

# MEATING POINT

magazine

SUSTAINABLE TECHNOLOGY, PROCESSING & PACKAGING

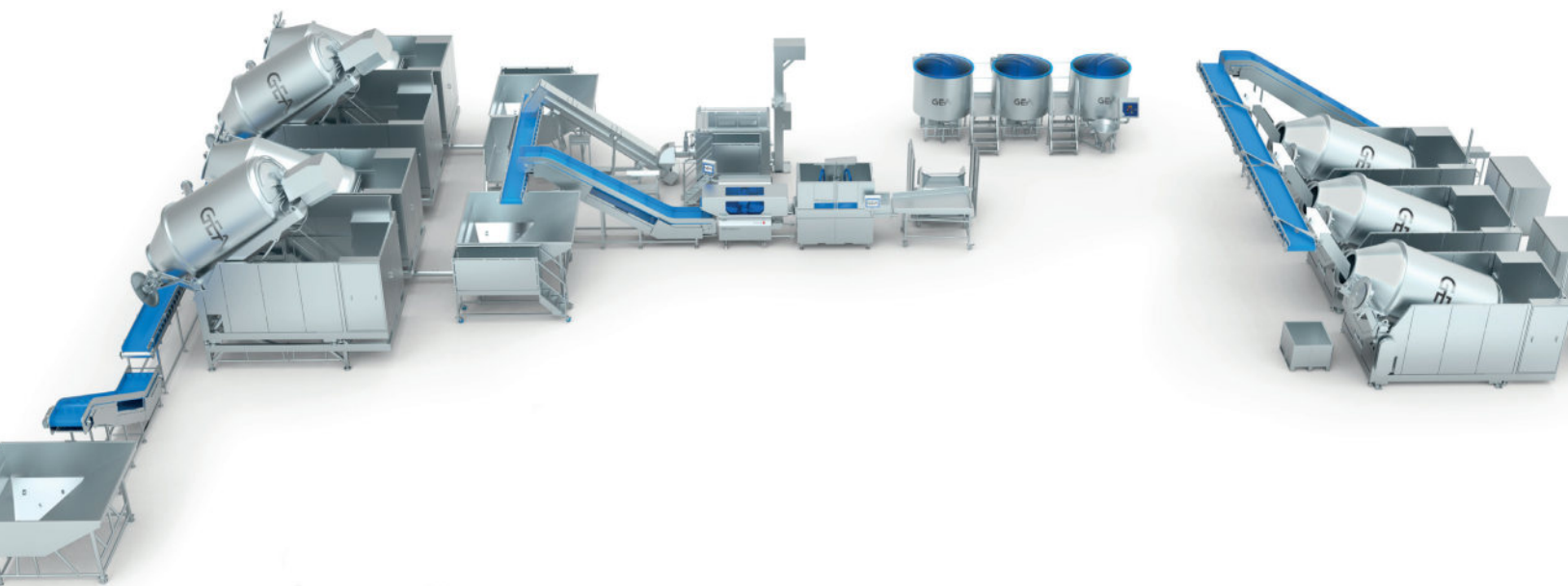


HOW  
**SUSTAINABILITY**  
IS CHANGING THE  
**PACKAGING**  
AND  
**LABELLING**  
INDUSTRY

PLANT - BASED MEAT:  
THE BAMBI FACTOR

THE REMARKABLE DYNAMICS OF GLOBAL  
PIG MEAT PRODUCTION AND TRADE

TRADITION, TECHNOLOGY,  
APPRECIATION OF TRENDS



# The step-by-step approach to premium quality ham

You know the challenge! Healthier, more natural ingredients; less salt; green label production; exemplary hygiene and food safety. In short: high quality production for premium products. At GEA we understand that quality is created from the start of the process with the right set of equipment.

Get the raw materials right, then focus in turn on: defrosting, brine preparation, injection, tenderizing, tumbling, massaging and curing, molding and forming, cooking and smoking, slicing and final packaging. Every stage is critical. And GEA is with you, every step of the way.



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**GEA** Engineering  
for a better  
world.

## Dear reader,

The meat sector, like the rest of the food sectors, must face daily challenges related to food safety, sustainability, and the improvement of designs, to which they must provide immediate and reliable solutions. In this line, one of the most significant advances that are being observed within the meat industry has to do with the improvement of packaging or food packaging. It is one of the most technologically developed topics with the aim of offering health, practicality, specialized products adapted to each type of consumer, and guaranteeing the good condition and preservation of products, reducing food waste to the maximum.



Jenny Smart

If you want to be among the most sustainable meat businesses, all activities need to come under review, no matter how big or how small. Sometimes changing even the smallest of things can result in major savings. The ultimate goal is achieving further carbon savings by adopting a food labelling product that uses fewer resources, is lighter and can be recycled. While the environmental impact of attaching a small label to a poultry product, or any other, may seem miniscule in comparison to other activities, it is worth thinking about how many labels are attached in a food business in a day, or a week or a year. If you multiply that by how many food businesses exist in any given country, or across the world, then the benefits of more environmentally friendly labelling options become all the more apparent.

Nadina Korthäuer, Director Marketing & Business Development at ESPERA - WERKE, takes a look at the current state of sustainability in the labelling industry, as "in the course of packaging optimizations in recent decades, less attention has been paid to the sustainability of the materials and the current, worldwide ecobalance teaches us that an urgent rethink is necessary". Read her article, "How sustainability is changing the packaging and labelling industry" on pages 28 - 29.

As usual, we feature the latest business and industry news, along with interviews, customer stories, research and development.

## Enjoy your read!

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## ADM UNVEILS NEW CUSTOMER CREATION AND INNOVATION CENTER IN THE UK

ADM (NYSE: ADM), a global leader in human and animal nutrition, announced the opening of a new Customer Creation and Innovation Center (CCIC) in Manchester, England, serving as a UK hub for food innovation and building upon ADM’s strong presence in the UK. With a state-of-the-art kitchen, chef’s presentation theater and flavor development lab, ADM is expanding its culinary capabilities and food solutions into new savory culinary innovations for the UK, in addition to providing continued support for the beverage, sweet goods and dairy sectors.

Bringing together the new local facility and technology with ADM’s full global pantry of ingredients and solutions enables ADM chefs, food scientists and flavorists to provide unique expertise into the growing alternative protein arena, developing pioneering savory plant-based product offerings that meet consumers’ high sensory expectations and evolving wellness demands.



*ADM Manchester Facility*

The 800 square-meter CCIC cultivates collaboration with customers - from food manufacturers to foodservice - fostering innovative development in on-trend savory applications, as well as sweet goods, dairy and alternative dairy products, beverages and more.

“The opening of our new Customer Creation and Innovation Center provides a unique synergistic space to further our commitment

to push the boundaries of food and beverage formulation, while also delivering on authentic culinary experiences,” said Chris Poole, Managing Director, ADM. “And with the UK market on track for steady growth in 2023 and beyond, ADM is perfectly positioned to service all our customers’ needs.”

The new CCIC demonstrates ADM’s continued dedication to nutrition innovation that can support the needs of a growing population and future generations, as the company also announced this year the opening of a probiotic facility in Valencia, Spain and a partnership with Marel to build a taste and texture innovation center for the alternative protein space in the Netherlands. Each of these investments expands the connection and integration of ADM’s global capabilities, supporting manufacturers in bringing future-forward offerings that meet consumers’ demands of tomorrow, today.

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



## MANE KANCOR OPENS NEW INNOVATION CENTRE IN INDIA



Mane Kancor Ingredients Private Limited, a pioneer in the field of global spice extracts, has opened its new, highly equipped and modern innovation centre at Kochi in Kerala, India. The innovation centre was inaugurated by Mr Jean M. Mane, President and CEO of Mane, in a virtual ceremony.

Mr Mane, in his inaugural address, said, "As part of our dedicated investments in technologies, corporate workspace, new process plants, IP, and new expansion across all our facilities, our commitment to look well ahead into the future necessitated proactive investment in R&D today, for a brighter future".

Speaking on the occasion, Mr. Geemon Korah, Director, CEO, Mane Kancor, said "Sustainability has always been a core focus of Mane Kancor, hence the entire facility is completely eco-friendly with the concept of living space." He further said, "This should encourage constructive and collaborative ideation between the various teams, better interaction, and seamless knowledge sharing, all leading to one goal - innovations and product development".

The 24000 sq.ft building is set in a vast stretch of land and is one of the biggest buildings in Mane Kancor's Angamaly campus in Kochi.

The state-of-the-art facility integrates all the research activities and product development initiatives in one comprehensive site with the support of expert analytical teams and top-of-the-line technologies. The research focuses on innovations in natural shelf-life solutions, natural colour solutions, culinary taste solutions, personal care ingredients and nutraceutical products. To support the research and development activities the centre has dedicated areas for sophisticated analytical instruments and storage solutions for raw materials, solvents, control samples, utility, sample preparation and pilot facilities.

The innovation centre also houses an exclusive sensory evaluation room that is being supported by a well-trained panel from cross-functional teams, to help set the benchmark and uncompromising quality in every product.

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

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# PERFORM EQUIPMENT PERFORMANCE TESTS AND DEVELOP NEW PRODUCTS WITH PROVISUR'S TEAM OF EXPERTS AT THE PROVISUR INNOVATION CENTER NEAR PARIS

The newly opened Provisur Innovation Center (PIC) offers comprehensive options for testing industry-leading industrial food processing equipment. Experts on site also help to develop new products, including the latest trends such as alternative protein sources or clean label products.

Provisur Technologies, headquartered in Chicago, USA, develops and manufactures industrial food processing equipment. The portfolio, under the tag line "Pushing Boundaries", stands for innovative technologies and integrated production systems. The well-established legacy brands- AM2C®, Beehive®, Cashin®, Formax®, Hoegger®, Lutetia® and Weiler®- are at the cutting edge of technology in their market segments. With customizable and highly efficient solutions in its four business units of Further

Processing, DMC (Defrosting, Marinating, Cooking), Slicing, and Separation, Provisur helps food processing companies of all sizes from all over the world to establish efficient processes that produce the highest yield and deliver top-quality products.

## Opening the PIC: the Perfect Testing Environment for European and Asian Customers

It is no coincidence that the company is a leader in technology in a variety of market segments in industrial food processing. Its team is composed of specialists with decades of experience. The group has placed the emphasis on combined expertise and is the driving force behind the development of extraordinary, integrated solutions. Now, Provisur has reached a new milestone in the



*Development and testing can now be conducted at Provisur's newly opened Innovation Center (PIC) in Plailly near Paris*

area of research and development: the 1,000 m<sup>2</sup> Provisur Innovation Center (PIC) was established in Plailly, near Paris, France within the space of just one year. The ribbon was cut on 6 October 2022 with the American executive management in attendance, alongside customers, partners, and representatives from the media. Situated near Paris Charles de Gaulle Airport, this central site in Europe supports Provisur's European and Asian customers with extensive, application-specific expertise in industrial food processing, combining food science, systems engineering and practical experience.

## Highly Versatile Technologies for Testing Under Real Conditions

In Plailly, Provisur's range of equipment is used under real production conditions to help processors test and develop their products. Food manufacturers have the opportunity to test their new products using the most innovative processing technologies from Provisur's portfolio. An expert team of food technicians and



*Provisur - Highly versatile technologies for testing under real conditions*



application engineers are available for support. In addition to this, the PIC offers a fully equipped restaurant kitchen for cooking or frying foods, as well as a laboratory that enables comprehensive product analysis. At the same time, the PIC provides an optimal environment for factory acceptance tests for Provisur customers' equipment, presenting innovations from the Provisur portfolio, and both internal and external training courses for equipment and applications. Provisur will also use this site to develop its portfolio of equipment further in collaboration with experts with the relevant technical background.

**From Alternative Proteins to Clean Label Products: Driving Forward the Latest Trends**

Another focus of Provisur's Innovation Center is research and

development into the latest trends within food manufacturing and nutrition, such as the booming market segments of alternative proteins and clean label products. Increasing social awareness of greater resource conservation and sustainability has come hand-in-hand with strong, on-going growth in products based on alternative proteins. Nowadays, formed products such as burger patties or nuggets are also available in a plant-based variant. These products present manufacturers with new processing challenges, such as in forming and slicing. Clean label products -products that contain no additives with binding effects - can be challenging to process. Provisur can also demonstrate significant progress in developing processes that simplify the production of clean label products.



Olivier Kerdiles,  
Provisur,  
Vice President Separation and DMC

**All-in-One Service for Optimal Solutions**

Opening the new PIC will help Provisur pursue its key aim: supporting existing and prospective customers, with combined expertise, in order to get the best possible performance from various equipment and develop new, innovative and high-quality products. Provisur's technology exhibits an impressive degree of automation and continuity of processes. Food manufacturers who make use of it ultimately benefit from efficient, cost-effective processes with high yields, while end customers benefit from safe, nutritious, high-quality, and affordable food. "Provisur's state-of-the-art technology is the result of our constant commitment to putting our customers' demands and requirements at the heart of everything we do. At the new Provisur Innovation Center, we take the time to work with product specialists and food scientists to find the perfect solution for our customers," said Olivier Kerdiles, Vice President Separation and DMC.

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



Provisur's technology exhibits an impressive degree of automation and continuity of processes

## GEA: NEW CIRCULAR PROCESSES DESIGN MORE SUSTAINABLE MACHINERY AND EQUIPMENT AT EVERY LIFECYCLE STAGE



Source: Adkasai

*In the area of sustainability and circular economy, GEA focuses on maximizing the lifecycle of its machines and equipment. Retrofits and overhauls are designed for maximum lifetime with minimized resource consumption.*

GEA is taking on the current market challenge and developing ever more resource-conserving and energy-efficient products and processes for numerous industries. With new circular processes, the company is also improving its own sustainability and helping customers achieve their sustainability goals.

GEA is a typical machinery and plant manufacturer whose indirect emissions contribute more than 90 percent to the company's total emissions. This shows that the emissions from the operation phase of the plants at the customer's site must be noticeably reduced. GEA is focusing on a new circular economy that targets both material use and plant operation at the customer's site. To effectively implement a circular economy, a shift in thinking is needed on two levels. Therefore, GEA is both transforming the processes at the material level of its portfolio and at the same time pursuing an approach to always offer its

customers the most sustainable production through the machines and equipment supplied.

### Circular Economy for the Material Level

GEA's solution for the material level is based on the introduction of the "Circular Economy" process. This process supports the strategic objective of implementing a circular economy for all machine service parts and packaging materials by 2026. Thus, GEA has a leading role in the mechanical and plant engineering sector. At the heart of the process is the application of an R strategy that operationalizes the five R's - Reduce, Reuse, Repair, Remanufacture and Recycle. For this purpose, a definitional framework was developed for the five R's to be applied to both the transformation of existing service parts and the design of new parts, since the foundations of circularity must already be laid at the development stage.

### Circular Economy for Machinery and Equipment

In addition to applying a circular strategy based on the five R's to spare parts and packaging materials, GEA is focusing on the circular economy as a future model for operating machinery and equipment in a circular, and thus more sustainable, manner at every stage of its lifecycle. This model focuses on maximizing the lifecycle and sustainable optimization of productivity,

with particular focus on "Design to Sustainability" (D2S). For the development departments, D2S means designing machines and systems in such a way that retrofits and maintenance are possible with maximum lifetime and minimized resource consumption.

### Digitization as an Enabler

Digitization will pave the way for the new circular business models. The future revenue models with the necessary processes, methods and tools for circularity can be implemented with digital business models. The products and services offered in digitized form, such as a digital twin or the application of Product Lifecycle Management (PLM), make it possible to accompany a real machine in all lifecycle phases in terms of data provision, simulation, real-time analysis, optimization and operational control. This shows the potential of new customer-oriented services, which can also be geared towards optimized plant operation in terms of ecology and economy.

Currently, GEA is rolling out a circular economy with the five R's for the material level across all business units; this process will be completed in 2025. GEA will consistently take the next step and implement the circular economy principles for machinery and equipment in order to substantially and sustainably reduce Scope 3 indirect emissions.

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

## NEW COMMUNICATIONS INTERFACE FOR SMART PORTIONING AND DETECTION PROCESS



*Synchronised processing and detection process*

Handtmann has developed a new communication interface that takes the connectivity of Handtmann system technology and foreign object detection solutions to a whole new level. The new X40 communication interface is open for metal detectors of all manufacturers. Producers of meat and sausage products of medium to industrial size in particular will benefit from the central line control and the flexible configuration for a wide range of production processes. The metal detector is installed directly at the outlet of the Handtmann vacuum filler or downstream

of the inline grinding system, if used. In sausage production, it is installed between vacuum filler/inline grinding system and clipper/AL sausage filling line or, in the dosing of liver sausage products or spreads, between vacuum filler and depositing system. Synchronisation, signal exchange, programme change and much more are carried out centrally via the vacuum filler's monitor control, greatly simplifying the operation of the overall line. If the operator changes the programme on the vacuum filler, the metal detector's programme is automatically changed as well to ensure that the correct metal detector programme for the respective article to be produced is used at all times and to enhance quality assurance even further. Integrating a foreign object detection device in the filling process allows early detection and rejection of metallic contaminants in all fluid to pasty products during the filling and portioning process, thus ensuring a continuous overall production process. Transparency

with traceability of production histories is reflected in regular records and audits.

In addition to the new communication interface between vacuum filler and metal detector, Handtmann also offers the Handtmann Communication Unit (HCU), a software solution for the paperless documentation of the tests the metal detector requires. The HCU automatically records any metal detector test carried out in defined intervals or when changing an article. If the test is successful, production can continue. If the test is negative, the line locks itself. Restarting is only possible after a successful test to release the line. Also, a test may only be acknowledged by authorised persons who can be managed through the HCU software. All tests and metal detections are automatically recorded and logged. A report function can then be used to automatically forward the tests to defined groups or departments, such as the QA department.

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



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## PACKAGING SPECIALIST ADAPA INVESTS IN PRODUCTION CAPACITY FOR SHRINK BAGS FOR THE UK MARKET

adapa Group, one of Europe’s leading companies in the flexible packaging solutions segment, has just made a major investment in two new lines for high-performance shrink bags at its UK St Helens plant. adapa now offers its UK customers an extensive shrink bag capacity. This strategic move further strengthens adapa’s supply chain agility enabling improved service to existing and new shrink bags customers.



*Looking back on approximately 40 years of experience, the specialist for flexible packaging supplies all types, shapes and film thicknesses for perfect shrink solutions.*

### Two Bag-Making Lines for the UK Market

Shrink materials are an important part of adapa’s strategic product portfolio. The specialist for flexible packaging supplies all types, shapes and film thicknesses for perfect shrink solutions and has been doing so for over 40 years. With this recent investment, UK customers will benefit from improved service backed by the group’s comprehensive shrink expertise. The two new lines in St Helens can process shrink bags in widths of between 200mm and 1050mm and lengths

between 100mm and 2000mm. Shrink bags are available in a variety of configurations including straight or round bottom seals, loose or as perforated on reel (POR) formats. Inline printing of single colour stamps and logos are available for the entire range. One line has already been in operation since the beginning of April with the second coming on line at the end of May.

### The Shrink Bag - a Real All-Rounder

Shrink bags are a packaging solution that has been tried and tested for decades and they are at the same time a real high-tech product: modern shrink materials are extremely thin and consist of several different layers that give the respective packaging its special properties.

Shrink packaging is enormously efficient and offers the packaged goods best protection and quality preservation throughout their entire life cycle - from storage to transport and distribution to sales at the POS. Shrink bags are used as ripening packaging for certain products, such as cheese or meat. With their barrier properties optimally adapted to the respective packaged goods, they ensure first-class product quality, e.g. tenderly matured meat or perfectly ripened cheese. In terms of look and feel, shrink packaging is an “honest package”: it presents its contents in a way that is clearly visible and tangible from all sides. In addition, the good printability offers many possibilities for an eye-catching brand presentation, whether in the service counter or on the self-service shelf in the food retailers.



*With the recent investment, British customers will benefit directly from adapa Group’s comprehensive shrink expertise.*



*adapas shrink bags combine reliable product protection - which thus simultaneously counteracts food waste - with minimal material use.*

### Increased Automation, Changed Requirements

The process sequences in shrink bag packaging are largely automated today. The bags are opened in the machines, filled with the product, vacuumed, sealed and finally shrunk. Robot technology is increasingly used to fill the pouches. This high degree of automation has massively increased the cycle rate (packs/minute) and has led to a doubling of the packing speed in recent years. The high speed, combined with shorter cycle times, leaves less time for sealing, so the sealing media have been adapted to ever smaller processing windows. In addition, shrink bags for these highly automated packaging processes require appropriate mechanical strength as well as particularly reliable sealing seams, as these are exposed to high loads in the filling process. Overall, the degree of automation and thus the packaging speed depend strongly on the product being filled: while uniform and solid products, e.g. cheese pieces or loaves, can be packaged relatively well automatically, this is not always possible to the same extent for soft products with varying sizes, such as fresh meat.

### Surprisingly Sustainable Thanks to Material Savings

In the spirit of resource conservation and climate protection, adapa strives with its entire portfolio of flexible packaging solutions to combine the best packaging performance and material usage. In the shrink bag segment, this has been achieved through many years of development work, which has resulted in ever thinner films, and has made this packaging variant an extremely sustainable solution. Shrink bags combine reliable product protection - which thus simultaneously counteracts food waste - with minimal material use. For example, a shrink bag with a weight of only about 12 grams is needed for the ripening packaging of a cheese wheel weighing about 3.5 kilograms - on balance, an excellent ratio between the weight of the packaged product and that of the packaging material.

### Environmental Packaging Award Shortlisting for VACUshrink(re) MEX 55

In the course of the packaging industry's commitment to develop more sustainable solutions, the classic shrink bag can make full

use of its advantageous properties. As part of its company-wide rethink initiative, adapa Group is working with its customers to promote the replacement of conventional packaging with more sustainable alternatives. A prime example of this is the VACUshrink(re) MEX 55: the shrink bag with high barrier, which is suitable for packaging meat or cheese, does not require any cross-linking. The certified recyclable PE-based bag is free of PA layers or PVDC barrier



*The production of shrink materials is a highly demanding process. It begins with the careful selection of raw materials and continues through extrusion to finishing and bag making - all process steps done in house at adapa.*

and can be easily processed on conventional equipment. For this, the VACUshrink(re) MEX 55 was awarded the coveted WorldStar Award 2023 in the category Packaging Materials and Components. It also won the German Packaging Award 2022 in the Sustainability category and the PackTheFuture Award 2023 in the Design for Recycling category.

[www.adapa-group.com](http://www.adapa-group.com)

## HIGH-PERFORMANCE LINE FOR COCKTAIL PRODUCTS IN ALGINATE CASING



*KLSH 153 ConPro system*

The Handtmann ConPro technology offers the possibility of producing varieties of sausage products in alginate casing in a continuous co-extrusion process in an edible, vegan alginate casing. Alginate is a long-chain carbohydrate, which is extracted from brown algae. Alginate gels can be produced across a wide range of temperatures and pH levels, they are insoluble in water, heat-stable and can therefore be blanched, smoked and dried. Handtmann ConPro technology

offers the continuous production of a sausage strand coated with alginate gel using two vacuum filling machines connected via a co-extrusion head. One vacuum filling machine pumps the filling product that the sausage strand is produced from, while the second feeds the alginate paste that subsequently forms the sausage casing. The Handtmann ConPro system KLSH 153 model is used for the production of cut sausage products. The co-extruded sausage strand is cut into individual portions by means of a separating device. The ends of the products can either be cut straight or also be shaped during the cutting process by means of a forming cut, thus creating rounded sausage ends. Products with a diameter of 8 to 32 mm and a product length starting at 40 mm are possible with this system. The system is available in two performance level versions. The smaller entry-level model is suitable for producers who have just made the step into ConPro

production. If more production capacity is required there is no need to buy a new system, production output can be increased via an upgrade. The KLSH 153 ConPro system has a modular design and can be enhanced in line with the specific requirements. They can be integrated into automation processes.

### High-Performance Option for Cocktail Products

Equipped with the multi-forming and separating unit, the KLSH 153 ConPro system turns into a high-performance line for cocktail products at up to 3,000 sausages per minute. In a continuous, endless production process, sausages in the calibre range of 13 to 28 mm and with portion lengths of 40 to 60 mm can be produced. Precisely separated and formed product ends are guaranteed, even at maximum production speed. The cocktail products can be transferred directly to freezer/frying tunnels.

[www.handtmann.com/food](http://www.handtmann.com/food)

## REX-TECHNOLOGIE - VACUUM FILLER & PORTIONING SYSTEMS

### Vacuumfiller 700 Series - Innovation & Perfection Set New Standards

The RVF 700 series has been developed to meet the requirements of the meat processing industry as well as and larger, sometimes highly specialised operating units. The housing, with its smooth and

hygienic design, is self-supporting and is made entirely of stainless steel to ensure efficient cleaning. The conveyor system has been designed in such a way that water can flow out of the feed system during the cleaning process.

The infeed systems ensure accurate portioning with maximum service

life. At the same time, all fillers are gently transported - i.e. without crushing, squeezing or tearing. The sectional view is clear and there are minimal air pockets in the meat. The vane cell feed system is available with 14, 12 or 8 vanes, or alternatively versions 14 and 12 are also available with blind vanes. Thanks to the



R VF 761-AKS 65M

newly developed lifting device, the hopper of the R VF 700 can be filled easily and without any mess. The hopper is available in different sizes (250 and/or 350 litres). The R VF 700 can always be equipped with a drive unit for the grinder due to the large machine stand.

**AKS 65M - Industrial Sausage Production**

*Fully automatic casing change for all artificial and collagen casings*

The linking and hanging technology from REX-Technologie stands for maximum flexibility. The process

solution is innovative with the highest productivity and flexibility for all sausages. Regardless of whether you are processing natural, synthetic or collagen casings, the hanging systems fill with exact portions at maximum speed.

The filling process is carried out by the REX vacuum filler. The product is gently conveyed via the vane cell conveyor and the residual air is evacuated to the maximum. This is the basis for the product quality of your sausages.

*Displacement System Defines The Portion Length*

The continuous vacuum filler fills the product into the casing. The displacement system defines the exact calibration point and, together with the highly dynamic REX servo drive, ensures an equal

length and maximum production output. Piece counts of over 2,500 pieces/minute are possible with artificial and collagen casings and up to 1,000 portions/minute with natural casings - always depending on the respective sausage length and diameter.

*Calibration Belts Ensure Exact Lengths*

The concept is completed by the two calibration belts that follow the displacer system. They can be easily adjusted to the calibre range by turning the two adjustment screws. This always ensures flexible use for all casing types with different casing diameters. In addition, set-up times are reduced to a minimum. The traversing movement and belt speed are automatically regulated by the easy to use touch screen system on the vacuum filler.

[www.rex-technologie.com](http://www.rex-technologie.com)



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# MEETING GLOBAL CHALLENGES WITH NEW TECHNOLOGIES

## Hydrosol and Planteneers on Continued Success Trajectory



### Meeting Local Needs with Individual Solutions

For this reason, this year for the first time the two sister companies invited their colleagues and partners to regional Sales Network Meetings in the different markets. The topics were focused on the respective key markets. In Dubai, Hydrosol and Planteneers presented new ideas for the Middle East and North African region and Asia-Pacific. In the Dominican Republic, Hydrosol presented profitable new products for Latin America. Economical recipes for fish and sausage products, dairy products and deli foods, as well as trend topics like healthy eating, were at the focus of attention. In Hamburg the focus was on solutions for the European and North American markets. The main topics were plant-based alternatives, including the many possibilities offered by the Plantbaser product configurator developed by Planteneers.

In addition to the specific market situation, consumer expectations, tastes and product preferences in the regions, participants presented special success stories, like using a Thermomix as a pilot “plant” for new dairy products in



With consolidated revenues of 764 million euros last year, the Hamburg Stern-Wywiol Gruppe again enjoyed double-digit growth. With 12 specialist facilities in Germany, 19 foreign subsidiaries, ten Technology Centers and production locations in nine countries around the globe, this owner-operated company group is one of the global players in food & feed ingredients. Two of the growth drivers in the group are the Hydrosol and Planteneers subsidiaries. For many years Hydrosol has been a leading international supplier of stabilizing and texturing systems, while Planteneers is one of the successful newcomers in the growth market for plant-based alternatives. Key factors for the success of both companies are intense research, the development of innovative technologies, a nose for coming trends, and closeness to customers and markets. “Closeness to the

market is crucial for us. It’s the only way we can offer customers the solutions they need and expect from us. Our innovations are precisely tuned to individual customer requirements,” said Dr. Matthias Moser, Managing Director of the Food Ingredients Division of the Stern-Wywiol Gruppe.

### Corona and Supply Chain Problems Change Commerce

The corona crisis and associated travel restrictions showed that many things can be accomplished online, and that travel is no longer absolutely necessary. Trends and needs have developed at different rates in different regions of the world, as have foods. Sustainability and climate protection, raw materials shortages and economical products - these trends differ in importance to producers, the trade, and consumers across different regions.



Latin America, the new generation of premium fish alternatives for the European market, and plant-based alternatives to classic breakfast cream in the Middle East / North African region.

### Helping to Shape Future Trends

“Challenges in raw materials sourcing, higher energy costs, the rising expectations of a growing world population regarding the flavour, appearance and quality of foods, and let’s not forget climate change and digitalization. The world is changing faster than ever before. But we nevertheless look optimistically towards the future,” said Dr. Moser. “With all the hurdles, we also see the opportunity to offer appropriate solutions to these major challenges through scientific and technical innovation.”

One example is “cellular agriculture” - making animal products from cells. “Both the cellular approach for making cultivated meat and precision fermentation for obtaining milk proteins give us opportunities to work with innovative raw materials and products in the future as well,” said Katharina Schäfer, Team Leader Product Management at Hydrosol. “Naturally there are challenges in the development of these future technologies, including scaling and consumer acceptance. But if they can be met, these technologies can make a major contribution to sustainable nutrition for the growing world population.”

Hydrosol and Planteneers are working hard on concepts with future potential, as Dr. Dorotea Pein, Director Food Trends and Innovations, explained at the Sales Network Meetings. At the focus of attention are ingredients like new proteins and enzymes, mega-trends like health and nutrition, and digitalization

and raw materials sourcing. “We’re confident that we’re looking at a promising future with many possibilities,” said Dr. Moser. “Food technology is one of the key technologies of the 21st century. I’m more convinced of it than ever.”

[www.hydrosol.de/en](http://www.hydrosol.de/en)  
[www.planteneers.com/en](http://www.planteneers.com/en)

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## LORYMA LAUNCHES E NUMBER - FREE ADHESION STARCH

### Native Wheat Starch Lory® Starch Saphir Pure Optimises Coating Stability



The clean-label, wheat-derived, native adhesion starch from food ingredients specialist Loryma stands out from other such products on the market because it is not modified and does not need an E number. Thanks to an innovative production process, Lory® Starch Saphir pure is as efficient as conventional modified starches, and provides optimum adhesion properties for all types of substrate coatings.

By simply declaring it as “wheat starch”, the adhesion starch meets current consumer preference for an easy-to-understand ingredient list without E numbers. This product is a superior version of Lory® Starch Saphir and replaces it in the Loryma range.

#### Adhesion for Air Bubble-Free Coating

Lory® Starch Saphir pure has excellent adhesion properties and forms vapour permeable films. This allows steam to escape through the coating, which binds optimally to various substrates such as meat, fish or plant-based alternatives. There are also no air bubbles or crumbling of the coating. Used as a functional ingredient in batter and tempura or as a pre-dust, Lory® Starch Saphir

pure provides a crispy surface while reducing fat absorption in the fryer. The wheat starch itself is neutral in taste and has a low viscosity, making it easy to use.

Dr Markus Wydra, Head of Research & Development Starches & Proteins at the Crespel & Deiters Gorup, was involved in product development and explains: “Until now, manufacturers have had no choice but to forego the use of adhesion starches and their associated benefits if they wanted to declare their product free of E numbers. With the introduction of Lory® Starch Saphir pure, however, we have developed a highly functional wheat-based solution that contributes significantly to a perfectly crisp breading.”

[www.loryma.de/en](http://www.loryma.de/en)

## FLAME-GRILLED, PLANT-BASED PERFECTION: RAPS LAUNCHES VEGAN CHICKEN ALTERNATIVE

### Plantfix Promises Easy Prep of Authentic Chicken-Style BBQ Delights



The Plantfix Chicken Style dry mix contains everything needed for a delicious meat alternative: textured pea protein provides the right consistency and anticipated light beige colour, while the specially developed chicken seasoning ensures authentic taste. Together with oil and ice water, it becomes a mass that can be shaped as desired. For example,

a barbecue show-stealer could be our vegan courgette skewer with chicken-style filling.

The RAPS Plantfix range perfectly addresses growing demand for plant-based alternative products thanks to its ease of handling and processing. In principle, no equipment is required for mixing with oil and ice water;

depending on the quantity, a mixer or cutter can be used. The mixture is then shaped into the desired form and cooled. The complete mixes are designed to form a meat-like texture during preparation and convince with a delicious chicken taste. What's more, they do not contain any declarable allergens or flavour-enhancing additives.

Plantfix Chicken is suitable as a basis for numerous products and variations. In addition to vegetable barbecue skewers, it is also easy to make a vegan equivalent to chicken nuggets. As a dry product, the Fix mixture does not need to be refrigerated, and the finished products have optimal freeze-thaw stability. This also makes for numerous creative applications for the food service sector.

In addition to the chicken variant, RAPS offers two other Plantfix options for alternative grilled delights. While the vegan burger patty is characterised by a spicy-smoky flavour with onions and pepper, the Plantfix Cevapcici promises fresh herbal notes with marjoram and thyme. All Plantfix mixes are available in handy bags and equate to about 2.5kg of the meat alternative.

Melanie Flachsenberger, Product Manager at RAPS, comments: "The right counter selection enables customers to do all their shopping for a barbecue in one go - even if there are guests with different dietary preferences. For summer barbecue skewers, chicken is a must-have, and the same goes for the vegan chicken alternative that can be made with minimal effort using our premixes."

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



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## QUPAQ SETS A WILD WORLD RECORD AT INTERPACK 2023

Following several months of intensive preparation, the tray denesting specialist, QUPAQ, achieved an official world record by denesting 1,094 trays in just 60 seconds at the world's largest packaging fair, Interpack in Düsseldorf. The purpose was to increase focus on innovation in the food industry.

Typically, a tray denester for food packaging runs 50-60 trays per minute. If higher speed is needed, you will expand the production line with an additional tray denester.

Therefore, it really caught the attention of the food packaging industry when QUPAQ, the market-leading provider of tray denesting solutions, announced that they, at Interpack 2023, would engage in the ultimate stress test of the tool's reliability: Setting an official world record by denesting at least 1,000 trays in just one minute. One tray after another, using only one single tray denesting tool. At QUPAQ, they have long believed that they make the fastest denesters in the world. On Friday, 5 May, they made it official by running a total of 1,094 trays in a minute. That is 18,23 trays every second!

"Many people in the food industry know our product brands, Inray and Anytray, and now the definitely also know QUPAQ which is the



result of a merger between Intech International and Carsoe in 2021. With this achievement, we send the message that we truly are the leaders in denesting innovation", says marketing manager Jesper Johansen from QUPAQ.

### Let's Keep Pushing the Boundaries of Innovation and Efficiency

The purpose of the world record attempt was to raise awareness of innovation in the food industry, which faces the enormous challenge of feeding a growing global population. Here, automation technology will be able to help increase efficiency.

"Who needs 1,000 trays per minute? Currently, no one. Until they do. That is how innovation work: You push the limits, learn, and refine. That is the message we want to promote with this world record attempt. We want to appeal to all tech companies in the food industry to push the limits of what

is considered possible in all stages of the value chain," says Jesper Johansen.

Ahead of Interpack 2023, QUPAQ went through months of intensive preparation. The world record attempt was carried out by a standard Inray Smart Servo with a Smart Tool installed. QUPAQ added additional sensors to the setup, changed the gearing to increase speed and reinforced the Smart Tool to reduce wear. The engineers also innovated the design of the rotating tool that separates the trays to make it even more efficient. The trays used for the attempt were ultra-low stack.

"Denesting more than 1,000 trays flawlessly in just 60 seconds is the ultimate stress test. It pushes our mechanics and software to the limit. Preparing for this attempt, we have learned quite a lot which we and the food industry will benefit from in the future", says Jesper Johansen.

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



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# SEALPAC'S AMAX TRAYSEALERS: VERSATILE IN APPLICATIONS AND MATERIALS, CONSISTENT IN PERFORMANCE AND EFFICIENCY

When it comes to the SEALPAC Amax-series traysealers, the name says it all. Based on decades of experience in tray-sealing, they have been designed to achieve previously unattainable, maximized results in terms of productivity and efficiency. These machines are characterized by their economical use of energy and particularly low-wear design. This reduces maintenance costs and increases their availability in the production area. Each Amax traysealer reliably processes a wide variety of trays and film, including today's resource-saving combinations.

## Maximum Performance, Flexible in Use

Our latest generation of SEALPAC traysealers, the Amax-series, sets new standards in performance. Subject to the application, these state-of-the-art machines achieve up to 50% higher outputs. Depending on the selected model (A4max to A10max), they will seal up to 196 trays per minute under modified atmosphere. Next to traditional



SEALPAC Amax traysealers reliably process a wide variety of materials that stand for more resource conservation and optimal recyclability, including paper-based skin packaging.



MAP and TraySkin® packaging, these flexible traysealers can handle particularly innovative packaging solutions that stand for more resource conservation. For example, they process ultra-light trays, the weight of which has been reduced by 20 percent compared to conventional MAP trays. Hybrid packaging concepts with a reduced plastic and high cardboard content, such as eTray®, FlatSkin® or FlatMap®, can also be handled by the SEALPAC Amax traysealers. At request, we offer you an all-in-one solution, which allows you to run all these concepts on the same base machine.

## Focus on Sustainability, Also in Machine Construction!

In times of high energy costs and rising raw material prices, the Amax-series offers a highly efficient operation. Next to their economical consumption of materials, they are characterized by their particularly compact and at the same time low-wear, low-maintenance design. SEALPAC Amax-series traysealers are driven by reliable servo motors, which ensure smoothest production runs. The integrated EnergyManager adjusts the line speed to the actual tray feed, to keep energy consumption as low as necessary.

By using servo technology, the air consumption of the Amax traysealers was reduced by up to 90%. However, SEALPAC not only stands for more sustainability in terms of energy use, but also allows the existing tools of the SEALPAC A-series to be used on the new Amax-series traysealers. This saves production costs and space.

## Smart Features, for Digitized Production Environments

The high-tech Amax traysealers are tailored to the needs of Industry 4.0. and offer all the necessary prerequisites for comprehensive digitization of industrial production. The operating data are available in real time and accessible from any location via internet connection. Furthermore, each model within the Amax-series is equipped with the innovative iMode control. It manages the speed of the entire process according to a simple principle: the number of packages to be sealed per minute, as specified by the operator. This determines the speed of all subsequent processes. The result is an increasingly optimal packaging process, which, if necessary, extends to the maximum physical limits set by the product and the packaging materials.

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



The Loma team was particularly proud to exhibit its new X5 SideShoot - a side-view X-ray system for food inspection, suitable where the food in packaging is taller than it is wide. The side-view X-ray system features a 150 mm wide belt, with a 270mm aperture and is capable of offering excellent detection of an extensive range of contaminants, including all metals, glass, stone, rubber and dense plastics, plus, within multilayer products, you can determine the layer in which the contaminant entered the process. Loma was also proud to introduce

## LOMA SYSTEMS® SHOWCASED MULTIPLE 'CHECK & DETECT' SOLUTIONS

a new product into its Pipeline portfolio. The X5 Pipeline range now includes a new 4" option. Perfect for inspection of pumped and free-flowing applications such as large-formed hams and gammons, this product complements the Pipeline family, which is already available with product pipes of 2.5 and 3", all offering excellent detection across a wide range of contaminants.

For those applications demanding the ultimate in cleaning efficiency, Loma's IP69 rated IQ4 RUN-WET® Metal Detector Conveyor was on display, as their CW3 RUN-WET® Combo System, a fully IP69 rated checkweigher and metal detector system designed

following industry-leading hygienic principles, for simultaneously detecting metal contaminants and reducing giveaway in food products. Both systems provide quicker and easier cleaning and are perfect for inspecting a wide variety of food products, including retail-packed convenience food/Food to Go and much more, where bacterial contamination is a risk.

Finally, Loma also showcased its data capture software, TRACS (Trending - Reporting - Analysis-Capture-Software), a graphical reporting tool, which runs over a network and captures data from connected machines for analysis and reporting from a remote computer.

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



Anritsu Ltd, global manufacturer of inline product detection and inspection equipment, has launched a line of brand-new class-leading inspection equipment which

## ANRITSU LAUNCHED EXCITING NEW INSPECTION EQUIPMENT

significantly improves contaminant detection and surpasses strict worldwide hygiene protocols.

First, the XR75 DualX+ is the latest innovation from Anritsu. DualX+ is a next generation Photon Detector technology, with specific algorithms for fish and poultry too - the images are meaningfully sharper, delivering superior detection capabilities and lower false rejection rates. Contaminants on the targets are clearly displayed and identified by the shadows they cast and foreign bodies are more readily identified too, even ones that are smaller and thinner in shape, such

as small fish bones, small poultry bones and fine metal fragments.

Another new Anritsu invention launched was the IP69K sanitary x-ray. Built in the ever-popular XR75 platform, it offers the XR75's reliability, ease of use and low cost of ownership in a robust, compact footprint. This hygienic solution with IP69K IP rating is specifically designed for inspection systems that go in the processing area of a production line - as opposed to the packaging area. The model meets and exceeds high-pressure washing and sanitary requirements for meat or wet products in Americas and Europe.

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



**Q: What was your focus at Interpack 2023?**

**A:** Sairem focused on 2 main applications at the Interpack namely: Packaged products and Food safety. Within Food safety, the following topics were covered: decontamination and pasteurisation.

**Q: What are your latest achievements in terms of digitalization and automation?**

**A:** Sairem has adopted an Industry 4.0 approach. Generators are available as standalone solutions or can be integrated into complete systems as required. The advantage that Sairem offers with their connected generators is the ability to assist clients remotely in a timely manner.

**Q: How do you tackle food waste? How does your equipment help manufacturers avoid unnecessary product and packaging waste?**

**A:** The main approaches that Sairem utilizes in order to reduce food, packaging and product waste are as follows:

- Flexible production: plug & play equipments, in order to produce exact quantities of desired product.
- Reliable and reproducible processes to ensure the same quality output every time.
- Improved preservation of organoleptic properties



Christina Frohm Kramer -  
Business Development Manager (Food) at SAIREM

**Q: What's your company's approach to sustainability? How can the circular economy play a part in a sustainable future?**

**A:** It is important to us at Sairem to ensure a sustainability approach. We have a number of methods (as listed) in place and continue to research and develop more ways to help towards a sustainable future.

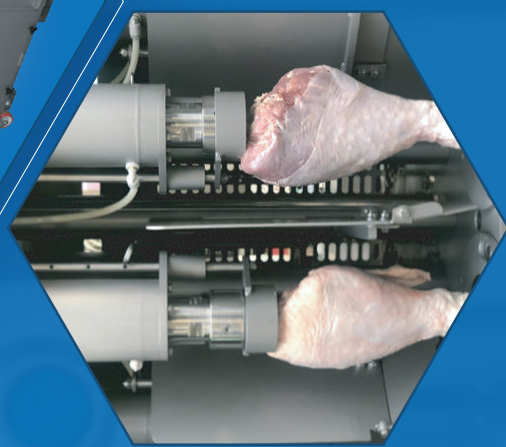
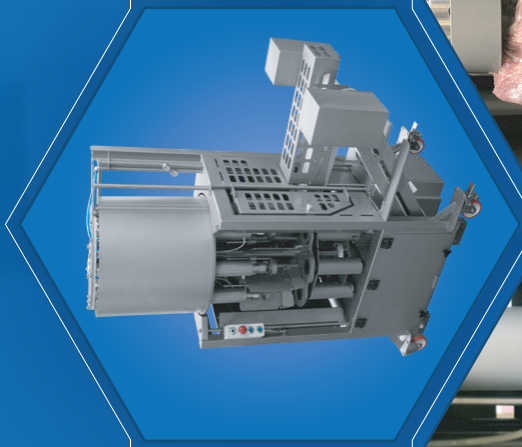
- Reduction of energy consumption

- Reduction of CO2 emissions
- The production of equipment which is 100% electrical
- The reduction of unnecessary packaging
- Innovation as a catalyst to drive processes which are founded on recyclability using Sairem's cutting edge technology
- Membership of associations focused on climate awareness and electrification within the industry.

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



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Marcel Veenstra

Marketing & Communications Manager at Sealpac International

**Q: What was your focus at Interpack 2023?**

**A:** In Düsseldorf, under our motto “GO sustainable!”, we presented our powerful and efficient traysealers and thermoformers, which meet the requirements of Industry 4.0. Whether it concerns our entry-level model or high-performance class, each of these energy-efficient machines produce attractive packs that combine maximum product safety with a particularly economical use of materials. Furthermore, we inspired the audience with our Supermarket of Innovations, where they could find an exciting selection of products in creative packaging concepts from all over the world.

**Q: What are your latest achievements in terms of digitalization and automation?**

**A:** At Interpack 2023, we demonstrated that SEALPAC’s high-output traysealers and thermoformers are fully prepared for Industry 4.0 environments. They are easily integrated into line control software, for example by using OPC-UA. As such, they provide the end users with a

detailed and systematic collection of their operating data in real time. By doing so, SEALPAC supports the line control software used to record comprehensive data for each connected piece of equipment, such as the status of operation, maintenance requirements, machine settings, and stops carried out. In addition, it allows for a complete overview of the line performance, errors occurred, and program changes by operators. The ability to measure the cycle count of individual tools, which are used on different traysealers, is one of SEALPAC’s special features. Overall, the complete documentation of data and its representation in real time will support those responsible in planning their processes even better, counteracting possible production disruptions in advance, further improving the line’s availability, and exploiting optimization potential.

**Q: How do you tackle food waste? How does your equipment help manufacturers avoid unnecessary product and packaging waste?**

**A:** SEALPAC has been a proud member of the SAVE FOOD initiative for many years now. At Interpack 2023, we participated in the SAVE FOOD Highlight Route, showing visitors how we can support them on this matter. For example, we are continuously developing innovative packaging solutions that reduce food waste, such as modified atmosphere packaging, skin packaging, and portion packaging. Food waste has many different reasons, but an important one is the mismatch between the amount of food inside



the pack compared to the actual need of the consumer. Especially with the number of single-person households and smaller families growing across the globe, this issue has become ever more evident. SEALPAC offers numerous solutions for packaging fresh food items in smaller portions. Each portion is reliably sealed and therefore available on demand, hence resulting in less waste of food.

**Q: What’s your company’s approach to sustainability? How can the circular economy play a part in a sustainable future?**

**A:** When it comes to food, it is almost impossible to do without plastic. That is why our motto can only be: as little plastic as possible, as much as necessary. We support our customers in the food industry by reducing the thickness of plastic used in packaging, by allowing for packaging made out of mono-plastics, and by introducing hybrid solutions, such as our latest FlatSkin®, eTray® and FlatMap® systems, which have a paper base and thin plastic liner or inlay. In case of hybrid solutions, we enable the consumer to separate the individual materials after use. By throwing these materials away in their appropriate waste streams, recycling is made easy. However, sustainability not only applies to the packaging itself, but also to the equipment. We recently launched our latest generation of Amax-series traysealers, which are capable of packaging any kind of food product at highest speeds and with minimal energy consumption. [www.sealpacinternational.com](http://www.sealpacinternational.com)



Giulia Antonelli -

Marketing & Communications Manager at  
Coligroup Spa

**Q: What was your focus at Interpack 2023?**

**A:** During Interpack, we launched the new printing solution JPrint 44UDV. Entirely designed and built by Alfaservice, a company of the Group, specialized in printing solutions, it allows our customers to say goodbye to the warehouse stocks of countless and expensive pre-printed reels. We are talking about a high-resolution digital color printer (four-color process CMYK) JPrint 44UDV: flexible, the printing quality is consistent and it allows to get a wide range of colours. It prints on plastic and paper film reels every kind of logo, picture, text, code or number, developed in complex printing layouts. The process is very simple: it is sufficient to upload to the panel the necessary images and artworks in order to obtain a very high-quality printing up to the resolution of 600x1200 dpi. Very often food manufacturers have to deal with

different brands and recipes, that require different kinds of graphics and consequentially dedicated pre-printed films. JPrint 44UDV makes all small-scale productions, market tests, niche products or the monthly promotions within everyone's reach.

**Q: What are your latest achievements in terms of digitalization and automation?**

**A:** We developed LISA®, a patented software for the integrated management of production in the "Industry 4.0" environment to intervene remotely to minimize unexpected machine downtime. This is enabled through real-time control of spare parts, management of maintenance and continuous monitoring of the machine's vital parts. Integration to the customers IT system for work orders acquisition and processing all the data and specifications that contribute to the quality of the final product. Thanks to the LISA® software package all process data can be stored and made available.

**Q: How do you tackle food waste? How does your equipment help manufacturers avoid unnecessary product and packaging waste?**

**A:** THERA series thermoforming machine represent the highest level of Italian technology, experience and reliability. This allows to produce final packages which are safe and can enhance product shelf-life preventing food waste, moreover, they are 100% custom design so the amount of plastic

used is the minimum necessary. Thanks to our Special systems for vacuum and gas injections, the machine produces only 10mm lateral scraps and only on bottom film, with a consequent COST AND WASTE SAVINGS on packaging material.

**Q: What's your company's approach to sustainability? How can the circular economy play a part in a sustainable future?**

**A:** We believe that the quest for new environmentally sustainable technologies is one of the first goals that modern companies should have. This is because protecting the environment is the duty of us all. WEBSKIN is our answer to the need of creating a recyclable and ecological package, without compromising the cost of the product to the final consumer. The WEBSKIN packaging process combines the efficiency and hygiene of the thermoforming process with the packaging design flexibility of tray sealing while optimising the usage of plastic material. Colimatic WEBSKIN uses a very high-quality cardboard bottom with a plastic percentage of less than 10% and is therefore totally recyclable in the paper; the lid (top) is separable and can be recycled in the plastic circuit, reducing the impact on the environment. The tray is made from a reel, with printed and customizable graphics, thus eliminating the costs of manufacturing, storing and managing pre-cut cardboard blanks.

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

# HOW SUSTAINABILITY IS CHANGING THE PACKAGING AND LABELLING INDUSTRY

By Nadina Korthäuer

Everyone knows the bananas on the supermarket shelves, each one individually labelled with the typical round label of the manufacturer. A naturally grown product that does not require any packaging due to its natural protection. But who has ever taken care to remove the label from the skin of a banana before disposing it in the organic waste? After all, apart from the fact that the banana peel is compostable, the label used for it is by no means compostable. Neither in an industrial way nor in the usual household way.

This is exactly where the basic question of the sustainability of products and packaging materials begins. If this idea is applied to the meat industry, the requirements become even more complicated than for the classic banana.

Meat products have to be packaged for protection against external contamination, but also for a consumer-oriented shelf-life. Thanks to the packaging, we have been used to store our meat at home for up to 14 days in the refrigerator, so that we can access it easily at any time. Current packaging technologies make this possible, no matter whether it is MAP packaging, shrink packaging, skin packaging or stretch packaging. The types of packaging certainly vary according to the shelf-life of the product, but they all ensure an extended shelf-life of the product. However, in the course of packaging optimizations in recent decades,

less attention has been paid to the sustainability of the materials and the current, worldwide eco-balance teaches us that an urgent rethink is necessary. In the future, packaging for fresh products such as meat or poultry must be



Nadina Korthäuer

*Director Marketing & Business Development  
at ESPERA-WERKE GmbH*

designed to be more respectful of the environment and reduce waste. Almost all European supermarket chains have now made the same commitment with the goal of reducing the current EU annual packaging waste per capita of 226 kg by a significant amount. The packaging industry must follow suit and develop environmentally friendly materials as quickly as possible, which can also continue protect products against external influences and offer the well-known shelf-life to the consumer.

In the meantime, there are types of packaging on the market that produce significantly less plastic packaging waste or even enable complete compostability.

But what does compostability mean? A clear distinction must be made between industrial compostability and household compostability.

Industrial compostability is currently governed by the best-known standard, EN 13432, according to which packaging must not exceed certain limit values for heavy metals and other elements. Furthermore, at least 90 % of the plastic mass must convert into carbon dioxide within 180 days and after 12 weeks no more than 10 % of material fragments are allowed to be larger than 2 mm. Finally, the standard requires that biological treatment does not deteriorate the quality of the compost. This is checked by a standardized plant growth test on the compost containing the biodegraded plastic in comparison to its growth on "normal" compost. If these guidelines are followed via an industrial composting process, packaging is accepted as "compostable". In addition to industrial compostability, there is also household compostability, as known from household composting stations.

But no matter whether the industrial or the household compostability is set as a benchmark, any packaging is only as good as its label. The label on a package serves as a clear product description, and as a definition of product characteristics such as nutritional values, allergens, best before dates, recipe instructions or origin

information. Labelling - and thus uniform - declaration of products is legally binding and indispensable, therefore especially in the fresh food sector, every product packaging must be provided with one or even several labels. This results in the fact that each packaging is compostable only if its label is. If you choose sustainable packaging and apply a classic, non-compostable label to it, the entire sustainability approach of the packaging is gone, because

you cannot expect the consumer to remove the label before disposing of the packaging.

**Compostability is therefore assessed on both materials, packaging and label.**

In an EU project ESPERA has extensively analysed compostable packaging materials in combination with compostable ESPERA labels. Also, the processing ability of both, compostable packaging materials



and compostable labels have been tested within this EU project in combination with automatic packaging machines and automatic labelling machines. The ESPERA labels are a composition of a compostable NatureFlex™ backing paper and a compostable BioTak® adhesive. Important aspects of the analysis were the adhesive behaviour of compostable labels on the compostable film and the processability of compostable labels with automatic labelling systems. Important focus questions to give ground to the project were: How do compostable labels behave in comparison to classic, non-compostable labels? How is the printing quality and durability of the print on compostable labels? With a product shelf-life of up to 14 days in different temperature environments, the label must remain perfectly legible on the day of consumption, even at freezing temperatures.

**In the future, we all need to think outside the box and understand upstream and downstream production processes in order to think sustainably.**

The results show that compostable packaging materials and the bio labels offer a perfect alternative to conventional film and labels. Both, the processing with fully automatic packaging and labelling systems and the printability of the labels is optimal at all temperature ranges, even at freezing temperatures. And even at different printing speeds, we get the same printing quality as conventional, non-compostable labels.

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## NEW STERILIZATION RESISTANT RESUCAT® 210-29 UV LED INKS

We at Resino Inks previously described our opinions about good reasons to replace traditional UV curing print by LED UV curing print. That describes environmental advantages, Minamata convention legislation & lamp difference details.

### RESUCAT® 210-29 UV LED SETTING THE STANDARD

RESUCAT® 210 series inks from Resino are known for its high demand features such as boiling & sterilization resistances, excellent adhesion to polyamide, high quality print and a low risk of migration which made the product attractive to customers for printing on sausage casings and food packaging.

Through several years Resino Inks has provided customers with a safe and healthy line of printing ink. The RESUCAT® 210-29 series is built on all the best properties from our well-known RESUCAT® 210 series and has been adjusted with LED curing principles. It is a further development of a known and thoroughly tested technology which has proven great results.

Furthermore, the colors of the 210-29 series have extremely low odor, fast curing and energy saving.

We notice some label UV LED printers are discussing "Dual-cure" inks, where the ink can

is that ultimately all future UV colors from Resino will be UV-led curable.

“Our aim is to help more printers to switch to UV LED –  
Thereby heading towards a more sustainable environment and a healthier work environment”

*Kristian Karlsen, R&D Director at Resino*

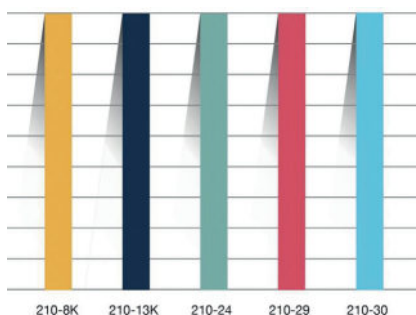
cure using traditional mercury lamps or LED lamps.

RESUCAT® 210-29 series also can be cured by traditional mercury lamps and LED lamps and therefore may be referred to as "Dual-cure" inks. The aim

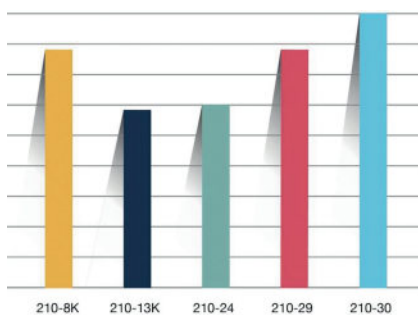
#### Benefit for Businesses

The LED technology comes with a lot of technical advantages and is more energy-efficient than traditional UV lamps. LED is better for the environment, it is cost effective and produces

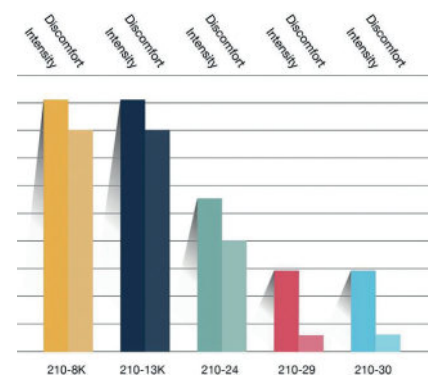
Tape/Scratch/Boiling Resistance



Price levels



Odor level





GREENER  
CHEAPER  
BETTER

low odor print of same high quality as traditional print with other RESUCAT® 210 inks.

With the RESUCAT® 210-29 series it is possible to use both 395nm and 405nm lamps. The

395nm can be used on all the print stations (White, colors & varnishes), whereas the 405nm provides increased performance for the white station, because the white pigment absorbs less UV light above 400 nm.

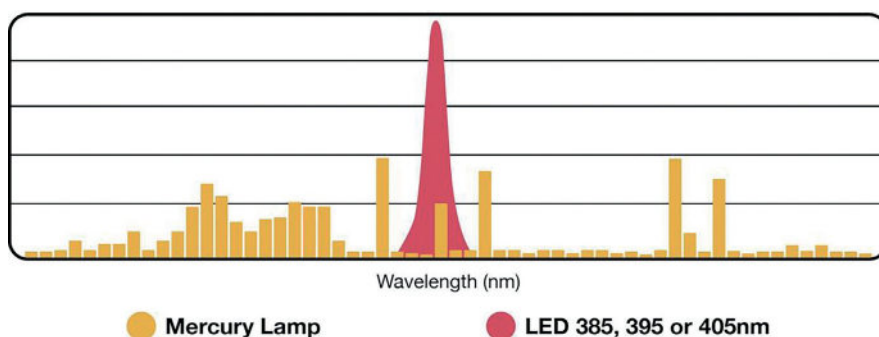
### Intensity

LED is more efficient, because of the higher intensity peak at a narrow wavelength spectrum. This enhances the absorption in the print and increase curing, enabling faster printing speed.

Also, the UV LED system provides more predictable and controllable curing which creates stability for the customer. In this way, the customer can also achieve a more constant quality.

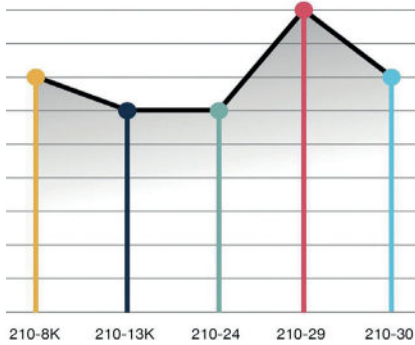
The faster printing speed has been confirmed during trials at several customers.

Extremely high UV intensity at 395nm





Price levels



Customers have confirmed the end use performance and fast-curing speed. We are already supplying regularly in the marketplace and have further approvals pending delivery of the LED UV press.

### Food safety

The LED UV ink series is designed with a raw material selection to

maintain the food safety and migration characteristics as obtained with other RESUCAT® 210 ink series.

This has already been confirmed by a 3rd party institute for a customer who has fully approved the system and has printed full scale since April 2023.

### Environmental Advantages

An environmental benefit of using UV LED lamps is that the technology supports phasing out of the traditional UV mercury lamps and thereby contributes in the transition to a mercury-free and sustainable environment.

For the work environment, UV LED also contributes to eliminating

# RESINO

the emission of ozone, which is known from traditional lamps and comes with the unpleasant "chemical smell."

### Your needs?

The RESUCAT® ink range is also suitable for flexible packaging, including shrink sleeves, shrink bags, retort & wet sterilization resistant print and much more.

We are happy to assist in your process around UV LEDs and how it can be implemented by your business.

[www.resino.dk](http://www.resino.dk)



## Efficient technologies for ham production

From brine preparation and injection to efficient massaging technology – the networked production steps enable the fully automatic production of cooked ham with consistently high quality.

The result is excellent value for the consumer and increased sales and profitability for the manufacturer.



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# MASTERS OF PET, CHAMPIONS OF RECYCLABILITY: AMB PET PACKAGING INNOVATIONS FOR A SUSTAINABLE FUTURE

AMB Spa, headquartered in north-east Italy, is one of the leading international suppliers of sustainable solutions for rigid and flexible films and an innovator in recyclability. The company uniquely offers an 'all in one place' approach that includes all aspects of the packaging process: design, tooling, product specification, film production, print design and application. For many years, it has pioneered and mastered PET solutions to drive recyclability in packaging.



AMB TotalMono PET - high barrier protection for sensitive foods

## 360-Degree PET Expertise

AMB has long invested in PET, believing that the material is the best solution for circularity within food packaging. The company deploys state-of-the-art technology to ensure that its PET products perform consistently and meet precise specifications for colour, surface, thickness, formulation and function: high-tech manufacturing makes AMB the industry leader in PET solutions. In addition, all manufacturing processes are as sustainable as possible to conserve resources and raw materials. Taken together, all these aspects enable the company to offer total PET packaging solutions with the strictest specifications for product protection, performance and sustainability.

### Mastering Tray-to-Tray Recycling with AMB TrayRevive

To create its innovative TrayRevive product, AMB partnered with

B. For Pet, a major Italian recycler. This collaboration ensures that post-consumer trays can be processed to produce rPET flakes for food packaging. AMB TrayRevive utilises post-consumer trays which are broken down into flakes and then used to manufacture a tray-to-tray product. The raw material undergoes a strict process of analysis - it is checked for contamination, and the quality of the flakes is evaluated to make sure that they are of food-grade quality. This investment in recyclability enables AMB to rightfully claim that TrayRevive closes the loop of the circular economy.

### Mastering End-to-End Sustainability with AMB TotalMono PET

Using 100% mono PET solutions for both top and bottom films has many benefits. One of the main advantages is that the lower thicknesses of AMB TotalMono PET compared to multilayer

products means less plastic is needed for production, which leads to a reduction in material waste. Additionally, the lightweight nature of AMB TotalMono PET also contributes to energy savings. Less space is required for transport, which results in fewer trucks on the road and less fuel consumption. This helps to reduce carbon emissions and promote more sustainable practices within the industry.

Another key benefit of AMB TotalMono PET is its high barrier protection for sensitive foods, which can help to extend their shelf life and reduce food waste. By reducing food waste, we can ensure that sustainability is not only achieved during the production process but also on the shelf.

Overall, AMB's 100% mono PET solutions are an excellent example of how sustainability can be integrated into packaging production while also providing performance benefits.

### Innovation and Customer Service in its DNA

AMB's team of experts are always looking to collaborate on forward-thinking ideas. To facilitate this,



Jamie Davies,  
Market & Communications Director of AMB

the company recently launched an innovation programme with Skipsa, a provider of advisory services and management platforms that allows enterprises to structure and manage their innovation initiatives in one place. Through the platform, AMB intends to collaborate with start-ups that are developing cutting-edge solutions for sustainable packaging, smart packaging, and shelf-life quality. "From day one AMB's drive for innovation has been key to our own growth and to the success of our customers," says Jamie Davies, Market & Communications Director of AMB. "This drive is backed up by a sales team that has a proud track record of finding the right solution for every application; by expert technical support that ensures customer products meet exact specifications, and by customer service representatives, who respond to every request and ensure deliveries are always made on time."

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



Online auction machinery for the food industry in Kapelle (NL)



Online auction machinery for the food industry in Wiśniewo (PL)



Online auction machinery for the food industry due to bankruptcy Food for Progress in Mölnlycke (SE)



Online auction poultry slaughterhouse and machinery for the food industry in Kaisiadorys (L)



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# INFINITY TOPSEAL™ FROM SEAL PACKAGING ADDS SUSTAINABLE SOLUTION FOR FOODSERVICE CATERERS

**“Infinity TopSeal from Seal Packaging Represents the Future of Sustainable Packaging for Food-To-Go.”**

Seal Packaging has introduced Infinity TopSeal™, a revolutionary and sustainable solution for food delivery businesses and foodservice caterers from restaurants to pubs and garden centres to the healthcare sector.

Last year, Seal Packaging was acquired by experienced industry professionals Kevin Curran and Sally Gabbitas, as a vehicle to launch new ranges of innovative and sustainable packaging. Their stated aim is to help their clients achieve net zero by ensuring the sustainability of its products’ raw materials, usage, and end-of-life, to protect the environment.

“At Seal Packaging, our mantra is ‘Packaging with Integrity’ and

we are always seeking sustainable solutions which deliver as many operator and end-user benefits as possible,” says Kevin Curran.

## The Future of Sustainable Packaging for Food-to-Go

“Infinity TopSeal is a truly revolutionary packaging solution, which ticks so many boxes. Available with single or double compartments, these microwavable fully recyclable trays keep food hotter for longer, while staying cool to the touch. They weigh less than traditional sealable options - as the material they are made from is over 60% air - and they therefore have a low carbon footprint. In short, Infinity TopSeal from Seal Packaging represents

the future of sustainable top-seal packaging for food-to-go.”

## Mono-Material

Infinity TopSeal is a mono-material foodservice packaging solution, and is therefore 100% recyclable. The tray is made from expanded polypropylene (EPP), and the heat-sealable film lid is made from polypropylene film. EPP was developed by Klöckner Pentaplast (KP) - a global leader in materials manufacturing, headquartered in Luxemburg, with 31 facilities worldwide.

“We are pleased to have partnered with Klöckner Pentaplast, as they are one of the most proactive and innovative materials manufacturers on the global market,” says Kevin Curran.

EPP is a sustainable replacement for expanded polystyrene (EPS) which was the favoured material for making takeaway food trays and clamshell burger boxes for many years. Many retailers have already ceased using EPS and from October this year, in England, all foodservice packaging made from EPS will be banned, while a ban applied in Scotland since June 2022.

Easy-to-use, and a drop-in replacement from rigid PP containers, Infinity TopSeal can be used with existing sealing equipment, so requires no additional investment.



*Infinity TopSeal™ from Seal Packaging represents the future of sustainable top-seal packaging for food-to-go.”*

## Secure Delivery of Takeaway Food

Infinity TopSeal is ideal to use for food delivery businesses. EPP has exceptional insulating properties - keeping food hotter for longer by more than 10°C, compared with alternative packaging solutions. It has a low heat transfer rate, retaining heat inside the packaging while keeping the outside cooler to the touch.

As a plastic, this packaging is naturally water-resistant with no need for extra coatings or additives to keep it stable and robust to maintain food quality. It also offers best-in-class resistance to the acids, alkalis and hot oils found in many foods and sauces. This quality helps food retain heat and cuts down the risk of leakage and odour transfer.

Sealed at source, Infinity TopSeal also provides perfect tamper-evidence, which guarantees food security and delivery integrity. It ensures hygiene and eliminates the potential for tampering or



*Infinity TopSeal™ from Seal Packaging delivers perfect tamper-evidence, which provides food security and reassures customers.*

product loss during delivery, which reassures customers and protects a food outlet's reputation.

## Reducing Food Waste

"Using Infinity TopSeal from Seal Packaging can also make a significant contribution to reducing food waste," says Sally Gabbitas.

"In factory and office canteens, at the end of each meal service, caterers can now hygienically portion and seal left-overs to freeze and use later, while in educational establishments, portioned left-overs can be sealed and sold to students. In healthcare, Infinity TopSeal enables the creation of diet- and allergen-safe meals in bulk which can then be portioned, sealed and chilled or frozen for later use.

## Communicating Benefits

"We are so proud of this innovative and unique sustainable packaging solution," concludes Kevin Curran. "We launched Infinity TopSeal at the Hotel, Restaurant and Catering Show at ExCel in March and the reaction has been really exciting, with dozens of operators wanting to introduce it as soon as possible. We know that they'll want to share all the positive benefits with their end-user customers, and to ensure that consumers understand their role, the packaging is embossed with the phrase 'Recycle Me'."

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



*Infinity TopSeal™ from Seal Packaging can be used with existing sealing equipment, so requires no additional investment.*

# PLANT-BASED MEAT: THE BAMBI FACTOR

By Henk Hoogenkamp, Protein Applications Expert

In the US market, it appears that the initial excitement surrounding plant-based meat has subsided. Various plant-based meat formats, such as burgers and sausages, are experiencing a decline in net data revenue in 2023 compared to the previous year.

Even during the peak summer BBQ season, repeat sales of plant-based meat products have slowed down, giving carnivorous consumers an opportunity to reclaim their market share. Beyond Meat and Impossible Foods

when explaining the rise of the plant-based category. As early as 2001, the author of this article (book "Soy Protein & Meat Formulations" by DuPont Protein Technologies) highlighted the correlation between girls entering puberty and their heightened sensitivity towards animal cruelty, often triggered by their first menstrual cycles. These girls tend to form an emotional association between the "redness of beef" and their own bodily changes, leading to a reluctance to consume meat, particularly beef.

outgrow these emotions, a considerable number permanently switch to plant-based meat and continue these dietary preferences into college and adulthood.

During this period of transition, the girls' mothers also start empathizing with the rationale against animal cruelty to maintain a bond with their daughters. Interestingly, many of these girls do not exhibit the same emotions when consuming meat that is not visually identifiable, such as in burritos, lasagna, or pizza toppings.

The Bambi Factor poses a challenge for the (red) meat industry as it erodes a significant consumer base. On the other hand, for plant-based meat companies, it presents an opportunity for marketing to build long-lasting awareness and establish strong relationships with their present and future consumers as these girls' progress in life.

## Down from its Peak

Analyzing sales data reveals that the repeat purchase cycle for plant-based meat products is too long. This means that meat-free dietary choices have moved to the back of consumers' minds, resulting in a reduced inclination for routine or impulsive purchases. To support this point, let's examine the food preferences of American consumers in 2023:

- 78% are carnivores with little or no intention of changing their dietary behavior.



and others, have been heavily affected by the decrease in sales, leading to consolidation and even the disappearance of branded plant-based meat products from grocery shelves and fast-food menus.

## Arguing with Emotion

A hidden factor behind the shift towards plant-based meat is the experience of young girls going through puberty. Marketing experts and financial analysts have previously overlooked this dynamic

Parents often find it challenging to discuss dietary changes and the elimination of meat with their pubescent daughters. It often is a "Mission Impossible", so to say! Logical arguments fail to resonate, especially when emotions come into play. The empathy felt towards animals being killed for consumption is a perspective that cannot be easily countered with intellectual reasoning. This significant phase in a young girl's life is now referred to as "The Bambi Factor." While some girls

- 1% are vegans.
- 1% are vegetarians.
- 2% are pescatarians (consume fish).
- 8% prefer white meat only (often due to beef aversion).
- 9% are flexitarians (reduced meat consumption).

In 2023, the meat substitute market in the US is projected to reach around US\$1.5 billion, nearly triple the value in 2012. While these numbers reflect impressive growth, the market has largely plateaued due to the reluctance of flexitarian consumers to regularly purchase plant-based meat products.

The price comparison between ground beef and plant-based alternatives, such as ground plant crumbles or mince used in burgers or sausages, still favors traditional beef. Although many shoppers claim to occasionally buy plant-based meat products, reality shows that most consumers prioritize their wallets over noble intentions related to reducing methane emissions and combating climate change.

Although products from Impossible Foods and Beyond Meat consistently perform well in taste tests, they do not significantly expand the category, especially as these brands penetrate deeper into retail and food service distribution channels. In the retail grocery sector, the main challenge seems to be the lower household penetration in relation to repeat purchase rates.

Due to multiple product extensions, including vegan pizza, crumbles, jerky, and fish alternatives, coupled with various food distribution channels, profitability for plant-based meat companies remains mostly negative. Even in the

fast-food market, plant-based meat companies have yet to create a burger that truly stands out on the menu and entices carnivorous consumers to give it a try. The unsuccessful US launch of the McPlant burger serves as an illustrative example of how challenging it is to persuade carnivores to embrace a plant-based alternative.

### Repositioning Strategy

Considering the overall food landscape in the US, approximately 20% of consumers are potential targets for plant-based meat products, which is a significant number that can drive sales. However, it seems that flexitarian consumers, pescatarians, and white-meat-only consumers are not loyal to plant-based alternatives but instead base their choices on price. More often than not, traditional animal-based foods win their preferences.

It appears that the “veggie burger” category has reached its saturation point, and plant-based meat companies cannot rely solely on this segment to significantly boost sales. Ultimately, the landscape of meat aversion does not necessarily translate into consumers being willing to pay a premium for the sake of the environment or presumed health benefits.

In retrospect, some plant-based meat companies aggressively expanded their product portfolios in both food service and retail markets to generate additional cash flow. Moreover, their rapid international expansion and pursuit of strategic prestige, as demonstrated by Beyond Meat’s swift entry into 80 markets in 2019,



can now be seen as overambitious. These grand PR campaigns, often endorsed by influencers, have failed to overshadow the underlying demand issues faced by the overwhelming influx of plant-based meat products into the market.

Undoubtedly, the “plant burger” format remains the best and most cost-effective way to attract vegan, vegetarian, and flexitarian consumers. Burgers are perfectly suited for BBQ rituals during the bustling summer months and provide a familiar food experience without beef. Despite the temporary sales decline of plant-based meat, the arrival of a new generation of consumers will rejuvenate the category for dedicated consumer segments. ●

## TRADITION, TECHNOLOGY, APPRECIATION OF TRENDS

### Butcher World Champion Matthias Endraß Relies on Bowl Cutters and Grinders from K+G Wetter

**H**ow did the Endraß butcher's shop, situated in the Bavarian village of Bad Hindelang, literally take the World Champion title in just a few years? With entrepreneurial vision and an appreciation of trends combined with the right mixture of tradition and technology: artisanal

Endraß. To enable them to learn new and modern meat processing methods, the siblings decided at the time to undergo additional training to attain the level of meat sommelier. Their objective was to combine current trends with tried-and-tested favourite products in order to gain new

such as Landjäger sausage, white sausage or roasts - but also trendy steak cuts and dry-aged beef. The siblings succeeded in moving up from a regional supplier to an insider tip for visitors from afar. The provisional highlight in the history of the butcher's shop is that Matthias Endraß and five colleagues in the "Butcher Wolfpack" as Team Germany were crowned winners of the World Butchers' Challenge 2022 in Sacramento (USA). Matthias' sister Ina was the best woman at the World Butchers' Challenge, taking fourth place in the Young Butcher category - quite an extraordinary achievement for a trained butcher's shop assistant.



techniques such as butchering and cutting with the cutting edge machine technology inside K+G Wetter's bowl cutters and grinders. The bowl cutter is equipped with the CutControl software. This allows the butchery to manage the recipes and control the production steps throughout the cutting process.

At 35 years of age, master butcher Matthias Endraß, together with his sister Ina, is the fourth generation to run the family business, which will celebrate its hundredth anniversary in 2025. "In 2016, we decided to refocus the butchery," explains Matthias

customers. "It was the right idea at the right time and made such a big impact." Contemporary cuts, preparation, presentation - the already experienced meat experts had plenty of new techniques to learn. "I learned an incredible amount. Even things I had learned up to that point were often already out of fashion," remembers Matthias Endraß. "The course enabled us to think outside of the box." Word quickly spread among customers from near and far that the small butcher's shop with a panoramic view of snow-covered Alpine peaks offers not only traditional specialties

The next logical step was to upgrade the machines in the sausage kitchen at Endraß in order to meet the increased demand and larger production volume. The sausage kitchen is accessed via the rear courtyard; on the way, a sign on the wall draws attention to the World Butchers' Challenge title. A few more steps take you into the middle of the premises where daily specialties are created for sale over the counter right next door - and, by the way, the counter is virtually the only sales channel. "We do sometimes sell to local restaurants, but otherwise everything really is sold over this one counter. That's sufficient," says Matthias Endraß. Tourism means that his customers now come from further afield to purchase the products that excited them on holiday.





*Ina Endraß-Lacher sells the meat specialities in the Endraß butcher's shop – for example meat loaf, raw sausage or the latest steak cuts. The specialist saleswoman was the best woman in the competition for young butchers at the World Butchers' Challenge in Sacramento.*



Wetter, recipes can be stored and called up for whatever batch size is required. Each processing step is then automatically displayed along with the ingredient, quantity, knife and bowl speed, temperature and duration. The program is started by tapping the touch panel. "If I now add the second batch of ice, it will first run on its own for six minutes," says Matthias Endraß as he pours the required amount into the cutter bowl. "This means that for every ten batches, I have at least 60 minutes to do something else - whether clearing up, washing up or other work. These are things that are otherwise annoying and hold you up at the end of the working day." Initially, World Champion Endraß was convinced he would not really need the recipe management software for such a small machine. "Many artisanal butchers think they don't need it - and I thought the same in the beginning. But you have to experience it to believe it."

Right now, the master butcher is at the bowl cutter, preparing fine sausage meat for the World Champion meat loaf - one of the products that won the Wolfpack team the World Butchers' Challenge title. The CM 50 STL from K+G Wetter has been performing reliably at Endraß since January 2023, as has the MAW 114 mixer automatic grinder with sorting device. "When the machines arrived, it was like Christmas all over again," recalls Matthias Endraß. Before the two new centrepieces of the operation arrived, a related machine had produced different types of sausage here for almost 40 years. "My father bought it from K+G (Krämer & Grebe), the predecessor company of K+G Wetter. It still ran perfectly after such a long time, so no other manufacturer came into question for me."

The special feature of this bowl cutter for the trade is that it has an automatic recipe management system. With CutControl from K+G



*Matthias Endraß works with the CutControl software on his CM 50 bowl cutter from K+G Wetter. "You have to experience it to believe it," says the master butcher regarding the ease of use facilitated by recipe management and production control.*

After just a few weeks, World Champion Matthias Endraß has come to appreciate his CM 50 even more.

The difference becomes clear when a recipe has not yet been saved. "Last week we made a lot of cooked salami. I had already written the program on the PC but hadn't yet transferred it to the bowl cutter. So I always had to wait and manually put the ingredients into the bowl. It really got on my nerves. This waiting time is simply dead time." Matthias Endraß has already saved many of his speciality recipes using CutControl, and the number is still growing. These also include some products that are not produced using the bowl cutter - boiled ham and raw bratwurst, for example. Why? "I have everything saved in one place and all of the ingredients and quantities are displayed right in the sausage kitchen. At the same time, knowledge of the traditional family recipes and how to produce them is stored digitally. Technology and tradition complement each other perfectly here.

The CM 50 bowl cutter easily handles the rather considerable production volumes at the Endraß butchery. "We started at five in the morning, and now, at around

eight, 450 kilos of World Champion meat loaf are almost ready," explains Matthias Endraß as he starts the last processing step. Through the acrylic glass lid you can see how the sausage meat becomes finer and more uniform with each pass. The raised rim of the cutter bowl ensures that none of it escapes when the bowl volume is fully filled. Inside the cutting chamber, which is adapted to the specific product using a baffle plate, the sausage meat becomes particularly fine. CutControl automatically controls the bowl revolutions and knife speed and stops the production step as soon as the stored switch-off parameters, such as the maximum temperature, are reached. Matthias Endraß now skilfully empties the well emulsified sausage meat. "Emptying by hand is really easy here; you can reach every corner easily and there are no losses".

Right next to the bowl cutter in the sausage kitchen stands the MAW 114 automatic mixer grinder, the second machine from K+G Wetter. "We make a lot of raw sausage, mini pepper salamis and

Landjäger sausage, for example. You put the mixing paddle in, throw the spices onto the meat and press the button. Then you simply set up the syringe for filling and that's it." Before purchasing the mixer grinder, ground meat and spices for the raw sausage were mixed by hand, in ten-kilo batches. "Let's not kid ourselves, after you've mixed 70 or 100 kilos of ground meat by hand, you aren't going to be capable of processing the tenth batch to the same quality. At some point you'll run out of strength," laughs Matthias Endraß. In addition to making the work easier, the mixer automatic grinder's new and expanded technology also saves time: "I have long been considering whether I need an automatic grinder and a mixing function. But now I'm so glad we have it - the time savings alone are worth it. For example, when I used to process bacon with the little stuffing mincer, it took me an hour to do that task alone. Now it's a secondary task for me."

A manual sorting device in the mixer automatic grinder in the World Champion sausage kitchen ensures that unwanted hard particles in the meat, such as pieces of gristle or bone, are reliably sorted out. The fact that the machine has a lateral discharge chute is particularly efficient, because the entire cutting set cross-section is available for grinding and the area in front of the mixer grinder remains free.

At the end of a long working day, as always, the machines have to be cleaned. It needs to be fast, but at the same time safe and perfectly hygienic. The bowl cutters and grinders from K+G Wetter are also perfectly



Matthias Endraß also uses the MAW 114 from K+G Wetter in his World Champion sausage kitchen. "I am so pleased that we now have an mixer automatic grinder - the time savings alone are worth it," says the World Champion butcher.





World Champion butcher Matthias Endraß, pictured here with his parents (left) and grandfather (centre) runs the family business Metzgerei Endraß in Bad Hindelang, Bavaria, together with his sister Ina (right), now in the fourth generation.

designed for this purpose; after all, hygiene is one of the core issues of the meat machinery and butchers equipment manufacturer from Biedenkopf-Breidenstein in the German State of Hesse.

“Machine cleaning is really top-notch. I think we’re three times faster than before,” says master butcher Endraß happily. “Their polished surfaces means they still look brand new each time they’re cleaned,” he enthuses. The machines, of course, don’t only sparkle superficially after cleaning: “It’s so simple to remove the meat worm, mixing shaft and cutting set, clean the parts, scrub off any residue, rinse through and that’s all there is to it.” The special hygienic feature on all K+G Wetter grinders is also used daily on the MAW 114 at Endraß: The rinsing chamber collects the smallest particles that could possibly squeeze through the meat worm seal into the inside of the machine as a result of the high pressure during mincing. “On the recommendation of K+G Wetter, we also had a water hose laid directly to the mixer grinder.

This makes cleaning the rinsing chamber a matter of just a few seconds. We rinse it out every day using hot water and detergent.” For hygiene safety, this technical solution from K+G Wetter offers a real benefit. “For the sake of safety, I always used to clean the old machine using disinfectant,” recalls Matthias Endraß.

It’s now just a few steps into the shop for the finished World Champion meat loaf. Raw sausages are already hanging from the wall while Lyoner sausages, salamis, roasts and grilled meat adorn the shop’s display cabinets. In the maturing cabinet, the finest pieces are waiting to be perfectly cut by the meat sommeliers - and for customers from near and far.

### The Endraß Butcher’s Shop in Bad Hindelang

The founder of the Endraß butcher’s shop in the idyllic spa town of Bad Hindelang was Matthias Endraß’ great-grandfather, who opened the business in 1925. Today, his grandfather is enjoying his well-deserved retirement in

his childhood home. In addition to Matthias Endraß, his sister Ina, a butcher’s assistant, and the siblings’ parents also work in the shop every day.

Externally, the new modern focus of the traditional butcher’s shop is apparent in the stylised bull’s head painted in gold on the white wall of the house, which shines brightly in the sun. The modern logo also confidently adorns the Endraß professional clothing - from work aprons to baseball caps.

Thanks to their entrepreneurial spirit and appreciation of trends and technology, the traditional Endraß butcher’s shop looks confidently to the future, with 2025 set to be a benchmark year for them: There will be a huge celebration at home to mark the butchery’s 100th anniversary. Moreover, butcher World Champion Matthias Endraß and the Butcher Wolfpack, hope to defend their title at the World Butchers’ Challenge - with the right mix of trends, technology and tradition.

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# THE REMARKABLE DYNAMICS OF GLOBAL PIG MEAT PRODUCTION AND TRADE

- 50 Years in Retrospect -

By Hans - Wilhelm Windhorst<sup>1</sup>

Part I:

Between 1970 and 2020, world meat production increased from 101 million tonnes to 343 million tonnes, it more than tripled. However, the increase has been very different for the three most important meat types. While cattle meat still accounted for the largest share in 1970, it lost much of its importance in the following five decades and by 2020 ranked far behind poultry and pig meat. The author has presented separate analyses on the dynamical development of poultry meat production (Windhorst 2023). This paper documents the development of pig meat production and trade at continental and country level.

but it was not until the last decade that poultry meat replaced pig meat as the predominant meat type. The stagnation of pig meat production is remarkable, as the production volume hardly changed between 2010 and 2020. Outbreaks of the African swine fever in several Asian countries and in Eastern Europe led to a drastic decrease in production. It was not until the beginning of the current decade that the production volume

increased significantly again and reached a value of 120 million t, whereby the gap to poultry meat narrowed considerably again.

The large differences in the development of the meat types are due to various steering factors. On the one hand, the production costs in intensive fattening differ considerably. Poultry has the by far best feed conversion rate, cattle the worst. In some religions, the consumption of pig meat,

## The Frame - Global Meat Production

World meat production has developed very dynamically between 1970 and 2020. From Table 1 and Figure 1, one can see that it developed very differently for the three main meat types. In 1970, beef was in first place with a production volume of 38.3 million tonnes, ahead of pig meat with about 36 million tonnes. Poultry meat only reached 15.1 million t and was still comparatively insignificant. This distribution changed fundamentally in the course of the following decades. As early as 1980, more pig meat than beef was produced worldwide,

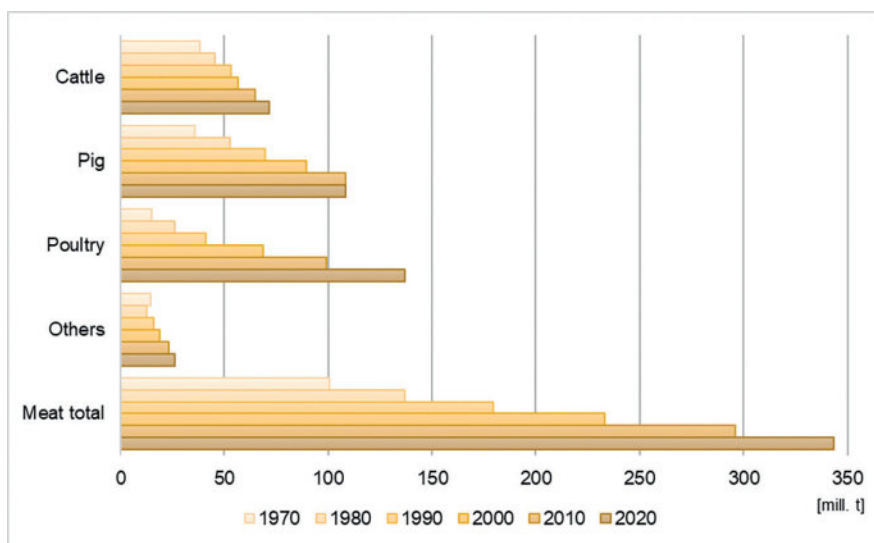
Table 1:

(Source: FAO database)

Meat types	1970	1980	1990	2000	2010	2020	Increase	
							absolute	%
Cattle	38,347	45,566	53,028	56,650	64,921	71,597	33,250	86.7
Pig	35,795	52,647	69,699	89,249	108,171	108,252	72,457	202.4
Poultry	15,095	25,946	40,997	68,656	99,317	137,029	129,934	807.8
Others	11,425	12,545	15,762	18,633	23,380	26,347	14,922	130.6
Total	100,662	136,731	179,486	233,188	295,789	343,225	242,563	241.0

The development of global meat production between 1970 and 2020, by meat species; Data in 1,000 t

Figure 1:



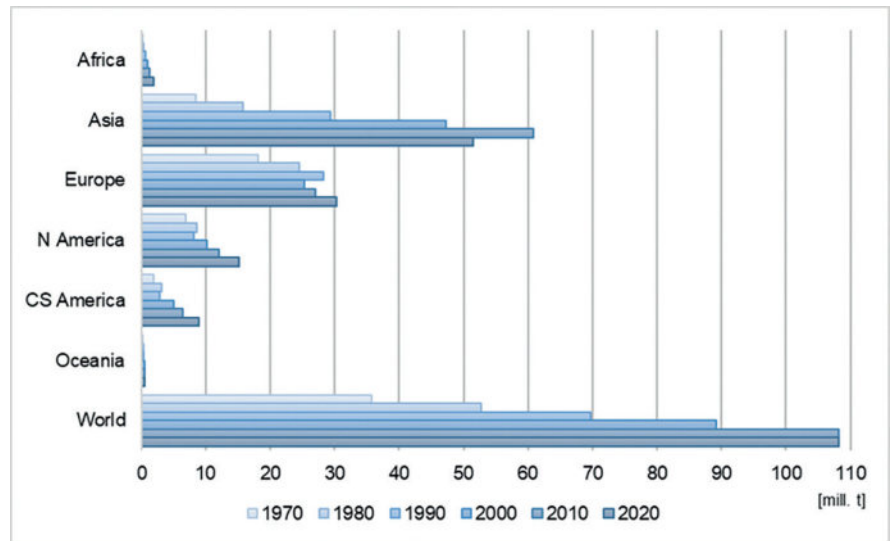
The development of global meat production by meat types between 1970 and 2020 (Design: A. S. Kauer, based on FAO data)

<sup>1</sup> The author is Prof. Dr. Hans-Wilhelm Windhorst, Professor emeritus at the University of Vechta and Visiting Professor at the University of Veterinary Medicine, Hannover

and in some also of beef, is taboo, which excludes more than 3 billion people as consumers. In addition, pig meat plays an insignificant role in system gastronomy compared to beef and poultry. The lower production costs, the lack of barriers regarding consumption and the global spread in system gastronomy led to a doubling of poultry meat production between 2000 and 2020, while pig meat only increased by 86.7%. In recent years, the discussion about resource consumption has gained in importance alongside health aspects. It has led to stagnation or even a decline in the consumption of pig meat in some European countries and in North America.

The remarkable change in the share of the meat types reflects the red-white shift in meat production and consumption (Figure 2). While beef lost 17.1% of its share and pig meat 4.1% between 1970 and 2020, poultry gained 24.9% and took an unchallenged leading position with a contribution of 39.9% to global meat production.

Figure 3



The development of global pig meat production at continent level between 1970 and 2020 (Design: A. S. Kauer, based on FAO data)

In the following section, the development of pig meat production will be analysed in more detail at continent level.

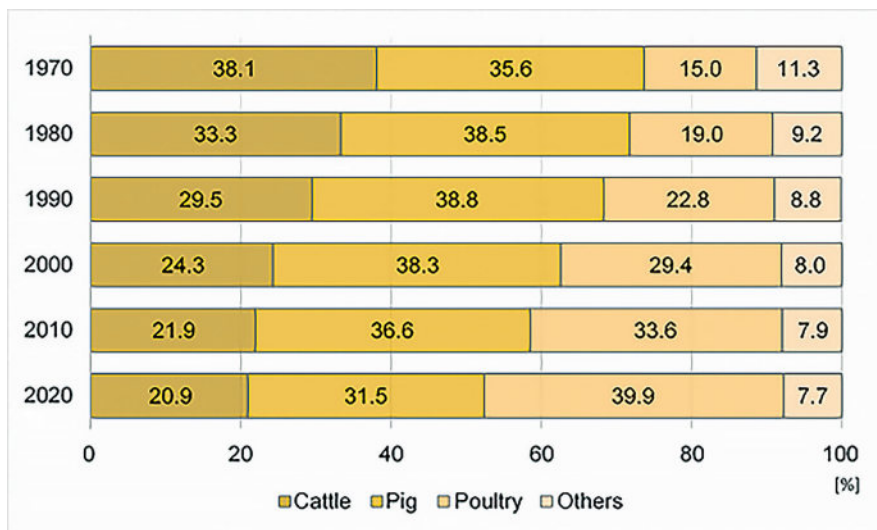
### Considerable Changes at Continent Level

A closer look at the development of pig meat production at continental level shows that Europe held a leading position until well into the

1980s and was then replaced by Asia, which became the dominant continent in the following decades (Figure 3).

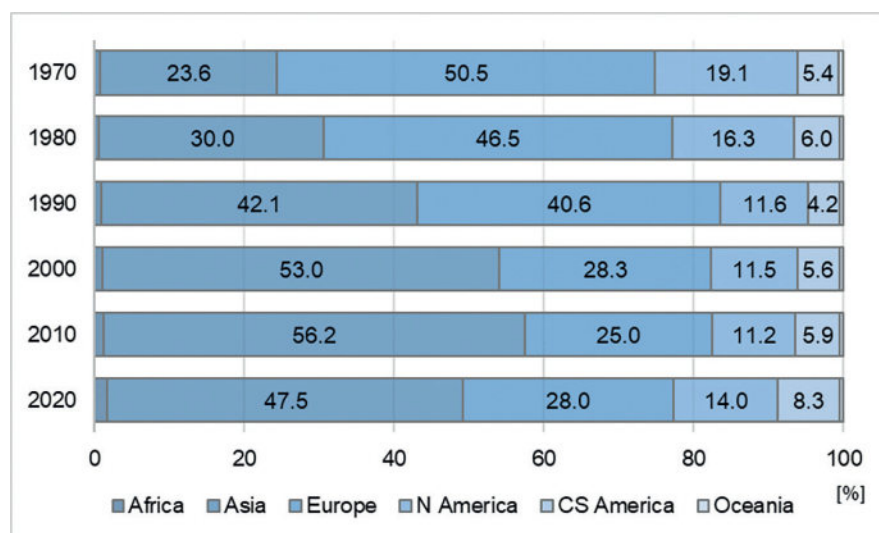
Due to the economic and political collapse of the Soviet Union and the dissolution of COMECON (Council for Mutual Economic Assistance), pig meat production in Eastern Europe declined significantly and only returned to the 1990 level in the last decade. Nevertheless, Europe was able to maintain its second place in global production and in 2020 produced twice as much as North America. Central and South America experienced a fast growth after 2000, with the decade between 2010 and 2020 being particularly dynamic. Asia contributed 59.3% to the 72.5 million t increase in pig meat production over the five decades analysed here, followed by Europe with 16.9% and North America with 11.5%. The highest relative growth rates showed Africa with 629.0%, Asia with 508.2% and Central and South America with 360.3%. The different developments in the

Figure 2



The changing contribution of the meat types to global meat production between 1970 and 2020; data in % (Design: A. S. Kauer, based on FAO data)

continents resulted in a remarkable change of their shares in world production (Figure 4). Europe’s contribution fell from 50.5% in 1970 to 28.0% in 2020, while Asia gained 23.9% and even 29.9% until 2010. The production decline of 9 million t, caused by outbreaks of the African swine fever in several countries in East Asia, led to a temporary reduction in the share. North America’s share declined by 5.1% over the five decades analysed, while Central and South America gained 2.9%. Similar to the production of poultry meat,

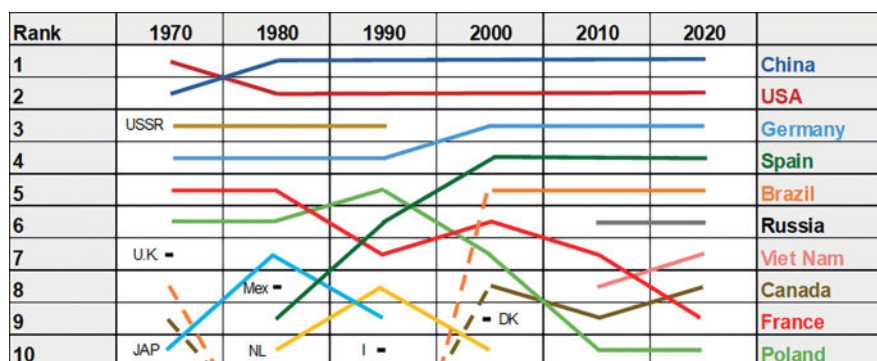


The changing contribution of the continents to global pig meat production between 1970 and 2020; data in % (Design: A. S. Kauer, based on FAO data)

a shift in the regions with the greatest dynamics from Europe and North America to Asia and Central and South America is also evident in the case of pig meat.

### Stabilisation of Production at Country Level

Figure 5 shows the composition and ranking of the ten leading countries in pig meat production between 1970 and 2020. While there was a considerable change in the composition of



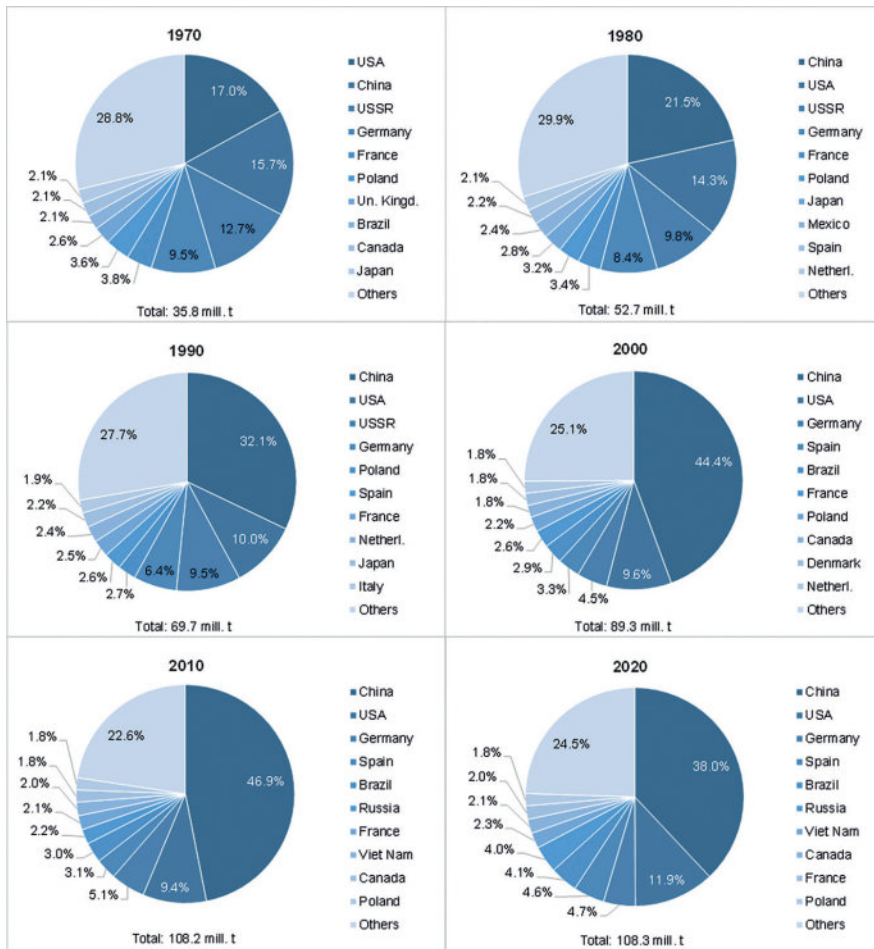
The changing composition and ranking of the ten leading pig meat producing countries between 1970 and 2020 (Design: author, based on FAO data)

Figure 4

pig meat production since 2010. Denmark and the Netherlands were not able to maintain their positions in the top group, but this does not apply to their roles in trade, as will be shown in a second paper.

The regional concentration in pig meat production increased from 71.2% in 1970 to 77.3% in 2010, then declined to 75.6% in 2020 before reaching 77.7% again in 2021. Figure 6 shows that in 2000 and 2010 the two leading countries, China and the USA, accounted for more than half of the global pig meat production, with China in a dominant position since 1990. The composition and ranking of the countries reflects the dynamics at continental level. For example, the growing importance of Central and South America is almost entirely a result of Brazil’s strong increase in production. Asia’s dominant position is due to China. Asia without China would be far behind Europe and North America. Germany lost its third place in 2021 to Spain, which has shown an exceptional development since 1980, which was also reflected in the country’s position in pig meat trade, as will be shown in a second paper.

Figure 6



The share of the ten leading pig meat producing countries in global pig meat production between 1970 and 2020 (Design: A. S. Kauer, based on FAO data)

### An Interim Summary

The preceding analysis of the development of pork production in the period from 1970 to 2020 has shown that the five decades were characterised by remarkable

dynamics. Production volume tripled over the five decades, reaching 108 million tonnes in 2020. Production grew particularly strongly in Asia, which accounted for 59.3% of the global increase of 72.5 million tonnes, followed by Europe and

North America. Some countries in Central and South America also showed high production increases. Obviously, stable patterns in the composition and ranking of the leading countries formed in the past decade.

The OECD/FAO Agricultural Outlook to 2030 forecasts an increase in global pig meat production from 108 million tonnes in 2020 to 127 million tonnes in 2030. While a decrease in the production volume of 1 million t is expected for Europe and only a slight increase of 400,000 t for North America, the forecast shows an increase in production of 18.4 million t for Asia and 800,000 t for Central and South America. Production in Africa and Oceania will hardly change.

Despite rising sales, the market shares of meat substitutes will increase only slowly in the current decade; this applies to both plant-based products and meat from cell cultures. Continuing technical problems in the scaling up of production, high production costs and a considerable scepticism on the part of consumers towards the great technical effort needed in production obviously prevent the rapid expansion. Even towards the end of the current decade, only single-digit or low double-digit percentages are likely to be reached. ●

#### Data sources and additional:

FAO database: <https://www.fao.org/faostat/en>.

OECD/FAO Agricultural Outlook 2021-2030. <https://stats.oecd.org>.

Windhorst, H.-W.: The contrasting world of global pig meat production. In: *Pig Progress* 36 (2020), no. 5, p. 6-9.

Windhorst, H.-W.: The red-white shift in global meat production. In: *Zootecnica international* 43 (2021), no. 5, p. 32-37.

Windhorst, H.-W.: A glimpse into the future. Projection of global meat production and consumption until 2030.

In: *Fleischwirtschaft international* 2021, no. 3, p. 28-31.

Windhorst, H.-W.: The future is now. A status report of alternative proteins – development and availability.

In: *Fleischwirtschaft international* 2022, no. 1, p. 48-51.

Windhorst, H.-W.: The revolution is taking shape. In: *Fleischwirtschaft international* 2023, no. 1, p. 34-39.

Windhorst, H.-W.: The remarkable dynamics of global poultry meat production and trade - 50 years in retrospective – Part 1: Poultry meat production.

In: *Zootecnica international* 45 (2023) (in preparation).



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