which can imply an economic loss.



DMRI Danish Technological Institute has developed a slaughterhouse tool called Welfare & Quality Check. The slaughterhouse is studied methodically together with one or more employees. Some problems occurring before slaughter can be seen on the carcass as haemorrhages. For that reason, we start the study in the deboning room in which the occurrence of haemorrhages and faulty stickings are accounted for. Then we continue to the lairage area, in which the layout and handling are assessed from arrival to stunning. In the end, the scores are settled, and the marks 'Very good', 'Good' or 'Unsatisfactory' are awarded, dependent on the result. In this way, the slaughterhouse will receive an assessment stating whether the standard lives up to the expectations, or if procedures or layout could be optimized favourably.

The Welfare & Quality Check is based on a combination of management and layout as well as animal-based measurements, such as corneal reflex (spontaneous reaction of the eye when it is touched), skin damage and haemorrhages. In this way, we ensure that not only inadequate layout, but also incidents of low welfare in adequate layout are identified. At the same time, the areas in which economic value can be gained are clarified, by starting in the deboning room in which trimming can be quantified.

To ensure permanent improvements, 1-3 employees are educated to perform a

Welfare & Quality Check themselves at the slaughterhouse. When the slaughterhouse is studied regularly, you can be sure that no slide takes place in animal welfare resulting in negative economic consequences. In this way and with a minimum of effort you always have an updated status for this area of the slaughterhouse. A Welfare & Quality Check (a methodological examination of the slaughterhouse together with education of employees) is performed during approximately one week and is finalized by issuing a diploma.



*Margit Dall Aaslyng, PhD is an expert in documenting animal welfare on the day of slaughter in pig production facilities. She also has an insight into consumers' understanding of animal welfare and how it can be transformed into willingness to pay.*



*Lars Kristensen Ph.D. Meat Science and Technology Product Manager covering animal handling, animal welfare and product quality improvement in the meat industry*

[www.dmri.com](http://www.dmri.com)

## HEAD-ONLY ELECTRICAL STUNNING: THE BEST ALTERNATIVE FOR CAS

Dutch Vision Solutions developed a high standard alternative for CAS, the 'Head-only' Electrical Stunning machine. It delivers high quality product as Head Only stunning applies reversible anaesthesia to each bird, compliant with the latest rules and legislations. Handling a production capacity varying from 3- to 14.000 broilers per hour (bph) it easily fits in with most poultry processors and delivers >99% well stunned broilers. The negative effects on the product from the most commonly used water bath stunning method doesn't count for both concepts.

This new innovative electrical stunner for broilers applies individual anaesthesia to each bird. The Head Only Electrical Stunner uses the resistance of the bird and applies a set milli-amp. to each individual bird, guaranteeing an effective reversible stun compliant with both EU 1099 & WATOK rules and legislations.

Tested by the renowned Wageningen University Livestock Research at 13,500 bph produced some overwhelming results and when used in conjunction with their revolutionary designed Kill Line Shackle Splitter over 99% of all birds were effectively stunned. With a backup stunner installed the system is 'FAR BEYOND' the EC 1099 regulations. In the report from the commission to the European Parliament, dated 12.19.2013, the commission mentioned: "Less cost per bird (0,974 € cent) then Controlled Atmospheric Stunning".

The Head Only Electrical Stunner is available for both 6" and 8" pitched lines.

The stunner needs in most existing lines only 16m<sup>2</sup> of floor space at line speeds of greater than 9,000 bph. Handling flock weights from less than 2kg to over 3kg, with a weight spread within the flock of up to 700g, before adjustment is required.

Important advantages of the head-only electrical stunner are less investment in the machinery and the minor workfloorspace of 16 m<sup>2</sup> then CAS. The 'Head-only' can be implemented in most common used lines from f.e. Foodmate, Baader-Linco, Meyn and Marel-Stork.

[www.dutchvisionsolutions.com](http://www.dutchvisionsolutions.com)



# USSS-1 AND USSS-2A PNEUMATIC STUNNERS FOR CATTLE

Jarvis Products Corporation has two pneumatically operated high-speed captive bolt stunners especially designed for better stunning, and improved meat quality. The USSS-1 Penetrating and USSS-2A Non-Penetrating Pneumatic Stunners are specially designed to implement high reliability, one shot, humane stunning procedures that render a stunned animal completely insensible to pain. Augmenting the stunners are the AST-101 (for USSS-1) and AST-103 (for USSS-2A) Air Stunner Testers; each ensuring correct tool calibration and bolt velocity after any stunner repair or maintenance procedure. Also available is the MSPR-1 Multi-Set Point Pressure Regulator that quickly sets pressure selection for both Jarvis stunners.

Jarvis provides free customer service, including equipment installation, service calls, and employee training.

USSS-1  
Pneumatic Stunner Penetrating Bolt



USSS-2A  
Pneumatic Stunner Non-Penetrating Bolt



[www.jarvisproducts.com](http://www.jarvisproducts.com)

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'It can be concluded from this experiment that broilers are effectively stunned using a head-only stunner.'

- Prof. Ir. Bert Lambooij Henny Reimert,  
University Wageningen, 2011

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'Head-only stunning with a 1 sec. high current followed by a 3 sec. low current results in effective stunning'

- Gerritzen, M.A., T. van Hattum, H. Reimert, 2015.  
Wageningen University & Research Centre

# IS GAS STUNNING AS HUMANE AS WE THINK?

**A**nimal health authorities are researching ways to reduce unwanted side-effects of controlled-atmosphere stunning around the world. Glenneis Kriel investigates current concerns and how gas stunning might be improved to minimise the symptoms of discomfort.

The primary mission of the Paris-based World Organisation for Animal Health (OIE) is to prevent the spread of livestock disease among its 180 member nations – but it is also constantly looking for ways to improve animal welfare worldwide.

When it comes to gas stunning, the process by which gases such as carbon dioxide or nitrogen are used to render the animals unconscious prior to slaughter, its main focus is on addressing side-effects which could be signs of unnecessary suffering.

**"Gas mixtures that cause escape movements are not acceptable and the reactions of poultry or pigs should therefore be observed."**

Welfare expert  
Dr Temple Grandin

Dr Moetapele Letshwenyo, OIE Sub-Regional Representative for Southern Africa, whose office monitors animal health across 15 African nations, said the OIE does not have a problem with gas stunning if done properly. While this is the case in general, poor implementation has become associated with negative side-effects. In the case of birds, these can include head shaking, flapping of wings, convulsions and gasping.

Some ways of implementing gas stunning are better than others, Dr Letshwenyo explained. Gassing is more uniform when birds are subjected to the gas all at once, such as when they are lowered into the gas on a lift or elevator. When the birds are moved into the gas on a conveyor belt, the birds at the front often inhale more gas than those at the back of the container.

"The speed at which the birds are managed from when they are delivered until they are stunned is also a matter of concern, as it seems that more side-effects occur in plants where this process takes longer," Dr Letshwenyo said.

As more people use gas stunning, new information is becoming available, said Dr Letshwenyo, which has to be continuously reviewed to ensure it stays relevant. There is, for example, a lot of debate over which gases or mixture of gases are the best to use and at what ratios and dosages. There have been concerns over the use of carbon dioxide because this is a pungent gas that can irritate animals' eyes and respiratory tracts. There also seem to be differences between the ways individual animals react to these gases.

Dr Temple Grandin, Professor of Animal Science at Colorado State University in the United States, who has written the book *Livestock Handling and Transport*, said that there is likely to be a little discomfort before birds lose consciousness with gas stunning. However, in comparison with electrical stunning, where live birds have to be hung upside-down on shackles, they experience much less stress.

"Electrical stunning has the advantage of producing instantaneous unconsciousness," Dr Grandin explained.

"But handling to position the animal is more difficult as each bird has to be handled by a person and hung on a shackle. Hanging birds on a shackle is highly stressful to them," she said.

**The drawback is that gas stunning does not induce instantaneous insensibility, which raises the question: how much stress and discomfort does the animal undergo before it loses consciousness?**

"From a handling perspective, controlled atmospheric stunning is therefore far superior. The birds enter the stunner in the transport containers and handling by people at the plant is eliminated."

The drawback is that gas stunning does not induce instantaneous insensibility, which raises the question: how much stress and discomfort does the animal undergo before it loses consciousness? According to Dr Grandin, different researchers have reported different results.

In her opinion some discomfort during anaesthesia induction – as signalled by reactions from the animals such as gasping and head shaking – may be acceptable as a trade-off against greatly diminished handling stress. However, in cases where the general effects of gas inhalation are escape movements and attempts to climb out of the container, she sees it as a sign that the distress is too severe and the system should not be used. "Gas mixtures that cause escape movements are not acceptable and the reactions of poultry or pigs should therefore be observed," she said.



Dr Grandin added that staff operating the stunning system should be well trained to ensure they know what they are doing. Equipment should be calibrated and inspected regularly to ensure proper functioning, and she pointed out that wind around the plant building, changes in plant ventilation and opening and closing doors may alter gas mixtures in some systems.

Birds should be constantly monitored – through windows or cameras – from the moment they enter the gas until they fall over or lose posture. Dr Grandin's suggestion is that plants should use a scoring system to compare the reactions of birds during different batches. Birds showing symptoms of distress might score a three or a four, depending on the severity of the symptoms, while birds that show little distress might score a two and those showing no distress before they lose consciousness might score a one. In this way, staff could monitor birds' behaviour with consistency, making it easier to identify adverse reactions as soon as they appear.

Gas stunning has been used with great success in many processing plants in Europe and America. But its use remains limited to big commercial companies, and the main reason for this is the high cost of installation compared to electrical stunning.

"Gas stunning set-ups are much more expensive than electric stunning, so companies in general still tend to use electric stunning," said Dr Grandin, pointing out that, "Labour associated with gas stunning, nevertheless is much lower, because there is much less handling of birds pre-stunning."

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# FREUND OFFERS A WIDE RANGE OF ELECTRONIC STUNNING OF PIGS AND SHEEP

STUN-E512



STUN E514



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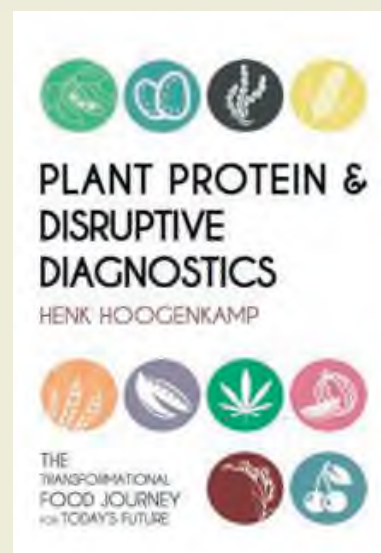


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## PLANT PROTEIN & DISRUPTIVE DIAGNOSTICS



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Henk Hoogenkamp's groundbreaking book tackles topics from food-related disease to malnutrition to organic and GMO to dealing with a world approaching an epidemic of obesity.

A provocative new nonfiction work by one of the world's foremost authorities on food formulation joins the short list of "must-read" books tackling the immense challenge of malnutrition in the developing world, even as Western societies are dealing with rampant obesity.

For most consumers in the Western world an abundance of animal protein is nearly always part of the daily diet, while for most in the developing world not sufficient animal protein is available. Hoogenkamp argues that the key to solving this dilemma is unlocking the potential of plant proteins as well as cellular biotechnology that deliver affordable nutrition, improve health and wellbeing and reduce the environmental burden in an era of shrinking water and land resources.

Along with detailed chapters discussing plant protein varieties such as derived from soy, pea, wheat, rice, potato and hemp the book explains:

- Food, water & climate change
- Sports Nutrition, Wellness & Lifestyles
- Food: People, Planet, Profit
- Glutenfree Protein Solutions
- Societal Food
- Diabetes T2: From Bad to Worse
- Fast Good Food & Family
- Fiber: A Natural Need for More
- Lifestyle Diagnostics
- Real Plant Meat
- Sugar, Salt Phosphate: Less is More
- Natural & Organic
- Sarcopenia & Longevity

About the Author: Born in the Netherlands, in his entire professional career Henk Hoogenkamp has been ahead of the curve, many times more right than wrong. Many of the things he advocated for were initially looked upon skeptically, but are now standard procedure in the industry. With brutal honesty and lots of inside information, Henk gives a fresh new voice to the world of plant protein technology and marketing. Written in a refreshing engaging style, Hoogenkamp shares practical know-how reflecting the skills needed to feed the world with food for tomorrow. A true timely book with undistilled wisdom and common sense gleaned from years of dedicated and hard-gained experience and Henk's unique ability to inspire others to reach the next level of expertise.

Along with coining the term "Lifestyle Foods" in the 1990s, his resume includes pioneering work in developing sports nutrition supplements and groundbreaking applications for milk and plant protein ingredients in meatfree foods, cream liquors, cheese analogs.



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# BEST PRACTICE IN MEAT CONVEYING

**By Fabio Conti**

**T**oday's meat industry faces the challenge of complying with increasingly stringent legal regulations in terms of health, hygiene, safety and traceability.

This applies to operations along the entire length of the supply chain, from farmers to slaughterhouses, from wholesalers to retailers. And meat cutting operations – with their multiple stages of handling, cutting, transporting, carrying and re-handling – are right at the heart of this.

Good food hygiene practices must therefore be maintained, hazard prevention plans implemented, and every precaution taken to minimise risk of bacterial build-up. Regulations are in place covering issues ranging from the layout, construction and design of cutting plants to personal hygiene facilities, all geared towards maximising hygiene standards at every stage of the process.

In terms of equipment, anything that could come into contact with meat products must be easy to clean and, where necessary, disinfect, and in reasonable condition, i.e. not scored or worn. One of the most important pieces of equipment in this respect is the conveyor used to carry materials away from trimming or deboning lines.

## Designing hygiene in from the outset

Cleaning operations are central to maintaining hygiene (more of which later), but best practice begins with the design of the conveyor unit itself.

In terms of the frame that supports the conveyor, this should be of stainless steel and the design should be as open as possible to allow access for cleaning.

Design of the framework should avoid the use of horizontal surfaces where water

might collect after cleaning, supporting the growth of bacteria. This means the use of construction elements such as round tubes; if square tubes must be employed then these could be turned to an angle of 45°.

All mechanical and other components should be appropriate to the task; bearings and other components requiring lubrication must use food approved lubricating grease, and IP65 standard protection on gear motors will enable thorough cleaning by sprayed water.

## Choosing the right type of conveyor belt

The major component on a conveyor is the belt, and in broad terms there are three types to choose from: solid stainless steel, solid plastic and modular plastic.

For many decades, the solid steel belt was the preferred option, and indeed remains so in some parts of the world, notably the Americas. In recent years however, the lower initial purchase price of plastic belts has seen this technology come to dominate the market. But this is slowly changing as processors look at how to implement best – in other words 'most hygienic' – practice across every operation.

So what makes a steel belt more hygienic than other technologies? First and foremost is the material, solid stainless steel. Its chemical and bacterial neutrality mean it poses no threat to either human health or to the taste of food. Durability and corrosion resistance are important too; stainless steel systems last for years, even decades.

The structure of the steel belt is another key advantage. Flat and solid, there are no gaps or textures in which bacteria can hide. Steel belts are installed in what is called 'endless' form, meaning the two ends are welded together to form the conveyor loop.

But the greatest advantage of a steel belt-based meat conveyor is its cleanability. Stainless steel has a dense smooth surface that is inherently easy to clean. It is also a material that can be cleaned and disinfected via many different methods: hot water, pressure, brushes, detergents, chemicals or any combination of these.

## Research make clear case for stainless steel

The case for the use of stainless steel conveyors in meat processing facilities has been enhanced by the publication of





research by Finnish food laboratory VTT Expert Services Ltd confirming that the risk of problems caused by bacterial build-up can be reduced, simply by upgrading to a stainless steel conveyor.

The research looked at the 'cleanability' of the three basic conveyor types: a stainless steel (AISI 301) conveyor belt, a solid plastic belt, and a plastic conveyor of slat construction. All three were tested in pristine condition and also with knife damage to replicate everyday wear.

A suspension of three types of microbes – *Pseudomonas fragi*, *Candida albicans* and *Listeria innocua*, chosen to replicate those found in meat processing facilities when cleaning is insufficiently thorough.

The suspension was applied to the clean belts and left for predetermined periods. The various belt samples were then cleaned, visual observations made (dirt was clearly visible on the damaged plastic surfaces), swabs taken, and microbial loads assessed using scanning electron microscopy (SEM).

The results were clear. VTT Expert Services' research scientists concluded that: "stainless steel is more cleanable than the two different plastic surfaces tested according to the culturing results. The difference is more significant for damaged surfaces."

### Superior cleanability - for long-term cost savings

One of the greatest threats to a sanitary production environment is the formation of biofilm on work surfaces, and unless cleaning is complete and effective, this can lead to the growth of harmful bacteria and pathogens. The superior cleanability of stainless steel – not to mention its far greater resistance to damage by bone or knives – offers the potential for those using other belt materials to achieve significant improvements to hygiene.

And there are commercial benefits too. The cleanability of stainless steel means conveyor belts can be cleaned and sanitized significantly faster, ensuring high availability – important in multi-shift operations. Short cleaning times also represent best practice in ecological and economical terms, with low water consumption and low use of detergents and other cleaning chemicals.



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From a purely financial viewpoint, the combination of long term payback and reduced cleaning costs makes it an attractive return on investment. Factor in the improved hygiene – at a time when all eyes are on the industry – and it's not difficult to see why more and more operations are going back to solid steel belt conveyors.

[www.sandvik.com](http://www.sandvik.com)

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# MODERN PRODUCTION OF SAUSAGE PRODUCTS: CONTINUOUS, EFFICIENT AND RELIABLE.

By Frank Löffler

With crescent pressure from the cost side, the meat-processing industry is increasingly looking for solutions for the processing of frozen and / or fresh raw materials to produce fine minces. Several components of a production line can be connected here in order to maintain a continuous production process.

An automated production line for sausage products comprises several components. These are connected to each other mechanically and control-related by means of suitable transport and conveying devices. Thus, a continuous production process is generated. The production process begins with receipt

of the raw materials, which must be manually unpacked in case there are frozen blocks. A pre-cutting, performed before the large mincers can process the frozen blocks, allows a higher line performance, because the mincer works more efficiently thereby and thus the mixer can be filled faster.

The next step is mixing. The minced raw material is led to the mixer directly through a worm or indirectly through a container. At the outlet of the mincer, an online analysis can be carried out by NIR (near infrared reflection) so that the recipe is followed. The continuous analysis of the raw material and the comparison with predetermined set-points serves for

control of the raw materials and leads to a recipe optimization. Quality standards are permanently met, improved and the production of meat and sausage goods becomes more economical long term.

**Picture 1:** Mixing shafts ideal for pre-mixtures: Interleaving paddles

The dry substances are led through powder dosing devices or through containers, and liquid ingredients (water) are led through liquid dosing devices. Ice or hot water can be used to control the temperature of the pre-mixture.

For pre-mixtures, height-offset and interleaving paddles are an efficient and

Picture 1





cost-effective option for mixing shafts design. With this configuration, the mixture takes place over the entire length of the trough. Likewise, narrow and long-built mixers have a positive influence upon the effectiveness (short mixing time for a homogeneous mixture) because the paddles sit close to the shaft and thus no dead spaces are caused by long paddle arms. Through novel special trough and paddle geometry, the weak point "emptying of stiff and viscous mass" of this mixer geometry is significantly optimized.


In order to work continuously with the subsequent cutter, two mixers can be used: a mixer is filled or emptied, and a mixer mixes the composite. The alternative is a large buffer tank with a conveyor pump next to the mixer so that it can be emptied quickly and it is available for a new batch.

**Picture 2:** Automatically adjustable, modular cutting set with wear compensation for Inotec cutters- can be used from one to five cutting stages

The step of manufacturing the sausage product is crucial in a production line. In order to produce cost-effectively and continuously, interstitial-cutters are used in a production line. For fine sausage products, Inotec cutters can be equipped with a funnel on the inlet side. Inline cutters are used for automated production systems. The product is led to the cutter hygienically in a closed pipe system through a pump. The pressure and the product outlet temperature are

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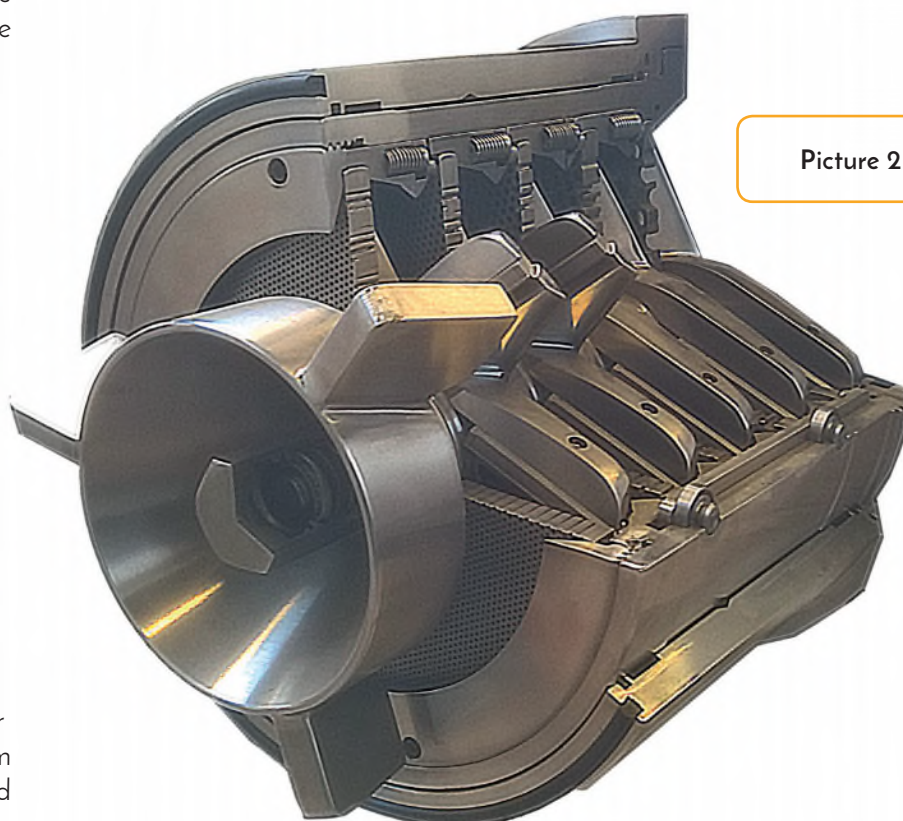
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Picture 2



Picture 3

housing. An improved control with an option for control of the output temperature as well as an automatic optimization of the setting parameters completes this high-performance machine together with its very compact, homogeneous and color - intensive end product.

**Picture 3:** Vacuum cutter 225 CDVM P

For the mixing of inserts, the novel mixers with mutually working counter-rotating spiral shafts are outstandingly suitable. This unique and patented technology is also suitable for the production of delicacy products. The new IVM Vario Mix series is characterized by fast and gentle mixing and very short emptying

regulated through the speed of the pump. Proven with regard to binding, bite and machine performance, Inotec systems work at four cutting stages using units with rotating cutter heads and stepped perforated discs (from coarse to fine). At an operating speed of 3000 rpm, the pre-emulsion is emulsified for a minimum time in continuous operation. Where cutting is done a wear on the cutting tools occurs. The consequence of this is that the material in the housing is no longer cut and is only squeezed through the perforated discs. It loses its fineness and the temperature increases. In the case of cutters with automatic wear compensation, the wear on the cutting tools is not avoided, but is minimized by the high adjustment accuracy.

Vacuum cutters are mainly used to gain compactness, texture and bite. In the case of cuttings, the cutting pattern is free of air bubbles as well. The new I 175/225 CDVM P vacuum cutter ensures the highest vacuum in the product by mixing through two interleaving paddle shafts and a supply pump before the cutter



Picture 4



operations with minimal residual amounts.

**Picture 4:** IVM Vario Mix series for fast and gentle mixing in inserts and mixing of delicacy products, but also perfect for ham (extremely much faster than Tumbler) and salami

After presenting all the machine components of a continuous production line, it should be pointed out that a production line is not only the combination of individual machines, but an integrated control system with recipe management, flexible process steps and data recording facilities that ensure the best usage of the selected degree of automation of the meat processing company.

In the field of portioning, Inotec is the leader with the Giromatic high-performance automatic tying machines. In combination with a filler, the sausage portions are exactly formed and separated by a special thread. Inotec sausage slicers ensure that after the maturation or the cooking process is finished, the portions will be separated.

About the author:

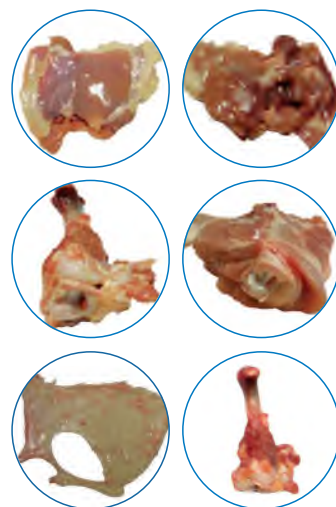


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# NEW TRAY SEALER "MEATS" RHUG'S QUALITY REQUIREMENTS

Heat sealing specialists Proseal has launched the world's first semi-automatic tray sealer for skin deep packs.

The new Proseal GTR-E is able to seal products that sit up to 100mm above the edge of the tray, making it ideal for large pieces of meat and joints. As with all types of skin packs, the film wraps tightly around the meat to extend the shelf life of the product without the need for gas flushing, and provides enhanced presentation.

The GTR-E has been developed in association with the first customer for the machine, Rhug Estate, an award-winning organic farm in Denbighshire, Wales, owned and run by Lord Newborough. To meet Rhug Estate's need for maximum flexibility, as well as being able to handle skin deep packs, the GTR-E can seal a wide variety of other pack types, including standard, gas flushed, and vacuum gas flushed trays, and ordinary skin pack trays. Tool changes between standard, skin pack and skin-deep formats take just five minutes.

The new model also incorporates Proseal's innovative, in-house developed E-seal technology, a high precision, high force electric seal system that creates a very tight and reliable seal each time while reducing compressed air usage by over 90%, thus delivering important energy and cost savings.

The machine's semi-automatic operation makes it ideal for smaller scale enterprises, which do not require a fully automatic in-line tray sealer, while its compact dimensions mean it can fit into the smallest of factory spaces.

Unlike traditional manual machines where the operator has to wait for each tray to be sealed, the rotary operation of the GTR-E means a new tray can be loaded while the

The GTR-E installed at Rhug Estate is the world's first semi-automatic tray sealer for skin deep packs.



The GTR-E can seal products that sit up to 100mm above the edge of the tray, making it ideal for large pieces of meat and joints



previous one is being sealed, delivering higher speeds and efficiencies to meet production line requirements.

Rhug Estate cutting plant manager, Gary Jones commented: "We needed a tray sealing machine that would ensure our high quality meat was both presented and protected effectively, in order to reach our customers in premium condition.

"With limited space available in our packing operation, we approached Proseal to help us come up with an appropriate solution. The GTR-E meets our requirements, and we have been delighted with the high standard of service from Proseal and the reliability and efficiency of the machine."

[www.proseal.com](http://www.proseal.com)



# ANTI-MICROBIAL ABSORBENT PACKAGING GIVES TWO DAYS EXTRA SHELF-LIFE TO DICED BEEF IN TRIALS WITH LEADING PROCESSOR

ANTI-MICROBIAL absorbent packaging from Sirane has given diced beef two additional days' shelf-life in recent trials with one major UK meat processing company.

The independently-run trials showed a two-day increase from nine to 11 days on the shelf-life of the packs containing Sirane's ABM pads compared to existing packaging.

Sirane's new Dri-Fresh ABM pads for meat/poultry, contain a blend of natural bio-flavonoids and organic acids which work together to extend shelf-life. Together with the absorbency within the pads, they offer an outstanding level of protection and significant shelf-life extension. The ABM technology is activated by moisture – so only functions when needed.

Simon Balderson, Sirane MD, said: "These results are great, and could result in significant financial savings for the processor in question as two additional days shelf-life is a huge step.

"So much food gets thrown away, and Sirane has been trying to help companies with their food waste reduction targets – ABM is one way meat and poultry packers can achieve this. ABM is a blend of natural ingredients which is incorporated into the absorbent pad.

"The combination of flavonoids which are anti-oxidants and anti-microbial, with organic acids including citric acid and ascorbic acids is harmless, as all elements are found naturally within fruit. It is clean, simple, and effective. Nature itself often has the answers.

"People have tried, and failed, in the past, to make anti-microbial packaging... but the major difference here is the method of delivery. With the anti-microbial integrated into the pad, and activated only when needed, it gets efficiently to the heart of the problem.

"We're encouraging all our customers to try our AB technology and run their own trials in their own unique supply-chain conditions, as this is just one of many success stories we're hearing about, with many reports coming back to us of shelf-life extension.

"Every processor and retailer's supply chain is different, with different parameters, so we would never say to every retailer 'you will get two days more'. We're saying you could get additional shelf-life by using a pad like this, you might even get more than two days extra."

Our Dri-Fresh ABM pads are part of a range of anti-bacterial and anti-microbial absorbent pad solutions; we also offer ABV pads for fruit and ABS for seafood. These pads work in the same way, but with the blend adjusted to help provide the optimum shelf-life.

They are one of a range of meat and poultry packaging solutions offered by Sirane, including absorbent pads, oven-ready pads, boneguard, oven and microwaveable films & more.

Reducing food waste shot back to the top of many companies' agenda last year with the launch of Courtauld 2025 – an industry-wide agreement to tackle the problem which sees the UK currently responsible for one fifth of all the wasted food across the EU.

The 10-year agreement hopes to reduce food



waste in the UK by 20%, and is targeting all part of the food cycle, from the food producer right through to the consumers.

A 2015 report published by the House of Lords EU committee revealed that retailers only directly account for around 5 per cent of food waste – with consumers causing 42 per cent and producers 39 per cent – but the report argued closer analysis shows retailers have simply developed ways (such as buy-one-get-one-free offers) to make other parts of the supply chain take on the waste they have caused, by cancelled orders, over-ordering or insisting on standards that a significant proportion of a farmer's crop cannot reach.

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## KM LAUNCHES NEW SKIN FILMS FOR PE TRAYS AND THERMOFORMERS

As consumers become ever more discerning about the quality and on-shelf appeal of meat, fish and other fresh foods, an ideal solution is here: a new range of K Skin films from KM Packaging Services, global supplier and developer of innovative food packaging and lidding solutions.

The K Skin Top and Base films are extremely versatile, and compatible with all major sealing machines including thermoformers and those that seal to pre-made trays. For form, fill seal machines, KM can supply both top web skin film as well as the thermoforming base webs.

These advanced films also reduce wastage throughout the supply chain due to excellent seal integrity; however, this does not impact on consumer convenience which is facilitated via smooth easy-peel opening. In addition, KM can supply a cost-saving option with films that will seal to mono-APET and mono-PP trays without a PE layer - thereby enabling the base webs or trays to be more easily recyclable.



Currently available in two grades, 100 and 150 micron, with more in development, K Skin not only seals very tightly to the product and tray corners to avoid "creep" but also features high clarity - thus providing optimal visibility and stability for the contents. A high oxygen barrier helps to extend shelf life and, for packaging machinery manufacturers, K Skin brings exceptional machining capability with an unrivalled combination of robustness and heat tolerance to a wide range of temperatures.

KM Packaging's Commercial Director Graham Holding explained: "K Skin is the latest new

range launched by KM Packaging and certainly boosts our reputation for innovative packaging solutions that help to extend shelf life, prevent food leakage or spoilage, and provide the consumer with a positive shopping experience. The versatility of K Skin is complimented by its massive benefits including robust process tolerance, extended product shelf life, superb sealing capability and of course exceptional gloss and clarity of presentation."

Leading the market in application knowledge and technical expertise, KM also includes barrier shrink films, high performance anti-fog films and resealable film lidding - amongst other products - within its extensive ranges. KM Packaging is constantly investing in new technologies and flexible packaging solutions. The company's experience and commitment to rapid turnaround mean that it can meet demand for both high volume orders and also fast delivery on short-run seasonal products.

[www.kmpackaging.com](http://www.kmpackaging.com)

## LEROY SEAFOOD GROUP AND LINPAC DEVELOP NOVEL SUSHI PACKS FOR MERCADONA

Leading fresh food packaging manufacturer, LINPAC, has collaborated with Norway's Leroy Seafood Group to produce a range of resource-efficient sushi convenience packs, which will be supplied exclusively to leading Spanish retailer, Mercadona.

Made from laminated PET with a printed film base tray and a clear anti-fog PET lid, the range comprises single and double portion and family sized packs that are designed to contain ready-to-eat maki, nigiri, sashimi and Japanese salads.

Notably, in a move from previous designs, LINPAC has developed a total pack solution that taps into the on-the-go snacking market by including internal cavities for wooden chopsticks and condiments. These



innovative features ensure neat, hygienic presentation of the contents and facilitate quick and easy dispensing and consumption for the consumer.

Diego Fernandez, product manager at LINPAC, commented: "We turned the full range around in a very short space of time by presenting designs and prototypes to Leroy throughout the process. The resulting food-

safe solution completely eliminates the need for additional packaging." A variety of raw fish, cooked fish and non-fish sushi and sashimi will be packed into the trays, for purchase on the same or following day, to comply with food safety regulations. The offer is currently on sale in 16 Mercadona stores in Madrid, Valencia and Southern area.

Group Marketing Manager at LINPAC, Nikki Clark, added: "This is a fantastic example of how collaborative innovation processes truly add value to our customers. In this case, the design has been streamlined to make it fit for purpose and removes the need for additional materials. It's a truly resource-efficient, total pack solution."

[www.linpac.com](http://www.linpac.com)

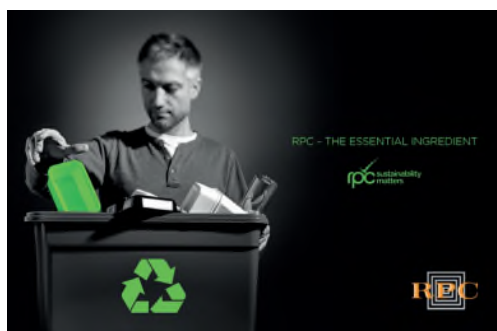


## RPC BPI JOINS NEW PLASTICS ECONOMY INITIATIVE

RPC bpi recycled products has joined the New Plastics Economy, a three-year initiative involving organisations across the plastics supply chain, aimed at developing a global and co-ordinated system for plastics packaging in line with circular economy principles.

The initiative is led by the Ellen MacArthur Foundation in collaboration with a broad group of leading companies, cities, philanthropists, policymakers, academics, students, and NGOs. The formal group comprises approximately 40 participants – including initial core partners Amcor, The Coca-Cola Company, MARS, Unilever and Veolia – which are working together to rethink and redesign the global plastics packaging system.

The objective is to ensure a more co-ordinated approach linking together today's incremental improvements and fragmented initiatives. This will help to create a shared sense of



direction among all organisations in the plastics sector, encourage further innovation and help the plastics value chain achieve stronger economics and better environmental outcomes.

As Dame Ellen MacArthur, Founder of the Ellen MacArthur Foundation, explains, "The ultimate goal of the New Plastics Economy is to design a system where plastic packaging never becomes waste, and can re-enter the economy as either a valuable biological or technical material."

Gerry McGarry, RPC bpi recycled products' Managing Director, says the New Plastics Economy initiative will become an important part of the group's sustainability programme. "Everyone recognises the essential and valuable contribution that plastics have made to many different areas of our daily lives," he explains. "It is vital that we complement the materials' acknowledged benefits with maximising the industry's contribution to a more circular economy. The joint purpose and commitment of the many different organisations in the New Plastics Economy initiative will be a key factor in achieving this."

The New Plastics Economy has now produced a second report, presenting the latest research findings and action plans, which was launched to business and government leaders at the World Economic Forum Annual Meeting in Davos, Switzerland.

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# STEP BY STEP TO SUCCESS

**F**or the American company, Big Steer Meats, the changeover from a double chamber machine to an automatic traysealer from MULTIVAC was significant progress. But everyone at the company's headquarters in Minnehaha Ave, St Paul (Minnesota) was so satisfied with the result, that the company invested in further MULTIVAC machines - and in doing so, was able not only to increase productivity and significantly extend the shelf life of the products, but was also able to create three new products, which could not be produced on the earlier machine.

Since 1978 Big Steer Meats has been supplying the cities of Minneapolis and St Paul with quality meat, tasty sandwiches, fresh and smoked sausage products as well as snacks. The two cities, known as the Twin Cities, are part of the metropolitan region of the same name in the US states of Minnesota and western Wisconsin, which with its 3.2 million inhabitants is the sixteenth largest Metropolregion in the United States.

Previously a chamber machine had been used to pack snack bars and smoked meats in 15 x 25 cm film pouches as well as fresh and smoked sausages in 20 x 25 cm film pouches. Then a MULTIVAC T 200



traysealer was installed for packing snacks in modified atmosphere. But when Big Steer Meats wanted to expand and supply other food businesses, the existing models came up against their limits. "The required production capacity could simply not be achieved any longer. Our machines were at their limits, as was the space we had available," says Charles Cory, President and CEO, summarizing the situation at that time.

First step: T 300 traysealer. As a first step therefore, a T 300 traysealer was purchased in the autumn of 2014. The principal aim was to increase productivity, but the extension of shelf life also played a significant role in the decision. As the company boss says: "Our customers expected products with a longer shelf life - and we had to react in order to remain competitive. The T 300, with which we can produce both MAP and skin packs, was the perfect choice for

us, since the shelf life of the fresh products could be extended to 21 days."

Despite an overall length of only 2.45 metres, the T 300 offers a loading area with 2 tracks, which enables the trays to be filled ergonomically in the same tight space as there is at Big Steer Meats, and this loading area can also be expanded to three tracks if required. The multi-talented machine has energy-efficient drive systems for tray transport, lifting unit and film trim winder, and it can also be combined with discharge systems. Thanks to the IPC06 machine control with touchscreen and graphic HMI 2.0 user interface, the operation of the machine is very user-friendly. The T 300 is capable of being washed down, and with its high-quality and durable stainless steel construction it is designed for the highest hygiene requirements.

Second investment: P 600 double chamber machine. In March 2015 the company invested in a BASELINE P 600 double chamber machine from MULTIVAC. It replaced the packaging machine from another manufacturer. This model, which is also capable of being washed down, has the same construction as the P 500, but it has larger chambers that are each equipped with two sealing bars. While products are being packed in the first chamber, the





second chamber can be unloaded and loaded again. This makes the packaging procedure especially efficient. The machine is also easy to clean and simple to control thanks to its three program memory spaces. It is used by Big Steer Meats to pack snacks and products with a large volume.

Third purchase: F 100 thermoforming packaging machine. At the same time, a further MULTIVAC machine was purchased - this time a F 100. This model is a pre-configured, entry-level thermoforming packaging machine, which among its features includes a small space requirement like the T 300 and an attractive price-performance ratio. It can run flexible film and rigid film with a thickness of up to 500 µm, and it has a film width of up to 459 mm. The forming depth is a maximum of 130 mm, and the cut-off length is up to 500 mm. "We had in mind a more professional and attractive pack design for our smoked sausage products and grill sausages," explains Charles Cory. And since the demand continued to rise, "it was once again necessary to significantly increase output, in other words to pack a larger quantity of products in a shorter time." The installation of both the P 600 and F 100 went without a hitch. The necessary tests had already been completed by the third day, when both machines were able to be integrated into production. There were no problems during installation - "and just one question was raised about the operation of the F 100, and this was answered fully by our technicians," says Tim Fox, MULTIVAC



Regional Sales Manager responsible for Big Steer Meats.

And the latest investment: L 300 conveyor belt labeller. In October 2015 the company invested once more as part of an optimisation process for its packaging procedure - this time in a L 300 conveyor belt labeller from MULTIVAC Marking & Inspection. Thanks to its modular construction, the free-standing model can be adapted to the particular requirements, and it enables thermoformed packs, film pouches and trays with different formats and designs to be labelled professionally. Charles Cory adds: "This factor was crucial for us. The L 300 now enables us to apply labels accurately to all our products with one single machine. The integrated control and drive electronics with servo technology ensures that the labels are positioned very accurately - in our case,

the labels are applied to the upper web and the base of the packs."

Thanks to the correct labelling of the product packs, it can now also be ensured that the products are identifiable throughout the entire process chain. All packs carry the legally required information about the product, manufacturer, shelf life and batch. This information is clearly visible from the start and is captured in the inventory control system. "Now we can see exactly, when the product was manufactured and put it into the retail chain at the right time," says the company boss.

Charles Cory does not rule out more expansion and investment in the near future, since "it is a great feeling, when you invest in your own business and see that it is successful." He is also sure, that he will keep faith with the machine manufacturer from the Allgäu region of Germany. This is because the machines have fulfilled all expectations without straining the budgets too much. The relationship has also strengthened in recent years with the highly competent and willing team around Tim Fox. The entrepreneurial company boss had initially found it difficult to navigate in the overcrowded packaging market. "But when I started talking to other companies, the name MULTIVAC was always mentioned, when I asked which supplier I should consider, and with which one they had good experiences. And when I now consider my decision, then I know for sure: When it is about reliable equipment, solid know-how, fair prices and excellent service, I can not find this anywhere better than at MULTIVAC. Or put another way: It is as if in our wildest dreams - MULTIVAC has made our packaging work massively easier."



[www.multivac.com](http://www.multivac.com)

# IT IS NOT JUST THE FOOD INDUSTRY WHICH IS UNDERGOING METAPHORICAL CHANGES

*There are many disruptions in the socio-economic and demographic settings of our daily life. Seemingly the whole planet Earth is being disrupted right now. Brexit, Trump and Leicester City all in one sentence! Unbelievable but true.*

*People using their iPhones to monitor a heart irregularity or attack and subsequently confront their doctor specialist with the diagnosis. Obviously these and more medical "interpretations" cause great friction and an entire level of base-line care is eliminated.*

*The huge changes in behavioral attitudes of the millennial generation. Just to mention a few: marriage is optional, delayed childbirth, cooking is optional, social media sub-cultures.*

*The world population is adrift. Huge disruptions in cultural settings, including food choices. Take for example airline food: pork has completely disappeared from the inflight line-up.*

**By Henk Hoogenkamp**

## Disruptive Innovation for Disrupted Consumers

**F**ast growing world population, climate change, ecosystem degradation, energy- water- and land scarcity are making today's food production increasingly unsustainable. Disruptive innovation can be defined as the introduction of new technologies and products -such as generated by cellular biotechnology- that unexpectedly displace an established technology and often disrupts the status quo. Take a page from the Apple handbook: entrepreneurial startup food companies often tend to innovate faster than their customer's need evolve. These disruptive products, services and solutions are generally first available for sophisticated customers at the top of the market. In contrast, legacy food companies typically prefer to maintain the status quo and rely on small incremental change, also termed sustaining innovation. That is the main reason why the 25 largest US legacy food companies have seen their sales declining ever since 2012.

The world cannot sustain the number of animals it takes to feed the burgeoning population reaching 9.4 billion by 2050. However, there is light at the end of the tunnel and soon new systems such as cellular agriculture will become available to grow abundance of meat and milk protein -without the animals involved at all.

Entrepreneurial startups such as Perfect Day Foods, Memphis Meat and Mosa Meat will disrupt traditional animal agriculture methods and create a more sustainable food infra-structure.

The problem is that the developing world wants to eat like the developed and affluent world, and in particular drive the huge increases in consumption of animal

products such as meat and dairy that are so vastly inefficient. The conventional agriculture won't be able to keep up with demand with exacerbating the myriad of ecological problems, such as feed-to-meat conversion, water consumption, outgrow waste, and methane release.

The clear answer is cellular agriculture which allows building an animal or plant protein







platform by taking the actual animal out of the supply chain equation. The primary goal is to safeguard food security and decrease the environmental consequences of traditional farming.

Recently the technology and investor community -including New Harvest, Peter Thiel (PayPal), Bill Gates (Microsoft) and Sergey Brin (Google) have become involved in supporting the drive to find more efficient ways to grow food. These entrepreneurial people together with capital venture companies also disrupt the traditional financing such

as Rabobank. "The author has repeatedly warned Rabobank Board about the fact that their business model is at risk if they do not open up and accept new food farming methods as future equivalents".

Besides the rapid progress of cultured meat and cow-free milk creation, there are more technological alternatives. Foods made from plant protein now allow animal-realistic meatfree products. Startup companies such as Impossible Foods (US), and Brecks Food (UK) are often using food science and genetic sequencing technology to simulate plant protein based equivalents to animal-derived products.

There is a growing demand for plant protein formulated foods, especially driven by the rapidly increasing number of flexitarians in affluent countries like North America, the UK and Germany. But let's not cheer too soon. Still more technology improvement and socio-marketing is necessary to truly reproduce classic organoleptic meat attributes. The way research is making progress, at some point in the near future the plant meat foods will reach par (in blind testing) and may obviate the need for traditional intensive farm-raised animals. Impossible Foods is clearly ahead of the curve and there is little doubt that their Impossible Burger will become the golden reference standard.

Stretching our imagination, consumers are becoming more aware of their food

choices, including how and where it is processed, all-natural and not infiltrated by unwanted chemical fertilizers, hormones and antibiotics.

To paraphrase The Beatles lyric: The transformational journey from animal protein nutrition to plant protein nutrition is a "long and winding road". It has taken a long time to create a plant meat product and a cow-less milk for that matter that is (almost) indistinguishable from the classic food. The current Baby Boom generation (born 1946-1964) most likely will be the first and last generation that consumed meat every day.

About the author:



Henk Hoogenkamp

Former President DMV USA (a Friesland Campina company), Senior Director Strategic Technology Dupont Protein. Board member RIBT. Author and Publicist.



## DMRI DESIGN MODERN PORK AND CATTLE SLAUGHTERHOUSE IN SOUTH KOREA



**Daejeon Chungnam Pig-Farmer Cooperative (DC) plan to establish a 40,000 m<sup>2</sup> new slaughterhouse for 3,000 pigs and 300 cattle per day near Cheonan, South Korea. It will become the workplace of 400 employees.**

The facility is planned to start operating at the end of 2018, meeting all modern demands and standards. DC have engaged DMRI and Haenglim Architecture & Engineering to facilitate the project.

The Daejeon Chungnam Pig-Farmer Cooperative being a major pig producer and the owner of butcher shops and restaurants in Korea plan to build a new slaughterhouse near Cheonan.

### Capacity and production

The capacity of the plant is planned to process 3,000 pigs and 300 cattle per day with the possibility of expanding with a processing department.

Site, approx. 85,000 m<sup>2</sup>

Building sizes, approx. 40,000 m<sup>2</sup>

Number of employees, approx. 400

### Time schedule

The building works are planned to start in the early spring of 2017 and by the end of 2018, the production starts up.

### Production standards

The slaughterhouse will comply with the standards of the European Union and the

United States of America for slaughtering, cutting, de-boning and hygiene for producing quality meat products for Korea.

Facilities will be made for collection and separation of animal by-products according to the EU by-product regulation "Health rules concerning animal by-products not intended for human consumption" EU 1774/2002.

### Environmental standards

Equipment and processes will be chosen according to the EU environmental standards for slaughterhouses, BREF (11.03) "Best Available Techniques in the Slaughterhouses and Animal By-Product Industries".

Consumption and emission will be within the ranges stated in the EU BREF (the above-mentioned standard).

### Traffic to and from the plant

Transport of products to and from the slaughterhouse will be made from the main roads east and south of the site.

### Odour

The most odorous departments such as lairage and the first part of the slaughter line will be placed at the west end of the site. Odour will be collected from the ventilation system from all facilities and send through a bio filter before the cleaned air is send up in the air. This will ensure that the odour concentration caused by the slaughterhouse will be at an acceptable level.

[www.dmri.com](http://www.dmri.com)

## 2017 US EGG EXPORTS PREDICTED HIGHER AFTER SOUTH KOREA'S BIRD FLU OUTBREAKS



**US - December data for table egg layers showed a record number of eggs produced per 100 chickens, while the number of layers reached its second highest level, according to the latest Livestock, Dairy, and Poultry Outlook from the US Department of Agriculture's Economic Research Service.**

The forecast for the first quarter of 2017 was increased by 10 million dozen eggs.

December shell egg prices saw a late seasonal rally that peaked near Christmas. Typically, egg prices increase before Thanksgiving; however, this year's prices were at multi-year lows until December, when daily prices nearly doubled. Prices have since declined in the second week of January.

The egg export forecast for 2017 was increased 30 million dozen eggs, largely due to an

outbreak of avian influenza in South Korea that increased the expected level of export demand for US eggs and egg product.

Over 30 million birds have been recently culled in Korea, including an estimated 33 per cent of the layer stock and 52 per cent of the total layer breeding stock. As a result, the Korean Government implemented a tariff rate quota of 35,000 metric tons for shell eggs, with a zero tariff until June 30, 2017, and air freight subsidies will initially be available from the Government.

The Korean and US Governments finalised a protocol to facilitate the export of US shell eggs to Korea on 8 January 2017. Until 2015, when avian influenza disrupted US egg production, the US held a stable market share above 50 per cent of Korea's egg imports, a market that included cooked or dry products.

[www.thepoultrysite.com](http://www.thepoultrysite.com)



## FOOD COMPANIES STEP UP FARM ANIMAL WELFARE MEASURES



**GLOBAL** - Food companies are paying more and more attention to animal welfare within their supply chains, according to the latest **Business Benchmark on Farm Animal Welfare (BBFAW)** report, published on 23 January 2017.

Now in its fifth year, the BBFAW provides an annual review of how 99 of the world's leading food companies are managing risks and opportunities associated with farm animal welfare.

UK food producer, Cranswick, and Swiss retail cooperative, Migros, join Coop Switzerland, Marks & Spencer, Noble Foods and Waitrose in attaining the highest marks for their management and reporting on farm animal welfare.

The report, which is compiled in collaboration with leading animal welfare organisations Compassion in World Farming, World Animal Protection and investment firm, Collier Capital, reveals that companies are paying increased attention to farm

animal welfare within their supply chains.

For example, 73 per cent of companies now have published farm animal welfare policies (compared to just 46 per cent in 2012).

Reflecting on these findings, BBFAW Executive Director, Nicky Amos, said: "With 26 companies moving up at least one tier since 2015, there is a clear indication that the food industry is finally starting to treat farm animal welfare as an important business issue."

She added: "Despite this progress, 42 of the 99 companies (including Restaurant Brands International, Domino's Pizza Group Plc and Starbucks Corporation) appear in Tiers 5 and 6, which demonstrates that there is still much work to be done to even get farm animal welfare on the business agenda of many large global food companies."

[www.thecattlesite.com](http://www.thecattlesite.com)

## MINIMUM SPACE RULES SET TO ENSURE US ORGANIC LIVESTOCK WELFARE



**US** - New rules have been announced in Washington that clarify production requirements for organic meat and poultry, which lawmakers hope will align the rules more closely with what customers already expect from organic production.

The new rules, announced by the US Department of Agriculture's (USDA) Agricultural Marketing Service (AMS), aims to ensure that all organic animals live in pasture-based systems utilising production practices that support their well-being and natural behaviour.

"During this Administration, USDA's support for the organic sector has grown along with the demand for organically produced products," said AMS Administrator Elanor Starmer.

"To build on this support, it has been a top priority to strengthen standards for organic livestock and poultry, ensuring that we meet consumer expectations and maintain the integrity of the USDA organic seal. This rule is also about fairness for organic producers - it ensures that everyone competes on a level field and plays by the same rules."

Major provisions of the rule include:

- \* Clarifying how producers and handlers must treat livestock and poultry to ensure their health and well-being throughout life, including transport and slaughter.
- \* Specifying which physical alterations are allowed and prohibited in organic livestock and poultry production.
- \* Establishing minimum indoor and outdoor space requirements for poultry.

Commenting on the announcement, The Animal Welfare Institute (AWI) farm animal programme director, Dena Jones, said: "This is a historic moment, as there are currently no substantive federal standards for the raising of farm animals under the law. The final rule reduces inconsistencies in the animal care provided by organic producers, and helps farmers who raise their animals in accordance with higher welfare standards. Such farmers—whose practices are more in line with consumer expectations for organic products—are currently at a competitive disadvantage to industrial operators who cut corners and treat their animals poorly."

[www.thepigsite.com](http://www.thepigsite.com)

## GLOBALG.A.P. RELEASES GUIDE AND SELF ASSESSMENT TO SUPPORT COMPLIANCE WITH FSMA PRODUCE SAFETY RULE



GLOBALG.A.P. has now published a new guide for compliance with the Food Safety Modernization Act (FSMA).

The GLOBALG.A.P. User's Guide and Self Assessment for FSMA Produce Safety Rule Compliance supports Integrated Farm Assurance (IFA) users in efficiently meeting Produce Safety Rule (Produce Rule) requirements. IFA is the most widely utilized good agricultural practice scheme for fresh produce in the world.

The GLOBALG.A.P. USA Crops National Technical Working Group prepared the Produce Rule implementation. It conducted a detailed comparative analysis of GLOBALG.A.P. IFA V5.0-2 against the Produce Rule. The results showed GLOBALG.A.P. IFA certified producers meet the majority of Produce Rule requirements.

Where differences in approach and requirements were identified, GLOBALG.A.P. developed an explanation in the form of this Guide. It includes a Self Assessment highlighting specific differences between GLOBALG.A.P. IFA coverage and the Produce Rule. The Self Assessment allows the IFA user to make the necessary adjustments to comply with the Produce Rule. The Guide provides an extra table that details exactly how IFA requirements address those in the Produce Rule.

The Self Assessment is not audited as part

of the GLOBALG.A.P. IFA certification process at this time by GLOBALG.A.P.'s independently accredited and licensed certification bodies. Producers can receive help with the Guide and Self Assessment from GLOBALG.A.P.'s USA-based and international technical support staff.

Dr. Kristian Moeller, CEO of GLOBALG.A.P., expressed his gratitude to the many individuals who contributed to this Guide's development: "At GLOBALG.A.P., we are committed to an inclusive process for developing our standards and guidelines. We wish to thank the technical staff, National Technical Working Group members, producers, retailers and other stakeholders who contributed to the development of this Guide over the past year."

"GLOBALG.A.P. has created a practical management tool for GLOBALG.A.P. IFA users all over the world to help ensure FSMA Produce Rule compliance with the publication of this guidance document," said Walter Ram, VP of Food Safety at the Giumarra Companies and Chairman of the GLOBALG.A.P. USA Crops National Technical Working Group. Mr. Ram added: "As a supplier of fresh produce from the USA and many other countries, we want to maximize the efficiency of our food safety and regulatory controls and this tool helps our growers to use GLOBALG.A.P. IFA to ensure Produce Rule compliance."

[www.globalgap.org](http://www.globalgap.org)

## MSD ANIMAL HEALTH JOINS GLOBAL SALMON INITIATIVE (GSI) TO SUPPORT SUSTAINABLE SALMON FARMING



**MSD Animal Health (known as Merck Animal Health in the US and Canada) is proud to announce its membership in the Global Salmon Initiative (GSI), a leadership initiative by global farmed salmon producers that is focused on accelerating sustainability for salmon farming.**

"The global salmon business has a very bright future with strong demand and healthy growth," said Dr Chris Beattie, Head of Global Aquaculture, MSD Animal Health.

"We align very closely with GSI's vision of providing a highly sustainable source of healthy protein to feed a growing global population, while minimizing its environmental footprint. With fish health and welfare central to the future success of salmon farming, we see a natural fit between MSD Animal Health and GSI."

By 2050, it is estimated that the world's population will increase by 34 per cent to 9.1 billion people – doubling the demand for global food production, including fish protein.

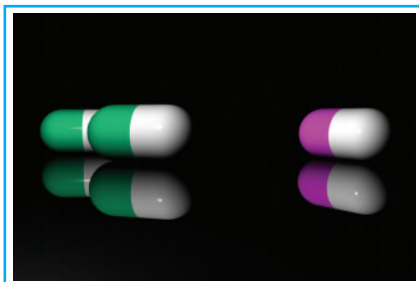
The Food and Agriculture Organization (FAO) of the United Nations also estimates that about one billion people worldwide rely on fish as their primary source of animal protein. A healthy source of protein and essential fatty acids, farmed salmon is vital to balancing the needs of feeding the growing global population, and meeting the demand for healthy and sustainable protein production.

MSD Animal Health is committed to supporting global farmed salmon producers through a wide range of products and services for the environmentally and economically sustainable control of major aquaculture diseases around the world.

[www.thefishsite.com](http://www.thefishsite.com)



## HEALTHY ANIMALS DO NOT REQUIRE UNNECESSARY OR PREVENTIVE ANTIBIOTIC MEDICATION



HKScan is committed to carry out its business in a sustainable and responsible way. HKScan's responsibility policy covers four areas: economic responsibility, social responsibility, animal health and welfare and environmental responsibility. HKScan has defined specific targets for each of these four areas and works systematically to achieve those goals.

Transparency is a key pillar of HKScan's responsibility way of working. In order to increase transparency and raise awareness of responsibility issues, HKScan has compiled a set of 'responsibility factsheets' listing key facts related to each responsibility area. The factsheets list key points related to the topic concerned as well HKScan's related targets, the actions they are taking to attain those targets, and milestones they have achieved so far. Minimising usage of antibiotics is part of their daily work.

The most effective way to prevent antibiotic resistance is to administer antibiotics only in the treatment of diagnosed diseases, both in the case of animals and human beings. In livestock farming, all actions taken at every stage of the production chain have

a direct impact on animal health and welfare. We at HKScan promote good animal health by arranging optimised living conditions tailored for each species combined with diligent observance of sound hygiene practices and high standards of biosecurity. If an animal is found to suffer from a disease, it is treated without delay and the infection is contained immediately to prevent it from spreading.

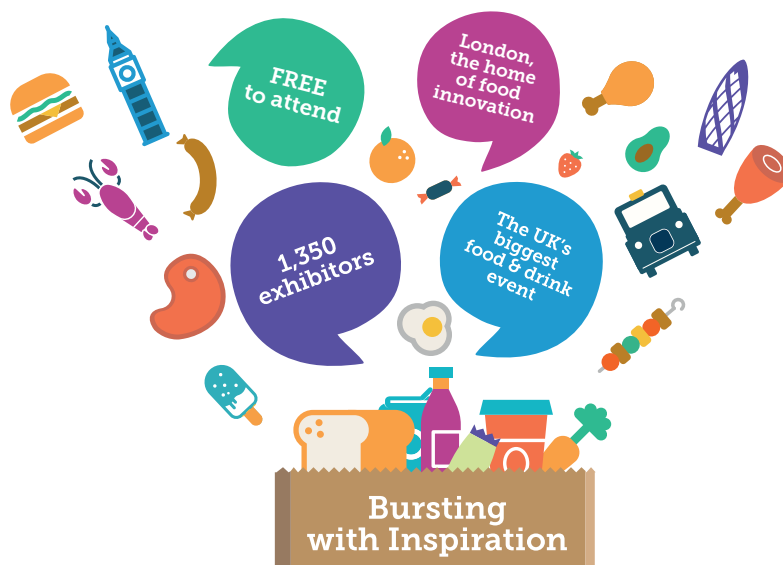
Neither farms owned by HKScan nor its contract farmers use antibiotics preventively or to promote animal growth. If livestock is given antibiotics, it is administered under close supervision: antibiotic medication is used only if prescribed by a veterinarian in the treatment of diseased animals.

The amount of antibiotics used in HKScan's production countries is significantly lower than in other European countries on average. Their policies designed to promote animal welfare and prevent disease have proved effective. They aim to maintain a low level of use of antibiotics and to continually improve our results – without compromising the welfare of their livestock.

[www.hkscan.com](http://www.hkscan.com)

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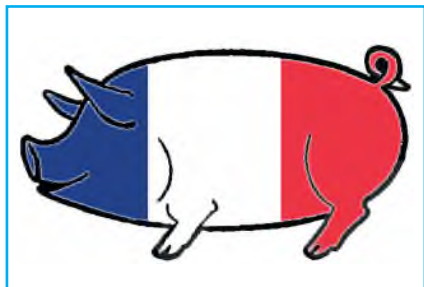
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## FRENCH GOVERNMENT CALLS FOR CCTV IN ALL SLAUGHTERHOUSES



**GLOBAL** - Following issues with animal welfare in French slaughterhouses, the government has passed a bill ordering for CCTV cameras to be installed throughout all slaughterhouses in the country from 2018.

The proposed law comes after slaughterhouses in the country came under intense scrutiny following footage from activist groups showing some slaughterhouses killing animals without stunning them first.

Twenty eight French MPs voted in favour of the rules, while four opposed them. The vote must now clear the French Senate before becoming law.

Following the announcement, Animal Aid - one of the UK's leading animal protection organisations - said it is calling on the British government to bring forward similar measures.

In other news, a scientist with the University

of Alberta, Canada, says research suggests that the microorganisms in the guts of pigs that help ward off disease can be transferred to other pigs to improve their health.

Dr Ben Willing, University of Alberta, commented: "Microbiomes can vary quite a bit between animal to animal and each animal will have its own distinct population but you'll certainly see that animals that are living in a similar environment and are living together will have much more similar microbiomes than animals that are living in different environments."

"We certainly see evidence that microbiomes can be transferred, particularly in the case when we see animals that are mixed. If you take animals that have lived apart and then you put them into that same environment you'll see that their microbiomes will start to look closer to each other, so obviously there's a transfer from one animal to another."

[www.thepigsite.com](http://www.thepigsite.com)

## DANISH CROWN ACQUIRES GERMAN SLAUGHTERHOUSE



**Following the acquisition, Danish Crown will at a single stroke become the fifth-largest cattle slaughterhouse in Germany and a major player in the north European market for organic beef.**

Danish Crown is acquiring the German cattle slaughterhouse Teterower Fleisch to become the fifth-largest cattle slaughterhouse in Germany. The purchase price will not be disclosed.

Teterower Fleisch in Mecklenburg-Vorpommern, a federal state in what was formerly East Germany, has an annual turnover of 150 million euro, slaughters 110,000 cattle annually, has 187 employees and is privately owned. Close to 20 per cent of the cattle slaughtered by Teterower Fleisch are organic. The company also slaughters pigs and lambs, but the focus is on cattle.

- The German business ties in beautifully with Danish Crown's new 4WD strategy. We want our beef division in particular to grow and to account for a larger share of Danish Crown's total activities - while at the same time focusing more on organic products and value adding, says President and Group CEO Jais Valeur.

Today, Danish Crown's beef division also has significant slaughtering activities in the

north German city of Husum, where almost 90,000 animals are slaughtered annually.

Following the takeover of Teterower Fleisch, the plan is to run Danish Crown Beefs existing slaughterhouse activities in Husum and the newly acquired business as an integrated unit, focusing on specialisation and on utilizing synergies in the international markets that both companies serve.

We are convinced that we can generate further growth by integrating the German business. We will have access to larger supplies of German raw materials, and the German company will be able to access Danish Crown Beef's markets worldwide, says Finn Klostermann, CEO of Danish Crown Beef.

In conjunction with the unveiling of the new five-year strategy plan for the group at the beginning of November, Danish Crown's top management announced that Denmark, Sweden, the UK and Poland had been designated the company's natural home markets - while Germany no longer had the same status.

In this light, the acquisition of a slaughterhouse in Germany may seem surprising, but there is a good explanation.

More than half of Teterower Fleisch's sales



actually take place outside Germany, for example in markets where Danish Crown Beef sees considerable growth potential – including Sweden and southern Europe. So its geographical location is just a starting point for ensuring the supply of good raw materials for all Danish Crown Beef's markets. In Germany, we have been successfully selling beef, but as a niche supplier of high-value meat to industrial customers and the foodservice market. This is a position that we can now consolidate and develop further. On the other hand – and completely in line with the 4WD strategy – we have decided not to enter the highly competitive German retail sector, at

least not directly. We do not believe we can make money there, says Finn Klostermann.

Teterower Fleisch's local management team will stay in place as a way of maintaining the company's strong local connections – but will be supplemented with management resources from Danish Crown Beef.

The agreement on the acquisition of Teterower Fleisch has been reported to the German federal cartel office (the Bundeskartellamt), which must approve the takeover before it can be finalised.

[www.danishcrown.com](http://www.danishcrown.com)

## UPDATED BVA, BVA SCOTTISH AND WELSH BRANCHES AND BVPA RESPOND TO CONFIRMATION OF AVIAN INFLUENZA



**On 24 January, the UK's Chief Veterinary Officer confirmed a new case of Avian Influenza H5N8 in a commercial flock of approximately 10,000 farmed breeding pheasants in Pilling, Preston, Lancashire. Some birds at the premises have died and the remaining birds will be humanely culled. A 3km Protection Zone and a 10km Surveillance Zone around the infected premises to limit the risk of the disease spreading.**

This follows confirmation from the Chief Veterinary Officer for Wales on 22 December 2016 of Highly Pathogenic Avian Influenza H5N8 in a wild duck, a wigeon, in Llanelli, Carmarthenshire and further confirmed cases of the H5N8 strain of Avian Influenza in commercial and backyard flocks and wild birds in England and Scotland. In response, the British Veterinary Association (BVA), BVA Scottish and Welsh Branches and the British Veterinary Poultry Association (BVPA) have issued a statement.

The precautions taken by the governments in England, Scotland and Wales remain in place, including the Prevention Zones (housing orders) and temporary ban on poultry gatherings. BVA advice to poultry keepers and vets remains as below. Any further findings of Avian Influenza in will be published online by Defra.

Poultry and captive bird keepers should continue to house their birds, where practicable, maintain their biosecurity and remain vigilant about the health of their birds.

Steps also have been taken to further protect poultry and captive birds by introducing a temporary suspension on gatherings of

poultry. Poultry keepers, including those with fewer than 50 birds, are encouraged to provide details of their flocks to the Poultry Register. This will ensure they can be contacted immediately in the event of an avian disease outbreak so that they can take action to protect their flock at the earliest opportunity.

The advice from Public Health England (PHE) is that the risk to public health from the virus is very low and the Food Standards Agency (FSA) has stated that bird flu does not pose a food safety risk for UK consumers. Thoroughly cooked poultry and poultry products, including eggs, are safe to eat.

The BVA, BVA Scottish and Welsh Branches, and BVPA responded:

"The identification of Avian Influenza in wild birds and domestic flocks illustrates both the ongoing importance of a robust veterinary surveillance system and the risk of infection to domestic poultry from wild birds. BVA, BVA Scottish and Welsh Branches, and BVPA urge all vets and poultry keepers to remain vigilant to signs of the disease and heed the biosecurity advice issued by the governments in England, Scotland and Wales. Any suspicion of Avian Influenza should be reported to the APHA as soon as possible."

"We'd like to also emphasise that the risk to public health from this strain is very low and that the Food Standards Agency has made clear that there is no food safety risk to consumers, with thoroughly cooked poultry and poultry products still safe to eat.

[www.bva.co.uk](http://www.bva.co.uk)

## BRF ENTERS TURKEY, WORLD'S LARGEST CONSUMER OF HALAL CHICKEN



**The company signs an agreement to acquire the operations of Banvit, the country's largest poultry producer and market Leader**

In yet another step in its international expansion, BRF arrives in Turkey, the world's largest consumer of halal chicken, to acquire the operations of Banvit, the country's largest poultry producer and market leader. The transaction will be via a joint venture between BRF and Qatar Investment Authority (QIA), the sovereign fund of Qatar, which will hold 60% and 40% interests, respectively.

Banvit is a fully integrated producer, with facilities ranging from feed control to final food processing. The company has five feed plants, four hatcheries and five production plants. "The units are located in the country's West, which concentrates most consumers, and East, which positions it as the only company capable of serving both the domestic and export markets," said Pedro Faria, Global CEO of BRF.

The assets of Banvit will be incorporated into OneFoods, a BRF subsidiary led by Patricio Rohner and dedicated to the halal market. "The acquisition of Banvit is the first step on the agenda to accelerate the growth of OneFoods, which holds market share in chicken products

of approximately 45% in Saudi Arabia, United Arab Emirates, Kuwait, Qatar and Oman, countries where it operates with own distribution and a broad product portfolio," explained Rohner.

Turkey, which has a population of 80 million, accounts for 10% the global consumption of halal poultry. Even so, local per-capita chicken consumption is low, at around 20 kilograms per year, and the penetration of processed food products is low, which means that the Turkish market offers excellent potential for growth. "In addition to the growth opportunities offered by the Turkish market, especially in processed products, we see important commercial and operational synergies to capture by integrating the operations of Banvit and OneFoods, which will further consolidate our strength and leadership in the halal animal protein market," said Rohner.

The consummation of the transaction, which in its first phase involves the acquisition of a 79.5% interest in Banvit, followed later by a tender offer for the remaining minority interest of 20.5%, is subject to fulfillment of the conditions precedent in the final documents, including approval by the antitrust authority. Banvit's firm value was estimated at US\$470 million.

[www.brf-global.com](http://www.brf-global.com)

## IFA RAISES BREXIT THREAT WITH MINISTER FOR AGRICULTURE



**IRELAND - IFA President Joe Healy emphasised the need for Government to use its strong relationships with EU and UK leaders to influence a constructive approach to Brexit negotiations with Minister for Agriculture Michael Creed at the IFA Annual General Meeting.**

The impact of Brexit was among a number of key farming issues under discussion with the Minister.

The IFA President has said that the signal by Prime Minister Theresa May that the UK intends to exit the single market is a major cause of concern to Irish farmers with the potential to seriously damage trade with the UK.

"With 40 per cent of Irish food exports going to the UK, no other member state and no other sector are as exposed in the Brexit negotiations. Already, Irish farmers

have taken most of the pain resulting from the weakness of sterling as a result of Brexit. Beef farmers took a hit of €150m last year from this alone and mushroom growers saw their margins wiped out."

The IFA President warned that politics cannot be allowed to override fundamental economic interests, and farmers expect the Minister and Irish Government to use the strong relationship they have with both EU and UK leaders to influence a constructive approach. He said the retention of free trade in agriculture and food products between the EU and UK must be a priority.

Mr Healy also warned against any reduction in the CAP budget as a result of Brexit, saying if EU solidarity means anything, then the budget shortfall must be made good so that farmers are not hit with CAP cuts when the UK leaves.

[www.thecattlesite.com](http://www.thecattlesite.com)



# Gulfood

26 Feb - 2 Mar 2017

Dubai World Trade Centre

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## **CONSUMER DEMAND FOR PRODUCT KNOWLEDGE FEEDS EXHIBITOR INTEREST IN WORLD FOOD – A DEDICATED NEW ZONE AT GULFOOD 2017**

**Origin and source key  
to food marketing,  
research shows, as  
Brazil and Ireland  
prepare largest-ever  
Gulfood outings**

**Asia-Pacific, Middle  
East and Africa regions  
are key growth drivers  
of packaged food  
globally**



Dubai, UAE: A surge in consumer demand for knowledge of food origin and source is now a key factor for successful sales and marketing in the global food industry, according to the latest research.

A survey by Opinion Matters found that a food's 'origin' is now second on a consumer's list, behind only sell-by dates, when it comes to purchasing, and leading international supermarket chains are addressing the issue through transparent 'sourcing' advertising.

The awareness of different foods from around the world has increased dramatically as a result of globalisation, with global tourism to reach 1.5 billion by 2020 and 65 per cent of households worldwide connected online. This rise in awareness has resulted in a strong response from eager exhibitors for the World Food – one of eight specialist sectors in the newly evolved format of Gulfood 2017, which is taking place from 26 February to 2 March 2017 at the Dubai World Trade Centre (DWTC).

One trend seen across the globe is product knowledge and value, as consumers become more price conscious and increasingly mistrust brands, especially those from the largest global food manufacturers.

There is also a shift towards more "authentic", niche and natural products, with people seeking brands that they see as upholding

key values. In addition, a growing number of consumers trust organic products to be healthier, more natural and greener but also favour smaller niche food manufacturers over large food multinationals.

The Asia-Pacific and Middle East and Africa regions are the main global growth drivers of packaged food globally.

Nations from East to West, North to South have signed up to showcase country-specific products, services and business opportunities at the 22nd edition of the world's largest food and hospitality show, which will feature 120 national pavilions

"Transparency on sourcing is taking centre stage in the food-value chain and World Food recognises demand for nations to build brand-trust that is now paramount to consumers," said Trixie LohMirmand, Senior Vice President, Exhibitions & Events Management, DWTC.

"The new sectorised format of the show will create better access for visitors to reach their target products and with World Food housed in its own dedicated sector, exhibitors will be able to offer greater insight into origin and source of their produce."

South America is out in force at Gulfood 2017 with Minerva Foods, one of the continent's biggest players in the production and sale

of fresh beef and its bi-products. With the Middle East and Africa so important to the company, representing 35 per cent of the company's international sales in the last twelve months ended in September 2016, the firm is now developing new, market-specific products, says Minerva Chief Commercial Operator, Iain Mars.

"We have a plan with SALIC (Saudi Agricultural and Livestock Investment Company) to address the food security issue in this region through a new distribution system focused on high-quality food supply," Mars said.

"The Middle East region faces a lot of challenges, including the non-favourable climate and limited availability of water, as well as the political insecurity in some countries. Despite the influence of urbanisation, westernisation, population growth and better purchasing power contributing to an increase in regional meat consumption, the elevated cost of production has historically limited investments in meat production and created a higher dependency on imports.

"All these factors increase the potential for South America to become the main supplier for the Middle East, exporting high-quality products with efficiency and at competitive prices.

"The change in format can only help as the dedicated World Food sector will



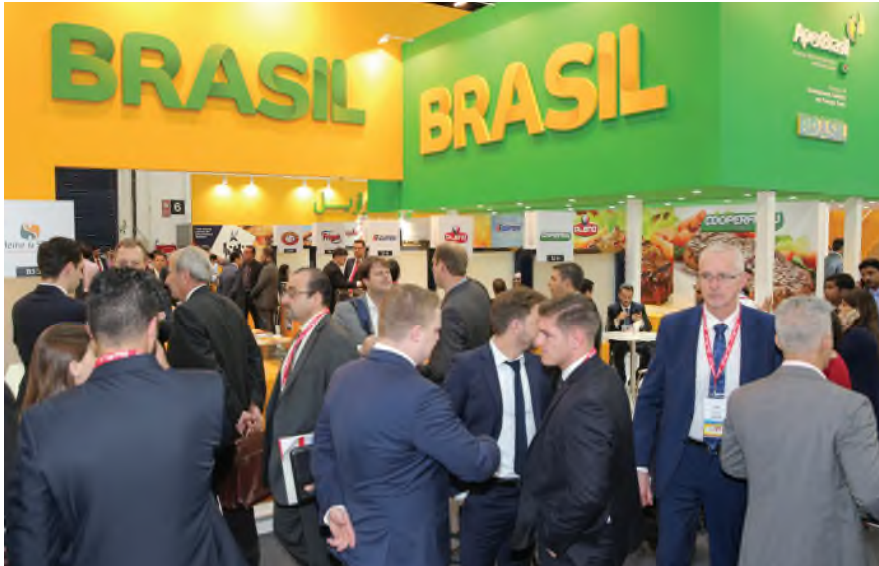
allow us to better showcase what we have to offer.”

Mars is tipping Halal and organic foods to be the Middle East’s premier growth

foodservice industries, we’re well placed to service the needs of a growing market.

The brand, operating in the GCC since 2014, were the first to introduce Irish

and natural foods for their consumers. We are keen to show in the World Food segment why Ireland is well positioned to help them achieve this within their marketplaces.”



sectors, adding: “Organic and grass-fed demand should increase following a shift in global behaviour towards lean and natural products.”

Brazilian interests at Gulfood will be boosted by the presence of the Arab Brazilian Chamber of Commerce, with spokesperson Michel Alaby citing the Arab world as the second major importer of Brazilian foodstuff after China -- regional sales hit \$8.68 billion in 2015.

Alaby said: “Among the most important Brazilian foodstuff products exported to the Arab countries are meat, sugar, cereals, oil seeds, coffee, milk and fruits. Brazilian companies are developing their knowledge of the Arab countries and features such as the Halal certificates for, but not limited to, meat and its bi-products.”

Ireland, meanwhile, hopes a strong reputation in the provenance of its beef and poultry will boost regional sales, during Gulfood 2017. A highlight of the Bord Bia Ireland pavilion will be the showcasing of the Golden Irish eggs brand, with the Emerald Isle’s food board eager to leverage the country’s product pedigree.

Golden Irish spokesman Brian Eivers, said: “We’re focused on offering customers a range of high-quality, 100 per cent Republic of Ireland BRC Grade A eggs. With a strong customer based across both retail and

eggs to the market and are now moving into the supply of boiled and liquid egg to enhance their stronghold. The World Food sector at Gulfood 2017 will also see the launch of a new, bilingual Golden Irish Organic 10 Pack designed especially for the Middle East.

“We’ve seen significant growth in our organic offering and created this product to offer customers greater options,” said Eivers, ‘adding to our range of beautiful colour coded retail packs’

Ireland is eager to showcase its reputation for providing great quality food at the Bord Bia Ireland pavilion, this will be championed by dry-aged grass-fed beef producer John Stone Beef.

Allan Morris, its Managing Director, said Ireland’s standard, yet stand-out beef rearing processes gives it the edge with increasingly quality conscious consumers: “Our beef is sourced from suckler farmers, which means the calves stay with their mothers to suckle until they are independent and can forage for themselves,” Morris said. “This system is quite unique but is the normal standard in Ireland, ensuring sustainability and grassland management is achieved.

“All Middle East countries are growing in terms of their desire for safe, sustainable

At the show, John Stone will roll out a host of new products all falling in line with its strict Halal protocols. Morris added: “We are proud to say that we are the first meat company in Europe that has been granted the National Halal Mark. This mark is an assurance of quality and verification that the highest Halal standards have been achieved.”

The dairy sector, meanwhile, is a key focus for Belgium’s Flanders’ Agricultural Marketing Board, which will have six dairies on show, under its White Gold from Europe banner.

Latvia, making its fourth Gulfood foray, is fielding its largest national delegation to date, with 20 companies under the banner of the country’s Ministry of Agriculture – up from seven producers three years ago. And the Latvians have high hopes of new business.

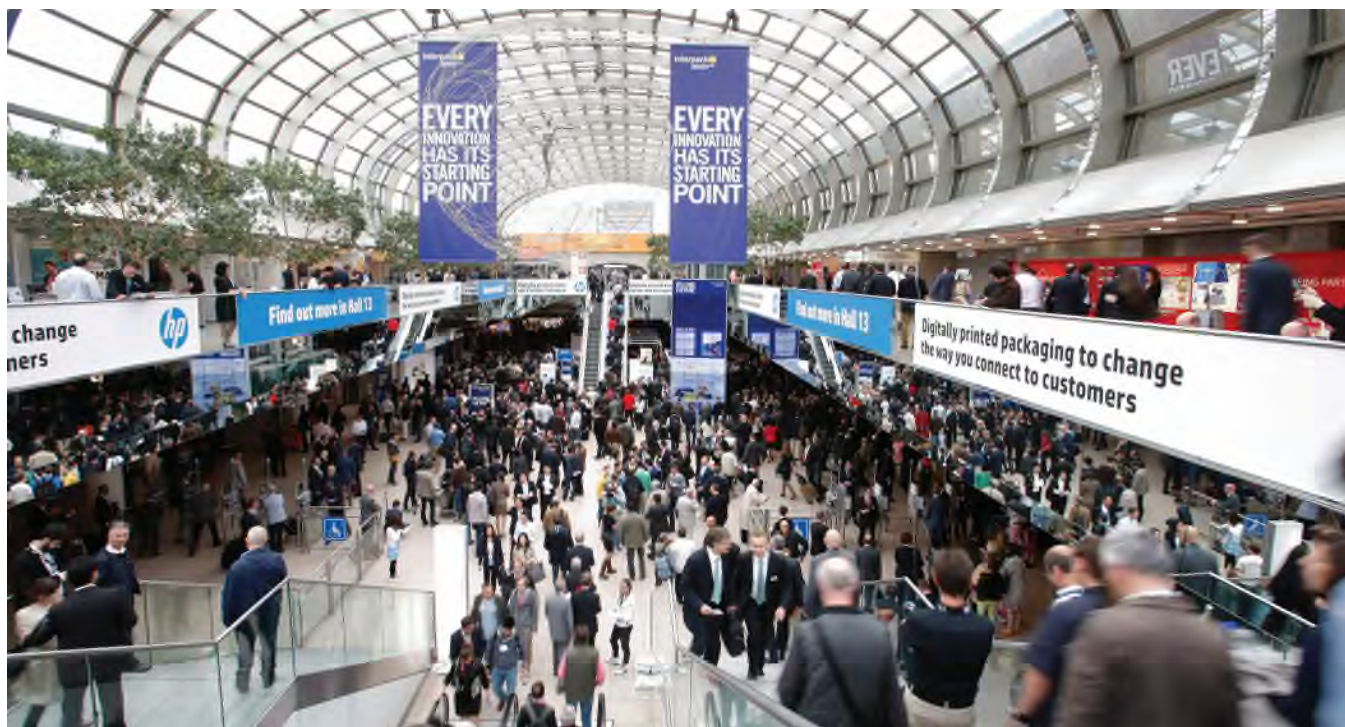
“Our aim is to cover all countries in the Middle East region and to introduce our high-quality and healthy products,” explained ministry of agriculture spokesperson Daina Saktina. “A high share of all Latvian products can be evaluated as eco and healthy-life products. We know that clients and customers from the region have high demands for food quality and we can satisfy these. We don’t have many mass production companies with average products. We have smaller, diverse companies which prioritise quality, uniqueness and healthy life products.”

World Food is one of eight dedicated segments now housed within Gulfood to ensure buyers can more easily and effectively navigate the giant show. The other features are: beverages; dairy; fats & oils; health, wellness & free-from; pulses, grains & cereals; meat & poultry and Power Brands.

Gulfood 2017 is a trade event open strictly to business and trade visitors. The show is open 11am-7pm from February 26 to March 1 2017 and 11am-5pm on March 2 2017. Visitors can pre-register at [www.gulfood.com](http://www.gulfood.com) to save AED150 on the on-site entry fee of AED350.

[www.gulfood.com](http://www.gulfood.com)

# ENORMOUS INTEREST IN INTERPACK 2017



\*  
**Exhibitor registrations at a record level**

\*  
**Parallel event components also booked out**

\*  
**Support programme with SAVE FOOD innovationparc and conference as well as VDMA special topic Industry 4.0**

Interpack 2017 is recording the highest demand among exhibitors in its 55 year history. By the official close of registration for this outstanding international event for the packaging industry and related processing industries, exhibitors had booked about 20 per cent more space than was available at the exhibition centre with its 262,400 square metres in 19 halls. Around 2,700 exhibitors can therefore be expected again from 4 to 10 May 2017, coming from about

60 different countries. As before, another trade fair will be running in parallel, entitled components, special trade fair by interpack. It will feature products from supplier industries of the packaging sector. This event, too, is now fully booked, yet it will occupy more than twice as much space as in 2014, at its première.

**Special topic: Industry 4.0 - in partnership with VDMA**

Where size and internationalism are concerned, interpack is a unique platform for businesses offering products and solutions in packaging technology and related processes as well as packaging media and materials for the various segments of this industry: food, beverages, confectionery and baked goods, pharmaceuticals, cosmetics, non-food consumer goods and industrial goods. The products and services presented here will be supplemented by several innovative

specialist areas. Working together with the German Engineering Federation (VDMA), Interpack 2017 will put the focus on Industry 4.0, in particular. The special show will take the form of a Technology Lounge at the VDMA stand, featuring examples of solutions in packaging machinery and process engineering and opening up new opportunities for applications in security, traceability, copying and counterfeit protection as well as in customised packaging.

**SAVE FOOD innovationparc**

As before, SAVE FOOD will play a role at interpack 2017. A special show called innovationparc will be held, with packaging ideas and solutions designed to reduce food losses and waste. They will include the winners of the international competitions for the SAVE FOOD Packaging Awards, held by the World Packaging Organisation (WPO). The prizes were awarded prior to interpack, and the winners are now set to compete with one another for the WorldStar Awards at the trade fair. Innovationparc will include a presentation forum which can be used by companies to showcase their ideas and solutions. As before, innovationparc will be held in a high-quality marquee, situated between Halls 2 and 3.





The first day of the trade fair will also feature the third international SAVE FOOD convention, held in partnership with the UN Food and Agriculture Organisation (FAO) and the United Nations Environment Programme (UNEP).

### Online services for trade fair visitors

[www.interpack.com](http://www.interpack.com) contains useful resources to help visitors prepare and plan each day

numerous tips on Düsseldorf's cultural highlights, so that visitors can plan their stay. A full list of event preparation services can be found at [www.interpack.com/tradefairplanner](http://www.interpack.com/tradefairplanner).



### Components trade fair now entirely in tandem with interpack

Following the première of components, special trade fair by interpack, in 2014, the general idea of this trade fair has been substantially revised for 2017. Visitors will now find it at a central location within the exhibition centre, in Hall 18, a temporary lightweight hall, approximately 5,000 square metres in size. It is situated between Halls 10 and 16, complementing interpack for its entire duration.

Hundreds of companies from the supplier industries will each have their own stands, offering products in drive, control and sensor technology, industrial image processing, material handling technology and other (machine) components. Components will be freely accessible to all interpack visitors and exhibitors. Further details are available at [www.packaging-components.com](http://www.packaging-components.com).

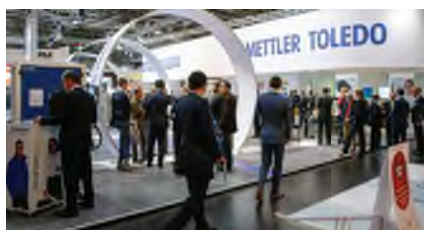
at the trade fair efficiently. These resources include an exhibitors' database with the option of compiling a personalised hall plan as well as a "matchmaking" function to contact exhibitors and to receive news of companies represented at the trade fair. The site has a responsive interface which also adjusts itself to a small display on a mobile device.

In addition, a visitors' app is available for iPhone and Android users. Its functions include the exhibitors' and event database, updated on a daily basis, graphically optimised hall plans and exhibitors' details, including contact details and product information, an appointment form and the option of adding customised notes to exhibitors' entries. The user's settings and notes are available on all platforms, regardless of the device where they were originally created. The interpack website also has a hotel booking function and

However, [www.interpack.com](http://www.interpack.com) offers more than direct preparation for the trade fair. The interpack magazine, which is issued at regular intervals, has numerous interesting articles on trends in the industry. It also has some worthwhile infographics and interviews with industry experts.

### Opening hours and prices

Interpack is open daily, from 4 to 10 May 2017, 10:00 to 18:00 hrs. E-tickets are available from December 2016. A day ticket can be purchased online in advance at [www.interpack.com](http://www.interpack.com) and costs €52.00 (€65.00 at the box office). The box office price for students and trainees is €15.00. A three-day ticket can be purchased online, in advance, for €105.00 (box office: €130.00). Tickets purchased online can be printed directly from a computer. An interpack 2017 entrance ticket or exhibitor's pass entitles the holder to travel to and from the exhibition centre for free, using the local transport company VRR. This covers all the towns and cities within the catchment area of the Düsseldorf Exhibition Centre.



[www.interpack.com](http://www.interpack.com)

## MEAT SHOWHOW AT PROGRESS POINT - DISCOVER THE LATEST DEVELOPMENTS IN PROCESSING TECHNOLOGY



Each year in March, Marel hosts the Meat ShowHow, demonstrating meat processing equipment and systems in Progress Point, their demo and training center. The next Meat ShowHow will take place on March 8th, 2017.

IN 2016 MPS Meat Processing Systems

joined Marel and together we focus on “Optimum raw material utilization through primary, secondary and further processing”.

Visitors to the Meat ShowHow come from near and far – and are truly impressed with the set-up and the many systems and applications they can experience at the facility.

Equipment and lines demonstrated in the hands-on environment include deboning, trimming, fat analysis, bone detection, grinding, mixing, sausage making, hamburger forming, cutting, marinating, packing, labelling and checking of final packs. The

mentioned equipment can help optimise production and yield, increase food safety and innovate end-products.

Progress Point is located in Denmark, only 5 minutes away from Copenhagen’s Kastrup Airport.



[www.marel.com/meatshowhow](http://www.marel.com/meatshowhow)

## CFIA RENNES 2017: THE PLACE WHERE FOOD PROCESSING IS REINVENTED!



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- Ingredients and Intermediate food products,
- Equipment and Processes,
- Packing and conditioning.

**An attractive and innovative range to meet your needs!**

CFIA is dedicated to the manufacturers in the food-processing sector who come

to meet suppliers targeting all positions in a factory: management, production, quality/health, safety/environment, maintenance, new construction, R&D, purchasing, packaging, logistics, sustainability, marketing/advertising, sales, etc., and each stage of production, from the ingredients to the finished products.

With 1,450 exhibitors and 20,000 visitors, this exhibition is one of the only ones with a similar offer in France and one of the most important events in Europe dedicated to the food-processing sector.

### Why to choose CFIA?

CFIA provides the answer to the purchasing and equipment needs of manufacturers in the food-processing sector.

The 1,450 exhibitors make this the key event of the year for whoever wants to:

- \* Keep tabs on the market

- \* Identify the best investment opportunities
- \* Meet new contacts and strengthen existing ones

Visitors can access a full high-quality range focused on three distinct sectors and find customised solutions in Ingredients and Intermediate food products, Equipment and Processes, and Packing and Conditioning.

CFIA is a real lever for growth in the sector. Join all the professionals from the food-processing sector at the heart of Brittany, from 7th to 9th of March 2017, to meet the key players in the food-processing sector and explore a full range of products and services.



[www.cfiaexpo.com](http://www.cfiaexpo.com)



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