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Petfood Industry WATT

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Walmart



The science and safety of palatability enhancers

Superpremium petfood post-recession

10 innovative packaging products

Feature company

AT WALMART, PETFOOD SAFETY= BEHAVIOR

Frank Yiannas of Walmart, p. 24



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On the cover: Frank Yiannas, VP of food safety for Walmart, with Tippy outside the retailer's Supercenter in Bentonville, Arkansas, USA.

Photo by Spencer Tirey, www.tireyphotography.com

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Walmart's Frank Yiannas talks petfood safety

Watch videos of Frank Yiannas, VP of food safety for Walmart, discussing petfood safety after his keynote address at Petfood Forum 2011:

www.petfoodindustry.com/7057.html



WATT

CORPORATE HEADQUARTERS

303 N. Main St., Ste. 500
Rockford, Illinois 61101-1018 USA
Tel: +1 815 966 5400; Fax: +1 815 968 0941

VP/Publisher **Steve Akins**, sakins@wattnet.net
Tel: +1 919 387 7961; Fax: +1 815 966 0941

VP/Director of Content **Bruce Plantz**,
bplantz@wattnet.net Tel: +1 815 966 5425

EDITORIAL TEAM

Editor-in-Chief **Debbie Phillips-Donaldson**
dphillips@wattnet.net Tel: +1 815 966 5424

Managing Editor **Jessica Taylor**
jtaylor@wattnet.net Tel: +1 815 966 5413

Copy Desk Team

Managing Content Editor **Tara Leitner**

Community Manager/SEO Editor

Kathleen McLaughlin Milella

Associate Editor **Andrea Saladino**

Associate Editor **Kayla Kling**

Associate Editor **Lindsay Beaton**

Art/Production Team

Art Director **Candi Teachman**

Production Manager **Jim Riedl**
jriedl@wattnet.net Tel: +1 815 966 5426

Advertising Production

Coordinator **Connie Miller**

SALES TEAM

USA

Sales Manager

Karen Blandford-Anderson

kanderson@wattnet.net Tel: +1 815 966 5571

Sales Associate **Ginny Stadel**

gstadel@wattnet.net Tel: +1 815 966 5591

Europe/Asia

Tineke van Spanje

tvanspanje@wattnet.net Tel: +31 495 526 155

Southeast Asia

Dingding Li

dingdingli@vip.163.com

Tel: +86 21 54136853

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Online Exclusives

Research: **Feline palatability and the shape of kibble**

Take a closer look at AFB's palatability research in Kristopher Figge's Petfood Forum 2011 PowerPoint presentation, "Kibble Shape and Its Effect on Feline Palatability":
www.petfoodindustry.com/7835.html.

How to: **Market a superpremium petfood in a down economy**

Want to know how to formulate, manufacture, package and market a superpremium petfood? Check out Serge Boutet's Petfood Forum 2010 PowerPoint presentation, "Making private label superpremium petfoods competitive in a crowded market," at www.petfoodindustry.com/7831.html.



Community

PetfoodConnection.com

New PETNet tracking system for regulators could be a good thing for the industry

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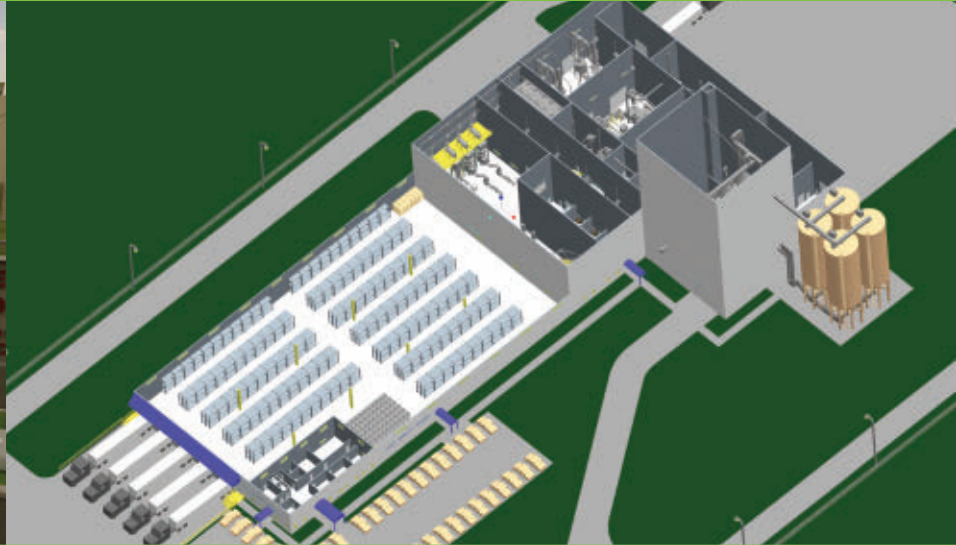
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Something to Chew On

Debbie Phillips-Donaldson

Read more

Find more nutrition information at www.petfoodindustry.com/nutrition.aspx

Disconnect between veterinary care and nutrition



What does it mean for our industry when vets are pet owners' most important source of nutrition information?

DURING THE AMERICAN VETERINARY Medical Association's annual conference in St. Louis, Missouri, USA, in July, several sessions focused on one significant issue: an overall 17% decrease in veterinary visits for US pets over the past two years. This sobering figure comes from the Bayer Veterinary Care Usage Study, a collaboration among Bayer Healthcare, Brakke Consulting and the National Commission on Veterinary Economic Issues. It was conducted in two phases.

Surveying 2,000 US dog and cat owners, the first phase identified six root causes for the decline, including the economic impact of the recession (no surprise there), plus cost of veterinary care, fragmentation of veterinary services, a perception that regular veterinary checkups are unnecessary and cats' resistance to being transported and handled.

A final cause should sound familiar to many petfood manufacturers: use of the Internet vs. office visits—39% of respondents said they look online if their pet gets sick or injured, before consulting a veterinarian. (For our industry, it would be use of the Internet vs. reliable, science-based sources of information on petfood and pet nutrition.)

In the second phase, 401 US veterinarians were surveyed, showing a gap between their and pet owners' views on providing long-term pet health care. The study offered recommendations for vets to combat the downward trends and negative owner perceptions (see www.bayer-ah.com/news.cfm), but nowhere was there a discussion of nutrition.

THIS IS NO surprise: There seems to be a huge disconnect between veterinary care and nutrition. Most US veterinarians would admit their formal education on companion animal nutrition

consisted of one basic course that, in some cases, had to be taught by a professor from another program because no veterinary faculty had the knowledge or expertise to teach it.

Any information on nutrition received after veterinary school usually comes via a handful of petfood manufacturers that sell through the veterinary channel. Of course, their products and information are all fine, but let's face it: That information is by its very nature prone to be limited and biased.

Among the over 600 continuing education sessions offered at this year's AVMA conference, I could count the number of nutrition-related sessions on both hands. Among the 25-30 veterinary groups and associations meeting during the conference or contributing to the educational program, two devoted specifically to nutrition—the American Academy of Veterinary Nutrition and the American College of Veterinary Nutrition—were noticeably absent. (It was encouraging to see the new Academy of Veterinary Nutrition Technicians on the program.)

YET A RECENT study looking into the petfood buying preferences of owners of overweight dogs showed that more than 83% of dog owners, no matter what their dogs' weight, consider their veterinarians the most important source of information on dog nutrition (see www.petfoodindustry.com/7709.html). Talk about a disconnect!

You have to wonder: If vets had more solid knowledge and expertise about nutrition and petfoods to share, would that inspire owners to bring in their pets more often? Would a call or visit to the veterinary clinic be their first course of action rather than turning immediately to the Internet?

More importantly for our industry, imagine how much your companies and brands would benefit from better informed and educated vets and a much stronger connection with them. ■

Debbie Phillips-Donaldson is editor-in-chief of *Petfood Industry* magazine. Email her at dphillips@wattnet.net.

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Industry News

Quick hits

- NSF International's Food Safety Division earned the highest, five-star safety rating from the British Retail Consortium.
- Magnum Systems selected AW Process LLC's Andy Woodford to cover the industrial markets for its material handling and packaging products in Florida, USA.
- Novus International published its 2010 "Innovation with Integrity" sustainability report, which was awarded a Level B-Check rating by the Global Reporting Initiative framework.
- Intersystems and EMW Industrial Ltd. entered into a cooperative agreement that makes EMW the sole stocking distributor of Intersystems' products in the British Columbia, Alberta, Saskatchewan, Manitoba and Thunder Bay regions of Ontario, Canada.
- Ecology Coatings Inc. was nominated for the 2011 Michigan Green Chemistry Governor's Award Program, which will announce the winner on October 27.



Last call for papers for Petfood Forum 2012

The deadline for abstract submissions for Petfood Forum 2012 is fast approaching, with all submissions due October 1.

Petfood Forum is scheduled for April 2-4, 2012, at the Renaissance Schaumburg Convention Center Hotel in the Chicago area.

Potential speakers are invited to submit non-commercial abstracts featuring new research or innovations on topics such as nutrition, ingredients, petfood safety, marketing and market trends, packaging and case studies.

Email submissions to dphillips@wattnet.net. For more information, visit www.petfoodindustry.com/PFF2012.aspx.

Learn more

The latest news and updates are always on www.PetfoodIndustry.com.

US FDA launches PETNet petfood incident tracking

The Partnership for Food Protection and the US Food and Drug Administration launched the Pet Event Tracking Network, PETNet, which is a secure, Web-based information exchange system for petfood-related incidents.

PETNet's voluntary information exchange, surveillance and alert system provides real-time information sharing about emerging petfood-related illnesses and product defects among FDA and other federal and state agencies. PETNet is currently made up of more than 200 representatives from four federal agencies, all 50 states and Puerto Rico.

The system will be accessible to PETNet members who are federal, state and territorial government officials responsible for the regulation of petfood products and the investigation of disease outbreaks in companion animals. Members can enter events into the system after they have identified a trend or a suspicious incident or defect associated with petfood products.

Once entered on the standardized form, the information will be immediately available to all other PETNet members, allowing other members to track the emergence of such data and to evaluate the need for action within individual jurisdictions.



Colgate executives report Hill's Pet second quarter earnings

Colgate-Palmolive, parent company of Hill's Pet Nutrition, held an earnings call on July 28 to discuss the company's second quarter 2011 results.

The company is focused on organic sales growth in emerging markets, where the highest quarterly growth in one year was recorded, helped by strong organic growth in the Hill's pet segment, according to Bina Thompson, president of investor relations. In the US, Hill's veterinary product channel saw renewed growth in the second quarter, following a decline during the economic recession.



Thompson said this growth in the US and Europe is being driven by vet exclusive products the company launched earlier in the year, under the Science Diet Healthy Advantage brand in the US and Science Plan VetEssentials name in Europe. Natural petfood is the fastest growing segment within the category, as pet humanization and the inclusion or exclusion of specific ingredients are increasingly driving consumer behavior, according to Cook.

The company expects modest growth for the third quarter of 2011 and full-year and organic sales growth in the mid-single digits following the launch of several new petfood products.

Swedish petfood, pet supply chain expands in 2011

Swedish petfood and supply chain Arken Zoo is expanding by opening 15 new shops in Sweden and Norway during 2011.

Two stores are already in operation in Norway and another three are signed up. Lars Bergkvist,

ARKEN ZOO

VI ÄLSKAR DJUR.

CEO of Arken Zoo, predicts there will be at least 10 stores in Norway by the end of the year. Arken Zoo has a total of 72 stores in operation. Arken Zoo's sales were up 53% for the first six months of 2011 compared with 2010, the company says.

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Fromm invests US\$10 million in new petfood manufacturing facility

Fromm Family Foods recently spent US\$10 million to convert an old animal feed mill outside of

Madison, Wisconsin, USA, into a petfood manufacturing facility, madison.com reported.

The facility in Columbus, Wisconsin, USA, closed in 2007 and was recently redone by Fromm

to create 70,000 square feet of manufacturing and warehouse space, including a 10,000-square-foot meat processing facility and the original 120-foot-tall mill tower. The Columbus plant was designed to produce 30 tons of petfood per hour with its 20 employees, compared to the Mequon, Wisconsin, USA, plant that currently produces about 9 tons of petfood per hour with 40 employees.

The Mequon facility will eventually be used for accounting, sales and product development, with the Columbus plant producing the majority of petfood. A third bagging line is scheduled to be added in Columbus as well as a 50,000-square-foot warehouse. Owner Tom Nieman predicts the company will double or triple its production of 600 tons per week over the next five years with the addition of the Columbus manufacturing facility.

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WATT eLearning offers educational courses, webinars for petfood professionals

WATT eLearning, an online education portal, has a number of courses available on-demand for petfood industry professionals to access 24 hours a day.

WATT eLearning's "Building Blocks of Companion Animal Nutrition" course is the latest in interactive educational offerings for petfood industry professionals. The course, developed by Linda Case, owner of AutumnGold Consulting, includes six modules with an accompanying textbook and certificate of completion. Course content is designed for those seeking a scientific understanding of basic petfood nutrients and their functions, companion

Pet Product News readers vote for top petfood products

Pet Product News International conducted its first Retailers' Top Pick Awards contest, in which the magazine's pet retailing readers voted on 14 pet product categories, including best cat, dog and bird food products.



Top winners in the edible cat products category include Bonus Bites Treats by Bravo, Signature Series for cats by Evanger's Dog & Cat Food Co. and Cosmic Catnip brand Catnip Bubbles by OurPet's.

For dogs, the top edible products are Bravo's Training

Treats in first place, Surf 'N Turf raw dinners by Stella & Chewy's in second place and Instinct Limited Ingredient Diets by Nature's Variety in third place.

Winning bird products include

Sunflower Candy Cups mini by Greenfeather Bird Supply in first place, Ultimate Polly Wanna Pinata by Fetch-It-Pets in second place and Forage-N-Play Swings by Super Pet in third place.



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Watt's eLearning platform also offers 17 petfood conferences and workshops, available for users to access on a computer or smartphone. The conferences and workshops cover a range of topics in petfood and pet nutrition, such as petfood processing, petfood ingredients, *Salmonella* control and pet product marketing.

These online sessions are webinars created from expert presentations at WATT's Petfood Forum and Petfood Workshop events, which may be accessed for a fee at www.wattelearning.com.

New Products

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For Consumers

Animal Lovers wellness dog biscuits

Wellness dog biscuits from Animal Lovers B.V. come in an assortment of varieties, all packed in a 250-gram foil package. Animal Lovers says its dog biscuit varieties include Hair & Skin with linseed, Fit & Vital with cranberry pieces, Dental Care with peppermint, gluten-free, wheat-free Anti-Allergy and Joint Care with glucosamine.

Animal Lovers B.V.
 +31.0.524.51.84.20
www.animallovers.nl



Veterinary Diets Hypoallergenic Feline Formula

Nestle Purina PetCare Co. says the Veterinary Diets HA Hypoallergenic Feline Formula provides balanced nutrition for both feline growth and maintenance. The food has hydrolyzed protein with a low molecular weight and a low-allergen carbohydrate source, according to Purina. The highly digestible food is available in 4- and 8-pound bags.

Nestle Purina PetCare Co.
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www.purinaveterinarydiets.com



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SmartBones, PetMatrix says, are rawhide-free chew treats made with chicken and vegetables. SmartBones come in chicken and peanut butter flavors, along with a dental variety for oral health. The chews are available in four sizes: Mini, for dogs weighing 5-10 pounds; Small, for dogs weighing 11-25 pounds; Medium, for dogs weighing 26-50 pounds; and Large, for dogs over 50 pounds.

PetMatrix
 +1.877.336.3647
www.smartbones.com



Grand Pet Carne Fresca line

Nu3 Group says its Grand Pet Carne Fresca line contains fresh meat for dogs. The dog food line comes in three formulas: puppy care, force and light. Puppy Care is formulated for immunity and growth and contains *Bacillus* for digestion. Force is designed for large breed, active dogs, with ingredients that promote cellular oxygenation and healthy immunological and nervous systems, according to the company. The Light formula contains ingredients to manage the metabolism and stress levels of small dogs, the company says.

Nu3 Group
 +1.352.526.1137
www.grandpet.com



Selective 31 Aromatic Attraction

Selective 31 Aromatic Attraction from Royal Canin is specifically formulated for picky cats. This cat food formula has a specific aroma to attract cats, the company says.

Royal Canin
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www.royalcanin.com



Limited Ingredient Diet Turkey Meal

Nature's Variety offers a feline option of its Instinct Limited Ingredient Diet Turkey Meal Formula. This food for cats contains one protein, one starch and one fiber source, the company says. The food is also grain-free, gluten-free and potato-free for cats whose diets require limited ingredients.

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Cargill Inc.
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www.cargill.com

Spring Naturals dinners, treats

Spring Naturals from Performance Pet Products is a line of dinners and treats for dogs. Recipes contain natural ingredients, such as real meats, whole vegetables, whole fruits and whole grains, all sourced from the US, the company says. Dinner flavors include beef, chicken, turkey, lamb and salmon, as well as grain-free and organic varieties. Treat flavors include grain-free and organic, with ingredients like blueberries, cranberries and oats.

Performance Pet Products
+1.866.868.0874
www.performancepet.net

More products online!



Find a full database of ingredients, equipment, packaging materials, test kits and other products at www.petfoodindustry.com/products.aspx.

For more new consumer products, visit the database at www.petfoodindustry.com/petfoodandtreats.aspx.

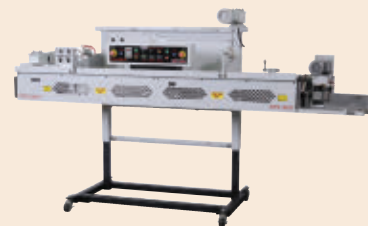
For Manufacturers

Glanbia Nutritional OptiSol 9000

OptiSol 9000 from Glanbia Nutritional is a functional ingredient that the company says allows for inclusion of 50% or more meat in low grain, high protein extruded petfood. Glanbia says OptiSol 9000 produced less than 1% fines in breakage and kibble durability testing for dogs. In digestibility testing with cats, the product made with OptiSol 9000 showed 82.7% dry-matter digestibility, 88.3% crude protein digestibility, 91.2% fat digestibility and 88.3% ME digestibility, according to the company.

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at speeds up to 25 cpm and uses 304 S/S standard food grade for all contact

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www.weighpack.com

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Mocon Inc.'s GreenLight 910 bacterial testing system is ideal for petfood processing companies with low to medium throughput requirements, the company says. The unit determines aerobic plate count or total viable count of a food sample's microbial load using a sensing assay or vial. GreenLight 910 has a PC software interface with multiple measurement modes, as well as the ability to generate a unique ID for each test.



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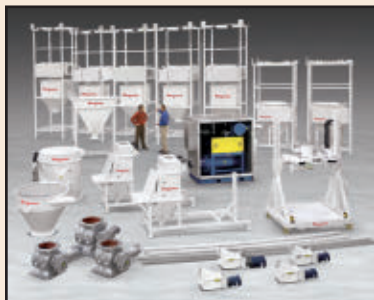


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hoppers and rotary airlock valves, two loss-of-weight Bulk-Out bulk bag dischargers with small surge hoppers and flexible screw conveyors, two loss-of-weight bag dump stations with flexible screw conveyors, a check-weighing hopper, a Twin-Centerpost bulk bag filler, a Pneumati-con dilute-phase pneumatic conveying system and a programmable controls package.

Flexicon Corp.
+1.610.814.2400
www.flexicon.com



Mepaco sanitary pallet lifts

Mepaco offers two models of sanitary pallet lifts: EZL2500 and EZ4000. The lifts are fabricated from T304 stainless steel and come with Mepaco's pickle passivated sanitary finish, the company says. The EZL2500 sanitary lift features a low-profile design that allows it to be loaded and unloaded with a pallet truck and has a 2,500-pound capacity. The EZ4000 has a 4,000-pound capacity. Other design options include ground entry, lift

Nutrition

Lonza



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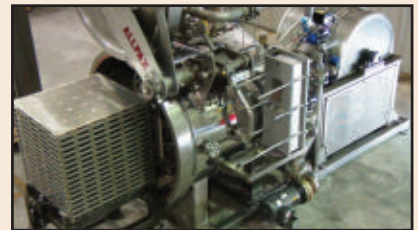
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Shaka production retort

Allpax Products' 1300 Shaka production retort has a 52-inch diameter and holds a single basket that can be loaded and unloaded by a single operator. Allpax says the Shaka process applies back and forth agitation during the retort process to sterilize food faster with improved thermal transfer. Shaka technology enables faster processing for improved taste, texture, appearance and nutritional quality of shelf-stable food, according to the company.

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Bulk Filling, Discharging Systems Guide Book

National Bulk Equipment Inc. has a Sanitary Bulk Filling and Discharging Systems Data and Specifications Guide Book available for free download on its website, www.nbe-inc.com/compliance. The book aims to clarify common perceptions of complexity and confusion associ-

ated with the integrations of bulk material handling equipment into sanitary process operations, the company says. Specific content includes

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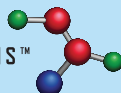
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Frank Yiannas, VP of food safety for Walmart (with Tippy), believes that enhancing food safety benefits all petfood manufacturers, retailers, customers and, most importantly, pets.

Videos: Walmart's Yiannas talks petfood safety

Watch videos of Frank Yiannas, VP of food safety for Walmart, discussing petfood safety after his keynote address at Petfood Forum 2011 and read the full version of this article at www.petfoodindustry.com/7825.html.



At Walmart, petfood safety = behavior

By Debbie Phillips-Donaldson

Frank Yiannas, VP of food safety for the retailer, explains why ensuring petfood safety means creating the right culture

FOOD SAFETY IS no small enterprise. As Frank Yiannas describes, thousands of professionals around the world have been

trained, millions are spent on research, countless inspections are done—and yet, food safety remains a significant global health challenge. Why?

“I became persuaded several years ago that to improve food safety, we needed to move beyond traditional testing, inspection and training—now, we still have to do those, but you have to move beyond them and start adopting principles related to organizational culture and human behavior,” Yiannas says. “One of my favorite definitions is food safety = behavior. If you’re trying to change the food safety performance of



‘Organizations that have strong food safety cultures make the choice to be really good at food safety.’

a company or, for example, the entire petfood industry or even a country, what you're really trying to do is change a lot of people's behavior."

Yiannas believes so strongly in this equation that he wrote a book, *Food Safety Culture: Creating a Behavior-Based Food Safety Management System* (Springer, 2009; see www.foodsafetyculture.com).

"Right now, more than at any time in human history, petfood safety, and food safety in general, is more of a shared responsibility than ever before," Yiannas says. "The food system today, how we get food from farm to fork or, in this instance, how we get food from the farm to the pet's bowl, has become increasingly complex and really dependent on many different stakeholder groups.

"Moreover, it's a global food supply," he continues, "If you think about food safety regulatory oversight in a global system, it's a patchwork of national regulations and state regulations." Hence, the responsibility is shared among ingredient suppliers, petfood and treat manufacturers, regulatory and academia. "Consumers have a role to play, even the media."

YIANNAS MAINTAINS THAT to meet this responsibility, food safety professionals have to master not only the hard sciences or skills, such as hazard analysis and critical control points; they also have to master concepts of behavioral sciences and organizational culture.

"Food safety professionals are pretty good at writing HACCP plans and food safety programs. The real challenge has been getting organizations to adopt

them and employees to believe in them. That's why I say the soft stuff is the hard stuff," Yiannas says.

So, how does a company tackle the soft stuff? "Organizations that have strong food safety cultures make the

Walmart's commitment to pets

Frank Yiannas says petfood safety is key at Walmart because the company has a very long and rich legacy of being committed to pets and food safety, dating back to the founder, Sam Walton, and his dog Ol' Roy. "It's pretty rare to hear an associate who had met Sam not talk about him visiting the store with Ol' Roy by his side," Yiannas says. "In fact, that's how our private brand petfood, Ol' Roy, got established; it was because of Sam's love and commitment to pets and his dog."

Yiannas can relate. Case in point: Tippy, the 5-year-old Pitbull/Labrador mix in the photo (facing page). "She was part of a litter of 10 that our family adopted in Florida almost five years ago," he says. "She was part of a criminal raid. The police believed the pups were going to be used as part of a dog-fighting ring."

The Yiannas family took the pups into their home. "I have to give a lot of credit to my wife and daughter," Yiannas continues. "They raised these cute, adorable pups and placed nine of them in homes in central Florida. We keep track of them quite frequently, and the nine dogs are doing really well." He adds that his family has rescued other animals over the years, but Tippy was the first puppy they kept from a rescue litter.

choice to be really good at food safety," Yiannas explains. "Those organizations generally have leaders like we do here at Walmart who are very committed to a strong safety culture

and ultimately protecting their customers. Even more importantly, they talk about food safety being part of their value or belief system. Notice I say 'value or belief.' Food safety is really part of our belief system, and it's not a priority. Because priorities can change but values and beliefs do not."

ORGANIZATIONS THAT

WANT to establish a strong food safety culture ensure it's

not just a program or the "flavor of the month," Yiannas says. In numerous experiences with companies all over the world, he's encountered many great

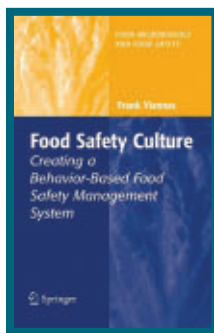
food safety cultures that share similar core attributes. They:

- Establish clear food safety expectations;
- Train and educate their employees on food safety (these are two

different things, Yiannas says, and both are necessary);

- Communicate food safety on a regular basis;
- Establish goals and measurement systems (preferably with mostly leading indicators); and
- Establish consequences, both positive and negative.

YIANNAS HAS FURTHER recommendations for petfood companies, such as focusing on ingredients. "Over the next few years, the food industry and certainly the petfood industry are going to hear a lot about food traceability because of the Food Safety Modernization Act," he says. "While we believe traceability is good, it doesn't go far enough. Traceability tells you where a product came from; it doesn't necessarily tell you how that product was produced. So we've been



Yiannas feels so strongly that food safety depends on culture and behavior that he wrote a book.

WALMART

using the term ‘food transparency.’”

Companies pursuing food transparency require their ingredient suppliers to be certified to food safety standards, Yiannas says, in addition to having certification themselves. And when

it comes to that, he strongly recommends adopting one of the global food safety standards such as the Global Food Safety Initiative. “A traditional third-party food safety audit really isn’t equivalent to one of the GFSI bench-

mark standards. They’re different in many ways,” he says.

“My recommendation to the petfood industry is to learn more by visiting MyGFSI.com,” Yiannas adds. “Also, talk to companies that have



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Yiannas plays with Tippy, whom his family rescued as a puppy from a criminal raid on a potential dog-fighting ring.

already embarked on or achieved certification against one of the GFSI benchmark standards. There are some petfood and treats manufacturers that have achieved certification and more working toward it. Learning about their experience would be a great first step.” He also recommends attending GFSI’s annual meeting February 15-17, 2012, in Orlando, Florida, USA.

“**AT WALMART**, we genuinely believe that food safety, or petfood safety, is not a competitive issue, nor does it provide a competitive advantage,” Yiannas says. “Ultimately, enhancing food safety does not benefit just a single manufacturer; it benefits all manufacturers, retailers, customers and, from my perspective, most importantly it benefits pets.”

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Want to know how to formulate, manufacture, package and market a superpremium petfood product? Then check out Serge Boutet's Petfood Forum 2010 PowerPoint presentation, "Making private label superpremium petfoods competitive in a crowded market," at www.petfoodindustry.com/7831.html.

According to Packaged Facts, the term superpremium is generally reserved for the highest quality products, which are positioned on clear-cut health claims (and higher prices), thereby ruling out most mass-market brands and concentrating in the pet specialty channel.



Market update: Superpremium petfood post-recession

By Jessica Taylor

Are consumers still willing to spend for gourmet, human-grade and functional petfoods while pinching pennies in these lean economic times?

PREMIUM PETFOODS—DEFINED BY Packaged Facts as those priced at least 10% above the category average—accounted for 40% of petfood sales in 2010, followed by regular petfood at 27% and value petfood at 14%, with treats comprising the remaining 18% of sales. On both the dog and cat sides of the market, the premium share of sales has contracted a bit with the recession while the regular and value segments have risen a notch or two.

Although the premiumization trend is still in strong force, many of the mass shoppers to be converted to premium foods have already entered those ranks,

so the challenge now will be to continue to attract consumers to even higher priced foods in the superpremium classification, which remains centered in the pet specialty and veterinary channels.

LET'S BE CLEAR: The terms "premium" and "superpremium" are ambiguous and have no formal definition in the petfood industry. The terms are often used interchangeably to describe both top-of-the-line specialty foods and above-average mass-market foods in value-added formulations or presentations.

According to Packaged Facts, the term superpremium is generally reserved for



Products that not only pamper and please your pet, but also provide functional ingredients like this Dogdration Premium Pet Water, continue to appeal to consumers, regardless of the price tag.



Although the rapid sales growth of natural and organic products slacked off during the recession due to the products' premium price tags, interest in natural remains high, as exemplified by Earthborn Holistic's superpremium cat food.

the highest quality products, which are positioned on clear-cut health claims (and higher prices), thereby ruling out most mass-market brands and concentrating in the pet specialty channel. These gourmet petfoods are distinguished by appetizing names and attractive packaging/label graphics designed to appeal to human sensibilities. The products are also



Just as often, superpremium refers to niche natural, organic, raw and frozen foods where the emphasis is ingredients and holistic benefits to pets.

characterized by human-style ingredients, textures, sauces and cuts, and often by single-serve containers.

THE PET SPECIALTY channel is much more fragmented than the mass-

market channel—says the Packaged Facts report, *Pet Food in the US, 9th Edition*—with dozens of dog and cat food marketers fielding premium products, including those positioning on natural/organic/holistic and

premium/gourmet appeals. Although the rapid sales growth of natural and organic products slacked off during the recession due to the products' premium price tags, high interest in natural remains in full force on the

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SUPERPREMIUM

manufacturing side.

Removing any doubt that the recession has had a dampening effect on the premium side of the market, the package tag “upscale” dove from 168 mentions in 2009 to 88 in 2010. Nonetheless, most of the products coming to market clearly are still upscale if the prevalence of the term “natural” is any indication.

ALTHOUGH PETFOOD SALES

continued to perform reasonably well during the recession, growing 5% annually in 2008 and 2009, the lingering economic slump drove the growth rate below 3% in 2010, the slowest going the market has seen since the turn of the millennium, according to Packaged Facts data.

The good news? As the economy



Superpremium can often refer to a petfood brand’s high-end packaging or breed-specific diets, like this Optima line.

improves, so should all things pet—but that recovery continues to appear very gradual. Sales of petfood will not return to their pre-recession 5%-6% rates of annual growth during the 2010-2015 period, although Packaged Facts does predict gradual

improvement over the 2.8% rate of growth charted in 2010.

THE “PET PARENT” sentiment arguably has never been stronger; during the uncertain economic times of the past couple years, many pet owners have found themselves valuing the comfort and security their pets offer more than ever. Accordingly, when it comes to new product development and marketing, a trend dubbed by Packaged Facts as “functional pampering” is essential.

“If a product pleases and pampers a pet, that’s great, but if it also meets a functional need, that’s even better, and products like omega-3-infused treats hit the functional pampering nail on the head,” concludes the report. ■



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Many palatability enhancers are tested for efficacy through controlled feeding studies that measure data such as first-bite preference and total consumption.



Photo by Gemenacom. Dreamstime.com

Research: Feline palatability and the shape of kibble

Take a closer look at AFB's palatability research in Kristopher Figge's Petfood Forum 2011 PowerPoint presentation, "Kibble Shape and its Effect on Feline Palatability": www.petfoodindustry.com/7835.html.

The science and safety of petfood palatability enhancers

By Jessica Taylor

Recent palatability research, safety recommendations and the latest taste-improving products

Flavor enhancers can now be purchased by consumers in most pet stores and online, like this line for both cats and dogs.



PALATABILITY ENHANCERS, as the name indicates, are used to affect taste, smell and texture of foods to increase their desirability to companion animals. Palatability is critical for manufacturers to consider when formulating a nutritionally balanced petfood.

Foods for dogs and cats can be made more palatable through various means, such as an adjustment in acidity. High-intensity, savory-based palatants that utilize meat, marine, cheese and liver-based ingredients are used for enhance-

ment purposes as well. So, what's out there, what do they promise and what's worth checking out?

IN KRISTOPHER FIGGE'S Petfood Forum 2011 presentation, "Kibble Shape and its Effect on Feline Palatability," the AFB International senior scientist and technical services manager shared some of the palatant company's latest research. Unlike dogs, cats tend to avoid spoilage aromas, while surface texture and size of kibble play a large role in

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PALATABILITY

what foods felines find palatable. AFB then researched whether kibble shape affected the palatability of dry cat foods.

AFB researchers used common kibble shapes like the cross, triangle, flat disc and cylinder as the variables in the study. Figge and his colleagues found that kibble shape was the primary driver for palatability while texture across a given range was not. The flat disc had mid-range texture scores and was the most preferred shape by cats. The cylinder was outside the range and was least preferred. The highly preferred disc-shape is not only easy to extrude, it is also durable, has less fines than other shapes and also has a greater surface area.

YEAST PRODUCTS FORM the core of the Sensient Bio-Ingredients port-

folio of palatability solutions. "In addition to providing a non-specific meaty flavor profile, yeast products

cations. We understand the special requirements of low-ash diets, wet as compared to dry foods, baked biscuit



AFB researchers used common kibble shapes like the cross, triangle, flat disc and cylinder as the variables in a study on kibble shape and its effect on feline palatability.

also enhance general savory and cheesy notes," explains the company website. "However, a generic yeast product does not work in all appli-

and intermediate moisture treats." To maximize the impact of enhancement, the company has developed separate brewers' yeast products for applica-



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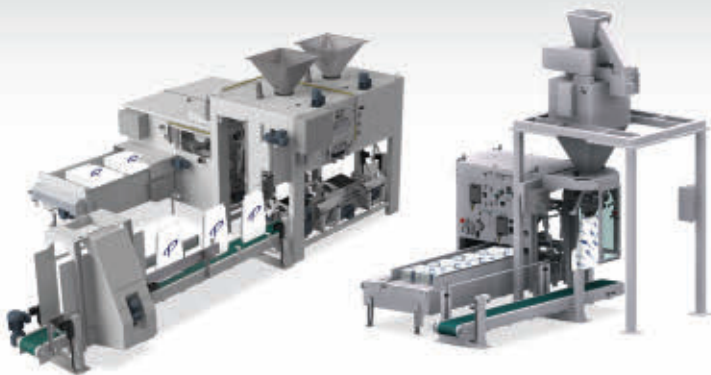
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tions in a wide variety of petfood diets.

All of its palatability enhancers are tested for efficacy through controlled feeding studies that measure both first-bite preference as well as total petfood consumption. All of Sensient yeast products are non-GMO and meet Food and Drug Administration and Association of American Feed Control Official guidelines, says the company.

PALATANTS ARE NO longer an ingredient in just the formulator's bag of recipe tricks. Palatants, flavor enhancers, gravies and toppers can easily be purchased by consumers in most pet stores and online pet merchants.

Companies like Flavorhounds and products like Stewart's Pet Food Flavor Enhancers are examples of this trend. DIY palatants appeal to consumers because they can help a picky pet switch foods, add a little flavor to a restricted therapeutic diet or medicated meals, and encourage a

Palatant food safety case study: SPF Excellence Program

Palatants make up a low percentage in petfood recipes but generate a high level of dispersion in the petfood chain. On average, according to Loïc Cosquer of SPF, 1 ton of palatant represents 100,000 companion animal meals. This means palatant suppliers have a special responsibility to make sure the products they distribute to the global petfood market are safe. Therefore, SPF Palatants is engaged in a program of excellence in palatant safety based on best practices, risk management, continuous improvement and communication through the supply chain.

The objectives of this program are to:

- Enhance palatant food safety in the petfood supply chain;
- Ensure animal health and welfare (pets) and public health (pet owners and their families);
- Benchmark requirements to petfood safety management systems; and
- Improve cost efficiency throughout the petfood supply chain.

The structure of the SPF Food Safety Management System includes operational teams, responsible for food safety, quality and dependability, in North America, South America, Europe and the Asia-Pacific region. The process of risk analysis is then applied for each palatant product. Risk assessment, hazard analysis and control measures necessary for safe products are all implemented and carried out. Verification plans are applied with sampling protocol.

SPF develops means of rapid measurement by near infrared technology (NIR), with an identification and quantification program of inputs and finished products. According to Cosquer, the traceability system in place assures a result of 100% in less than two hours.

To learn more about the SPF Excellence Program and the palatant company's portfolio of flavor-enhancers, go to www.spf-diana.com or contact Loïc Cosquer at: lcosquer@spf-diana.com.

sick or starving animal to eat. Taste-enhancing products are available in

organic, gluten-free and all-natural varieties. ■

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Ten innovative petfood packaging products for 2011

By Jessica Taylor

The latest petfood packaging materials, machinery and equipment from iPhone apps to baggers, bio-resins and biodegradable paper

A-B-C Packaging's Model 206 packs cartons or bottles, single or multipacks, into full-height, half-height or end-panel display trays at speeds to 30 trays per minute.



As you look for the best packaging solutions for your products, here's a selection of new offerings on the market.

1. PACKAGERS LOOKING FOR more sustainable production can reduce their corrugated use and ensure product protection with display shippers that use up to 50% less corrugated than standard or wraparound cases; and with A-B-C's Model 206 packer, they

can also increase their line efficiency and flexibility, according to the company. The Model 206 packs cartons or bottles, single or multipacks, into full-height, half-height or end-panel display trays at speeds to 30 trays per minute. Another new feature for the Model 206 is a servo-operated, high-capacity magazine with auxiliary blank magazine to ensure a continuous supply of materials to the packer. As one tray/case stack is used, another stack is automatically



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PACKAGING indexed into position, thus minimizing the attention of your line personnel. www.abcpackaging.com



The bag style Poly Cello custom-designed for Oxbow's Essentials petfood line is more compact with a stand-up base, reclosable zipper system and updated, high shelf impact graphics.

2. ADVANCED POLY-PACKAGING INC.

continues to expand its selection of specialty films used to manufacture pre-opened bags on a roll with the new Advanced Poly-“Green” film. The packaging is 100% degradable, which makes it perfect for customers who are promoting environmentally friendly and sustainable practices, says the company. The film is even edible—at least by microorganisms. Oxidation causes the molecular chain to break down, making the material brittle. Water can then form a bio-film that attracts microorganisms that feed

off the carbon and hydrogen elements. However, the film won't disappear before it is

disposed of. Advanced Poly-“Green” will stay intact under most conditions involving sunlight, moisture and temperature, the company says. www.advancedpoly.com

3. MONDI'S ADVANTAGE MG

White Cote GR, new to its grease resistance portfolio of packaging products, provides good printability and high grease resistance level for products in the petfood industry, according to the company. The clay-coated surface

of the paper ensures printability on Flexo printers. A functional chemical treatment of the fibers provides the high-grease requested by demanding applications. Only bleached virgin kraft paper from PEFC-certified suppliers is used for the production to support sustainability efforts. www.mondigroup.com

4. SEALED AIR CORP.

has introduced a new variation of Korrvu suspension and retention packaging that combines the best aspects of both formats, says the company. Similar to Korrvu retention packaging, the Korrvu Hybrid package uses a proprietary retention frame and elastomeric film to hold the product securely in place during shipment and distribution. The film is attached to the corrugated

At last, a bag that stands up for your customers and your brand.

retention frame, and when the frame's side flaps are folded up, the resilient film is loosened. The loosening creates a pocket into which the item is placed. When the flaps are folded down, the film stretches over the product to hold it securely in place. www.sealedair.com

5. PLASTIC INGENUITY
RECENTLY shared its R&D experience with some of the most common bio-resins because of the increased focus on environmentally friendly initiatives and renewable resources in packaging. PLA (polylactic acid) is a thermoplastic resin derived primarily from corn. The resin Plastic Inge-

Sealed Air Corp.'s Korrvu Hybrid package uses a proprietary retention frame and elastomeric film to hold the product securely in place during shipment and distribution.

nity uses is a PLA blend specifically designed for its particular extrusion and thermoforming applications and is FDA approved, which allows it to be used in most food packaging applications.

Plastic Ingenuity has focused much of its research and development efforts on developing a high heat deflection PLA, which includes both a special resin blend and a proprietary process modification. www.plasticingenuity.com

6. PLASTIC TECHNOLOGIES INC.
has launched a new free iPhone/iPad app to calcu-



late the final intrinsic viscosity (IV) for polyethylene terephthalate (PET) resin. The app is the first of its kind for the plastics packaging industry, according to the company. The format, called a nomograph, uses a graphic representation of numerical values to produce a final calculation. PTI's PET Hydrolytic Degradation Nomograph enables the user to indicate the starting IV and moisture percentage. www.plastictechnologies.com

7. WEIGHPACK SYSTEMS' BINGO
Bagger XL complements the well-known and popular Bingo Bagger, the company says. With all the features and benefits of the standard model, the Bingo Bagger XL can handle bags with widths of 16"-20" and bag lengths of 14"-24" operating at speeds up to 25



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PACKAGING

cpm, according to the company.

WeighPack also offers the Swifty Bagger, specifically designed for pre-made bags including stand-up, gusset and flat-bottom, with or without zipper closures. The bagger has a straight flow-through design with a color touchscreen, variable speed control, no-bag/no-fill sensor, heavy-duty mechanical cam shaft drive and integrated exit conveyor. www.weighpack.com



WeighPack Systems' Swifty Bagger is designed for pre-made bags, including stand-up, gusset and flat-bottom, with or without zipper closures.

compact with a stand-up base, reclosable zipper system and updated, high

shelf impact graphics. The company also recently introduced SmartPack technology that gives the look of high quality lamination with only one layer. www.polycello.com

8. POLY CELLO HELPED design and launch Oxbow Animal Health Inc.'s latest packaging for small animal diets. The new premade LLDPE, quad-bottom bags with pre-attached zippers were custom-designed, eight-color-printed and supplied by Poly Cello. The bag style is more

9. ACCORDING TO EXOPACK, the company relies on innovation to fulfill its packaging commitments: solutions like spouted closures that make pouring from stand-up pouches easier and potentially eliminates rigid containers. Exopack also offers

custom-engineered structures that are designed for optimal performance and are available in a variety of substrates such as polyethylene, poly amids, polypropylene, polyester, paper, woven polypropylene and composite. www.exopack.com

10. PEEL PLASTICS KNOWS that consumers are bombarded with marketing messages often through a package's shelf impact. That's why the company works hard to distinguish your brand by using brilliant, high-impact print and innovative package design, according to Peel. Using the latest in gas chromatograph technology, Peel also says that the palatability of your food is maintained from your factory floor to the kitchen floor. www.peelplastics.com

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Petfood Insights

David A. Dzanis, DVM, PhD, DACVN

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 petfoodinsights.aspx](http://www.petfoodindustry.com/petfoodinsights.aspx).

AAFCO votes on specialty petfood labels



During the AAFCO annual meeting, members also approved a change in the L-carnitine ingredient definition.

THE 102ND ANNUAL Convention of the Association of American Feed Control Officials was held July 30 to August 1, 2011, in Austin, Texas, USA. There were some, but not very many, items directly affecting petfood.

Since AAFCO recently changed its procedures so the membership now votes at both the annual and midyear meetings, the number of items up for consideration in the general session seemed fewer this year than at annual meetings past. In fact, most of the committees, including the Pet Food Committee, had no actionable items up for vote.

AAFCO MEMBERS DID vote to accept changes to the regulations affecting the label declaration of guarantees for specialty petfoods as brought forth by the Model Legisla-

tion & Regulation Committee. The guaranteed analysis on bird, reptile, fish and small mammal food labels now must appear in the same format as guarantees for dog and cat foods instead of that for livestock feeds. Manufacturers will have until January 2013 to revise their labels.

Among the items up for vote from the Ingredient Definitions Committee, the item of most impact on the petfood industry is the definition for L-carnitine. As revised, the definition now makes clear that it may be added to any dog and cat food, including treats and supplements, not just complete and balanced foods. The maximum inclusion rate of 750 mg/kg dry matter for dog foods and 1,000 mg/kg dry matter for adult cat foods still applies to all types of food.

THE PET FOOD Committee session covered many items, but in most cases action was

deferred to the midyear meeting in January 2012. The expert panel for AAFCO Dog and Cat Food Nutrient Profiles and feeding trial protocols will review the comments received on its draft recommendations and provide a final version for consideration by the committee at the next meeting. The Carbohydrate Working Group will also provide its recommendations in January.

Over the next few months, a small group of regulators will put the final touches on the revised affidavit for calorie content statements to be consistent with the Regulation PF9 (passed by the committee at the last meeting, which in part mandates calorie content statements on all dog and cat food labels) as well as the proposed amendments to Regulation PF10 (which would set requirements for “weight control” and similar claims). That should provide enough time for review of these documents by interested parties before discussion and possible action at the midyear meeting.

In most cases action was deferred to the midyear meeting in January 2012.

OTHER ITEMS BROUGHT to the Pet Food Committee included the revision to the committee’s purpose statement as suggested by the AAFCO board of directors (AAFCO *Official Publication*, 2011). Since the time frame to get back to the board is short, the comment period will have closed before this column is published. Also discussed was the development of an AAFCO statement expressly objecting to claims such as “AAFCO approved” on pet product

Dr. Dzanis is a writer and consultant on nutrition, labeling and regulation. Tel: +1.661.251.3543; email: dzanis@aol.com.

labels. The matter will be open for a few months for comment on proposed language.

After discussion, there was consensus in the committee that allowing minimum and/or maximum voluntary guarantees for some nutrients did not conflict with the general model feed regulations. A small working group was formed to investigate concerns expressed by an outside organization that AAFCO's guidelines for plaque and tartar control claims were inconsistent with Food and Drug Administration policies.

THE INGREDIENT DEFINITIONS

Committee accepted proposed changes to the definitions to better distinguish meat meal from meat and bone meal on the basis of phosphorus content, with some overlap (meat meal <4.5% P, meat and bone meal >3.5% P). It also discussed some new feed terms that could affect petfoods, such as "popped" and "puffed," but the investigator withdrew the items from further consideration at this time. On the other hand, "powdered" was accepted by the committee as a new feed term.

The Model Legislation & Regulation Committee is still waiting to receive a charge by the board to review the amendments to Regulation PF9 as previously passed by the Pet Food Committee. The Feed Labeling Committee has formed working groups to consider a requirement for minimum and maximum selenium guarantees for feeds containing over 0.5 parts per million selenium and a maximum sulfur guarantee for feeds containing more than 0.5% sulfur. It is unclear whether these items could apply to petfood labels at this time.

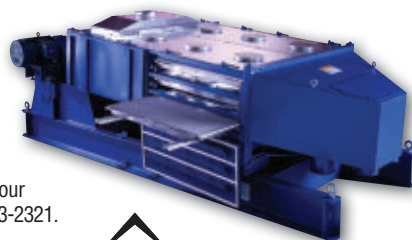
A proposal to the Feed Labeling Committee to require phone numbers to accompany the guarantor's name and address was dropped after discussion. ■



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Ingredient Issues

Greg Aldrich, PhD



A key nutrient, riboflavin (vitamin B₂) lies at the very heart of a dog or cat's metabolism and health.

Riboflavin: golden yellow heart of a pet's metabolism

RIBOFLAVIN (VITAMIN B₂) is one of those vitamins we don't hear much about in petfood production. Unlike with several other vitamins, the requirement for dogs and cats has been relatively well researched, it hasn't been implicated in unfounded controversy and petfood manufacturers fortify foods to the necessary level with relative ease. However, this lack of "noise" in the vitamin aisle shouldn't be confused with a lack of importance, because riboflavin is positioned at the very heart of healthy metabolism.

Riboflavin derives its name from two significant facets of its molecular structure: a sugar (ribose) and a three-ring isoalloxazine structure (flavin). The flavin component fluoresces to a bold yellow color when exposed to ultraviolet light. This was in part how the compound was first discovered and has been exploited ever since to measure riboflavin levels. The ribose portion is where the molecule is phosphorylated to produce the functional co-enzymes.

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RIBOFLAVIN MUST BE phosphorylated to a co-enzyme form before it can exert its effects in the dog or cat. This is a two-step process that first requires the enzyme flavokinase to produce riboflavin-5'-phosphate (also known as flavin mononucleotide, or FMN), and then pyrophosphorylase catalyzes it to flavin adenine dinucleotide (FAD). The process is under the control of thyroid hormones and is what allows the FMN and FAD co-enzymes to participate in intermediary metabolism and numerous oxidation-reduction reactions. These reactions include the conversion of vitamin B₆ to its active co-enzyme and the metabolism of folic acid, pyridoxine, vitamin K, niacin, vitamin D, reduced glutathione and vitamin C.

Ingredient sources richest in riboflavin include meat, milk, eggs and yeast products.

Because of this broad range of metabolic interactions, riboflavin deficiencies are seldom singular in nature but rather manifest as multi-nutrient deficiencies. Signs of riboflavin deficiency include weakness, fatigue, cataracts, dermatitis, alopecia, anemia, impaired reproduction and growth, nervous system deterioration and, in extreme circumstances, death.

INGREDIENT SOURCES RICHEST in riboflavin include meat, milk, eggs and yeast products. Rendered protein meals are a marginal and inconsistent supply. Vegetable matter can be a modest source while grains are relatively poor, with most of the riboflavin concentrated in the bran and germ fractions.

Natural sources of riboflavin in animal and plant tissues are mostly the co-enzymes FMN and FAD. To be absorbed, the nucleotides must be hydrolyzed from the ribose sugar. Conversely, in milk and the industrially produced vitamin, the riboflavin is in the free form (not phosphorylated), which allows for absorption as ingested. The absorption of riboflavin in the small intestine requires a sodium ATP-ase energy-dependent active transport system. Absorption can be affected by the animal's nutritional status and is improved when accompanied by a meal.

Diet composition can also influence absorption. For example, dietary levels of copper, zinc, iron, nicotinamide, ascorbic acid and tryptophan have been reported to influence bioavailability. In the circulatory system, riboflavin is transported bound to proteins (e.g., albumin) and immunoglobulins. There has been no upper (toxic) level of riboflavin established, and excess dietary intake beyond the animal's need is quantitatively excreted in the urine.



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INGREDIENTS **RIBOFLAVIN WAS FIRST** synthesized in 1935. While early commercial production depended entirely on chemical methods, today most of the approximately 2,400 tons of worldwide annual production relies on more cost-effective biosynthetic techniques. These industrial fermentation processes use organisms such as the filamentous fungi *Ashbya gossypii* grown on an oil-rich medium, yeasts like *Candida famata* and gram-positive bacteria such as variants of *Bacillus subtilis* that overproduce riboflavin.

Following a few clean-up steps, the net result of riboflavin production is a bright sun-yellow to golden powder. It is most commonly used in petfood vitamin premixes as an 80% active ingredient; however, there are other options available depending on application (60%, 90% and 96% riboflavin).

FREE RIBOFLAVIN IS susceptible to degradation from UV light exposure. Not that it applies to petfood, but the classic example is the loss of riboflavin in milk stored in clear glass

vitamins, riboflavin can be lost through leaching in high-moisture processes. In animal-based proteins, it is relatively stable through thermal processing and storage. It is also

Some supplementation is generally required to overcome ingredient variation, processing and storage losses.

containers. Sun drying of fruits and vegetables has also been blamed for degradation. This can be exacerbated with the addition of sodium bicarbonate in an effort to retain visual freshness. In essence, riboflavin losses are worsened with extreme shifts in pH—acidic or basic.

As one of the water-soluble

considered to be stable in baked and wet foods. However, the levels contributed by most petfood ingredients are not adequate to support the entirety of canine or feline requirements. So supplementation is generally necessary.

When considering supplemental sources, one must understand that while riboflavin is relatively stable compared to vitamins like A and C, there can still be small amounts of riboflavin sacrificed during petfood production. For example, retention in extruded foods is good with nearly 75% surviving through drying, but this can be compromised with extreme extrusion and drying temperatures. In addition, in a dry petfood on the store shelf, riboflavin can be lost at about 2% per month.

RIBOFLAVIN IS ONE of the many water-soluble B vitamins that are constantly turned over by the body with little to no stored reserves. Thus, it must be replenished daily by the diet. While riboflavin is a part of many ingredients used to make petfoods, some supplementation is generally required to overcome ingredient variation, processing and storage losses. Providing this extra riboflavin from any of the biosynthetic sources available in the market is a safe, consistent and effective way to meet the dietary needs for this key vitamin at the heart of metabolism and health. ■

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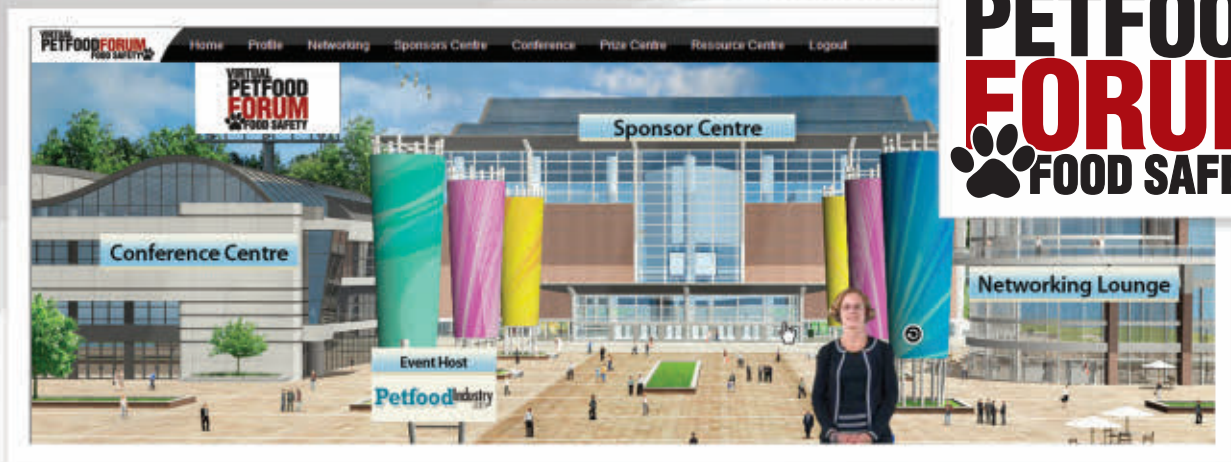
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Supplements and foods as preventive pet health remedies

Petfood marketers emphasize health and wellness to communicate value to consumers.

PACKAGED FACTS' MARCH 2011 report, *Pet Food in the US, 9th Edition*, shows the underpinnings of the US pet industry are strong, and the outlook is especially good for all things related to pet health. In the case of pet supplements and petfood, this is true to such a degree that some pet owners view these products as safer, holistic alter-

natives to pet medications.

For example, long-term administration of traditional non-steroidal anti-inflammatory medications can induce gastrointestinal toxicity, kidney failure and liver disease. As a result, before going the NSAID route, pet owners often turn to supplements such as glucosamine

Table 1. US pet owners on health benefits of petfoods

Packaged Facts asked dog and cat owners whether they agreed with this statement: "High-quality petfoods are effective as a preventive pet health treatment." (Totals may not add up to 100% due to rounding.)

Level of agreement/disagreement	Dog owners	Dog medication purchasers	Cat owners	Cat medication purchasers
Strongly disagree	6%	6%	6%	4%
Somewhat disagree	7	8	9	9
No opinion/not applicable	36	34	36	28
Somewhat agree	33	34	32	33
Strongly agree	18	17	18	26

Source: Packaged Facts' *Pet Medications in the US, 2nd Edition* and May-June 2011 Pet Owner Survey

Information provided by Packaged Facts (www.packagedfacts.com) based on *US Pet Market Outlook, 2011-2012* (April 2011).

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and chondroitin in pill, treat or food form.

In Packaged Facts' May-June 2011 Pet Owner Survey, 22% of dog medication purchasers and 28% of cat medication purchasers agree that they prefer to try holistic/natural pet treatments before resorting to pet medications. Over half of dog medication purchasers (51%) and cat medication purchasers (59%) agree that high-quality petfoods are effective in keeping their pets healthy (Table 1).

NUMEROUS NEGATIVE HEALTH conditions stem from overweight/obesity in dogs and cats, including osteoarthritis, type 2 diabetes, respiratory disorders, cardiovascular disease, non-allergic skin disease and many forms of cancer. Not surprisingly then, one of the biggest preventive health thrusts in

Table 2: New grain-free petfoods, 2007-2010

According to Product Launch Analytics from Datamonitor, the number of new grain-free petfood products has grown in both reports and SKUs since first tracked in 2007.

Years	Number of reports	Number of SKUs
2010	9	45
2009	7	26
2008	6	32
2007	2	8

Source: Packaged Facts' *Pet Food in the US, 9th Edition*. Compiled by Packaged Facts based on data from Product Launch Analytics, a Datamonitor service.

petfood is weight loss.

At the American Pet Products Association's 2011 Global Pet Expo, two major petfood companies featured new weight reduction programs under way in the

veterinary channel: Purina, with Project Slim Down, and Hill's, with Prescription Diet Weight Reduction Program. The latter relies on pre-measured meals, and in February 2011 Hill's carried this emphasis over into the pet specialty channel with the Science Diet Weight Loss System for Dogs.

Other marketers continue to segment established petfood lines with weight formulas, including Blue Buffalo (Blue Wilderness Natural Evolutionary Diet Dry Dog Food with LifeSource Bits Healthy Weight formula and Blue Adult Dry Cat Food Weight Control formula), Mars (Pedigree Dry Dog Food for Adult Dogs with Healthy Nuggets Kibble Healthy Weight formula) and Nutro (Nutro Ultra Holistic Superfood Dry Kibble Dog Food Weight Management formula).



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Linda P. Case, M.S.

About the Instructor

Course developer Linda P. Case, M.S., is a recognized expert in the fields of canine and feline nutrition, behavior and training, and companion animal health care. She operates AutumnGold Dog Training Center and is the author of four books, as well as numerous scientific papers and pet owner educational materials.

Case has also served as an adjunct assistant professor at the University of Illinois College of Veterinary Medicine, and lecturer and program coordinator at the University of Illinois Department of Animal Sciences.



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MARKET REPORT

TRENDS INCLUDING NATURAL, no wheat, no gluten, hypoallergenic and meat first combine in one of hottest holistic health-related trends in petfood today: grain free. According to Datamonitor's Product Launch Analytics, during the first seven months of 2011, 35 lines representing 167 SKUs carried grain-free claims, up from 9 reports/45 SKUs in all of 2010.

Grain free first showed up on the new product radar in 2007, when only two lines representing 8 SKUs appeared (Table 2, p. 53). Going the grain-free route now are all-new brand lines such as Dogswell's

Nutrisca, Petcurean's



Hill's Prescription Diet Therapeutic Weight Reduction Program was one of two weight-loss petfood lines introduced into the veterinary channel at Global Pet Expo 2011 in Orlando, Florida, USA, in March.

NOW!, Merrick's B.G. (Before Grain) and Ainsworth's Back to Basics, as well as extensions to lines including Fromm's, Pinnacle, Canidae, Sojos, Evanger's, Natural Balance, Halo

will be functional petfoods and treats boasting whole foods and holistic ingredients such as omega fatty acids and fruits and vegetables.

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LOOKING AHEAD, PETFOOD

marketers will continue to come down squarely on the side of health and wellness in seeking to communicate value to consumers. Driving much of the growth in the market

see more action in veterinary diets targeting specific medical conditions, including Hill's Prescription Diet, Iams Veterinary Diets, Royal Canin Veterinary Diets and Purina Veterinary Diets. This emphasis will increasingly position petfood, along with pet supplements, at the front line of consumers' pet health regimen in terms of both prevention and treatment.



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Key concepts

- **Effects of omega fatty acids on FCGS**
(JAPAN online July 2011. doi: 10.1111/j.1439-0396.2011.01195.x) Dietary fatty acids influence the composition of plasma cholesteryl esters and plasma levels of inflammatory cytokines in cases of feline chronic gingivitis/stomatitis.
- **Petfood buying preferences for owners of overweight dogs**
(JAPAN online July 2011. doi: 10.1111/j.1439-0396.2011.01193.x) The owners of dogs with excess weight had less interest in correct dog nutrition than owners of normal weight dogs.
- **Water in wet cat food affects energy intake and body weight**
(AJVR 72:918-923. doi: 10.2460/ajvr.72.7918) The impact of water content on energy density and food consumption may help promote weight loss in cats.
- **Effects of obesity and antioxidants in rabbits**
(Res Vet Sci 90: 196-204. doi: 10.1016/j.rvsc.2010.05.023) Castrated male New Zealand white rabbits might be considered an appropriate animal model to study various metabolic abnormalities related to visceral obesity.

Effects of omega fatty acids on FCGS

Feline chronic gingivitis/stomatitis (FCGS) is a painful inflammatory disease. Extraction of teeth, including all premolars and molars, has been shown to be the therapy of choice in cats not responding sufficiently to home care (e.g., toothbrushing) or medical treatment (corticosteroids or antibiotics).

In this study, we hypothesized that a cat food with an omega-6 polyunsaturated fatty acid ($\omega 6$ PUFA) to $\omega 3$ PUFA ratio of 10:1 reduces inflammation of FCGS and accelerates soft tissue wound healing of the gingiva after dental extractions, compared to a cat food with a $\omega 6$: $\omega 3$ PUFA ratio of 40:1. The cats were fed diets with chicken fat and fish oil as sources of fatty acids. In one diet, part of the fish oil was replaced by safflower oil, resulting in two diets with $\omega 6$: $\omega 3$ PUFA ratios of 10:1 and 40:1.



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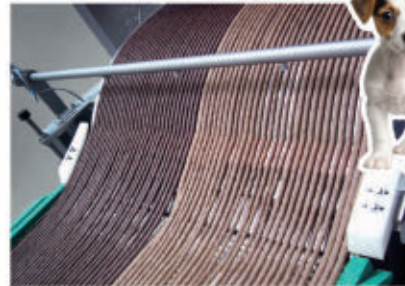


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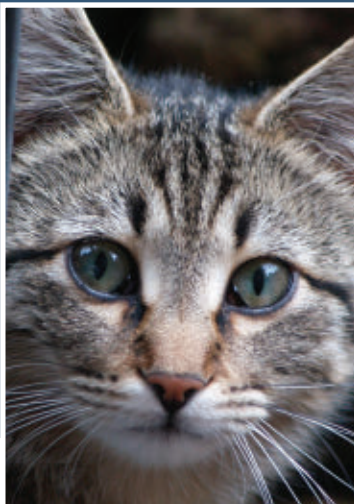
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RESEARCH NOTES

The study revealed that dietary fatty acids influence the composition of plasma cholesteryl esters and plasma levels of inflammatory cytokines. The diet with the 10:1 ratio lowered PGD₂, PGE₂ and LTB₄ plasma levels significantly, compared to the diet with the 40:1 ratio. However, feeding diets with dietary ω6:ω3 PUFA ratios of 10:1 and 40:1 to cats with FCGS for four weeks after extraction of all premolars and molars did not alter the degree of inflammation or wound healing.

Source: R.J. Corbeel *et al.*, 2011. Inflammation and wound healing in cats with chronic gingivitis/stomatitis after extraction of all premolars and molars were not affected by feeding of two diets with different omega-6/omega-3 polyunsaturated fatty acid ratios. *JAPAN* online July 2011. doi: 10.1111/j.1439-0396.2011.01195.x

Petfood buying preferences for owners of overweight dogs

The aim of this study was to evaluate the preferences of owners of overweight dogs when buying commercial petfood. Personal interviews were conducted with 198 owners of urban household dogs (137 with excess weight, 61 of normal weight). Questions rated the importance of certain qualities of prepared dog food.

A low price and special offers for commercial dog food were more important for owners of dogs with excess weight than for owners of normal weight dogs. The quality of ingredients and nutritional composition were more important for owners of normal weight dogs. The veterinarian was the most important source of information on dog nutrition for both groups (83% for both). The owners of dogs with excess weight had less interest in correct dog nutrition than owners of normal weight dogs.

Source: L. Suarez *et al.*, 2011. Preferences of owners of overweight dogs when buying commercial pet food. *JAPAN* online July 2011. doi: 10.1111/j.1439-0396.2011.01193.x

Water in wet cat food affects energy intake and body weight

The objective of this study was to determine whether water content in a wet diet induces decreases in voluntary energy intake (EI) or body weight (BW) in cats fed *ad libitum*. Maintenance EI was determined for two months in 10 weight-stable cats consuming a control diet. Then 16 sexually intact male domestic shorthair cats were allocated into two groups of equal BW and fed a wet diet (with-water, WW) or a freeze-

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dried version of the wet diet (low-water, LW) twice daily. Diets were identical in nutrient profile on a dry-matter basis.

Body composition measurements were determined by use of deuterium oxide at the end of each dietary treatment. Daily food intake was measured for determination of dry-matter intake and EI.

EI was significantly decreased for the WW diet compared with the LW diet. Cats had a significant decrease in BW during consumption of the WW diet. Body composition was unaltered by diet. In short-term preference tests, cats ate significantly more of the WW diet.

Bulk water in the WW diet stimulated decreases in EI and BW in cats. The impact of water content on energy density and food consumption may help promote weight loss in cats.

Source: A. Wei *et al.*, 2011. Effect of water content in a canned food on voluntary food intake and body weight in cats. *AVR* 72:918-923. doi: 10.2460/qjvr.72.918

Effects of obesity and antioxidants in rabbits

Molecular mechanisms responsible for impaired insulin-sensitivity due to obesity are not fully understood in humans or animals. This study investigated the effects of castration-induced visceral obesity and the influence of antioxidants on blood lipid profile and insulin sensitivity in 26 male New Zealand white rabbits divided into three groups: castrated-obese, treated with antioxidants (CI, n=7), castrated-obese (CO, n=7) and the control group (non-castrated, non-obese, NC, n=12).

All measured markers of obesity—body weight (BW), body mass index, visceral fat (VF) and VF/BW ratio—were significantly higher in both groups of castrated rabbits than in the control group. Apart from HDL cholesterol, the plasma concentrations of all constituents of the lipid profile were highest in the CO group. There were generally no differences between CI and NC groups for the same traits. Glucose concentrations and glucose and insulin kinetic parameters were considerably higher (except for glucose elimination rate) in CO rabbits than in NC ones.

Castration-induced visceral obesity negatively affected the lipid profile and insulin sensitivity and/or responsiveness. Antioxidant supplementation improved blood lipid profile, fatty liver, glucose homeostasis and insulin sensitivity in obese rabbits. Castrated male New Zealand white rabbits might be

considered an appropriate animal model to study various metabolic abnormalities related to visceral obesity.

Source: I.P. Georgiev *et al.*, 2011. Effects of castration-induced visceral obesity and antioxidant treatment on lipid profile and insulin sensitivity in New Zealand white rabbits. *Res Vet Sci* 90: 196-204. doi: 10.1016/j.rvsc.2010.05.023

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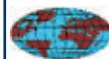


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Industry Calendar

See more

Find out what industry events are approaching. Go to PetfoodIndustry.com.

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	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	

- AFIA Liquid Feed Symposium 2011, September 13-15, 2011. Westin Crown Center, Kansas City, Missouri, USA. For more information or to register for this event, please visit www.afia.org or www.liquidfeed.org.



- SuperZoo 2011, September 13-15, 2011. Mandalay Bay Convention Center, Las Vegas, Nevada, USA. For more information and to register, please go to www.superzoo.org.



- Wenger 2011 Pet Food Processing Technology Seminar, September 13-15, 2011. Sabetha, Kansas, USA. For more information and to register, please visit www.wenger.com.



- The 2011 Feed and Pet Food Joint Conference, September 14-16, 2011. Westin Crown Center, Kansas City, Missouri, USA. For more information and to register, please visit www.petfoodinstitute.org.



- National Pet Industry Trade Show, September 18-19, 2011. Mississauga, Ontario, Canada. For more information on this event, please visit www.pijaccanada.com/en/tradeshows/national/.

- Wenger 2011 Pet Food Processing Technology Advanced Seminar, September 20-22, 2011. Sabetha, Kansas, USA. For more informa-



tion and to register, please visit www.wenger.com.

- Pet Fair Asia 2011, September 24-27, 2011. Shanghai Everbright Exhibition Center, Shanghai, China. For more information on attending this event, go to www.petfairasia.com.

- 18th Annual Practical Short Course on Aquaculture Feed Extrusion, Nutrition and Feed Management, September 25-30, 2011. Food Protein R&D Center, Texas A&M University, College Station, Texas, USA. To register and for a schedule of the short course curriculum, please go to www.tamu.edu.

- Pack Expo 2011, September 26-28, 2011. Las Vegas Convention Center, Las Vegas, Nevada, USA. To register and for further event and exhibitor information, please go to www.packexpo.com.

Online Events

- Virtual Petfood Forum – Making Safe Petfood in Today's Rapidly Changing Environment will take place October 26, 2011, 8 a.m.-5 p.m. CST. This is a live event, so make sure to go to www.petfoodindustry.com/petfoodforum.aspx for the latest information and for information on registration, topics and schedule.
- Mocon Inc. has announced its 2011 Free Webinar Series, which began March 9, 2011, and takes place once a month until December 10, 2011. To view class details and registration information, please visit www.mocon.com/events.php.



- AFIA Webcasts: Controlling *Salmonella* in Your Facility and Management Considerations for *Salmonella*/Microbial Control are available for download at www.afia.org.



- The Powder and Bulk Online Training Center is a virtual campus providing online training and lectures on topics such as Pneumatic Conveying, Mixing & Blending and Solids Flow. All of these Web-only classes are available at www.powderandbulk.com/online_training.



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