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Newman's Own Organics enjoys double-digit growth p. 16

Nell Newman and friend

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Shoppers' habits are changing

**Extrusion advances** 

US petfood exports rebounding

Phosphoric acid adds palatability to cat food

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# Editorial Notes By tim phillips, dvm

# The best way to get a good idea

he best way to get a good idea is to get a lot of ideas," according to Linus Pauling, Nobel Prize-winning chemist. First, decide what you want to happen, and why. Then it is time for brainstorming. Many techniques can be used to facilitate brainstorming and creative thinking, notes author David Allen (*Getting Things Done*, 2001), but the basic principles are:

- Do not judge, challenge, evaluate or criticize.
- ► Go for quantity, not quality.
- Put analysis and organization in the background.

In other words, give yourself permission to capture any idea, and then later on, figure out how it fits in and what to do with it.

This month, my dispatch comes from ideas gathered from people I've talked with and things I've seen and thought about recently. Could be that some of them are worthwhile for you.

## **Marketing nuggets**

The day of the traditional petfood kibble will soon be gone. More and more petfood kibbles will have pleasing colors, shapes, aromas and textures intended to appeal to pet owners.

For the foreseeable future, anthropomorphism will continue to shape the petfood industry.

The pet treat market is undergoing a huge transformation from novelty products to functional products.

There's a 6-to-18 month lag time between the introduction of human food ideas and their transfer to pet treats. Do not judge, challenge, evaluate or criticize. Give yourself permission to capture any idea.



## Sustainable Packaging Coalition

The Sustainable Packaging Coalition is an industry working group. Its aim is to foster innovative, functional packaging materials that promote economic and environmental health through supply chain collaboration. According to Paul Comey, a speaker at the recent Pet Food Institute (US) annual meeting, sustainable packaging:

- Meets market criteria for performance and cost;
- Is sourced, manufactured, transported and recycled using renewable energy;
- Maximizes the use of renewable or recycled source materials;
- Is beneficial, safe and healthy for individuals and communities throughout its life cycle;
- Is manufactured using clean production technologies and best practices;
- Is physically designed to optimize materials and energy;
- Is effectively recovered and utilized.

— Tim Phillips

That's what I call a tall order.

A related news item: Wal-Mart Stores Inc. recently announced plans to continue its commitment to reducing packaging across its global supply chain by 5% by 2013. Wal-Mart is beginning to use a packaging scorecard. In the near future, suppliers will receive an overall score relative to other suppliers, as well as relative scores in each category. On February 1, 2007, Wal-Mart will share the scorecard with its global supply chain of more than 60,000 suppliers. As of February 1, 2008, Wal-Mart will begin using the scorecard to measure its entire supply chain.

# PFI's 50<sup>th</sup> anniversary

In 2007, the Pet Food Institute (US) will turn 50 years old. We are working on a timeline that will summarize the highlights and milestones in the history of the petfood industry over those 50 years. Please think about any historical information or graphics you might contribute to this project. If you have ideas, please contact me.

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







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# **Industry News**



### **PFAC** meeting focuses on international trade

The Pet Food Association of Canada (PFAC) recently held its Annual Conference in Vancouver, British Columbia. Since it was the first time the meeting was held on the west coast of Canada, a primary focus of the event was an Asian Trade Symposium.

Featured speakers with expertise on trade with China, Japan, Indonesia and other Asian countries included Katsuo Mochiduki, chief secretary of the Japanese Pet Food Manufacturers Association; Wei Shao, Canadian barrister and Chinese risk management specialist; and Kelvin Chan, representative from Euromonitor International's Singapore office. Details on the meeting are available on the PFAC webpage, www.pfac. com. The 2007 meeting will take place in late October in Toronto, Ontario.

### Hill's Pet Nutrition to build plant in Moravia

Hill's Pet Nutrition will build a plant in Hustopece, southern Moravia, which is expected to employ 350 people. Reports from Hill's indicate that the Czech Republic will be its base for markets in central and eastern Europe. The plant is expected to encompass 160,000 square meters and produce 160,000 tons of petfood per year. At present, annual Czech petfood output is approximately 100,000 tons.

### New version of Greenies launched

Newly redesigned Greenies dog treats will incorporate a unique science used for the first time in the pet treat category, according to Mars Inc. Biomet-

ric research was applied to create Greenies' new design and texture. The research



originated from the University of Guelph in Ontario, Canada, and led to a range of products with five textures for its five sizes. The new Greenies dental chews were launched nationwide in early November.

## Exports to Turkey won't need dioxin statement

The US Department of Agriculture and the Turkish Ministry of Agriculture and Rural Affairs (MARA) officials recently declared that MARA will no longer require a dioxin statement on the veterinary health certificates accompanying US petfood exports to Turkey. This change is effective immediately.

Turkish importers of US petfood are now able to import from all US petfood companies, instead of importing only from the ones approved to export to the EU, as had been the case since May 2006.

## AAFCO Midyear Meeting scheduled



ASSOCIATION OF AMERICAN FEED CONTROL OFFICIALS, INC.

The Association of American Feed Control Officials (AAFCO) Midyear Meeting will be January 16-18, 2007, in Savannah, Georgia, USA, at the Hyatt Regency Savannah. The meeting schedule, along with all registration information, is available on the AAFCO website, www.aafco.org. For more information, contact Sharon Krebs, assistant secretary-treasurer, AAFCO, P.O. Box 478, Oxford, IN 47971 USA, Tel: +1.765.385.1029, Fax: +1.765.385.1032, E-mail: sharon@aafco.org.

## AvoDerm gets new look and name

Breeder's Choice Pet Foods recentlv celebrated its 60th anniversary by revamping the packaging and changing the name of flagship its brand-formerly Avo-Derm-to



Avoderm Natural. For more information, visit www.breeders-choice.com.

# Colgate-Palmolive's third-quarter profit slips

Colgate-Palmolive Co. said recently its third-quarter profit slipped 1% due to restructuring charges. The company saw quarterly net income fall to US\$344.1 million, compared with US\$347.2 million a year ago. Excluding charges related to a restructuring plan, as well as stock-based compensation expenses, Colgate-Palmolive reported earnings of US\$421.5 million. The results came despite record spending on advertising worldwide, according to CEO Reuben Mark. Looking ahead, Colgate-Palmolive forecasts double-digit earnings per share growth for 2006 and 2007, excluding restructuring and stock-based compensation charges.

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## Banfield, Meals On Wheels launch national petfood drive

Banfield, the Pet Hospital, a private veterinary practice franchise, and Meals On Wheels Association of America (MOWAA) have partnered to launch a nationwide US petfood drive.

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PO. 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 The drive kicked off November 1 and continues through the end of the year. Banfield and MOWAA's We All Love Our Pets program plans to collect more than 1 million pounds of petfood. For more information, contact: Christine DelliBovi, E-mail: christine@mowaa. org.

### Petfood Forum for marketers

In 2007, the Petfood Forum in Chicago will offer marketers several informative sessions, including new product trends, popular functional ingredients, product/packaging case study, global sales trends, the future of petfood retailing, large pet retailers on what pet owners want, a roundtable with petfood company CEOs on the future of the industry and in-depth, exclusive market research on the future of petfood.

This annual symposium and exhibition will be April 16-18, 2007, at the Hyatt Regency O'Hare in Chicago, Illinois, USA. For details and to register, visit www.wattnet.com/petfoodforum.

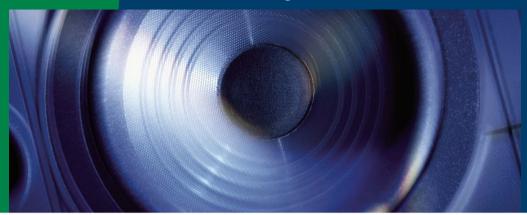
# Nestlé sales show strong growth

During the first nine months of 2006, consolidated sales of the Nestlé Group amounted to CHF72.2 billion (US\$59 billion)-an increase of 9.1% over the comparable period of 2005. PetCare achieved 6.9% organic growth. Europe pet care sales experienced strong growth, with strategic brands such as Bakers, ONE, Gourmet and Beneful doing particularly well. According to company reports, growth in North America continued to accelerate, with continued innovation around the humanization of petfood, including new natural products for dogs and restaurant-inspired recipes for cats.

## Old Mother Hubbard marks 80 years

Old Mother Hubbard (OMH) has reached its 80th year of manufacturing foods and treats for dogs and cats. OMH recently launched new products including a new line of Wellness treats and the introduction of Wellness 95% Meat.

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#### Industry News >

## SmartPak CEO named one of US's best bosses

Winning Workplaces has announced Paal Gisholt, president and CEO of SmartPak, is one of this year's 18 Best Bosses selected nationally. A related story



appeared in the October 2006 issue of *Fortune Small Business*. SmartPak's three-year growth rate of 437% made it the 11thfastest growing privately held consumer products company in the US. SmartPak was featured in the August 2006 issue of *Petfood Industry* magazine.

# Zip-Pak expands sales management

Zip-Pak recently added Milan Iglendza, Arnie Santa Ana and Janet White to its sales team. As regional sales manager, Iglendza will be responsible for business in the Midwest and Southwest US and Mexico. Santa Ana will head up West Coast US sales efforts as regional sales manager. White serves as key account manager.

Iglendza and Santa Ana will work out of Zip-Pak's Orangeburg, New York, USA, office, and White will operate from the company's Ottawa, Illinois, USA, office.

## Alltech announces new hires, promotions

Alltech has restructured its regulatory department. Monica Fanti has been appointed the global regulatory affairs officer. Dr. Steve Traylor joins Alltech as the regulatory technical coordinator. Erin Kennedy has been promoted to assistant manager involved in Asia Pacific regulatory affairs.

Kristen Green joins Alltech as the Latin America regulatory coordinator. Michelle Elsey has been named area sales manager for Illinois, Iowa, Kansas, Missouri and South Dakota in the US. Elizabeth Graves, Alltech's Asia-Pacific marketing manager, will now be based in Kentucky, USA.

## Testing company moves headquarters

Eurofins US has moved its corporate headquarters to Des Moines, Iowa, USA. Eurofins expects to hire approximately 50 people in the next two years, according to a news release. Its Des Moines operations will be the base for its North American food and pharmaceutical testing businesses. The company also plans to develop a new food testing laboratory to house vitamin and general nutrition testing functions.

## **K-Tron acquires Premier Pneumatics**

K-Tron International Inc. has acquired all of the stock of privately held Premier Pneumatics Inc., a manufacturer of pneumatic conveying and bulk handling equipment. The purchase price was US\$27.5 million.

Premier, based in Salina, Kansas, USA, manufactures and markets components for pneumatic conveying systems. Top operating management of Premier is expected to remain following the acquisition. Kevin Bowen, senior vice president of K-Tron Process Group, will serve as president of Premier. The Right Animals The Right People The Right Answers



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# New on the Shelves

Editor's note: Submissions and feedback are welcome. Contact Jenny Kvamme, Tel: +1.815.734.5637, Fax: +1.815.734.5649, E-mail: jkvamme@wattnet.net.



# Wellness all-natural dog treats

New from the Wellness line of dog treats, WellBites offer all-natural ingredients in a soft and chewy, wheat-free rectangular treat. Two blended meat sources—lamb & salmon, chicken & venison, beef & turkey or turkey & duck—are combined with whole grains and real fruits and vegetables for antioxidant support. www.wellnesspetfood. com; www.oldmotherhubbard.com.

# Natural dog food for large breeds

Del Monte Pet Products launches a new, all-natural Large Breed dry dog food. Nature's Recipe Large Breed dog food is specifically formulated to promote health and vitality in dogs over 50 pounds. This product is made with a blend of ingredients such as chicken meal, oatmeal, brown rice, omega-3 and omega-6 fatty acids and prebiotics. www.naturesrecipe.com.





# Kibbles 'n Bits Brushing Bites

Kibbles 'n Bits Brushing Bites has bits that clean a dog's teeth and freshen breath as the dog chews. Company literature states that every crunchy kibble and soft, chewy bit delivers a roasted chicken taste and that the product is 100% nutritionally balanced and complete. www.kibblesnbits.com.

# Heaven Scent Pizza for dogs

Blissful Biscuits offers new treats designed to look, smell and taste like pizzeriastyle pizza. Original and wheat-free pizzas have a cheddar cheese biscuit crust. Both are preserved with natural vitamin E, have no salt, require no baking and are ready to eat, according to the company. Each pizza is pre-cut and vacuumsealed on a 7-inch pizza disk, and packaged in its own delivery box. Wholesale is also available. www.blissfulbiscuits.com.



# Feedback



# In memoriam

**E** arly in October of this year Dr. Joep Lupgens died after fighting a battle he couldn't possibly win. People in the industry will remember Joep as an outgoing personality with the gift of paying well-meant attention to those he worked with. Humor and optimism were his second nature.

Joep worked on and completed his assignments with honest dedication and commitment, and with a keen eye for the requirements and interests of his principals. He definitely found pleasure and excitement in venturing into new areas and was not at rest before he could have absorbed all there was to know about the subject.

The industry has lost a great contributor, and his numerous friends in the industry are proud to have known Joep. He leaves a wife and two young daughters. Our thoughts and wishes for strength and courage are with them.

> Marcel Blok Change Stranamics B.V. Maashees, the Netherlands



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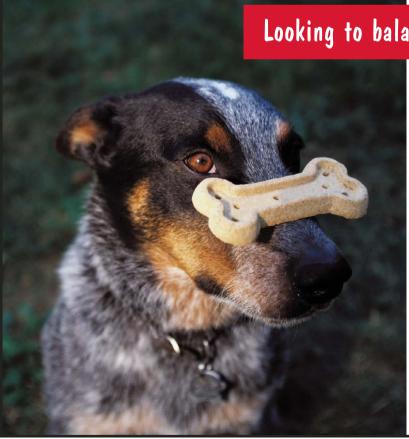
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# Aiming for the healthiest possible petfoods, Newman's Own Organics enjoys double-digit growth

#### BY MIKE PEHANICH

ou would expect the life of a child of actors Paul Newman and Joanne Woodward to be a bit above the ordinary. And you'd be right.

"I had a lot of pets growing up. A menagerie! Ferrets, a lot of baby birds, a Harris hawk, five cats and a pack of dogs..." relates Nell Newman in her book *The Newman's Own Organics Guide to a Good Life*.

When Newman was 10 years old she found out peregrine falcons were extinct east of the Mississippi River. That discovery proved the catalyst for her zealous concern for the environment. It also led her to earn a Bachelor of Science degree in human ecology from the College of the Atlantic and to work with raptors as a child and professionally.

Newman's experiences caused her to believe animals display conspicuous health and vitality when they are fed what they would instinctively feed on in the wild—an unadulterated diet of natural foods. "A peregrine falcon is near the top of the food chain," she reasons. "In a way, so are dogs." Why not feed pets, then, the healthiest, most natural foods available?

Thus emerged Newman's Own Organics Premium Pet Foods.

#### Not hippie-dippy

Paul Newman had proved a hard sell when it came to adding an organic line to his popular Newman's Own brand. An all-organic Thanksgiving meal finally sold him on the idea, proving organic need not translate into "hippie-dippy dishes," in Nell's words. His organic education soon followed when he hired his daughter and her business partner, Peter Meehan, to research the market for organic food products. Newman's Own Organics was off and running in 1993. It became a separate company in 2001.

The move into organic petfood in 2003 was a logical progression. The complete line of dry and canned foods for dogs and cats, plus dog treats, are made with at least 70% organic ingredients. The products are also processed according to standards from the US Department of Agriculture National Organic Program and certified by Oregon Tilth, a third-party, nonprofit certifying agency for organic farmers.

### Double-digit growth

"The whole petfood industry is growing with organic," Nell Newman says. "And the organic food industry as a whole has seen double-digit growth annually since 1990."

"Organic is a niche within a niche," notes L. Phillips Brown, DVM, research and product consultant for Newman's Own Organics' petfood division. "A lot of folks don't realize the difference between natural and organic."



# **Business basics**

Headquarters: Aptos, California, USA.

**Officers:** Nell Newman, cofounder and president: product development and marketing; Peter Meehan, co-founder and CEO: sales and marketing, new product opportunities.

**Annual sales:** US\$1 million for dog treats in 2005; total sales undisclosed.

#### Websites:

www.newmansownorganics.com and www.newmansownorganics. com/pet/home/index.php.

# orgonic

Natural is one of the more dynamic segments of the petfood market, Brown points out. Sales of natural petfood products grew nealy 70% from 2001 to 2005 and are projected to continue to grow 15% annually through 2010, according to Packaged Facts. The entire petfood industry grew 23% between 2001 and 2005, with growth hovering at 4 to 5% annually.

The Organic Trade Association (OTA) reports a 17% increase in sales in the organic industry in 2005 and total organic sales of US\$14.6 billion. Last year, organic petfoods tallied US\$30 million in sales, a 46% increase over the previous year, according to OTA.

Though the privately owned Newman's Own Organics does not share its sales figures, Newman claims the company has posted double-digit growth since its inception and that petfood sales have kept pace, with solid growth every year.

# Qualifying for certification

To qualify for organic certification, Newman's Own Organics petfoods cannot contain conventional pesticides or herbicides, synthetic fertilizers, sewage sludge, genetically modified organisms, ionizing radiation, antibiotics or growth hormones.

Manufacturing facilities must be carefully selected and strictly inspected. (The company's petfoods are co-packed.)

Unfortunately, demand for organic products has outstripped the agricultural supply, according to

# Good business, good causes

S creen legend Paul Newman built his Newman's Own food product company into a

anational brand and became Hollywood's answer to the Rockefellers, donating all his company's after-tax profits to charities.

Soon after, his daughter Nell and her business partner, Peter Meehan, launched Newman's Own Organics. To Meehan, the company's CEO, the subsequent move into organic petfoods was pure business logic. "We're always looking for new opportunities to extend the brand," he says. "Pets are very important to people, and it just made sense."

To Nell Newman, it presented an opportunity to earmark the royalties she paid to her father under the Newman's Own licensing arrangement for specific charities and causes. Her slogan: "Supporting animals not as fortunate as your own."

Nearly US\$110,000 of company earnings went to animal sanctuaries and humane and rescue shelters in the first year of the operation, with more than US\$300,000 donated to date. Recipients are listed at www. newmansownorganics.com/pet/ charity/index.php.

Newman's Own Organics overall has generated more than US\$6 million to causes and charities. That's a long way from the US\$220 million Paul Newman's philanthropic enterprise has spread, but still a strong step. Newman's Own Organics also helps fund the Organic Farm Research Institute in Santa Cruz, California, USA.

Newman and Brown. That fact continues to plague the industry and ensures products will sell for premium prices for years to come, Brown says.

# Good enough for Paul

Newman's Own prides itself on the wholesomeness of the ingredients in its petfood formulations. Products are made with human-grade chicken, chicken meal or fish meal and organic

Inspired by a childhood passion for science and love for animals, Nell Newman talked her famous father into adding an organic line to his successful food products company. Petfoods soon followed.

To endorse the petfood products and prove their quality, Paul Newman once ate from a can of his company's chicken and brown rice dog food on the *Tonight Show*.



Organic >



Newman's Own Organics petfoods and treats are made with at least 70% organic ingredients such as human-grade chicken, chicken meal or fish meal.

> grains and vegetables. Other premium ingredients include flaxseed meal, brown rice, antioxidants, organic barley, milo, oats, carrots,

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"Our products were human grade from the start," says Newman. "Once I found out that 'by-product' on a label could mean beaks and feet and entrails going into petfoods, I thought, 'We can do it better.""

The line has benefited from face time from its namesake, who recently endorsed the premium petfood line in a rare television appearance. Prodded by host Jay Leno and a US\$10 bet on the *Tonight Show*, Paul Newman ate from a can of the chicken and brown rice dog food before millions of latenight viewers.

# Lifestyle, lifestage

Organic purchases reflect the lifestyle preferences of pet owners. Many are ardent about their choice of organic, which is often tied to their values and belief systems.

Brown believes that owners who opt for organic tend to purchase premium petfoods. Newman's Own dog foods are geared to lifestage categories: adult for dogs up to 7 years old, senior for dogs older than 7 and puppy/active. Cat foods are similarly divided into adult/kitten and senior cat categories. Dog treats are offered in four flavors for small and medium/large dogs.

"We like foods geared to lifestyle, and lifestage choices are part of that," says Brown.

Like the rest of the products bearing the Newman's Own brand in retail outlets, the petfood line has benefited from Newman philanthropy. "Initially we rode on Dad's coattails," says Newman. "But now we are riding our highquality products."

Newman also credits owner satisfaction for the repeat sales. "We get Email that is quite remarkable," she says. "For example, 'We put our pet on your petfood and her skin sores dried up.' It sounds made up. But the messages are sincere. Petfood is an important part of a pet's life."

Mike Pehanich is a freelance writer based in Westchester, Illinois, USA.

# Shoppers' habits are changi

In the US, dollar stores, supercenters, pet stores and warehouse clubs are gaining

### BY KEN SLOCUM

CNielsen measures consumer purchasing of petfood products via its Homescan consumer panel service and its Strategic Planner, a syndicated database. Homescan solutions provide longitudinal consumer purchase behavior, demographic profiles, integrated attitudes and usage information.

Households participating in the panel record their UPC-coded purchases across all outlets to help identify key consumer and shopper insights. Strategic Planner covers the sales of fast-moving consumer goods through information collected from grocery, drug and mass merchant store checkout scanners.

### Channel trends

The average number of pet care purchasing trips as measured by AC-Nielsen's Household Panel reflects changing shopper dynamics. Trips to



grocery stores have been replaced by trips to supercenters and pet specialty stores.

The dollar store channel has also come on strong, making significant inroads—up an average of 1.4 trips per year since 2001 (see Figure 1). Opportunities to purchase within the dollar channel have increased dramatically. Almost 10,000 new dollar stores have been opened since 1996.

While the drug channel reflects a

The petfood category is healthy and continues to **denerate** solid growth in the US.

#### **Category** sales

	US\$ sales	%chg vs. 2005
Dog dry	1.64 bil.	2.70%
Dog wet	643 mil.	2.00%
Dog moist	45.4 mil.	-5.50%
Total dog	2.33 bil.	
Cat dry	1.01 bil.	1.30%
Cat wet	942 mil.	-0.90%
Cat moist	4.10 mil.	-30.00%
Total cat	1.96 bil.	
Dog & cat		
treats	757 mil.	2.70%
Total dog 8	k cat 5.05 bil.	1.20%

Table 1. Total US food, drug, mass merchandiser (excluding Wal-Mart) petfood sales for the 52 weeks ending October 7, 2006.

Source: ACNielsen Strategic Planner.

modest decline in trips, the channel remains healthy. CVS and Walgreens are continuing to invest in rapid store growth. In reviewing dollars spent per trip by channel, dollar stores and warehouse clubs reported the greatest percent increase since 2001 (see Figure 2). Warehouse clubs and pet specialty stores continue to command the largest amounts spent per trip, almost twice as

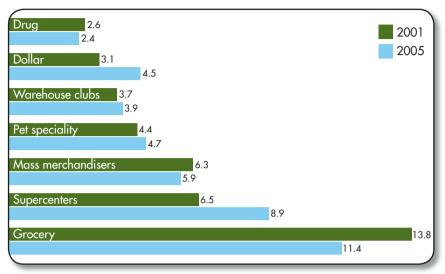
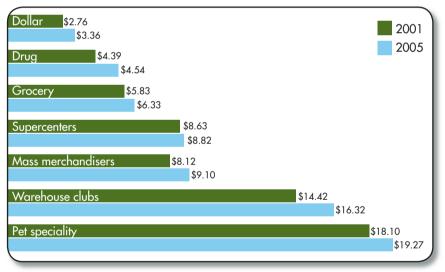


Figure 1. Average number of pet care trips by channel (2005 vs. 2001).



large as the other measured outlets.

#### Petfood category dollar trending

The petfood category is healthy and continues to generate solid growth in the US. Household Panel data projects 2005 petfood category sales across all channels of US\$10.7 billion—up 2.4% vs. 2004. Within food, drug and mass merchandiser channels (excluding Wal-Mart), petfood trending for the latest 52-week period ending October 7, 2006, reports dollar growth of 1.2%.

Growth was fueled by dry dog food (+2.7%), wet dog food (+2.0%), dry cat food (+1.3%) and dog/cat treats (2.7%). Moist dog food (-5.5%), moist cat food (-30.0%) and wet cat food (-0.9%) all experienced declines (see Table 1).

### Petfood segment growth by channel

Grocery grew 0.8% in dollars during the latest 52-week period. Growth for the channel was driven by dry dog (+2.3%) and wet dog food (+1.6%), dog/cat treats (+1.6%) and dry cat food (+0.8%). Wet cat, moist cat and moist dog all declined.

Petfood within the drug channel experienced strong sales growth. While drug accounts for only 2.2% of total supermarket, drug and mass (excluding Wal-Mart) sales, it grew by 4.9%—generating US\$5.5 million growth dollars. Dry dog (+12.4%), wet dog (+2.6%) and dry cat (+10.9%) all fueled drug channel growth.

Ken Slocum is client director for ACNielsen. E-mail: ken. slocum@acnielsen.com.

Figure 2. Average number of pet care US\$ spent per shopping trip (2005 vs. 2001).

**Shopper demographics and future trends** 

In terms of shopper demographics, younger (age 35-44) females are driving sales within the mass merchandisers, supercenters and grocery, while older females (age 55-65+) dominate the drug channel. Warehouse clubs excel among households with discretionary income to spend, followed by the grocery channel.

Cat food purchasing has increased among those shoppers 65 years and over, as cats may be easier for seniors to care for and feed. ACNielsen notes that the aging population provides opportunities that are long term. This demographic will likely impact store sizes and formats, growth of functional foods, package technology and size, and advertising copy and spending. There exists an opportunity for "generation" marketing.

In the short and long term, growth can be accomplished with a consumer focus that targets the health and wellness opportunities. Organics, functional foods, whole grains and elimination of trans fats are all major trends to be considered. Awareness of the impact of these trends, food product formulation and brand message will be important as well.

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# Phosphoric of cat food

#### BY CHLOÉ CHAMPION AND AURORE CHEMINEAU

# Application methods are also key

ats have specific requirements for regulating urinary pH in the formulation of their diets. A urinary pH below 6.0 can lead to the formation of calcium oxalate uroliths (bladder stones); while a pH above 6.5 will increase the chances of struvite urolith formation (Stevenson, 2002). Research has shown that struvite uroliths can be avoided completely, by maintaining a urinary pH between 6.0 and 6.4.

Careful formulation and the use of specific ingredients (such as poultry meal or corn gluten meal) can help cats maintain an optimal urinary pH. When formulation issues arise, the use of an acidifier (either as a sprayed-on coating or ingredient) becomes necessary.

# Phosphoric acid's effect on palatability

Trials were conducted at the SPF Research Center to determine the im-

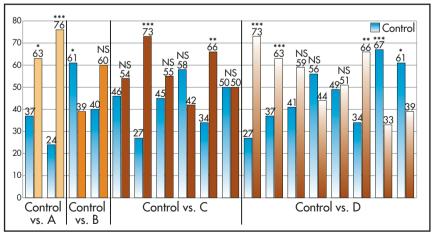


Figure 1. Palatability results for acidification with liquid palatability enhancer (3%). NS = no significant difference; \* = significant difference at p<0.05; \*\* = significant difference at p<0.01; \*\*\* = significant difference at p<0.001.

pact of phosphoric acid coating on cat kibble palatability. The goals of this research were to identify the interactions with palatability enhancers used as a coating and to identify the best way to coat kibble with phosphoric acid to maximize palatability.

Premium-quality cat kibbles were coated in a batch-coating system. Poultry fat was sprayed on at 6%, C'Sens liquid palatability enhancer (PE) at 3% and C'Sens powder PE was dusted on at 1%. The coating sequence was first fat, then the PE (liquid or powder). Some kibbles were coated with all three in the order of fat, the liquid PE, then the powder PE.

Three types of trials were conducted: (1) phosphoric acid with a liquid PE; (2) phosphoric acid with a powder PE; and (3) phosphoric acid with a combination of liquid and powder PEs.

In each trial, phosphoric acid (75%) was applied at 0.5% during a different step in the coating sequence: before the fat, before the PE, after the PE and mixed with liquid (fat or PE).

# Palatability test results for three trials

Palatability tests compared kibbles

# acid impacts palatability

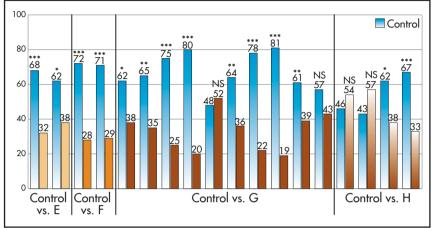


Figure 2. Palatability results for acidification with powder palatability enhancer (1%). NS = no significant difference; \* = significant difference at p<0.05; \*\* = significant difference at p<0.01; \*\*\* = significant difference at p<0.001.

coated with phosphoric acid and those without (the control). Two days of comparative tests were conducted at Panelis with a dry food-dedicated panel of 35 cats. The kibbles were fed at 15 days post-coating. Preference was measured by the consumption ratio.

In Trial 1, phosphoric acid was introduced at four different places during the coating process: (A) before fat coating; (B) after the fat and before liquid PE application; (C) after the liquid PE; and finally (D) mixed with the liquid PE. Each sequence was tested against its control kibble.

Consumption ratios in Trial 1 (see Figure 1) were in favor of the kibbles with phosphoric acid coated after the liquid PE or mixed with the liquid PE (sequences C and D). Results were significant and very highly significant for phosphoric acid applied prior to fat application (sequence A).

In Trial 2, phosphoric acid was sprayed on: (E) before fat coating; (F) after the fat and before powder PE application; (G) after the powder PE; and finally (H) mixed with the fat. Each sequence (E, F, G and H) was tested against its control kibble.

Consumption ratios were very highly significant for kibbles without phosphoric acid when applied before the powder PE (sequence F). The consumption ratios were significant to very highly significant in favor of the control kibble when phosphoric acid was applied before the fat (sequence E) or after the powder PE (sequence G). The level of significance of the final results show that the control is preferred (without phosphoric acid) over sequence H (phosphoric acid mixed with fat). Results also indicate that the use of phosphoric acid as a coating decreases palatability performance when combined with a powder PE (see Figure 2).

When comparing sequences G vs. F and E vs. F, palatability results indicated that there is no statistical difference between G and F, while E is highly or very highly significantly preferred over F. This means that if phosphoric acid needs to be used in a coating in combination with a dry PE, it is recommended to apply the phosphoric acid prior to the fat coating to diminish the loss of palatability performance caused by acidification.

Trial 3 studied the interaction be-

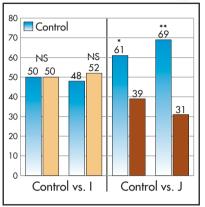


Figure 3. Palatability results for acidification with a combination of liquid (3%) and powder (1%) palatability enhancer. NS = no significant difference; \* = significant difference at p<0.05; \*\* = significant difference at p<0.01.

tween phosphoric acid and a combination of liquid and powder PEs. Phosphoric acid was applied at two different areas: (I) before the fat and (J) between the liquid and powder PEs.

Consumption ratios were not significant when the control kibbles were compared to sequence I (phosphoric acid coated before the fat). However, when phosphoric acid was applied between the liquid and powder PEs (sequence J), results were in favor of the control kibble (see Figure 3).

Phosphoric acid can enhance palatbility when coated with liquid PE alone but will decrease palatability significantly when applied with powder PE. To improve palatability performance when powder PE is used, SPF recommends spraying phosphoric acid as far from the dry palatant as possible in the coating sequence, i.e., before the fat.

The authors are with SPF (www.spfdiana.com). Contact Chloé Champion, cchampion@spf-diana.com; Aurore Chemineau, achemineau@spf-diana. com. In these 10 countries, changing attitudes toward pets are boosting imports

BY TIM PHILLIPS, DVM

S petfood exports declined in the early part of this decade. The drop was due primarily to US petfood manufacturers building more plants around the world, especially in Europe, rather than cope with European Union import regulations.

Now, because of changing attitudes toward pets and increased demand for high-value petfoods, US petfood exports are rebounding. Following are profiles of the leading importers of US petfoods. The US\$ amount after the country name is the value of US-made petfood imported in fiscal year 2006.

#### Canada: US\$375.5 mil.

As in the US, Canadian trends in human health and nutrition are mirrored in petfood. In the dog and cat food and other petfood sectors, value sales are expected to continue to outpace volume sales. Retail sales are being driven by value-added products. When consumers are deciding on petfood purchases, they often look for many of the same attributes that they would look for in human foods.

Consumers are bombarded from all areas with information on the importance of pet ownership and care. Hence, pet owners are feeling an increased responsibility for their pets' overall health and nutrition, notes Euromonitor.

#### Japan: US\$234.6 mil.

The number of small dogs and older pets is continuing to increase in Japan. Classification of petfood by size and age is becoming more pronounced; manufacturers tend to specialize when developing new products. In response to the growing popularity of small breeds, for example, Mars offers products for Miniature Dachshunds, Shih Tzus, Chihuahuas, Toy Poodles and Papillons. The leaders in functional

#### Due to changing attitudes toward pets and increased demand for high-value petfoods, US petfood exports are bouncing back.

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petfoods are foreign brands such as Pedigree and Hill's Science Diet.

In Japan, young people are tending to delay marriage and often turn to pets as surrogate family members. Many elderly people are living alone and often have pets as friends. These factors are expected to grow petfood sales.

#### Mexico: US\$93.1 mil.

Petfood sales in Mexico are showing promising signs of continuous growth. The constant investment of major players in the industry is paying off. The growth is coming from an increased awareness of the benefits of providing a balanced diet and well-being to pets and more disposable income of pet owners.

According to Euromonitor, Nestlé México has shifted course to concentrate on sales of premium brands, generating good returns. Iams de México reigns in premium petfood, and there is no indication that the company plans to change its strategy to serve mid-priced markets already catered to by Effem México and MaltaCleyton.

## Australia: US\$42.2 mil.

A number of social and demographic trends are affecting the petfood industry in Australia. Urban consolidation is resulting in smaller garden areas and more people living in apartments and townhouses. This has led to Australians increasingly preferring pets that require less space, such as smaller dogs, birds or fish. Another important change is the average age of Australian first-time mothers, which is reaching 30. As couples delay starting families, some of the energy and resources that could have been spent on children are being transferred to pets.

## Belgium: US\$25.0 mil.

Belgian consumers are not only trying to become healthier themselves, they are also paying more attention to their pets' health. Premium products continue to sustain their popularity among Belgian pet owners, mainly due to strong marketing, notes Euromonitor.

Cat food sales continue to be higher than dog food sales due to the higher cat population in Belgium. The main manufacturers of dog and cat food continue to be Masterfoods and Nestlé Purina PetCare. In 2004, these two players accounted for 52% of value sales, followed by private label with a 25% share.

### Taiwan: US\$23.9 mil.

Petfood value sales growth is benefiting from expansion of distribution outlets. There has been a rapid expansion of franchised pet stores and superstores. Petfood sales are expected to achieve healthy growth over the next four years in both constant value and volume terms.

Growth will mainly be due to the optimistic economic outlook, which should see consumers willing to spend more on their pets. A growing product



Some ships can carry up to 3,000 40-foot shipping containers.

## **US** petfood exports

US exports of dog and cat foods, fiscal years (October to September) 2001-2006 in millions of US\$.

Fiscal year	US\$ millions
2001	1,000.3
2002	791.3
2003	776.2
2004	776.7
2005	883.1
2006	1,044.1
Source: LISDA	

# Exports declined early in the decade due to US manufacturers building plants around the world.

range is also expected to boost demand. Ownership of cats and fish is expected to increase more than dog ownership, predicts Euromonitor.

### Korea: US\$20.2 mil.

Dogs were traditionally viewed as livestock in South Korea. Also, the country has been notorious for its dogeating culture, although the nation has started to take more of an interest in dogs as pets in recent years as a result of pet-related programs on television. Euromonitor predicts the trend toward keeping pets will rapidly expand over the next four years. Dog owners are increasingly feeding their pets the best dry dog food available.

## New Zealand: US\$18.0 mil.

The underlying trend in New Zealand cat and dog food is toward greater sophistication, with a move toward better-quality products. While wet cat and dog food remain the dominant type, dry cat and dog food have become more popular. Euromonitor notes that New Zealand's petfood market has witnessed further segmentation-such as products specifically formulated for different breeds, overweight pets and urban and rural pets. Although the pet population is expected to remain largely unchanged, further growth opportunities are expected from underdeveloped rural areas of the country.

### Israel: US\$14.8 mil.

The Israeli consumer appears to be continuing to buy mid-priced and economy dog and cat food, since premium foods can be more than double the price of mid-priced products. The petfood market in Israel is very competitive, with many active players. Over the past five years, there has been a growing trend toward imported products. Euromonitor estimates that in 2005, imported products constituted around 50% of value sales. This trend is being aided by the lowering of import taxes. The Free Trade Agreement between Israel and the US removed all quotas and tariffs on the import of petfood. The variety of domestically manufactured products available has also grown.

## Hong Kong: US\$13.7 mil.

Euromonitor reports that dogs in Hong Kong are becoming more pampered, since they are becoming more precious in the eyes of their owners. With the increase of females in the workforce, it is common to have women continue working after marriage. A high cost of living and the empowerment of females are contributing to the rise of dual-income families. As a result, many young couples are unwilling to have babies due to the time factor, as well as the high cost of educating a child. Keeping a pet is the next best solution to create a lively atmosphere in the home.

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Many die design techniques are employed to increase the number of die openings and the total die open area.



# Controlling product characteristics and removing bottlenecks

BY TIM PHILLIPS, DVM

ecent extrusion hardware advances have enabled precise control of product characteristics, reports Sajid Alavi, PhD, Kansas State University (KSU), USA. Advances that have made this control possible include: Innovative screw designs;

> Post-extrusion pressure control;

► Die-interchange systems.

An example of new extruder design is the conical twin screw extruder from Wenger Manufacturing (US). It provides better compression of the extrusion melt, enabling varying mechanical energy inputs and final product densities without use of special screw elements.

The post-extrusion pressure chamber is another improvement that has led to the ability to control product expansion and density by controlling the pressure after the die. Innovations in die design including hydraulically adjustable dies and die-interchange systems (Amandus Kahl, Germany) provide fast and simple changes from one die to another during a process. These die design advances have also led to greater flexibility and control over product density and shape.

The growth of the high-quality, premium petfood segment is especially high. Hence, Alavi predicts industry and academic research will focus increasingly on utilizing the rapid advances in data processing and sensor technologies. This research will lead to better online process and product control. Online sensors based on methods such as electrical capacitance and resistance and near infrared (NIR) spectroscopy will increasingly be a feature in extrusion systems. This will enable real-time monitoring of moisture at various points and other critical parameters such as residence time in the extruder barrel and thermal and mechanical energy input.

Alavi manages the extrusion center at KSU, which provides extrusion training and services for pilotscale trial runs. For additional information, visit www.oznet. ksu.edu/grsi/extrusion.htm.

# A fast track for new products

Laurent Garcia, Clextral Inc., observes that bringing new products to market is the name of the game in petfood today. In 2005, petfood marketers launched the biggest surge of new products in the history of the market, according to Packaged Facts market research. A large proportion of these new products are high-quality products with upscale appeal.

Garcia asserts that turnkey twin screw extrusion production lines processing many types of high-quality petfoods offer simple changeovers and ensure a quick return on investment. The Clextral Economic Line processing line manufactures dry foods (approximately 8% moisture), semi-moist foods with essential oils and meat ingredients (15-30% moisture) and treats with high protein and increased flavor components (approximately 18% moisture), interchangeably.

The Economic Line utilizes Clextral's Evolum twin screw extruder, which manufactures premium products due to its design ensuring homogenous mixing and optimal starch gelatinization. The Evolum's faster screw speeds and torque maintain greater throughputs, allowing the Economic Line to process 4 tons/hour of dry food, 3-3.5 tons/hour of moist food and 2-3 tons/ hour of treats.

Reduced downtime for changeover and sanitation is accomplished with an automated barrel opening that facilitates immediate screw access. Quality is ensured through computerized operation, and Clextral offers traceability software to certify raw ingredient consistency.

Also available are clip-on modules for the production of multicolor and/or co-extruded (filled) products. These kits are pre-engineered for the extruder and include all ancillary equipment, greatly reducing downtime for reconfiguration. For details, visit www. clextral.com.

# Removing processing bottlenecks

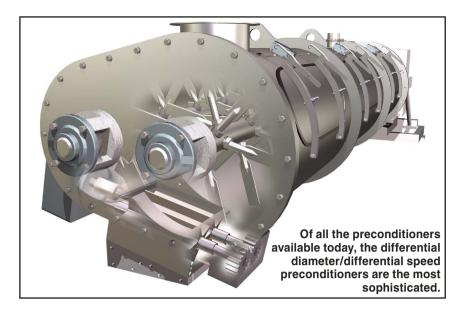
Galen J. Rokey, Wenger Manufacturing, notes that a line audit can identify bottlenecks to higher capacity. Bottlenecks that can limit throughputs of an extrusion line include:

> Preconditioning capacity. Of all the preconditioners available today, the differential diameter/differential speed preconditioners have the best mixing characteristics combined with the longest average retention times. To fix or compensate for inadequate preconditioning, use one or more of the following steps: increase preconditioner size; increase existing preconditioner size; increase existing preconditioner fill by one-time adjustment of beater configuration; add automatic retention time control system; and increase energy inputs in the extruder.

► Available extruder power. When power is the limitation to more throughput, the options to remove this bottleneck are to a install a larger extruder drive motor; check with the extruder manufacturer to determine maximum allowable installed power; and factor in the effects of removing other bottlenecks (improved preconditioning). Extrusion systems are available with powertrains of over 2,000 kW. Lack of power is the most common bottleneck to higher production rates for existing process lines.

**Extruder volumetric capacity.** A bottleneck due to volumetric capacity is usually manifested by the extruder operating in a "choked" or full condition. Volumetric capacity can be increased in one or more of the following ways: install a larger extruder screw diameter; increase extruder screw speed; configure the extruder with screw geometries designed for maximum conveying efficiency; utilize grooved barrel liners; and control extruder barrel temperatures with heating/cooling systems.

**Die open area.** A specific die open area is required to develop the proper back



pressure and barrel fill in the extruder.

Increasing the die open area to increase throughput potential is a straightforward relationship. Many die design techniques are employed to increase the number of die openings and the total die open area.

**Downtime reduction.** Downtime is often overlooked as a bottleneck to higher plant capacities. Many manufacturers believe they operate their lines 24 hours a day, seven days a week, and are surprised to find they have 20% of actual downtime. Practices that can reduce downtime are adjusting production schedules for minimum product switch-over time; installing hardware tools with quick-change features; designing control systems for compressed start-up/shutdown modes; training production personnel to reduce downtime; implementing preventive maintenance programs; and designing system hardware for maintenance and cleaning accessibility.

➤ Increasing usable product. Increasing usable product is also a significant opportunity to increase capacity. Offspec product may run as high as 8% of

# Lack of power is the most common bottleneck to higher production rates.

total production. Ways to increase levels of usable product include automated retention time control in preconditioners to reduce start-up/shutdown wastes; screw element and liner designs to give positive conveyance; high extruder speeds and variable-speed drives to shorten process response times; online, automated control of SME and recipe analysis; automated extruder control systems that compress start-up/shutdown modes; experienced production personnel to control process; process flows that handle the product gently; and waste recovery systems to recycle off-spec product.

► Upstream/downstream unit operations. Most bottlenecks occur along the process flow in areas other than the extruder. An audit to increase plant production levels should include an evaluation of each unit operation along the entire flow. Potential bottlenecks could be found in one or more of the following areas: grinding/sifting, storage, conveying, drying/cooling, coating or packaging.

All unit operations along the process line must be properly sized to avoid a flow bottleneck. As each bottleneck is identified and eliminated, a new, secondary bottleneck will likely appear. A different bottleneck may be identified for each product that is manufactured in a given process line. This auditing process can continue indefinitely, but at each step it is necessary to do a cost/benefit analysis to determine if the economics are favorable. For more information, visit www.wenger.com.

# Petfood Insights By David A. dzanis, dvm, phd, dacvn

# Negative claims on petfood labels can hurt the entire industry

s I penned this month's commentary, the United States was a few weeks away from its 2006 elections. Predictably, the television airwaves were saturated with political advertisements, the majority of which made negative statements regarding a candidate or proposition.

Political entities have the right to make this sort of ad, and I'm sure the ads are effective in achieving their short-term objectives. However, I am convinced that in the long term they only serve to disillusion the public and ultimately cause people to lose respect for all politicians, if not the political process in its entirety.

I mention this observation on negative political claims because at the August meeting of the Association of American Feed Control Officials Pet Food Committee, a question was raised regarding negative claims on petfood labels (e.g., "No \_\_\_\_"). While there was little time for discussion at that meeting, I gathered from the comments that some sort of additional regulatory control directed toward negative claims was being advocated.

I respectfully, but strongly, disagree with such a proposal. Negative claims should be subject to the same standard as any other claim—i.e., not false or misleading. True, some claims may be misleading by their very nature (e.g., "no cholesterol"). That claim, by itself, falsely implies a health benefit for dogs and cats similar to that for humans when scientific fact supports the opposite.

In most other cases, though, a truthful claim relating to the absence of an ingredient provides information to the consumer, who, for his or her own reasons, may be looking for that informaI strongly oppose any regulation specifically restricting negative claims.



tion as an integral component of the purchase decision process. The regulator may personally disagree with the criteria upon which this decision is made, but withholding information from the consumer on that basis alone shouldn't be within the regulator's purview. As long as the claim remains a true statement of fact and doesn't otherwise imply adverse effect of that ingredient, the consumer should be free to infer what he or she wants from that factual information. In other words, the consumer has the right

to make a choice, right or wrong. So, for the record, I strongly oppose any regulation specifically restricting negative claims. That said, I personally discourage anyone making negative claims from doing so.

#### A lesson from ethoxyquin

I am amazed that today many people (even those in the petfood industry) believe that ethoxyquin, a very effective antioxidant preservative, is highly toxic to pets. Having been in the US Food and Drug Administration (FDA) when the controversy was at its peak (early 1990s), I can say the scientific evidence showing ethoxyquin to be harmful when used as dictated by regulation is negligible. Rather, the "data" against its use was based largely on speculation and innuendo, initially on the part of several self-appointed consumer advocates.

At that time, several large petfood companies vowed to fight this false disparagement with scientific facts. They might have won, too, except the tide turned when some other companies joined in the negative campaign. As a result of petfood companies scrambling to remove ethoxyquin from formulas and/or disparaging competitors' products that continued to contain it, insinuation became fact, and the battle to continue use of this ingredient became futile. Ultimately, almost all companies succumbed, so nowadays, ethoxyquin has virtually vanished from the petfood ingredient list.

Although at one point FDA asked for a voluntary reduction of use levels in dog foods, the regulation permitting ethoxyquin in petfood at original levels of inclusion still stands today. Thus, it was competitive pressures, not any regulatory procedure, that caused this change in ethoxyquin use. Fortunately, reasonably suitable (albeit arguably not ideal) substitutes could be found to serve the function of ethoxyquin in petfood formulations. Still, in my opinion, loss of this useful tool by the industry is regrettable.

### Did we learn anything?

Today, with the war against ethoxyquin having been won, there is a consumer campaign against another com-

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7 Heritage Oak Lane, Suite 1, Battle Creek, MI 49015 269.897.6094 www.petfoodenterprise.com monly used petfood ingredient. I won't say what it is, because I don't want to inadvertently give any publicity to this cause. I will say that it is a conditionally essential nutrient that has been included in the majority of petfoods for decades without any indication of adverse effect.

Regardless, in the past few months

I've received quite a few calls about this ingredient. Some companies had first tried to disguise the name of the substance in the ingredient declaration, but that got them into trouble with regulators (and rightly so). It now appears that the only course of action remaining for these companies to consider is

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It won't end there, either. I am aware of at least two other very commonly used ingredients where there is rising, although in my opinion, very misguided concern. One is an essential nutrient! What will these companies do if and when these ingredients come under public fire? If you expend enough effort, you're likely to find negative aspects of virtually any ingredient. What will be left?

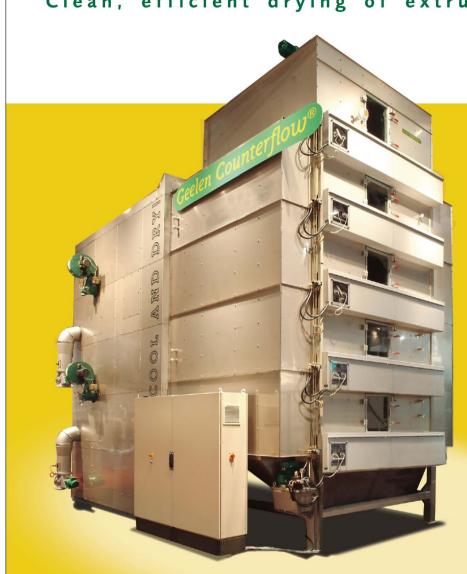
#### What can companies do?

I have no easy answers. However, I do think the atmosphere of heightened public concern created in part by the profusion of negative claims has fostered this predicament. If the primary means of selling your product is to disparage other products or their ingredients, eventually it will come back to bite you, either directly or though the consumer's lack of confidence in the industry as a whole. Interestingly enough, most of the calls I received regarding the aforementioned current ingredient controversy were from companies that tend to follow a negative marketing strategy.

In my consulting practice, I focus on the regulatory ramifications of labeling. As a result, I rarely advise against use of a negative claim unless it is likely to be considered false or misleading by feed control officials. Personally, though, I would like to see fewer negative claims on petfood labels. I humbly suggest that, irrespective of the possibility of any new regulations restricting the use of negative claims, extolling the virtues of your product rather than denigrating others will serve your company (and the petfood industry) better in the long run.

Dr. Dzanis is a writer and independent consultant for the petfood and animal feed industries on matters related to 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.

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# Ingredient Issues BY GREG ALDRICH, Phd

# BHA: no real risk can be identified

he "ingredient of the month" is the well-known, and often maligned, mono-phenolic compound, butylated hydroxyanisole—otherwise known as BHA. This potent synthetic antioxidant was patented by R.H. Rosenwald in 1949, and the first toxicity study was published in 1951. It has been scrutinized for its efficacy and safety (or lack thereof) ever since.

## **Efficacy in foods**

BHA is permitted in foods, feeds, cosmetics, rubber and petroleum products. In foods, its primary purpose is to extend shelf life by delaying the onset of rancidity. It works by retarding the ill effects that oxidation can have on food flavor, color and aroma. BHA has good carry-through in processed foods such as butter, lard, oils, emulsifiers, meats, cereals, cookies, crackers, chips, beverages, flavorings, prepared mixes and even chewing gum. BHA is more effective in animal fats than vegetable oils. It can also be added to packaging materials via waxed package coatings and liners.

BHA is synergistic when added in combination with other antioxidants and acids (e.g., BHT, methionine, lecithin, etc.) and has been reported to work well in petfood applications in combination with ethoxyquin (Gross et al., 1994). Incidental levels of BHA may be found in protein meals and other dry petfood ingredients; however, it is known to volatilize at temperatures and pressures common to kibbled petfood production. For this reason, it is most commonly used to preserve bulk fats and oils (e.g., pork fat) that are primarily surface applied.

### **Commercial application**

Structurally, BHA is a fairly simple compound with two side groups, a butyl group (four carbons) and a methoxy group (oxygen with CH3), radiating from a phenolic ring (a six-sided ring with an OH at the end). Like so many antioxidants, it is this ring structure that allows the compound to abstract the unpaired electron of a free radical and neutralize its damaging effects. They call this ring a "hindered" phenol, and BHA is one of the simplest of its kind (equate simple with better). BHA is strictly soluble in nonpolar substances like fats and oils and insoluble in polar compounds like water.

Commercially, BHA is available as a mixture of two isomers (2-tert-butyl-4-hydroxyanisole and 3-tert-butyl-4hydroxyanisole). It is a white or slightly yellow, waxy solid in its concentrated form (98.5% minimum with 90% from the 3-isomer) and is often found in tablet form to prevent caking. Intermediate companies dilute this purified BHA to more manageable concentrations (e.g., 10%) for direct application into fat sources. BHA is generally regarded as safe and is regulated by several federal agencies, mostly under 21 CFR172.110. For petfood and petfood ingredient applications, BHA is permitted at 200 ppm per unit fat (0.02% by weight of fat) alone or in combination with another antioxidant such as BHT.

#### Safety concerns

Just because BHA has been around for awhile doesn't necessarily mean the controversy surrounding this synthetic compound has gone away. For example, in 1986 California voters passed Proposition 65, the Safe Drinking Water and Toxic Enforcement Act. This act required chemicals that were presumed carcinogens to be "listed" in order to prevent their discharge into drinking water sources. BHA was one of the chemicals on this list because it was presumed to be a carcinogen by the International Agency for Research on Cancer (IARC, 1986). The IARC presumption of carcinogenicity was based on evidence obtained from "experimental animals." However, data from one animal model may not translate to all species (in this case a rat is not a dog).

In rats, mice and hamsters, BHA at mega-doses has been linked to papillomas and squamous cell carcinoma of the forestomach (Williams et al., 1999). However, humans, dogs and cats do not possess this nonglandular forestomach, also known as a proventriculus.

Interestingly, in the murine species (rats and mice) this forestomach appears to be the only target tissue affect-

It appears that BHA is a relatively safe option.

— Greg Aldrich



ed by BHA (Moch, 1988). It has been demonstrated many times over that dogs fed large dosages (in excess of 20 times permissible levels) over extended periods (in excess of six months) have not developed these lesions (Tobe et al., 1986). Further, it has been shown that BHA is rapidly absorbed (in a dose-dependent fashion), excreted in the urine and does not accumulate in the body of dogs (Takizawa et al., 1985).

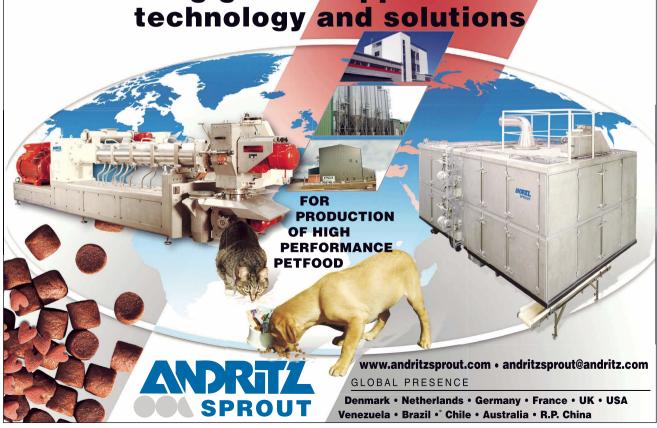
Since the mid-1980s there hasn't been a great deal of research published on this topic as it relates directly to dogs, and no data are found on BHA and its influence on cats. In the most recent comprehensive review on the topic, Williams et al. (1999) concluded that BHA posed no cancer hazard to humans at the current levels permitted in food, but that hasn't stopped the debate.

Despite this, BHA is still listed as "reasonably anticipated to be a human carcinogen" even though no supporting data in humans or their appropriate surrogate models (dogs rather than rats) exists.

While this demonstrates that BHA is likely safe in dog and possibly cat diets, it doesn't really address the concern of the pet owner, many of whom are electing to purchase foods preserved by natural means when possible. No doubt this would be the preference; however, at the present time, these foods fit more into the luxury category and most "mainstream" or "high-volume" petfoods utilize BHA in one capacity or another. Until natural preservatives are more cost-effective for this market segment it appears that BHA is a relatively safe option-provided you (or your pet) aren't a rat.

Dr. Greg Aldrich is president of Pet Food & Ingredient Technology Inc., which facilitates innovations in *foodsandingredientsforcompanion* animals. Tel: +1.785.271.0238, Email: aldrich4@cox.net.





# Market Watch By HUNTLEY MANHERTZ, Phd

# What are your customers saying about you?

maller niche operations must be tuned into the beat of consumer demand. Understanding your customers and the dynamics of the marketplace can help you control the direction of your business. In particular, with accurate insight into customers' attitudes and behaviors toward your products, you can better grow your business. So, let's talk about developing simple tools that can be used to facilitate growth.

#### **Information is key**

The first ingredient to successful planning is credible customer information. It is beneficial to use publications such as *Petfood Industry* magazine to obtain an overview of your market. In addition, you need a customer database stored in Excel or some other database format.

The information should include the customer's contact information: name, address, state, phone, E-mail and any demographic information you can get your hands on (e.g., gender, age). Also include your sales data for each customer transaction, what was purchased, the number of that specific item purchased and the date of the transaction. When the same customer purchases product every day of the week—you would enter this information into your database accounting for each transaction during the week.

Begin to compile this information for all the customers who have purchased from you in the past 12 months or so. From there, you will begin to build your database. Next give each customer in your database a unique identifier, so you can identify repeat information that can take your business to the next level.

You can gather critical

purchasers. If the first customer who

purchased from you, say 12 months

ago, was given an identifier 100, and this customer came back to your busi-

ness in the last week or so, you would

enter that transaction with identifier

ers if they would object to your reaching

out to them later to ask their opinions

of your products. For online purchases,

provide a webpage that allows custom-

ers to opt in for this purpose. In your

database, note whether you can or can-

not contact each customer. This avoids

any spam or no-call issues that can re-

sult from contacting customers without

Now we are ready to leverage your

data. There are two approaches to do-

ing this. First, you can evaluate your

internal database by looking at the pro-

file of your customer base. Ask ques-

tions such as are my customers older.

are they mostly single, do they tend

to buy from the state of Texas, etc. By

looking at these profiles and the sales

data of these profiles, you can begin

to plan marketing strategies for your

their prior consent.

database

Leveraging your

Last, but not least, ask your custom-

100.

business—keeping your most valuable customer segment in mind.

The second approach is to ask your customers their opinions of your product, your pricing, your new idea, the competition, a new packaging idea or a brand theme you have in mind. Typically, asking customers for their input is done in the form of a survey or a telephone conversation.

Depending on the scope and complexity of your questions, these techniques can be executed with the help of research firms at a reasonable price. Through phone and E-mail contact, you can gather critical information that can take your business to the next level.

Do this exercise every six months or so. It is best not to question your customers too often. Good luck growing your business, and Happy Holidays!

Dr. Huntley Manhertz Jr., is a consumer product goods market researcher and an independent writer. He can be reached at Tel: +1.813.310.0237, E-mail: info@ consumerlinkageresearch.com.



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### **Research Notes**

### Protein profiling of organic stone matrix and urine

Proteins comprise two-thirds of the organic matrix in urinary stones. Their relationship to calculogenesis remains controversial with regard to their effect as inhibitors or promoters. The purpose of the study was to determine the differences in peptide and protein patterns between the urine of stone formers (n = 23) and control dogs (n = 12), as well as between the organic matrix of different urinary stones (struvite n = 11, calcium oxalate n = 8, uric acid n = 4) using surface-enhanced laser desorption/ionization time-of-flight mass spectrometry.

Specific differences in protein and

#### > Protein profiling of organic stone matrix and urine

(JAPAN 90(5-6):192-199): In dogs, specific-urinary peptides and proteins might be associated with urolithiasis.

#### > Diet impacts colonic gene expression profiles

(ADSA ASAS Joint Meeting): Measurement of gene expression differences in the proximal colon of dogs consuming two different diets. peptide profiles were found in the organic matrix of different mineral compositions. Characteristic differences were also found in urinary peptide and protein patterns, especially in molecular masses below 20 kDa between affected and healthy dogs. Based on the obtained molecular masses. they were in some cases tentatively identified as proteins that are known to be involved in stone formation in humans. The study shows that in dogs, specificurinary peptides and proteins might be associated with urolithiasis. It indicates the importance to further characterize those proteins for possible diagnostic purposes, prognosis and therapy.

**Source:** Forterre, S. *et al.*, 2006. Protein profiling of organic stone matrix and urine from dogs with urolithiasis. *Journal of Animal Physiology and Animal Nutrition* 90(5-6):192-199.

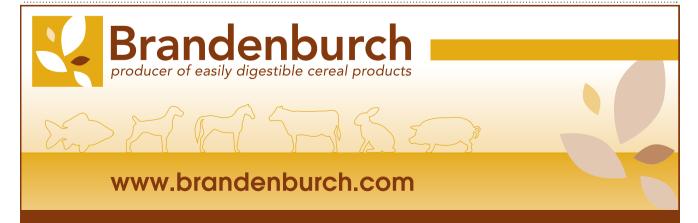
### Diet impacts colonic gene expression profiles

Mechanisms responsible for differences in intestinal morphology and fermentative end-product concentrations in geriatric and young dogs are unknown. Thus, the objective of this study was to measure gene expression differences in the proximal colon of healthy young adult and geriatric dogs consuming two distinct dog foods. Six geriatric (11-year-old at baseline) and six weanling (8-week-old at baseline)

female beagles were randomly assigned to one of two diets for 12 months: animal protein-based (APB: 28% protein, 23% fat and 5% fiber) or plant protein-based (PPB; 26% protein, 11% fat and 15% fiber). RNA was isolated from colon samples using Trizol and hybridized to Affymetrix GeneChip Canine Genome Arrays. Following normalization, data were analyzed using the mixed models procedure of SAS. Transcripts having a P< 0.05 and >1.5-fold change were considered different among groups. Diet manipulated gene expression in both young adult (144 transcripts) and geriatric dogs (166 transcripts).

Colonic tissue of young dogs fed APB had a higher metabolic activity, with genes associated with carbohydrate metabolism being expressed in greater quantities than young dogs fed PPB. Sodium potassium transporters were increased in young dogs fed APB while unchanged in old dogs. Genes associated with neurotransmitter degradation (MAOA and MAOB) were decreased in old dogs and increased in young dogs fed APB. Dipeptidyl peptidase IV, a gene involved in the breakdown of GLP-1, was increased in young dogs fed APB.

**Source:** Vester, B. *et al.*, 2006. Diet impacts colonic gene expression profiles of young adult and geriatric dogs fed either an animal- or plant protein-based diet. Proceedings of the 2006 ADSA ASAS Joint Annual Meeting, Minneapolis, Minnesota, USA.



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## **Product News**

#### High-speed robotic palletizer

Columbia/Okura's A1600 robot palletizes 50pound bags at a rate of 24 bags per minute, stacking bags of various sizes and types, including paper, poly and woven-poly, without tooling changes. The robot handles product from as many as four lower-speed production lines. A small



footprint and flexible layout allow placement in tight spaces, with capability for expansion.

Columbia/Okura LLC, 301 Grove St., Suite A, Vancouver, WA 98661 USA, Tel: +1.360.735.1952, Fax: +1.360.905.1707, E-mail: pallsales@colmac. com, Website: www.columbiaokura.com.

#### New leak detection system



Witt offers the MapMax, developed from the Leak-Master in-line model. This leak detection system for packaging can be integrated into the production line. The MapMax can also test individual packaging—for example, an entire batch from a thermoform or tray sealing machine—and test them one by one for leaks. This results

in cost savings as only individual, rejected packs need to be repacked.

Witt-Gasetechnik GmbH & Co. KG, Markus Mertens, Salinger Feld 4-8, D-58454 Witten, Germany, Tel: +49.02302.89010, Fax: +49.02302.89013.

#### Pallet rotator inverts entire pallet loads

The PalletPal Rotator from Southworth is designed to be a fast, safe, easy way to rotate fully loaded pallets. Southworth notes it is intended for replacing broken pallets, switching to or from in-house/shipping pallets, transferring loads to slip sheets and replacing damaged goods at the bottom of a load without the need for manual restacking. The PalletPal Rotator can handle loads measuring up to 48 inches x 48 inches x 60 inches with capacities up to 4,400 pounds.

Southworth Products Corp., PO Box 1380, Portland, ME 04104-1380 USA, Tel: +1.207.878.0700, Fax: +1.207.797.4734, E-mail: salesinfo@southworth products.com, Website: www.southworthproducts.com.

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#### Cylindrical vacuum dryers



Charles Ross & Son Co. offers a new line of cylindrical dryers for the chemical process industries. The 150-cubic-foot model is being used to dry specialty chemicals. The company notes that internal agitation

consists of an improved paddle design, set at opposing angles, to ensure the materials being dried are continuously exposed to the jacketed surface area of the trough and endplates. Designs are available from 1 through over 500-cubic-feet. Other options include choppers for size reduction, variable speed drives and control systems.

Charles Ross and Son Co., PO Box 12308, Hauppauge, NY 11788 USA, Tel: +1.800.243.ROSS, Fax: +1.631.234.0691, E-mail: sales@mixers.com.

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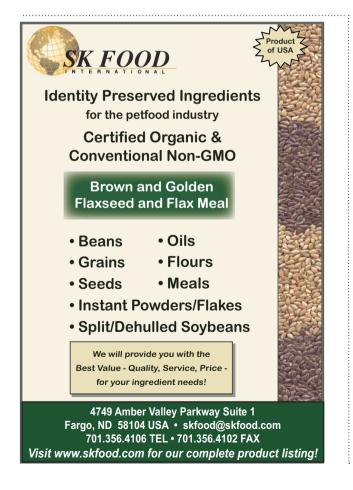
> AAFCO Midvear Meeting, January 16-18, 2007, Savannah, Georgia, USA. Contact: Sharon Krebs, P.O. Box 478, Oxford, Indiana 47971 USA. Tel: +1.765.385.1029. Fax: +1.765.385.1032. E-mail: sharon@aafco.org, Website: www.aafco.org.

**Global Pets Forum**, January 18-19, 2007, Marriott Hotel, Copenhagen, Denmark. Contact: Pets International, Tel: +31.33.422.5833, Fax: +31.33.422.5838, E-mail: corine@pets.nl, Website: www.petsinfo. net.

Annual Practical Short Course on Feeds & Pet Food Extrusion, January 28-February 2, 2007, Texas A&M University, College Station, Texas, USA. Contact: Dr. Mian N. Riaz, 2476 TAMU -Food Protein R&D Center, Texas A&M University, College Station, Texas 77843-2476 USA, Tel: +1.979.845.2774, Fax: +1.979.458.0019, Email: mnriaz@tamu.edu, Website: www.tamu.edu/extrusion.

>AFIA Expo/USPOULTRY IPE, January 31-February 2, 2007, Georgia World Congress Center, Atlanta, Georgia, USA. Contact: US Poultry & Egg Association, 1530 Cooledge Road, Tucker, Georgia 30084 USA, Tel: +1.770.493.9401, Fax: +1.770.493.9257, Website: www.poultryegg.org or www.afia.org.

**Global Pet Expo**, February 22-24, 2007, Orlando, Florida, USA. Contact: APPMA, 255 Glenville Road, Greenwich, Connecticut 06831



USA. Tel: +1.203.532.3601. Fax: +1.203.532.0551. E-mail: gpe@appma. org, Website: www.globalpetexpo.org.

> VIV Asia, March 7-9, 2007, Bangkok, Thailand. Contact: Richard de Boer, VNU Exhibitions Europe, P.O. Box 8800, 3503 RV Utrecht, Netherlands, Tel: +31.30.295.2714, Fax: +31.30.295.2809, E-mail: richard.de.boer@vnuexhibitions.com, Website: www.vnuexhibitions.com or www.viv.net.

NGFA Annual Convention, March 18-20, 2007, St. Francis, San Francisco, USA. Contact: National Grain and Feed Association, 1250 I St. N.W., Suite 1003, Washington, D.C. 20005 USA, Tel: +1.202.289.0873, Fax: +1.202.289.5388, E-mail: info@ngfa.org, Website: www.ngfa.org.

**Expo Zoo**, March 18-20, 2007, Paris, France. Contact: Expo Zoo, 45 Ave. George V, 75008 Paris, France, Tel: +33.1.53.57.62.24, Fax: +33.1.53.57.62.01, E-mail: Veronique.oury@europ-expo.com, Website: www.expozoo.com.

> Japan Pet Fair, March 29-April 1, 2007, Pacifico Yokohama, Tokyo. Contact: Tomo Miura, Tel: +81.3.3512.5674, E-mail: jpf2007@smj. co.jp, Website: www.jppma.or.jp/2007jpf/e/index.html.

> H.H. Backer Pet Industry Spring Trade Show, March 30-April 1, 2007, New Atlantic City Convention Center, Atlantic City, New Jersev, USA, Contact: H.H. Backer Associates Inc., 200 S. Michigan Ave., Suite 840, Chicago, Illinois 60604 USA, Tel: +1.312.663.4040, Fax: +1.312.663.5676, E-mail: hhbacker@hhbacker.com, Website: www.hhbacker.com.

> Petfood Forum, April 16-18, 2007, Hyatt Regency O'Hare Hotel, Chicago, Illinois, USA. Contact: Marcia Riddle, Watt Publishing Co., 122 S. Wesley Ave., Mt. Morris, Illinois 61054 USA, Fax: +1.815.734.5631, E-mail: mriddle@wattnet.net, Website: www.wattnet. com/petfoodforum.

> Petfood Focus on Treats, April 18-19, 2007, Hyatt Regency O'Hare Hotel, Chicago, Illinois, USA. Contact: Marcia Riddle, Watt Publishing Co., 122 S. Wesley Ave., Mt. Morris, Illinois 61054 USA, Fax: +1.815.734.5631, E-mail: mriddle@wattnet.net, Website: www. wattnet.com/petfoodforum.

> Petfood Forum Europe, May 8, 2007, Utrecht, Netherlands. Contact: Marcia Riddle, Watt Publishing Co., 122 S. Wesley Ave., Mt. Morris, Illinois 61054 USA, Fax: +1.815.734.5631, E-mail: mriddle@wattnet.net, Website:www.wattnet.com/petfoodforum.

► Victam International, May 8-10, 2007, Utrecht, Netherlands. Contact: Henk van de Bunt, Victam International B.V., P.O. Box 197, 3860 AD Nijkerk, Netherlands, Tel: +31.33.246.4404, Fax: +31.33.246.4706, E-mail: expo@victam.com, Website: www.victam.com.

> For a complete list of 2007 events, visit Petfood Industry Online at www.petfoodindustry.com

Send meeting dates to Jenny Kvamme at jkvamme@wattnet.net. Include dates, location, contact name, address, phone, fax, E-mail and website.

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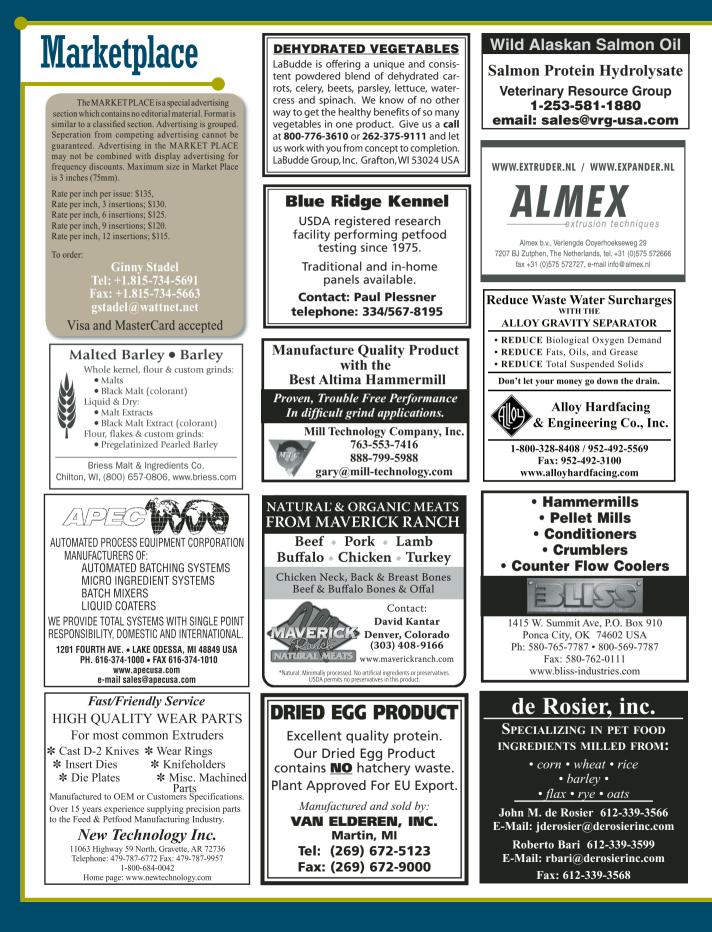
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## Something to Chew On BY DEBBIE PHILLIPS-DONALDSON Should you jump on the organic bandwagon?

o doubt about it, organic is hot. The organic industry has experienced double-digit growth each year since 1990, according to the Organic Trade Association (OTA), and is expected to continue growing. Organic petfoods comprise one of the hottest categories, with sales increasing 46% in 2005 over the previous year.

And yet, organic foods for humans represent just 2.5% of total US food sales, OTA says. For organic petfoods, the penetration is minuscule: just 0.09% of overall US petfood sales.

That means the only way to go is up. But no smart, responsible petfood manufacturer could be blamed for hesitating to jump on the organic bandwagon or commit a larger portion of its product mix to organic.

#### **Consumer confusion**

OTA exists to promote and support the organic industry, but even it expressed concerns in a 2005 report, *The Past, Present and Future of the Organic Industry* (www.ota.com/pics/documents/ Forecasting2005.pdf). "Many issues could cloud the future of organic products, including consumer confusion about organic definitions," it said.

While surveys often show consumers purchase organic products because of a perception that they're healthier and environmentally friendly, those are people who are already well educated about, and regular users of, these products. And that's a minority of consumers, only 10% of respondents to the 2005 annual *Whole Foods Market Organic Trend Tracker* survey (see www. wholefoodsmarket.com/company/pr\_ 11-18-05.html). Just 31.5% of people who don't consume organic products

### Experts predict organics will become more available, cheaper and more mainstream.



— Debbie Phillips-Donaldson

agree those foods have more nutrients; only 35% of this group believe organics are better for the environment.

But the Whole Foods survey showed 75% of respondents cited cost as the main reason for not buying more organics. Another important (and related) reason was availability of organic products, given by 46% of respondents.

#### Wanted: more farmland

For producers, availability is a major concern in terms of agricultural supply, especially farmland. Currently less than 1% of farmland around the world is certified organic, according to OTA. While organics experts believe that could expand to about 12.6% by 2025, any increase is dependent on government support, especially in the US.

OTA cites a report, *The World of Agriculture: Statistics & Emerging Trends 2006*, which says the amount of farmland under organic management worldwide grew about 5 million hectares in a single year (to a total of 31 million hectares). Three million of those newly organic hectares are in China, which may not necessarily help producers in other parts of the world.

#### What to do?

The recent Pet Food Institute (PFI) annual meeting in Chicago, Illinois,

USA, brought to light several key points:

➤ More and more information for producers is available about organics, and much of it includes pet products. For example, the September issue of *Natural Food Network Magazine* includes an article about natural and organic pet supplements. The Natural Food Network website (www.naturalfoodnet. com/nfnportal) offers resources such as a directory of organic suppliers.

> Your industry, through PFI, is working with the US Department of Agriculture National Organic Program (NOP) to develop a petfood standard within the NOP standards. This could help ensure better consistency among organic petfood products and labels, which in turn could help drive consumer interest in, and knowledge about, organics for pets.

Despite current obstacles, most experts predict organic products will become ever more available, cheaper and more mainstream. In its 2006 *Pet Food in the US* report, Packaged Facts projects US sales of organic petfoods will grow at a compound annual rate of 25% through 2010. Will you be part of that growth?

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



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