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Features

18 Top 10 global petfood leaders
By Jessica Taylor Bond
These influential industry giants know just where to sit and stay—at the top.

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On the cover: The pets of Petfood Industry/Watt employees (see p. 50).
We have petfood ingredients down to a science!

Developing unique science-based technologies and supplying novel products tailored to meet the specific needs of the petfood industry has been ADF’s mission for over 25 years. Our expertise in processing has provided the petfood market with a consistent supply of high quality protein ingredients. Along the way, our focus has always centered on ingredients of uncompromising quality backed by the solid application of science and the skill of the industry’s finest customer care team.

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Balancing safety, profit and price

There’s some sort of classic struggle going on here. First, the petfood industry wants to produce good safe products at the best possible profit. Next, the public wants to buy good safe products at the best possible price. And finally, regulators want to make the best possible compromises.

However, regulators tend to be chronically under funded. The world talks safety but doesn’t adequately fund it. This fact is widely known. There are no angels or devils here, just speckled shades of gray.

Perhaps what we need are ways to use peer pressure to increase the voluntary safety efforts of all companies. Perhaps we need a more effective regulatory presence. Perhaps, if the Food and Drug Administration (FDA) does not get enough funding, we will be forced to rely on voluntary safety regardless of what we want.

AFIA’s safety dialogue

I recently attended the American Feed Industry Association’s (AFIA) “National dialogue on ingredient safety.“ AFIA wants to give the FDA input on crafting Guidelines for Industry (GFI) for improving petfood safety. Here are points and questions that came out of the meeting:

➢ It is essential that the rules be science-based.
➢ Will regulators, especially state and international, use GFI advice against petfood companies?
➢ What’s the difference between voluntary and regulated safety?
➢ Another problem: lack of uniformity—will FDA focus on big companies, but not hold smaller companies accountable?
➢ What’s the difference between voluntary and regulated petfood safety, especially for small companies that can usually get by with ignoring regulations?
➢ Are problems usually with the companies that don’t come to meetings like the recent AFIA dialogue on ingredient safety?
➢ Don’t make the requirements a disincentive for good quality assurance.
➢ If companies are taking samples that can be used against them by regulators, it’s a disincentive for taking samples.

To be continued

AFIA launched its Safe Feed/Safe Food Certification Program on Sept. 22, 2004. It is intended for companies interested in demonstrating their pledge to food safety and enhancing consumer confidence in the products they provide. Will something like this be enough? Probably not, but it is a step in the right direction.

Don’t make the requirements a disincentive for good quality assurance.

— Tim Phillips

Tell us what you think!

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

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

Quick hits

- **Food Safety Net Services** hosted China’s Vice Minister of Science and Technology, Liu Yanhua, at its San Antonio, Texas, USA, laboratory.

- **Rosen’s Diversified Inc.** plans to open a Performance Pet Products LLC petfood and treat production facility at the former Mitchell, South Dakota, USA, Dakota Pork plant.

- **Launching this month** in the UK, the Pedigree Adoption Drive will raise money and awareness to benefit dogs in rescue centers.

- **Hill’s Pet Nutrition Inc.** is cosponsoring the 14th annual Pets Need Dental Care Too program and offering National Pet Dental Health Month Kits to veterinarians.

- **Nick Deldon** has been appointed vice president of finance and information systems for Old Mother Hubbard, Tewksbury, Massachusetts, USA.

Safety steps recommended

The Pet Food Institute (PFI) has received recommendations from the National Pet Food Commission (NPFC) and is developing a plan to implement them. The NPFC was established by PFI in April 2007 to conduct an independent review of the petfood recalls of 2007. The commission was comprised of recognized authorities in nutrition, toxicology, veterinary medicine and quality control.

From its study the NPFC recommended steps the industry and government can take to further build on the safety and quality standards already in place for petfood. Recommendations include developing a model product safety/quality assurance program, developing a model emergency response plan, using existing or developing additional, contractual trading rules governing the purchase and sale of ingredients and expanding educational and training initiatives.

For a complete list of all NPFC recommendations to PFI and manufacturers, visit www.petfoodindustry.com/NPFC.aspx.

Tainted petfood may have killed 300 pets

More than 300 North American cats and dogs may have died from eating contaminated petfood in 2007, according to a Michigan State University study conducted for the American Association of Veterinary Laboratory Diagnosticians. The survey of veterinarians found that 236 cats and 112 dogs died or were treated for symptoms linked to recalled petfood, says Wilson Rumbeiha, a clinical toxicologist who conducted the study. About 4,000 pet owners contacted authorities claiming their pets died after eating tainted or recalled petfood.

“We were surprised there were fewer verifiable cases,” Rumbeiha said. The survey counted only cases where the pets ate the recalled food and the diagnosis was consistent with kidney failure from the contaminants. While the study found at least 224 pets are known to have died, the voluntary survey most likely underrepresented the actual number of deaths from the tainted food. “We are saying at least 300 cases because there may have been some cases not entered,” the researcher stated.

The study found more cats and smaller dogs got sick than larger dogs, and most cases occurred in Texas, Illinois and Michigan (98% came from the US). The first analysis covers responses through June; more vets submitted cases through October, which Rumbeiha’s team is currently analyzing.

Early-bird registration for Petfood Forum events

Take advantage of early-bird specials and register for Petfood Forum Asia, Petfood Forum 2008 and Petfood Focus on Safety by January 15, 2008, to save more than 15% off of the price. If you register for both Petfood Forum 2008 and Petfood Focus on Safety you will receive a discount of 25%.

Petfood Forum Asia takes place for the first time ever on March 5, 2008, in Bangkok, Thailand, in conjunction with Victam Asia. For more information, see p. 28. Registration for Petfood Forum Asia, Petfood Forum 2008 and Petfood Focus on Safety is available online at www.petfoodindustry.com/petfoodforum.aspx. Register today!
Denmark petfood factory receives food safety certificate: The Aller Petfood factory received the official certificate showing that the facility observes the requirements of the ISO 22000 standard for food safety. Although ISO 22000 is widely used by companies within the human food market, the Aller Petfood plant in Fredericia, Denmark is the first petfood factory in Europe—and perhaps the first in the world—to receive the certificate, according to Aller.

New reports update UK petfood figures: A series of new reports has been released by the United Kingdom based market research company Snapdata that revises earlier historical valuations of the UK cat food and dog food markets for the year 2006. Previous figures released by the Pet Food Manufacturers Association set the UK market value of dry, moist, mixer and treats for cats and dogs at £1,589 million (US$3.15 million), roughly a 2.5% increase from 2005. In Snapdata’s Snapshot Report: UK Pet Food 2007 that value is reset to £1,615.1 million (US$3.20 million), a 3.8% increase from the previous year.

The company has also published two reports, UK Dog Food 2007 and UK Cat Food 2007, that offer forward looking and historical data. Snapdata predicts that by 2011, the UK dog food market will be at 790.1 tons in volume. Snapshot Reports are available at www.snapdata.com.
INDUSTRY CALENDAR

**January**

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Conference on Pet Food Ingredient Quality, January 22-23, 2008, Georgia World Conference Center, Atlanta, Georgia, USA. Contact: Jarrod Kersey, American Feed Industry Association, jkersey@afiia.org, John Starkey, Poultry Protein & Fat Council, jstarkey@poultryegg.org, www.petfoodconference.com.

International Poultry and Feed Expo, January 23-25, 2008, Georgia World Congress Center, Atlanta, Georgia, USA. Tel: +1.770.493.9401, www.ipe08.org.


18th Annual Practical Short Course on Feeds and Petfood Extrusion, January 27-February 1, 2008, Food Protein R&D Center, Texas A&M University, College Station, Texas, USA. Contact: Dr. Mian N. Riaz, Tel: +1.979.845.2774, Fax: +1.979.458.0019, mnriaz@tamu.edu, www.tamu.edu/extrusion.

**February**

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13th International Industrial Trade Fair, Cereals, Mixed Feed and Veterinary, February 5-8, 2008, All-Russia Exhibition Centre, Moscow, Russia. Contact: Alexandra Zharko, Tel: +7.495.956.41.52, Fax: +7.495.730.19.92, garko@intourist.ru, www.intourist.ru.


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

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10 | Petfood Industry | January 2008
Seize the opportunities at Petfood Forum Asia! This is the debut of the Asian edition of Petfood Forum, the premier event for the petfood industry for 15 years.

As part of Victam Asia 2008, Southeast Asia’s leading agrifeed event, Petfood Forum Asia will be the meeting place for petfood professionals from around the world. You will find new products and the latest innovations as you network with your peers and industry experts. And you will learn about:

- Global and Asian petfood sales trends.
- Petfood safety and traceability.
- Update on nutrition.
- New and functional ingredients.
- Advances in palatability.
- Hot product trends.
- And more!

For updates on the program, bookmark www.petfoodindustry.com/petfoodforum.aspx.

Petfood Forum Asia
March 5, 2008
10:00 to 17:00
Queen Sirikit National Convention Center
Bangkok, Thailand

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Early-bird registration fee (through January 15, 2008): US$225

Registration fee after January 15, 2008: US$275

Register now and save! Turn the page or visit www.petfoodindustry.com/petfoodforum.aspx.

Or contact Nancy Grossnickle at ngrossnickle@wattnet.net or Tel: +1.815.734.5674.

Victam Asia 2008 brings together exhibitors, conference delegates and visitors from the animal feed, aquafeed, petfood and grain processing industries. The show also features conferences presented by the Thai Department of Livestock Development and Aquafeed.com USA. For more information, visit www.victam.com.
Registration Form

Or register online at www.petfoodindustry.com/petfoodforum.aspx

Petfood Forum Asia 2008
March 5, 2008
Queen Sirikit National Convention Center
Bangkok, Thailand

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Registration includes all conference sessions, a light breakfast, generous buffet lunch and coffee break.

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NOTE: Registrations will not be processed without payment; rate is determined by date payment is received. Prior to January 15, 2008, registration fees are refundable minus a US$50 cancellation fee; after January 15, no refunds are available.

Substitution of registered personnel is available at no charge.

For more information, please contact Nancy Grossnickle at ngrossnickle@wattnet.net or Tel: +1.815.734.5674

Petfood Forum Asia 2008 is held in conjunction with Victam Asia 2008. Registration to Victam Asia is free if made online at www.victam.com prior to March 5, 2008. For information on hotels and travel packages, please visit www.victam.com.

For information on exhibiting, contact Victam or Ginny Stadel at gstadel@wattnet.net or Tel: +1.815.734.5691.
The articles we print in each issue of the magazine represent just a portion of the latest information on topics most important to you. We’re able to provide even more useful content online. For example, this month you’ll find online extras about:

➤ **The top 10 global petfood manufacturers**—profiles start on p. 18 of this issue, with more about each company at www.petfoodindustry.com/top10.aspx.

➤ **Rapidly growing Asian markets**—these are highlighted on p. 31, and you’ll find more data and analysis from Euromonitor at www.petfoodindustry.com/asia.aspx.

➤ **Functional fiber**—the article starting on p. 32 is based on comprehensive research by Dr. George Fahey and colleagues, available at www.petfoodindustry.com/fiber.aspx.

➤ **Why salt in petfood is a good thing**—Dr. Greg Aldrich dispels misperceptions and explains the benefits of salt on p. 38. Read more of his insightful comments at www.petfoodindustry.com/salt.aspx.

**Multimedia and more**

PetfoodIndustry.com also offers a growing video library about petfood companies. So far you can find:


➤ A video from a canine nutrition symposium presented by Royal Canin last fall; go to www.petfoodindustry.com/royalcanin.aspx.

Plus, at any time you’ll discover more industry news, articles, research and new products (for both consumers and manufacturers) on PetfoodIndustry.com.

And don’t forget to check out what’s on the minds of your fellow petfood professionals by visiting the Discussion Board online. While you’re there, please share your own thoughts!

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Jan Hall, Logistics Coordinator

www.3dcorpsol.com
Feedback

Every month Petfood Industry conducts an electronic survey of readers. (For the current survey, go to www.petfoodindustry.com/monthlysurvey.aspx) In the past few months, we’ve asked about the impact of last spring’s US recalls on the market. In October we asked if respondents were aware of any effects the recalls had on the Asian petfood industry. Of 62 people responding to the question:

➤ 48% said they were unaware of any effects.
➤ Of the 52% who said the industry had been affected, 69% reported general awareness of a distrust or loss in exported Asian products; 31% said they knew of increases in safety or quality standards.

Examples of respondents’ comments included:

➤ We’ve had an increase in supplies coming from non-Asia based manufacturers and higher measures for testing raw materials and final products coming from Asia.
➤ Loss of business for Chinese ingredient suppliers, higher cost for manufacturers who chose not to buy materials “Made in China.”
➤ We’ve stopped sourcing from China until further notice.

In November we asked readers if they thought petfood manufacturer trade associations should provide an adverse event reporting system. Of the 68 people answering the question, 87% said yes. Their comments included:

➤ We need an unbiased reporting system that is obvious to the consumer, accessible to all and able to act rapidly to prevent exposure of an unhealthful product.
➤ For persons such as myself, in the beginning phase of petfood production, marketing is a major expense. Any feedback from events, negative or otherwise, helps determine the allocation of monies.
➤ There needs to be a central reporting system that serves the industry with timely information about ingredients and possible contaminants that are not normally recognized. The recent melamine contamination is a prime example.
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Buhler – your partner for processes and plants in the Petfood industry.
After a tumultuous and media-scrutinized year, our industry has seen plenty of changes. Some things, however, remain relatively consistent, like the 10 companies that lead the petfood industry in global sales. But just like the March 2007 recalls and the resulting push of fresh, organic and natural products, there’s always room for a few surprises. Although most companies profiled are familiar names, two Brazilian companies have entered the ring.

Lead dogs and new pups

The latest information from Euromonitor International shows the continued growth of the global petfood market since 2001 (Table 1). As of fall 2007, worldwide dog and cat food sales stood at US$45.12 billion, a 4.9% increase over the previous year. Euromonitor projects this growth to continue at a compound annual rate of 2.9%, reaching about US$52 billion by 2012.

For overall market sales, research companies like Euromonitor are able to provide data close to real-time. For individual company sales and market shares, data lags by a year. Thus, Tables 2 and 3 (p. 20) present the top 10 global petfood companies by sales and growth, respectively, as of the end of 2006.

1 Mars Petcare

World headquarters: McLean, Virginia, USA (Mars Petcare: Franklin, Tennessee, USA)

Approximate 2006 global retail sales: US$10.71 billion

Officers: Doug Cahill, president, Mars Petcare US

Top brands: Pedigree, Cesar, Sheba, The Goodlife Recipe, Whiskas, Greenies, Royal Canin

New products: Cesar Gourmet Filets in sauce, WholeMeals for Dogs, Multi-pack Whiskas Favourites and Fisherman’s Choice (UK)

Websites: www.mars.com; www.marspetcare.com

Mars Petcare, the pet division of Mars Inc., continues to grow by relying on innovation and leveraging the expertise within its Waltham Centre for Pet Nutrition. Sales across its core brands, such as Pedigree, Cesar and Whiskas, have remained strong, Mars says. The introduction of the Goodlife Recipe was the largest brand launch in Mars Petcare US history, according to the company, and the line has performed well.

That launch contributed to Mars’ earning the number two spot for new dog products in 2007 and the number one spot for new cat products (Table 4, p. 23). The company also launched two Whiskas steam-cooked 12-pack cat foods exclusively to UK independent retailers.

Table 1: Dog and cat food sales worldwide

| Global sales of dog and cat food have grown at a steady pace over the past five years. Source: Euromonitor International. |
|---|---|---|---|---|---|---|
| Dog and cat food | US$45.12 | 5.1 | 3.7 | 5.2 | 4.8 | 5.9 | 4.9 |
| Dog food | US$28.25 | 5.8 | 4.4 | 6.1 | 4.9 | 6.6 | 5.2 |
| Cat food | US$16.86 | 4.2 | 2.7 | 3.7 | 4.7 | 4.8 | 4.4 |
Retailers in late 2007. WholeMeals for Dogs is the first single-piece meal designed for dogs, according to Mars, and will be available at pet specialty retailers in the US in February.

The company asserts all its products, branded and private label, undergo industry-leading testing and quality control, and its stringent quality program extends to its supply chain.

Table 2: Top 10 in global petfood sales

Approximate global dog and cat food sales in 2006 put these 10 companies in the lead. *Nutro Products Inc. was purchased in May 2007 by Mars Inc., but for the sales reporting period, Nutro was still a separate company.

Source: Euromonitor International.

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<td>Mars Inc.</td>
<td>US$10.71</td>
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<td>12.7</td>
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<td>5.9</td>
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<td>Nestlé SA</td>
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<td>6.6</td>
<td>20.8</td>
<td>8.1</td>
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<td>10.8</td>
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<td>14.8</td>
<td>15.5</td>
<td>2.1</td>
<td>-1.2</td>
<td>4.1</td>
<td>5.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Uni-Charm Corp.</td>
<td>US$ .29</td>
<td>0.7</td>
<td>-11.1</td>
<td>3.7</td>
<td>15.3</td>
<td>9.7</td>
<td>0.4</td>
<td>0.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Total Alimentos SA</td>
<td>US$ .20</td>
<td>0.5</td>
<td>-12.1</td>
<td>-10</td>
<td>34.6</td>
<td>41.9</td>
<td>62.4</td>
<td>30.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Nutriara Alimentos Ltda.</td>
<td>US$ .20</td>
<td>0.5</td>
<td>-5.2</td>
<td>-12.4</td>
<td>-10.4</td>
<td>22.3</td>
<td>36.4</td>
<td>38.7</td>
<td>0.4</td>
</tr>
</tbody>
</table>

2 Nestlé Purina PetCare

World headquarters: Vevey, Switzerland (Nestlé Purina PetCare: St. Louis, Missouri, USA)

Approximate 2006 global retail sales: US$10.48 billion

Officers: W. Patrick McGinnis, CEO, Nestlé Purina PetCare; Terence Block, president, PetCare NA; Rock Foster, CFO

Top brands: Purina, Friskies, Alpo, Beggin’ Strips, Beneful, Busy Bone, Fancy Feast, Mighty Dog, Pro Plan, Bakers, Felix, Go Cat, Gourmet Gold, Vital Balance, Vitalife, Cheweez, DeliCat, TBonez, HiPro

New products: Friskies dry food secured Nestlé Purina Petcare (part of Nestlé SA) another flourishing year. It was the number one company for new dog products and number two in new cat products (Table 4).

With 24% of the total market share in 2006 (Table 2), Nestlé is focusing development on niche markets. The Pro Plan Dry Senior Cat Food line is an example, specially designed for aging and elderly cats.

Premium and superpremium brands have been driving growth in the UK. Top performing brands include Pro Plan and Bakers Complete. Eastern Europe is another growth area for the company, where in August Nestlé Russia announced plans to open a factory in Vorsino, Kaluga Region.

Top brands: Eukanuba, Iams

New products: Eukanuba Healthy Extras Puppy Growth Biscuits, Eukanuba Mature Care Formula for Cats, Iams Premium Protection for Dogs and Cats, Iams Healthy Naturals, Iams Digestive Care for Cats


Since the petfood recalls last March, Procter & Gamble’s shares in the pet segment have been down, running 1 to 1.5 share points lower since the four weeks ended February 24, 2006, the last period before the crisis. “Unfortunately, even though these wet and semi-moist products are less than 10% of our product line, we frankly got hit pretty hard,” stated
A.G. Lafley, P&G CEO and chair.

Even though P&G’s larger dry food business was unaffected by the recall, many have speculated, due to dropping sales and shares, that P&G may sell their Iams and Eukanuba brands.

P&G Petcare managed a healthy US$2.86 billion in retail sales in 2006, with a strong showing in new product launches in both dog and cat food (Table 4). Iams Premium Protection line for Dogs and Cats, launched in August 2007, boasts offerings for eight of the top 10 dog health problems and seven of the top 10 cat health problems with a barrage of ingredients and antioxidants, according to P&G.

Table 3: Top 10 in global petfood growth

<table>
<thead>
<tr>
<th>Company</th>
<th>% growth 2005 to 2006</th>
<th>% growth 2000 to 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>MaltaCleyton SA de CV, Mexico City, Mexico, <a href="http://www.maltacleyton.com.mx">www.maltacleyton.com.mx</a></td>
<td>213.3</td>
<td>2075.6</td>
</tr>
<tr>
<td>Del Monte Foods Co., San Francisco, California, USA, <a href="http://www.delmonte.com">www.delmonte.com</a></td>
<td>57.6</td>
<td>NA</td>
</tr>
<tr>
<td>Nutriara Alimentos Ltda., Arapongas, Paraná State, Brazil, <a href="http://www.nutriara.com.br">www.nutriara.com.br</a></td>
<td>38.7</td>
<td>72.3</td>
</tr>
<tr>
<td>Mogiana Alimentos SA, Campinas, Brazil, <a href="http://www.guabi.com.br">www.guabi.com.br</a></td>
<td>36.2</td>
<td>21.3</td>
</tr>
<tr>
<td>Total Alimentos SA, Tres Coracoes, Brazil, <a href="http://www.totalalimentos.com.br">www.totalalimentos.com.br</a></td>
<td>30.4</td>
<td>219.8</td>
</tr>
<tr>
<td>Inaba Pet Food Co Ltd., Yui, Shizuoka Prefecture, Japan, <a href="http://www.inaba.com">www.inaba.com</a></td>
<td>22.3</td>
<td>54.2</td>
</tr>
<tr>
<td>Provimi BV, Rotterdam, Netherlands, <a href="http://www.provimil.nl">www.provimil.nl</a></td>
<td>10.7</td>
<td>90076.1</td>
</tr>
<tr>
<td>Colgate-Palmolive Co., New York, New York, USA, <a href="http://www.colgate.com">www.colgate.com</a></td>
<td>8.8</td>
<td>60.9</td>
</tr>
</tbody>
</table>

Hill’s Pet Nutrition

World headquarters: New York, New York, USA (Hill’s Pet Nutrition:}

Janet Donlin, Chief Veterinary Business Channel

Top brands: Hill’s Science Diet, Hill’s Prescription Diet

New products: Science Diet Nature’s Best Canine petfood, Prescription Diet Canine and Feline Treats


Employees: Over 2,800

With companies outside of North America growing the most, Hill’s Pet Nutrition still managed 8.8% in growth from 2005 to 2006 and an overall growth rate of 60.9% since 2000 (Table 3). Hill’s says its keys to expansion are building and strengthening relationships in the veterinary
profession and continuous innovations and improvements in wellness and therapeutic petfood nutrition. Hill’s also announced plans to build a new manufacturing plant in Emporia, Kansas, USA.

Less than 1% of Hill’s products were affected by the recalls, and the company strives to remain known for the highest quality and safety standards. After the recalls it added additional safety checks on raw materials and finished products prior to release.

This past year Hill’s relaunched Science Diet Nature’s Best Canine petfood and introduced Prescription Diet Canine and Feline Treats.

Del Monte’s net sales for the year ended April 29, 2007, were US$1.3 million, an increase of 50% compared to fiscal year 2006. The increase was driven by volume gains primarily due to continued momentum of Meow Mix cat food and Milk Bone dog treats. Growth from new products and net pricing actions also positively contributed to the increase in net sales, with 16 SKUs in new cat food products (Table 4).

Although Del Monte’s shares dipped US$0.73, or 7.5%, the company had an astounding 57.6% growth from 2005-2006 (Table 3). The company produced second-quarter earnings per share of 13 cents vs. 11 cents last year. Sales rose 5% with growth in new petfood offerings. Del Monte is hoping competitors in the industry push through a price hike early this year to offset the rising costs of grains used in brands such as their Meow Mix and Kibbles ‘n Bits brands.

Affinity Petcare, a division of Agrolimen SA, says it is committed to the following values: imagination, innovation, flexibility and a scientific and systematic approach. The company offers a wide range of products, from special veterinary diets to super-premium foods to value-priced products for cats and dogs.

Affinity products are distributed mainly in the European Union, but the company is building a distributor network within the fast-growing Eastern European petfood market, too.

Besides expanding distribution, Affinity’s growth strategy is based on new product development and

For Quality Petfood Ingredients

Count On Scoular People
strong promotion efforts. Its new Special Care cat foods draw on expert veterinarians and nutritionists, the company says, to treat specific conditions such as urinary tract health and hairballs. Both are dry diets.

**Nutro Products Inc.**

*World headquarters:* City of Industry, California, USA

*Approximate 2006 global retail sales:* US$0.56 billion

*Officers:* David Kravis, CEO; Mike Satterwhite, executive vice president; Ladd Hardy, senior vice president, marketing

**Top brands:** Max Dog, Ultra Dog, Natural Choice Dog, Max Cat Gourmet Classics, Natural Choice Complete Care Cat

**New products:** Ultra Large Breed Puppy and Adult; Natural Choice: Sensitive Skin & Stomach Formulas, Complete Care Indoor Kitten & Weight Management, Senior Brown Rice & Lamb Meal, Dog Healthy Desserts, Small Bites Lite & Senior

*Websites:* www.nutroproducts.com; www.ultraholistic.com

Nutro Products Inc. was purchased in May 2007 by Mars Inc., but for the sales reporting period used in this article, Nutro was still a separate company. The company prides itself on using natural ingredients, making foods pets drool over and thrive on, and being at the forefront of research. Though affected by the March 2007 recalls, it has since stepped up its safety and testing programs to prevent future incidents.

Since the introduction of its Max line in 1985, Nutro has expanded the dog food line to include a variety of products for every stage of a dog’s life and a full line of foods for cats. The popular Natural Choice line now includes treats and biscuits as well as wet foods for both dogs and cats.

Nutro experienced growth in its superpremium holistic brands with new products such as Natural Choice Complete Care Indoor Kitten & Weight Management.

**Unicharm PetCare Corp.**

*World headquarters:* Tokyo, Japan

*Approximate 2006 global retail sales:* US$0.29 billion

*Officers:* Toshio Takahara, chairman; Gumpei Futagami, president/CEO

**Top brands:** Aiken Genki Gin no Sara, Neko-Genki Silver Spoon, Gaines Pakken
Table 4: Top 10 in new products, 2007

These numbers reflect the leading companies for new dog and cat food products (by stock keeping units, or SKUs) through November 2007. Source: Productscan/Datamonitor Inc.

<table>
<thead>
<tr>
<th>Company</th>
<th>New SKUs</th>
<th>Company</th>
<th>New SKUs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procter &amp; Gamble Co., Cincinnati, Ohio, USA, <a href="http://www.pg.com">www.pg.com</a></td>
<td>44</td>
<td>Colgate-Palmolive Co., New York, New York, USA, <a href="http://www.colgate.com">www.colgate.com</a></td>
<td>18</td>
</tr>
<tr>
<td>Muscatine Foods Corp., Muscatine, Iowa, USA, <a href="http://www.kentfeeds.com">www.kentfeeds.com</a></td>
<td>35</td>
<td>Morando SpA, Andezeno, Torino, Italy, <a href="http://www.morando.it">www morando.it</a></td>
<td>17</td>
</tr>
<tr>
<td>Herrmann GmbH, Munich, Germany, <a href="http://www.herrmannshundfutter.com">www.herrmannshundfutter.com</a></td>
<td>32</td>
<td>Aixia Corp., Tokyo, Japan, <a href="http://www.aixia.jp">www.aixia.jp</a></td>
<td>16</td>
</tr>
<tr>
<td>Drs. Foster &amp; Smith, Rhinelander, Wisconsin, USA, <a href="http://www.drsfostersmith.com">www.drsfostersmith.com</a></td>
<td>15</td>
<td>Drs. Foster &amp; Smith, Rhinelander, Wisconsin, USA, <a href="http://www.drsfostersmith.com">www.drsfostersmith.com</a></td>
<td>16</td>
</tr>
</tbody>
</table>
Unicharm PetCare Corp. is a division of Tokyo-based conglomerate Uni-Charm Corp. and is continuing to take advantage of Japan’s steadily growing pet population of 25 million companion animals. The company believes the key to its continuing rise is a strong emphasis on four trends: indoor cats and dogs, small dogs, overweight animals and the aging pet population. To differentiate itself from other fast-growing Japanese petfood manufacturers, Unicharm emphasizes the speed of converting consumer needs into products and applying technology to premium foods.

Unicharm is betting on pet humanization to drive consumers to more premium and superpremium products like its new semi-moist dog food Gaines Pakken White Meat Chicken and Ginno Spoon Retort Pouch, a wet cat food.

Since Gumpei Futagami became president and CEO of the company in 2001, the pet division has grown 13%-14% annually. To continue a healthy growth, Unicharm faces challenges in improving product quality, safety consciousness and gaining profits in an environment where raw materials are increasingly expensive.

Total Alimentos SA

World headquarters: Três Corações, Brazil
Approximate 2006 global retail sales: US$0.20 billion
Top brands: Big Boss, Big Boss Nuggets, Lider, Familia Max, K&S, Nero, Equilibrio, Supreme, Snacks
New products: Supreme Cães Sensíveis, Feitiço Bolas de Pêlos, Nero Refeição, Lançamento Big Bom, Kitute Higiene Bucal
Website: www.totalalimentos.com.br

New this year to the Top 10 profiles, Total Alimentos SA is a Brazilian-based company operating from its facility since 1974. The company’s single objective: to provide consumers innovative products with high levels of technology.

Total Alimentos credits investments in technology, research, new ingredients and communication with customers as reasons it currently occupies such a prominent position in the production of food for dogs and cats.
in Brazil and worldwide. From 2005 to 2006 the company experienced a strong 30.4% growth rate, with overall growth of over 200% from the year 2000 (Table 3).

With pioneering technologies in palatability of dry and wet foods, Total Alimentos prides itself on modern and exclusive processes. The company also claims to be the only petfood manufacturer certified in ISO 9001, GMP and HACCP. Total Alimentos thinks these programs contribute to the controls of its processes and products, ensuring consumers safe and reliable petfood, since they comply with multiple international standards of food safety.

Nutriara Alimentos Ltda.

World headquarters: rapongas, Paraná State, Brazil
Approximate 2006 global retail sales: US$0.20 billion
Top brands: Foster, Freddy’s, Bybo, Dog Show, Blog Dog, Dog Friends, Tommy, Fulldog, Flooo, Dunga, Ringo, Pitoko Mix, Pitty, Bidu, Street Dog, Pitukão Pitukinha, Gatto, Street Cat, Blog Cat, Clean Cat, Pitukats
New products: Dog Show Gourmet, Dog Friends Dry food, Gatto Meat, Fish & Mix
Website: www.nutriara.com.br

The second new petfood company from Brazil to appear on our list, Nutriara Alimentos Ltda. was founded in 1991. Initially production was directed at birds, pigs, bovine and equine breeders. It wasn’t until 1996 that the company opened the pet segment of its business, but it took little time for Nutriara to secure a position in the competitive petfood market.

Nutriara expanded its activities and facilities, changed over its production lines and began focusing its investments solely on petfood. Since 2000, the company has experienced 72.3% in growth (Table 3) and doesn’t plan on slowing down any time soon. With an enormous range of products for both cats and dogs, many of which are top sellers, the company strives to offer pet products for animals of all ages, sizes and special health needs.

Currently, Nutriara products can be found in every region of Brazil, as well as Argentina, Uruguay, Paraguay and Chile. Focusing on increasing production, the company has recently built another facility in Uruguay. Nutriara has also formed a partnership with Cargill Animal Nutrition and is preparing to take on the rest of the world, one piece of kibble at a time.
Alice’s life was an uncomfortable one because of hairballs. A specially formulated cat food now makes life good.
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Petfood Forum Asia 2008 is a unique event and the meeting place for Asian petfood professionals. It is an opportunity to learn, network and visit with suppliers. The symposium lectures are scheduled for March 5, 2008, at the Queen Sirikit National Convention Center (QSNCC) in Bangkok, Thailand, in association with Victam International.

At Victam Asia, you'll have the chance to visit many feed and petfood industry suppliers (equipment and ingredients). For a free online registration to the Victam exhibition, go to www.victam.com. Also at this site, you can find several hotel options. The QSNCC has its own station on the underground railway system in Bangkok, allowing for easy access.

Following is the most up-to-date scheduling, topic and speaker information available at press time. For the Petfood Forum Asia website, go to www.petfoodindustry.com/petfoodforum.aspx. If you have specific questions, contact Nancy Grossnickle at E-mail: ngrossnickle@wattnet.net; Tel: +1.815.734.5674.

**Guide:**
A symposium for Asian petfood manufacturers joined with supplier exhibits at Victam 2008

**Wednesday, March 5**

**10:00—10:40**
Advances in palatability
Chris Nelson is the president of Kemin Industries, a global nutritional ingredient company. He provides attendees with the latest news on the many factors that influence palatability.

**10:40—11:20**
Global and Asian petfood sales trends
Maria Trombly, the China bureau chief for Trombly Ltd., shares exclusive, primary research from Packaged Facts and Petfood Industry, surveying hundreds of pet industry executives from around the world, with a focus on Asia.

**11:20—Noon**
Petfood safety and traceability
Julie Lenzer Kirk, Interstates Cos., discusses how to prepare for a petfood product recall.

**Noon—1:30 Lunch**

**1:30—2:10**
Advances in pet nutrition
Anton C. Beynen, PhD from Utrecht University, Faculty of Veterinary Medicine looks at the rapidly expanding fields of dog and cat nutrition and shares highlights.

**2:10—2:50**
New functional ingredients
David Southey, Southey Consultants Ltd., covers the exciting new world of new functional ingredients in petfoods, looking at a wide range of potential petfood components.

**2:50—3:30 Break**

**3:30—4:10**
The future of petfood retailing
Lee Linthicum, who manages the research program for the global pet care products industry at Euromonitor International, examines the rapidly changing retail industry, and addresses critical questions: What are emerging trends? And, what are the challenges and opportunities?

**4:10—4:50**
Treat extrusion
Will Henry, technical sales engineer in R&D at Extru-Tech Inc., covers new ways to use the single screw extruder to make exciting pet treats.
Petfood Forum 2008
April 14-16, Hyatt Regency O’Hare Hotel, Chicago, Illinois, USA

The petfood market continues its rapid pace of growth, despite recent crises. Find out the best opportunities for expansion and how to lead them in your organization!

Petfood Forum 2008 connects you with the people and information you need to continue to advance. This premier event for the petfood industry features plenty of networking opportunities and exciting sessions such as:

- Ingredient popularity and trends.
- Preventing brand theft.
- Packaging case study.
- The natural and organic markets.
- Sustainability and carbon footprints.
- Petfood safety management systems.
- Weight loss through prebiotics.
- Alternative petfoods and the melamine fall-out.
- Ranking the importance of private label worldwide.
- Managing palatability for treats.
- Global trade issues.

Plus! These insightful roundtables:

- Top petfood company CEOs discuss the state of the industry.
- Leading pet retailing executives highlight consumer trends.
- Experts on new product development debate the push and pull between science and marketing, R&D and production.

Petfood Focus on Safety
April 16-17, Hyatt Regency O’Hare Hotel, Chicago, Illinois, USA

Every petfood company around the world is placing a renewed emphasis on safety and quality. The Petfood Focus on Safety symposium gives you an in-depth look at information you can’t afford to miss:

- Crisis contingency planning.
- Good purchasing practices.
- Adverse event reporting and preferred vendors.
- Finding the right insurance.
- Case studies on quality/safety programs at a petfood supplier and a manufacturer.
- ISO 22000—the world’s most advanced food safety management system

New this year!
A panel discussion on the consumer connection: how best to communicate with consumers, especially during a safety crisis.

For information on exhibiting at Petfood Forum 2008, please contact Ginny Stadel at gstadel@wattnet.net or Tel: +1.815.734.5691.
Attendee Registration Form

Or register online at www.petfoodindustry.com/petfoodforum.aspx

Petfood Forum 2008
April 14-16, 2008
Hyatt Regency O’Hare Hotel
Chicago, Illinois, USA

Petfood Focus on Safety
April 16-17, 2008
Hyatt Regency O’Hare Hotel
Chicago, Illinois, USA

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- ☐ Petfood Focus on Safety only
- ☐ Both Petfood Forum and Petfood Focus

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Address __________________________ City __________________________
State/province __________ Zip/postal code __________ Country _______________________
Phone __________________________ Fax __________________________ E-mail _______________________
URL __________________________
Additional attendees __________________________________________

Organizational function (e.g., marketing, management, R&D, etc.): __________________________
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Be sure to identify yourself as a Petfood Forum 2008 or Petfood Focus on Safety participant prior to March 26, 2008, to receive our special group rate. Room availability is limited; reservations will be handled on a first come, first served basis.
Asia-Pacific contains many emerging markets—such as China, India and Thailand. These markets are characterized by relatively low levels of disposable income and a still developing distribution infrastructure. So, the highly developed Japanese market dominates regional sales. However, the region’s developing markets are catching up.

Japanese dominance waning

Despite the continued dominance of the Japanese market, its share of petfood and pet care value sales has been in steady decline in recent years. In 2006, Japan accounted for nearly 70% of regional petfood and pet care sales by retail value. However, in 2002 the country accounted for a more significant 75% of regional value sales. Likewise, 2006 retail value sales in Japan increased by only 2.6% from 2005, compared to regional sales growth of 4.3%.

Important developing markets like China, India, Thailand and Vietnam all saw retail value sales of petfood and pet care products increase in excess of 10% in 2006 according to the latest Euromonitor International findings. Of these, Thailand and India both counted among the 10 fastest growing markets globally between 2005 and 2006.

The dynamic Chinese market

At more than US$735 million in sales for 2006, China remained the region’s second largest market mainly because of the size of its population. However, the market has also shown strong growth—increasing at an average rate of nearly 13% since 2002—as urbanization has increased consumer purchasing power, transformed lifestyle and boosted the development of distribution infrastructures. Consequently, China saw an increasing consumer shift from feeding pets table scraps to purchasing prepared petfood. Similar developments have also driven strong growth in markets like India, Vietnam and Thailand.

Nevertheless, it must be stressed that sales of items such as prepared dog and cat food remain very uneven across these markets with the highest concentration in major cities. But, this is changing. In China, for example, pet superstores like Cool Baby are expanding from Shanghai and Beijing to second-tier cities like Nanjing and Yantai. This will offer pet owners in such cities better access to a wider variety of products.

Factors such as this should support continued retail sales growth for the developing markets of Asia. Petfood and pet care value sales in the region are expected to grow 5% each year between 2007 and 2012.

Table 1: Asian market shares 2006

Retail pet product sales in the Asia-Pacific region were approximately US$8 billion. Source: Euromonitor.

<table>
<thead>
<tr>
<th>Country</th>
<th>Market share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>70%</td>
</tr>
<tr>
<td>China</td>
<td>9%</td>
</tr>
<tr>
<td>South Korea</td>
<td>7%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>6%</td>
</tr>
<tr>
<td>Thailand</td>
<td>3%</td>
</tr>
</tbody>
</table>

Several countries in Asia saw an increasing consumer shift from feeding pets table scraps to purchasing prepared petfood. ©Dan Wallace. Image from BigStockPhoto.com

Analyzing Asian markets

China, India and Thailand are among the fastest growing global markets

BY LEE LINTHICUM, EUROMONITOR INTERNATIONAL

Online extra!
For more information on Asian markets, visit www.petfoodindustry.com/asia.aspx.

January 2008 | Petfood Industry | 31
There is increasing evidence that dietary fiber is important in maintaining the overall health of dogs and cats. Fiber in petfoods plays a significant role in the prevention and mitigation of several illnesses, including:

- Diabetes,
- Obesity,
- Irritable bowel syndrome,
- Colitis,
- Megacolon and
- Colon carcinoma.

Other possible clinical nutrition uses of fiber include blunting of postprandial glycemia, preventing the growth of pathogenic microorganisms and improving nitrogen metabolism in pets with renal dysfunction. Although the contribution of energy from fiber fermentation is minimal in dogs and cats, increasing evidence indicates that this fermentation contributes to their intestinal health.

### Fiber’s impact on nutrition

As dogs and cats have become domesticated, their diets have changed from being largely meat-based to ones containing a substantial amount of carbohydrate. Indeed, many commercial dog and cat diets contain 30% or more carbohydrate, of which dietary fiber can be an appreciable component.

Including fiber in petfoods can impact nutrition in several ways. Moderate to high concentrations of dietary fiber can decrease food intake and help improve appetite regulation. Depending on the fermentability and viscosity characteristics of a particular dietary fiber source, fibers can slow gastric emptying, decrease intestinal transit time and decrease total tract nutrient digestibility (see Table 1). However, more recent data indicate that ileal nutrient digestibility is not compromised. Other physiological responses attributed to fiber include fecal bulking, production of short chain fatty acids (SCFA), enhanced colonic morphology and intestinal function and a positive influence on the distribution of colonic microflora (see Table 2, p. 34).

### The ideal dietary fiber

An ideal dietary fiber or fiber blend should provide good stool characteristics without significantly decreasing nutrient digestibility.

The fermentation compartments of dietary fiber can slow down gastric emptying time. ©Oguz Aral. Image from BigStockPhoto.com
Companion animals occur posterior to the stomach. The fermentative role of the cecum is likely more important in the dog than in the cat. The cecum is a blind ended sac of the proximal colon in the dog whereas it is considered a vestigial organ in the cat.

Dogs are capable of fermenting a significant quantity of dietary fiber. Total tract digestibility of lignocellulose, hemicellulose and cellulose of 33%, 47% and 18%, respectively, have been reported in dogs. Swanson et al. investigated the fermentability of several alternative fiber sources using a canine in vitro fermentation model.

Fiber sources tested included several pomaces (apple, carrot, grape, tomato), flaxseed, pea hulls and pistachio. On a dry matter basis, substrates contained between 55% and 86% total dietary fiber (TDF) and had varying rations of insoluble:soluble fiber. Accordingly, fermentation characteristics also varied greatly, resulting in a range of organic matter disappearance values (9.3% to 51.7% after 24 hours of fermentation).

Cats and fiber

The carnivorous nature of cats, their relatively small colon and their lack of a functional cecum suggest that they may not utilize dietary fiber as extensively as do other non-ruminants. However, Kienzle noted reduced pH values of large bowel digesta and feces after cats ingested raw corn starch. The change in pH was undoubtedly a result of SCFA produced from microbial hindgut fermentation of starch.

Sunvold et al. fed domestic short-hair cats diets containing 0% or 9.5% supplemental TDF from either beet pulp (a moderately fermentable fiber), cellulose (a nonfermentable fiber), a

Links between diet and health

A recent US survey commissioned by the International Food Information Council reveals the top diet and health links named by consumers are:

- Calcium for the promotion of bone health (89%);
- Fiber for maintaining a healthy digestive system (86%);
- Vitamin D for promotion of bone health (81%);
- Omega 3 fatty acids for reduced risk of heart disease (76%);
- Fiber for reduced risk of heart disease (74%);
- Probiotics for maintaining healthy digestive and immune systems (58% and 54%, respectively);
- Soy protein/soy for reducing the risk of heart disease (55%).

Fiber

3:1 cellulose:gum Arabic mixture or two different blends of fibers:

- 35% pectin + 30% locust bean gum + 20% carob bean gum + 15% guar gum or
- 60% beet pulp + 22% rice bran + 10% pectin + 8% carob bean gum.

Total tract disappearance of TDF was increased by consumption of beet pulp (38.2%) and fiber blends (50.6% and 41.1%, respectively) compared to the control diet (5.3%) However, TDF digestibilities of cellulose (8.9%) and the 3:1 cellulose:gum Arabic mixture (5.7%) were similar to the control diet. These data refute the assumption that cats are incapable of utilizing fermentable carbohydrates.

Better knowledge base needed

To further define the role of dietary fiber for companion animals, research is needed in several areas. For example, the role of fiber in the longevity of dogs and cats is virtually unknown. Also, the role of fiber in diets to aid treatment of specific disease is promising but needs further study. Finally, although evidence exists as to the potential benefit of SCFA production in the intestine of other species, information regarding the role of SCFA in the dog and cat is scarce. Development of a better knowledge base in these areas would further refine our ability to develop diets for companion animals that would optimized their health and well-being.

<table>
<thead>
<tr>
<th>Table 2: Stool characteristic and prebiotic effects</th>
<th>Fermentable fiber</th>
<th>Nonfermentable fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response criteria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wet stool bulk</td>
<td>No effect or increases</td>
<td>Increases</td>
</tr>
<tr>
<td>Fecal moisture</td>
<td>Unknown</td>
<td>Decreases or no effect</td>
</tr>
<tr>
<td>Number of defecations</td>
<td>No effect in dogs; increases in cats</td>
<td>Increases</td>
</tr>
<tr>
<td>Prebiotic effect</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>SCFA production</td>
<td>Increases</td>
<td>Slight increase</td>
</tr>
<tr>
<td>SCFA ration</td>
<td>Decreases acetate:propionate</td>
<td>Increases acetate:propionate</td>
</tr>
<tr>
<td>Colonic weight/length</td>
<td>Increases</td>
<td>No effect</td>
</tr>
<tr>
<td>Colonic absorptive area</td>
<td>Increases</td>
<td>No effect</td>
</tr>
<tr>
<td>Glucose uptake</td>
<td>Increases</td>
<td>No effect</td>
</tr>
</tbody>
</table>

Potential fiber effects on large intestinal responses of companion animals. SCFA=short chain fatty acids.
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The US Food and Drug Administration’s (FDA) Center for Veterinary Medicine (CVM) and the Association of American Feed Control Officials (AAFCO) have recently signed a memorandum of understanding (MOU) concerning the process by which AAFCO Feed Ingredient Definitions, including those intended for use in petfoods, are established, modified or removed. This document seems to be a first step toward CVM’s formal recognition of AAFCO’s list of defined ingredients.


Feed ingredient definition process

CVM has long played an integral role in the AAFCO Feed Ingredient Definition process. While considered by CVM to be an informal procedure, an FDA Compliance Policy Guide (CPG) first written in 1980 regarded the AAFCO definitions as constituting the “common or usual” names for feed ingredients contemplated by the Federal Food, Drug and Cosmetic Act (www.fda.gov/ora/compliance_ref/cpg/cpgvet/cpg665-100.html). This was done despite preexisting federal regulations that provided a means to establish common or usual names outside of AAFCO (21 CFR Section 502).

Explicit acknowledgement that CVM had input in the AAFCO definition process came with amendment of the CPG in 1995 via the addition of this sentence: “Whenever ingredient definition changes are contemplated by AAFCO, CVM must concur in their suitability.” That amendment roughly correlates with guidance first provided to AAFCO ingredient investigators in the 1993 Official Publication, which noted it was imperative that all materials relevant to an ingredient definition be submitted to CVM. However, while the original guidance directed the investigator to obtain CVM’s opinion, language was changed soon after to ensure CVM’s concurrence was sought.

Historically, the AAFCO definition process offered a rigorous but potentially less arduous and more timely means of establishing acceptable use of a feed ingredient compared to the more formal FDA procedures. These include the Food Additive and GRAS (Generally Recognized As Safe) Affirmation petitions. CVM’s primary role had been that of a technical and scientific advisor to AAFCO, offering its much needed expertise in reviewing pertinent safety and utility data on feed ingredients.

Over the years, it is my impression that CVM has assumed more direct responsibility and control of the overall process. As a result, in many cases the differences between AAFCO’s informal process and FDA’s formal processes appear to have diminished considerably.

What’s new in the MOU?

The MOU doesn’t expressly alter much of the existing AAFCO process. A few new details are specified. For example, AAFCO now has a certain number of days to forward a request for a new or modified definition to CVM. Also, CVM agrees to let AAFCO know within a specified period whether it will be able to consult on a matter. (It’s unclear what happens to a new or modified ingredient proposal if CVM is not willing or able to provide input). There are other details to address the removal of ingredients from AAFCO’s published definitions and resolve disputes between the two parties.

The MOU does not expressly define the separate responsibilities of the parties in the definition process. For example, as written the petitions are reviewed by both CVM and the ingredient investigator without distinction in duties. Since in many cases the AAFCO investigator is also a CVM employee, that differentiation is often moot.

What the MOU appears to do is expressly grant what had been the trend: It bestows more direct control on CVM
in establishing and maintaining ingredient definitions. AAFCO can still seek advice or consultation with CVM, but AAFCO must obtain a “letter of concurrence” before it can accept a new definition or amend an existing one. AAFCO also must obtain CVM concurrence on any action to remove an ingredient from its definition list and at the same time must accept any CVM request (assuming adequate reasons) to do the same. The only outlet if AAFCO does not abide by these rules is arbitration.

**Why is the MOU needed?**

CVM notes that the MOU allows CVM to formally recognize AAFCO’s list of defined ingredients (www.fda.gov/cvm/cvm_updates/aafco_mou.htm). This step is reportedly necessary to give the list the force and effect of federal law, which will enhance CVM’s feed safety goals (www.fda.gov/cvm/afss2nddraftframework.html).

However, the only stated purpose of the MOU is to facilitate collaboration between CVM and AAFCO by “clarifying responsibilities and providing mechanisms for resolving disputes.” Thus, it’s unclear how the MOU accomplishes formal recognition by CVM. Also, a CPG that stipulated CVM’s previous informal recognition of the AAFCO definitions has already existed for decades without an MOU.

Therefore, I presume CVM will take other steps to achieve formal recognition of AAFCO’s feed ingredient definitions. There is indication that CVM will revise the current CPG to clarify its relationship with AAFCO and its list of animal feed ingredients, and AAFCO will revise its guidance to ingredient investigators. However, I would think that an amendment to the Code of Federal Regulations (CFR) to stipulate AAFCO’s list of ingredients as acceptable by FDA for use in animal feed would be needed, too.

**A good idea, but …**

All in all, I think the MOU and the move for more CVM control over the process is probably a good idea. While the safety of feed ingredients is admittedly of overriding importance, I am concerned about the effect this may have on the timeliness of response to proposals for new or amended AAFCO definitions. To help in this regard, I hope CVM moves forward with its plans to implement the GRAS Notification procedure with due haste.

I am also worried about the effect the MOU may have on the tendency for some feed control officials to reject anything not explicitly defined by AAFCO. This is especially true for petfoods, where many human food ingredients not on any list are commonly included in formulations. It must be remembered that by its very nature, any official list of acceptable feed ingredients cannot be considered exhaustive, and a means to establish ingredient names by common usage in the market is provided for in FDA regulations; see 21 CFR Sections 502.5(d), 570.30(d) and 582.1(a).

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**Dr. Dzanis is a writer and independent consultant for the petfood and animal feed industries 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.**
Salt: what’s wrong with it?

For years, salt had been one of those ingredients in pet-food that was so innocuous it had become almost invisible. Recently, though, consumers have been expressing concerns about it. This can be best demonstrated with a visit to almost any petfood company’s website, where you’ll find Q & A dialogue about why salt is added to the food. This new attention to salt indicates it has become one of those ingredients with an issue.

To generalize, the pet-owning public perceives salt in petfood as unhealthy and that it’s being added as a seasoning. The issue likely stems from pet owners assuming their dogs and cats have the same dietary health problems with sodium and hypertension that people have.

Short of renal or heart failure, hypertension is not a big issue for dogs or cats. So, is there really anything wrong with salt?

Sodium and chloride are considered essential minerals in dog and cat diets.

— Greg Aldrich

Lethal to harmonious

Salt (sodium chloride) is the combination of the explosive element sodium and the toxic gas chlorine. These two otherwise lethal elements come together harmoniously to form a benign rock found in nature as halite. In its pure
form, it consists of 60.67% chloride and 39.33% sodium.

Commercially, salt is derived from three avenues: mining (rock salt), evaporation from underground brine deposits or solar evaporation of seawater (sea salt). Accounting for impurities and the addition of flow agents, most salt is traded at 95-98% purity.

The salt commonly used in petfood is translucent to opaque white. The other form used in petfood is iodized salt; the addition of iodine is a means to prevent goiter.

**Leap in logic**

Salt has traditionally been used as a preservative for fish, meat and some vegetables. Now, it is used every day as a seasoning on human foods.

This free use of salt as a seasoning is a fairly recent application in people’s diets and has probably caused the greatest misunderstanding of its use in petfood. The consumer must be making the leap in logic that the mere presence of salt on the ingredient panel means the pet’s food is being flavored with excessive amounts of salt.

The flaw in this theory is that most petfoods do not rely on salt as a seasoning. If you have ever tasted petfood, you know one thing for sure: It is bland. For our palate, it could do with a bit of salt seasoning. But in petfood salt is primarily used to a level necessary to meet nutrient requirements.

Both sodium and chloride are considered essential minerals in dog and cat diets. Deficiencies in sodium and chloride result in problems with nervous signal transmission, low blood pressure, restlessness, increased heart rate and pasty or thick mucus. The requirements (on a diet dry matter basis) range between 0.06-0.30% for sodium and 0.10-0.45% for chloride depending on species and lifestage.

**Meeting requirements**

If you took a quick survey of nutritionists and asked them how much salt they customarily add to their formulas, the response would overwhelmingly be 0.09-0.15% sodium and 0.20-0.30% chloride. The other factor that makes the addition of this minimal amount possible is that digestibility and absorption of sodium and chloride from salt are nearly 100%.

While salt seems to have fallen into controversy recently due to the perception that it’s unhealthy, the nutrition and integrity of the ingredient have not changed or eroded. Salt remains the most cost-effective, prudent source of supplemental sodium and chloride in the diet and should stay on ingredient panels for the foreseeable future. Rather than play on the confusion, the petfood industry should strive to educate consumers.

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**If you have ever tasted petfood, you know one thing for sure: It is bland.**

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**Online extra!**

For more insight from Dr. Aldrich on salt in petfood, go to [www.petfoodindustry.com/salt.aspx](http://www.petfoodindustry.com/salt.aspx).

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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.

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Extrusion effect on the quality of dog food

Researchers at Wageningen University and TNO Nutrition and Food Research, both in the Netherlands, recently looked at the effect of different extrusion conditions and product parameters on the nutritional quality. Quality was determined by a number of in vitro measurements (reactive lysine and starch gelatinization degree), as well as physical quality of kibble (durability and hardness) of a canine diet. The parameters investigated were mass temperature (110, 130 or 150°C), moisture content (200 or 300 g/kg) of the diets prior to extrusion and the number of times extruded.

Total lysine and other amino acids were unaffected by the extrusion conditions employed. Extrusion conditions had a clear effect on the reactive lysine content with the ratio of reactive to total lysine increasing from 0.71 to 0.80 and higher as a result of extrusion and temperature. After a second extrusion, a decrease was observed from a ratio reaching...
1.0 to about 0.9. Initial moisture content affected lysine reactivity. Protein digestibility as measured in vitro was not affected by different extruding conditions.

There were no obvious differences in protein dispersibility index of all the extrudates. In vitro glucose digestibility coefficients as well as starch gelatinization degree showed a tendency to increase with an increase in each individual parameter tested. The increase in temperature from 110 to 150°C, as well as extrusion for a second time, decreased kibble durability, while increasing moisture content increased durability. The research concludes that optimization of extrusion conditions during commercial petfood production should include measurement of the reactive to total lysine ratio.

**Source:** Wageningen University and TNO, 2008. AllAboutFeed.net, November 22.

**β-carotene helps lipid metabolism**

According to this study, an increased consumption of β-carotene-rich foods may contribute to decreasing the risk of chronic diseases. A research collaboration team from DSM Nutritional Products and the Albert Ludwigs University of Freiburg, Germany, published these novel findings about β-carotene functions. This micronutrient is a major dietary precursor (pro-vitamin) of vitamin A, which is essential for gene regulation and vision. For vitamin A production, β-carotene must be cleaved into the real vitamin.

For the first time, researchers established a genetically modified mouse by knocking out the gene responsible for the pro-vitamin A cleaving enzyme. As expected, mice lacking the pro-vitamin-cleaving enzyme became vitamin A-deficient and accumulated β-carotene in several tissues. More surprisingly, these mice also showed characteristic changes in blood lipid levels and developed fatty livers. Feeding preformed vitamin A...
prevented vitamin A deficiency in these mice, but not the disturbances in lipid metabolism. Furthermore, even when vitamin A was available with the diet, the genetically modified mice were more susceptible to obesity.

These findings may have some significant public health implications. Carotenoids such as β-carotene are not only important for well known vitamin A-dependent processes, such as vision, but may also be beneficial for additional health aspects. Disturbances in lipid metabolism, as found in this mouse mutant, are causally linked to cardiovascular and liver disease. Such secondary disorders are prevalent in the increasing number of obese patients worldwide.

The results of this new study imply that vitamin A cannot substitute for all physiological functions of the pro-vitamin. This finding positions β-carotene in close relation to other essential food ingredients, i.e., vitamins and polyunsaturated fatty acids. Considering the additional health effects of β-carotene described in this study, an increased consumption of β-carotene-rich food may contribute to lower the burden of chronic diseases encountered in both industrialized and developing countries.


Detection of dog and cat tissues in food

A polymerase chain reaction (PCR) method based on the nucleotide sequence variation in the 12S ribosomal RNA, mitochondrial gene has been developed for the specific and qualitative detection and identification of cat, dog and rat or mouse tissue in food and feedstuffs. The primers designed generated fragments of specific lengths for cat, dog and rat or mouse tissues. Specificity of the primers was tested against 32 nontarget species including mammals, birds, fish and plant species.

This PCR method allowed detection of raw and heated cat, dog and rat or mouse tissues in meat/oats mixtures even when the concentration of the target species was reduced to 0.1%. Furthermore, the performance of the method was not affected by prolonged heat-treatment (up to 133°C for 20 min at 300 kPa). Consequently, it could be very useful to verify the origin of raw materials in food and feedstuffs submitted to denaturing technologies, for which other methods cannot be applied.

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**Histamine test for tuna**

Neogen Corp. has received approval from the AOAC Research Institute for its quantitative test for histamine that eliminates the need for the use of hazardous materials in the testing process, according to Neogen.

Veratox for Histamine (AOAC-RI No. 070703) is a direct competitive ELISA test for the detection of histamine in fresh, canned or pouched tuna, packed in oil or water. The test uses a water extraction process and returns results in 2.5 to 50 parts per million. The Veratox for Histamine AOAC validation studies showed a 95.4% recovery rate of spiked samples when compared to the AOAC official fluorometric method, according to the company.

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Phone 314-982-5115 Fax 314-982-5159
e-mail: sandra.schroeder@nestle.nestle.com
website: www.investmentrecovery.com

FOR SALE
Reconditioned Cooking Extruders & Dryers
• CLEXTAL • WENGER
• EXTRU-TECH • AEROGLIDE
EXTRU-TECH, INC.
100 Airport Road
Sabatha, KS 66534
Phone: 785-824-2153
Fax: 785-824-3143
Attn: Equipment Sales Group

ELISA Technologies, Inc.
Laboratory Testing Services & Test Kits
“Committed to Food/Feed Safety – Veterinary Diagnostics”
MEAT SPECIATION • MYCOTOXINS
ALLERGENS • ANTI-BIOTICS • HORMONES
Tel: 352-337-3929 Fax: 352-337-3928
4581-L NW 6 Street, Gainesville, FL 32609
Web: www.elisa-tek.com Email: info@elisa-tek.com

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Laboratory Testing Services & Test Kits
“Committed to Food/Feed Safety – Veterinary Diagnostics”
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4581-L NW 6 Street, Gainesville, FL 32609
Web: www.elisa-tek.com Email: info@elisa-tek.com

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Pyramid Processing Equipment LLC
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Phone: 913-681-2996 • Fax: 913-681-5925
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• Using HPLC and TLC Official Reference Methods
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Stephanie Tinsley, Sales Manager
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636-583-8600 www.romerlabs.com
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• Replacement parts for Instapro Model 2000 & 2000 rebuild extruders
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info@ohiopetfoods.com
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<table>
<thead>
<tr>
<th>Company Name</th>
<th>Page No.</th>
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<td>3D Corporate Solutions LLC</td>
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<td>AFB International</td>
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<td>Andritz Sprout A/S</td>
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<td>Cargill Sweetners N A</td>
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<td>CPM/Roskamp Champion</td>
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<td>Extru-Tech Inc</td>
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<td>Fres-co System USA Inc</td>
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<td>Geelen Counterflow BV</td>
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<td>Global Werbeagentur GmbH</td>
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<td>Lonza Group</td>
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<td>Martek Biosciences</td>
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<td>Muench-Edelstahl GmbH</td>
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<td>NutraCeal</td>
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<td>Omega Protein Inc</td>
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<td>Premier Tech Systems</td>
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<td>Sanimax Marketing Ltd</td>
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<td>SPF North America</td>
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<td>Summit Ridge Farms</td>
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<td>The Peterson Co</td>
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<td>The Scoular Company</td>
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<td>Trouw Nutrition USA LLC</td>
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<td>U S Poultry &amp; Egg Assn</td>
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<td>US Commodities</td>
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<tr>
<td>Vietnam Int'l bv</td>
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</tbody>
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If you regularly peruse Industry News, you’ll notice some changes this month (p. 8). We’ve redesigned it to fit in more information about the petfood market. That now includes news about companies and people in a “Quick hits” section, plus Petfood Industry Global for news outside the US.

To present as much useful information as possible in one part of the magazine, we’ve also moved the Industry Calendar (formerly called Meeting Planner) into News, along with a lineup of unique content and interactive features on PetfoodIndustry.com. In fact, the website offers even more news, events, articles and product information on a 24/7 basis.

Hot growth areas
This issue also features our annual Top 10 article on leading global petfood manufacturers (p. 18). To go along with comparative data on these companies, Euromonitor has provided an update on 2007 petfood sales (as of press time). Despite the US recalls, the outlook is positive.

Additional data includes a breakdown by regions showing history and five-year projections (Table 1). It highlights the hot growth in areas like Eastern Europe, Latin America and Asia Pacific. Indeed, this year’s top 10 list includes, for the first time, two companies from Brazil: Total Alimentos SA and Nutriara Alimentos.

Our pets as stars
For our Top 10 cover this year, we gave our colleagues at Watt Publishing (parent company of Petfood Industry) the chance to show off their pets:

- Maggie, longhaired tabby; Oscar, Cockapoo—companions to Michelle Adams; Gato, calico—Pam Ballard; Tookis, tabby—Liz Crosby; Jo Boo, English Bulldog puppy—Chris Farrey; Frannie, chocolate Lab; Viper, yellow Lab—Jim Francis; Heathcliff, black cat with white—Ken Jennison; Blizzard, yellow Lab; Ryo, Californian rabbit—Sarah Lanenga; Charlie Skampers, Coco Beans, Milka and Minxy, all cats—Kathleen McLaughlin Milella; Cooper, Jack Russell mix—Lisa Morris; Kate, Shi Tzu/Maltese puppy; Rocky, Silky Terrier puppy—Joyce Neth; Daisy, Collie—Sharon Nordman; Buddy and Chloe, mixed-breed dogs—Linda Ohm; Oreo, German Shorthair/Border Collie—Diane Palmer; Betsy, Beagle; Betty, Boston Terrier/Pug; Grace, Corgi/Jack Russell—Tim Phillips; Cassidy, Sheltie—Sue Roberts; Lexi, Jack Russell Terrier; Tade, Siamese—Denise Slager; Oliver, gray and white cat; Toby, brown tabby—Sue Snyder; Muki, Shi Tzu—Tess Stuckenberg; Patra, gray tabby; Ra, orange tabby—Candi Teachman.

Also in the cover collage are my cats: Monte (orange and white) and Deacon (gray), who appear on this page now, too.

Table 1: Dog and cat food sales by global region

<table>
<thead>
<tr>
<th>Region</th>
<th>Retail sales, 2007</th>
<th>2002-07 % growth</th>
<th>Projected sales, 2012</th>
<th>Projected growth to 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>$45.12</td>
<td>42.9</td>
<td>$52.06</td>
<td>15.4</td>
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<tr>
<td>Asia Pacific</td>
<td>$4.41</td>
<td>21.3</td>
<td>$5.33</td>
<td>20.9</td>
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<tr>
<td>Australasia</td>
<td>$1.27</td>
<td>62</td>
<td>$1.44</td>
<td>16.5</td>
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<tr>
<td>Eastern Europe</td>
<td>$2.54</td>
<td>193.9</td>
<td>$3.95</td>
<td>55.6</td>
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<tr>
<td>Latin America</td>
<td>$5.04</td>
<td>107.2</td>
<td>$6.37</td>
<td>26.5</td>
</tr>
<tr>
<td>Middle East and Africa</td>
<td>$0.44</td>
<td>63</td>
<td>$0.51</td>
<td>16.9</td>
</tr>
<tr>
<td>North America</td>
<td>$16.97</td>
<td>26.3</td>
<td>$18.88</td>
<td>11.2</td>
</tr>
<tr>
<td>Western Europe</td>
<td>$14.48</td>
<td>42.4</td>
<td>$15.57</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Something to Chew On

The future looks bright

This year’s top 10 list includes, for the first time, two companies from Brazil.

— Debbie Phillips-Donaldson

Tell us what you think!
Send letters to the editor to editor@petfoodindustry.com or post your comments online at www.petfoodindustry.com.

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