

August 2008

Petfood Industry

WATT

www.petfoodindustry.com

Functional fixes

The rise of
petfood retailing

Latest drying/
cooling technology

Success from

PETFOOD INDUSTRY
GLOBAL



Sweden

Niklas Siwersjö of Lantmännen Doggy AB, p. 18



Palatability for wellness

SPF, worldwide leader, innovates and invents the Palatability New Generation combining its best performing palatants with exclusive solutions for the well-being of cats and dogs.

With 12 plants in the world, SPF is the only one able to offer a true local approach providing you differentiation and competitiveness.

www.spf-diana.com



One day, she'll protect *you*.

But *who's* protecting her puppy food?

► This growing puppy has no idea we take great care in preparing the highest quality antioxidants for her food. She has no idea we are constantly innovating new technologies to provide the most up-to-date products and services to our customers.

She would be delighted to know we care so much about the quality of her food we have implemented a new, innovative Quality Assurance and Technical Support Program called **OxyGuard™**, to ensure her food is protected until it gets to her bowl.

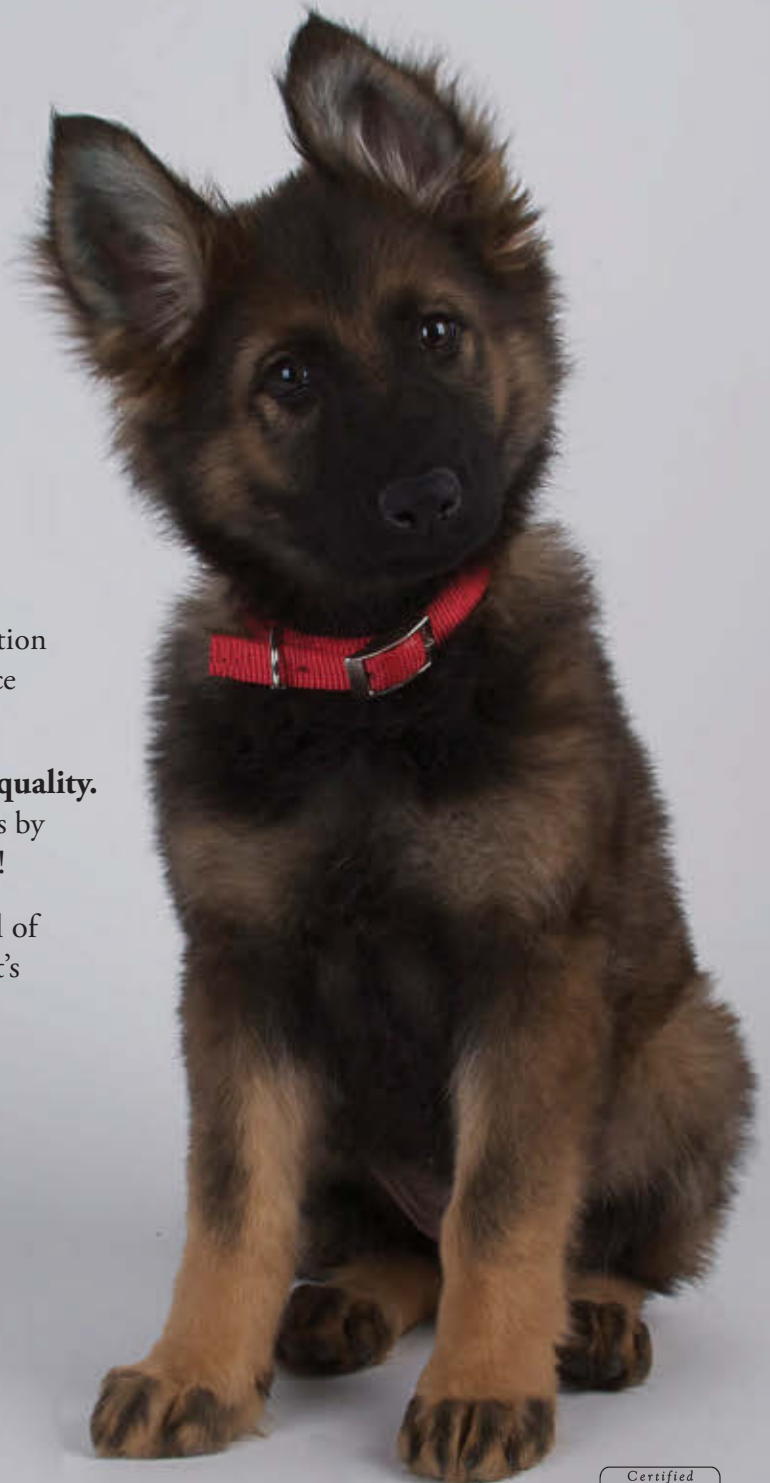
Quality is never an accident.

It is the result of high intention, intelligent direction and skillful execution. It represents the wise choice of *many* alternatives.

Higher priced products do not equal higher quality.

Ameri-Pac guarantees the highest quality products by sourcing U.S. raw materials. Quality comes first!

High quality antioxidants are the heart and soul of Ameri-Pac, Inc. Because at the end of the day, it's really all about her, our customer! ►



Features



18 Success from Sweden

By Stefania Pes

Health, convenience and environment are the key words behind the philosophy and growth of Lantmännen Doggy AB.

24 Functional fixes

By Tim Phillips, DVM

Petfoods with functional formulas can help manage pet health problems.

26 The rise of petfood retailing

By Tim Phillips, DVM

Developing retail markets are nuanced but offer valuable prospects.

29 Cool down costs, heat up progress

By Jessica Taylor Bond

What's hot and cold and innovative all over? The latest in drying and cooling technology!



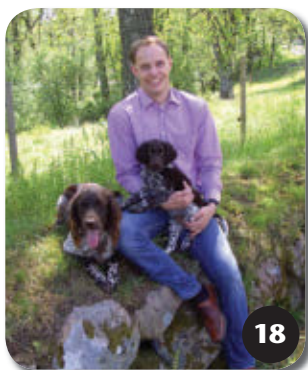
Departments

6 Editorial Notes By Tim Phillips, DVM

32 Petfood Insights By David Dzanis, DVM, PhD

34 Ingredient Issues By Greg Aldrich, PhD

44 Something to Chew On By Debbie Phillips-Donaldson



On the cover: Niklas Siwersjö of Lantmännen Doggy AB.

10 — Industry News

16 — New on the Shelves

36 — Research Notes

37 — Product News

39 — Market Place

43 — Advertisers' Index

PETFOOD INDUSTRY (ISSN 0031-6245) is published monthly by Watt Publishing Co., 303 N. Main St., Suite 500, Rockford, Illinois 61101-1018 USA. All rights reserved. Reproduction in whole or part without written permission is strictly prohibited. PETFOOD INDUSTRY and its logos are registered trademarks of Watt Publishing Co. **POSTMASTER:** Send address changes to: PETFOOD INDUSTRY, 303 N. Main St., Suite 500, Rockford, Illinois 61101-1018 USA. Periodical postage paid at Rockford, IL and additional mailing offices. Canada: Canada Post International Publication Product Mail Code 1686232.

Protein ingredients you can

Trust

www.adf.com

They look to their owners with love and trust. And their owners look to you for healthy ingredients for petfood. Which is why, for 30 years, ADF has been the most trusted supplier of spray-dried protein products in the industry. Our focus has always been on developing and providing ingredients of uncompromising quality made right here in the USA, and backed by the industry's finest customer care team. ADF® brand protein products. Novel ingredients your customers will love, supplied by a company you can trust.



ADFTM
30
YEARS
1978 - 2008

SUPERIOR AIB RATING

For more information call: 800.456.3447 or visit us at www.adf.com
In Europe, please contact: ADF-CIMA Nutrition nv: +32.56.61.7151 • E-mail: adf@cima.be
All ADF plants are EU Certified

ADF® is a registered trademark of American Dehydrated Foods, Inc. in the United States and / or other countries.

Web departments

1. Petfood Industry Videos:

Clips shot at Petfood Forum 2008.
www.petfoodindustry.com/showvideo.aspx



2. Topics: List of topics pertaining to the articles presented by Petfood Industry, including: Nutrition/Ingredients, Company Profiles, Packaging, Market Data, Safety/Regulatory, Processing/Production.

<http://www.petfoodindustry.com/topics.aspx>

3. General Forum: Visit the general forum and post new topics or respond to old ones. <http://www.petfoodindustry.com/discussions.aspx?g=topics&f=782>

4. Market Place: Classified advertisements for the petfood industry. www.petfoodindustry.com/classifiedads.aspx

Featured this month

Fixing problems

Read a scientific paper about the clinical evaluation of a nutraceutical for joint health by Daniel Gingerich, et al.

www.petfoodindustry.com/0808PETmilk.aspx



© joegaughn - BigStockPhoto.com

Emerging markets

Check out Lee Linthicum's presentation about the future of petfood retailing.

www.petfoodindustry.com/0808PETretail.aspx



Swedish petfood trends

Get the low down on the Swedish petfood and pet treat market from the latest information provided by Euromonitor International.

www.petfoodindustry.com/0808PETSSweden.aspx



© finlasticque - BigStockPhoto.com

Bruce Plantz, Vice President, Director of Content

EDITORIAL STAFF

Debbie Phillips-Donaldson, Editor-in-Chief
Tim Phillips, DVM, Editor
Jessica Taylor Bond, Associate Editor
Copy Desk Staff
Ken Jennison, Managing Content Editor
Sue Roberts, Senior Content Editor
Sara Lanenga, Associate Editor
Eric Eyberger, Associate Editor
Candi Teachman, Art Director

EDITORIAL & SALES OFFICE

PETFOOD INDUSTRY, 303 N. Main St., Ste. 500, Rockford, Illinois 61101-1018 USA. Tel: +1.815.966.5400, Fax: 1.815.966.6416 (Editorial), 1.815.968.0941 (Sales).

Steve Akins, Vice President, Publisher
sakins@wattnet.net
Tel: +1.919.387.7961, Mobile: +1.815.209.6444

USA ADVERTISING SALES

Michelle Adams, Sales Manager
madams@wattnet.net, Tel: +1.815.966.5503

Ginny Stadel, Sales Associate
gstadel@wattnet.net, Tel: +1.815.966.5591

INTERNATIONAL ADVERTISING SALES

Tineke van Spanje, International Sales Manager
tvanspanje@wattnet.net
Tel: +31.495.526155, Fax: +31.495.525126

Ding Ding Li (China, Taiwan, Hong Kong only)
Dingdingli@vip.163.com
Tel: +86.21.64474625

PUBLISHING SERVICES

James Wessel, Circulation Director
For subscriptions, address changes, past copies—
jwessel@wattnet.net

Robert Portillo, Production Manager
For advertising material, deadlines and processing—
rportillo@wattnet.net

ADMINISTRATIVE STAFF

Leslie A. Watt, Chairman Emeritus
James W. Watt, Chairman
Gregory A. Watt, President/CEO
Tim Smith, COO, VP Finance, Corp. Secretary/Treasurer
Joyce Neth, VP/Director of Insight, Research and Development

SUBSCRIPTION INQUIRIES/ CHANGE OF ADDRESS

Contact the Circulation Department at 303 N. Main St., Ste. 500, Rockford, Illinois 61101-1018 USA. Tel: +1.815.966.5400; Fax: +1.815.968.0513; E-mail: jwessel@wattnet.net. Subscription print edition prices: USA \$84.00/yr, Canada \$102.00/yr, Outside USA & Canada via Airmail \$144.00/yr; \$14.00 per copy unless marked. Digital edition sent by email: \$36.00/yr. Prices in US dollars. Business or occupation information must accompany each subscription order. For change of address, contact the circulation department listed above and give BOTH old and new address.

Photocopy Permission: Permission is granted by the copyright owner, Watt Publishing Co., provided the appropriate fee is paid directly to Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923 USA, tel +1.978.750.8400, fax +1.978.750.4470.

Bulk Reprints: Contact FosteReprints, +1.866.879.9144 or www.fostereprints.com.

© Copyright 2008, Watt Publishing Co. All rights reserved



EMPYREAL™

75

dependably pure.



Protection in an imperfect world. Empyreal™ 75, a naturally pure source of protein. Every shipment. Every time.

Empyreal™ 75 is a licensed trademark of Cargill Corn Milling. © 2008 Cargill, Incorporated

empyreal75.com

Downloading the human brain

In *The Singularity is Near*, futurist Ray Kurzweil examines what he calls the next step in our evolutionary progress: the union of humans and computers. He believes that the knowledge and skills embedded in our brains will be combined with the vastly greater capacity, speed and knowledge-sharing ability of computers (www.singularity.com).

Our intelligence will become increasingly nonbiological and trillions of times more powerful than it is today, Kurzweil says. He sees an astonishing future in which technological progress will create a utopia—for people and pets.

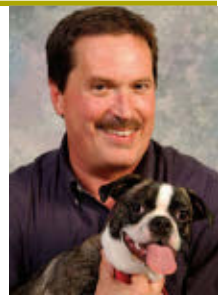
Although he doesn't mention pets specifically, I think the advances in human health he predicts will surely improve pet care. Yes, this month's column might be a stretch, but I think it's good to stretch from time to time.

Eternal life in 2020

Within a few decades, machine intelligence will far surpass human intelligence, leading to Singularity—tech-

“There will be nanochips for identity preservation and tracking.”

— Tim Phillips



nological change so rapid and profound it will “rupture the fabric of human history,” asserts Kurzweil. The implications include “the merger of biological and nonbiological intelligence, immortal software-based humans and ultra-high levels of intelligence that expand outward in the universe at the speed of light.” He predicts that if you can live and remain relatively healthy until about the year 2020, scientific advancements and the achievement of Singularity will permit us to realistically achieve immortality.

Why such dramatic changes? The history of technology shows that technological change is exponential. So we won't experience 100 years of progress in the 21st century—it will be more like 20,000 years of progress (at today's rate). There's even exponential growth in the rate of exponential growth.

Part of Singularity is molecular nanotechnology. As we master the ability to design molecular machines that can continue to function when the living system around them has failed, those molecular machines can restore the function of the living system. Bottom line: Life and health will be restored and sustained in the face of greater injury, greater damage, greater trauma and greater dysfunction than ever before.

The promise of food nanotechnology

Following are a few food nanotechnology applications currently being researched and tested:

- ▶ Nanocapsules for delivery of pesticides and fertilizers more efficiently.
- ▶ Nanochips for identity preservation and tracking.
- ▶ Nanoencapsulated flavor enhancers and nutraceuticals.
- ▶ Lighter, stronger and more antimicrobial packaging films.
- ▶ Nanocheleates to deliver nutrients to cells more efficiently without affecting color or taste.

Not a nut

Lest you think that Kurzweil is a nut, think again. He is one of the world's leading inventors, thinkers and futurists, with a 20-year track record of accurate predictions. Kurzweil was selected as one of the top entrepreneurs by *Inc.* magazine, which describes him as the “rightful heir to Thomas Edison.”

I hope to see you in 2020. ●

Dr. Phillips is the editor of Petfood Industry magazine. He can be reached at Tel: +1.815.734.5644, E-mail: tphillips@wattnet.net.



© Hank Shiffman Image from BigStockPhoto.com

Futurist Ray Kurzweil sees an astonishing future in which technological progress will create a utopia.

FINDING WAYS TO BUILD STRONG BODIES
AT THE MOLECULAR LEVEL IS AN EXERCISE
OUR SCIENTISTS COULDN'T RESIST.



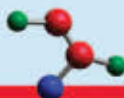
Introducing the Kemin Functional Ingredient Line.

Today's pet owners understand nutrition is key to their pet's well being, and they actively look for brands that offer unique functional benefits. It's what got our scientists all pumped up about developing our new Functional Ingredients line. Nutrikem[™] brand enzymes to improve nutrient bioavailability and digestive health. XanthaGLO[™] brand lutein as a nutritive antioxidant and for eye health. KemTrace[™] brand Zinc Plus to maintain healthy skin and internal tissues. And Subactil[™], that maintains a healthy balance of gut microflora for gastrointestinal health. Each of these ingredients not only maintain pet health, they help build stronger petfood brands.

To learn how, call your Kemin representative or visit www.kemin.com.

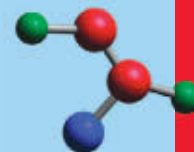
US 1-800-777-8307 Asia +61-2-9482 2357

KEMIN[®] INSPIRED MOLECULAR SOLUTIONS[™]



OUR LATEST INNOVATIONS FOR PET FOOD
REALLY HIT THE SPOT





Kemin Palasurance Your New and Only Choice in Palatability Enhancers

Kemin introduces a global expansion of its Palasurance™ brand petfood palatability enhancers business based on the solid expertise, experience and technological advances that have established our position as your strategic partner in assuring total palatability and freshness for your pet food and treats.

Palasurance™ brand palatability enhancers are made from a wide variety of the freshest ingredients providing superior palatability and aroma performance. Our palatants deliver consistent quality, enhanced stability, functional properties, flavor enhancing characteristics and specific label claims when applied on or in a pet food and/or treat.

Freshest Ingredients. Superior Products. Worldwide.

For years, we've produced quality palatants in our European operations. Now a strategic alliance with Tyson Foods, Inc. expands our ability to develop, manufacture and market customized Palasurance™ and Topnotes® brand palatants in and for North America. In addition, Kemin has expanded manufacturing into Central and South America markets with the acquisition of Kemin Nord Palatabilizantes do Brasil operations.

Unsurpassed Customer Support

The Kemin Technisales team is your palatability and freshness protection partner. We work closely to help develop and manage a complete application program to meet your unique needs. Because we understand the intricacies of today's petfood manufacturing processes and products, our seamless network of Customer Laboratory Technicians and Technical Service Managers can provide customized palatability assurance from the sourcing of raw ingredients to the final presentation in the food bowl.

Kemin Palasurance™ palatability enhancer family of products will prove to be a key strategic part of your company's total palatability program.

US (only) 1.877.890.1462 EU +32.16.69.79.99 Asia +61.2.9482.2357 South America +55.49.9968.0457



Quick hits

- ▶ Bosch Packaging Technology has appointed Pres Lawhon president and general manager of Dobby Inc.
- ▶ Vitakraft Pet Products has acquired the American bird food company Sun Seed.
- ▶ Hill's Pet Nutrition Inc. has unveiled the redesigned HillsVet.com.
- ▶ Bravo! has named Pet Food Experts Inc. as its exclusive Northeastern distributor in the US.
- ▶ Food Safety Net Services co-hosted the International Forum for Transmissible Animal Diseases and Food Safety Workshop in San Antonio, Texas, USA.
- ▶ BHJ has moved production of its hydrolysates to Sweden.
- ▶ Mühlenchemie and Nensey Food Ingredients have established Stern Ingredients India Private Ltd. in Mumbai.

Petfood Forum 2009 CALL FOR ABSTRACTS

Petfood Forum 2009, organized by *Petfood Industry*, will be held April 20-22, 2009 at the Hyatt Regency O'Hare Hotel in Rosemont, Illinois, USA, a suburb of Chicago.

The Petfood Forum 2009 organizing committee invites the submission of abstracts for noncommercial oral and poster presentations in the following topic areas: nutrition and ingredients; packaging; safety and regulatory issues; processing and production subjects; market data, trends and predictions; company profiles; and new products.

To submit an abstract, please follow the guidelines on our website: www.petfoodindustry.com/PFFinstructions.aspx. If you have questions, please send an email to tphillips@wattnet.net or call +1.815.966.5544. **Abstracts must be received no later than September 30, 2008**, and must follow the guidelines provided. Send abstracts to tphillips@wattnet.net.

Fresh petfood becoming a new standard in premium foods

For years, virtually all of the dollar sales growth in the North American petfood market has been coming from the conversion of pet owners to higher priced fare, and the single most important factor behind their willingness to pay more is the belief that better quality products offer tangible health benefits. Because fresh petfoods fit this bill perfectly, sales are on the rise, with a 23% compound annual growth rate forecasted to bring retail sales to US\$473 million by 2012, according to Packaged Facts' new *Fresh Pet Food in North America: The Raw/Frozen, Refrigerated and Homemade Wave* report.

Also helping the market along are technological advances and convenience features, an overlap into the high-growth natural/organic segment, heightened food safety concerns and the mobilization of the raw/frozen petfood industry via the North American Raw Petfood Association and the Canadian Association of Raw Pet Food Manufacturers.

Fresh Pet Food in North America—the first and only market report to quantify this dynamic segment of the petfood market—is grounded in primary interviews with industry experts and extensive canvassing of the Internet, where the “word-of-mouth” raw foods movement has long been based and continues to spread. The market consists mainly of raw diets sold in frozen form but also includes refrigerated or frozen petfoods that have been lightly cooked (i.e., pasteurized) as well as uncooked products made shelf-stable via dehydration. The report also examines the growing trend toward homemade petfoods and the trend toward the usage of fresh ingredients in traditional shelf-stable dry and wet petfoods.

For more information about *Fresh Pet Food in North America: The Raw/Frozen, Refrigerated and Homemade Wave*, visit <https://www.packagedfacts.com/Fresh-Pet-Food-1420439>.



Take the *Petfood Industry* survey!

What do you think the next frontier is for functional petfoods or ingredients? What functional ingredients do you think are most effective? Tell us what you think about that and the articles in this issue. Go to www.petfoodindustry.com/monthlysurvey.aspx.

PETFOOD INDUSTRY GLOBAL

Japan spending more on petfood. Japanese pet owners are spending more money on their animals, according to a recent consumer survey, with 23% of the respondents saying they spend more on their pets compared to what they spent three years ago. Of all respondents, 84% said their spending on petfood has increased.

Approximately 60% of respondents said they spend ¥1,000 (US\$9.42) to ¥5,000 (US\$47.09) a month on their pets; 9% spent ¥10,000 (US\$94.18) or more. As Japanese consumers spend more on petfood, pet owners are demanding the same safety standards they are accustomed to with their own food products. Another survey by the Agriculture, Forestry, Fisheries and Environment ministries shows that about 40% of pet owners have doubts about petfood safety, and Japanese officials have since announced the government is considering introducing a law to ensure the safety of petfoods.

UK pet care market still growing, despite economic slowdown. The pet care market in the UK is worth an estimated £1.65 billion (US\$3.28 billion) a year, with year-on-year growth of 5%, according to figures from market analysts TNS. Cat food is growing by 5.1% year-on-year and dog food by 4.8%. The increase in value in the dog food market is being driven by growth in dry dog food and dog treats. Wet dog food and dog biscuits are in decline.

Wet products have helped drive growth in cat food, aided by new product development from both Felix and Whiskas launching into the premium wet multi-serve market. TNS says the move "further reinforces the importance of premiumization to the pet care category, despite the economic slowdown." Wet single-serve cat food has also grown the market by £45.5 million (US\$90.6 million), largely due to the continued success of pouch varieties.



MEET US IN PRAGUE
FOR A TASTY SCIENTIFIC TREAT



INNOVATIONS TO APPLICATION

4th Annual Kemin Science of Petfood
Symposium

October 21-22, 2008, Jalta Hotel, Prague

Join us in Prague as some of the leading scientists in petfood nutrition, palatability, and safety show you how to move your business from innovation to application. You'll learn about a number of flavourful possibilities for your products and fire up a new level of potential for your business.

For details or to register, contact Silke Taris by calling +32 14 25 97 97 or e-mail silke.taris@kemin.com. Special Early Bird Savings when you sign up by August 10.



INSPIRED MOLECULAR SOLUTIONS

INDUSTRY CALENDAR

September

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

AFIA Liquid Feed Symposium,

September 10-12, 2008, Doubletree Hotel, Austin, Texas, USA. Contact: Judy Pilgrim, Tel: +1.703.524.0810, Fax: +1.703.524.1921, afia@afia.org, www.afia.org.

Pet South America,

September 17-19, 2008, Transamerica Expo Center, Sao Paulo, Brazil. Contact: Miryam Tolotto, Nielsen Business Media Brasil, Tel: +55.11.4613.2014, Fax: +55.11.4613.2001, miryam.tolotto@nielsen.com, www.petsa.com.br.

National Annual Pet Industry Trade Show,

September 21-22, 2008, Toronto, Ontario, Canada. Contact: Pet Industry Joint Advisory Council - Canada (PIJAC), Tel: +1.613.834.2111, Fax: +1.613.834.4854, executiveoffice@pijaccanada.com, www.pijaccanada.com.

Glee PetIndex, September 21-23, 2008, NEC, Birmingham, United Kingdom. Contact: Emap Limited, Tel: +1.44.0.20.7728.4262, Fax: +1.44.0.20.7728.4200, glee@emap.com, www.gleebirmingham.com.

AACC Annual Meeting,

September 21-24, 2008, Hawaii Convention Center, Honolulu, Hawaii, USA. Contact: American Association of Cereal Chemists (AACC) International, Tel: +1.651.454.7250, Fax: +1.651.454.0766, meeting.aaccnet.org.

SuperZoo West,

September 24-26, 2008, Mandalay Bay Convention Center, Las Vegas, Nevada, USA. Contact: World Wide Pet Industry Association (WWPIA), Tel: +1.800.999.7295, www.wwpia.org.

15th Annual Practical Short Course on Aquaculture Feed Extrusion, Nutrition and Feed Management,

September 28-October 3, 2008, Texas A&M University, College Station, Texas, USA. Contact: Mian N. Riaz, PhD, Tel: +1.979.845.2774, Fax: +1.979.458.0019, mnriaz@tamu.edu, www.tamu.edu/extrusion.

October

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

PFI Annual Meeting,

October 1-2, 2008, Chicago, Illinois, USA. Contact: Pet Food Institute, Tel: +1.202.367.1120, Fax: +1.202.367.2120, info@petfoodinstitute.org, www.petfoodinstitute.org.

Nestlé Purina Nutrition Forum,

October 2-4, 2008, St. Louis Ballpark Hotel, St. Louis, Missouri, USA. Contact: Charlene Lackey, charlene.lackey@rdmo.nestle.com, www.purinavets.com.

H.H. Backer Christmas Trade Show,

October 3-5, 2008, Donald E. Stephens Convention Center, Rosemont, Illinois, USA. Contact: H.H. Backer Associates, Tel: +1.312.663.4040, hbacker@hbacker.com, www.hbacker.com.

AHVMA Annual Conference,

October 11-14, 2008, Nugget Casino Resort, Reno, Nevada, USA. Contact: American Holistic Veterinary Medical Association, Tel: +1.410.569.0795, Fax: +1.410.569.2346, office@ahvma.org, www.ahvma.org.

Wild West Veterinary Conference,

October 15-19, 2008, Grand Sierra Resort, Reno, Nevada, USA. Contact: Wild West Veterinary Conference, Tel: +1.703.449.6418, Fax: +1.703.631.1167, wildwestveterinaryconference@jspargo.com, www.wildwestvc.com.

A complete listing of 2008 events is available at www.PetfoodIndustry.com



WENGER Industry Poll

Add your input to the dialogue.

NEW Polling question from Wenger now available!

Check out the new question on www.petfoodindustry.com

Log on to www.petfoodindustry.com to answer the poll question.



Nutro sets record straight



Over the past several months, ConsumerAffairs.com, a self-proclaimed consumer news center, has been posting statements and consumer complaints about Nutro petfood products. Nutro states these postings draw false links between illness and death among pets and the consumption of Nutro petfoods. It further points out the website is not affiliated with the US Consumer Product Safety Commission or *Consumer Reports*.

Reduced retail availability of Nutro products may have sparked rumors of food safety problems. Currently there are worldwide shortages of ingredients across the human and pet food industries and Nutro has had its share of supply problems. As a result, there are certain Natural Choice Lamb and Rice products for dogs that are in short supply in certain locations.

In some of the cases, posted on June 23 on ConsumerAffairs.com, outside sources have provided verification that Nutro products were not the cause of any pet health issues. In others, Nutro is taking steps to address pet owners' concerns and determine the cause of the pet health issues, according to Debra Fair, Public Relations Manager at Nutro. But at this point, she says, every Nutro product analyzed in relation to the June 23 posting on ConsumerAffairs.com has been shown to be safe.

US marshalls seize petfood products at Petco distribution center

In late June, at the request of the US Food and Drug Administration (FDA), US marshalls seized various petfood products stored under unsanitary conditions at the Petco Animal Supplies Distribution Center located in Joliet, Illinois, USA. The marshalls seized all FDA-regulated animal food susceptible to rodent and pest contamination. The seized petfood violates the Federal Food, Drug and Cosmetic Act because it was alleged in a case filed by the US attorney that they were being held under unsanitary conditions.

During an FDA inspection of a Petco distribution hub in April 2008, widespread and active rodent and bird infestations were found. The FDA inspected the facility again in May and found continuing and widespread infestation. Kevin Whelan, a Petco spokesman, said after the FDA inspection in May, the company "acted aggressively to address any concerns that were raised."

According to the FDA, there have been no reports of pet illness or death associated with the consumption of any petfood distributed by Petco.

HAMMER IT OUT WITH CPM

Champion Hammermills are built on a solid foundation with the standard features you need. Features that are optional from them come standard from us. Bearing temperature monitor probes, vibration switches, trap key interlock and dynamically balanced rotors are all standard equipment. AR235 abrasion-resistant wear liners come standard too. Raise your standards. Call 800-366-2563 or visit us on the Web to get the right machine for your job.



Hammermill



**ROSKAMP
CHAMPION**
Your Partner in Productivity

800-366-2563 | 319-232-8444 | WWW.CPMROSKAMP.COM
WATERLOO, IOWA



These days we're not just taking better care of ourselves, we're taking better care of our pets, too.

Carniking® from Lonza contains pure L-Carnitine.

L-Carnitine is proven to:

- Support healthy cardiac function
- Improve muscle force
- Convert fat into energy
- Support healthy hepatic function
- Ensure optimum energy metabolism for all life stages

Provide your customers with a product that will improve the quality of life of their companion animals. They'll love you for it.



Carniking® offers pure L-Carnitine and is a trademark of Lonza Ltd, Switzerland.

www.carniking.com

Lonza Inc, Allendale, NJ USA Tel. +1 800 955 7426 carnitine@lonza.com

FDA claims progress on protection plan

The US Food and Drug Administration (FDA) recently released a six-month status report on its progress in implementing a food safety plan launched in November in response to high-profile contamination incidents—including the petfood recall—involving domestic and imported foods over the past few years. The eight-page report covers a wide range of action items, from efforts to solicit stakeholder comments to research on how to assess produce contamination risks. Progress assessments are grouped under prevention, intervention and response sections. In each category the FDA also lists steps it plans in the future.

The status report comes as the FDA is fielding criticism over its handling of the investigation of a massive *Salmonella* outbreak thought to be linked to fresh tomatoes or some other ingredient commonly served in combination with tomatoes. Some lawmakers have charged that the FDA has been too slow in implementing the food safety plan. For their part, FDA officials have said the US Congress has failed to grant the FDA authorities it has requested in the plan, such as the ability to require food recalls.

The FDA said it is working with state and local partners to develop a strategy for implementing the food safety plan and that a 50-state meeting will be held in St. Louis, Missouri, USA from August 12-14 to collaborate and plan future food safety initiatives. Also, the FDA is seeking feedback on a variety of food safety proposals, including outreach activities and petfood labeling and safety standards.



Designed for
success.

**Buhler – your partner for processes and plants
in the Petfood industry.**

Buhler Inc
Pasta & Extruded Products
P.O. Box 9497
Minneapolis, MN 55440
T (763) 847-9900
F (763) 847-9910
buhler.minneapolis@buhlergroup.com
www.buhlergroup.com

 **BUHLER**

New on the Shelves

Find more new products at www.petfoodindustry.com. To submit products, contact Eric Eyberger, Tel: +1.815.734.5612, Fax: +1.815.968.0941, eyberger@wattnet.net.



« Salmon oil for petfood

Plato Treats has introduced its new Wild Alaskan Salmon Oil. According to Plato, the oil is made from 100% cold-pressed, all-natural, wild Alaskan salmon and ships in a 16 oz. bottle with a pump dispenser for clean, quick and easy dispensing onto petfood. As a source of omega-3 and omega-6 essential fatty acids, the oil helps promote healthy skin and a glossy coat, support heart health and maintain a healthy immune system, says the company. www.platopettreats.com.

Heroic water for dogs »

Century Foods has introduced Hero Water, a bottled water for dogs, which includes three formulas designed to appeal to dogs of all ages and breeds. According to the company, Hero Water uses a triple-filtered, reverse-osmosis purification process that removes impurities and additives like chlorine and fluoride. Century Foods also states that the water is fortified with nutrients to help keep dogs healthy and active. www.herodogwater.com



« Grain-free petfood

Merrick Pet Care has debuted Before Grain products. According to the company, these products support a grain-free lifestyle for both dogs and cats. Merrick states that Before Grain is made with fresh meat, balanced protein baselines and super-foods such as acai berries, which are natural antioxidants. www.merrickpetcare.com



Chewable tablets for joint pain »

VetBalance Professional Joint Formula by Innovative Pet Nutrition is an all-natural, highly effective solution for dogs suffering from joint discomfort and loss of mobility, according to the company. The product is a chewable tablet that contains antioxidants and helps control inflammation, alleviate pain, lubricate joints, repair damaged cartilage, enhance mobility and flexibility and improve joint stability, says the company. www.vetbalance.com



Something may be missing in their diet. But they won't find it in the refrigerator.

Adding NutraCea's Stabilized Rice Bran Feed Ingredient Technology to your petfood formulations will deliver:

- High Quality Plant Based Fat (20%)
- Essential Fatty Acids
- Natural Palatability
- High Quality Soluble Fiber
- Hypoallergenic Protein (13%)
- Complete Amino Acid Profile
- A Unique Ingredient Technology of U.S. Origin

Excellent Alternate Source for Beet Pulp & Soy Hulls

NutraCea® is now adding value to petfoods in the same way it has for over 10 years in formulated high-end equine diets. Please contact us to find out how we can add value to your petfood formulations!

For more information, contact NutraCea®
1-888-757-7731
www.nutracea.com/pet



5090 N. 40th Street, Suite 400, Phoenix, AZ 85018-2199, Tel: 602-522-3000, Fax: 602-522-3001

Success from Sweden

Health, convenience and environment are the key words behind the philosophy and growth of Lantmännen Doggy AB

BY STEFANIA PES

Sweden is celebrated for its untouched, beautiful countryside and outstanding natural environment. In order to protect this national asset, Sweden has imposed some of the toughest environmental legislation in the world. Lantmännen Doggy AB is proud of this Swedish legacy, which it translates in its product line, marketed under the brand Bozita.

Swedish quality guarantees safety and purity

“Quality is a prerequisite for our business, for us there is simply no other alternative,” says export director Niklas Siwersjö. “All raw materials that can be grown in Sweden are sourced locally from farms in the vicinity of our factory. Here farmers use fewer chemicals than in other parts of the world, since the use of preventative antibiotics is prohibited and no growth promotion hormones are used, our raw materials are of the highest quality.

“Belonging to the farmer’s cooperation Lantmännen enables us to be in stricter control of the quality of the raw ingredients,” continues Siwersjö. “The Swedish origin of ingredients assures

cat and dog owners a pure, healthy product according to Swedish legislation and the Lantmännen Doggy policy of supply.”

Some examples of the very stringent legislation and ethical restrictions in Sweden are:

- Carcass meal prohibition since 1985;
- Antibiotics forbidden in livestock production since 1986;
- *Salmonella*-free meat production;
- Traditional battery farming and beak clippings of chickens is prohibited; and
- All meat and grain used is GMO-free.

Producing a clean and nutritious product is the main guiding principle for production and development of the company’s manufacturing line, which is located exclusively in Sweden.

The Swedish market

Get the low down on the Swedish pet-food and pet treat market from the latest information provided by Euromonitor International at www.petfoodindustry.com/0808PETSSweden.aspx.

Niklas Siwersjö, export director of Lantmännen Doggy AB, with his dogs Rogstabergets Jackson Browne and Lokkebergets I Jäger Browne.

Business basics

Headquarters: Vårgårda, Sweden

Officers: Hans Nilsson, managing director; Niklas Siwersjö, export director

Turnover: €42 million (US \$65.7 million)

Export sales: 25% of total turnover

Main export countries: Norway, Finland, Germany, Russia, England and the Baltics

Employees: 145

Brands: Bozita for the specialist channel; Mjau and Doggy for the grocery channel

Website: www.bozita.com

“These attributes allow the company to be competitive in the European markets, where the main focus is emphasizing superior quality, purity, safety and being innovative,” says Siwersjö.

All-around innovation

Innovation is indeed the other strength that the relatively small and flexible company Lantmännen Doggy relies on to attract consumers. The petfood company runs its own R&D facilities, and bases all product development on the latest published research in food nutrition for dogs and cats. Next to the R&D facilities, it has set up its own cattery and kennel for palatability and acceptance testing of every new product before it is introduced to the market.

An interesting result of Lantmännen Doggy’s continuing research is Macrogard, a natural betaglucan that works as an immunostimulant, strengthening the pet’s immune system, assisting endogastric function and promoting general well-being. The addition of Macrogard to a pet’s diet especially supports pets experiencing strains, growth, lactation and outer stress, according to the company.

Moreover, Lantmännen Doggy is the first petfood manufacturer to implement a technology that enables the sterilization of food in cartons rather than the traditional cans



Experience and exports

Lantmännen Doggy AB is based in Vårgårda, a rural agricultural center about 70 kilometers northeast of Gothenburg on the Swedish west coast. Since 2001, Lantmännen Doggy has been owned by Svenska Lantmännen, a farmer’s cooperative, one of the largest groups of food producing companies in the Nordic countries. Swedish quality and environmental awareness have been guiding principles for Lantmännen Doggy since its founding 105 years ago, and have contributed to substantial growth in their exports.



The company can boast a century of experience in animal food manufacturing, which led them to become market leader in dog and cat food sales in Sweden, and export sales to boom between 60-70% in the past two years, now accounting for 25% of total turnover.

or pouches; the company successfully launched a Bozita wet food line in Tetra Recart. Tetra Recart is a square carton package made out of a special paperboard laminate material that allows the same quality and safety as the traditional canning process, but offers the chance to differentiate and present the product in an innovative way. More importantly, the new packaging concept provides a variety of benefits to consumers compared to traditional packaging:

- **Portability.** Tetra Recart is light, compact and easy to carry;
- **Easy opening and pouring.** The package incorporates a specially developed laser perforated opening system, so consumers need no special openers for the package;
- **Convenience.** The material is designed for space-saving stackability in kitchen cupboards;
- **Safety.** No sharp, cutting edges to worry about, so safe to use with children; and
- **Reclosable.** The packaging is reclosable by folding the opening flaps back down to keep the food fresh for 2-3 days in the refrigerator.

Environmentally, the Tetra Recart is also a winner. One pallet contains 35,000 Tetra Recart empty cartons,

meaning that one truck is equal to approximately 15 trucks of empty cans. This results in cost-effective transport and storage with minimal environmental impact, since the Tetra Recart cartons also able to be recycled with traditional beverage cartons.

Currently, 55% of Bozita cat and dog wet food in Tetra Recarts is exported Europe-wide, sold in more than 5,700 pet shops, of which 950 are located in Germany. Due to the encouraging results, more effort will be put into further product development and variations in the same packaging (different recipes, flavors, chunks in different sauce or gravy etc.). Next is the possibility of offering selected cooperation in private label for the entire product range.

Environment for a healthy business

In 2002, Lantmännen Doggy AB obtained ISO 14001 certification—the voluntary, internationally recognized environmental management systems (EMS) standard.

“Our personal beliefs and concerns toward the industry’s effects on the environment are mirrored in our company policy,” Siwersjö says. “Our achievement of this important certification aims to demonstrate our environmental commitment to our community and our customers, and also helps us improve our overall performance in terms of efficiency and productivity.”

Tetra Recart is a square carton package made out of a special paperboard laminate material that allows the same quality and safety as the traditional canning process.

According to Siwersjö, the company's environmental credibility and commitment to quality increase the opportunities for further market penetration. Lower energy operations, optimized use of raw materials, reductions in waste and pollution, and mitigated risks of accidents and emer-

gency situations translate into greater profitability and productivity. ●

Stefania Pes is a consultant and writer for Mediatic (www.mediatic.it), a communications and marketing agency based in Italy serving the petfood industry.



Airflow Flexibility with Complete Finished Product Control



- Extrusion Systems
- Horizontal Dryers & Coolers
- Vertical Coolers
- Feeding Systems
- Conditioning Systems
- Control Systems
- PDU (Product Densification Unit)
- SAS™ (Sphere-izer Agglomeration System)
- Liquid/Powder Coating Systems
- Pneumatic Conveying Systems
- Multi-Color Extrusion Die Assemblies
- Replacement parts for major brands of extruders
- Re-manufactured extruders and dryers
- Re-conditioning Services

From Extru-Tech's founding, our innovative drying and cooling solutions have been built on solid technology. We provide engineered design technology exceeding client expectations, all with minimal production and financial risk to the customer.

Realizing we got it right the first time, today those same basic values are in place. We continually enhance those original sound product designs with advanced technologies that surpass market productivity and quality trends. You can trust Extru-Tech, Inc. to continue to provide solutions based upon our solid reliable foundation.



Corporate Office
 P.O. Box 8 ▪ 100 Airport Road
 Sabetha, KS 66534, USA
 phone: 785-284-2153
 fax: 785-284-3143
 extru-techinc@extru-techinc.com
 www.extru-techinc.com

History:

1903 The Doggy company is founded by the former family of Aron Heyman. The first dog food "Värgårda Dog Powder" is made from residuals from the farming activities surrounding Värgårda Herrgård in the area of Värgårda, Sweden.

1968 The current factory is built.

1971 The first modern extruder is installed.

1990 Tre Kök is acquired by the Swedish Slaughterer Co. Doggy Tre Kök starts to produce wet dog food and all activities are concentrated to Värgårda.

1992 The new and still existing wet food factory is opened in Värgårda. Wet dog and cat foods are produced.

1996 The first order for the German market under the brand of Bozita is delivered.

1997 Bozita Robur—the super-premium dry dog food—is developed and introduced to the Swedish market.

2001 Bozita Heimtierfutter GmbH is founded as company sales in the German market are successful. Today, 13 people work within the German organization and Germany accounts for more than 15% of the annual turnover.

2001 Doggy AB is bought by Lantmännen.

2002 Lantmännen Doggy AB is certified according to EMS standard ISO 14001.

2005 The new Tetra Recart line is installed and wet superpremium cat food in Tetra Recart is launched as an alternative to traditional cans.

2006 Doggy AB is renamed to Lantmännen Doggy AB. Bozita dry superpremium cat food is introduced to the European markets. Lantmännen Doggy AB is certified according to the food safety management system of ISO 22000.



He always gives his best. Now you can return the favor.

Introducing Hero Fortified Water. More than just a smart way to reward special dogs, it's a great way to capture sales in the booming pet care market. Made with triple-purified water, Hero is flavored for a taste dogs love and fortified with the nutrients they need to live long, healthy lives. And it has all the right ingredients for building strong sales. This is one pet product that doesn't roll over and play dead. Find out more at www.herodogwater.com.



www.herodogwater.com



At 12 years of age, Rodney has moderate joint pain, particularly in his hips. A specially formulated pet food helps him feel like a pup again.

north america 636.329.0435 800.218.5607
northamerica@afbinternational.com

latin america 54.2322.480747
alusa@afbinternational.com.br

europa 31.73.5325777
europa@afbinternational.nl

asia/pacific 61.398.799093
khal@afbinternational.com

PALATANT PERFECTION

Rodney Isn't Perfect.
But With AFB's Help,
His Dinner Is.

Today, pet food manufacturers are providing more than nutrition. They're delivering benefits for dogs and cats with a wide variety of challenging conditions. Making sure that these exciting new pet foods taste great to pets is AFB's job and nobody does it better.

Because Of The Advanced Technologies Behind The
Optimizor[®], BioFlavor[®] And Enticer[®] Brands,
AFB Is Uniquely Able To Offer Customized Solutions

AFB is better suited than ever to give pet food marketers a real competitive advantage. Our new resource center expands AFB's R&D capabilities and is the palatant industry's most comprehensive facility. Working closely with our customers, we can create palatant technology that precisely matches the requirements of specialty products currently under development anywhere in the world.

To learn more about AFB's comprehensive resource center, contact a sales director listed below or visit www.afbinternational.com.



australia 61.359.711105
jseletto@ingham.com.au



Functional fixes

Petfoods with functional formulas can help manage pet health problems

Gourmetceuticals markets PPL-240, an antioxidant derived from a South American fern (*Polypodium leucotomos*). It has been clinically proven to protect cells against the damaging effects of free radicals. The FDA (US) has approved it for both human and animal consumption (www.gourmetceuticals.com).

BY TIM PHILLIPS, DVM

There are many dog and cat foods boasting functional formulas. These petfoods assert the ability to help manage several different health concerns, including:

- Dental disease;
- Hairballs;
- Food allergies;
- Urinary tract disease; and
- Mobility problems.

DSHEA of 1994

The rising popularity of petfoods containing functional ingredients can be traced to the Dietary Supplement Health and Education Act (DSHEA) of 1994. This US legislation restricted some of the Food and Drug Administration's (FDA) authority to act against functional ingredients as unapproved food additives. This led to a vast influx of such products for people and influenced similar trends in petfood.

The FDA maintains that DSHEA does not apply to petfoods. So, the same ingredients allowed for people under DSHEA may still be unapproved food additives in petfoods. However, in general, FDA has made such ingredients a low regulatory priority. Petfood companies can make "structure function" claims, such as promotes healthy skin, but if the in-

redient is not an approved ingredient (by AAFCO, FDA or NRC) regulators could object.

Scientific evidence

While scientific evidence is growing for the use of some functional ingredients for pets, it is sometimes scarce. There are many questions about the safety and efficacy of functional ingredients in petfood that need to be answered in peer-reviewed scientific literature. However, much of the science is proprietary and unpublished or the studies are in species other than dogs and cats.

Veterinary petfoods

Certain petfoods are formulated to aid in the management of specific medical matters that should be diagnosed and monitored by a veterinarian. Among the commercial veterinary petfoods, top companies in the European, Asian, Latin American and US markets include:

- Colgate-Palmolive Co. (Hill's Pet Nutrition);
- P&G Pet Care (Eukanuba);
- Nestlé Purina PetCare; and
- Mars Petcare (Royal Canin).

A lot of the concepts used in veterinary petfoods have found their way into mass merchant and pet specialty brands. Following are several pet

health problems and some of the concepts used to help solve them.

Dental disease

Periodontal disease affects the gums, bones and connective tissue around the teeth. It starts with plaque forming on the teeth. If the plaque isn't removed, minerals in saliva turn it into tartar. Tartar builds up below the gums and bacteria grow, causing inflammation. These bacteria can enter the bloodstream and cause or aggravate lung, kidney, liver and heart problems.

Food allergies involve an immune mechanism.

Products for the nutritional management of pet dental disease are usually dry foods that contain an optimum-sized kibble with a texture that scrubs the exposed tooth surface. Antioxidants and glucosamine are often added to promote oral health. Sometimes calcium-binding tartar control

ingredients, such as tetrasodium pyrophosphate, are used in these formulations.

Hairballs

An almost constant temperature and artificial lighting lead to regular hair loss in indoor cats. Much of this lost hair can be swallowed during grooming sessions. It may become lodged in the digestive tract and form hairballs. Hairballs can lead to vomiting, constipation or intestinal blockage.

Hairball control formulas contain proprietary fiber combinations, such as cellulose and beet pulp, to help move hair through the feline digestive tract. Purina's hairball control product has "a patent-pending technology utilizing a soy lecithin emulsifier, which prevents dietary fats from combining with undigested hair and forming a hairball."

Food allergies

Food allergies involve an immune mechanism. They generally manifest as skin or digestive diseases marked by pruritus (scratching), vomiting or diarrhea. Food intolerances are adverse reactions to food where an immune mechanism cannot be demonstrated. Food intolerances may result from metabolic or toxic reactions, or from an inability to fully digest food.

Petfoods with a novel source of protein, such as duck, lamb or venison, can provide significant clinical improvement in pets with food allergies. In addition, the antigenicity of dietary proteins can be minimized by enzymatic hydrolysis to produce low molecular weight proteins. There are also hypoallergenic palatants available, says Isabelle Guiller, SPF R&D director, that are "specifically designed with low molecular weight proteins or are free of animal proteins."

With respect to skin disease, both omega-6 and omega-3 fatty acids appear to be anti-inflammatory. According to Iams nutritionists the proper ratio is five to 10 omega-6 fatty acids to one omega-3 fatty acid.

Royal Canin's skin support formula contains aloe vera gel and a "synergistic combination of nicotinamide, pantothenic acid, histidine, choline and inositol" to increase the synthesis of ceramides that are needed for an effective skin barrier.

Urinary tract disease

Feline lower urinary tract disease (FLUTD) is caused by uroliths, urethral plugs or feline idiopathic cystitis. FLUTD is often associated with inflammation of the urinary tract. So petfoods for managing FLUTD often contain higher levels of antioxidants and omega-3 fatty acids to decrease inflammation. Such petfoods also tend to contain controlled levels of magnesium, calcium, phosphorus and oxalate to reduce building blocks of crystals. Some acidify the urine, which helps dissolve struvite crystals.

Mobility problems

Joint disease is common in older pets, especially in overweight dogs of the large or giant breeds. Petfoods for maintaining healthy joints usually contain glucosamine and chondroitin to provide the building blocks of healthy cartilage. Another common ingredient is EPA, an

Improving mobility

Dan Gingerich, DVM (www.stolwellness.com) sent a study showing that a functional ingredient from hyperimmunized cows helps dogs with arthritis. Go to www.petfoodindustry.com/0808PETmilk.aspx.

omega-3 fatty acid used to decrease inflammation. L-carnitine is added to help achieve optimum body weight.

Royal Canin joint health products include green-lipped mussel powder (GLMP) for its "unique ability to promote joint health." GLMP is known to contain several anti-inflammatory fatty acids, chondroitin sulfate, glutamine and antioxidant co-factor minerals (zinc, copper and manganese).

Macro, micro and novel

Some of the preceding products claim functionality due to controlled macronutrient levels such as proteins, fats and carbohydrates. Some claim functionality due to controlled micronutrient levels—for example, magnesium, antioxidants and zinc. Some claim functionality due to the presence of novel ingredients like chondroitin and green-lipped mussel powder. Whatever the approach, there is a growing consensus that petfoods with functional formulas can help manage several troublesome pet problems. ●



Hill's makes many products for the nutritional management of pet health problems, including dental disease (t/d), feline lower urinary tract disease (c/d) and joint disease (j/d).

The rise of petfood retailing

Developing retail markets are nuanced but offer valuable prospects

BY TIM PHILLIPS, DVM



It just keeps getting better for the petfood industry. In emerging markets, the combination of income growth, increasing urbanization and better marketing is creating favorable conditions for petfood sales.

Development drivers

Here is what's happening in many developing petfood retail markets:

1. Rising income levels. Economic development has fueled an in-

crease in consumption, with more consumers trading up to value-added petfood products.

2. Improved market penetration. Accelerating urbanization is bringing suppliers, retailers and consumers closer together. Improving transportation infrastructures are facilitating distribution and large-format retailers are expanding, bringing packaged petfood to new regional and local markets. In addition, there's been more foreign pet-

The five leading international retailers are Wal-Mart, Carrefour, Tesco, Metro Group and A.S. Watson Group. They are already present in many developing markets, and local retailers will have to work hard to compete.

food production facilities.

3. More segmented marketplace. Sales remain concentrated among affluent middle-class consumers, with mid-priced brands predominant. However, premium brands can find lucrative and expanding markets in large metropolitan areas. Meanwhile, generally low consumption levels suggest huge potential for growth in China and India, particularly in the economy segment.

4. Increased marketing. Reduced poverty rates are driving petfood volume growth in the economy segment, particularly in Latin America. Mass advertising and westernization are encouraging the substitution of packaged petfood for table scraps.

Figure 1. Global retail shift

From 1998 to 2007, global distribution of petfood has shifted away from supermarkets toward pet superstores and pet shops. However, the distribution mix varies significantly in specific markets. The table shows the percent value of petfood and pet care products through various channels. Source: Euromonitor (www.euromonitor.com).

Channel	1998	2007
Supermarkets/hypermarkets	39.6%	37.7%
Other food stores	9.2	6.7
Pet shops	20.9	21.7
Pet superstores	10.9	13.5
Other non-food stores	12.6	13.3
Veterinary clinics	6.8	7.1
Total	100.0%	100.0%

The big boys

According to Euromonitor, here are the five leading international retailers and where they are based:

- ▶ Wal-Mart (US);
- ▶ Carrefour (France);
- ▶ Tesco (UK);

- ▶ Metro Group (Germany); and
- ▶ A.S. Watson Group (Hong Kong).

Major international retailers are expanding their country coverage to gain sales growth. The UK's leading retailer, Tesco, for example, recently entered the US market. In 2007, Germany's Metro Group opened stores in Pakistan. In India, Wal-Mart, Tesco and Carrefour are all attempting to secure a foot hold.

These large retailers are also refocusing their efforts on markets that offer the potential for market leadership. French giant Carrefour, for example, is leaving Slovakia as it concedes the race for market leadership to Tesco. Meanwhile, Tesco has conceded to Carrefour in Taiwan. As a result, the two retail giants reached an agreement whereby Carrefour took control of Tesco's retail locations in Taiwan, and Tesco took over Carrefour's retail outlets in Slovakia.

The five leading international retailers are all already present in many developing markets. "Local retailers are going to need to raise their game to compete with the rising power of the multinational retailers," says Eurmonitor's Lee Linthicum.

Spotlight on Asia

From 2007 to 2012, Euromonitor predicts four of the five fastest growing petfood markets will be in Asia. The top five are:

- ▶ Vietnam;
- ▶ Russia;
- ▶ India;
- ▶ Thailand; and
- ▶ South Korea.

Though supermarkets/hypermarkets' share of the overall Asia Pacific petfood and pet care market declined between 1998 and 2007, a country-by-country analysis shows the situation to be far more nuanced. Basically, the regional decline for this retail format is due to Japan, with Singapore and Taiwan further contributing.

The decline in Japan is largely because of the continued dominance and expansion of the home center format. Meanwhile, in Taiwan and Singapore, supermarkets/hypermarkets are mainly losing out to the pet superstore channel.

However, in the rest of the Asia Pacific region, particularly in developing markets, supermarkets and hypermarkets are becoming increasingly important for the purchase of petfood. The proliferation of this retail format, especially beyond first-tier cities, is making more petfood available to people in un-

tapped areas. Particularly strong gains have been in India, Indonesia, Malaysia, the Philippines, Thailand and Vietnam.

China is also benefiting, but less so given the popularity and expansion of pet superstores like Cool Baby. Furthermore, until 2004, international supermarket/hypermarket operators



Sea the Difference



Research has shown the use of Omega Protein's menhaden fish meal and oil can provide a variety of benefits such as reduced inflammation in joints, higher trainability, lower exercising heart rate, a heightened immune system, healthier skin and a shiny coat.

Special Select: Menhaden fish meal, a proven stable and reliable source of balanced amino acids and essential fatty acids used in quality pet food and pet treats.

Natural Nautic: Menhaden fish meal now preserved with mixed tocopherols, the natural choice for providing these rich nutrients.

Virginia Prime: Refined menhaden fish oil, a direct source of EPA and DHA, long-chain omega-3 fatty acids that are essential to a pet's diet and health.

Omega Protein, giving you the options to provide pet owners what they want most - healthy pets. Send us an email, inquire@omegaproteininc.com, visit our website or call us for more information.



www.omegaproteininc.com
713-623-0060 800-345-8805

like Wal-Mart, Carrefour and Tesco faced significant Chinese regulatory obstacles. With these restrictions now eased, Chinese supermarkets/hypermarkets should see their share of the petfood and pet care market increase in the years ahead.

The expansion of supermarkets and hypermarkets

many of whom have never purchased packaged petfood before. These consumers are usually quite price sensitive, so economy products are the most popular. By entering the market for the first time they'll contribute strongly to overall regional growth.

Rising value

Several key emerging markets are on the cusp of an explosion in the number of young people. This is particularly pertinent to the Indian retail environment, because demographic patterns are similar to those in the United States post-World War II—which precipitated a surge in organized retailing.

Another key demographic change is that the world's population continues to urbanize. People are drawn by the ever increasing concentration of global economic activity in cities, such as Beijing and Shanghai. By 2015, over half of the world's population will live in towns and cities.



Accelerating urbanization is bringing suppliers, retailers and consumers closer together.

These socio-demographic factors point to a rise in the value of emerging retail petfood markets.

This article is based largely on a presentation by Euromonitor's Lee Linthicum at Petfood Forum 2008. Contact him at lee.linthicum@euromonitor.com.

Focus on emerging markets

See Lee Linthicum's Petfood Forum 2008 presentation at www.petfoodindustry.com/0808PETretail.aspx.

throughout developing Asian countries is helping drive volumes for economy petfoods. As supermarkets expand, they are making packaged petfood available to a whole new group of consumers,

Let Us Help You Reach Your Goals



Our broad exposure to the industry helps us coordinate the research and development of new potential ingredients and formulate them into marketable products. Our commitment to ingredient technology can work for you.

We are also adept and experienced at developing entirely new proprietary ingredients to meet your specifications, with assured confidentiality. Whether you're looking for a new variety, or just want to add some spice to your existing line, call The Peterson Company.



"Products Produced in the USA"

Cool down costs, heat up progress

What's hot and cold and innovative all over? The latest in drying and cooling technology!

BY JESSICA TAYLOR BOND

Cost-efficiency and energy-efficiency in particular, combined with high quality production, is an increasingly hot topic for every manufacturing sector. In the case of the petfood industry, a great benefit in this regard can be obtained through optimized use of drying and cooling systems.

Hybrid technology

Geelen Counterflow's president Sander Geelen suggests a remarkable parallel between modern counterflow

dryers and hybrid drive cars, which are now very popular because of their superior fuel efficiency. Hybrid cars usually use fuel efficient engines to ensure the highest possible effectiveness when running on gas or diesel. "Our dryers exclusively use the counterflow principle that is scientifically proven to be the most efficient method to exchange energy between any two flows of gases, liquids or solids," says Geelen. "By applying this principle in our dryers, we can minimize the amount of drying air we need and maximize the amount of

energy that can be transferred. This results in a lower air exhaust volume and a lower exhaust air temperature."

Another parallel between hybrid vehicles and counterflow dryers is their energy recovery. When the driver brakes, the mechanical energy is transformed into electrical energy and stored in the batteries that are used to power the electric motor. "In counterflow dryer-coolers we can recover the product heat that is injected by hammermills, conditioners and extruders. That energy is recovered from the cooler in the form



Counterflow dryers, like this example from Geelen Counterflow, already have over 50% market share in countries such as Japan, France, Spain, Italy, Belgium, the Netherlands and Argentina.



What makes Münch-Edelstahl's Carousel Dryer/Cooler different from other counterflow drying systems is the cylindrical body. The round profile of the Carousel allows gentle and uniform drying of the product.



The Rotary Batch Dryer-Dehumidifier-Cooler from Munson Machinery is for direct or indirect drying, dehumidifying or cooling of bulk solid materials.

of warm air. All of that warm air can be reused as make-up air for the dryer,” explains Geelen. “However, it is important to properly design the coater, cooler and air system to make sure the warm air is sufficiently clean when entering the dryer.”

Each counterflow dryer from Geelen

has internal air recirculation systems that ensure only air with a very high relative humidity passes the exhaust fan, according to the company. For a typical petfood dryer this means that only 25-30% of total drying air is ever exhausted. Counterflow dryers already have over 50% market share in countries such as Japan,

Drying a product helps reduce water activity and thus, increases shelf-life.

France, Spain, Italy, Belgium, the Netherlands and Argentina.

Even the most efficient dryer can waste energy if not controlled properly. According to Geelen, the key is to ensure all of the relevant process variables—product flow rate, moisture percentage, air volume, air temperature and drying time—can be precisely measured and controlled in real-time.

Control more than temperature

Operators on the manufacturing line want their dryers to always deliver the exact same moisture percentage for their particular product, independent of variations in raw material or weather. Geelen Counterflow thinks it may have the solution. “In counterflow dryers,” the company president explains, “we employ an accurate planar microwave sensor in the dryer hopper, which performs on-line measurement of moisture percentage, product temperature and bulk density.” The moisture signal is used to fine-tune the temperature of drying air, so the dryer reacts automatically to any deviation from the set point.

Drying a product helps reduce water activity and thus, increases shelf-life, according to Tom Barber of Aeroglide

Online resources

For more on the featured products, visit:

www.geelencounterflow.com

www.muench-gmbh.net

www.munsonmachinery.com

www.aeroglide.com

Capture The Power

AEROGLIDE®

National • FEC • Sargent



PERFECTING THERMAL PROCESSING WORLDWIDE

Conveyor Driers, Truck/Tray Driers, Impingement Ovens,
Advanced Control Systems, High-Sanitary Design

www.aeroglide.com/petfood

Raleigh, NC USA +1 919 851 2000 • Philadelphia, PA USA +1 215 464 6070
England +44 1780 767 007 • China +86-21-5132-1880 • Malaysia +60 3 6411 9999

Corp. (now part of Buhler Inc.). It can also impact palatability, texture and chemical properties of the product, as well as reduce both waste disposal and shipping costs.

Dry, dehumidify or cool

The Rotary Batch Dryer-Dehumidifier-Cooler from Munson Machinery is for direct or indirect drying, dehumidifying or cooling of bulk solid materials. The configurations for direct drying, dehumidifying or cooling are equipped with a material intake chute with ports for introducing heated or cooled air directly into the batch. Configurations for indirect drying, dehumidifying or cooling come with a jacketed vessel that heats or cools the batch indirectly, and are offered with

Another parallel between hybrid vehicles and counterflow dryers is their energy recovery.

nitrogen-purged systems that eliminate exposure to the atmosphere.

Münch-Edelstahl GmbH also manufactures and designs a machine with multiple functions. Its Carousel Dryer/Cooler has a modular construction design that allows for an increase of capacity after the first installation, and is available at a maximum of 9 sqm of footprint, in different can diameters and with two to 12 decks.

What makes Carousel different from other counterflow drying systems, according to the company, is the cylindrical body. An air stream always flows in a round shape, so that means dryers based on a square bin will always face dead spots in the four corners. Petfood in the corners retains more moisture,

while petfood in the center of the machine is over-dried and has less water content.

The round profile of the Carousel

allows gentle and uniform drying as the airflow stream needed to evaporate the water content is always based on a round form. ●

PRIVATE & CUSTOM LABELING

Co-Pack and Private Label Extrusion

- **Domestic ingredients only**
- **Total traceability**
- **Rigorous testing in & out:** Safe feed-safe food member
- **Non ruminant:** FCI certified facility
- **Packaging:** 4# to 50#
- **Closures:** Fold over, sew, band seal and small SUP
- **Extrusion:** Customized shapes and sizes available
- **Treats and Biscuits:** Many shapes and sizes available
- **Logistics:** Regional transportation, truck load and LTL



CSD Nutrition: 5101 Harbor Drive • Sioux City, IA

Call Dan or Gary at (712) 255-6927

Pet Food Testing and Feeding Trials for Cats and Dogs

- Dental Protocols (as per VOHC)
- Palatability Testing
- Digestibility / Metabolism Testing
- Stool Quality Analysis
- Blood Level Protocols
- AAFCO Nutritional Adequacy
- Urine pH
- Weight Loss Protocols
- Customized Tests Available
- Product Safety Testing



Setting the Standard for Pet Food Testing

(570)756-2656

RD 1, Box 131 • Susquehanna, PA 18847
Fax: (570)756-2826 • Email: srf@epix.net

FDA discusses petfood labeling and safety

The US Food and Drug Administration (FDA) held public meetings over two consecutive days in mid-May to discuss issues pertaining to petfoods. The first meeting invited comment on implementation of the FDA Amendments Act of 2007 (FDAAA), while in the second meeting the agency provided an update on its Animal Feed Safety System (AFSS).

Not much debate on FDAAA

I've discussed the ramifications of FDAAA on the government and industry previously (see *Petfood Industry*, December 2007). Among the mandates imposed under the new law, FDA has until September 2009 to promulgate new regulations relating to labeling, nutrition and ingredient standards for petfoods.

Online resources

For additional information, see:

- ▶ www.petfoodindustry.com/0712PETinsight.aspx
- ▶ www.regulations.gov (re: Docket #FDA-2007-N-0442)
- ▶ www.petfoodindustry.com/0611PETinsight.aspx
- ▶ www.petfoodindustry.com/0708PETinsight.aspx
- ▶ <http://www.fda.gov/cvm/AFSS3rdDraftFramework.html>

To assist in the process, FDA provided a series of questions in a federal register notice on which it sought input. The questions were open ended—for example, “How can the feeding directions already present on the label be improved?” and “What kind of ingredi-

Public meetings invited comments and provided updates.

— David Dzanis



ent definitions would provide adequate information?”—and touched on a wide array of petfood issues. It was hoped these questions would prompt considerable discussion at the meeting.

While reasonably well attended, the meeting did not spark much public debate. FDA purposefully had little to say (the meeting was to collect outside opinions, and assumedly the agency did not want to hinder that process by espousing any preconceived positions of its own).

Only three outside groups offered verbal comments:

- ▶ The Association of American Feed Control Officials (AAFCO) made some brief remarks regarding implications new federal regulations would have on the current state regulatory oversight of petfoods;
- ▶ The American Veterinary Medical Association voiced support for mandatory calorie content statements on dog and cat foods and put forth a very interesting proposal to require a “not evaluated by FDA” disclaimer on petfoods bearing health-related claims; and
- ▶ Defend Our Pets, a consumer advocacy organization formed as a result of last year’s recalls, made the most extensive comments. The group presented a long list of suggestions, including some form of country of ori-

gin labeling (e.g., disclaimers when the product contains ingredients from countries that do not meet US standards) and “total elimination” of what it considers confusing and misleading labeling requirements (apparently from the AAFCO Model Pet Food Regulations). This organization also recommended actions beyond FDA’s authority to implement on its own (e.g., mandatory recall authority, approval of grants by petfood companies to veterinary schools).

Scheduled for a full day, the meeting lasted only a couple of hours, even with a long break in the middle. Because the due date for submission of written comments on this matter was a month later, most organizations with a stake in the matter decided to withhold verbal comment until they could evaluate the comments of others and react at a later time.

In fact, the written comments, posted on www.regulations.gov (re: Docket #FDA-2007-N-0442), are extensive and include input from many organizations, including the Pet Food Institute, the American Feed Industry Association and both the American College and Academy of Veterinary Nutrition.

Questions about AFSS

FDA has been working on AFSS for a number of years prior to passage

of FDAAA in an effort to develop a comprehensive, risk-based approach to animal feed safety, including petfood safety. The agency has held a number of meetings on the subject over the past few years (see *Petfood Industry*, August 2007 and November 2006).

The May 2008 meeting was held to give an update on FDA's progress as it further refines the AFSS. Compared to the previous day's meeting on FDAAA, this meeting did last a much greater portion of the scheduled full day, primarily because FDA gave a number of presentations that prompted some questions from the attendees.

A key point of progress included a revised draft of the AFSS framework document (<http://www.fda.gov/cvm/AFSS3rdDraftFramework.html>). It identifies gaps FDA sees in the present oversight of animal feed safety and proposes means by which those gaps can be addressed.

For example, FDA considers lack of a comprehensive list of all ingredients allowed in animal feeds as a part of its own regulations to be a deficiency. However, the recently signed memorandum of understanding between FDA and AAFCO that allows the former greater oversight of the latter's ingredient approval process, as well as plans to finalize and implement the generally recognized as safe (GRAS) notification rule, is proposed to

help address this gap.

Much of the meeting focused on FDA's continued efforts to rank the relative risk of chemical and microbiological feed contaminants for the purpose of establishing, in part, enforcement priorities and allocation of resources. This is accomplished by a process of assigning scores to rate the potential health consequences of and likelihood of exposure to various contaminants, which eventually results in a number that can be compared to those calculated for other contaminants. (Find more detail on how this is done in my previous columns listed in the box on the facing page.) Unfortunately, the very detailed presentations at the May meeting on how to do the ranking do not appear to be posted on the agency's website as of the time of this writing.

Separate petfoods from feed?

AFSS is intended to address petfood as well as livestock feed safety. To me,

this makes sense, as it would allow for a more effective and efficient program to the benefit of all. Interestingly enough, Defend Our Pets is adamantly opposed to grouping petfood with feed in the system. Notwithstanding that AFSS has been in development since 2003, the consumer group believes AFSS would "dilute the intent and authority" of FDAAA.

In fact, while FDA is currently trying to extend and incorporate the FDAAA mandates into the system, Defend Our Pets apparently perceives an AFSS that includes petfood to be little more than a veiled effort to diffuse attention away from the petfood industry. ●

Dr. Dzanis is a writer and independent consultant on veterinary nutrition, labeling and regulation. He can be reached at Tel: +1.661.251.3543, Fax: +1.661.251.3203, E-mail: dzanis@aol.com.

A consumer advocacy group formed as a result of last year's recalls made the most extensive comments.

Dog Palatability Testing

- Automated Data Acquisition, Analysis, and Reporting
- All Panels are Trained and Validated
- Groups for Dry Foods and Canned, Semi-moist and Pouched Foods, Treats and Toys
- Comprehensive Treat Analysis
- Time-Event-Consumption Data Collection Available
- Animal Enrichment Team
- Large Outdoor Puppy Parks
- Socialization / Exercise Programs
- One-On-One Attention
- Proven Colony Veterinary Care



Setting the Standard for Pet Food Testing
(570)756-2656

RD 1, Box 131 • Susquehanna, PA 18847
Fax: (570)756-2826 • Email: srf@epix.net

Dealing with choline chloride

Dogs and cats, like many other species, require choline. It's the "Intel inside" kind of molecule that allows others to function to their full potential. Almost all commercial petfoods contain supplemental choline, predominantly from choline chloride. However, putting choline chloride into the formula can have profound effects on the way the ingredients are combined and processed during production due to the molecule's hygroscopic (water-loving) nature.

Essential nutrient

Studies with dogs in the 1930s first led researchers to identify choline as a necessary nutrient. Since that time it has been recognized as a:

- ▶ Key component of cell membrane phospholipids;
- ▶ Vital part of the neurotransmitter molecule acetylcholine;
- ▶ Lipotropic agent in fat utilization and lipid signaling; and
- ▶ Methyl group donor in reactions involving methionine, folic acid, vitamin B12, glycine and serine.

The choline oxidation product betaine also acts as an osmolyte in the kidney. In its absence, choline deficiency can result and cause weight loss, vomiting, fatty liver and even death in dogs and cats.

While often grouped with the B-vitamins, choline is actually a closer fit, structurally and functionally, with the amino acids and fatty acids. Its similarity to B-vitamins is associated with the way it moves through the body. Specifically, choline is soluble in polar solvents like water and alcohol, has no bodily storage depots and is metabolized and excreted in proportion to the amount consumed. Thus, it

It's an "Intel inside" type of molecule—but also a problem child.

— Greg Aldrich



must be replenished daily. Because of this constant efflux and the fact that dogs and cats are unable to produce adequate quantities themselves, dietary sources are required.

Meeting the needs naturally

Much of the required choline can be found in common petfood ingredients. Choline occurs naturally in plant and animal tissues. In ingredients, free choline is found only in small amounts with the greatest proportions appearing as the phospholipids phosphatidylcholine (lecithin), phosphatidylethanolamine and sphingomyelin.

The richest natural source of choline in the ingredient market is the emulsifier lecithin, which contains approximately 2 to 3.5% choline; most is derived from soybeans. Eggs (especially the yolk), liver, fish, meats, rendered protein meals, soybeans, soybean meal, peas and wheat germ are rich sources with levels ranging from 1,500 to as high as 3,000 mg/kg. Grains, fruits, vegetables, fats and oils contain only marginal levels of choline with concentrations of 500 to 1,000 mg/kg.

Considering that the requirements for dogs and cats on a bioavailability adjusted, 4,000-kcal diet basis are 1,700 and 2,550 mg/kg, respectively, there can be a gap in the amount provided by the diet and that needed by the animal. There are provisions for methionine as a methyl group substitute for choline in feline diets (3.75 parts methionine for one choline when methionine exceeds 0.62%). Betaine (hydrochloride or anhydrous) can also be used to replace supplemental choline.

However, the more common approach for petfood manufacturers is to make up the shortfall and provide some insurance to cover the variability of the base diet ingredients by supplementing with synthetic choline sources. Several choices are allowed in feed and petfood, such as choline chloride, choline bitartrate, choline pantothenate and choline xanthate. The most common in petfood is choline chloride; it's found in almost every petfood product labeled as complete and balanced. Its popularity is due to a combination of cost, choline content and availability.

The problem child

The pencil and paper exercise of putting choline chloride in a petfood formula is pretty straightforward, but using it in production can be a real headache. Choline is chemically syn-

Tell us what you think!

Send letters to the editor to editor@petfoodindustry.com or post your comments online at www.petfoodindustry.com

thesized from trimethylamine and ethylene chlorohydrin or ethylene oxide. In free form, 2-hydroxy-N,N,N-trimethylethanaminium (also known as 2-hydroxyethyl trimethylammonium) is a very hygroscopic organic base (alkaline). The chloride salt popular in the livestock and petfood market is more hygroscopic than the bitartrate salt used more commonly in the human foods and supplements market.

Because of its hygroscopic nature and solubility in water, an aqueous solution (approximately 75% choline) causes the least number of plant sanitation issues. However, it requires capital investment in liquid holding tanks and plumbing. Further, because the application rate is relatively small, with supplemental levels at 0.05 to 0.25% of the diet, sophisticated systems are required for uniform dispersion and mixing. Not every petfood company is willing or able to take such measures.

It pulls moisture from the surrounding air and quickly becomes a sticky mess that clings to equipment and personnel and creates zones of cross-contamination. Its challenge is compounded in facilities lacking humidity controls.

A logical approach is to use the vitamin premix to carry choline into the formula. However, because of its affinity for moisture, choline chloride is also the culprit in vitamin losses in premixes. As it draws water into a vitamin premix, the increase in water activity creates an environment more conducive to oxidation.

For this reason, vitamin suppliers vehemently discourage customers from including choline chloride as part of their premix because of the reduced vitamin retention during storage. Most affected are vitamins A, K3 (menadione sodium bisulfite complex), thiamine mononitrate and niacinamide. Inclusion can result in spotting and discoloration in the premix. This can extend into product

appearance, especially for wet foods. However, once in the product, choline chloride itself is very stable through extrusion, drying and enrobing.

Addressing the issue

There are options for meeting the choline needs in dog and cat formulas but no quick and inexpensive ways around the use of choline chloride. Regardless of form used, there will be complications and cost due to its hygroscopic nature. The most prudent management approach is to fortify to meet choline needs with the route that causes the least pain and overall cost. ●

Dr. Greg Aldrich is president of Pet Food & Ingredient Technology Inc., which facilitates innovations in foods and ingredients for companion animals. Tel: +1.785.271.0238, E-mail: aldrich4@cox.net.

Using choline chloride in production can be a real headache.

An alternative is choline chloride enrobed onto a dry carrier—most commonly ground corn cobs. The resulting powder can be handled in bulk or in bags and is more consistent in form and handling to other dry ingredients. However, using corn cobs as a carrier dilutes the amount of choline delivered per pound to levels of 50% and 60%.

The cost-benefit to the liquid form is often enough to justify the capital improvement, with a payback in one to three years, especially when the cost of plant cleanup is taken into account. The choline powder is very hy-

Cat Palatability Testing



- Large Open Community Housing
- Cageless Testing Available
- Time-Event-Consumption Data Collection for Singles and Groups
- Enriched Environment For Singles and Groups
- Socialization Activities for all Cats
- Large Window Areas Overlooking Outdoor Courtyards
- Screened Panels for Performance
- Groups for Dry Foods and Canned, Semi-moist and Pouched Foods, Treats and Toys



Setting the Standard for Pet Food Testing

(570)756-2656

RD 1, Box 131 • Susquehanna, PA 18847
Fax: (570)756-2826 • Email: srf@epix.net

Research Notes

Key Concepts

► Improving joint health

(*Vet. Therapeutics* 4:56-66): A special milk protein concentrate from hyperimmunized cows helps dogs with osteoarthritis.

► Effects of diet on blood glucose

(*J. Anim Sci.*, doi: 10.2527/jas.2007-0354): Starch has less of an impact on the cat postprandial glucose response than on those of dogs and humans.

► Genetics of periodontal disease

(*FASEB J.* 22:1117.7): In dogs with poor periodontal scores, genes associated with inflammation and pain were increased.

Improving joint health

Owners gauged the mobility impairment of their dogs via a questionnaire to evaluate a nutraceutical with joint health claims. The test product was a special milk protein concentrate (SMPC) from hyperimmunized cows, previously shown to have anti-inflammatory and antiarthritic activity in humans (www.stollewellness.com).

Fifty large-breed dogs, 7 to 12 years of age, were randomly assigned to either a placebo or treatment group. Compared with the placebo group, the treatment response was significantly better in the SMPC group with regard to case-specific scores and owner global assessments.

Source: D.A. Gingerich, *et al.*, 2003. Use of client-specific outcome measures to assess treatment effects in geriatric, arthritic dogs: Controlled clinical evaluation of a nutraceutical. *Vet. Therapeutics* 4:56-66.

Diet and blood glucose

The effects of diets with different starch sources on glucose and insulin responses in cats were investigated. Six experimental diets consisting of 35% starch were extruded, each containing one of the following ingredients: cassava flour, brewer's rice, corn, sorghum, peas or lentils. The experiment was carried out on 36 cats with 6 replications per diet in a completely randomized block design. When compared to baseline values, only the corn diet stimulated an increase in the glucose response. The data suggest that starch has

less of an impact on the cat postprandial glucose and insulin responses than on those of dogs and humans. This can be explained by the metabolic peculiarities of felines, which may slow and prolong starch digestion and absorption, leading to the delayed, less pronounced effects on their blood responses.

Source: L.D. de-Oliveira, *et al.*, 2008. Effects of six carbohydrate sources on cat diet digestibility and postprandial glucose and insulin response. *J. Anim Sci.*, doi: 10.2527/jas.2007-0354.

Genetics of periodontal disease

Fifty-six spayed/neutered beagles were identified for this study. Dogs were scored for periodontal lesions and fed commercially available adult foods. Analysis of the RNA found differences in 284 genes between the dogs with poor periodontal scores and dogs with good periodontal scores. Genes associated with inflammation process and pain response were increased, while cell adhesion and attachment, heavy metal binding, glycoprotein synthesis and cytoskeleton structure support were decreased in dogs with poor periodontal scores compared to dogs with good periodontal scores.

Source: N.Z. Frantz, *et al.*, 2008. Identification of gene differences between dogs with poor periodontal scores compared to dogs with good periodontal scores. *FASEB J.* 22:1117.7.



Belt Driers/Coolers



More than 1,000 KAHL belt coolers/driers are now in operation worldwide.



AMANDUS KAHL GmbH & Co. KG, Dieselstrasse 5-9, D-21465 Reinbek / Hamburg, Phone: +49 40 727 71 0, Fax: +49 40 727 71 100
info@amandus-kahl-group.de, www.akahl.de

Product News

Good enough for Meow Mix

Dorapak containers, made by Sonoco and recently adopted by Del Monte Pet Products, are stackable, recloseable and green, containing 85% recycled content. According to the company, the thermoformed PVC snap-on lid promotes freshness for the container's contents. Sonoco also emphasizes that Dorapak containers have a minimum stacking strength of 400 pounds.



Sonoco

+1.800.377.2692
www.sonoco.com

A-B-C's latest model

The Model 65 tray former from A-B-C Packaging is a machine built with a steel frame and all-mechanical drive, which allows it to form up to 30 trays per minute. Features include an adjustable forming and sealing section that ensures square trays with straight vertical sidewalls for easy tray packing and stable palletizing as well as a mandrel to provide complete tray compression for adhesive bonding and secure load handling. The Model 65 tray former also provides reduced maintenance design with sealed bearings, lubricated air cylinders and Venturi vacuum system, states the company.



A-B-C Packaging Machine Corp.

+1.727.937.5144
www.abcpackaging.com

Arizona Instruments updates technology

Arizona Instrument has recently released its next generation of bench top moisture and ash analyzers, the Computrac MAX 5000XL, an updated version of the company's MAX 5000. According to the company, the MAX 5000XL advances the state of the art in rapid moisture and ash analysis with a temperature controlled balance and high temperature lift compensation



Your leading global supplier of technology and solutions for the petfood industry



www.andritzsprout.com
andritzsprout@andritz.com

ANDRITZ

SPROUT

GLOBAL PRESENCE

Denmark
Netherlands
Germany
France
UK
USA
Venezuela
Brazil
Chile
Mexico
Australia
R.P. China



algorithm. The instrument also features a temperature ramp control feature that allows it to be used for qualitative analyses that were previously only possible using a thermogravimetric analyzer. The company states that some of the features of the Computrac Max 5000XL are the ability to analyze materials with ash concentrations of as little as 0.5% and allowing the user to capture the weight loss of a sample during a precisely controlled temperature change.

Arizona Instrument LLC

+1.602.470.1414

www.azic.com

New nitrogen/protein analyzer from Thermo Fisher Scientific

Thermo Fisher Scientific Inc. announces the launch of the Thermo Scientific FLASH 4000 Nitrogen/Protein analyzer. The FLASH 4000 N/Protein analyzer features a large sample load (2 g), ensuring maximum accuracy and reliability of results, and improved productivity capabilities, says Thermo Fisher Scientific. The FLASH 4000 features a unique, patent pending automatic CO₂ adsorber regenerating technology. The company states this is automatically activated to adsorb the CO₂ generated during the FLASH combustion. In addition, the new generation software for the FLASH 4000 is intended to enable users to simplify analytical operation by minimizing user involvement in setting up the analyzer with the utilization of features like Auto-Start, Auto-Standby, Auto-Ready and Automatic Leak Test.



Thermo Fisher Scientific

+1.781.622.1000

www.thermofisher.com

Rotating Vacuum Coater/Mixer

MAXIMIZE ABSORPTION OF LIQUID

F-6-RVC TEST COATER

THE SMARTEST SOLUTIONS
ASK FOR OUR CD-ROM

- ⊕ HIGHEST PERCENTAGE OF LIQUID ADDITION (UP TO 40%)
- ⊕ COMBINES MIXING AND COATING
- ⊕ VERY GENTLE PRODUCT HANDLING, CLOSE TO ZERO BREAKAGE
- ⊕ ONE FILLING AND DISCHARGE VALVE, EASY TO MAINTAIN
- ⊕ ROTATING COATING TECHNOLOGY
- ⊕ FROM THE NUMBER ONE SUPPLIER OF RVC'S
- ⊕ CAPACITY 6 L UP TO 7000 L IN A SINGLE BATCH
- ⊕ TWIN SHAFT MIXER INSIDE

FOR FOOD, FEED, PETFOOD AND AQUAFEED!



www.forberg.no

Hegdalvn. 77 · NO-3261 LARVIK, NORWAY
Tlf.: (+47) 33 13 34 34
Fax: (+47) 33 13 34 35
e-mail: sales@forberg.no

MÜNCH Edelstahl GmbH

CAROUSEL-DRYERS

**Innovative Products
require
Intelligent Drying
Technology!**



+49-2103-58996
www.muench-gmbh.net

► Equipment

WWW.EXTRUDER.NL / WWW.EXPANDER.NL

ALMEX

—extrusion techniques

Almex b.v., Verlangde Ooyerhoekseweg 29
7207 BJ Zutphen, The Netherlands, tel. +31 (0)575 572666
fax +31 (0)575 572727, e-mail info@almex.nl



Rebuilt and Used Equipment for Sale

100 cu ft Mixing system, Scale hopper,
Scott mixer, and Surge with discharge
conveyor

Two 1,000 cu ft per hour Spray Dynamics
coating drums with spray bars

Two 1,000 cu ft per hour Mistcoaters with
Centriflows and pellet feeders

Jacobson P241D hammermill

1201 FOURTH AVE. • LAKE ODESSA, MI 48849 USA
PH. 616-374-1000 • FAX 616-374-1010
www.apecusa.com
e-mail sales@apecusa.com

- **Hammermills**
- **Pellet Mills**
- **Conditioners**
- **Crumblers**
- **Counter Flow Coolers**



1415 W. Summit Ave, P.O. Box 910
Ponca City, OK 74602 USA
Ph: 580-765-7787 • 800-569-7787
Fax: 580-762-0111
www.bliss-industries.com

**Cablevey Conveys
Crunchy Bits
with Very Little
Breakage**



641.673.2451
www.cablevey.com

USDA and FDA Listed and In Full Conformance of Sanitary Requirements,

Deamco Bucket Elevators,
Clean-In-Place(CIP) Systems,
Vibratory Conveyors and
Bulk Storage Systems,
Handling Tons of Pet Food Daily,
Maximizing Cleanliness and
Efficiency.



Deamco
Conveyance
System

Deamco
Clean-In-Place
(CIP) System



DESIGN, ENGINEERING & ASSOCIATED MANUFACTURING COMPANY
6520 East Washington Blvd., City of Commerce, CA 90040-1822
(800) 933-2620 or (888) 933-2620 • Fax (323) 890-1139
www.deamco.com • email: deamco@deamco.com

CONTAINER WASHERS?

www.vandevect.com



FRAIN GROUP QUALITY
MACHINERY
USED

NEW ARRIVALS EVERY DAY!

5D3971-American Newlong 4 Head Rotary Bag Filler 25bpm
5D5924-Fischbier Double Fold H/M Bag Sealer 60 ft / minute
5D7005-FPEC 80 cu feet 304 S/S Horizontal "U" Paste Mixer
5C0908-Horizon Systems S/S 3 cu ft / 60L Bag Break Station
5B9711-Inglett 1950 Automatic Top Load Bag Hanger 25bpm
6D7881-Ohlson S/S Dual Lane Bulk/Trickle Scale up to 200lb
5C4509-Package Machine Auto form/Fill/Seal Machine 75ppm
5E2550-Roberts Packaging Auto Horiz Form/fill/seal 200ppm
5E0876-Spiroflow Sys Bulk Bag Super Sack Unloader 4400lb
5E3451-Stephen Machinery S/S Emulsifier output: 8800lb/hr

Chicago AREA **(630) 629-9900**
www.fraingroup.com

**Manufacture Quality Product
with the
Best Altima Hammermill**

*Proven, Trouble Free Performance
In difficult grind applications.*

Mill Technology Company, Inc.
763-553-7416
888-799-5988
gary@mill-technology.com



Fast/Friendly Service

HIGH QUALITY WEAR PARTS
For most common Extruders

- * Cast D-2 Knives
- * Wear Rings
- * Insert Dies
- * Knifeholders
- * Die Plates
- * Misc. Machined Parts

Manufactured to OEM or Customers Specifications.
Over 15 years experience supplying precision parts
to the Feed & Petfood Manufacturing Industry.

New Technology Inc.

11063 Highway 59 North, Gravette, AR 72736
Telephone: 479-787-6772 Fax: 479-787-9957
1-800-684-0042
Home page: www.newtechnology.com

The MARKETPLACE is a special advertising
section which contains no editorial material. Format
is similar to a classified section.

MARKETPLACE ads are also placed on the
PetfoodIndustry.com website for maximum exposure!
Advertising is grouped. Separation from competing
advertising cannot be guaranteed.

Advertising in the MARKETPLACE may not be
combined with display advertising for frequency
discounts. Maximum size in MARKETPLACE is 3
inches (75mm).

Rate per inch per issue: \$150.

Rate per inch,

3 insertions; \$145. 9 insertions; \$135.
6 insertions; \$140. 12 insertions; \$130.

To order:

Ginny Stadel

Tel: +1.815-734-5691

Fax: +1.815-734-5663

gstadel@wattnet.net

Visa and MasterCard accepted

► Ingredients

**sodium caseinate
calcium caseinate
acid casein**



American Casein
109 Elbow Ln.
Burlington, NJ 08016
(609) 387-3130
www.americancasein.com



Your source for:

- Pet Food Blends • Pet Food Ingredients
- Trace Mineral Premixes
- Custom Blending • Packaging Services

Baltzell Agri Products
6930 F Street, Omaha, NE 68117
Ph: 402-331-0244
Fax: 402-331-0530



3D MDB
3D HDB

Semi load lots
Satisfaction Guaranteed
barrfood@yahoo.com

800-826-2341 Fax: (715) 267-7214

QUALITY

**MARINE
& VEGETABLE
OILS**

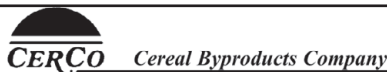
Surprisingly Competitive Pricing



Since 1930
1-800-ALL-OILS

ARISTA INDUSTRIES, INC.
557 Danbury Road, Wilton, CT 06897
www.aristaindustries.com

203-761-1009



- BARLEY PRODUCTS
- OAT PRODUCTS
- RICE PRODUCTS
- DRIED BREWERS YEAST
- DRIED WHEY • BEET PULP

55 E. Euclid Ave., Suite 410
Mt. Prospect, Illinois 60056
PH: 847-818-1550 FAX: 847-818-1659
Web Site: www.cerealyproducts.com

de Rosier, inc.

**SPECIALIZING IN PET FOOD
INGREDIENTS MILLED FROM:**

- corn • wheat • rice
- barley •
- flax • rye • oats

John M. de Rosier 612-339-3566
E-Mail: jderosier@derosierinc.com

Roberto Bari 612-339-3599
E-Mail: rbari@derosierinc.com

Fax: 612-339-3568



WE ARE THE MILL!

- White Rice
- Brown Rice
- Full Fat Rice Bran
- Specialty Products
- Rice Hulls

Tel 870-268-7500 Fax 870-268-7501
Jonesboro, Arkansas
www.arkansasricemills.com

Jedwards International, Inc.
Leading supplier of Omega-3 Oils
Supplier of Bulk Specialty Oils
to the Food, Dietary Supplement
and Cosmetic Industries



tel: 617-472-9300
fax: 617-472-9359
www.bulknaturaloils.com

**TOMATO
POMACE**

High Quality

LaBudde Group
262-375-9111



**Your Grain Management
and Procurement Company**

Wheat - Oats - Spelt - Flax - Rye - Durum
Barley - Triticale - Specialty Grains
We supply organic and conventional grains to the food and pet
industries. We are currently contracting all organic grains.



For More Information call 800.243.7264 or visit www.hesco-inc.com



**Enzymes for
Flavors**
**Enzymes for
Processing**
**Enzymes for
Nutrition**

Enzyme Development Corp
360 W 31st, Ste 1102
New York, NY 10001
www.EnzymeDevelopment.com
info@EnzymeDevelopment.com

LANSING
TRADE GROUP, LLC

SPECIALIZING IN:

- POTATO FLAKES
- SWEET POTATO FLOUR
- SWEET POTATO FIBER
- TAURINE

LANCE LAUGEN
800-227-8237

lance@lansingtradegroup.com

► Ingredients

Ingredient Supply
CORPORATION

Potato Protein • Brewer's Dried Yeast
1-800-984-4460
www.ingredientsupply.com

VEGETABLE BLEND
Unique blend of carrots, celery, beets, parsley, lettuce, watercress and spinach

LaBudde Group Inc
800-776-3610
262-375-9111
Product solutions from concept to completion

MARSHALL

INDUSTRIAL DRIED GOODS
Your Complete Source for Dried Fruit Products

Producing High Quality, Dehydrated Fruit and Vegetable Ingredients for Pet Food Manufacturers!

Specializing in Alternative Fiber Sources.
Apple, Blueberry and Cranberry.

100% Natural
No Preservatives
1-800-796-9353

5740 Limekiln Rd. • Wolcott, NY 14590
Ph: 315-594-1760 • Fax: 315-594-1956
www.orchardsweets.com

FIBER SOLUTIONS
*Apple
Blueberry
Cranberry*

LaBudde Group Inc
800-776-3610
262-375-9111
Product solutions from concept to completion

NATIONAL RICE COMPANY

Providing purchasing, market analysis and consulting services to buyers of rice and rice co-products
www.nationalrice.com

Pizzeys's Nutritionals
Angusville, MB. Canada

Enhance the nutritional Value of your feed with
PIZZEY'S MILLED FLAXSEED
Superior Quality
Consistent Nutrient Composition
Cost Effective Source of **OMEGA 3**

1-800-804-6433
Ph. (204) 773-2575
Fax (204) 773-2317
Web Site: www.pizzeys.com
email: info@pizzeys.com

Sanimax

Your one-stop pet food ingredient solution

✓ pea fibre / flour
✓ peas - Various grades
✓ poultry meal
✓ duck meal
✓ venison meal
✓ pork meal
✓ brewers rice *call Sanimax!*

65 Massey Road, Guelph, Ontario
Canada N1H 7M6 • Toll Free: 1.800.263.7430
Phone: 519.824.2381 • Fax: 519.824.9472
Web: www.sanimax.com
E-mail: marketing@sanimax.com

Product of USA

SK FOOD INTERNATIONAL

Identity Preserved Ingredients
Certified Organic & Conventional Non-GMO

Brown & Golden Flaxseed and Flax Meal

- Beans
- Grains
- Seeds
- Flours
- Meals
- Brans/Germs
- Oils/Vinegars
- Cocoa Products
- Fibers: Soy ProFiber
- Instant Powders/Flakes
- Split/Dehulled Soybeans

Let us be your Best Value - Quality, Service, Price - Ingredient Supplier

4666 Amber Valley Parkway • Fargo, ND 58104 USA
701.356.4106 TEL • 701.356.4102 FAX • skfood@skfood.com
Visit www.skfood.com for our complete product listing!

Stryka Botanicals

INGREDIENTS
Natural bulk ingredients for your formulation needs.
Experts in botanical, fruit and vegetable powders for the petfood industry.
Products in stock for immediate shipment.

Stryka Botanicals, 1-800-9-STRYKA, info@stryka.com www.stryka.com

DRIED EGG PRODUCT

Excellent quality protein.
Our Dried Egg Product contains **NO** hatchery waste.
Plant Approved For EU Export.

Manufactured and sold by:
VAN ELDEREN, INC.
Martin, MI
Tel: (269) 672-5123
Fax: (269) 672-9000

Wild Alaskan Salmon Oil

Salmon Protein Hydrolysate
Veterinary Resource Group
1-253-581-1880
email: sales@vrg-usa.com

► Ingredients

Your Pet Food
INGREDIENT SOURCE

Organic ingredients/blends
Dehydrated Potato/
Potato blends
Oatmeal Pellets

For Details Please Contact:
Mary Jo Langenecker
mlangenecker@uscommodities-ag.com
Mike Johnson
mjohnson@uscommodities-ag.com
Paul Boisclair
pboisclair@agmotion.com

1-800-987-1070 **US**
Commodities
An AgMotion Company

► Packaging

CADY BAG CO.
CBC
PEARSON, GA

"Titan Flex-Pack"
Woven PP Bags

41 Project Circle • P.O. Box 68 • Pearson, GA 31642
Phone: 1-800-243-2451 • Fax: 912-422-3155
Contact: sales@cadybag.com • www.cadybag.com

► Testing

Blue Ridge Kennel

USDA registered research facility performing petfood testing since 1975.

Traditional and in-home panels available.

Contact: Paul Plessner
telephone: 334/567-8195

WILBUR-ELLIS

SPECIALIZING IN:

- EU LAMB MEATS, MEALS & ORGANS
- IMPORTED/DOMESTIC MARINE PROTEIN MEALS
- VENISON, BEEF & POULTRY PRODUCTS
- POTATO AND PEA PRODUCTS
- FISH AND VEGETABLE OILS
- TOMATO POMACE & ORGANICS
- JUST-IN-TIME DELIVERIES FROM INTERNATIONAL MARKETS



CONTACT US:

- 1 613 649-2031 (PH)
- DAFELSKI@WECON.COM
- WWW.WILBUR-ELLISFEED.COM

► Testing

ELISA Technologies, Inc.
Laboratory Testing Services & Test Kits

"Committed to Food/Feed Safety - Veterinary Diagnostics"

MEAT SPECIATION • MYCOTOXINS
ALLERGENS • ANTIBIOTICS • HORMONES

Tel: 352-337-3929 Fax: 352-337-3928
2501 NW 66th Court, Gainesville, FL 32653
Web: www.elisa-tek.com Email: info@elisa-tek.com

KENNELWOOD INC.
Twenty-five years of pet food testing for palatability and nutritional adequacy.

217 356-3539
email: dowatts@aol.com

Romer Labs, Inc. offers:

- Mycotoxin Detection Test Kits: Fluorometric, ELISA, and Lateral Flow - offered in Qualitative and Quantitative Formats
- Using HPLC and TLC Official Reference Methods
- Laboratory Equipment

Our "Total Quality Assurance & Mycotoxin Risk Management Program" is what makes us the Worldwide Leader in Providing Mycotoxin Solutions.



Romer Labs, Inc.
1301 Stylemaster Drive, Union, MO 63084
636-583-8600 www.romerlabs.com
email: office@romerlabs.com

► Services

Product Development

Pet Food Formula Consulting
Prototype Development

WHERE NEW IDEAS BEGIN
newproducts@petfoodingredients.com

Toll Free (800) 843-4148 FAX (843) 881-1710

1983 **BCI** 2008
Bachelor Controls, Inc.
25 Years of Systems Integration Excellence

CONTROL ENGINEERING
2008
System Integrator
of the Year

Batching • Extrusion • MES Integration

Sabetha • Kansas City • Memphis
www.bachelorcontrols.com • 785.284.3482

► Used Equipment

CONTINENTAL AGRICULTURAL EQUIPMENT, INC.

- New Conex Extruders and rebuilt extruders
- Replacement parts for Insta-Pro® Model 2000 & 2500 extruders

1400 S. Spencer Rd., Newton, KS 67114
Ph: 316-283-9602 • Fax: 316-283-9584
E-mail: gary@continentalagra.com • Web: www.continentalagra.com

FOR SALE
Reconditioned Cooking Extruders & Dryers
Single & Twin Screw Designs
• CLEXTRAL • WENGER
• EXTRU-TECH • AEROGLIDE

EXTRU-TECH, INC.
100 Airport Road
Sabetha, KS 66534
extru-techinc@extru-techinc.com

EXTRU-TECH, INC. Phone: 785-284-2153
Fax: 785-284-3143
Attn: Equipment Sales Group

Ad Index

Company Name	Page No.	Company Name	Page No.
ADF-Amer Dehydrated Foods..... www.adf.com	3	Forberg International AS..... www.forberg.no	38
Aeroglide Corp..... www.aeroglide.com	30	Kemin Nutrinsurance Inc..... www.kemin.com	7, 8-9, 11
AFB International..... www.afbinternational.com	22-23	Lonza Group.....	14
Amandus Kahl GmbH & Co KG..... www.akahl.de	36	Muench-Edelstahl GmbH..... www.muench-gmbh.net	38
Ameri-Pac Inc..... www.ameri-pac.com	1, 38	NutraCea..... www.nutracea.com	17
Andritz Sprout A/S..... www.andritz.com/ft/	37	Omega Protein Inc..... www.omegaproteininc.com	27
Buhler Inc..... www.buhlergroup.com	15	The Peterson Co..... www.thepetersoncompany.com	28
Cargill Sweeteners N A.....	5	SPF North America.....	IFC
Century Foods..... www.centuryfoods.com	21	Summit Ridge Farms.....	31, 33, 35
Consumers Supply Inc.....	31	Trouw Nutrition USA LLC..... www.trouw-nutritionusa.com	IBC
CPM/Roskamp Champion..... www.cpmroskamp.com	13	Wenger Manufacturing Co..... www.wenger.com	12, BC
Extru-Tech Inc..... www.extru-techinc.com	20, 43		

Petfood Industry REPRINTS:

Take Advantage of Your Editorial Exposure

Customized reprint products of articles from *Petfood Industry* create powerful marketing tools that serve as instantly credible endorsements.

Reprints create a strong message for:

- Sales Aids
- Tradeshow Handouts
- Media Kit Supplements
- Educational Programs
- Direct Mail Campaigns
- Recognition/Investor Confidence



Call us today to learn more about how you can benefit from this cost-effective method of personalizing your marketing content.



FosteReprints
866.879.9144
sales@fostereprints.com

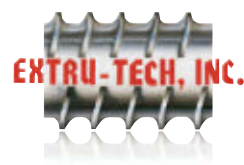
The Extru-Technician



The digital magazine for
pet food extrusion.



brought to you by



To register for your own digital issue of The Extru-Technician, please go to <http://watt.netline.com/extru-tech>. It's FREE and the 4th issue will be in your in-box in August.

What it means to be green

I spent the US July 4th holiday weekend with relatives who are doing their best to “go green.” To them, this means things like recycling trash; using recycled, washable plastic plates for the picnic rather than paper plates (though they acknowledged that washing the plastic ones consumes water and energy); and serving a variety of foods and beverages labeled organic—from bread to blueberries to red wine made from organic grapes. (But, interestingly, no organic cat food for the furry family member.)

Though I left their home feeling a little guilty that I’m not moving quite as quickly toward a greener lifestyle, I’ve recently come across information about sustainability that makes me question which efforts and practices are worth it. What is truly sustainable?

Consumer power

US pet owners seeking natural, organic or eco-friendly products tend to be women who are home owners living in larger metropolitan areas, with graduate degrees or higher and household incomes of \$150,000 or more. (This comes from the Simmons Market Research Bureau and is cited in Packaged Facts’ September 2007 report, *Natural, Organic and Eco-Friendly Pet Products in the US*.)

Tell us what you think!

Send letters to the editor to editor@petfoodindustry.com or post your comments online at www.petfoodindustry.com

My above-mentioned relatives happen to buck several of those trends—but like other US consumers who buy organic products and make other lifestyle choices generally considered healthier and more sustainable, they do so voluntarily because these issues are important to them.

Do we know what is and isn’t sustainable development?

— Debbie Phillips-Donaldson



In Western Europe and other developed regions, the “greening” of food and other product chains is heavily legislated. European Union regulations have banned substances like genetically modified organisms (GMOs) and antibiotic growth promoters in feed and mandated farmers to reduce emissions of greenhouse gases (GHG) like methane, ammonia and nitrous oxide. This legislation, however, has been driven by consumer demand; regulatory experts in Europe often say consumer preferences = political power.

The hidden load

But are consumers—or even manufacturers and producers—well informed about what is and isn’t safe and sustainable development? For example, according to a new report from the Hudson Institute’s Center for Global Food Issues, grain-fed beef may produce 40% less GHG than pasture-fed beef and be the more sustainable practice. (See <http://www.cgfi.org/pdfs/nofollow/beef-eco-benefits-paper.pdf>.)

At the Petfood and Nutrition Update Symposium in Solingen, Germany, in June, Holger Rohn of Trifolium (a sustainability consultancy in Friedberg, Germany, www.trifolium.org) presented examples of the level of resources different types of food production require. Making 1 kg of regular (non-organic) bread takes 42 kg of water, 605 kg of soil and leads to 1 kg of erosion—while producing 1 kg of organic bread uses 40

kg of water, 1,097 kg of soil and 2 kg of erosion, according to Trifolium.

Rohn also provided data on the “hidden material load” of various human activities in Germany—effects such as erosion, earth displacement and unconverted materials that are not readily apparent in food production, the making of clothing, education or housing. In some sectors, especially food and housing, the hidden effects are greater than the known ones: the visible material load of minerals, raw fossil fuels and biological raw materials. Rohn said Germany’s hidden material load is higher than Japan’s but much smaller than the US’s.

Not easy being green

Like Kermit the Frog on the popular children’s TV show *Sesame Street*, consumers and manufacturers alike are finding that it’s not easy being green. But given our many finite natural resources and the very real economic, technological and ecological limits to what we can develop, we have to start somewhere. As Rohn commented, to date many organizations, governments and individuals have been acting as if we had four planets—and we know for certain that is not sustainable. ●

Phillips-Donaldson is editor-in-chief of Petfood Industry magazine. E-mail her at dphillips@wattnet.net.

WE EAT, SLEEP AND
THINK PETFOOD....



AND
SO
DO
THEY.



As the Petfood Industries
No. 1 Premixer, Trow Nutrition's
Companion Animal Team is totally
FOCUSED on your business.



Trow Nutrition
INTERNATIONAL

115 Executive Dr.
Highland, IL 62249
Tel: 800-365-1357
Fax: 618-654-7012
www.trownutritionusa.com



*Wenger Petfood Systems . . . for those who
crave **superiority** in production.*



Dogs, cats and most other pets certainly don't care what type of pet food extrusion and drying equipment you use in your operation . . . as long as the food meets their discriminating taste.

But, the unparalleled performance, versatility and cost-savings potential of Wenger's petfood systems are tremendously appealing to manufacturers and processors worldwide. Product shapes, texture, density and palatability can all be maintained within the strictest quality control limits.

Our extruders feature on-line control of mechanical energy to meet specific target density or texture. And via Wenger's

new Waste Recycling System, any wet, under-processed product from system startup can be totally recycled for improved plant efficiency.

As the world's longtime leader in petfood production, Wenger is uniquely positioned to give you the tools you need to succeed – whether you already know which tools you want or you need our process expertise to guide you.

Put a Wenger system to work in your operation and discover the type of quality and performance that pets around the world will always appreciate.

