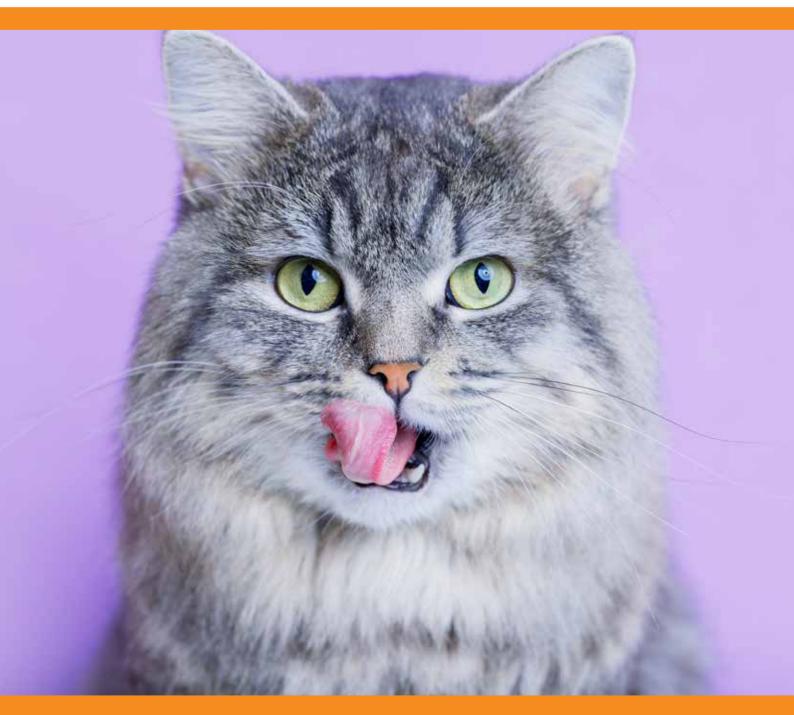
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Petfoodpro Technology & Marketing 2/23



Ingredients: The Blueberry Mix, Natural Astaxanthin, Dry, Cooked, Raw: What is best?

Processing: HPP, Freeze Drying, Extrusion, Food Safety, Dosing and Depositing

Packaging: Transforming Packaging with Recyclable Films, Labelling

Marketing: Preview to Zoomark 2023, Interzoo 2024



AFB partners with pet food companies to provide palatant solutions that meet performance, attribute, and economic objectives.





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Pet Pampering Still Growing

It's always a challenge to know when enough is enough. Our human children can possibly express themselves better, if Mom gives them too much of a good thing. Animals are a little different. We think we are doing them good, if they get a lot of treats or toys. Who can forget

Tricky Woo in the James Herriot stories!

For suppliers of pet care products, enough might be just a little more. A new study by Sarah Mahoney brings some interesting insights. American consumers may be spending more time back at the office, but they aren't spending any less on pets just yet, judging from the latest results from Petco and Chewy. Both companies are looking to build market share in individual nutrition and heathcare options. In short there is a lot of money being spent in pet care, from grooming and clothing through to other accessories and high quality food products.

The numbers in the pet care sector are staggering, especially coming out of an economic low point; at the upcoming Zoomark we will see for ourselves what this part of the pet food industry has to offer and how it has developed in the last years.

Zoomark is in fact celebrating its 20th Anniversary this year and is larger than ever. There will be special sections on Start-ups and another looking at trends for the future, Pet Vision. One of these is titled "Spoil me more: products and services that treat pets to extra-special attention". We will let you know what we find there. Last time we saw a wonderful birthday table, designed with such detail that a doll in a doll's house would be jealous.

Sustainability will be covered in all aspects at Zoomark, refecting global trends in other industries. Specialized stores in the large-scale retail sector represent an opportunity for accessories, offering greater scope to showcase the variety and quality of the products compared to those on sale in supermarkets and hypermarkets, where food products are to the fore. Dan Franco, President of Rinaldo Franco Spa, endorsed this, highlighting that "the growing attention from these brands represents an opportunity for accessories: until now 90% of products were distributed in the specialized retail channel. This results in more scope to present new products, tying in with the trend for humanization. Just think of the



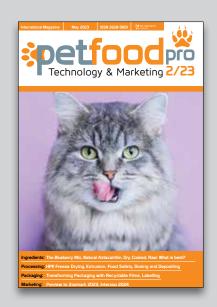
Ian D. Healey, Editor-in-Chief

accessories made from reclaimed and sustainable materials, very strong trends when it comes to making purchases for pets".

Whether you are looking for a special haircut for your guinea pig or a birthday present your budgie will never forget, there will be a lot to look at in Bologna. Our team look forward to meeting you there. Call us ahead and we will find time to plan the future of pets.

Sincerely





Issue 2 May 2023

The cat remains Germany's number one pet with 15.2 million individuals and is therefore also an important sales driver, especially in the pet food sector. Cats are followed by dogs (10.6 million) and small animals (4.9 million). The revenue of the most important product categories was led by cat food. More figures on the German petfood market on page 41.

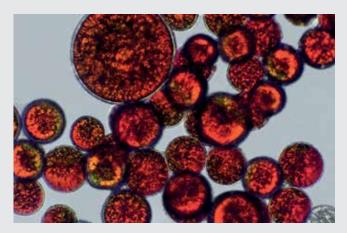
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Famous for its potent antioxidant and anti-inflammatory properties, natural astaxanthin has become a highly targeted ingredient – not only for human consumption but also for pet food. Research shows that it contributes to a better immune defense and improved immune response in pets in general, and that it stimulates muscle function and recovery specifically for dogs. **Take a look at the article on page 11.**



The global pandemic has bonded pets and their owners even closer together. And with it, feeding patterns have evolved again. A key global player in safety inspection in the petfood and treats market examines the rising humanization and premiumization trends driving consumer demands and production line technology that is supporting responsible pet ownership. **See page 22.**



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One of the key drivers for growth in the petfood business is the ongoing trend of humanization of pets, which results in pet owners paying special attention to the quality of their four-legged family members' food. Another strong trend is sustainability. Pet food producers are looking to satisfy both their product demands and meet environmental and government laws to limit waste. **Full details on page 32.**



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Pet Food: The Blue Revolution!

Formulating pet foods and treats with fruit such as blueberries provides color, fiber and overall appeal. Blueberries in the form of purees, drum-dried and freeze-dried formats, juices, concentrates, and IQF are a healthy choice for new and innovative pet foods attractive to both pet and pet owner.



Most important in pet food product development is the value pet owners place on real ingredients; pet owners want products that contain adequate amounts of real blueberries to assure their pets the many benefits associated with blueberries. They demand the genuine article and

not imitations. Blueberries on the label and real blueberries in the product itself showcase goodness. Pet owners are not looking for a slew of unidentifiable ingredients on the ingredient statement. The use of real US highbush blueberries helps to communicate goodness, safety and good manufacturing processes.

In pet products the term antioxidant is used liberally referring to good joint health, better eye sight, memory, longevity, overall wellness, stage of life, taste! The antioxidant power of blueberries fits this messaging.

We have found that blueberries provide a halo effect and are a hallmark of goodness, part of the mindset of many consumers: "What is good for me, must be good for my pet." What is popular on

labels in the grocery store will likely be found on pet food labels as well.

Blueberries contribute to the clean label image, especially when there are visible pieces. Pet owners value the fact that they can see the ingredient as well as read about it on the label. The addition of fruits like blueberries can mean the removal of fillers and stabilizers, which also benefits the product and its image.

Among innovative new trends, there is a growing interest in toppers for wet and dried pet foods that can be sprinkled on top or mixed into foods. They can be formulated to aid digestibility and as sources of fiber, nutrients and antioxidants. Extruded inclusions made from blueberry pieces or powders can provide chewy or soft-moist texture,











palatability and functional ingredients. Puffed treats and crunchy chips can have blueberry powder coatings.

Blue is the Bright Spot

Blueberry color is also a consideration for consumers who said, in focus groups, that color was how they judge that products contain real blueberries. When it comes to pet foods, the same can hold true especially regarding color consistency – a dog biscuit, for example, needs to look the same each time the product is purchased. That is why some manufacturers use freeze dried and micro dried powders.

Because blueberries are available in a range of formats to meet manufacturer needs (low moisture, pH, individual piece identity, etc.) many technical challenges are mitigated. Whole and chopped dehydrated blueberries as well as fresh and frozen blueberries and real blueberry powder and fiber are used in pet foods and snacks. Formulators can select the format that works best for the need. Companies like Principle-Solutions utilize "farm direct ingredients from the heartland of America" for their innovative formulations; in fact, as its president Kevin Zimmer pointed out recently, they use no additives or fillers in their processing. See http://www.principle-solutions.com/

Also trending are Fruitables Pumpkin & Blueberry with blueberries:

https://fruitablespet.com/dog-treats/ baked-treats/pumpkin-blueberry; Wagatha's Super Berry Biscuit with certified organic blueberries: https:// www.wagathas.com/super-berry-biscuit16-oz-bakery-box-r.html. With blueberries in the mix, the pet food product gets attention! It's a prize- winning ingredient that makes a splash on the market, enhances the healthy profile of the product and pleases pets and their owners.

For more information

www.blueberrytech.org www.realblueberries.org

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Dry, Cooked & Raw: What are the **Best Food Options for Your Pet?**

History - Present: a Pet food timline

The earliest commercial dry pet food was first created in the late 1800s and is a popular choice amongst many pet owners to this day. However, with the advancement of current day technology, there are a plethora of diets to feed our dogs and cats. These range from dry extruded and oven-baked food to fresh and raw food diets.

A recent survey displayed how owner feeding practices changed between 2008 and 2018. The survey showed that feeding pets conventional, aka commercial, or heat processed, diets was still the predominant diet choice. Interestingly enough, there were more owners feeding their pets unconventional diets, such as raw, homemade or vegetarian foods, than in previous studies investigating diet choice.

The trends of raw feeding has increased in recent years because of the focus on "natural" and "species-appropriate" diets for our pets. Raw meat diets encompass a wide variety of formats ranging from incomplete, unprocessed (with no sterilization steps) to complete and balanced diets, which include sterilization steps.

In contrast, more traditional pet food is most often available in an extruded format. Extrusion, is a process which uses heat, pressure and moisture to cook the pet food, and is often used to improve protein and starch digestibility in pet

Oven-baked pet food also has potential nutritional benefits to pets with lower starch gelatinization occurring than extruded pet food and possibly lowering the available glucose in the bloodstream after consumption.

Unsure of Where to Start? Here are Some Tips!

It's important to note that any of these diets could be appropriate for your pet as a complete diet as long as they are complete, balanced and provide all of your pet's nutritional needs for the day.

If you're ever unsure about a diet's nutritional adequacy, here are some tips to better understand how to proceed:

Speak to your vet. This is always a good resource when choosing a new diet for your pet.

Always be sure to check for a nutritional adequacy statement (i.e. formulated to meet or exceed AAFCO or FEDIAF requirements for dogs or cats at maintenance, all life stages, or growth & reproduction).

This is a good indicator of knowing whether or not the diet is formulated to provide all of your pets daily nutrient requirements, so that you and your furry friend can adventure and be healthy together!

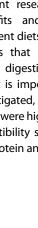
Look into the companies' credentials, team, manufacturing process, and ingredients. Check out how they test their diets nutritional efficacy to ensure you're comfortable before feeding or introducing any new diet to your pet.

At HOPE, we follow AAFCO and FEDIAF recommendations, and go above and beyond those recommendations by keeping up with current research and constantly reassessing our formulas to ensure our pets receive premium quality nutrition. Each batch of HOPE Pet Food is tested by a third-party laboratory to ensure all nutrients are present and no nasties (like Salmonella and mycotoxins). HOPE's formulas are also tested for digestibility to make sure they are delivering high quality and available nutrients to our pets. HOPE Pet Food employs an in-house pet nutritionist available to answer questions about nutrition anytime.

Additional Information

Current research shows some possible benefits and risks to feeding these different diets to our pets. Some evidence shows that raw and cooked diets are more digestible than dry kibble diets, but it is important to note that all diets investigated, including the dry kibble diets, were highly digestible and exceeded digestibility standards (greater than 80% for protein and greater than 90% for fat)!







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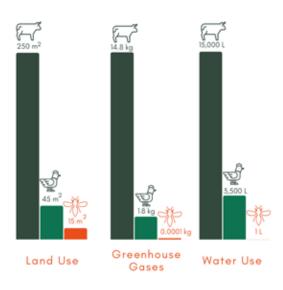


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There are several possible reasons as to why raw and especially cooked diets were more digestible than dry kibble diets. These reasons include the higher inclusion of fiber in extruded diets compared to raw and fresh/cooked diets. Combined with higher protein and fat in raw and fresh or cooked diets, these two reasons can contribute to the higher digestibilities of these diets.

The benefit of commercial fresh and cooked diets over raw diets is the processing/cooking step. Not only is heat cooking known to increase nutrient and

calorie digestibilities in diets for humans, this cooking step also adds in the critical "kill" step to minimize the risk of microbial contamination these diets could have.

Raw diets have potential zoonotic concerns when it comes to pathogen shedding because there is no heat treatment to kill/minimize those pathogens. Salmonella transmission from dogs to their owners via contaminated food has been observed. There is always the risk of Salmonella and other pathogens in any type of pet food, including dry kibble, however, there is a higher prevalence of Salmonella in raw diets vs processed dog and cat foods. Pathogen shedding also occurs more often in dogs fed a raw diet compared to dry kibble.

Research shows that regular athome cleaning and disinfection routines are ineffective at getting rid of Salmonella contamination from bowls and even at a raw-feeding kennel with good daily cleaning routines, Salmonella was still present on surfaces.

Final Thoughts

All in all, there are several factors to consider when deciding which diet is best for your dog, and with all the options out there today, it can be a difficult decision. Keeping in mind your pets' nutrient requirements, cost of food, and



food safety in your home are important. If you have immunocompromised family members, young children, or seniors in your home, choosing a cooked diet may be a safer option for your household.

And a friendly reminder to wash your hands after handling any type of pet food, treat. Keeping up with these important practices are going to keep you and your loved ones happy and healthy!



Sofia Bonilla, PhD Founder & CEO - HOPE Pet Food Scientist, bioprocess expert

For more information www.hopepetfood.ca

Natural Astaxanthin: How the 'king of carotenoids' can upgrade pet food

Famous for its potent antioxidant and anti-inflammatory properties, natural astaxanthin has become a highly targeted ingredient – not only for human consumption but also for pet food. Research shows that it contributes to a better immune defense and improved immune response in pets in general, and that it stimulates muscle function and recovery specifically for dogs. Senior pets in particular can benefit from astaxanthin as a highly bioactive ingredient.

All natural

Astaxanthin is a natural reddish pigment from the xanthophyll carotenoids family responsible for the red-orange color of a number of marine animals and microorganisms like salmon, crabs, krill, lobsters, and even flamingos. It is also found abundantly in various plants, bacteria, plankton and microalgae. Perhaps the most commonly known member of the carotenoids group is carotene, which is often associated with carrots – and, by that token, vitamin A.

"King of carotenoids"

Because of its reputation as one of the most powerful antioxidants found in nature, astaxanthin is often referred to as 'the king of carotenoids'. A growing number of studies is backing this reputation up. For instance, it has been shown that natural astaxanthin is almost

5 times stronger than beta-carotene, 110 times stronger than vitamin E and 6000 times stronger than vitamin C in quenching free radicals, thereby protecting the cells from oxidative stress. The latter is especially beneficial for older pets, because just like in humans, oxidative stress increases as pets age – meaning that their bodies face a higher number of free radicals to keep in check.

Carotenoids are known for their ability to neutralize reactive oxygen species on the inner layer of the cell membranes. As a superior property of its unique chemical structure, astaxanthin does this on both inner and also the outer layers. Thus, by slowing down the oxidative injury to cells in the brain and other organs, astaxanthin can contribute to better health and improved quality of life.

Table 1 Natural Astaxanthin is:



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Human consumption

Not only pets, but their parents as well can benefit from the antioxidant and anti-inflammatory properties of astaxanthin. Studies indicate that the carotenoid can have a series of positive effects on the human body, including, but not limited to, supporting memory and cognitive function, eye and vision, muscle endurance and performance, skin health and immune responses.

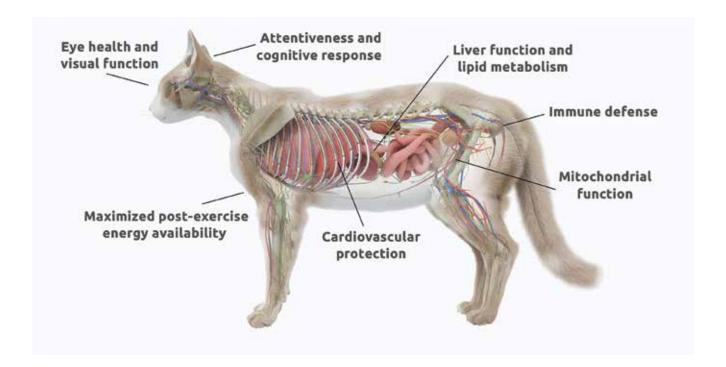
Other advantages of natural astaxanthin are that it is allergen-free and non-GMO, and it does not contain any gluten or soy. It also perfectly fits in a vegan and vegetarian lifestyle when derived from plant-based sources such as algae. Salmon and some other seafood are alternative

sources of astaxanthin, although it is not feasible to obtain the effective daily dose of astaxanthin merely through food. For this reason, supplementation is recommended.

Astaxanthin for pets

As pet parents are becoming more aware of the importance of healthy nutrition, not just for themselves but also for their four-legged companions, many countries nowadays have an evergrowing aging pet population. Given the physical, physiological and metabolic changes that inevitably come along with aging, these older pets will, to a varying extent, develop symptoms like progressive deterioration of their skin, coat, and teeth, as well as joint health and functionality.

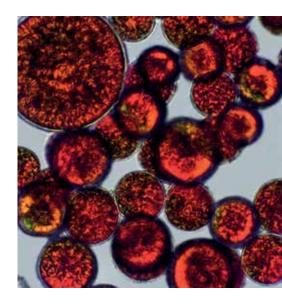
Finding the right ingredients to mitigate these symptoms is extra critical for senior pets because their appetite and the ability to digest and absorb nutrients typically decline as they age. This is where astaxanthin comes into play. Due to its high bioactivity, the carotenoid's antioxidant and anti-inflammatory properties effectively support senior animals' wellbeing, fitness, and general health, with proven benefits for muscles, eves, brain, immune system and more - answering to pet parents' ongoing pursuit of health-promoting and highly efficacious pet food products with high quality ingredients. Research indicates that natural astaxanthin contributes to different aspects of pet's health, including:



IQI Astaxanthin-Rich-Microalgae

As of October 2022, IQI is working together with AstaReal in Sweden to bring their innovative and science-based version of astaxanthin, Novasta® EB15, to the European pet food market. The company cultivates the most abundant source of natural astaxanthin, freshwater microalgae Haematococcus pluvialis in-house in closed photobioreactors under sterile conditions, making it a clean, green and sustainable source. The product is supplied as a red powder, composed of 32% algae biomass in 66% fully hydrogenated rapeseed

oil (encapsulated). It contains at least 1.5% astaxanthin. Encapsulation boosts astaxanthin' resilience against food processing effects. This additional processing flexibility provides further opportunities for incorporation of natural astaxanthin into rather 'open' formulations (such as pellets, meal mixes and soft chew treats) that are exposed to air at ambient temperatures, with less concern about the product stability and quality. Novasta® EB15 can be added to a wide variety of extruded or wet pet food and is considered as a great addition to the diet of cats and dogs.





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Oxidation Control | Palatability | Food Safety | Health & Nutrition







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Novasta® EB15 at a glance:

- Unique thermostable formulation•
- The safest and most studied brand of astaxanthin
- Natural source, originated from the microalgae Haematococcus pluvialis (produced in Sweden)
- Backed by over 70 clinical studies on humans and pets
- Suitable for targeting multiple health areas
- · Vegan friendly and sustainable

Sustainable Source

Given IQI's own efforts to contribute to a sustainable pet food industry, we highly value AstaReal's sustainability ambitions.

The company aims to be climateneutral by 2026 and proactively tries to contribute to the health and well-being of humans and animals. It already has a lot of positive things in place, such as 100% climate-neutral electricity, sustainability demands in suppliers assessment, good systems for waste sorting, sustainable business activities and several health-promoting internal activities.

The Author

Geert van der Velden is Innovation Manager with IQI Trusted Petfood Ingredients, based in Amersfoort, Netherlands. He is responsible for Business Development, generating new products and concepts that meet the needs of existing and new customers. Geert has more than 25 years' experience in the international pet food industry and

ateis to g

has gained knowledge and experience in many sections of IQI's business.

"It's great that many pet parents acknowledge the importance of antioxidants in pet food, but clearly many of them don't know that astaxanthin is an antioxidant as well. With this whitepaper, we're putting the spotlights on this powerhouse ingredient", Van der Velden says. "Although the document is primarily aimed at specialists in the pet food industry, I'm confident it serves everyone who is either personally or professionally concerned with the latest trends on pet food supplementation."



For more information

www.iqi-petfood.com www.astareal.se/benefits-ofastareal-astaxanthin/

About IQI TRUSTED Petfood Ingredients

IQI Trusted Petfood Ingredients is a global provider of premium-claim ingredients to the top brands in the pet food industry. Founded in 1994 as a trading company in raw pet food materials, today IQI offers an extensive variety of ser vices to aid and assist our customers and suppliers worldwide. IQI Trusted Petfood

Ingredients employs highly skilled personnel, owns and operates a global network of logistical hubs, and relies on a global supply network to obtain the purest natural resources available.

For IQI, quality is key. IQI Trusted Petfood Ingredients goes to great lengths to ensure the quality of its products and develop innovative new products. IQI also invests a great deal in maximizing the quality of its partnerships. Since this business is all about trust, IQI needs to bond with its partners to succeed. By working closely with both its customers and suppliers, IQI creates full transparency in the supply chain. IQI oversees and controls every step in the process from source to shelf and supplies products that are pure and traceable to their source.

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High Pressure Processing (HPP) and Freeze Drying of Raw Pet Foods and Treats Workshop Successfully Concluded at the Nebraska Innovation Campus



tos Hinerha

Hiperbaric, the global leader and supplier of high pressure processing (HPP) equipment, in collaboration with the University of Nebraska-Lincoln, hosted a two-day raw pet food workshop on March 15-16, focusing on HPP and freeze drying of raw pet foods and treats.

The event aimed to bring together industry experts and professionals to share their knowledge and insights on the latest trends, innovations, and best practices in the raw pet food processing industry.

The raw pet food workshop covered various topics, including HPP, freeze drying, water activity, product shelf-life, food safety regulations, market trends, and best practices. The workshop combined lectures, pilot plant demonstrations, and visits to Universal Pure's HPP facility and Petsource by Scoular's freeze-drying and co-manufacturing facility.

The event was attended by 90 participants, representing 41 companies and organizations from the pet food processing industry, including major players such as Mars Petcare, Nestle Purina, Blue Buffalo, Stella & Chewy's, Steve's Real Food, The Farmer's Dog, OC Raw Dog, Spot & Tango, and Green Juju.

Participants were provided a digital badge issued by the University of Nebraska-Lincoln for completing the workshop.

Event sponsors included UNL Food Processing Center, Hiperbaric, Parker Freeze Dry, and Universal Pure.

"We are thrilled with the response and participation we received for this workshop," said Dr. Grace Danao, UNL Research Associate Professor. Roberto Peregrina, Hiperbaric USA Director, added, "It was a great opportunity for industry professionals to come together and share their knowledge and expertise in the field of raw pet food processing."

The raw pet food workshop provided a platform for attendees to exchange ideas, network, and gain a deeper understanding of the latest advancements in pet food processing. The hands-on sessions and interactive discussions were well-received by participants and provided valuable insights into the challenges and opportunities in the pet food processing industry.

The success of the workshop is a testament to the commitment of Hiperbaric and the University of Nebraska-Lincoln to support the growth and innovation of the raw pet food processing industry.

All workshop materials, including recorded presentations, will be available on NU

Advance, the University's course delivery platform for online non-credit and professional development offerings. Inperson workshop registrants do not have to pay when enrolling in the online course, all others can enroll for a \$300 fee.

Workshop participants will have access to these materials until September 17, 2023.

Registration is available at https://fpc.unl. edu/petfoodconference.

About Hiperbaric

Hiperbaric is the world's leading supplier of high pressure processing (HPP) equipment for the food industry.

Since its inception in 1999, Hiperbaric has designed, developed, produced, and marketed the best high pressure processing equipment internationally. The company is recognized for its reliability, customer support, teamwork, and continuous effort in R&D.

Hundreds of companies worldwide use Hiperbaric equipment for the processing of juices and beverages, meat, fish and shellfish, fruits and vegetables, dairy, and prepared dishes. A highly versatile technology, HPP can be applied to a wide range of foods.

With world headquarters in Spain, the company also has an office in Miami to serve its North American market. For more information, visit: www.hiperbaric.com



About UNL Food Processing Center

Established in 1983, the Food Processing Center is a multi-disciplinary resource that offers technical and business development services under one roof. This combination is rare in the food industry, which enables the organization to meet the needs of its diverse clients including manufacturers, entrepreneurs, suppliers, distributors, associations, retailers, and food service providers.

The role of The Food Processing Center is to enhance value throughout the process, from idea through ongoing market support.

The Food Processing Center is equipped to work with products in every major food group including grains and oilseeds, fruits, vegetables, dairy products, meat, and poultry. Depending on customer needs, it can provide a stand-alone service or a fully integrated package of technical and business development support.

The Food Processing Center offers a unique combination of technical and business development services to accurately reflect the nature of the food industry. Food is both a science and a business, and it understands the dynamic relationship of these two different, yet interconnected worlds.

For more information

www.hiperbaric.com https://fpc.unl.edu/

8th Annual Extruded Pet Foods and Treats

The 8th Annual Practical Short Course on Extruded Pet Foods and Treats will take place from July 10-14, 2023 at Texas A&M University in a hybrid format by staff, industry representatives, and consultants.

The program will cover information on pet food nutrition, material handling, preconditioning, extrusion of pet foods, extruded and non-extruded treats, baked pet treats, raw material, extrusion hardware, automation, product analysis,

meat handling in pet food, drying, cooling, and enrobing, food safety, pet food and treat shelf life, troubleshooting and pet food related class activities.

For more information www.teesedge.tamu.edu



Issue 2 2023 17

Sieve Shakers: Everything you Need for Sieving!



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Vibratory Sieve Shaker ANALYSETTE 3 PRO – precise sieving with amplitude control

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electromagnetic drive oscillates the sieve stack into regulated vertical oscillations, and is the ideal solution for sieving sample quantities up to 2 kg and a measurement range from 20 μ m to 63 mm

The ANALYSETTE 3 PRO is perfectly suited for quality control of incoming and outgoing products, offers user-friendly operation and is low-noise, robust and long-lasting.

Vibratory Sieve Shaker ANALYSETTE 3 SPARTAN – simple sieving for all tasks

The little sister of the ANALYSETTE 3 PRO for all typical sieving tasks in the laboratory with optical adjustment of the amplitude on the running instrument. Complete with the practical FRITSCH sieve stack tensioning system EASYTWIST and the FRITSCH evaluation software AUTOSIEVE for evaluation of the sieve analysis.

Heavy Duty Analytical Sieve Shaker ANALYSETTE 18 – effective sieving of large quantities

The ANALYSETTE 18 is the robust, Heavy Duty Analytical Sieve Shaker from FRITSCH. It can effortlessly sieve up to 15 kg of material between 20 µm and 125 mm. The three-dimensional sieving motion ensures particularly fast sieving results without manual re-sieving, and also optimal reproducibility.

For more information www.fritsch.de





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You have ideas – we have just the right solution for them. From product preparation to filling and portioning technology and product handling - our process solutions to match your needs. Benefit from our many years of in-depth expertise, our process-reliable technology and our excellent service. Let us turn your ideas into solutions.



Scan QR code and watch the video.

Further information at: www.handtmann.com/petfood

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HANDTMANN LINE SOLUTIONS: FROM RAW MATERIAL THROUGH TO PACKAGING

Perfectly coordinated technology from product preparation and portioning, forming or drying all the way through to packaging. Our process solutions are ideally suited for cold-extruded applications. Handtmann technology turns meat, plant-based or insect protein raw materials into bars and sticks of varying sizes and shapes. We stand for accurate-to-the-gram portioning and diverse process options ensuring precise product depositing onto conveyors or trays.



PRODUCT PREPARATION

Mixing: Handtmann Inotec IM mixer

2-shaft mixer for the guick and homogeneous thorough mixing of viscous to highly viscous products. Handtmann Inotec mixers also provide the optimum shaft configuration for any mixing material.



Emulsifying: Handtmann Inotec iT

The modular 1- to 5-stage cutting system with optimum adjustment of the cutting position and thus minimised wear, reliably grinds products of any viscosity and temperature into homogeneous products of particle sizes less than two millimetres.



ACCURATE-TO-THE-GRAM PORTIONING

Filling and forming: VF 800 vacuum filler and FS 510 forming system Handtmann vacuum filling technology with subsequent fully automatic, multi-lane forming stands representative for long-term stable portioning accuracy, minimal wear, needs-based performance, application variety, hygiene and ergonomics at the highest level.



DOWNSTREAM PRODUCT PROCESSING

Product depositing, drying and packaging

Handtmann technology is perfectly coordinated with downstream process steps and the machines from our numerous partners required for depositing, drying and packaging. Everything from a single source for a seamless production process from A to Z.

Albert Handtmann Maschinenfabrik GmbH & Co. KG Hubertus-Liebrecht-Str. 10-12 | 88400 Biberach | Germany sales.machines@handtmann.de | +49 7351 45-0



Twin Screw Extruder ZSK Mv PLUS Ideal for Pet Food Treats



The Coperion line of ZSK Mv high efficiency extruders have been upgraded to include options for easier clean design to meet the highest standards of hygiene, ideal for the processing of pet treats. The core feature of this redesign is the twin screw extruder's open base frame, made of stainless steel and has only smooth surfaces, offering users numerous advantages. Its excellent accessibility markedly reduces the downtime needed for cleaning. In addition, the added versatility of the barrel and screw element configuration options ensure maximum product configurations. In addition, several engineered features ensure the maximum allowable free volume and throughput with highest machine efficiencies.

The complete extrusion system for both pet treats can be provided with integrated controls and equipped with Coperion K-Tron's line of both ingredient and liquid feeders to ensure optimal accuracy and extruder performance.

For more information

www.coperion.com/en/industries/food-pet-food

About Coperion

Coperion is the international market and technology leader in compounding and extrusion systems, feeding and weighing technology, bulk materials handling systems and services. Coperion designs, develops, manufactures, and maintains systems, machines and components for the plastics, chemicals, pharmaceutical, food and minerals industries. Within its two divisions – Polymer and Strategic Markets / Aftermarket Sales and Service – Coperion has 2,500 employees and nearly 30 sales and service companies worldwide. Coperion K-Tron is a brand of Coperion.

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Keeping 'Tabbies' on Premium Pet Food Trends

Premium Trends and Technology Pave the Way for Better Pet Food Satisfaction

Data shows that the global pandemic has bonded pets and their owners even closer together. And with it, feeding patterns have evolved again. As a key global player in the pet food and treat market, food safety inspection specialist Fortress Technology examines the rising humanisation and premiumisation trends driving consumer demands and production line technology that is supporting responsible pet ownership.



Photo:iStock credit @ Svetlana Sultanaeva

Pampered pets - human food is beginning to dictate the way pet food is processed and superfoods are creeping their way into pet diets

The days of opening a tin of chum for our four-legged friends are long gone. During the international lockdown in 2020, the European Pet Food Federation (FEDIAF) recorded a 2.8% growth in animal ownership, with 88 million households in Europe owning a pet that year. A number of these were first time pet owners.

With more canine and feline mouths to feed than ever before (and a market worth over 21 billion Euros in Europe alone), sufficient pet food safety and detailoriented inspection has never been more paramount.

As more homes acquired a new family member, the annual sales of pet food in 2020 increased to 8.5 million tonnes. The pandemic saw millions more pets sat indoors with their owners, promising them a life of companionship. The market responded accordingly by supplying 21.2 billion pet food related products and services in 2020.

Petfluencers and animal content

Industry trends, such as the rise in social media pet influencers (petfluencers), has a huge role to play. Humanization and premiumization are also big buzzwords in this new world of emotive storytelling.

As a consequence, the sale of natural versions of pet slurries, kibble and raw diets has boomed in the last three years. Due to increasing environmental and animal welfare concerns, owners are also favoring premium pet food.

"Industry trends prove that pet owners are demanding more from manufacturers when it comes to pet food meeting similar standards to human food, ensuring that it is safe, nutritious and

follows rigorous processes with quality machinery," explains Fortress Europe's Commercial Manager Jodie Curry.

Human food is beginning to dictate the way pet food is processed, as owners want their animal's diets to mirror their own. In other words, good enough for human consumption. Reports also show that the pet food industry is influenced by human trends such as cleaner labelling, veganism, alternative protein and healthier options. In fact, during 2020 Europe held the largest share of the global vegan pet food market, and it is expected to grow to over 15 million US dollars by 2028. It is clear that tearing open a packet of overly processed and poorly produced pet food is no longer good enough.

A craze for customisable kits

A seniorisation trend is also emerging. With pets living longer than ever before, this is influencing the need for functional foods that are age or illness specific. As a consequence, more owners are buying premium food that can be tailored to their

pet's breed, age, weight and even taste preferences.

Combined with the rise in e-commerce subscriptions, dog owners can purchase tailor-made subscription boxes that contain premium pet kit meals – a global market estimated to reach USD 5.20 billion by 2028.

Ready-made for a variety of breeds and completely customisable, these conveniently pre-packed goods come perfectly portioned, making it all the more necessary for processing lines to meet filling regulations and eliminate contaminants efficiently. Quality x-ray systems will check pre-made pouches for fill levels, product voids and also ensure applications are properly sealed.

"Effective inline inspection is of the utmost important in ready-to-go packaging. A system like our new Raptor X-Ray is ideal for inspecting pet foods in metal foil sachets and can look for a range of hazardous contaminants, including bone

and glass. The ability to accommodate a range of different flexible packaging formats that prolong shelf life is one of the critical advantages of X-ray," Jodie states.

An appetite for quality snacks and trendy treats

The sparking interest in the quality and nutritional value of pet food means premium and super-premium areas of the market, including pet treats and snacks, have dominated e-commerce sites and retailers.

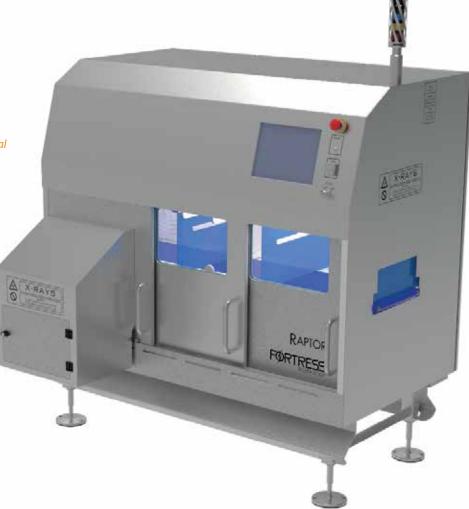
Superfoods are creeping their way into pet diets and replacing the bog-standard wheat treats; blueberries, cranberries, sweet potatoes, peas, spinach and even chia seeds are not uncommon in pet treats produced by craft-style or retail suppliers. This humanised appetite for pet food requires a demand for tighter regulations and better-quality machinery.

New technology is beginning to accommodate these treat trends, as processing lines now use machinery that





Fortress Technology's new Raptor X-Ray is ideal for inspecting pet foods in metal foil sachets and can look for a range of hazardous contaminants, including bone and glass



can generate live OOE data for reporting, making detecting contaminants early in all-natural and organic products much more productive.

Clawing for a better pet food promise

For years, detecting contaminants in pet food and pet treats has had widespread

effects, whilst also impacting cost of production line; as detection and x-ray systems are often implemented at the tail-end of lines to inspect finished and packaged product where it is more expensive to pinpoint foreign body contaminants.

Annual sales of pet food increased to 8.5 million tonnes in 2020 as pet ownership rocketed



"If you catch a metal contaminant in its largest form at the start of the processing line, for example in a pipeline or gravity system, you are eliminating it at the cheapest part of the process," Jodie elaborates. "Pushing the inspection solely to the end of the line, any contamination will be caught at the most expensive part of the production process. At this point the entire batch of product will be packed and ready for despatch and could potentially be contaminated with unidentifiable and hazardous contaminant fragments, prompting a costly and potentially brand-damaging recall."

To combat ineffective production lines, the industry can use machines with upstream detection to reject quantities of metal and other contaminants before it reaches the meticulous end-of-line systems and is ready to be packaged.



Hygienic pump pipelines for wet pet slurries and pate-style foods are utilized to prevent contaminations reaching the packaging stage. They are available in metal detection and x-ray formats. Similarly, Fortress gravity metal detectors are a common sight on dry kibble lines, often located between product chutes and hoppers and integrated with automated packing systems and checkweighers.

Additionally, highly sensitive bulk metal detectors and checkweighers can be added at the end of production lines to verify the weight and perform a final quality check on the largest of pet food bags and boxed wet food trays.

By adopting an efficient and systematic approach to manufacturing pet food, owners can rest assured knowing that their pet's dinner has undergone thorough contamination detection. No matter the ingredients or application format, it is essential pet food production lines reflect the authentic safety, wellbeing and care associated with owner's animals.



To combat contamination Fortress Technology's hygienic pump pipeline is IP69K rated to withstand high-pressurized washdowns

For more information www.fortresstechnology.co.uk

Baby elephants in Kenya need our help. Drought, poaching and habitat loss is leading calves to become orphaned. Like Roho, whose mother died when he was just an infant.

Roho was rescued by the Sheldrick Wildlife Trust, who are pioneers in the hand-rearing of milk dependent baby elephants so that they can return to the wild when grown. He will need specialist milk and care for up to 10 years and you can help ensure his future by adopting him today.

Adopt or donate and give fragile baby elephants a second chance at life: www.sheldrickwildlifetrust.org



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DV 85-4 Depositing System for Direct Dosing Into Trays and Thermo-Forming Packaging



Handtmann develops modular technology for petfood processing, from product preparation including mixing and grinding to processing technology for pumping, feeding, portioning, linking, forming, dosing and separating as well as product handling including weighing, feeding and depositing into packaging solutions. The core competency of dosing includes the DV 85-4 depositing system, boasting high flexibility that makes it ideal for use in artisan production as well as industrial performance levels.

In combination with a vacuum filler, direct dosing is flexibly possible in trays and thermo-forming packaging, such as feeding two-lane, 2-1 formats into thermo-forming packaging machines and tray sealers. Thanks to the serial 2-lane dosing, a capacity of up to 100 portions per minute can be achieved, depending on the portion size. A wide variety of product variations is possible here from

fluid to pasty or with chunky inserts. Hot fillings up to 90 degrees Celsius additional advantages for the production of wet and cooked petfood. Various outlet variants, round or star-shaped nozzles and a dosing nozzle with stamp and return suction further expand the scope for product and production. The adjustable ejection movement of the piston, ("double stroke" function) and the precise cutting of chunky products thanks to the patented "pulling cut" guarantee an excellent and appealing product presentation for all products. In addition, the precise feed system of the Handtmann vacuum filler ensures consistent weight accuracy. The dosing valve features the latest hygienic design and all materials are FDA-compliant. Made of high-quality stainless steel, the dosing valve is easy to clean and meets highest hygiene requirements.

For more information www.handtmann.com/food



COVERIS[™]

MonoFlex

Recyclable monomaterials range



NO
PRODUCT
PACKAGING
OPERATIONAL
WASTE.

Tiny Amounts, Big Results

Small component dosing and weighing system gets the measurements right



H. Wilhelm Schaumann GmbH is one of the most important European manufacturers of mineral and pharmaceutical mixtures for nearly all types of animals. A multitude of different small components give rise to special, highly effective feeds. This requires absolute precision in their dosing and weighing, because even the smallest deviation can significantly affect their quality. It's a challenge that the Austrian company Daxner successfully tackled at the Schaumann Taufkirchen facility: A sophisticated system solution ensures high productivity and absolute precision. It is a trailblazer for small component handling in other industries as well.

The precision of the automatic dosing and weighing system developed by Daxner is 10 g per component. That is an impressive figure, but for the Schaumann company it is the be all and end all. "Even the smallest deviations in dosing and weighing the vitamins and trace elements needed for the mineral mixtures will lead to undesirable results. We can therefore tolerate no imprecision in our production, because for us, quality is the top priority," is the way Stefan List, long-time manager of the Taufkirchen, Austria, plant, explains the stringent requirements.

No conflict between precision and productivity

The system that Daxner developed for Schaumann succeeds in balancing precision and productivity. They got the dosing and weighing not only precise, but efficient. Thanks to innovative Daxner bulk solids technology, now up to twelve batches an hour can be processed. That is a significant increase.

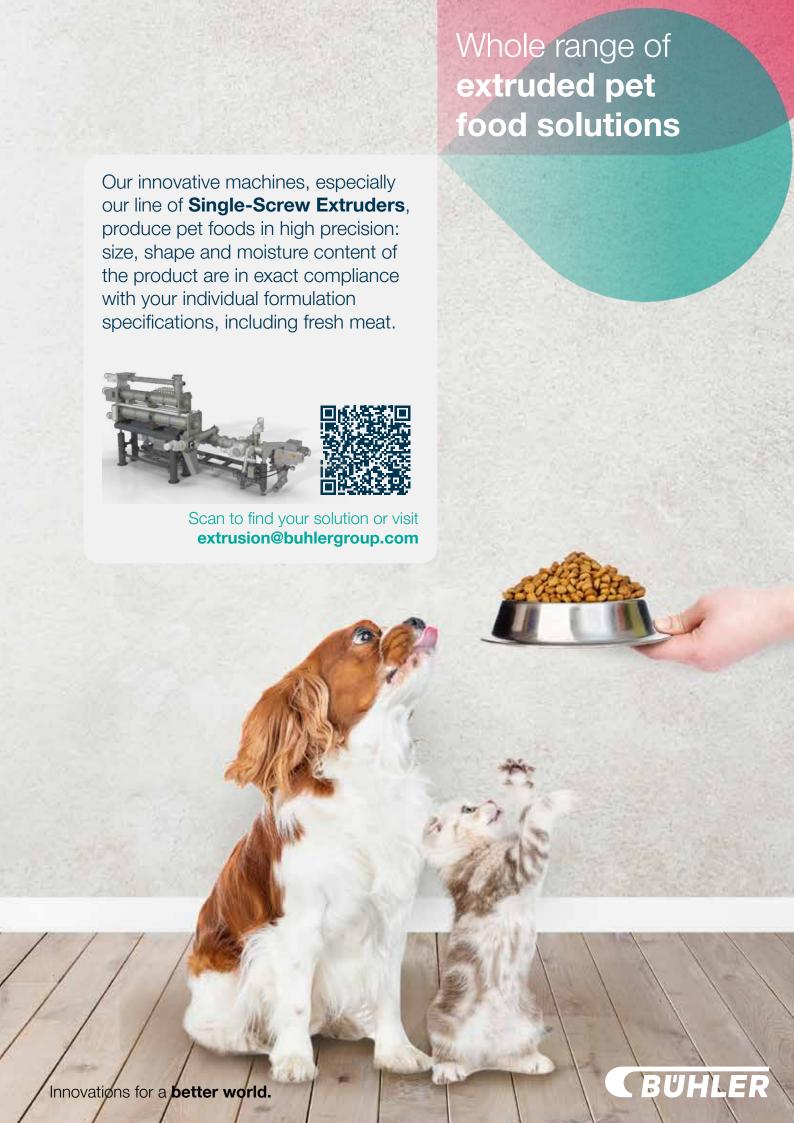
Optimizing production

The Taufkirchen feed works is one of the most modern, efficient production facilities in the industry. "We see futureoriented technology as a significant competitive advantage that we consistently invest in," the manager explains. The advantages are obvious:

In this case, technology not only brings higher efficiency and precision, but also optimization of the whole production area. "We could finally eliminate spatial constraints. Because dosing was put on the ground floor, and weighing in the basement, long-needed additional space was obtained for the mixing area.







Residue-free handling of difficult materials

What had previously seemed impossible has now succeeded through intelligent resolution of technical details. Despite the individual production steps being set up on different levels, the production process works completely troublefree: A pneumatic dense phase conveyor sends the dosed and weighed components from the basement to the mixing process on the fourth floor.

Defying the laws of gravity, they arrive completely free of residue and contamination, and meet the strict hygiene requirements 100%.

The solution is in the details

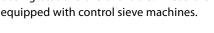
Above all, it is the many technical details that add up to this system's uniqueness and efficiency. Company head Johann Daxner observes: "The solution is in the details. It is also our strength - our expertise. So on the one hand we've got excellent technology, and on the other hand we know how to use it for the specific customer and specific task. The total result depends on every little detail." This philosophy is reflected in the system solution developed for Schaumann, and in its technical execution.

Combined dosing stations

Schaumann stores the small components necessary for the mineral mixtures trace elements and vitamins - in the Taufkirchen feed works' ground floor. To take them from big-bags or sacks, and fill containers with them, two combined

dosing stations are available. These are equipped with control sieve machines.

An inflatable hose docking system and a powerful aspiration system with a radial fan and jet filter make the filling dust-





Container dosing system

The containers themselves are a central element in small component handling. They are designed as a stable

steel frame with flexible, clamped containers with a filling lid and discharge flap. After they are filled, they are guided to the dispensing system, which consists of two dosing stations, each with eight container locations. Forklifts use docking collars to set the containers onto vibrating frames. The vibration ensures residuefree emptying into interim containers. Agitating dischargers uniformly feed the dosing screws. Exacting production, speed control and the flow-stop end cap ensure precise dosing.

Flexible scale

Then weighing takes place in a flexible scale. It is designed as a container scale with flexible rubber inliners. Together with pneumatically activated squeezing elements, they guarantee residue-free emptying even with powders that do not flow easily. To ensure strict hygiene requirements, it can be moved out on



tracks for easy cleaning. Another plus: High weighing accuracy of 10g (weighing range up to 50kg), allowing individual components of 1kg to be weighed to 1% precision.

Pneumatic dense phase conveyor

After that, the flexible scale empties the weighed components into the pneumatic dense phase conveyor directly below. This moves the bulk material from the cellar to the receiving container on the fourth floor. Despite the long, complex routes, even sticky or heavy-flowing products can be gently transported with absolutely no residue. The conveyor pipe extends over a 30m horizontal and 30m vertical distance, in which a total of six 90-degree pipe bends are built. These are designed as flexible hose elbows for highly adhesive products. The receiving container upstream from the mixing process is designed as a scale that uses gravimetric controls to ensure 100% residue-free conveying and emptying processes. Delivery of the content to the mixer completes the batch cycle. Twelve batch cycles can be performed per hour.

Testing and fine-tuning

Besides being planned and designed to the smallest detail, the system underwent fine-tuning on site before being installed and integrated into the production process. The Daxner specialists designed and ran tests in the plant to achieve the right dosing precision under realistic conditions.

Proven in operation

In the Taufkirchen feed works, the Daxner dosing and weighing system

has been running for six months to the customer's complete satisfaction.



"We set a very high bar that the Daxner company completely cleared with a system solution thought through to the smallest technological detail. We are connected through a very long partnership that has been completely confirmed again by this project," says Stefan List.

A promising solution for other industries, too. This version of the automated dosing and weighing system is not revolutionary just for the animal feed industry, but also for many others that

use small components with diverse characteristics. Johann Daxner sums up the strengths of this technically demanding systeminthisway: "Aboveall, oursolution has potential for any company that has to dose and weigh raw materials with the utmost precision, and where hygiene demands require that all contamination be prevented."

For more information www.daxner.com



Transforming Pet Food Packaging Market With Recyclable Films

With an estimated revenue of 94,76 billion USD, the global pet food market is steadily growing. The fact that over 80 million European households owned at least one pet in the past year proves this point as well.¹ To meet growing customer and market demands, Coveris has been extending its range of fully recyclable MonoFlex packaging. We talked to Nicolas Plantec, Pet Food Segment Leader, and Eric Valette, Flexible BU Innovation Director at Coveris, to understand what the future holds for this booming industry.

The numbers speak for themselves – the pet food market is a growing business! What are the key market trends that are driving this boom, in your opinion, and how is Coveris answering them?

Nicolas Plantec: One of the key drivers for this business' growth is the ongoing trend of humanization of pets, which results in pet owners paying special attention to the quality of their four-legged family members' food. Combined with the growing number of pet owners in Europe during the pandemic, it explains why this market is very resilient during a crisis period and keeps steadily growing.

Eric Valette: Another strong trend is sustainability. Pet food producers are looking to satisfy both their product demands

Eric Valette
R&D Director BU Flexibles

meet environmental and government laws to limit waste. Our MonoFlex family of fully recyclable bags and films is the perfect answer to the global packaging waste evolution.

It's been three years since the COVID-19 pandemic outbreak, but its influence is still visible on the market. How did it affect your customers?

Nicolas Plantec: During the pandemic, the UK market saw a 57% increase in dog ownership due to the rising trend of dog adoption as a companion for families.² European customers also tend to choose to feed their pets premium food. Since these pet owners are mostly located in big cities, rapid urbanisation is among the key factors driving the market.

EricValette:Thistrendislargely driven by Gen Z and Millennials who represent 59% of new owners and are aware of the environmental impact of packaging waste, therefore prefer buying bigger and recyclable size packs.³ In combination with the e-commerce growth in Europe where 75% of people buy primarily online, this created a demand for new bags sizes and formats, which we answered.⁴ We can offer a variety of MonoFlex

bags from 1 up to 20 kilograms, from flat bottom to quadroseal bags, both FFS and pre-made, as well as stand-up pouches.



Nicolas Plantec Segment Lead Pet Food

You have long and rich experience in the pet food market in Europe. How would you say the customers' demands and challenges have evolved over the past 2-3 years?

Nicolas Plantec: The main focus during the pandemic years for pet food market were enhanced product safety and hygiene, as well as maintaining supply chain flows working. However, trends are going back now to a pre-pandemic scenario, and we notice that pet food brands are focusing again on innovative and environmentally friendly packaging solutions. As a result, our recommendation is to switch to the polyethylene based MonoFlexE solution, a monomaterial structure which allows recycling in the existing plastic streams.

Eric Valette: To satisfy the growing need of European pet food brands for convenience and ease of use, we worked





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We bring together people and institutions in order to use professional knowledge to ensure that no pet suffers pain, is afraid or poorly nourished. We currently run 10 shelters Germany-wide, to accommodate abandoned pets and lovingly care for them. We also have our own social food brand – 100% of the revenues we invest in animal welfare!

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The MonoFlex family of 100% PE-based films is designed for dry pet food packed both in form-fill-seal and pre-made bags including popular formats like block bottom and quadroseal bags as well as stand-up pouches. They are produced across our sites in France, Germany, Hungary, and UK, where they are extruded, printed, and converted on site.

hard to ensure the bigger bags with PEbased monomaterial structure provide the same benefits as our standard structures to allow easy opening and resealing for

extended freshness. In fact, the MonoFlex bags offer a variety of reclosable systems such as top zip, top hook and loop, front or top pocket zipper. Thanks to our inhouse R&D capabilities,

the new solutions offer customers the same convenience and product protection as the standard designs, while minimizing waste.

Speaking about minimizing waste, where does Coveris stand? Is the company part of any external sustainability initiatives?

Nicolas Plantec: Sustainability is embedded in Coveris' mission of No Waste, which aims to provide the best eco-efficient and high-performance packaging solutions both from a product and an operational perspective. The monomaterial solutions from MonoFlex family answer these targets and have the ability to meet the overall European Commission goal to transform 50% of plastics packaging to be reusable, recyclable or compostable

by 2025.⁵ On a Group level, Coveris has introduced ReCover, a new business segment responsible for mechanical recycling of plastic films to achieve higher

"The combination of full recyclability of the monomaterial, the prolonged freshness thanks to the front zip and the enhanced graphics met all our needs. As a result, the new bag created a user and environmentally friendly image for our therapeutic pet food brand", summarized Olivier Poupon, Demavic Buyer.

quality, consistent supply of recycled materials.

Eric Valette: Besides launching our own strategies, Coveris Group is also part of many international initiatives to minimize plastic waste. For example, we are a part of the UK Plastics Pact, which brings together enterprises from across the plastics value chain to drive change in the way we design, produce, use, reuse, and dispose of plastic packaging waste. We also collaborate with other packaging producers under the CEFLEX initiative, which focuses on promoting innovative solutions for creating a truly circular economy for flexible packaging. Also, several Coveris sites received the EcoVadis Gold certificate confirming that our operations meet the highest ESG market standards.

In terms of future innovations, where do you see the main challenges and opportunities? Are you planning any new

product launches for the pet food market anytime soon?

Nicolas Plantec: The main market's challenges focus again on maintaining shelf life and boosting endusers' convenience while

switching to more sustainable packaging solutions. At Coveris, we believe that packaging innovations in terms of improved circularity and reduced carbon footprint will be the key drivers in the next years.

Eric Valette: We are planning two important product launches this year for different product categories. For dry pet food, which is our core activity, we developed innovative paper bags that should be ready to market by the end of 2023. For wet pet food, however, we are in the final stages of developing a sterilizable monomaterial pouch with a barrier function, using our awardwinning MonoFlexBE material. We are looking forward to introducing both innovations and seeing how the market reacts.





Ultra Premium Direct, a French manufacturer of natural premium pet food, has considered the needs of modern pet lovers and developed a new product range in France called PROTEIN BOOST. This innovative food line offers the best nutrition by combining kibbles made without cereals and freeze-dried pieces of raw chicken and trout dried in the cold. The new product range is available for online purchase at the Ultra Premium Direct's website from 2022 in Coveris' MonoFlexE fully recyclable bags made 100% from PE.

"We wanted to be one of the first to offer recyclable bags on the market, but we didn't want it to impact our production process and machinery. Coveris was able to provide us with a new, recyclable material, however, with the same characteristics as our previous bags with the PET/PE structure," underlines Jamie Queally, Purchase manager at Irish Dog Food.



To improve their existing packaging, Irish Dog Food teamed up with its packaging supplier, Coveris, to design their first recyclable bags in bigger sizes. The new pet food bags for Irish Dog Food have been available in Aldi stores in the UK since the summer of 2021. The monomaterial solution for Irish Dog Food answers one of the four targets of UK Plastics' Pact, which is to transform 100% of plastics packaging to be recyclable by 2025.

About Coveris

Coveris is a leading European packaging company. It manufactures flexible packaging solutions for some of the world's most respected brands, producing a wide range of products - from food to pet food, medical goods to industrial and agricultural products. Coveris is organized in three Business Units: Films, Flexibles, and Paper. Together with its customers, Coveris is continuously developing new, attractive, and sustainable packaging, fully in line with the company's No Waste sustainability vision. Pursuing this vision, Coveris has recently established ReCover, a business unit that bundles all steps of waste procurement and processing for circular plastic recycling, thus closing the loop. With its corporate office in Vienna, Coveris Group has 29 sites in the EMEA region, with a total of 4,100 employees.

¹https://www.grandviewresearch.com/industry-analysis/pet-food-industry

²https://www.grandviewresearch.com/industry-analysis/pet-food-industry

³https://www.pfma.org.uk/news/pfma-releases-latest-pet-population-data

4https://ec.europa.eu/eurostat/web/products-eurostat-news/w/DDN-20230228-2

⁵https://environment.ec.europa.eu/topics/waste-and-recycling/packaging-waste_en

For more information

www.coveris.com



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Fortin Mills with New Coding & Marking Solutions

Marking gets to the heart of the matter

"First come, first served!" they say. When grinding, however, it is not only speed that counts, but also the process: In a conventional mill, grain is ground into flour. In a peel mill, on the other hand, the valuable grain kernel is preserved. This can then be used to produce nutritious cereal flakes and varieties of groats. Both processes have dusty production environments in common: a challenge for product and packaging labelling.

Fortin Mühlenwerke GmbH & Co. KG of Düsseldorf, Germany is one of the largest peeling mills in Europe. Founded in 1932 in the port of Düsseldorf, the company now sells its products made of oats, wheat, barley, spelt and rye worldwide. The company's customers are food processing producers such as muesli and cereal manufacturers, pet food manufacturers, but also large bakeries and retail chains. Depending on the end customer, the products are packaged in cartons, trays or bags. Despite sometimes dusty filling situations, the packaging units must be reliably labelled with various information such as product names, weights and expiry dates. Fortin has been using the thermal inkjet printing technology of Bluhm Systeme for years.

Clean, high-quality and efficient marking

For Fortin-Werke as a food company, a clean and high quality printing system was the deciding factor for purchasing. Other factors included manageable acquisition and operating costs, reliability in 24-hour

operation, network capability and ease of use. In addition, Bluhm's Markoprint system was convincing not least because two different lines can be operated very efficiently from one control unit.

A total of eight print heads of the Markoprint thermal inkjet printing system from the Bluhm

Systems portfolio are installed in the packaging systems of the Fortin plants. The eight cartridges were divided into two units with four print heads each. In these so-called quad heads, the ink cartridges were "cascaded", i.e. they sit slightly offset on top of each other. For technical reasons, each individual cartridge can be labelled at a maximum print height of 12.5 millimeters. Thus the quad heads at the Fortin plants each achieve a print image of up to 50 millimeters in height.



Fortin uses cartridges that contain HP's water-based ink. This ink is ideal for printing on easily absorbent substrates such as cardboard boxes, trays and paper bags. The maximum print quality in which the print heads can mark is pin sharp with 600 dpi. Thanks to such high quality printing results, Markoprint markings can even replace labels. Since each ink cartridge has its own print head, a brand new printer is available for every cartridge change. This ensures a consistently high-quality print image and a clean system at all times.



The Markoprint system enables highly efficient control of up to eight print heads from a single control unit. At Fortin, the two Quad print heads were mounted on two different packaging lines and connected to the controller via a network. This allowed the control unit to be safely integrated into the production process. The controller works with i-Design Touch. This intuitive software makes it very easy to create and save a wide variety of print images. In addition to texts and logos, the layouts can also contain barcodes and twodimensional data matrix or QR codes. Due to the export business, Fortin plants mainly print GTIN 13 barcodes on their packaging

Markoprint offers a wide range of printing options

Markoprint printers can be used with ink cartridges from various manufacturers. These print heads differ in maximum resolution and print height. This results in numerous different marking possibilities. With an eight-head printing system, as it is used at Fortin-Werke, large lettering with a maximum print height of 800 millimeters could, for example, be realized using the corresponding ink cartridges. The eight cartridges could also be divided into four twin print heads, each with a height of 25 to 200 millimeters.



For more information www.blumsysteme.com





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Ready for the Zoomark Show?

- Photos: Zoomark
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- Record numbers for Zoomark's 20th birthday.

Zoomark, the international pet food and pet care show, is back, bigger than ever. Scheduled for 15th-17th May 2023 at BolognaFiere, it is ready to make its mark, with record numbers. As things currently stand, this edition of Zoomark is set to be the biggest ever, occupying no less than 7 halls (16, 21, 22, 25, 26, 29 and 30).

All the major pet industry players have confirmed their presence in Bologna and are finalizing their exhibit: more than 1,056 exhibitors have chosen Zoomark as their official showcase. 75% of them come from abroad, from a total of 57 countries, and they represent the full range of pet industry product categories.

The growth of the event is evidenced by the number of foreign delegations, which now stands at 9, with groups from the USA, China, Canada, Brazil, UK, Greece, Czech Republic, India and Thailand.

Mega trends and innovations in hall 16

Hall 16 will host two of the most interesting and innovative areas of Zoomark 2023: NEXT and Pet Vision. NEXT is the brand-new area devoted to Start-Ups: an opportunity for them to introduce themselves to the pet business community for the first time. In this space dedicated to young businesses, visitors will find a host of new ideas and inspiration from the cutting-edge of the industry.

The Pet Vision area offers insight into five mega trends set to shape the pet market in the near future, namely:

Value for money:products and services that offer an optimum quality to price ratio, to help consumers in this period of high inflation, without compromising on brand experience;

- Green transition: products and services that stand out for their genuine environmental sustainability and social responsibility;
- Healthy & functional: products and services for health and functional purposes, designed to fulfilspecific needs;
- Tailor-made: bespoke products and services that are highly specialized and customized, speciallycreatedto meet precise needs of pets and owners;
- Spoil me more: products and services that treat pets to extra-special attention.

The competition

These five categories will also be the focus of a brand new competition judged by a jury of high-profile international trade journalists, which on 16th May will pick the best (and most innovative) products launched at Zoomark.

The jury will evaluate and award the product or service that stands out the most for its qualitative, technological and innovation features and content, and for its consistency with the trend for which it was registered.

For each of the five megatrends, one product will go to the top step of the podium, while the second and third place winners will receive a special mention.

Aqua project

After the success of past editions, this year's event sees the return of Aqua Project, a high-tech display area created to spotlight the aquarium industry. In this area, set up in hall 29, distributors and retailers will be able to meet with major



companies in the industry and attend aquascaping seminars.

Aqua Project is a spectacular focal point of the Zoomark Show Experience, showcasing next generation and designled fish and reptile tanks, and attention-grabbing scapes created by the main Italian and international firms.

The programme of events.

The much-awaited release of the 2023 Assalco-Zoomark Report. The three days of Zoomark will see a host of educational and refresher events for exhibitors and attendees alike. The opening conference on the morning of 15th May will also include the keenly anticipated presentation of the new Assalco-Zoomark Report.

The programme of events at Zoomark includes meetings for distributors and International Sessions focussing on

rapidly developing markets and regions. There will be no shortage of scientific conferences on animal health and nutrition, and seminars on techniques for boosting sales and capitalising on the latest technologies.

Euromonitor is hosting a key event on pet market trends in Europe, then there are the pet store educational events organized by ACAD (the Association of Pet Stores and Groomers), and a round table discussion hosted by the PLA - Plant Litter Association.

A birthday to celebrate together

Since it was first established, Zoomark has served pet industry professionals in both good times and bad (such as the pandemic). Year after year it has strengthened its role as point of reference for companies seeking to embrace innovation, to become, in 2023, Europe's leading pet industry event.

2023 sees the milestone 20th edition of the show and Zoomark is gearing up to celebrate on the evening of 15th May, at the end of the first day. Exhibitors and visitors are invited to take part in a relaxed, informal celebration that offers a chance to get together and build new professional connections, remember past editions, think about the present and make plans for the future.

For more information www.zoomark.it





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Road to Interzoo 2024

Facts and figures: A brief data analysis on the petfood industry and Interzoo as global business platform located in Germany, a leading petfood market.

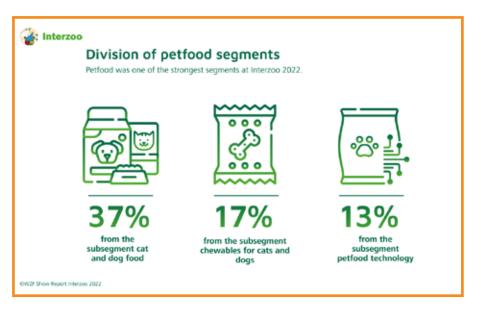
The demand for innovative petfood products is growing gradually and sales figures are on an all-time high. Interzoo, the world's leading trade fair of the pet industry, offers both a place to exhibit the latest petfood trends and to meet the industry's decision makers.



In March 2023 data analyst Bloomberg Intelligence published its Pet Economy Report forecasting a bright future for the pet industry: according to the report, global sales in the industry will rise from currently 320 billion US dollars to 500 billion US dollars by 2030 (source: https://www.bloomberg.com/). The report concludes that pet food will remain the largest product segment of the pet industry, with an expected increase in sales of 52 percent.

According to Euromonitor International, the total global revenue of the pet food industry in 2022 was over 110 billion US dollars, which corresponds to an increase of three percent compared to the previous year. With a 40 percent market share, the North American market leads the way, followed by Europe (28.7 percent) and Asia (19.1 percent). Taking those numbers into consideration, the global petfood sales in 2030 would well exceed 167 billion US dollars. Bloomberg Intelligence uses lower figures due to a different data base as a basis for its calculation and predicts a rise to global petfood sales of over 135 billion US dollars within seven years. Either way, it is clear that petfood sales are on the rise in terms of total sales and thus reaffirm their outstanding importance within the pet supplies industry.

With regard to e-commerce the Bloomberg analysts announced that it will double to 60 billion US dollars by 2030, increasing its market capture from 22 percent to 30 percent. This



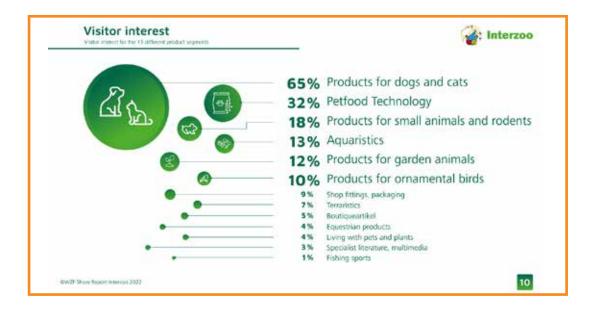
estimation is backed up by data of the most recent development that saw e-commerce growing particularly strongly - with a culminated growth rate for the petfood industry of 105,9 percent with subsegments registering a growth even beyond 150 percent (source: Euromonitor International/ Interzoo Academy). According to a survey by NielsenIQ, online purchases in the pet care sector already account for 38 percent of sales in the USA. According to market data, inflation-related economic developments are not affecting the pet food market either. On the contrary, the increasing number of pet owners with higher incomes enables the successful distribution of higher-quality and more expensive products, especially in North

America, Western Europe and Australasia. Another consequence of recent research shows that most pet parents prioritize the needs of their animals no matter what. Findings from the British 2023 PDSA Animal Wellbeing (PAW) Report suggest that pet parents are willing to make cutbacks on costs such as traveling, electricity or meals so they can keep caring for their pets. Up to 95% of owners will do "whatever possible" to avoid rehoming or abandoning their pets due to the rising inflation, the report says.

Petfood market Germany

The German market, one of Europe's biggest petfood markets, mirrors many of the aforementioned developments: In 2022 the German market registered

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total sales figures of 5.1 billion dollars in brick-and-mortar stores compared to 1.2 billion dollars in online sales. That same year sales within the pet food sector in Germany amounted to 4 billion US dollars, according to the latest survey by the honorary sponsor of Interzoo, the German Pet Trade and Industry Association (Zentralverband Zoologischer Fachbetriebe Deutschlands e.V., ZZF) and the Pet Supplies Industry (Industrieverband Heimtierbedarf, IVH). Pets were kept in 46 percent and thus in almost half of all households in Germany. There was a total of 34.4 million dogs, cats, small mammals and ornamental birds kept in total. In addition, there were numerous ornamental fish and terrarium animals. 67 percent of all families with children owned a pet and 14 percent of all households had at least two pet species. The cat remains Germany's number one pet with 15.2 million individuals and is therefore also an important sales driver, especially in the pet food sector. Cats are followed by dogs (10.6 million) and small animals (4.9 million).

The revenue of the most important product categories was led by cat food (2 billion euros, + 12.5 percent compared to the previous year) and dog food (1.8 billion euros, + 7.8 percent). Despite a small downwards trend, food for small animals still plays a major role with a revenue of 91 million euros. The list of the most important business segments within the German petfood market is completed by ornamental fish food

(59 million euros) and pet bird food (44 million euros), both registering an increase compared to 2021.

"Exhibitions are mirroring markets. That's why we're proud that at Interzoo petfood products for all the different pet species can be found. Our unique multitude of exhibitors and products covers the entire sector," says Dr. Rowena Arzt, Head of Exhibitions at Interzoo organizer WZF - Pet Industry Services (Wirtschaftsgemeinschaft Zoologischer Fachbetriebe GmbH).

Interzoo deep-dive: Product segment petfood products

Whilst the data analyst's predictions depend on a multitude of influential factors, the current development of the pet food sector leaves no doubt that the segment will continue to play a major role within the pet supplies industry.

In fact, data from Interzoo shows the high standing of petfood at the world's leading trade fair of the pet supplies industry: "Pet food manufacturers were the second largest visitor group by economic sector at Interzoo 2022 and products from the petfood industry, including packaging and raw materials, were displayed by a large number of exhibitors", states Dr. Arzt. Especially innovations within the field of petfood technology were a point of attraction for Interzoo trade visitors: Almost every third visitor was interested in products and services of this product segment. "Thus, pet food companies comprise a

vital part of Interzoo, presenting trends, innovations and their services to the global industry," says Dr. Arzt.

Within all petfood products the largest subsegment by far at the most recent Interzoo edition in 2022 was the category of cat and dog food with 37 percent (source: exhibitor registration). Chewables for cats and dogs (17 percent) and products associated with petfood technology (13 percent) were the other two subgroups with double-digit percentages with food for small animals and pet birds following close by.

Doubtlessly, the special Interzoo flair is also due to the high-quality supporting programme accompanying the exhibition. Celebrating its 38th edition from 7 to 10 May 2024 Interzoo is a renowned business place for international stakeholders of the petfood industry, even more so since Petfood Forum is part of the event. "Interzoo is known for an attractive supporting programme offering an overview on trends, expert knowledge and high visibility to exhibitors, e.g. by the Interzoo Product Showcase, the Fresh Ideas Stage or during the conference sessions", Dr. Arzt points out. "One of the supporting programme's highlights will be the Petfood Forum Europe which will once again take place one day prior to Interzoo 2024, on May 6."

Road to Interzoo 2024

Interzoo organizer WZF is looking forward to welcoming the petfood industry in







Dr. Rowena Arzt, Head of Exhibitions

2024 to Nuremberg Fairgrounds. The exhibitor team will be happy to advise companies interested in exhibiting on respective options and the tailor-made Interzoo packages.

Sources and original data

Further information on the number of pets in Germany can be found on the website of the German Pet Trade and Industry Association (Zentralverband Zoologischer Fachbetriebe e.V., ZZF). The full report is available as a free-of-charge download on the Interzoo Academy research subsite: https://interzoo-academy.com/en/ produkt/the-german-pet-market-2022/

The show report of Interzoo 2022 is available in both German and English at https://www.interzoo.com/en/exhibitioninfo/exhibition-profile/review.

To the full Global Pet Report by Bloomberg Intelligence: https://www. bloomberg.com/company/press/globalpet-industry-to-grow-to-500-billion-by-2030-bloomberg-intelligence-finds/







For more information www.interzoo.com

Upcoming Events

May 15-17, 2023

Zoomark International 2023

Bologna, Italy

www.zoomark.it

July 10-14, 2023

8th Annual Extrudes Pet Foods & Treats

College Station, Texas, USA

www.teesedge.tamu.edu

July 14-16, 2023

Petexpo

Montecasino, Johannesburg, South Africa

www.petx.co.za

September 26-27, 2023

9th Nordic Pet Food Conference

Aalborg, Denmark

www.norpetfood.com

October 3-5, 2023

VICTAM LatAm 2023

Sao Paulo, Brasil

www.victamlatam.com

March 19-24, 2024

Anuga FoodTec 2024

Cologne, Germany

www.anugafoodtec.com

May 7-10, 2024

Interzoo 2024

Nuremberg, Germany

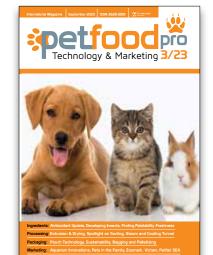
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Editor-in-Chief: Ian Healey

Tel: +49-(0)-911-2018-215

E-mail: ihealey@harnisch.com

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International Communications: Edouard Costemend, Gabriele Fahlbusch,

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Editorial Team:

Pamela Almenara Cabrera, Sabine Straka,

Bruno Bozic, Sabrina Maasberg

Digital: Britta Steinberg

Graphic Designer: Pamela Almenara Cabrera, Sabine Krauss

Technical Manager: Armin König

Advertising: Sabrina Maasberg

E-mail: maasberg@harnisch.com

Subscriptions: Marta Bletek-Gonzalez

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Fax-Inquiry

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