Savoury snacks are enjoyed by consumers of all ages, at various eating occasions across Europe: on average around 3.6kg are purchased per year per capita in Europe. In 2013 the retail value of the savoury snacks market in Europe amounted to around €17.5 billion, with nearly 1,800,000 tonnes of savoury snack products being purchased. For all these products, the main priority for our manufacturing and supplying industry is not pleasure, fun and enjoyment, but the health and safety of consumers.

The word ‘horsegate’ stubbornly persisted in many print and online media in the last year and some journalists were only too keen to link this clear case of food fraud with topics like origin labelling or even food safety. What was the result? Widespread insecurity or even fear among consumers, at their daily shopping and a loss of trust vis-à-vis the food industry. In order to win back trust, we will have to become more vocal about what we do every day, in order to assure that the products we vis-a-vis and sell are safe.

Be it pesticides, foreign materials, allergens, process contaminants, heavy metals or other issues, our industry has systematic and rigorous procedures in place to ensure that all products on the market meet the most recent certification schemes and, above all, the latest legal requirements. When necessary, manufacturers take immediate action to mitigate any potential food safety risk, in order to ensure that consumers can continue to trust the safety of their favourite snack food products.

To support this, our industry also depends on manufacturers of food processing equipment to continue their investment in the provision of new technologies, to detect and remove unwanted material in the product stream. Our sector cooperates closely with the European Commission, national authorities and research groups to reduce any potential food safety risks. We advocate scientifically supported risk assessment methods, as the basis for setting any legal or voluntary limits. But we are not stopping there. Europe’s savoury snacks industry, along with their suppliers, take a pro-active approach to food safety, and invest significant resources to ensure that products are safe and meet the high quality standards expected.
Empowering processors to deliver clean, safe food.

Enhanced SORTEX A and SORTEX B optical sorters empower processors to deliver clean and safe food.

Bühler has fortified its optical sorting portfolio for dry commodities, including nuts, seeds, pulses, grain, coffee and plastics. The SORTEX A and SORTEX B ranges feature innovations in feed, vision and ejection systems. They will offer processors even greater levels of yield, performance and product superiority, in their efforts to safeguard food safety standards.

Although processors may target their output to a range of customer specifications, all must remove particular food safety hazards from their input, and all demand consistency in their end-product. This requires consistent and accurate sorting, along with the fastest processing speeds and low cost of ownership. Bühler has subsequently developed a sophisticated and flexible optical sorting product portfolio, with a wide range of customisable product options allowing processors to meet their exact sorting requirements.

The SORTEX A and SORTEX B portfolio is driven by technical excellence, responding to feedback from Bühler’s customers, who require hygienic and reliable solutions to help them deliver products that meet local and international food safety and quality standards.

Bühler Global Product Manager Faisal Baig affirms: “The innovations included in this portfolio mean Bühler can now resolve more of the most demanding sorting and food safety challenges facing the food industry, and provide efficient, impressively accurate, high yield sorting options to a wider range of customers whilst delivering clean and safe food.”

SORTEX A - for the strictest levels in optical sorting
The SORTEX A has been proven to excel in the most difficult of dry commodity food sorting applications, where the strictest levels of food quality and safety are non-negotiable. Variants of this range include the standard SORTEX A, DualVision™, ColorVision™ and MultiVision™.

They are available in a range of modules to allow processors to tailor their sorting investments to their specific capacity requirements.
Each of these variants is capable of detecting and removing the subtlest of defects - in colour, shape or size - that other conventional sorters cannot. In seed processing, for example, US-based Red River Commodities Inc. – whose commitment to food quality and safety is second to none, endorsed by the American Institute of Baking for ‘Outstanding Excellence’ - has raised the output quality of its sunflower seeds to a near-perfect 99.99% purity, while simultaneously increasing yield by 50%, following the installation of a SORTEX A ColorVision™ InGaAs machine.

Fitted with an enhanced inspection system that can detect defects not possible with RGB technologies alone, Red River found Bühler’s InGaAs and PROfile™ (shape) technology to be the most effective solution for removing challenging foreign materials, such as sticks, stems, stones, glass and importantly, sclerotia – a compact mass of fungal growth.

SORTEX B range – for optimised mainstream sorting
This range is designed to maximise yield and productivity in mainstream sorting applications which do not require the highly-advanced technology offered by the SORTEX A range.

The SORTEX B is the first choice for conventional day to day bulk sorting, offering the assurance of Bühler’s trusted technology. It provides high reject accuracy and process efficiency ensuring a high yield of consistent quality end-product.

The SORTEX B variants include the standard SORTEX B, DualVision™ and ColorVision™ and are available in various module sizes, offering processors a choice of powerful solutions for their specific capacity requirements.

Charith Gunawardena, Head of optical sorting at Bühler, comments, “The SORTEX A and SORTEX B ranges are further evidence of Bühler’s continuing dedication to innovation and to developing products that help processors to overcome their food safety and quality challenges, such as subtle defect detection and mycotoxin reduction.

Coupled with the recent development of our all-new flagship SORTEX S UltraVision™ for rice sorting, this latest portfolio development demonstrates Bühler’s commitment to developing enhanced advanced and conventional sorters offering food processors the best possible sorting solutions, whatever the difficulty of the application.”
Westfro expands capacity and ensures quality.

Additional SORTEX optical sorting technology supports quality and growth in frozen vegetable production for Westfro, the family-run Belgian producer of frozen vegetables, herbs and fruit.

Located in one of the best vegetable growing centres in Europe, Westfro has an annual production capacity of 95,000 tonnes and, for over 40 years, the company has specialised in minimising the time between harvest and processing, in order to preserve the optimum level of vitamins, minerals and fibres in its vegetable products.

This leading international player is renowned as a trustworthy and loyal partner to its supplying farmers, as well as its customers in food service, retail and industry, both at home and abroad.

“We strive for sustainable, long-term collaboration, based on excellent product quality, high flexibility and outstanding customer service. We do this through rigorous quality control and continuous investment in up-to-date technology,” said Mr Verhelle, owner of Westfro.

As part of its recent investment in a new processing plant at its Staden site and building on many years of successful partnership, Westfro turned once more to Bühler to underpin its quality standards. With a capacity to sort 24 tonnes per hour of individually quick frozen (IQF) vegetables, including peas and carrots, the processing facility allows Westfro to boost its production capacity and its output significantly. In order to secure the quality of this increased throughput, Westfro opted for two Bühler SORTEX K2A optical sorters.

“We chose Bühler to provide us with the specialist sorting equipment we needed at our new site, following many years of using the SORTEX technology,” said Mr Verhelle. “The reliability and efficiency of Bühler’s SORTEX technology, combined with the excellent local support provided by its customer care team, meant that we wanted to continue the relationship as our business expands.”

Positioned after the IQF tunnel, the SORTEX K2A optical sorters remove foreign material, misshaped or discoloured vegetables and extraneous vegetable materials such as leaves, pods or bugs.

“We congratulate Westfro on its success and its expansion, which has resulted from its excellent service and quality products. We have worked in partnership with Westfro over many years, to help the company to continue to provide customers with good quality, clean and safe food and with this new installation we look forward to continuing this relationship over the coming years,” said Stephen Jacobs, Bühler’s global product manager for fruit and vegetables.
Bühler puts food safety at the heart of rice processing.

Coupled with the ever-present need for greater capacity, efficiency and profitability, food safety has become the linchpin of successful operations in the increasingly competitive rice market.

This interview with Bühler’s Food Safety Initiative team reveals how designing safety into every aspect of rice production is vital for each player in the supply chain.

**What contaminants can affect rice safety?**

**Béatrice Conde-Petit:** Contaminants that can enter rice include agricultural or processing chemicals, ranging from insecticides to factory lubricants; foreign materials, such as glass, metal, sticks and unwanted grains; and also insects, molds, mycotoxins or bacteria.

**What can be done to address these concerns?**

**Rustom Mistry:** Critically, beautiful shiny rice does not guarantee food safety: careful attention is needed at every step of production in order to assess and eliminate risks at each stage.

For rice processors, a formal Food Safety Management System, supported by a HACCP (Hazard Analysis and Critical Control Point) programme, is fundamental to ensuring food safety.

**What does HACCP involve?**

**Rustom Mistry:** HACCP involves a hazard analysis, to assess the contamination potential for each step of the production process and identify measures to prevent or reduce the contamination or ‘hazard’. Processing points where there is significant risk of contamination are determined as Critical Control Points (CCP). Limits need to be established for CCPs, together with the corrective actions required to eliminate or control the hazard/contamination, if it arises. Verification procedures must be put in place to allow processors to monitor that their HACCP system is working well.

**How else can processors achieve greater safety and hygiene?**

**Rustom Mistry:** The design of a plant and its equipment plays a fundamental role in preventing potential contamination.
If designed with clear zoning and space for operation, maintenance and the movement of personnel, a plant will already be one step ahead. A plant’s structure, as well as the conduits for its utility supplies need to be constructed with sanitation in mind; and, critically, today’s plants must operate ‘dust free’ at all times, as areas where dust or rice particles can collect represent areas with significant potential for contamination.

Ease and speed of cleaning is vital; coupled with the avoidance of any crevices or hard edges that can allow dust to accumulate. Bühler equipment features easily removable machine covers and screens that are simple and quick to change; and sealing systems that prevent any dust leaking out into the plant.

The plant should be designed to have an ‘airlock entry’, to avoid dust coming into the plant, and have smooth flooring, sealed and rounded off where it meets the walls, to avoid crevices where dust can built-up. Critically, a well-designed aspiration system must be built in to every modern plant to meet today’s stringent standards of quality, sanitation and hygiene.

What advantages does Bühler equipment bring?
Rustom Mistry: Bühler’s rice processing solutions are designed for continuous and trouble-free operation. Every element of design is tailored to the highest international safety and hygiene standards.

Raymond Herbert: Peace of mind is a crucial element. All our solutions meet and invariably exceed the EC’s Machinery Directive, which dictates that all processing machinery is safe and contributes to the prevention of contamination. We provide certification for all our machines, to help rice processors achieve their own compliance and HACCP fulfilment.

Each and every piece of Bühler equipment, which is supplied with full instructions and advice on cleaning methods and materials, cleaning intervals and maintenance, inherently encompasses the strict use of plastics and stainless steel components, along with designs that prevent entrapment of product in recesses or voids. Bühler can also provide rice processors with a validated report, to illustrate the minute levels of dust produced around its machines when sorting grain.

Rustom Mistry: Automation delivers less down time and more effective production up-time, while higher yields and lower power consumption become possible, thanks to Bühler’s extensive engineering expertise. Excellent design and good automation ensures immediate start-up with no choking in plant. Pneumatic slide gates automatically close for power cuts, preventing the machine from crushing product during restart. Ultimately, Bühler understands and embraces the sanitation requirements of a modern, dust free plant that meets the need of international standards and offers the flexibility for future development.

What does the future hold?
Rustom Mistry: In future, rice processing plants will inevitably move from manual operation to industrialised and automated plants, based on both single and multi-level floor concepts, capable of processing multiple different rice varieties. They will feature the ultimate in product safety and hygiene tracking product, which is currently critical to exporters, but will also affect domestic producers, in the longer term.

Bühler, with its international expertise and global presence, combined with its understanding of local markets, is ready to help the industry process rice safely and hygienically.

Read the full article here.
Bühler strengthens its commitment to coffee processors in Africa.

With the price for coffee falling globally, there is greater pressure on coffee processors to extract an improved yield from the incoming coffee beans.

Many are turning to additional hand picking, in order to achieve the quality necessary to meet export standards, or investing in alternative low-cost solutions. However such measures cannot consistently meet the ever stringent demands of the industry.

“In today’s margin-squeezed coffee sector, time is money and hand picking represents a further limitation to productivity,” said Bühler global product manager Jose Rubens.

To empower coffee processing customers to achieve superior yields, whilst maintaining high quality and throughputs cost effectively, Bühler has introduced the SORTEX B ColorVision™ optical sorter. The SORTEX B ColorVision™ can detect a wide range of foreign material and subtle colour defects, typically found in Arabica Coffee, such as discoloured, immature, vinegar/foxy and insect damaged (broca) coffee beans.

Featuring superior feed, vision and ejection systems, engineered for conventional high capacity coffee sorting, it is the first choice high capacity sorter for mainstream coffee processors who seek the assurance, functionality and trusted performance of the SORTEX brand, without the niche technologies of Bühler’s SORTEX A range.

“The SORTEX B ColorVision™ has been designed to sort a variety of coffees, enabling processors to achieve a high reject accuracy and process efficiency, ensuring a high yield of consistent quality end-product in one pass, with the minimum number of sorting modules, thus boosting their productivity and profit margins,” said Lawrence Kuhn, Buhler SORTEX territory manager for Africa.”

Additionally, Bühler has established a new Regional Centre of Excellence in Kenya. This state-of-the-art facility, together with an expanding hub, located in Togo, West Africa, brings Bühler’s 150 years of expertise and coffee sorting know-how to the key African coffee producing regions.

Providing training, as well as sales and service support to its customers in the region, the 1800 square metre centre will also allow coffee producers the opportunity to witness first-hand sorting demonstrations of their green coffee samples.
InVivo Group maintains its grain quality with investment in Bühler’s SORTEX A optical sorter.

SORTEX A represents state-of-the-art optical sorting and handling technology, lighting and feed systems.

SORTEX A – the first ever installation of an optical sorter in a port silo – achieves a grain quality of 99.98% and foils ergot contamination in French grain.

French leader in grain storage and logistics, InVivo, is responsible for handling around six million tonnes of grain annually, via ships, trains and barges. It is responsible for 12 grain storage sites, with a total capacity of 1.5 million tonnes of grain, and also stores and loads grain at eight other InVivo-managed, partnership silos at ports throughout France. Its quality fulfilment and efficiency is pivotal in ensuring France’s grain exports, which account for half of the country’s grain production.

“As our mission is to provide efficient logistics for high quality grain exports,” said Laurent Manderfeld, Head of Investment for InVivo, who confirmed that the company was also responsible for four port silos in Morocco, Hungary and Romania, as part of its international expansion. “All our silos have ISO 9001 certification as well as Charte Sécurité Alimentaire food safety and GTP certifications.”

As InVivo prides itself in maintaining the quality of the grain it stores and transports, the industry issue surrounding ergot contamination in wheat during 2013 represented a significant challenge for the company. An unusually high growth of the ergot fungus on wheat from the 2013 harvest meant that around 40,000 tonnes of the wheat stored by InVivo was potentially unfit for human food grade quality.

“Our mechanical equipment was no longer sufficient to achieve the standard of quality we required, given the higher level of ergot contamination we were experiencing in incoming wheat, and we knew we had to act fast in order to reduce potential losses,” said Mr Manderfeld.

During 2013, wheat exhibited ergot contamination levels varying between 0.8% to 1.6% and InVivo was committed...
to fulfilling or improving on the requirement of 0.05% maximum of ergot contamination - the point at which grain is relegated to animal feed.

InVivo and their partner EMC2 turned to Buhler SORTEX to provide a solution that would allow it to maintain quality and ensure that the wheat it stored was not downgraded to cattle feed.

With the installation of the SORTEX A at its Metz facility - with its state-of-the-art optical sorting and handling technology, lighting and feed systems - InVivo is now able to process incoming grain to remove ergot-contaminated product, consistently achieving a maximum ergot contamination level of just 0.02% in the finished grain, regardless of the level of input contamination.

“With the SORTEX A, we now consistently achieve a grain quality of 99.98%, with a very low reject of good wheat grains, which means very little product loss, whatever the quality of incoming product,” said Mr Manderfeld.

Commenting on the success of the new sorting solution at InVivo, Charith Gunawardena, Bühler’s head of optical sorting affirmed: “We are delighted that the SORTEX A sorter has helped InVivo to achieve the consistency and quality the company needs in order to continue to meet the exacting standards required for French grain exports. This is another example of how Bühler can help support grain processors maximise their yield and profitability consistently.”
Viridor, one of the UK’s leading recycling, renewable energy and waste management companies, has invested over £1 million in an advanced flake optical sorting station on the HDPE line at the company’s polymer recycling facility in Skelmersdale. The new technology has increased the sites yield of valuable and high quality HDPE ‘natural’ (blow mould grade) for colour-critical applications.

Viridor Polymer Recycling is one of the most highly regarded reprocessors of domestic plastics in the UK. The site at Skelmersdale recycles 3000 tonnes of plastic bottles each month from Viridor’s local authority contracts and other private customers; producing highest quality plastic pellets and flakes ready for use in remanufacture. The installation of the new technology was completed in early 2014, and will help maintain Viridor’s position as one of the leading recyclers of plastic bottles in the UK.

The new flake sorter centres around two state-of-the-art optical sorters which accurately remove non-natural HDPE flakes; typically between 2mm and 12mm in size, in the HDPE product stream at a throughput rate of two tonnes per hour. The optical sorting station was supplied by Bühler SORTEX which has also supplied other technology at the polymer recycling facility. The equipment produces a high purity natural HDPE and a coloured HDPE that can be compounded into black pellet.

Stuart Kershaw, Trading Sales Manager for Plastics at Viridor commented:

“The investment in this advanced flake sorting station came as a result of a UK market requirement for a consistent volume of HDPE natural compound. This can be used for a variety of colour critical extrusion/blow moulding applications, including but not limited to conduit, sheet, wood polymer composite and bottles.

“We are now producing 500 tonnes of the HDPE natural product each month, adding to the volumes of HDPE black & PET clear flake.

“Our latest investment underlines our commitment to quality and innovation in recycling. As a business, Viridor is aiming to reduce export reliance with a focus on providing high quality polymer for use within the
demanding UK market. Our continuous supply of HDPE natural is unique within this country.”

Gary Welsh, General Manager at Viridor’s Polymer recycling facility added:

“Advanced recycling facilities such as the plant at Skelmersdale require continuous review to meet the demands of a changing market for quality recyclate products. This new piece of equipment is changing what we do as a business and adding to our product range so that we can flex to meet the needs of our customers.”

Alex Vaks, Sales Engineer at Bühler Ltd said:

“We seamlessly integrated Bühler’s most advanced optical sorting technology into Viridor’s operation, meeting their exacting needs for a highly flexible system. The leading edge optical sorting station is able to cope with dramatic fluctuations in inputs as required; whilst keeping the output consistent.

We are excited to be building upon our existing strong relationship with Viridor and contributing to their success as leaders in the rapidly developing high quality recycling market.”
In 2009 Vetömag Derecske Kft, a family-owned seed production and cleaning business in Hungary, established a seed cleaning plant at its 2-3,000 hectare seed production site in Derecske. Here employees are dedicated to the quality cleaning and sorting of products such as mustard seeds, oil radish, dry peas and rape seeds, although the site has the flexibility to clean other products when required. Their production mainly involves growing green manure crops, such as rapeseed, mustard, alfalfa and millet - crops used as organic fertiliser, to be ploughed back into the soil, to add nutrients and organic matter to other growing crops.

“We are equipped to prepare all kinds of grain crops and seeds for sealing as well as pre-cleaning, cleaning and packing, according to the needs of our customers,” said Ference Pálkutas of Vetömag Derecske Kft, who confirmed that quality and reliability are the linchpins of the company’s activities.

Since its inception, Vetömag Derecske Kft has seen the business expand rapidly along with the number and variety of products that customers request to be cleaned. In order to meet this increasing demand, the company began its extensive research into advanced cleaning technology and, in 2013, invested in a bichromatic SORTEX Z+ optical sorter from Bühler.

“Previously we were reaching only half of our specified one tonne per hour targets and had to sort twice, in order to recover good product that was being rejected or wasted,” said Mr Pálkutas. “Ultimately, we had difficulty achieving acceptable yields.”

Drawing on leading edge vision technology, the new optical sorter is located as a standalone machine. It receives product from Vetömag’s pre-cleaning equipment, such as gravity tables and indent cylinders, and determines the purity of input product with exceptional quality and growth opportunities for seed and rice cleaning in Hungary.
accuracy, within a split second. High speed ejectors enable precise ejection, while uniform feed and optimal illumination result in the most accurate separation of defective items and foreign material on the basis of colour, shape or other optical properties. The Bühler SORTEX series combines reliability, accuracy and flexibility, with consistent and high quality throughput.

“We are delighted with the performance of the new sorter. We get a high yield first time, every time – so there is no need for resorting,” said Mr Pálkutas. “In addition, the Bühler team has supported us at every step of the way, in order to optimise what is achievable with the SORTEX optical sorter. Not only does it offer high quality throughput now, but with the help of the Bühler team, the new sorter gives us the flexibility to adapt rapidly to our customers’ changing requirements and continue to expand the business going forward.”

“With its inherent flexibility and ability to be adapted for various applications, the SORTEX optical sorter can support Vetőmag’s cleaning operations both now and in the future,” said Aron Demeter, Bühler’s seed segment manager, who stressed that Bühler’s emphasis is on partnership.

“Recently, in response to a request from Vetőmag Derecske Kft, we were delighted to return to the plant, to reconfigure the sorter and train the operators to use the equipment for removing peas from rice: a new and additional application that the company can now offer to its other customers and boost its profitability, during otherwise quieter periods,” concluded Mr Demeter.

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