The International Magazine of Rendering

April 2013



# Market Report

US Rendering: A \$10 Billion Industry

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# **Rendertorial**

It's been a busy year already and we're only a quarter of the way through!

As you'll notice throughout this issue of *Render*, our biggest one of the year, articles run the gamut, from feed markets to politics and regulations to grease theft and everything in between. Even the locales covered span a broad range, from the State of California to rules moving forth in Europe and the commissioning of a new processing line in Australia. The industry is busy as a bee and renderers around the world appear to like it that way.

We wouldn't have it any other way at Render either. For 42 years, the pages of what is now recognized as The International Magazine of Rendering has been the go-to forum for the latest, greatest, and even the not so best news about the rendering and affiliated industries. New markets, or ensuring existing markets stay put, pending regulations, keeping plants in top optimal running order, and news from around the world is what we try to bring Render's readers each and every issue, six times a year. And what a pleasure when someone lets us know we're hitting the mark (see "Letters" on page 69).

The April issue traditionally includes the United States (US) industry's annual market report, and has for over 30 years. This month is no different. Yet it's getting tougher each year to collect and analyze the data, especially now that the US government no longer gathers the sometimes proprietary information we've come to depend on. Nonetheless, the National Renderers Association's Kent Swisher has trudged through statistics gathered near and far (and even thrown a few darts) to continue to bring our industry the most accurate numbers on how it's doing. It's a tough job, and we thank Swisher for doing it!

And talk about busy! California renderers and biodiesel producers are on a whirlwind ride, working diligently at curtailing the ongoing grease theft problem and striving to meet the state's low carbon fuel standard despite everincreasing feedstock constraints. Both are hoping to ultimately strike gold in the Golden State. Eureka! **R** 



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## **Economic Challenges**

I have a friend who believes all the congressional knife throwing, name-calling, and grandstanding in the United States (US) over spending, deficits, fiscal cliffs, and sequestration is just political street theater. He's convinced all right-thinking adults understand that the economy – domestic and global – is more important than political points. His goal is to tell all who'll listen that the House of Representatives and Senate leadership and the White House actually agree on the need to save money, cut the deficit/ debt, and demonstrate fiscal restraint. The media posturing is all for show.

I think he's correct in that the ultimate goal of controlling the budget is pretty much universal; he veers from the path of sanity when he believes there's full consensus on how to achieve that goal.

The economic challenges consuming the US Congress now and for the next 60 to 90 days are considerable. All must be overcome if we're to see reauthorization of a fiveyear farm bill, full implementation of new food safety laws, a reemergence of efforts to craft a national energy policy, completion of, or progress on, new trade deals in the Pacific Rim and Europe, not to mention immigration and corporate tax reform.

However, there's a sliver of truth in what my friend says or at least there's an emerging context to the latest round of fiscal fisticuffs. This emerging view seems to be more the result of a reality check than a vote count. Perhaps it's the new post-election, laid-back President Barack Obama; maybe it's a Republican party still stinging from its defeat in that same contest. Yet the unalloyed reality everyone seems to understand is that actions taken to cure domestic economic ills have significant implications for the United States both in maintaining that growth, however stuttering, as well as in the country's inevitable role as a global economic backstop.

The US economic recovery is fragile, but it's maintaining forward momentum thanks in part to a hyperactive stock market reacting more to the Federal Reserves' "quantitative easing" than to Washington, DC. However, unemployment remains high, corporations sit on piles of cash while not hiring – they've learned to do more with less – and the housing market is just beginning to show signs of a robustness not seen in four years. This snail's pace, however, must be maintained if not accelerated as southern European economies continue to founder, Great Britain threatens to exit the European Union, and no continental government hero seems willing and/or able to step in to provide adult supervision.

In Asia, economic recovery is a mixed bag. Japan remains a shadow of what it once was, while Korea is treading water. China is either on the brink of economic implosion or on the verge of a major fiscal surge, depending on the day of the week and the segment of the Chinese economy one analyzes. As for Latin America, let's not go there; ditto the Middle East. Experts agree the United States can't allow itself to get distracted from the slow road to domestic recovery and global economic stability if it hopes to rekindle overall productivity and economic health. This country, they say, is too wedded to exports. Our perspective must be global, they say. The biggest distraction would be domestic political battles for the sake of political battles.

The across-the-board spending cuts mandated by the Budget Control Act - the so-called "sequester" - had not kicked in as of this writing and won't until at least mid-April, though authorized by presidential order as of March 1, 2013. The impact of these mandatory cuts fully depends on whom you speak with and which public relations spin you buy into. The White House publicly predicts that when the full force of an approximate 2.5 percent reduction in domestic program discretionary spending hits, the country will be catapulted back to the days of the Great Depression unless we raise revenues to offset the reductions. This is a very polite way of saying increase taxes on a greater percentage of the wealthy, greenhouse gas emitters, and oil companies, among others, while closing tax loopholes and talking about entitlement program reform. The Tea Party folks and other budget hawks - they flourish in both parties - are mostly silent, privately relishing sequestration bringing about the across-the-board spending cuts for which they've lusted since 2008.

The White House has not submitted its fiscal year 2013 budget recommendations and is not expected to get that document to Capitol Hill until the end of March, nearly two months late. Its reason: sequestration and the continuing resolution have muddied the budget waters. While neither chamber pays much attention to the White House budget in any event, it does confirm where the Obama administration's priorities lie. Also, the administration is being scolded for publicly overstating the impact of sequestration while not talking about how it will meet its spending cut obligations. It committed a major public relations blunder by notifying Congress it was suspending White House tours - those for which tickets are provided by members of Congress to their constituents. This prompted a Republican member of the House to offer an unsuccessful amendment to a pending spending bill prohibiting the president from traveling to a golf course during sequestration.

However, moderate voices are starting to make themselves heard, and their message is this: The US economic recovery is ongoing albeit more slowly than we'd like; we can and will do as much or more while spending what we've got. The Food and Drug Administration said it can maintain its programs – some programs may slow – and meet its spending reduction by cutting back on travel, "collaborations," training, and other projects without furloughing a single employee. The Transportation Security Administration says it may have to engage in rolling furloughs – a day off without pay every couple of weeks – but airport security lines will not be miles long and take hours to complete. Meat inspection? Of course, and the US Department of Agriculture is already backing off its "we'll be forced to shut it down" message, saying it will be months before the effects are felt.

Congress was expected to punt the sequester can into summer by including a new deadline extension in its most recent continuing resolution to replace the current continuing resolution that funds government operations at fiscal year 2012 levels. Now it appears the cuts will remain in place no matter the overall funding scheme.

As I write this, the House has passed a continuing resolution to keep the government running through September 30, the end of the federal fiscal year. This means every department and agency will operate on the same budget as it did the year before. All funds are intact, including the Market Access Program and the Foreign Market Development Program. In place is the one dollar per gallon blender's tax credit for biodiesel and renewable diesel. In addition, the House included in the budget bill expanded funding for the Department of Defense and military construction because of the sequester. The Senate will likely modify the House bill to include more individual funding bills that provide greater flexibility for agencies and departments to move money around while still meeting their spending reduction mandate. This means the spending cuts stay, but the government will not shut down.

Both chambers will produce by April 14 fiscal year 2013 budget resolutions for the first time in nearly six years, based on Congressional Budget Office spending projections expected to be delivered to them in mid-March. While the House has consistently produced its blueprint for federal spending, the Senate has not. It's also expected the overdue White House budget will be on the Hill as well.

This all adds up to the price to be paid for trying to reverse a high-speed vehicle without first slowing down. Both sides of the aisle appear to have embraced the notion a 2.5 percent reduction in overall discretionary domestic spending with added flexibility, while providing defense protections, is a small price to pay to keep the US economy trekking upward. **R** 



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# **N**ewsline

## **Industry and Government Confront State Issues**

California renderers and grease collectors are excited and optimistic about the newly formed Rendering Industry Advisory Board (RIAB) as a tool in working with the California Department of Food and Agriculture (CDFA) to curtail grease theft in the state. Yet the group realized there is still much work to be done as they met for the second time in early March.

CDFA Secretary Karen Ross commended the board on its proactive approach with the department and encouraged renderers to notify the state's animal health department or her office as early as possible when a situation arises. RIAB Chairman Michael Koewler, Sacramento Rendering Company, revealed that California's renderers have

had a very long and fruitful relationship with CDFA over the past 30 years, something unique in the United States, and returned the accolades on the department's efforts to work with the rendering industry.

Before grease theft was tackled, some rendering issues were addressed, beginning with Don Brown, Pacific Egg and Poultry Association, who spoke about a spent hen disposal problem for a large number of birds in a short amount of time, primarily in Southern California. After the state's poultry industry experienced and eradicated exotic Newcastle disease about 10 years ago, most producers continued with the disposal options used at the time, primarily composting. California is home to about 20 million layer hens equally divided between the northern and southern parts of the state. Brown's company, Moark, LLC sometimes needs to dispose of about 200,000 birds in a five-day period every 12 weeks. The concern by the poultry industry and California's animal health division is transmission of possible disease if hens are transported any distance. However, Dr. Annette Jones, state veterinarian, said if trucks are covered, hens can be transported to rendering facilities, yet Brown has not been able to find a renderer able to handle the volume in the short amount of time. Renderers at the meeting vowed to work with the Pacific Egg and Poultry Association on the situation.

Ken Decio, California Department of Resources and Recovery, or CalRecycle, informed the board that the department is revising state composting regulations, which were last updated in 2004. He noted that due to the increased activity, anaerobic digester regulations will be written at the same time. With the regulation process currently in the informal stage, CalRecycle has been working with CDFA on where to draw the line on meat products and encouraged renderers to provide their input.

"If you do see something you don't like, this is your opportunity to tell us," Decio stated.



CDFA Secretary Karen Ross (*standing*) addresses California's Rendering Industry Advisory Board.

On another rendering matter, Dr. Doug Hepper, CDFA, explained that California Safe Soil, LLC has opened a pilot plant in West Sacramento, CA, to convert leftover food from supermarkets into a liquid soil amendment using enzymatic digestion. After some discussion with the company, CDFA issued a temporary research permit for two years instead of a rendering license and will re-evaluate the permit/ licensing requirements once the project is complete. California Safe Soil is presently collecting "unsold food" from two neighboring supermarkets and submitting monthly lab results to CDFA on the finished product.

Switching the focus to inedible

kitchen grease (IKG) was CDFA's Dr. Jan Hershenhouse, who disclosed there are 46 renderers (18 traditional, 28 IKG renderers), 53 collection centers, and 388 IKG transporters (341 commercial, 47 personal) licensed in California. CDFA investigator Louie Lucero reported a collection center in Modesto that was accepting "a lot of" stolen grease has had its registration revoked and a fine imposed. Investigator Paul Roos informed the board that in Southern California, six registrations were not renewed in 2013 due to illegal activity and one case of a registration decal (required by state law for transporting IKG) that was forged is now in the hands of the district attorney's office.

In an effort to develop comprehensive IKG theft data, CDFA staff instructed renderers and grease collectors to file a report of all IKG thefts to local police agencies. Once the agency returns a confirmation report, renderers and grease collectors should then forward the report to CDFA for monitoring. Compiling the most accurate data on where thefts are occurring will give department investigators areas to target for law enforcement activity and education.

"IKG is the new metal theft, but no one talks about it," said CDFA special investigator Paul SanGregorio. "It's important we get the word out."

Doug "Spike" Helmick Jr., retired commissioner of the California Highway Patrol and the pubic member on RIAB, agreed that CDFA needs to quantify the grease theft problem – how many thefts, what is the monetary loss, when are they occurring (time of day, days of week, etc.) – and report that information to law enforcement.

"Our outreach program needs to be far more outreaching," Helmick commented.

Another tool in the state's IKG program, a transporter manifest, went into effect April 1, 2013, with CDFA conducted training programs to ensure accurate compliance. The board voted to hold their next public meeting in early May. **R** 



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# Market Report

# US Rendering: A \$10 Billion Industry

By Kent Swisher Vice President, International Programs National Renderers Association

he many optimistic predictions that the world would pull out of the economic slump in 2012 were not realized. According to the International Monetary Fund, global output fell from 3.9 percent in 2011 to 3.2 percent in 2012. Among the developed nations, the United States (US) had the strongest growth output, from 1.8 percent in 2011 to 2.3 percent last year. Canada's output dropped from 2.6 in 2011 to 2.0 in 2012 while Europe's output declined by four percent last year over 2011. The lethargic economies in the developed nations finally spilled over to the developing nations where growth in those regions fell from 6.3 percent in 2011 to 5.2 percent in 2012. In many ways, 2012 is a year of many things we would like to forget, from the multiple tragedies at US schools, horrific weather events, and protests over austerity measures in Greece, to the US presidential election and the uncertainties in the Middle East. On the upside, we were all happy to learn that although the Mayan Calendar ended in 2012, the world did not.

#### Domestic Developments

Supply

US renderers continued to see downward pressure on their raw material supply last year. Cattle inventories remained low with slaughter down 3.3 percent from 2011 at 32.9 million head, although slaughter weights were up two percent from 1,277 pounds in 2011 to 1,302 pounds last year. Broiler slaughter was down slightly at 1.2 percent in 2012, going from 8.6 billion head in 2011 to 8.5 billion in 2012. Poultry slaughter has fallen well over five percent in the last five years yet demand for the by-products continues to grow. On a positive note, hog slaughter began picking up again last year after a few years of declines, increasing 2.1 percent from 110.8 million head in 2011 to 113.1 million in 2012, although slaughter weights remained unchanged at 275 pounds.

The United States reported another case of atypical bovine spongiform encephalopathy (BSE) in April 2012, just before the National Renderers Association's (NRA's) spring meetings. There was little reaction in this country among buyers; however, Indonesia closed the market for ruminant meat and bone meal and the market remained closed at the time of this writing.

Over time, renderers have seen the supply of raw material decline due to many factors: the removal of specified risk materials as regulated under the enhanced feed ban put in place November 2009; less dead stock picked up due to the same rule; theft of used cooking oil; and the increased demand for edible offal for export. There is a preference in many developing countries for edible products from the fifth quarter. As incomes rise in these countries, so has the demand for products like tongue, liver, tail, brains, and chicken feet, just to name a few. In fact, in China, these items sell for two to three times the price in the United States. Rabobank reports that this development is not short-term but a structural change to the meat and by-product industries that companies in these industries need to take into account

Production and consumption data for the rendering industry was traditionally reported in the US Census Bureau's *M311K* – Fats and Oils: Production, Consumption, and Stocks report. However, due to government cut backs, this report was discontinued in July 2011. Hence, the data in table 2 of this report was derived by NRA using historic relationships between livestock production as reported by the National Agricultural Statistics Service and rendered product production. Yellow grease production was derived by using the relationship between yellow grease production as reported in A Profile of the North American Rendering Industry by Informa Economics (2011), and cooking oil consumption as reported by the US Department of Agriculture (USDA).

Tallow production in 2012 is estimated at just over 2.2 million metric tons, down five percent from 2011. White grease production that includes both lard and choice white grease was up two percent from 580,700 metric tons in 2011 to 593,900 metric tons in 2012. Yellow grease production, which includes but is not limited to used cooking oil, is projected at 885,000 metric tons last year, down two percent from 2011. Poultry fat production was 474,800 metric tons in 2012, little change from the previous year. In total, the US rendering industry produced over 4.2 million metric tons of fat in 2012 valued at approximately \$4 billion. Between 2007 and 2012, fat production fell nine percent by volume and increased 48 percent in value.

Theft of used cooking oil from containers behind restaurants continued to be a major constraint for renderers in 2012. Used cooking oil theft cost the rendering industry approximately \$62 million dollars in lost revenue last year, not to mention the cost of damaged containers due to theft. NRA hired legal counsel in Washington, DC, and organized a grease theft summit in January 2013 to discuss options regarding the theft of used cooking oil.

Meat and bone meal production, which includes ruminant, porcine, and mixed specie, was 2.2 million metric tons in 2012, down half a percent from 2011. Poultry meal production was nearly 1.2 million metric tons, down slightly from the previous year, and feather meal production was 608,000 metric tons, nearly steady with 2011 estimates. Total protein meal production was four million metric tons in 2012 valued at approximately \$2.5 billion.

The total value of products produced by the rendering industry last year, including products not in table 2, was approximately \$10 billion.

#### Demand

The rendering industry produces products for the feed, pet food, energy, and oleochemical industries and demand remained strong in 2012 from all sectors for both protein meals and fats. However, high fat prices in 2011 along with a weak global economy and a glut of palm oil depressed fat prices toward the end of 2012.

Prices of animal fats and yellow grease were down across the board with the exception of lard. Tallow declined 12 percent, choice white grease dropped nine percent, yellow grease plunged 15 percent, and poultry fat fell 13 percent over 2011. It must be noted that 2011 saw record high fat prices so when comparing 2012 to 2010, prices still remained strong. Animal protein prices on the other hand increased well over 12 percent across the board. Ruminant meat and bone meal reached \$429 per metric ton, a 14 percent increase over 2011, while porcine meat and bone meal rose 20 percent to \$501 per metric ton. Feed grade poultry meal was up 13 percent to \$539 per metric ton, and pet food grade poultry meal increased by 16 percent, from \$721 in 2011 to \$834 in 2012. Feather meal prices saw the most dramatic increase, going up 27 percent in 2012 to an average of \$649 per metric ton. Exports of feather meal were up by 43 percent in 2012, which was the main reason for the dramatic price increase.

According to Alltech's 2013 Global Feed Survey, the United States produced 168.4 million metric tons of feed in 2012 from 5,251 active feed mills, up about two percent from 2011. The largest segment of the feed industry was poultry, estimated to be 86.8 million metric tons, followed by ruminant at 43 million metric tons, and swine at 23.6 million metric tons. Although aqua feed and pet food are relatively low at one million

#### Continued on page 13

Table 1. Average annual prices of select rendered products, 2007-2012 (per metric ton)									
Product (Location)	2007	2008	2009	2010	2011	2012	% Change 11/12		
Fats									
Beef tallow, packer (Chicago)	\$614	\$753	\$553	\$737	\$1,095	\$963	-12		
Choice white grease (Missouri River)	\$527	\$729	\$511	\$657	\$1,020	\$926	-9		
Yellow grease (Missouri River)	\$475	\$604	\$448	\$577	\$932	\$788	-15		
Poultry fat (Mid-south)	\$512	\$709	\$510	\$628	\$992	\$864	-13		
Edible tallow (Chicago)	\$678	\$840	\$608	\$775	\$1,176	\$1,068	-9		
Edible tallow (Gulf)	\$727	\$751	\$606	\$787	\$1,180	\$1,034	-12		
Lard (Chicago)	\$721	\$445	\$631	\$849	\$1,093	\$1,279	17		
Protein meals									
Meat and bone meal, ruminant (Missouri River)	\$249	\$361	\$368	\$330	\$375	\$429	14		
Meat and bone meal, porcine (Missouri River)	\$262	\$385	\$400	\$351	\$419	\$501	20		
Blood meal, ruminant (Missouri River)	\$648	\$815	\$752	\$742	\$861	\$1,018	18		
Blood meal, porcine (Midwest)	\$740	\$985	\$884	\$850	\$950	\$1,101	16		
Poultry by-product meal (57% protein)	\$340	\$486	\$460	\$406	\$475	\$539	13		
Poultry by-product meal (67% protein) (Mid-south)	\$539	\$678	\$690	\$673	\$721	\$834	16		
Feather meal (Mid-south)	\$327	\$483	\$539	\$490	\$513	\$649	27		
Source: The Jacobsen.									

Category	2007	2008	2009	2010	2011	2012	% Change 11/12
Production							,
Tallow	2,538.9	2,424.4	2,364.5	2,338.8	2,373.5	2,265.1	-4.6
Inedible tallow	1,727.5	1,610.7	1,531.1	1,511.2	1,486.8	1,453.2	-2.3
Edible tallow	811.4	813.7	833.4	827.6	886.7	812.0	-8.4
White grease	559.5	595.5	586.4	572.7	580.7	593.9	2.3
Choice white grease	499.5	531.7	523.6	511.3	518.4	530.3	2.3
Lard	60.0	63.8	62.9	61.4	62.2	63.7	2.3
Yellow grease/used cooking oil	910.2	920.0	872.9	868.8	906.4	885.0	-2.4
Poultry fat	624.8	659.3	458.0	471.4	475.2	474.8	-0.1
Subtotal	4,633.4	4,599.2	4,281.8	4,251.8	4,335.7	4,218.8	-2.7
Meat and bone meal	2,398.5	2,313.8	2,266.0	2,244.7	2,272.9	2,261.5	-0.5
Poultry by-product meal	1,155.3	1,176.5	1,145.0	1,178.6	1,188.1	1,186.9	-0.1
Feather meal	593.1	603.9	586.2	603.5	608.5	608.0	-0.1
Subtotal	4,146.9	4,094.2	3,997.3	4,026.7	4,069.5	4,056.4	-0.1
Total	<b>8,780.3</b>	8,693.5	<b>8,279.1</b>	<b>8,278.5</b>	<b>8,405.2</b>	8,275.3	-0.5 -1.5
Consumption	0,700.0	0,075.5	0,277.1	0,270.5	0,403.2	0,275.5	-1.5
Feed, food, fatty acid,							
carryover, other	3,049.1	3,077.9	2,921.3	2,314.8	2,253.7	2,609.9	15.8
Tallow	1,362.0	1,395.3	1,485.4	1,299.6	1,451.1	1,539.7	6.1
Yellow grease	536.1	462.0	430.4	208.9	132.4	264.2	99.5
White grease	526.2	561.3	547.5	379.7	303.8	408.4	34.4
Poultry fat	624.8	659.3	458.0	426.5	366.4	397.7	8.5
Methyl esther	024.0 n/a	n/a	+30.0 n/a	383.7	758.9	714.0	-5.9
Tallow	n/a	n/a	n/a	77.1	194.6	173.3	-11.0
Yellow grease	n/a	n/a	n/a	110.7	213.6	278.1	30.1
White grease	n/a	n/a	n/a	151.0	241.8	185.5	-23.3
Poultry fat	n/a	n/a	n/a	44.9	108.9	77.1	-23.3
Subtotal	3,049.1	3,077.9	2,921.3	2,775.6	3,207.2	3,088.7	-27.2
	3,170.3	3,085.2	2,921.3	2,775.0	2,861.2	2,909.8	1.7
Animal protein meals Feather meal			2,933.7 532.4	2,850.5 553.3	2,001.2 545.5		-5.1
Subtotal	547.3 3,717.6	530.6 3,615.9	3,466.0	3,409.8	3,406.8	517.9 3,427.7	-5.1
Total	<b>6,766.6</b>	<b>6,693.8</b>	<b>6,387.3</b>	<b>6,185.5</b>	<b>6,614.0</b>	<b>6,516.4</b>	-1.5
	0,700.0	0,093.0	0,307.3	0,105.5	0,014.0	0,510.4	-1.5
Exports	1 000 0	045.0	00F 7	070.2	447.0	474.0	00.4
Inedible tallow	1,000.8	945.0	805.7	879.3	667.8	476.9	-28.6
Yellow grease	374.1	458.0	442.5	549.2	560.3	342.8	-38.8
Edible tallow	176.1	84.1	73.4	82.9	60.0	75.3	25.6
Lard	32.7	33.1	37.1	38.2	32.5	N/A	
Choice white grease	0.6	1.2	1.8	3.7	2.6	N/A	20.4
Subtotal	1,584.4	1,521.3	1,360.6	1,553.3	1,323.1	894.9	-32.4
Animal protein meals	383.5	405.1	477.3	566.8	599.7	538.6	-10.2
Feather meal	45.8	73.3	53.9	50.1	63.0	90.1	43.1
Subtotal	429.3	478.4	531.2	616.9	662.7	628.8	-5.1

Source: Global Trade Atlas for exports, US Environmental Protection Agency for biodiesel consumption, and USDA/National Agricultural Statistics Service slaughter data to derive production. Note: n/a = not available.

### Table 3. US annual livestock and poultry slaughter, 2007-2012 (thousand head)

							% Change
Specie	2007	2008	2009	2010	2011	2012	11/12
Broilers/Mature chickens	9,035,620	9,075,112	8,658,603	8,790,479	8,683,643	8,576,194	-1.2
Cattle	34,414	34,514	33 <i>,</i> 338	34,265	34,087	32,950	-3.3
Hogs	109,278	116,559	113,618	110,257	110,860	113,152	2.1
Turkeys	264,926	271,265	245,812	242,619	246,844	250,192	1.4
Source: USDA/National Agricultur	ral Statistics Service.						

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and eight million metric tons respectively, their demand for rendered products is quite strong, with pet food consuming approximately 30 percent of all protein meals produced by the rendering industry. The feed industry has been the traditional market for rendered proteins and fats, with energy from added fat in a diet replacing a portion of the corn.

The oleochemical industry remains an important customer for renderers, but since the census no longer reports on the consumption of animal fats, it is difficult to give a good assessment as to its use in this market. Traditionally, the US oleochemical industry consumed approximately 10 percent of fat production in the United States.

In table 2, consumption of rendered products is derived by taking production minus use of fats in biodiesel minus exports. It can be seen that fats use in the domestic marketplace rose by approximately 14 percent in 2012, totaling 2.7 million metric tons. This is partly due to reduced export demand. For animal proteins, the US market consumed 3.4 million metric tons of processed animal proteins in 2012, up slightly from 2011.

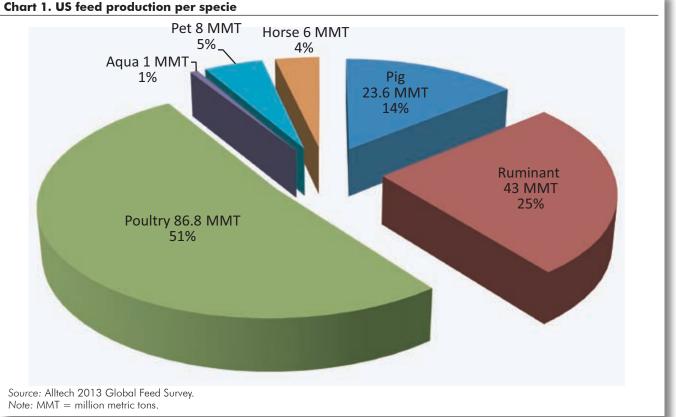
The biodiesel market in the United States has become a major consumer of animal fats. As directed under the Renewable Fuel Standard (RFS), the renewable fuel obligation for biodiesel was initially set at 800 million gallons in 2011. In 2012, the obligated mandate was increased to one billion gallons, and for 2013, the Environmental Protection Agency set the mandate at 1.28 billion gallons. Total use of rendered fats consumed in biodiesel was approximately 714,000 metric tons in 2012, down about six percent from 2011, and accounting for approximately 17 percent of the production of rendered fats last year. While consumption of tallow, white grease, and

poultry fat in biodiesel declined dramatically in 2012, the use of yellow grease increased by 30 percent to around 278,000 metric tons. In addition, ethanol producers began extracting corn oil from dried distillers grains with solubles (DDGS). It is estimated that by the end of 2012, over 80 percent of the ethanol industry was capable of extracting the corn oil from DDGS, up from 30 percent of the industry at the beginning of the year. Hence, use of corn oil for biodiesel production displaced both animal and vegetable fats in biodiesel with usage rising from 51,000 metric tons of corn oil in 2010 to 259,000 metric tons in 2012.

Exports of rendered products last year were approximately 1.5 million metric tons, down 23 percent from 2011. As a whole, US renderers exported about 18 percent of all production in 2012, down from 24 percent the prior year. This decline was mainly due to the major reduction in fat exports, which totaled 894,900 metric tons last year, down 32 percent from 2011. Fat exports were about 21 percent of production in 2012 compared to 31 percent in 2011.

The old saying, "the cure for high prices is, high prices" was partly to blame. Prices in 2011 for fats and oils were at record highs. In late 2011, the Malaysian Palm Oil Council started to report extremely high stocks of palm oil and predicted prices would decline in 2012. This was the case as low-priced palm oil flooded the market and put downward pressure on fat prices in overseas markets. The average spread between palm oil and soybean oil over the last 10 years is about \$77 per metric ton. In 2012, that spread averaged close to \$150 per metric ton, and was over \$277 dollars just this last December. This dramatic decline put pressure on all US fat prices toward the

#### Continued on page 15



Product/Country Inedible tallow		, 2007-2012	(metric ton	5)			
	2007	2008	2009	2010	2011	2012	% Change 11/12
Inadible fallow	2007			2010	2011		,
Mexico	463,330	428,148	415,550	427,556	372,106	271,378	-27.1
Turkey	403,330	112,521	114,218	137,120	90,649	79,495	-12.3
Guatemala	40,979	36,143	26,242	43,723	29,584	19,117	-12.3
							-51.5
Canada	46,773	32,424	28,152	31,662	26,287	12,760	
Venezuela Kanar Sauth	17,931	24,159	18,847	14,710	23,369	18,589	-20.5
Korea, South	61,950	55,333	45,150	47,519	22,784	2,000	-91.2
Peru	19,798	19,921	16,964	22,498	21,981	15,000	-31.8
Honduras	34,709	23,575	23,088	32,971	19,457	24,597	26.4
Morocco	18,849	9,454	13,841	15,425	16,913	10,501	-37.9
Colombia	18,794	19,787	10,998	10,298	8,099	6,699	-17.3
Nicaragua	10,284	8,398	7,599	10,148	8,098	7,749	-4.3
Haiti	9,239	7,493	3,199	12,547	7,540	1,750	-76.8
El Salvador	14,597	13,239	6,563	5,302	7,499	4,699	-37.3
South Africa	7,048	10,894	3,980	5,479	5,088	0	-100.0
Pakistan	8,199	22,984	11,882	7,995	4,000	0	-100.0
Dominica	4,200	6,798	3,199	4,699	2,799	0	-100.0
Trinidad and Tobago	1,867	860	1,696	652	1,093	122	-88.8
Panama	787	400	423	947	400	400	
Nigeria	44,242	85,996	37,997	42,520	0	0	
Japan	16,358	13,357	5,999	0	0	0	
Dominican Republic	6,551	10,448	3,649	0	0	2,000	
Brazil	0	2,040	0	5,000	0	0	
Cuba	2,397	0	2,999	0	0	0	
Total	1,000,837	945,042	805,734	879,251	667,802	476,856	-28.6
Yellow grease							
EU-27	34,621	68,075	43,023	120,844	217,040	129,446	-40.4
Mexico	86,612	109,903	137,541	161,396	131,746	89,870	-31.8
Venezuela	82,034	109,464	102,879	118,243	91,490	74,589	-18.5
Dominican Republic	46,755	35,650	37,651	39,945	30,460	13,063	-57.1
Canada	13,439	38,536	22,361	15,455	25,767	15,673	-39.2
El Salvador	13,044	10,210	9,973	10,784	11,239	1,406	-87.5
Guatemala	14,305	6,840	12,985	19,023	10,224	7,008	-31.5
Honduras	6,090	1,408	4,640	5,989	7,236	1,643	-77.3
Jamaica	3,454	4,931	6,289	7,845	6,630	2,402	-63.8
Haiti	7,405	6,271	9,873	4,998	5,292	4,000	-24.4
China	29,930	31,476	33,937	17,967	4,188	457	-89.1
Korea, South	12,073	18,187	8,049	8,089	2,870	387	-86.5
India	63	148	210	406	2,488	26	-99.0
Costa Rica	1,748	2,238	5,345	3,620	1,991	2,705	35.9
					1,862	2,703	
Norway	n/a <b>374,148</b>	12	39	4,192	· ·		-94.3
Total	374,140	458,010	442,517	549,207	560,289	342,782	-38.8
Edible tallow	105 550	70.000	(7.070	75.000	54.070	70.11/	00.0
Mexico	135,553	72,832	67,879	75,020	54,379	70,116	28.9
Canada	25,516	7,772	3,444	3,011	5,282	5,163	-2.3
Korea, South	9,415	2,266	0	0	184	0	-100.0
Trinidad and Tobago	124	118	196	133	95	26	-72.6
	0	0	0	12	18	0	-100.0
Australia	4	9	7	4	4	0	-100.0
Barbados			1,649	2011	0	0	
	0	0		3,944		0	
Barbados	0 <b>176,080</b>	0 <b>84,053</b>	<b>73,398</b>	3,944 <b>82,893</b>	59,962	0 75,305	25.6
Barbados Turkey	-					-	25.6
Barbados Turkey <b>Total</b>	-					-	25.6
Barbados Turkey Total Lard	176,080	84,053	73,398	82,893	59,962	75,305	25.6
Barbados Turkey <b>Total</b> Lard Mexico Canada	<b>176,080</b> 22,762	<b>84,053</b> 31,938	<b>73,398</b> 36,394	<b>82,893</b> 27,483	<b>59,962</b> 32,859	<b>75,305</b> n/a	25.6
Barbados Turkey <b>Total</b> Lard Mexico Canada Trinidad and Tobago	<b>176,080</b> 22,762 5,958 342	<b>84,053</b> 31,938 2,727 569	<b>73,398</b> 36,394 715 363	<b>82,893</b> 27,483 4,085 272	<b>59,962</b> 32,859 2,005 218	<b>75,305</b> n/a n/a n/a	25.6
Barbados Turkey <b>Total</b> Lard Mexico Canada Trinidad and Tobago Aruba	<b>176,080</b> 22,762 5,958 342 13	<b>84,053</b> 31,938 2,727 569 92	<b>73,398</b> 36,394 715 363 253	<b>82,893</b> 27,483 4,085 272 3	<b>59,962</b> 32,859 2,005 218 150	<b>75,305</b> n/a n/a n/a	25.6
Barbados Turkey <b>Total</b> Lard Mexico Canada Trinidad and Tobago Aruba Bahamas	<b>176,080</b> 22,762 5,958 342 13 65	<b>84,053</b> 31,938 2,727 569 92 77	<b>73,398</b> 36,394 715 363 253 0	<b>82,893</b> 27,483 4,085 272 3 12	<b>59,962</b> 32,859 2,005 218 150 106	<b>75,305</b> n/a n/a n/a n/a	25.6
Barbados Turkey <b>Total</b> Lard Mexico Canada Trinidad and Tobago Aruba	<b>176,080</b> 22,762 5,958 342 13	<b>84,053</b> 31,938 2,727 569 92	<b>73,398</b> 36,394 715 363 253	<b>82,893</b> 27,483 4,085 272 3	<b>59,962</b> 32,859 2,005 218 150	<b>75,305</b> n/a n/a n/a	25.6

Deal at /Compta	0007	0000	0000	0010	0011	0010	% Change
Product/Country	2007	2008	2009	2010	2011	2012	11/12
Animal protein meals							
Indonesia <sup>1</sup>	174,695	206,502	283,557	341,536	395,009	231,512	-41.4
Mexico	112,132	107,164	115,715	89,375	84,102	64,435	-23.4
Chile	9,223	5,280	5,068	14,419	21,746	58,014	166.8
China <sup>2</sup>	22,542	16,487	15,888	48,567	32,497	46,258	42.3
Canada	27,032	30,693	38,325	44,256	30,618	39,094	27.7
Philippines	10,190	5,736	4,456	9,629	4,386	32,837	648.7
Thailand	3,502	6,080	3,646	7,019	11,624	12,884	10.8
Ecuador	1,741	5,861	5,270	3,490	4,255	4,893	15.0
Netherlands	848	787	833	2,211	3,502	5,518	57.6
Vietnam	8,254	16,793	2,921	1,303	2,905	2,050	-29.4
Costa Rica	1,391	78	515	1,603	1,948	349	-82.1
Belgium	0	19	0	0	1,876	0	-100.0
Dominican Republic	11	0	3	140	1,773	881	-50.3
Total	383,524	405,132	477,342	566,771	599,712	538,641	-10.2
Feather meal							
Indonesia	34,963	56,813	43,749	37,260	36,208	47,153	30.2
Chile	532	0	0	0	13,697	24,216	76.8
Canada	3,195	5,383	6,311	9,497	11,632	17,035	46.4
Taiwan	732	1,154	947	1,811	680	1,600	135.3
Vietnam	1,099	5,367	92	660	625	95	-84.8
Mexico	0	101	107	20	70	0	-100.0
Thailand	0	745	0	9	31	18	-41.9
Total	45,804	73,255	53,882	50,139	62,989	90,117	43.1

Note: n/a = not available.

<sup>1</sup>NRA estimates.

<sup>2</sup>Exports to China are likely undervalued.

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end of 2012. On average, the tallow to soybean oil spread has been \$175 per metric ton over the past 10 years, with last year's average being right at \$175. Yet the ending months of 2012 saw that spread increase. Even though exports suffered because of the glut of palm oil and reduced demand globally, the US rendering industry was somewhat buffered from a total price collapse because of the protected demand by the US biodiesel industry.

#### Outlook

Continued pressure on raw material for the rendering industry is likely to carry into 2013 and beyond. The USDA/ Economic Research Service predicts US beef production to decrease by four percent in 2013 and continue declining until 2019. Poultry slaughter is forecast to decline about one percent in 2013 and start growing again the following year, while pork production is forecast to grow by two percent in 2013. Hence, not only will raw material be tight for production, but the feed industry will likely continue at a very slow rate of growth as well. The fats and oils market should remain strong in 2013 as the RFS biodiesel mandate increased to 1.28 billion gallons. In addition, the growth in corn oil production should slow as ethanol producers maximize production, providing added opportunities for animal fats to replace lost energy from extraction of oil from DDGS in the domestic feed market. On the international market, palm oil supplies are expected

to dwindle and prices should strengthen as added demand ought to narrow the price spread between soy oil and palm.

### International Market Conditions

Protein Meals

Even as the global economy weakened in 2012, the global feed industry continued to expand, mainly led by expansion in developing nations. According to Alltech's 2013 Global Feed Survey, global feed production increased from 873 million metric tons in 2011 to 954 million metric tons in 2012, a 10 percent gain. China is the largest feed market in the world with production increasing from 175.4 million metric tons in 2011 to 198.3 million metric tons last year, a 13 percent growth. By regions, Asia is the largest producer of feed in the world at 357 million metric tons in 2012, up 17 percent over 2011. Feed production in Europe rose four percent to 208 million metric tons with North America up two percent to 188 million metric tons. Latin America grew 10 percent in 2012 to 137 million metric tons while the Middle East/Africa region went from 47 million metric tons in 2011 to 56 million metric tons last year, a 20 percent increase. This growth in feed production continues to fuel demand for rendered products.

NRA targets both the poultry and aquaculture industries in export markets. The aqua feed market expanded from 29.7 million metric tons in 2011 to 34.4 million metric tons in 2012, up 16 percent. While this industry is small, it is fast growing and

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processed animal protein meals have a competitive advantage in aqua diets because of their similarities to fish meal.

The largest export market for US animal protein meals in 2012 was Indonesia. Although the largest market, exports to Indonesia fell 41 percent last year to 231,512 metric tons due to the closing of the market in April after the United States reported an atypical case of BSE. As of this writing, Indonesia remains closed to ruminant meat and bone meal from the United States.

Mexico is the second largest market for US processed animal protein exports, which imported 64,435 metric tons in 2012. Mexico has been plagued with avian influenza outbreaks this past year that has reduced feed demand for the poultry sector causing exports to decline. Exports of processed animal protein meals to Chile have exploded in recent years due to the recovery of the Chilean salmon industry and its demand for protein meals. Exports grew by approximately 167 percent in 2012 to nearly 60,000 metric tons.

The seeds for booming exports of US rendered protein meals to Chile were planted many years ago as the NRA started to look for opportunities in the Chilean salmon industry early in 2003. However, in December of that year, the first case of BSE was found in the United States and the opportunities that the Chilean market presented were suddenly shut down as its sanitary authorities prohibited the importation of all rendered protein meals. Thanks to the support of the NRA International Market Development Committee, and USDA's Animal and Plant Health Inspection Service and Foreign Agricultural Service, NRA was successful in obtaining import requirements for non-ruminant protein meals in 2004. In the beginning, export volumes were low due to competitive products from Europe as well as neighboring Argentina and Brazil, but as the salmon industry recovered from the infectious salmon anemia virus crisis and fewer products were available from other countries, exports of US product increased exponentially and then more than doubled in 2012.

The same story can be told regarding feather meal exports to Chile, which grew to approximately 25,000 metric tons in 2012, up over 76 percent from 2011. Other growing markets include China and the Philippines, importing close to 46,000 metric tons and 33,000 metric tons respectively. Exports to other Asian countries are likely higher than reported due to different tariff codes being used for processed animal protein meals. Even with the loss of the largest importer of ruminant meat and bone meal (Indonesia), exports of processed animal proteins only declined by 10 percent due to increased demand from other countries and their growing feed industries.

#### Fats and Greases

As mentioned earlier, US exports of rendered fats and greases plummeted in 2012 due to decreased global demand combined with large stocks of palm oil. Due to the large glut of palm oil, prices fell nearly \$300 per metric ton, a 32 percent drop over the year. In addition, prices of rendered fats remained relatively high early in the year due to the demand from the US biodiesel industry, pricing exporters out of the market for the most part. Mexico remained the largest importer of US tallow at 271,378 metric tons, down 27 percent over 2011. Exports of tallow to Turkey were at a 10-year low at approximately 79,000 metric tons. The one growth market was Morocco, whose imports of tallow increased 26 percent to over 24,000 metric tons for its soap industry. The 27 member countries of the European Union (EU) remained the largest import market for used cooking oil in 2012 at 129,446 metric tons. This product goes solely to the EU biodiesel industry. Mexico and Venezuela imported 89,870 metric tons and 74,589 metric tons of yellow grease respectively, both strong declines over 2011.

Biodiesel and renewable fuel demand remained strong in 2012. The top three global biodiesel producers continued to utilize animal fats and used cooking oil in their industries. The United States used over 700,000 metric tons, the EU took 1.1 million metric tons, and Brazil imported over 400,000 metric tons of animal fats and used cooking oil for the biodiesel

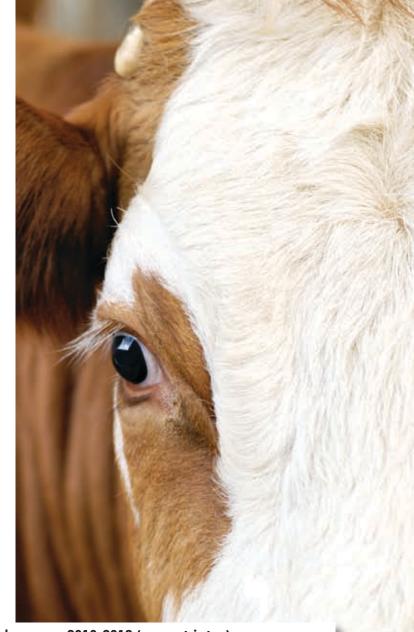
<b>2007</b> 5,870,000	2008	2009			
5 870 000		2009	2010	2011	2012 <sup>e</sup>
5,070,000	8,410,000	8,672,000	9,425,000	9,425,000	9,700,000
188,000	726,000	1,190,000	1,811,000	2,415,000	2,536,000
354,000	146,000	1,407,000	2,088,000	2,339,000	2,363,000
1,040,000	1,618,000	1,260,000	793,000	2,235,000	2,240,000
236,000	551,000	289,000	648,000	1,330,000	1,575,000
60,000	392,000	534,000	578,000	551,000	753,000
n/a	298,000	298,000	298,000	397,000	497,000
8,000	70,000	289,000	368,000	470,000	477,000
81,000	88,000	107,000	122,000	138,000	249,000
33,000	57,000	114,000	122,000	126,000	130,000
38,000	47,000	86,000	70,000	70,000	101,000
10,000	10,000	32,000	32,000	32,000	50,000
5,000	6,000	7,000	8,000	12,000	18,000
195,000	171,000	194,000	70,000	11,000	13,000
9,000	7,000	5,000	1,000	2,000	4,000
8,126,000	12,596,000	14,484,000	16,431,000	19,554,000	20,703,000
	354,000 1,040,000 236,000 60,000 n/a 8,000 81,000 33,000 38,000 10,000 5,000 195,000 9,000 <b>8,126,000</b>	354,000 146,000   1,040,000 1,618,000   236,000 551,000   60,000 392,000   n/a 298,000   8,000 70,000   81,000 88,000   33,000 57,000   38,000 47,000   10,000 10,000   5,000 6,000   195,000 171,000   9,000 7,000	354,000   146,000   1,407,000     1,040,000   1,618,000   1,260,000     236,000   551,000   289,000     60,000   392,000   534,000     n/a   298,000   298,000     8,000   70,000   289,000     81,000   88,000   107,000     33,000   57,000   114,000     38,000   47,000   86,000     10,000   10,000   32,000     5,000   6,000   7,000     195,000   171,000   194,000     9,000   7,000   5,000     8,126,000   12,596,000   14,484,000	354,000   146,000   1,407,000   2,088,000     1,040,000   1,618,000   1,260,000   793,000     236,000   551,000   289,000   648,000     60,000   392,000   534,000   578,000     n/a   298,000   298,000   298,000     8,000   70,000   289,000   368,000     81,000   88,000   107,000   122,000     33,000   57,000   114,000   122,000     38,000   47,000   86,000   70,000     10,000   10,000   32,000   32,000     5,000   6,000   7,000   8,000     195,000   171,000   194,000   70,000     9,000   7,000   5,000   1,000	354,000   146,000   1,407,000   2,088,000   2,339,000     1,040,000   1,618,000   1,260,000   793,000   2,235,000     236,000   551,000   289,000   648,000   1,330,000     60,000   392,000   534,000   578,000   551,000     n/a   298,000   298,000   298,000   397,000     8,000   70,000   289,000   368,000   470,000     81,000   88,000   107,000   122,000   138,000     33,000   57,000   114,000   122,000   126,000     38,000   47,000   86,000   70,000   70,000     10,000   10,000   32,000   32,000   32,000     5,000   6,000   7,000   8,000   12,000     195,000   171,000   194,000   70,000   11,000     9,000   7,000   5,000   1,000   2,000

Source: USDA/Foreign Agriculture Service GAIN Reports, US National Biodiesel Board, US Energy Information Agency. Note: e=estimate; n/a = not available. industries and this demand should continue into 2013. In addition, Singapore is now the second largest global importer of tallow as a raw material for renewable fuel. In 2012, one plant imported 178,000 metric tons of tallow for its operations, mostly from Australia and New Zealand.

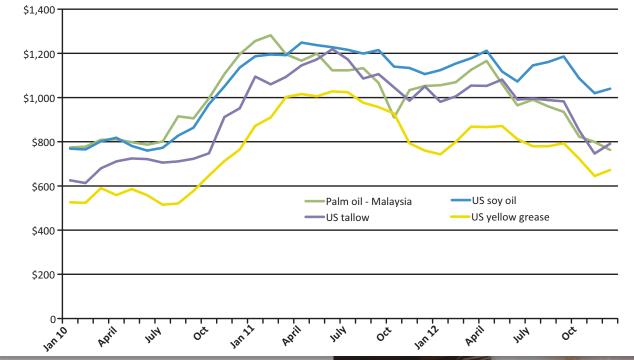
#### Outlook

As mentioned earlier, the cure for high prices is high prices. Alternatively, it can be said that the cure for low prices is low prices. This should be the case with palm oil going into 2013. As stocks begin to drop due to the unsustainable spread between palm oil and other fats and oils, prices should recover. Also, a growing feed industry in developing countries coupled with growing biodiesel and renewable fuel production in developed countries should invigorate export demand for fats and oils. In addition, NRA expects China to open the market to tallow for its soap industry in the next year or two, giving US exporters access to the largest potential tallow market.

The possibilities for processed animal protein exports from the United States should be enhanced due to the recommendation by the World Organization for Animal Health, or OIE, Scientific Commission to the OIE general assembly that the United States be categorized as negligible risk. Although there was much fanfare in the United States when this was announced, it must be noted that the general assembly must still vote on this recommendation. However, a precedent was set in 2012 when Brazil reported an atypical case of BSE yet still maintained its negligible risk status so logic dictates that the United States should receive negligible risk status at the OIE meeting in May. Unfortunately, logic does not always dictate decision-making when it comes to issues that can be used as sanitary and phytosanitary (SPS) trade barriers. As it has been seen, many trade restrictions posed as SPS concerns are nothing more than trade barriers and BSE-related measures are no exception. R







# **World Feed Production Up to 959 Million Tons**

The world is producing 959 million tons of feed and has increased its production by at least four percent in the last year, according to the 2013 Global Feed Survey released by Alltech. Alltech assessed the compound feed production of 134 countries in December 2012 through information obtained in partnership with local feed associations and Alltech's sales team, who visit more than 26,000 feed mills annually.

Among the 134 countries assessed in the survey, China was reaffirmed as the chief producer of feed at 191 million tons and an estimated 10,000 feed mills. Consistent with late 2011 assessments, the United States and Brazil followed with 179 million tons produced by 5,251 feed mills and 66 million tons produced by 1,237 feed mills, respectively. Overall, a 26 million ton increase was observed in BRIC countries (Brazil, Russia, India, and China) year to date.

Asia continues to be the world's number one producing region at 350 million tons. However, Africa exceeded Asia in percent growth over 2011 results, increasing its tonnage nearly 15 percent from 47 million in 2011 to 54 million in 2012.

Globally, the survey identified 26,240 feed mills, with North America and Europe serving as home to more than half of them. The Middle East was estimated to have the largest feed mills, with an average of more than 63,000 tons produced per mill. Sixty percent of feed produced globally is pelleted, with percentages particularly high in Europe.

When analyzed by species, poultry continues to dominate with a 43 percent share of the feed market at 411 million tons

growing by about eight percent over 2011 estimates. Sixty percent of all poultry feed tonnage is dedicated to broilers, with the rest fed to egg layers, turkeys, duck, and other fowl.

The pig feed sector matched poultry's eight percent growth, moving to 218 million tons globally. The ruminant feed market, comprising dairy, beef, and small ruminants, grew more than 13 percent between late 2011 and December 2012, producing 254 million tons.

Aquaculture is the fastest growing species sector by tonnage with growth greater than 55 percent since 2011, while pet food represents 20.5 million tons, 40 percent of which is produced in the United States, but Brazil continues to make considerable advances in this sector. Global equine feed tonnage increased almost 17 percent to 10.8 million tons.

"As we look to the demands of the future, chiefly the feeding of nine billion people by 2050, these survey results should stir optimism and resolve within our feed and food industries," said Dr. Pearse Lyons, president of Alltech. "Our global feed industry is rising to the challenge, and we're seeing growth across the board. Moreover, we're seeing it in some particularly key areas – BRIC, Africa, and aquaculture."

Global feed production has traditionally been difficult to quantify because many countries lack a national feed association. For this reason, in late 2011, Alltech began to leverage its global presence to obtain a finer estimate of the world's feed tonnage. **R** 



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# Grease Theft Still Frustrating West

Although faced with other threats to their raw materials in the form of environmental contaminants and new competitors, Pacific Coast Renderers Association (PCRA) members continued to seek solutions to the challenge of grease theft throughout the west at the group's annual convention held in Carmel Valley, CA, in late February.

Doug "Spike" Helmick, retired commissioner of the California Highway Patrol, stated that from a law enforcement perspective, if perpetrators feel they are not going to get caught or face penalties, they'll continue to steal. He noted that one California police chief became aware of the inedible kitchen grease (IKG) theft problem when one of his officers was caught stealing grease, although most police chiefs and highway patrol officers have no knowledge of the problem. Helmick insisted that renderers need to make law enforcement, district attorneys, the restaurant and trucking

industries, and the general public aware of the extent of the thefts.

"You don't realize the power you [renderers] have and these folks need to know how they can help you," he commented.

Michael Koewler, SRC Companies, encouraged renderers to report every theft by filing a police report that goes against a city/county's crime record. He also urged PCRA members to perform outreach and awareness to law enforcement, allied industries (including the California Restaurant Association), and elected officials. Ken Kage, Darling International, Inc. reported that law enforcement isn't taking grease theft seriously in Colorado. He was told by a street

officer to report the thefts online and once enough are reported, the crimes are flagged to law enforcement at which time they'll realize the severity of the situation.

Dr. Jan Hershenhouse, California Department of Food and Agriculture (CDFA), disclosed the heavy workload of the five staff members in the Meat, Poultry, and Egg Safety Branch, which not only includes livestock slaughter and processing but also licensing, regulating, and inspection of rendering facilities and enforcement of the state's IKG program. She noted that increased fines of \$5,000 per violation for grease theft should have more of an impact and California's grease collection manifest system goes into effect in April, further increasing the branch's tasks due to auditing from "cradle to grave." CDFA recently denied a license to a major grease collection center and transporter due of the long, hard work on the theft case.

"Unfortunately, administration is a long process," Hershenhouse stated, adding that the agency's biggest impact is denial of registration as it makes collectors "dead in the water." She also reiterated that renderers need to file police reports for each grease theft so the department can monitor problem areas and reach out to educate law enforcement in those cities. CDFA recently mailed letters and IKG theft posters to 58 county sheriff offices and has received some interest regarding educational programs.

Tom Cook, National Renderers Association, said grease theft has been one of the most frustrating issues he has had to deal with since joining the association as president in 1997. He added that there is a lot to learn from exchanging ideas with law enforcement.

Ross Hamilton, Darling International, discussed other



Andy Andreoli (*left*), Baker Commodities, and Ryan Koewler, Reno Rendering, are the new PCRA president and vice president, respectively.

threats - such as biological, chemical, and physical - to renderers' raw materials. He stated that the industry's commitment to biosecurity emerged about 10 years ago when the Animal Protein Producers Industry (APPI) developed the North American Rendering Industry Code of Practice, which is based on hazard analysis and critical control pointlike principles. Hamilton pointed out that this "self-regulation" policy was put in place long before the United States (US) government required it of the rendering industry and will help assure that renderers are ready when the Food and Drug Administration (FDA) releases its feed regulation under the Food

Safety Modernization Act. He added that FDA has stated that renderers' compliance with the feed rule is the highest among all industries regulated.

Renderers who participate in APPI's Salmonella testing program are now also taking part in weekly Enterobacteriacea, or EBAC, testing for plant sanitation and monthly Clostridium perfringens testing to validate critical control points, according to Hamilton. He reported that in 2001, the United Kingdom government concluded that rendering is the preferred method of disposal to prevent the spread of disease after examining various disposal options following the country's foot and mouth disease outbreak.

A new area of concern for some renderers is raw material contaminated with the chemicals dursban, diazinon, and endosulfan, which are used for fly control on ear tags and

# **Coast Renderers**

By Tina Caparella

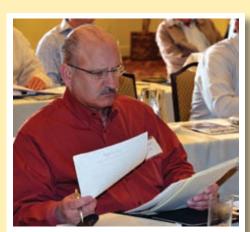
can affect raw material if tags are not removed prior to slaughter. Hamilton noted that the limit for these chemicals is 300 parts per billion (ppb) and 30 to 90 tags can exceed that level. Another chemical contaminant of concern is permethrin, also used for fly control, in spent hens, broilers, and feathers. Some levels have been as high as 90,000 ppb, with the tolerance being 150 ppb for poultry products. Hamilton stated that fat containing permethrin can be diverted to fuel, but other rendered products pose an environmental disposal issue because the chemical is toxic to bees and fish.

Tad Bell, California Grain and Feed Association (CGFA), said the spent hen

and chemical contamination issue is about losing "input," or material, while colleague Dennis Albiani warned of California Assembly Bill 323, driven by the California Department of Resources Recycling and Recovery, or CalRecycle, that would require grocery stores, restaurants, and food processors to recycle food waste. Albiani insisted that waste management companies who want to recycle meat or meat products should fall under the CDFA rendering program and state monetary incentives should be broad-based so all recycling industries are included, although CGFA prefers no incentives so industry is market-driven and competitive.

Sharing the trials and tribulations in Canada was Ridley Bestwick, West Coast Reduction, Ltd. who told how an E. coli event basically took down a large Canadian food company, XL Foods. It all began September 4, 2012, when the Canadian Food Inspection Agency (CFIA) identified a positive E. coli O157:H7 sample in raw beef trimmings at XL Foods' Brooks, AB, Canada plant. That same day, the US Department of Agriculture also found a positive sample during routine testing in the United States. All product was destroyed and since none had entered the marketplace, no recall was issued. The Brooks plant was reported to have had 46 CFIA inspectors onsite at the time.

Within 10 days, as CFIA investigated the source and cause of the contamination, two more positive



Dave Fischer, JBS Swift and Company, prepares for PCRA's business meeting.

samples were discovered in the United States after which CFIA removed XL Foods from the list of establishments eligible to export to the United States, but still did not issue a product recall. It was at this point, on September 15, that Bestwick said the media took the story viral, 24 hours a day, seven days a week. The news was front page for three weeks. CFIA issued its first "health hazard alert" on September 16 recalling certain products, and continued to expand its alerts almost daily identifying more products. On September 27, CFIA suspended the license of XL Foods in Brooks. As of October 1, 2012, only eight illnesses had been linked to the largest beef

recall in Canada's history, said Bestwick.

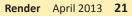
One month after the incident began, XL Foods broke its silence and released its first press release, taking responsibility and apologizing to the Canadian public. Eventually, JBS Food Canada purchased XL Foods. In all, 45 million pounds of meat was recalled, one month's worth of the plant's slaughter, with some of the meat being treated by CFIA as hazardous waste and directed to landfills that accept prohibited specified risk materials.

"A brand was destroyed, a business destroyed," Bestwick commented. He added that until XL Foods assumed

> responsibility, everyone played the "blame game," from CFIA and the agency's union to the labor union in the XL Foods plant and national political parties. Bestwick noted the lesson learned in this situation is that companies, including renderers, need to have well-managed disaster and media relations plans in place to restore public confidence, maintain relationships with regulators, and always follow, monitor, and update hazard analysis and critical control point plans.

PCRA also conducted business matters during its convention, including electing Andy Andreoli, Baker Commodities, as president and Ryan Koewler, Reno Rendering Co., as vice president of the association. PCRA's next convention will be held February 29-March 1, 2014. **R** 

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Retired California Highway Patrol Commissioner Spike Helmick encouraged renderers to make law enforcement aware of the grease theft problem in the state.

# Rendered Products Remain Quality Feed Ingredients

#### By Tina Caparella

"Dogs and cats love rendered animal fats and proteins," Greg Aldrich, Kansas State University, stated at the International Rendering Symposium held during the 2013 International Production and Processing Expo (IPPE) in Atlanta, GA, the last week in January. About 80 attendees, including many international guests, listened to industry experts discuss the various aspects of the North American rendering industry.

Aldrich pointed out that 165 million cats and dogs and 213 million other pets (i.e., birds, fish, horses, and rodents) live in 62 percent of homes in the United States (US), compared to children living in 33 percent of US homes. He emphasized the paradigm shift from pets going from barnyard security to becoming a family member is bringing some "craziness," such as a new demand for high protein (35 to 50 percent), no grain diets, even though dogs don't need such high protein amounts in their food.

As a nutritionist, Aldrich is most concerned with the palatability of rendered products and sees a trend toward natural preservatives, of which tocopherol-based systems are most effective. As to the on-going battle of classifying some pet food ingredients as "by-products," which, by definition, are secondary products produced in addition to the principal product, he noted that if the ingredient name cannot be changed, then the pet food industry will need to educate consumers that these ingredients are just fine to use in pet foods.

"Rendered protein meal represents a substantial portion of the high quality protein and fat in modern companion animal diets," Aldrich said. "They are commonly included at five to 40 percent and can contribute in excess of 85 percent of the dietary protein and 30 percent of the dietary fat." He went on to thank the rendering industry for "taking all this



waste and creating good, quality ingredients for pet foods. And I know we don't always express that thanks."

National Renderers Association (NRA) President Tom Cook described the rendering industry as the essential gatekeeper for the health of people and the planet. In the United States and Canada, 250 facilities process 137 million pounds of raw material each day, enough to fill 10,000 Dallas Cowboy football stadiums annually. He broke down the amount of material from each animal not consumed for human food in the United States as 49 percent of the live weight of a cow, 44 percent of a hog, 37 percent of a chicken, and 36 percent of a turkey.

Dr. Gianni Carniglia, NRA consultant for Latin America, provided estimates for the region's rendering industry, which includes 70 plants in Brazil, 14 in Mexico, and 10 in Argentina that make up 93 percent of production. Almost 80 percent of rendering facilities are integrated with meat processors, with protein meals accounting for 67 percent of production and fats making up the balance.

The pet food industry in Latin America is an emerging market, accounting for 17 percent of the global share and growing at about 12 percent per year. Four countries make up almost 95 percent of the market volume: Brazil at 52 percent with 2.2 million metric tons, Mexico at 19 percent with 800,000 metric tons, Argentina at 14 percent with 600,000 metric tons, and Chile with seven percent of the market at 360,000 metric tons, with 40 percent of that product imported.

"The availability of proteins and fats in quantity and quality will be a key successful factor of the Latin America pet food industry development," Carniglia commented.

Bill Dieterichs, The Jacobsen Report, mentioned there isn't a lot of change in raw material supply for US renderers and that all rendered products will be used, it's just a matter of where. He remarked that growing demand continues to be in aquaculture, with some growth in boilers and pork, while beef demand remains flat. Dieterichs said feather meal usage is increasing in Chile's aquaculture industry, and the "huge" growth in US exports of dried distillers grains with solubles is most likely for poultry and pork rations.

"US and Canadian rendered protein is a safe and wholesome ingredient that should continue to find its way into animal feed throughout the world," he announced.

Renderers provided their perspectives, beginning with Dr. Charles Starkey, American Proteins, Inc. who noted that pet food gets as much regulatory attention these days as infant formula due to *Salmonella* concerns. He said that a new Food and Drug Administration (FDA) Compliance Policy Guide for *Salmonella* in Animal Feed is due out soon, and that feed ingredients with any traces of *Salmonella* are no longer considered adulterated, except those used in milk replacers and pet food. While there are over 2,300 species of Salmonellosis, FDA is primarily focusing on 30 to 40 that cause concern. Starkey has no doubt that *Salmonella* is killed in the rendering cooker so any recontamination is most likely caused by outside sources, including employees. He pointed out that the bacteria can survive on cloth for up to 228 days, in sweeper dust for 300 days, and on wash and wear fabric for nearly 70 days. He then provided a laundry list of ways to prevent *Salmonella* contamination.

Dr. Ross Hamilton, Darling International, Inc. acknowledged that the rendering industry's goal is to provide safe, quality ingredients to customers for use in pet food and animal feed. He estimates nearly 76 billion pounds of raw material is available to recycle by renderers each year, including used cooking oil, expired meat from retail, and fat, bone, and trim from meat processing. Hamilton explained that rendering kills pathogenic organisms, protects the environment, recycles carbon and energy, and provides control, verification, and traceability that condemned or expired meat products are not reused as human food, all within hours of receiving the raw materials rather than weeks or months as other popular alternative methods do. He highlighted the various methods, including critical control points, and programs used in the industry to ensure pathogens are destroyed and that products are not recontaminated.

Hamilton encouraged employers to do background checks on new employees and ensure all employees receive training on feed safety and good manufacturing practices, including the intent behind them, and provide annual refresher training. He also urged renderers to educate their raw material suppliers that the cleaner the material, the cleaner the finished product. Drivers need to inspect material collected for uncharacteristic odors, suspicious and prohibited materials, metal, wood, plastic, and ear tags, and companies need to provide drivers with the process to document and report possible contaminations.

Dr. David Meeker, senior vice president, NRA Scientific Services, explained that many proteins contain *Salmonella*, not just animal proteins, and that the rendering industry is working harder every day to control the bacteria in their products. He emphasized that testing of animal proteins checks to ensure the rendering process is working, not every load produced, and widespread testing for *Salmonella* is not necessary or cost-effective.

A number of researchers shared their experiences with rendering and its products, including Dr. Charles Gooding, Clemson University, who explained how rendering's attributes make it a "green" industry as defined by the World Resource Institute, such as minimal use of virgin raw materials; production processes that minimize the use of water and energy; production processes free from harmful toxins; reuse and recycling of solid waste streams; substantial reductions in emissions or effluents of harmful greenhouse gases and pollutants; and products that are built for longevity and durability. He presented an array of calculations developed to determine the carbon footprint of a rendering operation and explained that he is now looking at a life cycle assessment of rendering due to demand from various sources to show that rendering is a green process compared to alternative technologies such as composting.

Dr. Jeffre Firman, University of Missouri, focused on rendered products in poultry feed, which are used as a source of protein, calcium, and phosphorus. He described



From left, Jose Velez, Antiotrading in Columbia, discusses animal proteins and fats as alternative feed ingredients for salmon with Eduardo Oliart and Carlos Franzani, both of Graneles in Chile.

using a digestible formulation to save money and allow the use of alternative ingredients more easily. Dr. Brian Kerr, US Department of Agriculture, stated that phosphorus can be a high-cost item in feed formulations with rendered proteins being a good source of phosphorus at a lower cost. Kerr also touched on the revisions made to the National Research Council's Nutrient Requirements of Swine released in 2012.

#### **Pet Food Focus**

There were other educational programs available to the record 26,000-plus attendees at the IPPE, including a pet food conference sponsored by the Poultry Protein and Fat Council and American Feed Industry Association (AFIA) and its Pet Food Committee. Michael Maddox, Pet Industry Joint Advisory Council, got the meeting started with statistics that showed pet food product sales have doubled in the last 10 years, but that pet ownership actually saw a small drop from 2006 to 2011 after years of steady growth.

Maddox next addressed the various regulatory trends emerging in the United States, such as limits on the number of pets per household, mandatory spay/neuter, identification enforcement, pet "guardianship" versus pet "owner," and non-economic damages, something the pet food industry is very concerned about. He emphasized that "emotion rules the day," and in the world of pets, a picture really does express a thousand words.

Dr. Daniel McChesney, FDA/Center for Veterinary Medicine, updated attendees on the Food Safety and Modernization Act (FSMA) proposed rules for human food released in January, indicating that the feed rules will be almost identical with the exception that good manufacturing practices for feed will be introduced since they currently don't exist in regulation. He advised to read the executive summary of the proposed rules for food, and then skip the next 400 or so pages that explain FDA's thought process behind the rules. McChesney explained that the language specifying companies "should" do this is FDA-speak for "we would like you" to do this. He also shared information about FDA's Veterinary

Continued on page 24

#### **Rendered Products** Continued from page 23

Laboratory Response Network used to promote human and animal health by collaborating with state veterinary diagnostic laboratories that has been well received.

A panel of pet food ingredient representatives discussed issues keeping them up at night. Mike Cici, The Scoular Company, said corn carry-over is low and changing weather conditions in 2011-2012 meant a smaller fish catch. He then presented alternative protein sources for animal feed as "pulses" (dry bean, chickpea, dry pea, lentil, and fava bean) and algae, which he described as nutritionally situated between soybean meal and fish meal.

Jerry Phelps, Tyson Animal Nutrition Group, noted that 40 percent of the US corn crop is used in ethanol while on a world scale, 15 percent of the corn is used in the biofuel. He warned that the availability of domestic protein supplies is constricted now and in the foreseeable future as exports are increasing. However, because of the decline in fish meal availability, feed manufacturers have been turning more attention to feather and poultry meals, creating a "good year" for Tyson. Phelps did encourage the industry to "think outside the box" to redefine ingredient definitions and expand to new protein sources.

Dale Hill, ADM Alliance Nutrition, reiterated that the availability of feed ingredients is becoming more and more difficult. His company works with 400 different ingredients and the challenges are obtaining a certificate of analysis on each batch and third party certification on processes from ingredient suppliers and imports. Hill believes 80 to 90 percent of feed companies are already in compliance with FSMA, and that *Salmonella* remains a big issue for the industry with the focus being on control and reduction.

Dr. Maho Imanishi. Centers for Disease Control (CDC) and Prevention, confirmed that Salmonella is the most common bacterial cause of foodborne illnesses in the United States. with 1.2 million illnesses reported each year resulting in 400 deaths. She ex-



Greg Aldrich, Kansas State University, declared that dogs and cats love rendered animal fats and proteins.

plained there are many ways the bacteria is transmitted to humans, both directly through eating contaminated foods and indirectly, and that outbreaks now tend to be more dispersed across the country compared to being more localized years ago. Imanishi discussed the small *Salmonella* outbreak in spring 2012 that was linked to dry dog food. In response, CDC has prepared an educational poster instructing consumers on proper handling of pet food that will be distributed to animal hospitals, veterinary clinics, and pet food retailers.

Aldrich also spoke at the pet food conference, echoing the sentiment that pet food's unique role in the mix of animal and human food is now being swept into food safety rules like never before. He described the multiple threats to pet food manufacturers as mixing errors, miscalculations and unexpected processing interactions, and contaminates that



can come from multiple entry points such as raw materials, transportation, personnel, pests, post processing, packaging, distribution, and even in the consumer's home. Aldrich said manufacturers often consider the extruder as a kill step for bacteria, but he has not found much data to support this idea and sometimes sees recontamination after emergence from the extruder. He noted a practical rapid method (less than one hour) for detecting *Salmonella* in pet food and feed ingredients is needed.

Jan Jarman, Minnesota Department of Agriculture, provided an update on an amendment to the American Association of Feed Control Officials' (AAFCO's) "95 percent rule." Currently, if a product name includes animal-derived ingredients, then those ingredients must make up 95 percent of the product. The proposed change is if a product name includes any ingredients, then those ingredients must make up 95 percent of the product, thus making the rule apply to all feed ingredients, not just those derived from animals. Jarman mentioned that AAFCO has developed a website at http://petfood.aafco.org in response to a large interest in home-based pet treat and pet food manufacturing and put in place a strategic plan with one goal being to enhance cooperation among regulatory agencies, especially state-to-state.

Third party certification was also addressed, beginning with a recap of AFIA's programs that are designed as a pass or fail system, are open to all companies for certification, and meet or exceed FDA regulations. A panel of experts encouraged companies to be open and honest with auditors because the intent of the certification is for the company's operations to be better than they are currently. In addition, certain employees in the company need to be trained in hazard analysis and critical control points prior to becoming certified. That training is available through universities, private trainers, or industry organizations. The panel emphasized that third party certification programs are to ensure the company is doing the best it can to ensure safe feed and feed ingredients. It's expected that under FSMA, third party certification will be required, and many customers are beginning to demand it. R

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#### WESTERN REGION

President: Andy Andreoli Baker Commodities, Inc. 323-268-2801

Vice President: Ryan Koewler Reno Rendering Co. 800-733-6498

Secretary/Treasurer: Jeanette Caito 415-441-2121

## 2013 ACTIVE MEMBERS

#### **Producers of Animal Fats and Proteins**

#### American Proteins, Inc. -Headquarters

4705 Leland Drive Cumming, GA 30041 Contact: Stan Gudenkauf Phone: 770-886-2250 Fax: 770-886-2296 Web: www.americanproteins.com E-mail: stan.gudenkauf@ amprot com Region: Eastern

#### American Proteins, Inc. -

Cuthbert Division P.O. Box 528 Cuthbert, GA 31740 Contact: Brandon Kyzar Phone: 229-732-2114 Fax: 229-732-3896 Products: SF,PB,FM Region: Eastern

#### American Proteins, Inc. -Cumming Division

4990 Leland Drive Cumming, GA 30041 Contact: Jonathan Green Phone: 770-887-6148 Fax: 770-889-2820 E-mail: jonathan.green@ amprot.com Products: SF,PB,FM Region: Eastern

#### American Proteins, Inc. -

Hanceville Division P.O. Box 429 Hanceville, AL 35077 Contact: Jason Spann Phone: 256-352-9821 Fax: 256-352-4223 E-mail: jason.spann@ amprot.com Products: SF,PB,FM **Region: Eastern** 

#### APC, Inc.

The Lauridsen Group, Inc. 2425 SE Oak Tree Court Ankeny, IA 50021 Contact: Nix Lauridsen or Dennis Skou Phone: 515-289-7600 Fax: 515-289-4360 Web: www.functionalproteins.com E-mail: info@ functionalproteins.com Products: Spray-dried blood and plasma products **Region:** Central

#### APC, Inc. - Boone

2621 Mamie Eisenhower Ave. Boone, IA 50036 Contact: Gary Manning Phone: 515-432-8021 Fax: 515-432-8027 E-mail: gary.manning@ functionalproteins.com Products: Spray-dried blood and plasma products Region: Central

#### **PRODUCT CODE KEY:**

- BFP Blender - Fat and Proteins BLF
- Blender of Fat **BIP** Blender of Protein
- ΒM Blood Meal
- BR Broker CH
- Chemicals СM Chicken Meal
- CN Consultant
- CWG Choice White Grease
- DL Dealer
- DT Dry Rendered Tankage

http://nationalrenderers.org

EQ Equipment Edible Tallow ΕT ΕX Exporter FA Fatty Acids Feed Grade Animal Fat FGAF FM Feather Meal ΗI Hide Insurance LG Lard/Grease Laboratory/Testing MB Meat and Bone Meal

IN

LT

ΜМ Meat Meal ΡВ Poultry By-product PF Poultry Fat PM Poultry Meal RF **Refined** Fats Stabilized Animal Fats SF SS Samplers and Surveyors ST Storage Terminals ŤG Tallow and Grease YG Yellow Grease OT Other

APC, Inc. - Arion 2248 Lincoln Way Arion, IA 51520 Contact: Tom Muckey Phone: 712-263-6690 Fax: 712-263-6772 E-mail: tom.muckey@ functionalproteins.com Products: Spray-dried blood and plasma products Region: Central

APC, Inc. - Dubuque 525 Julien Dubuque Drive Dubuque, IA 52003 Contact: Dave Banfield Phone: 563-588-3333 Fax: 563-588-2691 E-mail: david.banfield@ functionalproteins.com Products: Spray-dried blood and plasma products Region: Central

APC, Inc. - Selma 1451 West Noble Street Selma, NC 27576 Contact: Matt Ruppert Phone: 919-965-2051 Fax: 919-965-2130 E-mail: matt.ruppert@ functionalproteins.com Products: Spray-dried blood and plasma products Region: Central

APC, Inc. - Sublette HCR 1, Highway 83 North Sublette, KS 67877 Contact: James A. Phillabaum Phone: 620-675-8691 Fax: 620-675-2369 E-mail: james.phillabaum@ functionalproteins.com Products: Spray-dried blood and plasma products Region: Central

#### Baker Commodities, Inc. -Headquarters

4020 Bandini Boulevard Vernon, CA 90058-4274 Contact: James M. Andreoli Phone: 323-268-2801 Fax: 323-264-9862 E-mail: jandreoli@ bakercommodities.com Products: EX,RF,SF,TG,HI,MM, MB,FGAF,ST Region: Western

#### **Baker Commodities, Inc. -**Spokane

P.O. Box 11157 Spokane, WA 99211-1157 Contact: John McCartney Phone: 509-535-5435 Fax: 509-536-3817 E-mail: jmccartney@ bakercommodities.com Products: SF,TG,HI,MB Region: Western

#### Baker Commodities, Inc. -

Los Angeles 4020 Bandini Boulevard Vernon, CA 90058-4274 Contact: Shelton Wang Phone: 323-268-2801 Fax: 323-268-5166 E-mail: swang@ bakercommodities.com Products: EX,RF,SF,TG,HI,MM, MB,FGAF,ST Region: Western

#### Baker Commodities, Inc. -

Seattle P.O. Box 58368 Seattle, WA 98138-1368 Contact: Mike Bulleri Phone: 206-243-7387 Fax: 206-243-3412 E-mail: mbulleri@ bakercommodities.com Products: EX,TG,MB,FGAF,HI, OT,Fish meal Region: Western

#### Baker Commodities, Inc. -Rochester

2268 Browncroft Boulevard Rochester, NY 14625-1050 Contact: Bill Schmieder Phone: 585-482-1880 Fax: 585-654-7070 E-mail: bschmieder@ bakercommodities.com Products: SF,TG,HI,MB,FGAF, BLP Region: Eastern

#### Baker Commodities, Inc. -

Kerman P.O. Box 416 Kerman, CA 93630-0487 Contact: Manuel Ponte Phone: 559-846-9393 Fax: 559-846-7671 E-mail: mponte@ bakercommodities.com Products: EX,FGAF,HI,MB,SF,TG Region: Western

#### Baker Commodities, Inc. -

Phoenix P.O. Box 6518 Phoenix, AZ 85009 Contact: Gil Morgan Phone: 602-254-5971 or 602-275-3402 Fax: 602-272-1846 E-mail: gmorgan@ bakercommodities.com Products: TG,MM,MB,SF,FGAF Region: Western

#### Baker Commodities, Inc. -

Billerica P.O. Box 132 No. Billerica, MA 01862 Contact: Joe Huelsman or Walter Gurschick Phone: 978-454-8811 Fax: 978-454-0448 E-mail: jhuelsman@ bakercommodities.com Products: EX,SF,TG,FGAF,MM,MB,ST Region: Eastern

#### Baker Commodities, Inc.

Island Commodities 91-269 Olai Street Kapolei, HI 96707 Contact: John Tsukada Phone: 808-682-5844 Fax: 808-682-4389 E-mail: jtsukada@ bakercommodities.com Products: TG,MB Region: Western

#### Birmingham Hide & Tallow Co., Inc.

P.O. Box 1596 700 Maple Street, Suite A Birmingham, AL 35210 Contact: T. Owen Vickers Phone: 205-252-1197 Fax: 205-251-1522 Web: www.bhtonline.com E-mail: tovickers@aol.com Products: TG,SF,FGAF,HI,MB,BFP Region: Eastern

#### Cargill Meat Solutions, Inc. - Headquarters

Excel Corporation P.O. Box 2519 Wichita, KS 67201 Contact: Mark McMahon Phone: 316-291-2748 Fax: 316-291-3013 Web: www.excelmeats.com E-mail: mark\_mcmahon@ cargill.com Products: EX,BM,DT,FGAF,HI MB,MM,SF,TG Region: Central

#### **Cargill Meat Solutions -**

Beardstown R.R. Box 450 Beardstown, IL 62618 Contact: Brent Jaggar Phone: 217-323-6200 Fax: 217-323-6306 Products: BM,DT,FGAF,HI,MB, MM,SF,TG Region: Central

#### **Cargill Meat Solutions -**

Dodge City P.O. Box 1060 Dodge City, KS 67801 Contact: Daryl Kuker Phone: 620-227-0550 Fax: 316-227-5839 Products: BM,DT,FGAF,HI,MB, MM,SF,TG Region: Central

#### **Cargill Meat Solutions -**

Fort Morgan P.O. Box 4100 Fort Morgan, CO 80701 Contact: Ron Logan Phone: 303-867-1540 Fax: 303-867-1564 Products: BM,DT,FGAF,HI,MB, MM,SF,TG Region: Central

#### **Cargill Meat Solutions -**

Friona P.O. Box 579 Friona, TX 79035 Contact: David Wathen Phone: 806-295-8380 Fax: 806-295-8214 Products: BM,DT,FGAF,HI,MB, MM,SF,TG Region: Central

#### **Cargill Meat Solutions -**

Plainview P.O. Box 910 Plainview, TX 79072 Contact: Reed Staal Phone: 806-291-4012 Fax: 806-291-1897 Products: BM,DT,FGAF,HI,MB, MM,SF,TG Region: Central

#### **Cargill Meat Solutions -**Schuyler

P.O. Box 544 Schuyler, NE 68661 Contact: Rod Perrin Phone: 402-352-5411 Fax: 402-352-8334 Products: BM,DT,FGAF,HI,MB, MM,SF,TG Region: Central

#### **Cargill Meat Solutions -**

Wapello County P.O. Box 310 Ottumwa, IA 52501 Contact: Bill Glosser Phone: 641-682-4735 Fax: 641-683-4793 Products: BM,DT,FGAF,HI,MB, MM,SF,TG Region: Central

#### **Cargill Meat Solutions**

P.O. Box 3850 High River, AB, T1V 1P4 Canada Contact: Shane Mulrooney Phone: 403-652-4688 Fax: 403-652-5245 Products: EX,BM,DT,FGAF,HI, MB,MM,SF,TG Region: Western

#### **Cargill Poultry**

Excel Corporation 1001 E. Smith California, MO 65018 Contact: Danny Volker Phone: 314-796-2123 Fax: 314-796-3661 Products: PM,FM,MM Region: Central

#### **Cargill Regional Beef**

P.O. Box 188 Wyalusing, PA 18853 Contact: John Couture Phone: 570-746-9224, x7347 Fax: 570-746-1235 E-mail: john.couture@cargill.com Products: SF,TG,MB,BFP,EX,BM Region: Eastern

#### **Central Bi-Products**

Farmers Union Industries, LLC P.O. Box 319 Redwood Falls, MN 56283 Contact: Duane Anderson Phone: 507-637-2938 Fax: 507-637-4267 Web: www.fuillc.com E-mail: danderson@ centralbi.com Products: FM,PB,SF,TG,HI,MM, MB,DT,BFP,FGAF,BM,OT(Pet food) Region: Central

#### **Central Bi-Products**

Farmers Union Industries, LLC P.O. Box 359 Long Prairie, MN 56346 Contact: Daryl Brever Phone: 320-732-2819 Fax: 320-732-2148 Products: FM,PB,SF,TG,HI,MM, MB,PM,BFP,FGAF,BM,OT(Pet food) Region: Central

#### Darling International Inc. - Headquarters

251 O'Connor Ridge Blvd., Suite 300 Irving, TX 75038 Phone: 972-717-0300 Fax: 972-717-1588 Web: www.darlingii.com E-mail: info@darlingii.com Region: Central, Western, Eastern

#### Darling International Inc. - Regional Office

P.O. Box 615 Des Moines, IA 50303 Phone: 515-288-2166 Fax: 515-288-1007 Web: www.darlingii.com Region: Central, Western, Eastern

#### Griffin Industries LLC -Headquarters

Darling International, Inc. 4221 Alexandria Pike Cold Spring, KY 41076 Phone: 859-781-2010 Fax: 859-572-2575 Web: www.griffinind.com Region: Central, Western, Eastern

#### For rendered fat sales

## DAR PRO Solutions, a Darling/Griffin Brand

Contact: Michael Rath Phone: 800-669-1209 Fax: 972-717-1959 Web: www.darpro.com E-mail: sales@darpro.com Products: BLF,BR,CN,DL,EQ,ET, EX,FGAF,HI,LT,RF,SF,ST,TG,YG, OT (biodiesel) For rendered protein sales

#### DAR PRO Solutions, a Darling/Griffin Brand

Contact: Jim Conway Phone: 877-659-8438 Fax: 859-781-2569 Web: www.darpro.com E-mail: jconway@darpro.com Products: BLP,BM,CM,EQ,EX, PB,PM,FM,LT,MB,MM,OT (Organic fertilizer, specialty proteins, flavor enhancers)

For restaurant services

## DAR PRO Solutions, a Darling/Griffin Brand

Contact: Brian Griffin Phone: 855-327-7761 Fax: 859-781-2569 Web: www.darpro.com E-mail: recyclingservices@ darpro.com

#### Encore Oils, LLC

SeQuential Pacific Biodiesel 4735 Turner Road SE Salem, OR 97317 Contact: Tyson Keever Phone: 503-954-2154 Fax: 503-296-5797 Web: www.encoreoils.com E-mail: tysonk@ salembiodiesel.com Products: MB,TG,Lard Region: Western

#### Florida By Products, Inc.

465 Caboose Place Mulberry, FL 33860 Contact: Jay Ford or Richard Stradtman Phone: 863-425-6706 Fax: 863-425-0106 E-mail: rstradtman@ floridabyproducts.com Products: LG Region: Eastern

#### FPL Food, LLC

1301 New Savannah Road Augusta, GA 30901 Contact: Randal Garrett Phone: 706-922-5510 E-mail: randal.garrett@ fplfood.com Products: MB,MM,HI,Tallow Region: Eastern

#### Foster Farms

P.O. Box 457 Livingston, CA 95334 Contact: Dennis Richmond Phone: 318-368-4344 Fax: 318-368-4310 Web: www.fosterfarms.com E-mail: dennis.richmond@ fosterfarms.com Products: PM,FM,PF,CM Region: Western

#### G.A. Wintzer & Son Co.

204 W. Auglaize Street P.O. Box 406 Wapakoneta, OH 45895 Contact: Gus Wintzer Phone: 419-739-4900 Fax: 419-738-9058 Web: www.gawintzer.com E-mail: gus@gawintzer.com Products: EX,RF,SF,TG,FGAF,HI, MB,FM,PB Region: Eastern

#### Holmes By-Products, Inc.

3175 T.R. 411 Millersburg, OH 44654 Contact: Abe L. Miller or Dennis Koshmider Phone: 330-893-2322 Fax: 330-893-2321 Products: SF,HI,MM,MB,PB,FM Region: Eastern

#### Hormel Foods Corp.

1 Hormel Place Austin, MN 55912 Contact: Tim Carlson Phone: 507-437-5207 Fax: 507-437-5367 E-mail: ttcarlson@hormel.com Products: MB,HI,SF,BM,Lard, Deodorized edible lard/tallow Region: Central

#### Hormel Foods - Austin

500 14th Avenue NE Austin, MN 55912 Contact: Dean Steines Phone: 507-437-5373 Fax: 507-437-5524 E-mail: dwsteines@hormel.com Products: MB,HI,SF,BM,Lard, Deodorized edible lard/tallow Region: Central

#### Hormel Foods - Fremont

900 S. Platte Avenue Fremont, NE 68025 Contact: Pat Kranz Phone: 402-721-2300, x3210 Fax: 402-721-0445 E-mail: pakranz@hormel.com Products: MB,HI,SF,BM,Lard Region: Central

#### Farmer John - Clougherty Packing

Hormel Foods Corp. 3049 E. Vernon Avenue Los Angeles, CA 90058 Contact: Jim Farnsworth Phone: 323-583-4621, x1456 Fax: 323-584-1699 E-mail: jfarnsworth@ farmerjohn.com Products: MB,SF,BM,Lard Region: Central

#### JBS Swift & Company -Headquarters

1770 Promontory Circle Greeley, CO 80634-9039 Contact: Jim Fisher Phone: 970-506-8354 Fax: 970-506-8320 E-mail: randy.geist@jbssa.com Products: TG,RF,HI,MBM,BM,EX Region: Western

Plant Locations

#### JBS Swift & Company

410 N. 200 W Hyrum, UT 84319 Contact: Elton Varner Phone: 435-245-6456 Fax: 435-245-5207 E-mail: elton.varner@jbssa.com Products: TG,RF,HI,MBM,BM,EX Region: Western

#### **JBS Swift & Company**

800 N. 8th Avenue Greeley, CO 80634 Contact: Keith Neddermeyer Phone: 970-351-0800 Fax: 970-304-7320 E-mail: keith.neddermeyer@ jbssa.com Products: TG,HI,MB,BM,EX Region: Western

#### JBS Swift & Company

P.O. Box 2137 Grand Island, NE 68801 Contact: Steve Caravan Phone: 308-384-5330 Fax: 308-389-4834 E-mail: steve.caravan@ jbssa.com Products: TG,HI,MB,BM,EX Region: Central

#### **JBS Swift & Company**

P.O. Box 524 Dumas, TX 79029 Contact: Carlos Martinez Phone: 806-966-5103 Fax: 806-966-5481 E-mail: carlos.martinez@ jbssa.com Products: TG,HI,MB,BM,EX Region: Central

#### JBS Swift & Company

1200 Story Avenue Louisville, KY 40206 Contact: Tim Barton Phone: 502-582-0230 Fax: 502-582-0253 E-mail: tim.barton@jbssa.com Products: TG,MBM,BM Region: Eastern

#### JBS Swift & Company

North & 10th Avenue Marshalltown, IA 50158 Contact: Jon Holden Phone: 641-752-7131 Fax: 641-752-8509 E-mail: jon.holden@jbssa.com Products: TG,MBM,BM Region: Central

#### JBS Swift & Company

1700 N.E. Highway 60 Worthington, MN 56187 Contact: Kevin Schweigert Phone: 507-372-2121 Fax: 507-372-4611 E-mail: kevin.schweigert@ jbssa.com Products: TG,MBM,BM Region: Central

#### Mountain View Rendering Company

JBS Souderton, Inc. 173 Rocco Road Edinburg, VA 22824 Contact: Robert Forry Phone: 540-984-4158 Fax: 540-984-4159 E-mail: bforry@shentel.net Products: SF,FM,PB,PF,BM, FGAF,OT Region: Eastern

#### **MOPAC** Rendering

JBS Souderton, Inc. P.O. Box 64395 Souderton, PA 18964 Contact: Ken Gilmurray Phone: 215-723-5559, x3056 E-mail: ken.gilmurray@ jbssa.com Products: BLF,BLP,FGAF,SF,TG, EX,LT,MB,PB,BM Region: Eastern

#### JBS Packerland Tolleson

P.O. Box 99 Tolleson, AZ 85353 Contact: Jeremy Eatherton Phone: 970-506-8355 E-mail: jeremy.eatherton@ jbssa.com Products: DT,HI,MB,SF,TG Region: Western

#### JBS Packerland Green Bay P.O. Box 23000

P.O. Box 23000 Green Bay, WI 54305 Contact: John Reynolds Phone: 970-506-8355 E-mail: john.reynolds@ jbssa.com Products: DT,HI,MB,SF,TG Region: Central

#### Pilgrim's Pride Corp. -Rendering Headquarters

P.O. Box 1268 Mt. Pleasant, TX 75456 Contact: Doug Brown Phone: 903-434-1170 Fax: 972-290-8345 Web: www.pilgrims.com E-mail: doug.brown@ pilgrims.com Products: SF,FM,BM,PF,PM Region: Central

#### Plant Locations

#### Pilgrim's Pride Corp. -

Broadway 330 Co-Op Drive Timberville, VA 22853 Contact: Howard Covington Phone: 540-896-0730 Fax: 972-882-3244 E-mail: howard.covington@ pilgrims.com Products: SF,PM,FM,PB,PF Region: Eastern

#### Pilgrim's Pride Corp. -

El Dorado 1810 Southwest Avenue El Dorado, AR 71730 Contact: Hal Davis Phone: 870-875-1025 Fax: 870-875-2437 E-mail: hal.davis@pilgrims.com Products: PM,PF Region: Central

#### Pilgrim's Pride Corp. -

Moorefield 129 Potomac Avenue Moorefield, WV 26836 Contact: Mitch Burns Phone: 304-538-7834 Fax: 304-538-3540 E-mail: pburns@pilgrims.com Products: SF,PM,FM,PF,PB Region: Eastern

#### Pilgrim's Pride Corp. -

Mt. Pleasant 1220 Pilgrim Street Mt. Pleasant, TX 75455 Contact: Brandon Lairmore Phone: 903-575-3909 Fax: 903-575-3901 E-mail: brandon.lairmore@ pilgrims.com Products: SF,PM,FM,BM,PB,PF Region: Central

#### Pilgrim's Pride Corp. -

Russellville 3433 Bernice Avenue Russellville, AR 72802 Contact: Dan Craig Phone: 479-968-2567 Fax: 479-968-3171 E-mail: dan.craig@ pilgrims.com Products: SF,MB,PM,FM Region: Central

#### Pilgrim's Pride Corp. -

Sumter 2050 Highway 15 South Sumter, SC 29150-8799 Contact: Robert Canty Phone: 803-481-8555, x5100 Fax: 803-481-4263 E-mail: robert.canty@ pilgrims.com Products: SF,PM,FM,PB,PF Region: Eastern

#### John Kuhni Sons, Inc.

P.O. Box 15 Nephi, UT 84648 Phone: 435-758-7600 Fax: 435-758-7610 Products: SF,TG,HI,MB,FGAF, OT(Transporter) Region: Western

#### Kaluzny Bros., Inc.

1528 Mound Road Joliet, IL 60436-9808 Contact: David Kaluzny II Phone: 815-744-1453 Fax: 815-729-5069 E-mail: dkaluzny2@aol.com Products: SF,TG,DT,BLF,FGAF, HI,CWG,YG Region: Central

#### Kruger Commodities, Inc. - Headquarters

14344 Y Street, Suite 202 Omaha, NE 68137 Contact: James H. Kruger Phone: 402-896-1324 Fax: 402-896-1784 Web: www.krugerinc.com E-mail: jim@krugerinc.com Products: FGAF,MB,SF,TG,FM Region: Central

#### Kruger Commodities, Inc.

5900 Old Allegan Road Hamilton, MI 49419 Contact: Terry Pfannenstiel Phone: 269-751-0560 Fax: 269-751-8929 E-mail: terry@krugerinc.com Products: FGAF,FM,MB,SF,TG Region: Eastern

#### **KCI** Restaurant Services

Kruger Commodities, Inc. 4125 Dahlman Avenue Omaha, NE 68107 Contact: Scott Etheridge Phone: 402-898-4700 Fax: 402-898-4702 Products: BLP,Cooking oil disposal Region: Central

#### **KCI Restaurant Services**

Kruger Commodities, Inc. 3370 L Avenue Tama, IA 52339 Contact: Bill Farris Phone: 641-484-3823 Fax: 641-484-3825 Products: Cooking oil disposal Region: Central

#### Maple Lodge Farms, Ltd.

830<sup>1</sup> Winston Churchill Blvd. Brampton, ON, L6Y 0A2 Canada Contact: John Hilario Phone: 905-455-8340 Fax: 905-455-8370 E-mail: jhilario@ maplelodgefarms.com Products: SF,PB,FM Region: Eastern

#### Mendota Agri-Products, Inc. - Headquarters

712 Essington Road Joliet, IL 60435 Contact: John Mahoney Phone: 815-730-2080 Fax: 815-730-2087 Web: www.mendotaagriproducts.com E-mail: johnm@ mahoneyeyes.com Products: BLF,DT,FGAF,SF,TG,YG Region: Central

#### Mendota Agri-Products, Inc.

P.O. Box 439, 448 N. 3973 Road Mendota, IL 61342 Contact: John Setchell Phone: 815-539-5633 Fax: 815-539-7943 Web: www.mendotaagriproducts.com E-mail: johns@mendag.com Products: BLF,DT,FGAF,SF,TG, MB,YG Region: Central

#### National Beef Packing Company, LLC -Headquarters

P.O. Box 20046 Kansas City, MO 64195-0046 Contact: Doyle Leefers Phone: 800-449-2333 Fax: 816-713-8859 Web: www.nationalbeef.com E-mail: doyle.leefers@ nationalbeef.com Products: SF,TG,HI,MM,MB, BM,EX Region: Central

#### National Beef - Dodge City

2000 E. Trail Street Dodge City, KS 67801 Contact: Mike Clayton Phone: 620-227-7135 Fax: 620-338-4339 E-mail: mlclayton@ nationalbeef.com Products: SF,TG,HI,MM,MB, BM,EX Region: Central

#### National Beef - Liberal

P.O. Box 978 Liberal, KS 67905 Contact: Arlie Wright Phone: 620-624-1851 Fax: 620-626-0285 E-mail: alwright@ nationalbeef.com Products: SF,TG,HI,MM,MB, BM,EX Region: Central

#### National Beef - Brawley

P.O. Box 1221 Brawley, CA 92227 Contact: Brian Webb Phone: 760-351-2700 Fax: 760-351-2796 E-mail: bcwebb@ nationalbeef.com Products: BM,EX,FGAF,HI,MB, TG Region: Western

#### Nutri-Feeds, Inc.

P.O. Box 2257 Hereford, TX 79045 Contact: Garth Merrick Phone: 806-350-5525 Fax: 806-357-2292 E-mail: garth@ merrickpetcare.com Products: TG,MB Region: Central

#### Pascal Enterprises -Headquarters

2621 State Street Dallas, TX 75204 Contact: William Shirley or Mel Roshanraven Phone: 214-871-0300 Fax: 214-871-8707 E-mail: melr@ pascalenterprises.com Products: BM,CM,CWG,MB, PM,PF,TG,YG Region: Central

#### Plant Locations

#### **Capital City Processors, LLC**

P.O. Box 94148 Oklahoma City, OK 73109 Phone: 405-232-5511 Fax: 405-235-9960

#### **HTC** Industries

P.O. Box 3286 San Angelo, TX 76902 Phone: 325-949-0645 Fax: 325-659-3823

#### **Oklahoma By-Products**

P.O. Box 1848 Durant, OK 74701 Phone: 580-924-3620 Fax: 580-924-3742

#### **Riegel By-Products**

P.O. Box 7064 Shreveport, LA 71107 Phone: 318-222-3309 Fax: 318-222-3303

#### **Texas By-Products**

P.O. Box 662 Durant, OK 74701 Phone: 580-924-1008 Fax: 580-924-1008

#### Protein Products, Inc.

PPI, Inc. P.O. Box 2974 Gainesville, GA 30503 Contact: Jeff Gay Phone: 770-536-3922 Fax: 770-536-8365 E-mail: jgay3922@ mindspring.com Products: Fish meal and oil Region: Eastern

#### Quality Processors, Ltd.

P.O. Box 849 Neepawa, MB, ROJ 1H0 Canada Contact: Michael or Wayne Wollman Phone: 204-476-2457 Fax: 204-476-3874 E-mail: wayneqp@yahoo.com Products: FGAF,SF Region: Central

#### Rothsay - Headquarters

A Member of Maple Leaf Foods, Inc. 150 Research Lane, Suite 307 Guelph, ON, N1G 4T2 Canada Contact: Kevin Golding Phone: 519-780-3341 Fax: 519-780-3360 Web: www.rothsay.ca E-mail: kevin.golding@ mapleleaf.com Region: Central

#### Plant Locations

#### Rothsay

A Member of Maple Leaf Foods, Inc. P.O. Box 8270 Dundas, ON, L9H 5E2 Canada Contact: Dave Willison Phone: 905-628-9303, x291 Fax: 905-628-8577 E-mail: dave.willison@ mapleleaf.com Products: SF,TG,RF,MB,BM,EX, BLF,FGAF Region: Central

#### Rothsay

A Member of Maple Leaf Foods, Inc. R.R. #1 Moorefield, ON, NOG 2K0 Canada Contact: Scott Henry Phone: 519-638-3081 Fax: 519-638-3410 E-mail: scott.henry@ mapleleaf.com Products: FM,SF,TG,MB,FGAF, BLF,PB,PF Region: Central

#### Rothsay

A Member of Maple Leaf Foods, Inc. 607 Dawson Road Winnipeg, MB, R2J 0T2 Canada Contact: Scott Masterton Phone: 204-233-7347 Fax: 204-235-0942 E-mail: scott.masterton@ mapleleaf.com Products: FM,SF,TG,FGAF,MB Region: Central

#### Rothsay

A Member of Maple Leaf Foods, Inc. 605 1st Avenue Sainte-Catherine, QC, J5C 1C5 Canada Contact: Michel Brosseau Phone: 450-632-3250, x400 Fax: 450-632-4703 E-mail: michel.brosseau@ mapleleaf.com Products: EX,RF,SF,TG,MB,FGAF Region: Eastern

#### Rothsay

A Member of Maple Leaf Foods, Inc. P.O. Box 151 Truro, NS, B2N 5C1 Canada Contact: Carol McMaster Phone: 902-895-2801, x223 Fax: 902-893-0176 E-mail: carol.mcmaster@ mapleleaf.com Products: FM,SF,TG,FGAF,MB Region: Central

#### Rothsay

A Member of Maple Leaf Foods, Inc. P.O. Box 200, General Delivery Hickson, ON, NOJ 1L0 Canada Contact: Arlen Bolan Phone: 519-462-2917 E-mail: arlen.bolan@ mapleleaf.com Products: CM,PF,PM Region: Central

#### Sacramento Rendering Company

SRC Companies 11350 Kiefer Boulevard Sacramento, CA 95830 Contact: Michael Koewler Phone: 916-363-4821 Fax: 916-363-8641 E-mail: michaelkoewler@ aol.com Products: EX,SF,TG,HI,MM,MB, DT,FGAF,BFP Region: Western

#### **Reno Rendering**

SRC Companies 1705 N. Wells Avenue Reno, NV 89512 Phone: 800-733-6498 Products: Transfer station Region: Western

#### Salinas Tallow Co., LLC

1 Work Circle Salinas, CA 93901 Contact: William Ottone Phone: 831-422-6436 Fax: 831-422-6231 E-mail: saltalco@aol.com Products: YG,HI,MB,Fish meal Region: Western

#### Sanimax - Headquarters

9900 Maurice-Duplessis Montreal, QB, H1C 1G1 Canada Contact: Andre Couture (chairman), Martin Couture (chief executive officer), or Tony Galasso (president) Phone: 514-643-6001 or 888-495-9091 Fax: 514-648-3013 Web: www.sanimax.com E-mail: info@sanimax.com Region: Eastern

#### Sanimax

P.O. Box 45100 2001 Avenue de La Rotonde Charny, QB, G6X 3R4 Canada Contact: Eric Dunn Phone: 418-832-4645, x3190 Fax: 418-832-6995 Web: www.sanimax.com E-mail: info@sanimax.com Products: EX,FM,PB,SF,TG,BM, RF,FGAF,BLF,HI,PM Region: Eastern

#### Sanimax

9900 Maurice-Duplessis Montreal, QB, H1C 1G1 Canada Contact: Eric Caputo Phone: 514-648-6001, x3249 Fax: 514-648-0597 Web: www.sanimax.com E-mail: info@sanimax.com Products: EX,FM,PB,SF,TG,BM, RF,FGAF,BLF,HI,PM Region: Eastern

#### Sanimax

P.O. Box 10067 2099 Shawano Avenue Green Bay, WI 54307-0067 Contact: Donn Johnson Phone: 920-494-5233 Fax: 920-494-9141 Web: www.sanimax.com E-mail: info@sanimax.com Products: EX,SF,TG,HI,DT,FGAF, MB,BFP Region: Central

#### Sanimax

P.O. Box 56

505 Hardman Avenue South St. Paul, MN 55075 Contact: Tim Kedrowski Phone: 651-451-6858 Fax: 651-451-6542 Web: www.sanimax.com E-mail: info@sanimax.com Products: EX,SF,TG,MB,BM, MM,FGAF,FM,PB,HI,BFP,RF Region: Central

#### Sanimax

605 Bassett Street DeForest, WI 53532 Contact: Donn Johnson Phone: 608-846-5466 Fax: 608-846-5370 Web: www.sanimax.com E-mail: info@sanimax.com Products: SF,TG,FGAF Region: Central

#### **Smithfield Packing**

Smithfield Foods 111 Commerce Street Smithfield, VA 23430 Contact: Todd Scherbing Phone: 757-357-3636 Fax: 757-357-1624 Web: www.smithfieldfoods.com E-mail: toddscherbing@ smithfield.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Eastern

#### **Smithfield Packing**

111 Commerce Street Smithfield, VA 23430 Contact: Gregg Redd Phone: 757-357-1636 Fax: 757-357-1624 E-mail: greggredd@ smithfield.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Eastern

#### **Smithfield Packing -**

Smithfield 501 N. Church Street Smithfield, VA 23430 Contact: Jeff Brock Phone: 757-357-3131 ext. 2750 E-mail: jeffreybrock@ smithfield.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Eastern

#### **Smithfield Packing -**

Tar Heel 15855 Highway 87 West Tar Heel, NC 28392 Contact: Walter Wardlaw Jr. Phone: 910-879-5758 ext. 758 E-mail: walterwardlaw@ smithfield.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Eastern

#### Smithfield Packing -Clinton

424 E. Railroad Street Clinton, NC 28328 Contact: Norman Johnson Phone: 910-299-3051 Fax: 910-299-3001 E-mail: normanjohnson@ smithfield.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Eastern

#### **Farmland Foods**

11500 NW Ambassador Drive Kansas City, MO 64195 Contact: Brenda Lewis Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Central

#### Farmland Foods - Dennison

800 Industrial Drive Dennison, IA 51442 Contact: Ron Pankau Phone: 800-831-1812 E-mail: rgpankau@ farmland.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Central

#### Farmland Foods - Crete

2223 County Road I Crete, NE 68333 Contact: Mike Rice Phone: 800-222-7578 E-mail: mike.rice@ farmland.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Central

#### Farmland Foods - Milan

22123 Highway 5 Milan, MO 63556 Contact: Grady Yackle Phone: 660-865-4061 E-mail: giyackle@milan. farmland.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Central

#### **Farmland Foods -**

Monmouth 1220 N. 6th Street Monmouth, IL 61462 Contact: Scott Peel Phone: 800-298-4682 E-mail: sppeel@farmland.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Central

#### Farmland Foods -

Sioux Falls 1400 N. Weber Avenue Sioux Falls, SD 57103 Contact: Roger Oosenforth Products: BFP,TG,FGAF,MM, EX,OT(Pet food meat products) Region: Central

#### Sonac USA, LLC

VION Ingredients 1231 S. Rochester Street, Suite 250 Mukwonago, WI 53149 Contact: Lawrence Jeske Phone: 262-363-6051 Fax: 262-363-2789 E-mail: larry.jeske@r ousselot.com Region: Central

#### Sonac USA, LLC

VION Ingredients 1299 E. Maple Maquoketa, IA 52060 Contact: Lawrence Jeske Phone: 262-363-6051 Fax: 262-363-2789 E-mail: larry.jeske@ rousselot.com Products: Spray-dried blood and plasma products Region: Central

#### South Chicago Packing Company

16250 S. Vincennes Avenue South Holland, IL 60473 Contact: Mike Botelho Phone: 708-589-2432 Fax: 708-589-2532 Web: www.miniat.com E-mail: mbotelho@miniat.com Products: ET,RF,SF,TG,EX Region: Central

#### Tallowmasters, LLC

9401 NW 106th Street Suite 102 Medley, FL 33178 Contact: Glenn Martin Phone: 305-887-7536 Fax: 305-884-1719 Web: www.tallowmasters.com E-mail: info@tallowmasters.com Products: EX,SF,TG,FGAF,MB Region: Eastern

#### Terra Renewal Services, Inc.

1100 E. Campbell, Suite 220 Richardson, TX 75081 Contact: Todd Mathes Phone: 972-996-7548 Web: www.terrarenewal.com E-mail: toddmathes@ terrarenewal.com Region: Central

#### Tyson Foods, Inc. -Headquarters

2200 Don Tyson Parkway, CP721 Springdale, AR 72762 Contact: Bo Watson Phone: 479-290-2897 Web: www.tyson.com E-mail: bo.watson@tyson.com Products: FM,PB,PM,PF,OT Region: Central

Plant Locations

#### **Cullman Blending**

P.O. Box 1144 Cullman, AL 35055 Contact: Mike Lankford Phone: 256-734-7100 Fax: 256-734-4521

#### **Pine Bluff Blending**

4211 Emmett Sanders Road Pine Bluff, AR 71601 Contact: Mike Lankford Phone: 870-534-7276 Fax: 870-534-7273

**RVAF -** *Clarksville* 1238 Market Street Clarksville, AR 72830 Contact: Frank Fox Phone: 479-754-3441 Fax: 479-754-8018

**RVAF -** Forest 11634 Hwy 80 W Forest, MS 39074 Contact: Reed Kilpatrick Phone: 601-469-8301 Fax: 479-717-0198

**RVAF -** Harmony 501 Sheffield Road Harmony, NC 28634 Contact: Gregg Wikstrom Phone: 704-546-2602 Fax: 704-546-5944 **RVAF -** *Robards* (Henderson) 14660 U.S. Hwy 41 S Robards, KY 42452 Contact: Mark Badertscher Phone: 270-521-3160 Fax: 270-521-3181

**RVAF -** Scranton 7755 N. Hwy 292 S Scranton, AR 72863 Contact: Jim Rofkahr Phone: 479-938-2025 Fax: 479-757-7731

**RVAF -** Sedalia 20003 Menate Road Sedalia, MO 65302 Contact: Jim Robejsek Phone: 660-826-7071 Fax: 660-826-7119

**RVAF -** Seguin 1200 W. Kingsbury Street Seguin, TX 78155 Contact: James Romans Phone: 830-401-8842 Fax: 479-203-4221

**RVAF -** *Temperanceville* 11224 Lankford Hwy Temperanceville, VA 23442 Contact: Tim Johnson Phone: 757-824-3471 Fax: 757-854-1415

**RVAF -** *Texarkana* 5466 Miller County 64 Texarkana, AR 71854 Contact: Dan Crowe Phone: 870-645-2693 Fax: 870-645-2619

#### **Tyson Fresh Meats**

800 Stephens Port Drive, DD828D Dakota Dunes, SD 57049 Contact: Bob Bestgen or Kim Broekemeier Phone: 605-235-2523 or 605-235-2836 Fax: 479-757-7595 or 479-757-7547 E-mail: bob.bestgen@tyson.com or kim.broekmeier@tyson.com

#### Plant Locations

Beef Sites: Amarillo, TX Dakota City, NE Denison, IA Holcomb, KS Joslin, IL Pasco, WA

Pork Sites: Columbus Junction, IA Madison, NE Perry, IA Storm Lake, IA Logansport, IN Waterloo, IA

#### Valley Proteins, Inc. -Headquarters

P.O. Box 3588 Winchester, VA 22604-2586 Contact: Gerald F. Smith Jr. Phone: 540-877-2590 Fax: 540-877-3210 Web: www.valleyproteins.com E-mail: jjsmith@ valleyproteins.com Products: BFP,TG,FGAF,MM,EX, OT(Pet food meat products) Region: Eastern

#### Valley Proteins, Inc. -

Accomac Division 22528 Lankford Highway Accomac, VA 23301 Contact: Reed Parks Phone: 757-302-1343 Fax: 757-302-1346 E-mail: rparks@ valleyproteins.com Products: PB,PF Region: Eastern

#### Valley Proteins, Inc. -

Amarillo Division 8415 S.E. 1st Avenue Amarillo, TX 79118-7302 Contact: Bill Walby Phone: 806-379-6001 Fax: 806-374-1207 E-mail: bwalby@ valleyproteins.com Products: BFP,TG,FGAF,MM, EX,OT(Pet food meat products) Region: Central

#### Valley Proteins, Inc. -

Baltimore Division 1515 Open Street Baltimore, MD 21226 Contact: Robert Hutson Phone: 410-355-4800 Fax: 410-355-3095 E-mail: rhutson@ valleyproteins.com Products: BFP,TG,FGAF,MM, EX,OT(Pet food meat products) Region: Eastern

#### Valley Proteins, Inc. -

Emporia Division 25170 Val-Pro Drive Emporia, VA 23847 Contact: Mike Anderson Phone: 434-634-9475 Fax: 434-634-3833 E-mail: manderson@ valleyproteins.com Products: BFP,TG,FGAF,MM, EX,OT(Pet food meat products) Region: Eastern

#### Valley Proteins, Inc. -

Fayetteville Division 1309 Industrial Drive Fayetteville, NC 28301 Contact: Paul White Phone: 910-483-0473 Fax: 910-213-1140 E-mail: pwhite@ valleyproteins.com Products: BFP,FGAF,HI,SF,TG,EX, MM,OT(Pet food meat products) Region: Eastern

#### Valley Proteins, Inc. -

Gastonia Division 5533 S. York Road Gastonia, NC 28052 Contact: Mark Cassidy Phone: 704-864-9941 Fax: 704-861-9252 E-mail: mcassidy@ valleyproteins.com Products: BFP,FGAF,HI,SF,TG,EX, MM,OT(Pet food meat products) Region: Eastern

#### Valley Proteins, Inc. -

Knoxville Division 9300 Johnson Road Strawberry Plains, TN 37871 Contact: Chris Bivans Phone: 865-933-3481 Fax: 865-932-5713 E-mail: cbivans@ valleyproteins.com Products: BFP,FGAF,HI,SF,TG, MM,EX,OT(Pet food meat products) Region: Eastern

#### Valley Proteins, Inc. -

Lewiston Division P.O. Box 10 Lewiston, NC 27849 Contact: Mike Anderson Phone: 252-348-4290 Fax: 252-348-4349 E-mail: manderson@ valleyproteins.com Products: PB,PF Region: Central

#### Valley Proteins, Inc. -

Linville Division 6230 Kratzer Road Linville, VA 22834 Contact: Hobie Halterman Phone: 540-833-6641 Fax: 540-833-6504 E-mail: hhalterman@ valleyproteins.com Products: BFP,TG,FGAF,MM, EX,OT(Pet food meat products) Region: Eastern

#### Valley Proteins, Inc. -

Rose Hill Division P.O. Box 1026 469 Yellow Cut Road Rose Hill, NC 28458 Contact: Jeff Baird Phone: 910-289-2083 Fax: 910-289-3312 E-mail: įbaird@ valleyproteins.com Products: BFP,TG,FGAF,MM, EX,OT(Pet food meat products) Region: Eastern

#### Valley Proteins, Inc. -

Terre Hill Division 693 Wide Hollow Road East Earl, PA 17519 Contact: Keith Landis Phone: 717-445-6890 Fax: 717-445-6379 E-mail: klandis@ valleyproteins.com Products: BFP,FGAF,TG,MM, EX,OT(Pet food meat products) Region: Eastern

#### Valley Proteins, Inc. -

Wadesboro Division P.O. Box 718 Wadesboro, NC 28170 Contact: Dean Deibert Phone: 704-694-3701 Fax: 704-694-6145 E-mail: ddeibert@ valleyproteins.com Products: BFP,TG,FGAF,MM, EX,OT(Pet food meat products) Region: Eastern

#### Valley Proteins, Inc. -

Ward Division 271 Val-Pro Road Ward, SC 29166-9801 Contact: Bill Brochin Phone: 803-685-2590 Fax: 803-685-2591 E-mail: bbrochin@ valleyproteins.com Products: BFP,TG,FGAF,MM, EX,OT(Pet food meat products) Region: Eastern

#### Valley Proteins, Inc. -

Winchester Division P.O. Box 3588 Winchester, VA 22604 Contact: Robert Golightly Phone: 540-877-2590 Fax: 540-877-3136 E-mail: rgolightly@ valleyproteins.com Products: BFP;FGAF,SF,TG, MM,EX,HI,OT(Pet food meat products) Region: Eastern

#### Wardlaw's Poultry Farm

6037 County Road 27 R.R. #1 Cookstown, ON, LOL 1L0 Canada Contact: Keith Wardlaw or John Koning Phone: 705-309-0204 Fax: 705-309-0204 Web: www.wardlawspoultryfarm.com E-mail: keithwardlaw@ gmail.com or john@ wardlawspoultryfarm.com Products: LG Region: Eastern

#### Washington Beef, LLC

AB Foods, LLC P.O. Box 832 Toppenish, WA 98948 Contact: Nicholas Troy Phone: 509-865-2121 Fax: 509-865-2827 Web: www.abfoodsusa.com E-mail: nicholas.troy@ abfoodsusa.com Products: MB,BM,HI,Tallow Region: Western

#### West Coast Reduction,

Ltd. - Headquarters 1292 Venables Street Vancouver, BC, V6A 4B4 Canada Contact: Gordon Diamond or Barry Glotman Phone: 604-255-9301 Fax: 604-255-3434 Web: www.wcrl.com E-mail: info@wcrl.com

#### West Coast Reduction, Ltd.

Vancouver Plant Operations 105 Commercial Drive North Vancouver, BC, V5L 4V7 Canada Phone: 604-255-9301 Fax: 604-255-1803 Web: www.wcrl.com E-mail: info@wcrl.com Products: EX,FM,PB,SF,TG,BM, ST,FGAF,BLF,HI,RF,YG,PF,BFP, CWG,PM,Fish meal,Porcine meal Region: Western

#### Alberta Processing Co.

West Coast Reduction, Ltd. 7030 Ogden Dale Place SE Calgary, AB, T2C 2A3 Canada Contact: Geoff Smolkin Phone: 403-279-4441 Fax: 403-279-6928 Web: www.wcrl.com E-mail: info@wcrl.com Products: EX,FM,SF,TG,MB,HI, DT,BM,ST,FGAF,BLF,RF,YG,Fish meal Region: Western

#### Northern Alberta Processing Company

West Coast Reduction, Ltd.

1930 121 Avenue NE Edmonton, AB, T6S 1B1 Canada Contact: James Taylor Phone: 780-472-6750 Fax: 780-472-6944 Web: www.wcrl.com E-mail: info@wcrl.com Products: EX,FM,PB,SF,TG,DT, BM,ST,FGAF,BLF,RF,YG,Fish meal,Porcine meal Region: Western

#### Saskatoon Processing Co.

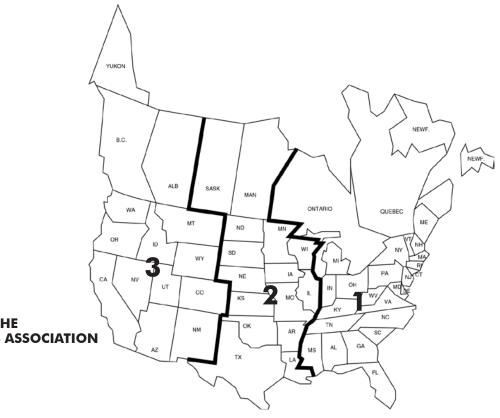
West Coast Reduction, Ltd. 3018 Miners Avenue Saskatoon, SK, S7K 4Z8 Canada Contact: Bruce Sestak Phone: 306-934-4887 Fax: 306-934-3364 Web: www.wcrl.com E-mail: info@wcrl.com Products: EX,FM,PB,SF,TG,MB, DT,BM,ST,FGAF,BLF,HI,RF,YG, Fish meal Region: Western

#### West Coast Rendering Co.

D & D Services, Inc. 4105 Bandini Boulevard Vernon, CA 90058 Contact: Bill Gorman Phone: 323-261-4176 Fax: 323-261-7185 E-mail: wmgorman@ yahoo.com Products: EX,YG,MM,DT,HI,PB, BLP Region: Western

## Western Mass. Rendering Co., Inc.

94 Foster Road Southwick, MA 01077 Contact: David T. Plakias Phone: 413-569-6265 Fax: 413-569-6512 Web: www.westernmassrendering.com E-mail: david@wmrco.com Products: EX,SF,FGAF,DT,TG Region: Eastern



# REGIONAL AREAS OF THE NATIONAL RENDERERS ASSOCIATION

1. Eastern Region

2. Central Region

3. Western Region

# Active Members by State/Canada Full listing is available on indicated page number.

### Alabama

American Proteins, Inc	27
Birmingham Hide & Tallow	28
Cullman Blending	32
-	

### Arizona

Baker Commodities, Inc	28
JBS Packerland Tolleson	30

### Arkansas

Pilgrim's Pride Corp	. 30
Pine Bluff Blending	. 32
Tyson Foods, Inc.	
Tyson Foods, Inc RVAF 32	

### California

Baker Commodities, Inc	28
Farmer John-Clougherty	29
Foster Farms	29
National Beef Packing Co	31
Sacramento Rendering Co	31
Salinas Tallow Co., LLC	31
West Coast Rendering Co	34

### Canada

Alberta Processing Co	34
Cargill Meat Solutions	28
Maple Lodge Farms, Ltd	30
Northern Alberta Processing	34
Quality Processors, Ltd	31
Rothsay	31
Sanimax	31
Saskatoon Processing Co	34
Wardlaw's Poultry Farm	
West Coast Reduction, Ltd	

### Colorado

### Florida

Florida By Products, Inc	29
Tallowmasters, LLC	32

### Georgia

American Proteins, Inc.	27
FPL Food, LLC	29
Protein Products, Inc.	31

### Hawaii

### Illinois

Councill Manual Collections	00
Cargill Meat Solutions	
Farmland Foods	32
Kaluzny Bros., Inc.	30
Mendota Agri-Products, Inc	30
South Chicago Packing Co	32
Tyson Fresh Meats	33

### Indiana

### lowa

APC, Inc	27/28
Cargill Meat Solutions	
Darling International	
Farmland Foods	32
JBS Swift & Company	29
KCI Restaurant Services	
Sonac USA, LLC	32
Tyson Fresh Meats	33
,	

### Kansas

APC, Inc	
Cargill Meat Solutions	
National Beef Packing	
Tyson Fresh Meats	33

### Kentucky

Louisiana	
Griffin Industries, Inc2 JBS Swift & Company2 Tyson Foods, Inc RVAF3	9
Criffin Industrian Inc. 0	0

Riegel	By-Products	

### Massachusetts

Baker Commo	dities, Inc	28
Western Mass.	Rendering	34

### Maryland

Valley Proteins,	Inc
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### Michigan

	-		
Kruger	Commodities,	Inc.	

### Minnesota

Central Bi-Products Co	29
Hormel Foods Corp	29
JBS Swift & Company	30
Sanimax	

### Mississippi

### Missouri

Cargill Poultry	28
Farmland Foods	32
National Beef Packing Co	30
Tyson Foods, Inc RVAF	33

### Nebraska

Cargill Meat Solutions	. 28
Farmland Foods	. 32
Hormel Foods Corp	. 29
JBS Swift & Company	. 29
KCI Restaurant Services	
Kruger Commodities, Inc	. 30
Tyson Fresh Meats	. 33

### **New York**

Baker Commodities, Inc......28

### Nevada

### North Carolina

APC, Inc.	28
Smithfield Packing	
Tyson Foods, Inc RVAF	32
Valley Proteins, Inc	

### Ohio

G.A. Wintzer & Son Co	29
Holmes By-Products, Inc	

### Oklahoma

Capital City Processors	31
Oklahoma By-Products	
Texas By-Products	31
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### Oregon

Encore C	 	•••	• • •	•••	•••	•••	•••	•••	/	

### Pennsylvania

Cargill Regional Beef	28
MOPAC Rendering	30
Valley Proteins, Inc.	

### **South Carolina**

Pilgrim's Pride Corp	30
Valley Proteins, Inc.	33

### South Dakota

Farmland Foods	32
Tyson Fresh Meats	33

### Tennessee

### Texas

Cargill Meat Solutions	28
Darling International	29
HTC Industries	
JBS Swift & Company	
Nutri-Feeds, Inc	
Pascal Enterprises	
Pilgrim's Pride Corp	
Terra Renewal Services, Inc	
Tyson Foods, Inc RVAF	
Tyson Fresh Meats	
Valley Proteins, Inc.	

### Utah

JBS Swift & Company	. 29
John Kuhni Sons, Inc.	

### Virginia

Mountain View Rendering	. 30
Pilgrim's Pride Corp.	. 30
Smithfield Packing	. 32
Tyson Foods, Inc RVAF	. 33
Valley Proteins, Inc	

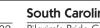
### Washington

Baker Commodities, Inc	28
Tyson Fresh Meats	33
Washington Beef, LLC	34

### West Virginia

### Wisconsin

JBS Packerland Green Bay .	30
Sanimax	32
Sonac USA, LLC	32



# **2013 Associate Members**

Brokers of Fats and Proteins, Equipment Manufacturers, and Firms Serving the Rendering Industry

### Air/Water Treatment

### Ashland Water Technologies

Ashland Inc. 2150 W. Breezewood Court Plover, WI 54467 Contact: Randy Kopchinski Phone: 920-539-4174 Web: www.drewindustrial.com E-mail: rjkopchinski@ ashland.com Products: Chlorine dioxide, odor control, boiler/cooling water treatment, wastewater treatment Region: Central

### Chem-Aqua, Inc.

NCH Corporation 2727 Chemsearch Blvd. Irving, TX 75062 Contact: David Rose Phone: 972-438-0120 Fax: 972-438-0801 Web: www.chemaqua.com E-mail: drose@nch.com Products: Water treatment products Region: Central

### **Diversey/ReNew**

Formerly JohnsonDiversey 8310 16th Street Sturtevant, WI 53177-1964 Contact: Mike Gruver Phone: 641-455-6635 or 262-631-4001 Web: www.diversey.com E-mail: michael.gruver@ diversey.com Region: Central

### Envron Ozone Odor Control

Envron Environmental, Ltd. 202-1275 Broad Street Region, SK, S4S 6B6 Canada Contact: Allan Finney Phone: 306-924-3040 Fax: 306-924-3066 Web: www.envronozone.com E-mail: afinney@ envronozone.com Region: Central

### SCP Control, Inc.

P.O. Box 32022, 7791 Elm Street NE Minneapolis, MN 55432 Contact: Eric Peterson Phone: 763-572-8042 Fax: 763-572-8066 E-mail: info@scpcontrol.com Region: Central, Western

### Antioxidants

### Amalfi Ingredients Corp.

94 East Jefryn Blvd., Unit H Deer Park, NY 11729 Phone: 631-392-1526 Fax: 631-392-1529 Web: www.amalfiingredients.com E-mail: cmonteleone@ amalfiingredients.com Region: Eastern, Central

### Ameri-Pac, Inc.

P.O. Box 1088 751 S. 4th Street St. Joseph, MO 64502 Contact: Robert Colescott Phone: 816-233-4530 Fax: 816-233-1702 Web: www.ameri-pac.com E-mail: bobc@ameri-pac.com Region: Central

### C.F. Zeiler & Company, Inc.

8601 LaSalle Road, Suite 203 Towson, MD 21286 Contact: Charlie Zeiler Phone: 410-828-7182 Fax: 410-828-7183 Web: www.cfzeiler.com E-mail: cf\_zeiler@cfzeiler.com Region: Eastern

### Kemin Nutrisurance, Inc.

P.O. Box 483 Schulenburg, TX 78956 Contact: Chris Gloger or Kevin Custer Phone: 979-562-2471 or 515-289-6842 Fax: 979-562-2471 Web: www.kemin.com E-mail: chris.gloger@kemin.com or kevin.custer@kemin.com Products: Ingredient specialist Region: Central

### Nealanders Food Ingredients

2425 Alft Lane Elgin, IL 60124 Contact: Bob Leonard Phone: 847-468-0001 Fax: 847-488-0007 Web: www.nealanders.com Region: Central

### Novus International, Inc.

Novus Nutrition Brands, LLC 20 Research Park Drive St. Charles, MO 63304 Contact: Vanessa Stewart Phone: 636-926-7427 Fax: 314-576-6041 E-mail: vanessa.stewart@ novusint.com Region: Central

### Peak Tech, Inc.

P.O. Box 7 Jeffersonville, IN 47130 Phone: 812-283-6697 Fax: 812-283-0765 E-mail: jsparrow@pfanoil.com Region: Central

### Videka

SPF North America-Diana Group 5300 Highway 25 North Hodges, SC 29653 Contact: Jean-Francois Herve Phone: 864-374-3239 Fax: 864-374-3091 Web: www.diana-group.com E-mail: jfherve@ diana-videka.com Region: Eastern

### Bulk Liquid Storage / Transportation

### **Bulk Transportation**

P.O. Box 390 Walnut, CA 91789 Contact: Gary Cross Phone: 909-594-2855 Fax: 909-595-9983 Web: www.bulk-dti.com E-mail: garyc@bulk-dti.com Region: Western

### Dura Cast Products, Inc.

16160 Hwy 27 Lake Wales, FL 33859 Contact: John Gilles Phone: 863-638-3200 Fax: 863-638-2443 Web: www.duracast.com E-mail: jgilles@duracast.com Region: Eastern

### LNL Trucking, Inc.

P.O. Box 192 Bedford, IN 47421 Contact: Larry Limp Phone: 812-278-9410 Fax: 812-278-9810 Web: www.lnltrucking.com E-mail: larry.lnl@comcast.net Region: Eastern

### Paul Marcotte Farms, Inc.

1725N, 12000 E Road Momence, IL 60954-9467 Contact: Sherrie Smart Phone: 815-472-4400 Fax: 815-472-4453 E-mail: smartdispatcher@ hotmail.com Products: Transporters Region: Central

### Stoller Trucking, Inc.

P.O. Box 309 Gridley, IL 61744 Contact: Brian S. Stoller Phone: 309-747-4521 Fax: 309-747-4457 Web: www.stollertrucking.com E-mail: bstoller@ stollertrucking.com Region: Central

### Chemicals

### **CCI**

3540 East 26th Vernon, CA 90058 Phone: 800-767-9112 Region: Western

### Chem-Tech Solutions, Inc.

427 Brook Street Belmont, NC 28012 Contact: Tony Phillips Phone: 704-829-9202 Fax: 704-829-9203 Web: www.chemtechsolutions.com E-mail: info@ chemtechsolutions.com Products: Degreasers, truck and floor cleaners, anti-foam for cookers Region: Eastern

### **DuBois Chemicals**

3630 East Kemper Road Sharonville, OH 45241 Contact: Tiger Jezwinski or Joe Heitker Phone: 719-425-1012 or 513-325-4281 Fax: 800-433-5508 Web: www.duboischemicals.com E-mail: tiger.jezwinski@ duboischemicals.com or joe.heitker@ duboischemicals.com Products: Degreasers/Cleaners for trucks, equipment, walls and floors, truck wash systems Region: Eastern

### Evonik Goldschmidt Corporation

Parent Co: Evonik P.O. Box 1018 Janesville, WI 53547-1018 Contact: Randy Love Phone: 804-452-5690 Web: www.goldschmidt.com E-mail: randy.love@evonik.com Products: Based on tallow, fats, oils

Region: Central

### Global Aqua Solutions, LLC

2480 Precision Drive, Unit E Minden, NV 89423 Contact: Jessica Thorn Phone: 800-398-0994 Fax: 800-398-0994 Web: www.globalaquasolutions.com E-mail: admin@ globalaquasolutions.com Region: Western

### Hydro Solutions, Inc.

P.O. Box 221016 Louisville, KY 40252-1016 Contact: David Davis Phone: 502-899-7107 Fax: 502-897-8738 Web: www.hydrosolutions.com E-mail: hydro@ hydrosolutions.com Region: Eastern

### Skasol, Inc.

1696 W. Grand Avenue Oakland, CA 94607 Contact: Brian Ford Phone: 510-839-1000 Fax: 510-839-1090 Web: www.skasol.com E-mail: brianford@skasol.com Region: Western

### Vantage OleoChemical

4650 South Racine Avenue Chicago, IL 60609-3321 Contact: Joseph Jabczynski Phone: 773-376-9000 Fax: 773-376-1936 E-mail: joseph.jabczynski@ uniqema.com Products: Oleochemicals Region: Central

### Commodity Brokers/ Traders

### **Agri Trading**

P.O. Box 609 340 Michigan Street SE Hutchinson, MN 55350 Contact: Steve Borstad Phone: 320-587-2133 or 320-583-3209 Fax: 320-587-5816 Web: www.agritradingcorp.com E-mail: steve.borstad@ agritradingcorp.com Region: Central

### D.A. Lorentzen, Inc.

1523 Guthrie Drive Inverness, IL 60010 Contact: Duane Lorentzen Phone: 847-991-5220 Fax: 847-991-5220 E-mail: dalorentzen@gmail.com Products: TG,FGAF,SF,ET,BR Region: Central

### Decom, Inc.

11325 Šouth Hudson Avenue Tulsa, OK 74137 Contact: J.C. Deyoe Phone: 918-298-5205 E-mail: jcdeyoe@aol.com Products: FM,BP,SF,TG,FGAF, MM,MB,DT,BR Region: Central

### E.B. Wakeman Company

846 Higuera Street, Suite 5 San Luis Obispo, CA 93401 Contact: Gary Gibson Phone: 805-781-8475 Fax: 805-781-0516 Products: FM,PB,MB,TG,BR Region: Western

### EDF Man Liquid Products Corporation

14015 Park Drive, Suite 217 Tomball, TX 77377 Contact: Martin Parker Phone: 281-290-2066 Fax: 281-315-2115 E-mail: martin.parker@ westway.com Region: Central

### Gavilon, LLC

11 ConAgra Drive Omaha, NE 68102 Contact: Aaron Perkinson Phone: 402-889-4358 Fax: 402-221-0343 Web: www.gavilon.com E-mail: aaron.perkinson@ gavilon.com Products: Animal proteins and fats, grain, feed ingredients, energy, and biofuels Region: Central

### Gersony Strauss Company, Inc.

171 Church Street, Suite 270 Charleston, SC 29401 Contact: Lonnie James Phone: 843-853-7777 Fax: 843-853-6777 E-mail: gersony@gersony.com Region: Eastern

### Hurley Brokerage, Inc.

11524 West 183rd Street, Unit 103 Orland Park, IL 60467 Contact: Bill Hurley Phone: 708-361-8823 Fax: 708-361-9649 E-mail: bill.hurley@ hurleybrokerage.com Products: BR,FM,PB,RF,SF,TF,ET, FGAF,MM,MB,DT Region: Central

### Lead (USA) Global Ingredients, Inc.

745 E. Garvey Avenue, #202 Monterey Park, CA 91755 Contact: Amy Lin Phone: 626-307-2863 Fax: 626-307-2851 Web: www.leadsusaglobal.com E-mail: amyl@ leadsusaglobal.com Region: Western

### Mini Bruno North America, Inc.

Mini Bruno Sucesores, C.A. 41 West Putnam Avenue, 2nd Floor Greenwich, CT 06830 Contact: Alves Neri Phone: 203-422-2923 Fax: 203-422-0441 Web: www.minibruno.us E-mail: aneri@minibruno.com Region: Eastern

### Mirasco, Inc.

900 Circle 75 Parkway, Suite 200 Atlanta, GA 30339 Contact: Diaa Ghaly Phone: 770-956-1945 Fax: 770-956-0308 Web: www.mirasco.com E-mail: diaa.ghaly@ mirasco.com Region: Eastern

### Pacific Northwest Commodities

P.O. Box 6737 San Rafael, CA 94903 Contact: Bill Foehr Phone: 415-492-0657 Fax: 415-492-0659 E-mail: pnwc@pacbell.net Products: Tallow and protein Region: Western

### Pasternak, Baum & Co., Inc.

500 Mamaroneck Avenue Harrison, NY 10528 Contact: Michael Sanchez or Mike Moran Phone: 914-630-8080 Fax: 914-630-8120 Web: www.pasternakbaum.com E-mail: fatsandoils@pbaum.net Products: Fats, oils, grains Region: Eastern

### Rouse Marketing, Inc.

9200 Montgomery Road, Building H, Suite 25A Cincinnati, OH 45242-7789 Contact: Raymond H. Rouse Phone: 513-984-4420 Fax: 513-792-2313 Web: www.rousemktg.com E-mail: ray.rouse@ rousemktg.com Products: CN,BR,FGAF,LT,PF,SF, TG,YG Region: Eastern

### Sanimax Marketing, Ltd. (formerly Bi-Pro Marketing, Ltd.)

Sanimax Industries, Inc. 65 Massey Road Guelph, ON, N1H 7M6 Canada Contact: Martial Hamel Phone: 519-824-2381, x2000 Fax: 519-824-9472 Web: www.sanimax.com E-mail: martial.hamel@ sanimax.com Products: Marketing group Region: Eastern

### Solmar-Universal Tanker Chartering, Inc.

Schoolhouse Plaza, 374 Milburn Avenue Milburn, NJ 07041 Contact: Ralph Joel Phone: 973-379-8822 Fax: 973-379-8833 E-mail: mail@ solmaruniversal.com Products: Freight chartering Region: Central

### Sunbelt Commodities, Inc.

P.O. Box 70006 Marietta, GA 30007-0006 Contact: Dave Haselschwerdt Phone: 770-641-8504 Fax: 770-642-9534 E-mail: dave@ sunbeltcommodities.com Products: BR,TG,ET,FM,PB Region: Central

### U.S. Commodities, LLC

Ag Motion 700 US Trust Building 730 2nd Avenue South Minneapolis, MN 55402 Contact: Wint Ritchie, Mike McCartan, or Steve Haider Phone: 612-486-3882 Fax: 612-486-3982 Web: www.agmotion.com E-mail: mmccartan@ agmotion.com Products: FM,PB,FGAF,MM,MB, BM,DT Region: Central

### W.W.S., Inc.

4032 Shoreline Drive, Suite 2 Spring Park, MN 55384 Contact: Wendy Weihe Storlie Phone: 952-541-9001 or 888-645-6328 Fax: 952-541-9206 Web: www.wwstrading.com E-mail: wendy@wwstrading.com Products: Commodity merchandiser of fats, oils, and proteins Region: Central, Eastern, Western

### Wilbur-Ellis Company

1200 NW Niato Parkway, Suite 310 Portland, OR 97209 Contact: Bill Standeven Phone: 503-227-2661 Fax: 503-274-2518 Web: www.wilbur-ellisfeed.com E-mail: bstandev@wecon.com Region: Western

### Wilks & Topper, Inc.

567 5th Street Oakland, CA 94607-3500 Contact: Steve Wilks Phone: 510-251-6300 Fax: 510-251-6295 E-mail: wilkstoppr@aol.com Products: FM,PB,TG,ET,FGAF, MM,MB,BM,FA,OT Region: Western

### Consultants

Bolton & Menk, Inc. P.O. Box 668 Ames, IA 50010-0668 Contact: Greg Sindt Phone: 515-233-6100 Fax: 515-233-4430 Web: www.bolton-menk.com E-mail: gregsi@ bolton-menk.com Region: Central

### Conestoga-Rovers and Associates

7086 N. Maple Avenue Suite 101 Fresno, CA 93720 Contact: Janie Sustaita or Jason Haelzie Phone: 559-326-5900 Fax: 559-326-5905 Web: www.craworld.com E-mail: jsustaita@craworld.com or jhaelzie@craworld.com Region: Western

### Reid Engineering Company, Inc.

1210 Princess Anne Street Fredericksburg, VA 22401 Contact: Shane H. Reid Phone: 540-371-8500 Fax: 540-371-8576 Web: www.reidengineering.com E-mail: sreid@ reidengineering.com Products: Engineering services in wastewater, water, re-use, utility, and site development Region: Eastern

### SCEC Air Quality Specialists

1582-1 N. Batavia Street Orange, CA 92867 Contact: Karl Lany Phone: 714-282-8240 Fax: 714-282-8247 Web: www.scec.com E-mail: klany@scec.com Products: Permitting, compliance management, emissions testing Region: Western

### Equipment

### AC Corporation

P.O. Box 16367 Greensboro, NC 27416-0367 Contact: Trip Walker Phone: 336-273-4472 Fax: 336-274-6035 Web: www.accorporation.com E-mail: twalker@ accorporation.com Region: Eastern

### Alloy Hardfacing & Eng. Co., Inc.

20425 Johnson Memorial Dr. (Hwy 169) Jordan, MN 55352 Contact: Paul Rothenberger Phone: 800-328-8408 or 952-492-5569 Fax: 952-492-3100 Web: www.alloyhardfacing.com E-mail: paulr@ alloyhardfacing.net Region: Central, Western

### Anco-Eaglin, Inc.

1420 Lorraine Avenue High Point, NC 27263-2040 Contact: Rick Eaglin Phone: 336-855-7800 Fax: 336-855-7831 Web: www.ancoeaglin.com E-mail: ancoeaglin@aol.com Region: Western

### Bliss Industries, LLC

P.O. Box 910 Ponca City, OK 74602-0910 Contact: Chad Cook Phone: 580-765-7787 Fax: 580-762-0111 Web: www.bliss-industries.com E-mail: sales@ bliss-industries.com Products: Grinding, cooling, pelleting Region: Central

### Brown Industrial, Inc.

311 W. South Street P.O. Box 74 Botkins, OH 45306-0074 Contact: Craig D. Brown Phone: 937-693-3838 Fax: 937-693-4121 Web: www.brownindustrial.com E-mail: craig@brownindustrial.com Products: Truck bodies/trailers Region: Central, Eastern, Western

### Centriphase, LLC

Petroleum Solids Control, Inc. 1320 E. Hill Street Signal Hill, CA 90755 Contact: Mike Vignovich Phone: 562-216-6968 Fax: 562-427-2951 Web: www.centriphase.com E-mail: mike@centriphase.com Products: Centrifuges, shakers, hydrocyclones, tanks Region: Western

### Chinrose International

P.O. Box 548 Cornelius, OR 97113 Contact: Elizabeth Rose Phone: 503-357-7553 Fax: 503-357-5522 Web: www.chinrose.com E-mail: elizabeth@ chinrose.com Products: Locks and security hardware Region: Western

### **Clapper Corporation**

P.O. Box 257 Ankeny, IA 50021 Contact: Theodore Clapper Phone: 515-964-1110 Fax: 515-964-0863 Web: www.clappercorp.com E-mail: tclapper@ clappercorp.com Products: Repair and sales Region: Central, Western

### Crown Iron Works Co.

P.O. Box 1364 Minneapolis, MN 55440-1364 Contact: Derek Masterson Phone: 651-639-8900 Fax: 651-639-8051 Web: www.crowniron.com E-mail: dmasterson@ crowniron.com Products: Extraction, drying, refining, oleochemical solutions, and biodiesel plants Region: Central

### **DGA & Associates**

9419 Toledo Avenue So. Bloomington, MN 55437 Contact: Duane G. Anderson Phone: 952-881-4088 Fax: 952-881-2703 E-mail: dgaassociates@qwest.net Region: Central

### Dupps Company, The

P.O. Box 189 Germantown, OH 45327 Contact: Frank Dupps Jr. or Jim Lyle Phone: 937-855-6555 Fax: 937-855-6554 Web: www.dupps.com E-mail: info@dupps.com Region: Central, Eastern, Western

### Equipment Sales, LLC

Tri-State Tank (Walker Group Holdings) 11637 Brookwood Leawood, KS 66211 Contact: Phil Hodes Phone: 816-589-7040 Fax: 913-279-3151 Web: www.tristatetank.com E-mail: equipmentsalesllc@ gmail.com Products: Vacuum trucks and trailers Region: Central, Western

### Frontline International, Inc.

95 16th Street, SW Barberton, OH 44203 Contact: John Palazzo Phone: 330-861-1100 Fax: 330-861-1105 Web: www.frontlineii.com E-mail: ipalazzo@frontlineii.com Products: Used cooking oil automated system (equipment only) Region: Eastern

# Gainesville Welding & Rendering Equipment

37 Henry Grady Highway Dawsonville, GA 30534-9802 Contact: Terry Stephens Phone: 706-216-2666 Fax: 706-216-4282 Web: www.gwrendering.com E-mail: gwrenderingequipment@ windstream.net Region: Eastern

### Genesis III, Inc.

P.O. Box 186 5575 Lyndon Road Prophetstown, IL 61277 Contact: Jonathan Paul Phone: 815-537-7900 or 866-376-7900 Fax: 815-537-7905 Web: www.g3hammers.com E-mail: jonathan.paul@ g3hammers.com Products: Hammermills and parts Region: Central

### Haarslev, Inc.

9700 NW Conant Avenue Kansas City, MO 64153 Contact: Hans H. Nissen Phone: 816-799-0808 Fax: 816-799-0812 Web: www.haarslev.com E-mail: info-usa@haarslev.com Region: Central, Western

### Industrial Filter & Pump Mfg. Company

5900 Ogden Avenue Cicero, IL 60804 Contact: Edward H. King Phone: 708-656-7800 Fax: 708-656-7806 Web: www.industrialfilter.com E-mail: eking@industrialfilter.com Products: Pressure leaf filters Region: Central

### **Industrial Steam**

Atlantic Feedwater Systems One Lincoln Centre 18W 140 Butterfield Road, Suite 1100 Oak Brook, IL 60181 Contact: Dominic Susin Phone: 630-368-0332, x106 Fax: 630-572-0372 Web: www.industrialsteam.com E-mail: dsusin@ industrialsteam.com Products: Deaerators and high pressure condensate systems Region: Central

### Kastalon, Inc.

4100 W. 124th Place Alsip, IL 60803 Contact: Lyn Thorne Phone: 708-389-2210 Fax: 708-389-0432 Web: www.kastalon.com E-mail: lyn@kastalon.com Products: Locking oil cap Region: Central

### **KWS Manufacturing**

3041 Conveyor Drive Burleson, TX 76028 Contact: Jimmy Rios Phone: 817-295-2247 Fax: 817-447-8528 Web: www.kwsmfg.com E-mail: jrios@kwsmfg.com Products: Manufacturer bulk material handling equipment, screw conveyors, and bucket elevators Region: Central

### **Leem Filtration**

25 Arrow Road Ramsey, NJ 07446 Contact: Bill Boyd Phone: 813-653-9006 Fax: 813-685-3382 Web: www.leemfiltration.com Products: Filtration equipment Region: Eastern

### Lock America International, Inc.

9168 Stellar Court Corona, CA 92883 Contact: Frank Minnella Phone: 800-422-2866 Fax: 888-422-2866 Web: www.laigroup.com E-mail: sales@laigroup.com Products: Security locks and hardware Region: Western

### MAC Trailer Mfg.

14599 Commerce Street Alliance, OH 44601 Contact: Joe Dennis Phone: 330-823-9900 Fax: 330-823-0232 Web: www.mactrailer.com Region: Eastern

### **Martin Sprocket & Gear**

3600 McCart Street Ft. Worth, TX 76110 Contact: Kirk Trimble Phone: 817-258-3000 Fax: 817-258-3173 Web: www.martinsprocket.com E-mail: ktrimble@ martinsprocket.com Products: Bulk material handling and mechanical power transmission equipment Region: Central

### Martin Sprocket & Gear Canada, Inc.

3200 Darrell Drive Ayr, ON, NOB 1E0 Canada Contact: David Thompson Phone: 519-621-0546 Fax: 519-621-4413 E-mail: dthompson@ martinsprocket.com Region: Central

### **MMI Tank and Industrial**

616 E. Southern Avenue Mesa, AZ 85204 Contact: Steven Denny or Stacy Pinkard Phone: 480-461-0404 Fax: 480-461-0406 Web: www.mmitank.com E-mail: steve@mmitank.com Products: Equipment installation or removal, sitebuilt tanks, repair, alterations, conveyors, piping, fabrication Region: Western

### Olson Manufacturing/ V-Ram

P.O. Box 289, 620 S. Broadway Albert Lea, MN 56007 Contact: Jeff Hall Phone: 507-373-3996 Fax: 507-373-5937 Web: www.vram.com E-mail: jeff@vram.com Region: Central

### Onkens, Inc.

P.O. Box 72 320 E. Main Easton, IL 62633 Contact: David Hull Phone: 309-562-7271 Fax: 309-562-7272 Web: www.onkens.net E-mail: dhull@onkens.net Products: Truck bodies, trailers, and bulk grease containers Region: Central, Eastern, Western

### Orthman Conveying Systems

P.O. Box B Lexington, NE 68850 Contact: Doug Hampton Phone: 308-324-4654 Fax: 308-324-7549 Web: www.orthman.com E-mail: dhampton@orthman.com Region: Central

### **Par-Kan Company**

2915 W 900 S Silver Lake, IN 46982 Contact: Abbie Phillips Phone: 260-352-2141 Fax: 260-352-0701 Web: www.par-kan.com E-mail: aphillips@par-kan.com Products: Grease containers/lids Region: Central

### Promens Saint John, Inc.

Promens HF P.O. Box 2087 Saint John, NB, E2L 3T5 Canada Contact: Mike Kilpatrick Phone: 506-633-0101 Fax: 506-657-7261 Web: www.stjohn.promens.com/ca E-mail: sales.sj@promens.com Products: Plastic containers Region: Eastern

### Provisor Technologies, Weiler

1116 E. Main Street Whitewater, WI 53190 Contact: Jim Schumacher Phone: 262-473-5254 or 800-558-9507 Fax: 262-473-5867 Web: www.weilerinc.com E-mail: jschumac@weilerinc.com Region: Central

### **R&D Equipment Sales Co.**

4760 Freeman Drive Fort Worth, TX 76140 Contact: Ralph Romero Phone: 817-563-2571 Fax: 817-563-2519 Web: www.rdequipmentco.com E-mail: ralph@rdequipmentco.com Region: Central

### **Redwood Metal Works**

P.O. Box 88 Redwood Falls, MN 56283 Contact: Chett Bisel Phone: 507-644-2893 Fax: 507-644-7000 Web: www.redwoodmetalworks.com E-mail: cbisel@ redwoodmetalworks.com Products: Aluminum rendering trailers, air/water treatment Region: Central

### **Roskamp Champion**

2975 Airline Circle Waterloo, IA 50703 Contact: John Brooks Phone: 319-232-8444, x122, or 800-366-2563 Web: www.cpmroskamp.com E-mail: brooksj@ cpmroskamp.com Products: Hammermills, hammers, screens Region: Central

### **RW Manufacturing**

P.O. Box 599 Stuttgart, AR 72026 Contact: Shane Sweetin or Randy Sweetin Phone: 870-673-7226 Fax: 870-673-6131 Web: www.rwmfginc.com E-mail: ssweetin@rwmfginc.com or rsweetin@rvmfginc.com Products: Replacement parts for hammer mills and shakers Region: Central

### Scan American Corp.

9505 N. Congress Avenue Kansas City, MO 64153 Contact: Barry Griffith Phone: 816-880-9321 Fax: 816-880-9343 Web: www.scanamcorp.com E-mail: bgriffith@ scanamcorp.com Products: Pumps, cookers, presses, driers, grinders, coagulators, crushers, mixers, thermal oxidizers, humidifiers, pallet crushers Region: Central

### Sturtevant, Inc.

348 Circuit Štreet Hanover, MA 02339 Contact: Steve Marshall Phone: 781-829-6501 Web: www.sturtevantinc.com Products: Air classifier separator for poultry meal Region: Eastern

### Summit Trailer Sales, Inc.

One Summit Plaza Summit Station, PA 17979 Contact: Chuck Pishock Phone: 570-754-3511 Fax: 570-754-7025 Web: www.summittrailer.com E-mail: chuck@ summittrailer.com Region: Eastern

### Superior Process Technologies

1915 Broadway Street NE Minneapolis, MN 55413 Contact: Doug Smith Phone: 612-378-0800 Fax: 702-975-5758 Web: www.superiorprocesstech.com Products: Biodiesel production Region: Central

### Titus, Inc.

9887 6 B Road Plymouth, IN 46563 Contact: Tom Read Phone: 574-936-3345 Fax: 574-936-3905 Web: www.titusinc.com E-mail: tread@titusinc.com Products: Titus II grinder Region: Central, Eastern

### Travis Body and Trailer, Inc.

13955 FM 529 Houston, TX 77041 Contact: C.K. (Bud) Hughes Phone: 713-466-5888 or 800-535-4372 Fax: 713-466-3238 Web: www.travistrailers.com E-mail: info@travistrailers.com Products: Trailer manufacturer Region: Central

### **Uzelac Industries, LLC**

6901 Industrial Loop Greendale, WI 53129 Contact: Michael Uzelac Phone: 414-529-0240 Fax: 414-529-0362 Web: www.uzelacind.com E-mail: mike@uzelacind.com Products: Duske drying systems Region: Central

### Virginia Truck Center P.O. Box 96

Weyers Cave, VA 24486 Contact: Greg Witt Phone: 540-453-1003 Fax: 540-234-0997 Web: www.virginiatruckcenter.com E-mail: gwitt@ virginiatruckcenter.com Region: Eastern

### Walinga USA, Inc.

1190 Electric Avenue Wayland, MI 49348 Contact: Terry Medemblik Phone: 800-466-1197 Fax: 616-877-3474 Web: www.walinga.com E-mail: tjm@walinga.com Products: Collection vehicles Region: Eastern

### **Equipment - Centrifuges**

### Centrifuge Chicago Corporation

1721 Summer Street Hammond, IN 46320 Contact: Doug Rivich Phone: 219-852-5200 Fax: 219-852-5204 Web: www.centrifugechicago.com E-mail: doug@ centrifugechicago.com Products: Repair, parts, service Region: Central

### **Centrisys Corporation**

9586 58th Place Kenosha, WI 53144 Contact: Chris Gatewood Phone: 209-304-2200 Fax: 209-654-6063 Web: www.centrisys.us E-mail: chris@centrisys.us Region: Western

### **GEA Westfalia Separator**

100 Fairway Court Northvale, NJ 07647 Contact: Rawn Walley Phone: 201-767-3900 Fax: 201-767-3416 Web: www.wsus.com E-mail: info.wsus@ geagroup.com Region: Eastern

### Jenkins Centrifuge Company, LLC

1123 Swift Street North Kansas City, MO 64116-4194 Contact: Kevin Jenkins or Cam Kirkpatrick Phone: 800-635-1431 Fax: 816-471-6692 Web: www.jenkinscentrifuge.com E-mail: kienkins@ jenkinscentrifuge.com or . ckirkpatrick@jenkinscentrifuge.com Products: Rebuild centrifuges and presses, buy and sell equipment, manufacture new horizontal centrifuges Region: Central, Eastern, Western

### Separators, Inc.

5707 W. Minnesota Street Indianapolis, IN 46241 Contact: John Campbell Phone: 317-484-3745 Fax: 317-484-3755 Web: www.separatorsinc.com E-mail: separate@sepinc.com Region: Central, Eastern

### Vision Machine, LLC

26343 Anderson Road Magnolia, TX 77345 Contact: Ray Morris Phone: 281-259-6207 Fax: 281-259-6702 Web: www.visionmachine.com E-mail: ray@visionmachine.com Region: Central

### Equipment - Repair

C.A. Picard, Inc. P.O. Box 98 Belleville, KS 66935 Contact: Ted Williams Phone: 785-527-5641 Fax: 785-527-5414 Web: www.capicard.com E-mail: tedwilliams@ capicard.com Region: Central

### C.A. Picard, Inc.

P.O. Box 606 Shellman, GA 39886-0606 Contact: Jim Morrissey Phone: 229-679-5378 Fax: 229-679-2021 Region: Central

### Cen-Tex Centrifuge

Services, LLC 3501 North Loop 336 East Conroe, TX 77301 Contact: Jamie Koch Phone: 936-756-9200 Fax: 936-756-9280 Web: www.cen-tex.net E-mail: jkoch@cen-tex.net Region: Central

### Fay's Industrial Services, Inc.

6423 Orchard Point Road Harrison, AR 72601 Contact: Jim Fay Phone: 870-741-6824 Fax: 870-741-6824 Region: Central

### Industrial Hardfacing, Inc.

218 E. Main Street Lamoni, IA 50140 Contact: Chip Millslagle Phone: 800-247-7778 Fax: 641-784-6923 Web: www.industrialhardfacing.com E-mail: sales@industhard.com Region: Central

### Exporters

Fornazor International, Inc. 455 Hillsdale Avenue Hillsdale, NJ 07642 Contact: John Fornazor Phone: 201-664-4000 Fax: 201-664-3222 E-mail: jfornazor@aol.com Region: Eastern

### International Feed

P.O. Box 280 2075 Daniels Street Long Lake, MN 55356 Contact: Bernie Kaiser Phone: 952-249-9818 Web: www.internationalfeed.com E-mail: berniek@ internationalfeed.com Products: Supplier/Exporter of animal protein meals Region: Central

### Superior Jali Int'l, Inc.

1111 Corporate Center Drive, Suite 104 Monterey Park, CA 91754 Contact: Lily Zhang Phone: 323-262-6877 Fax: 323-262-6897 Web: www.superiorjali.com E-mail: superiorjali@earthlink.net Products: PM,MB,TG,YG,PF,RF, OT,EX,DL,BR Region: Western

### Wellens & Co., Inc.

P.O. Box 24627 Minneapolis, MN 55424-0627 Contact: LeRoy Wellens Phone: 952-925-4600 Fax: 952-925-0031 E-mail: wellens.company@ earthlink.net Products: FM,PB,SF,TG,FGAF, MM,MB,DT,YG Region: Central

### Feed Manufacturers/ Ingredients

### **Agri-Fine Corp**

2701 East 100th Street Chicago, IL 60617 Contact: Mike Hoelzeman Phone: 773-978-5130 Fax: 773-978-7125 Web: www.agri-fine.net E-mail: mike@agri-fine.net Region: Central

### Feed Energy Company

3121 Dean Avenue Des Moines, IA 50317-2433 Contact: Robert G. Riley Jr. Phone: 515-263-0408 Fax: 515-265-4163 Web: www.feedenergy.com E-mail: sales@ feedenergy.com Products: BLF,FA,FGAF,RF,SF Region: Central

### International Ingredient Corporation

150 Larkin Williams Industrial Court Fenton, MO 63026 Contact: Kevin M. Halpin Phone: 636-343-4111 Fax: 636-349-4845 Web: www.iicag.com E-mail: khalpin@iicag.com Products: Specialty feed ingredients Region: Central

### **Mars Pet Care**

315 Cool Springs Boulevard Franklin, TN 37067 Contact: Andy Zenor Phone: 615-628-5090 E-mail: andy.zenor@ effem.com Products: Dog/Cat food, treats, and biscuits Region: Eastern

### **Mid-South Milling Company**

710 Oakleaf Office Lane Memphis, TN 38117-4800 Contact: J.L. Petty Phone: 901-767-0071 Fax: 901-681-4337 Contact: Nathan Pappas Phone: 901-681-4306 Fax: 901-681-4337 Web: www.msmilling.com E-mail: npappas@msmilling.com Region: Central

### Nutra-Flo Protein Products

216 Cunningham Drive Sioux City, IA 51106 Contact: Eric J. Lohry Phone: 712-279-1938 Fax: 712-279-1973 Web: www.nfprotein.com Products: Animal protein producer Region: Central

### Packers By-Products, Inc. P.O. Box 66

National Stockyards, IL 62071 Contact: Max Schaefer Phone: 618-271-0660 E-mail: chaefer@sbcglobal.net Products: Manufacturer and distributor of animal proteins Region: Central

### **P&G Pet Care**

Procter and Gamble 8700 Mason-Montgomery Road Mason, OH 45040 Contact: Greg Daniel Phone: 513-622-0774 Fax: 513-945-2798 Web: www.iams.com E-mail: daniel.gd.2@pg.com Products: Dog/Cat food Region: Eastern

### Financial/ Professional Services

### Marsh Risk & Insurance Services

Marsh McLennan Companies 777 South Figueroa Street Los Angeles, CA 90017 Contact: Richard B. Cook Phone: 213-346-5323 Fax: 213-346-5928 Web: www.marsh.com E-mail: dick.cook@marsh.com Region: Western

### Laboratory/Testing

### A&A Laboratories, Inc.

1000 Backus Avenue Springdale, AR 72764 Contact: Gordon L. Whitbeck Phone: 800-962-7120 Web: www.aandalabs.com E-mail: info@ whitbeckgroup.com Region: Central

### **Crystal Laboratory**

242 Hwy 60 E, Suite 2 P.O. Box 829 Lake Crystal, MN 56055 Contact: Steve Marsh Phone: 507-726-2387 Fax: 507-726-2388 E-mail: smarsh@prarie.lakes.com Region: Central

### Diversified Laboratories, Inc.

4150 Lafayette Center Drive, Suite 600 Chantilly, VA 20151 Contact: Peter Kendrick Phone: 703-222-8700 Fax: 703-222-0786 Web: www.diversifiedlaboratories.com E-mail: pkendrick@ diversifiedlaboratories.com Region: Eastern

### **Eurofins Scientific, Inc.**

2200 Rittenhouse Street, Suite 150 Des Moines, IA 50321 Contact: Lars Reimann Phone: 901-301-8425 Web: www.eurofinsus.com E-mail: larsreimann@ eurofinsus.com Region: Central

### Eurofins Scientific, Inc.

2315 N. Causeway Boulevard, Suite 150 Metarie, LA 70001 Contact: Christine Mcintosh Phone: 504-297-3400 Web: www.eurofinsus.com E-mail: christinemcintosh@ eurofinsus.com Region: Central

### NP Analytical Laboratories

Checkerboard Square St. Louis, MO 63164 Contact: Judy O'Brien Phone: 314-982-2193 Fax: 314-982-1078 Web: www.npal.com E-mail: jobrien@purina.com Region: Central

### Thionville Laboratories, Inc.

Thionville Surveying Co., Inc. 5440 Pepsi Street New Orleans, LA 70123 Contact: Paul Thionville Phone: 504-733-9603 Fax: 504-733-6457 E-mail: operations@ thionvillenola.com Region: Central

### Samplers and Surveyors

### Cullen Maritime Services, Inc.

465 46th Street Richmond, CA 94805-2301 Contact: John Spenik Phone: 510-232-6700 Fax: 510-232-6766 E-mail: cmssfo@pacbell.net Region: Western

### Cullen Maritime

Services, Inc. 2126 E. 7th Street Long Beach, CA 90804 Contact: John Spenik Phone: 562-433-4355 Fax: 562-433-3457 E-mail: john.spenik@ cullenmaritime.com Region: Western

### Cullen Maritime Services, Inc.

9317 232nd Street SW Edmonds, WA 98020-5026 Contact: Craig Burgess Phone: 206-783-6979 Fax: 206-783-6913 Region: Western

### Trade Groups/Journals

### American Feed Industry Association

2101 Wilson Blvd., Suite 916 Arlington, VA 22201 Contact: Joel G. Newman Phone: 703-524-0810 Fax: 703-524-1921 Web: www.afia.org E-mail: jnewman@afia.org Region: Eastern

### **Meat & Poultry Magazine**

Sosland Publishing 4800 Main Street, Suite 100 Kansas City, MO 64112 Contact: Kathy Berry Phone: 816-756-1000 Fax: 816-756-0494 Web: www.meatpoultry.com E-mail: kberry@sosland.com Region: Central

### Pet Food Institute

2025 M Street NW, Suite 800 Washington, DC 20036 Phone: 202-367-1120 Fax: 202-367-2120 Web: www.petfoodinstitute.org Region: Eastern

### Western United Dairymen

1017 L Street, Suite 582 Sacramento, CA 95814 Contact: Gary Conover Phone: 916-492-0892 Fax: 916-492-1645 Web: www.westernuniteddairymen.com E-mail: gary@garyconover.com Products: California dairy milk producer/trade organization Region: Western

### Other

### Arreff Terminals, Inc.

Fornazor International, Inc. 1601 Marshall Avenue Portsmith, VA 23704 Contact: Noel Smith Phone: 757-393-2730 Fax: 757-393-2899 Products: Bulk transloading/ bagging Region: Eastern

### Caito Fisheries, Inc.

P.O. Box 2415 San Francisco, CA 94126 Contact: Jeanette Caito Phone: 415-441-2121 Fax: 415-441-2221 E-mail: caitosf@mcn.org Products: Seafood processor Region: Western

### Center for Toxicology and Environmental Health, LLC

5120 North Shore Drive North Little Rock, AR 72118 Phone: 501-801-8500 Fax: 501-801-8501 Web: www.cteh.com Region: Central

### CenterPoint Energy Services, Inc.

525 Milam, Room 1440 Shreveport, LA 71101 1111 Louisiana Houston, TX 77002 Contact: Jeff Wiese Phone: 318-429-3059 Fax: 318-429-2600 Web: www.centerpointenergy.com/ces E-mail: jeff.wiese@ centerpointenergy.com Products: Energy/Natural gas supplier Region: Central

### Chemol Company, Inc.

P.O. Box 16286 Greensboro, NC 27416 Contact: Fred Wellons Phone: 336-333-3050 Web: www.chemol.com E-mail: fred@chemol.com Products: Bio-based and bio-renewable chemicals from animal fats and vegetable oils Region: Eastern

### **Farmland Foods**

P.O. Box 20121, Dept. 122 Kansas City, MO 64195 Contact: Robert Eastep Phone: 816-713-7878 Fax: 816-713-7700 Web: www.farmlandfoods.com E-mail: rleastep@farmland.com Products: Beef/pork packers Region: Central

### HGI Industries, Inc.

2055 High Ridge Road Boynton Beach, FL 33426 Contact: Ralph T. Kubitzki Phone: 561-735-3701 Fax: 561-735-3824 Web: www.hgiind.com E-mail: rkubitzki@hgiind.com Products: Non-chemical air decontamination system Region: Central, Eastern

### High Performance Systems Corp.

22 Hillcrest Boulevard Warren, NJ 07059 Contact: Jeffrey Smedley Phone: 908-377-4111 Fax: 908-279-7021 Web: www.highperfsystems.com E-mail: highperfsystems@ yahoo.com Region: Eastern

### **Homeland Biogas** Energy, LLC

1717 Langhorne-Newtown Road, Suite 200 Langhorne, PA 19047 Contact: John Illgen Phone: 920-884-2066 Web: www.homelandbiogasenergy.com E-mail: john.illgen@ hbenergyllc.com Products: Owner, operator, developer of anaerobic digester technology Region: Central

### Jacob Stern & Sons, Inc.

2104 75th Street Houston, TX 77011 Contact: Jeffrey Peeler or John Lindquist Phone: 713-926-8386 Fax: 713-926-8128 E-mail: jeffp@tx.jacobstern.com or jlindquist@tx.jacobstern.com Products: Tallow Region: Central

### Jacobsen Publishing

1123 W. Washington Boulevard, Floor 3 Chicago, IL 60607 Contact: Ryan Standard Phone: 312-726-6600 Fax: 312-726-6654 Web: www.thejacobsen.com E-mail: ryan@thejacobsen.com Region: Central

### Kappa Products Corp.

1301 E. 99th Street Chicago, IL 60628-1697 Contact: Paul Stern Phone: 773-374-0600 Fax: 773-374-5625 Products: Animal and vegetable oils producers Region: Central

### Olymel S.E.C.

2200 Avenue Pratte Bureau 400 St-Hyacinthe, QB, J2S 4B6 Canada Phone: 450-771-0400 Fax: 450-771-4872 Web: www.olymel.ca E-mail: claudebourgault@ olymel.com Products: Meat processor Region: Eastern

### **Renewable Energy Group**

416 S. Bell Avenue P.O. Box 888 Ames, IA 50010 Contact: Dave Elsenbast Phone: 515-239-8117 or 515-450-6314 Web: www.regfuel.com E-mail: dave.elsenbast@regi.com Products: Biodiesel production, feedstock procurement, marketing Region: Central

### Southwest Hide Co.

250 S. Beechwood Drive, Suite 180 Boise, ID 83709-0944 Contact: John Rueb Phone: 208-378-8000 Fax: 208-377-9069 Web: www.southwesthide.com E-mail: jr@southwesthide.com Products: DL,EX,HI Region: Central, Western

### Universal Maintenance, Inc.

P.O. Box 104 Murrayville, GA 30564 Contact: Jessica Colbert Phone: 706-297-0087 Fax: 706-297-0088 Web: www.universalmaintenance.com E-mail: jessica@bellsouth.net Products: General contractor Region: Eastern

### Val-U-Meat Pkg

2107 So. Milliken Ontario, CA 91761 Contact: Steve Stiles Phone: 909-390-9828 Fax: 909-390-9833 E-mail: stevestiles@ dslextreme.com Products: Dead stock removal - dairy Region: Western

### Worcester Industrial **Products**

7 Brookfield Street Worcester, MA 01605 Contact: Martha Hawley Phone: 800-533-5711 Fax: 508-831-9990 Web: www.shortening-shuttle.com E-mail: mhawley@shorteningshuttle.com Products: Grease transport Region: Eastern

### Xenerga, Inc.

7075 Kingspointe Parkway, Suite 1 Orlando, FL 32819 Contact: Trenton Stillwell Phone: 407-996-5545 Fax: 407-996-5551 Web: www.xenerga.com E-mail: tstillwell@xenerga.com Products: Biodiesel producer Region: Eastern

### Associate Members by Alphabetical Full listing is available on indicated page number.

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### **Akiolis Group**

72 Avenue Olivier Messiaen Le Mans, 72000 France Contact: Stephan Grawitz Phone: 32-244-81-5010 Fax: 32-244-81-5012 Web: www.akiolis.com E-mail: stephan.grawitz@ akiolis.com Products: BM,CM,FM,PM,MB, MM,PF,SF,TG,YK

### Daka Denmark A/S

Dakavej 10 Loesning, 8723 Denmark Contact: N.C. Leth Nielsen Phone: 45-5156-4600 Fax: 45-7928-4008 Web: www.daka.dk E-mail: In@daka.dk Products: SF,TG,HI,EX,MM,MB, BM,FGAF

### Harinas de Minatitlan SA de CV

Calle San Jose S/N-A Col. Nueva Mina, Minatitlan Veracruz, 96760 Mexico Contact: Vicente Arbesu Lago Phone: 52-922-2210908 Fax: 52-922-2210908 x13 E-mail: arbesu1@ prodigy.net.mx Products: MB,TG

### Mini Bruno Sucesores C.A.

P.O. Box 80037 Caracas, 1080-A Venezuela Contact: Ignacio Davila Phone: 582-12-433-5895 Fax: 582-12-433-5915 Web: www.minibruno.com E-mail: ignacio.davila@ minibruno.com Products: MB,FM,TG,PM,MM, Palatants

### Norsk Protein

Smiuhagan 25 Ingeberg, 2323 Norway Contact: Lars Aashammer Phone: 479-139-1977 Fax: 476-255-0041 E-mail: lars.aashammer@ norskprotein.no Products: TG,MM

### Peerless Holdings Pty., Ltd.

5-9 Merino Street Laverton North Victoria, 3026 Australia Contact: Julius Rath Phone: 613-9214-7777 Fax: 613-9214-7777 Products: TG,MB,BM,FM

### Rendac B.V./Sobel N.V.

P.O. Box 9 Son NL-5691 AA Netherlands Contact: Dirk Kloosterboer Phone: 31-499-364-500 Fax: 31-499-373-873 E-mail: dkloosterboer@sobel.nl Products: EX,FM,PB,SF,HI,MM

### Rengra - Rendimientos Grasos

Rengra SA de CV Km 7.5 Carretera Monterrey Monclova int "B" El Carmen, Nuevo Leon 66550 Mexico Contact: Fernando Mendizabal Fernandez Phone: 52-818-1543220 Fax: 52-818-1543216 Web: www.rengra.com.mx E-mail: fmf@rengra.com.mx Products: MBM,YG,Technical grade tallow

### Ryco Jamaica, Ltd.

P.O. Box 239 Son NL-5691 AA Mandeville, Manchester Jamaica W.I. Contact: Kevin Mullane Phone: 876-987-1891 Fax: 876-986-7629 E-mail: rycoja@aol.com Products: FGYG,PB,FM

### SARIA Bio-Industries AG & Co. KG

Werner Str. 95 Selm, 59379 Germany Contact: Dr. Kurt Stoffel Phone: 49-2592-210-258 Fax: 49-2592-210-124 Web: www.saria.com E-mail: kurt.stoffel@saria.com Products: EX,FM,PB,RF,SF,TG, HI,MM,MB,BM,BFP,ET,FGAF, CM,PF,PM,YG

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### ChinaFeedOnline.com

15th Floor, Radio City 505 Hennessy Road Causeway Bay, Hong Kong Contact: Christine Wang Phone: 852-2871-0708 Fax: 852-2871-0708 Fax: 852-2871-0950 Web: www.chinafeedonline.com E-mail: hk@21cfo.com Products: China market information service

### De Smet Rosedowns, Ltd.

Cannon St. Hull East Yorkshire, HU2 0AD England Phone: 44-1482-329864 Fax: 44-1482-325887 Web: www.rosedowns.co.uk E-mail: rosedowns@ desmetgroup.com Products: EQ

### FMC International Corp.

11th Floor, No. 866-1, Chung Cheng Road Chung-Ho City, Taipei Hsien Taiwan, 235 China Contact: Slim Chou Phone: 886-2-8221-2666 x10 E-mail: fmc@fmcintco.com

### Guandong Guonon

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### HAARSLEV A/S

Bogensevej 85 P.O. Box 65 Bogense, DK 5400 Denmark Contact: Claus Ostergaard Nielsen Phone: 45-63-83-1100 Fax: 45-63-83-1120 Web: www.haarslev.dk E-mail: info@haarslev.dk Products: EQ

### Keith Engineering (Australia) Pty., Ltd. P.O. Box 354

St. Clair, NSW, 2759 Australia Contact: Derek Henderson Phone: 612-9852-1000 Fax: 612-9852-1001 Web: www.keitheng.com.au E-mail: admin@keitheng.com.au

### Natural Agricultural Co. (WA), Ltd.

P.O. Box 3117 21 Edinburgh Road Enugu, 400001 Nigeria Contact: Dr. Emmanuel Okpara Phone: 234-8033-338210 E-mail: graobynn@yahoo.com Products: Poultry processing, egg supplier

### Oleon nv

Assenedestraat 2 Ertvelde, 9940 Belgium Contact: Hubert Denoose Phone: 32-9-341-17-52 Fax: 32-9-341-17-49 E-mail: hubert.denoose@ oleon.com Products: EQ

### Stord Process AS

Liamyrane 6, 5132 Nyborg Bergen, Norway Contact: Harald Nesse Phone: 47-551-97230 Fax: 47-551-97239 Web: www.stord-as.com E-mail: harald@stord-as.com Products: EQ

# Teampower Feed & Grains Trading, Ltd.

Rm 1803-1805, Great Eagle Centre No 26, Harbour Road Wanchai, Hong Kong Contact: Pang Kong Lik Phone: 852-2845-3000 Fax: 852-2845-7000

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# **Biodiesel Industry Strives**

### By Tina Caparella

he last 10 years have been an "apocalyptical decade" for the biodiesel industry, said Joe Jobe, National Biodiesel Board (NBB) chief executive officer, as he opened the 2013 National Biodiesel Conference and Expo in Las Vegas, NV, in early February. Videos highlighted the struggles and accomplishments the United States (US) industry has faced since 2002, but Jobe warned that attacks against renewable fuel would continue. However, with the Environmental Protection Agency's Renewable Fuel Standard (RFS) in place and tax credits reinstated, he believes 2013 will likely be the most prosperous year for the industry.

"Our goal is to make our transportation energy supply look like our power energy supply," Jobe stated, referring to a combination of solar, wind, and coal. He then announced a new 10-year vision for NBB: 10 percent of the on-road diesel market by 2022 (10x22).

"It's not about replacing every drop of petroleum; it is about continuing to diversify transportation energy so we can meet our needs affordably and sustainably," Jobe noted. Eight years ago, NBB set a goal of five percent of the diesel fuel supply by 2015, which was viewed as aggressive. With a billion gallons of biodiesel produced in 2011 and 2012, the industry is well on track of achieving that goal, possibly meeting it even sooner. Nonetheless, Jobe admitted there will need to be technological breakthroughs in feedstocks to obtain the new 10x22 goal.

Scott Thurlow, Canadian Renewable Fuels Association, addressed the market up north where there are two main biodiesel producers, Rothsay and Biox, with Archer Daniels Midland (ADM) on the cusp of opening a plant. There is a federal two percent mandate in place for renewable diesel that includes biodiesel in the country's diesel pool, except in the province of Newfoundland, which is exempt due to logistics. Using 2011 figures, the mandate requires 160 million gallons of biodiesel, of which 20 percent is produced domestically. Thurlow estimated biodiesel production in Canada last year was about 40 million gallons; expected capacity in 2013 will be nearly double that once the ADM facility is online. He noted there is a desire to increase the national mandate for renewable diesel to five percent by 2020.

A Las Vegas Biodiesel User Group panel took the general session stage to describe how biodiesel got its start in the city back in 1999 when Russ Teall, now with Biodico Sustainable Biorefineries, contacted Gary Weinberg, Western Sierra Services, who worked for a petroleum company at the time.

"We were really running by the seat of our pants," Weinberg commented since there was no technical specification or legislation at that time of biodiesel's infancy. It took a lot of effort to convince the Clark County School District, Las Vegas government officials, and the community that biodiesel was good for the school buses and children despite early reports criticizing the alternative fuel. Dan Hyde, now retired from the City of Las Vegas, did not have fun being a fleet manager his first two years as biodiesel was being introduced, but working through the technical issues and myths took teamwork of multiple advocates and the hard work has been successful. Since the school district's program of using biodiesel in its buses began in 2001, 250 million miles have been driven, displacing five million gallons of petroleum diesel fuel.

"We never lost one engine," declared Frank Giordano of the Clark County School District.

The conference's general session on the second day included NBB's Chairman Gary Haer, Renewable Energy Group, comparing parallels of his family's struggle after floods devastated his 750 acres of crops in 2010/2011 and the trials and tribulations of the biodiesel industry. In both situations, farm and biodiesel persevered with the help of family and industry. Haer explained how effective NBB's Advanced Biofuel Initiative, a national communications campaign, has been.

"It was critical that we defined ourselves before our opponents defined us," he commented.

Former US Senator Byron Dorgan (D-ND) was the session's keynote speaker as his involvement with biodiesel dates back to some of the first legislation introduced and he has a long history in the fuels industry. He noted that the United States is producing 25 percent more oil and gas than it did just five years ago, and recovering more oil with better technology. Yet the country still imports 45 percent of its oil and the globally-set cost per barrel is dependent on many factors.

While Dorgan is a big supporter of producing more oil and gas at home, he believes this country also needs to support



Kirk Cobb (*right*), Superior Process Technologies, discusses the company's equipment with Andrew Hill, Biofuels Association of Australia, at the conference's expo.



alternative energies, biofuels, and renewable fuels.

"Renewable energy can and will play an important role in this country," he stated, adding that timing is everything and the industry must tell its good news story, relentlessly. Dorgan revealed that Congress has two huge challenges ahead: cut spending and adjust the tax code to bring in revenue, which puts renewable fuels at risk because of tax credits and mandates. He went on to say he is disappointed the petroleum industry is fighting the RFS because, "We have to move together to be successful."

Giving the conference's closing address the following day was US Department of Agriculture Secretary Tom Vilsak, who told a packed audience that the biodiesel industry is helping to create "a new dynamic in America." He reiterated that dependence on foreign oil is less than 50 percent and dropping, and gave some of the credit to advancements made in the industry.

"The biodiesel industry is making us a more secure country and the most exciting piece is that it's not just limited to fuel and energy," Vilsack said. "Because of how innovative you are, with new technology and techniques...you've given birth to a biobased economy and with that the possibility of a new American economy." He noted that challenges to the RFS are baseless because it's working as intended, but there is still more work to be done.

"You have the power to make us more energy secure, and still create enough food and fiber for the world," Vilsack went on to say. "That's an amazing opportunity worth fighting for. You also have the ability to respond as a generation to climate change. You've got to keep up the fight because the stakes are



Former US Senator Byron Dorgan believes renewable energy can and will play an important role in the country.

extraordinarily high." NBB then recognized Vilsack as one of the strongest advocates for renewable fuels in the country by presenting him with the National Energy Leadership Award.

### **Perplexities of Public Policy**

Individual conference sessions tackled technical issues, markets, petroleum, and federal/state policy and regulations, which was popular with attendees. Giving a broad federal policy outlook were Ginny Terzano, Dewey Square Group, and Wes Coulam, Washington Council Ernst and Young. Terzano explained how President Barack Obama recognized America's changing demographics and fought hard to win them over in the 2012 election. The president won 93 percent of the black vote, 71 percent of Latinos, 67 percent of unmarried women, and 60 percent of voters ages 18 to 29.

"Various signs show Republicans running for office are on the outside of the way citizens are thinking," Terzano commented, adding that Republicans are starting to pivot because of the consquences of the 2012 election. She remarked that the events in Newton, CT, and Hurricane Sandy have changed the dialogue in Washington, DC, forcing political leaders to take a hard look at issues they haven't previously addressed. Due to these and other events, Obama's agenda includes gun safety, climate/energy, immigration, jobs and the economy, equality issues, and Afghanistan, but it's still unclear what is going to get done going forward.

Terzano then provided an array of possible presidential contenders already being discussed for the 2016 election, but stated, "It's way too early to tell who's going to jump in."

Coulam noted that Congress is still divided with the Republicans controlling the House of Representatives and Democrats in the majority in the Senate. Many committees that control taxes and the country's financial and environmental matters are also divided. Coulam indicated that given the precedence on biodiesel tax extenders in the past (allowed to expire for one year before renewed retroactively, twice), it is unlikely renewing any tax extenders, biodiesel or otherwise, will be a priority in Congress.

A second session on federal policy again packed the room, possibly because Michel Monconduit, Internal Revenue Service, provided information on filing for the extended biodiesel tax credits. Tim Urban, Washington Council Ernst and Young, echoed there won't be a lot of discussion in Congress about extending the biodiesel tax credits the first half of this year due to national budget issues, debt ceiling, and sequestration taking precedence. He explained that the current tax extension was part of a "mega package" and the industry may have to look for that next package to be a part of, although several members of Congress are looking to

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### Biodiesel Continued from page 47

repeal energy tax incentives and other tax loopholes.

Jim Massie, Alpine Group, agreed that the first quarter would see Washington dealing with fiscal matters, adding that after four years of battling with Congress, Obama has decided he doesn't need them anymore and will use his executive power to build his legacy. Massie noted the RFS is under "complete attack," with the focus being on the lack of cellulosic ethanol and biodiesel renewable identification number fraud. He warned that opponents have built a strong case and may have the votes in Congress; however, to amend the RFS would mean amending the Clean Air Act, a very difficult task.

Tom Hance, Gordley Associates, focused on various lucrative bioenergy programs within the farm bill, which received a one-year extension until September 30, 2013, but only for baseline funding programs, so energy was not included.

Shifting to state policy, NBB's



Shelby Neal highlighted state biodiesel mandates, which include Oregon and Minnesota at five percent, Pennsylvania at two percent, and Washington at five percent, although enforcement is spotty. There are several other states with mandates in place, such as New Mexico and Louisiana, which have not yet been implemented. As for home heating oil, New York City now requires two percent biodiesel in heating oil (called bioheat) that went into effect in October 2012. Connecticut is requiring two percent bioheat in heating oil for 2012, increasing to five percent in 2015, and 20 percent in 2020, which will be implemented when all contiguous states pass similar policies, although regulation has been introduced to eliminate this requirement. Legislation has also been introduced in New York to expand the city bioheat mandate to the entire state.

Eric Bowen, Renewable Energy Group and California Biodiesel Alliance, discussed the low carbon fuel standard (LCFS) in California that requires a 10 percent reduction in carbon intensity by 2020. Although he believes biodiesel is poised to make a major contribution in the state's carbon reduction goals, there are challenges. A lawsuit was brought against the standard for violation of interstate commerce laws and was won, but the ruling was appealed and is now in the hands of the appeals court. Bowen emphasized that even if the appeal is denied and the ruling stands, the law is easily fixable to allow it to continue moving forward.

Another challenge comes from the Western States Petroleum Association that argues the LCFS goals are unattainable by 2015 and unfair due to multiple requirements. Other challenges include infrastructure issues in California at the terminal level and not enough biodiesel availability in the state.

Rebecca Richardson, MARC-IV Consulting, provided state fuel quality activities, reporting that 48 states have adopted the definition of biodiesel to include ASTM D6751 and 23 states proactively test biodiesel/diesel blends at various levels.

"Fuel quality is only an issue if there's an issue," she stated.

The next National Biodiesel Conference and Expo is scheduled for January 20-23, 2014, in San Diego, CA.

# **Biodiesel Leaders, Early Pioneers Recognized**

A group of farmer leaders in the mid-section of the United States started a research and development group in the early 1990s looking for a new market for huge quantities of surplus soybean oil. Just off the heels of the first Gulf War, they envisioned an opportunity to contribute to their nation's energy security. The group they created became the National Biodiesel Board (NBB).

In the early years, the organization was focused on building a solid technical foundation for this new alternative fuel called biodiesel through extensive engine durability, compatibility, health effects, and emissions testing. In 1992, the United Soybean Board voted to invest national checkoff funds into biodiesel research, effectively launching biodiesel to the billion-plus gallon commercial industry that it is today. As NBB celebrated its twentieth anniversary at the National Biodiesel Conference and Expo in early February in Las Vegas, NV, it also recognized the United Soybean Board with its Influencer Award for the board's leadership and financial commitment through the soybean checkoff since 1992. Other biodiesel champions presented with NBB's annual "Eye on Biodiesel" awards included:

• Industry Partnership – John Maniscalco, New York Oil Heating Association, helped make New York City a shining example of biodiesel support as sustainability efforts continue to move forward, including landmark legislation that now requires all heating oil sold in the city to contain at least two percent biodiesel. This cleaner burning, domestic fuel blend known as Bioheat will replace up to 20 million gallons of petroleum a year. The efforts of Maniscalco and the support provided by the New York Oil Heating Association made this unprecedented legislation possible.

• Innovation – Dr. Leon Schumacher, a professor of agricultural engineering at the University of Missouri, Columbia, is one of the first researchers to jump into biodiesel with both feet. He led the first engine tests of biodiesel in the United States, including a 1991 Dodge Ram that can still be seen on the university campus today. Biodiesel has become one of the most tested fuels on the planet. It began with this early research and continues today.

• Inspiration – The Las Vegas Biodiesel User Group, which comprises of Gary Weinberg, Western Sierra Services; Ron Corbett, City of North Las Vegas; Frank Giordano, Clark County School District; James Morwood, Las Vegas Valley Water District; and Dan Hyde, City of Las Vegas (retired), is a group of pioneers who championed the alternative fuel against all odds in the late 1990s to help it become the established fuel it is today. The group was among the first users of biodiesel in the nation. These fleets worked to overcome resistance, remove technical obstacles, and even successfully challenged large diesel equipment manufacturers to support biodiesel. **R** 





By Tina Caparella

A smomentum grows for using biodiesel as part of meeting California's low carbon fuel standard (LCFS), the California Biodiesel Alliance (CBA) presented a full-day forum in Las Vegas, NV, just prior to the National Biodiesel Conference and Expo in early February. A good attendance indicated there is interest in the renewable fuel's future in the Golden State.

Eric Bowen, former CBA chairman, declared these are interesting times in California.

"We are at a point of seeing a shift from tens of thousands [of gallons] to a marketplace of hundreds of thousands to the potential of millions of gallons of biodiesel," he optimistically stated about the requirements of the LCFS beginning to kickin. An array of speakers provided detailed information on the standard, which was established by executive order from Governor Arnold Schwarzenegger in 2007, as well as other alternative and renewable fuel programs in California.

Greg Staiti, Weaver and Tidwell, LLP explained that although the law putting in place the LCFS, Assembly Bill 32, is currently being challenged in court with a decision expected any time, California's Air Resources Board (CARB) has the authority to move forward with the program while under appeal. The LCFS aims to reduce greenhouse gas (GHG) emissions in the state by reducing the carbon intensity of all transportation fuels, except those used in aircraft, military, racing, ocean-going vessels, or certain locomotive applications. Staiti noted that various factors go into the carbon intensity rating of a fuel, which is based on a "wells-to-wheels" analysis of the emissions, including feedstock and location of feedstock. The lower the carbon intensity rating, the better the fuel is at reducing GHG emissions, according to CARB. Of much interest is the favorable rating for biodiesel produced from tallow and used cooking oil and renewable diesel using tallow. Both fuels have a carbon intensity value of below 40, compared to ultralow sulfur diesel's value of 98 and Midwest soybean-based biodiesel's value of 83.25 (table 1).

Staiti then described the state's credit generation scheme as a "real opportunity that is becoming monetized." In early December, credits were between \$15 and \$20 per metric ton; in early February, credits were above \$30 per metric ton. He mentioned that Oregon implemented phase one of its LCFS in December and British Columbia, Canada, is implementing low carbon objectives via renewable fuel mandates in the gasoline and diesel supply pool.

Shawn Garvey, The Grant Farm, declared that over the next decade, federal and state government agencies will invest a transformative \$250 billion in private companies working to build a clean energy future. He said new grant and loan opportunities regularly become available for commercial-scale biofuels production, co-products commercialization, and waste diversion, and presented various resources to find

funding such as grants.gov, recovery.gov, FedConnect.net, and affiliate organizations. Garvey pointed out the multitude of programs currently financed and awaiting applicants for bioenergy and biomass projects.

Stephen Kaffka, California Biomass Collaborative, University of California, Davis, believes California's LCFS is a good tool for encouraging in-state biofuel production and reminded attendees that fuel producers must also comply with blending requirements under the federal Renewable Fuel Standard (RFS), although he believes the LCFS is a better regulation.

Stephen Silva, E.B. Wakeman Commodities, educated the group on rendered fats and oils, explaining that all used cooking oil is yellow grease, but not all yellow grease is used cooking oil, which can be a combination of animal fats and used cooking oil. He said there is no industry standard for used cooking oil so buyers will get 10 different products from 10 different suppliers. Silva mentioned that natural beef programs require vegetarian diets, driving feeders to source used cooking oil-based yellow grease, which is increasing demand and now accounts for 25 to 30 percent of the overall California market. Yellow grease exports to Mexico are also rising for the expanding poultry, pork, and aquaculture industries, thus further driving demand. Silva predicted that yellow grease prices will increase this year to 2011 highs and a reduced national cattle slaughter could cause a surge in tallow prices as well.

Randall von Wedel, CytoCulture International, Inc. focused on oil seed cultivation, but admitted that used cooking oil is generating most of the biodiesel production in California and Nevada. Joe Jobe, National Biodiesel Board (NBB) chief executive officer, spoke during the conference's luncheon, revealing that NBB invests a lot of resources in California because "we think it's an important state, especially the regulatory agenda."

A panel from CARB joined the forum by video to update the industry on the board's activities. It was stipulated that CARB does not "hate" biodiesel and, in fact, diesel with a five percent blend of biodiesel is legal to sell as CARB diesel (California requires its own type of diesel fuel to meet stringent air quality standards). The board continues to examine increased blends of biodiesel and renewable diesel, both of which CARB expects to play a significant role in the LCFS.

Steve Howell, Marc-IV, declared that biodiesel works in new technology diesel engines and that over \$15 million has been spent in engine testing since 2004, not including internal equipment manufacturer testing. He pointed out that ongoing studies in evaluating the effect of alkali metals in biodiesel are using soy-based fuel because it's the most common biodiesel. "All our work we do is supposed to be feedstock neutral," Howell commented, adding that specifications for metals are the same no matter the feedstock. He stated that 75 percent of original equipment manufacturers support a 20 percent blend of biodiesel in diesel fuel, with NBB's goal being 90 to 100 percent of manufacturers. Howell said testing will help convince the rest, which are mainly light duty manufacturers from Europe.

Peter Moulton, Washington Department of Commerce,

revealed his state has provided various financial incentives and market development for biofuels, including a RFS for the inclusion of two percent biodiesel in the state's diesel fuel with a clause to increase to five percent once in-state production meets certain requirements. However, what looked promising six years ago has suffered under the national recession, feedstock limitations, and inconsistent government policies, thus the RFS is not yet in effect. The bright spot is state agencies are required to use at least 20 percent biodiesel in their fleets.

Providing an Australian experience was Andrew Hill, Biofuels Association of Australia, who explained that the politics of his country and the United States are not so different. He noted that ethanol

gets a production subsidy while biodiesel gets a clean fuel grant and with no forcible mandate in Australia, biodiesel must be priced close to diesel fuel. Hill mentioned that New South Wales has a "sort of" mandate, but if the biodiesel's not available, fuel blenders can ask for an exemption.

"Everybody wants to save the world, but nobody wants to pay for it," he announced.

Carlo Luri, Bentley Biofuels, provided a Nevada biodiesel

Table 1. Select carbon intensity values for diesel and its substitutes.

producers perspective on doing business with California, which is home to eight biodiesel plants with a capacity of 35 million gallons per year compared to Nevada's two plants that have a capacity of five million gallons per year. Nevada's regulatory incentives only apply to state and local government fleets that have over 50 vehicles with the focus being on air quality in the state's two most populated counties, which include the cities of Las Vegas and Reno. The biggest constraint in Nevada is feedstock availability and the

> minimal, if any, government support for alternative fuels. On the bright side, Nevada has no corporate taxes and government is easy to work with because of the size of the state.

> Mike Lewis, Pearson Fuels, explained the large amount of work for California fuel retailers in keeping track of renewable identification numbers obligated under the federal RFS and now meeting requirements of the state's LCFS. However, he said the biggest challenge has been declining demand for biodiesel and petroleum fuels in general.

> Wrapping up the day was Lisa Mortensen, Community Fuels, who tried to weave attendees through the maze of complex regulations that could affect California businesses.

"The challenge is finding every regulation that affects the biodiesel

producer, from construction to on-going production, both federal and state," she commented, adding that California's Division of Occupational Safety and Health often has more rigorous requirements than federal laws. Mortensen briefly covered waste cooking oil collection regulations in the state, which she declared as "highly regulated," and described human resources rules in California as dynamic and everchanging. **R** 

Fuel	Pathway identifier	Pathway description	Carbon intensity value (gCO2e/MJ) <sup>1</sup>
Diesel	ULSD001	ULSD – based on average crude oil delivered to California refineries	98.03
Biodiesel	BIOD001	Conversion of Midwest soybeans	83.25
	BIOD002	Conversion of used cooking oil in California	15.84
	BIOD006	Conversion of North American canola	62.99
	BIOD007	Conversion of corn oil, from distillers grain pre-drying	4.00
	BIOD009	Conversion of tallow originating in California to biodiesel produced in California	34.11
Renewable diesel	RNWD001	Conversion of Midwest soybeans	82.16
	RNWD002	Conversion of tallow	39.33
Source: Title 17, California Code of Regulations, Section 95486(b), table 7. Note: ULSD – ultra-low sulfur diesel.			

<sup>1</sup>In grams of carbon dioxide equivalent per mega joule.



Stephen Silva, E.B. Wakeman Commodities, explains that not all yellow grease is used cooking oil.

# **The Great Political Divide**

In a column early last year, I wrote about being guilty by association. In it, I protested that just because one lived and worked in the Washington, DC, area in somewhat government-related work didn't mean one should be blamed by everyone outside of Washington for what goes wrong there. I am just as frustrated as the next person that the two sides can't get together at least on some issues, such as making the sequestration more manageable.

The sequestration is across-the-board spending cuts that will not actually go into effect until mid-April. On the surface, there is not much leeway. The various government agencies and Congress all have to find ways to slash about 2.5 percent in domestic program discretionary spending and similar defense cuts.

President Barack Obama and his administration waged an all-out campaign the last two weeks of February warning citizens that the wheels of government would come to a screeching halt if the cuts were implemented. Police officers, firefighters, nurses, teachers, and other first responders would be the first to be axed. The Transportation Security Administration, which ensures security at the nation's airports, would be reduced so much that flights would be severely delayed. The education secretary was questioned on his claim that 40,000 teachers would lose their jobs. He stood by this statement three times to the press before being forced to substantiate the claim. Well, it was 40 teachers in West Virginia and those jobs might not be related to the sequestration. A Democrat congresswoman claimed 170 million jobs would be lost. Huh?

Even the United States Department of Agriculture (USDA) stated that federal meat inspection would come to a halt. That one hit a nerve with the livestock and poultry industries as well as renderers. Livestock and poultry producers are already hurting with increased expenses along with a severe drought in the major livestock producing states. I doubt USDA wants to be seen as adding extra burden to them by cutting back meat inspection. USDA was also caught sending a directive to its regional and state offices not to contradict the claims coming from the administration.

Closing the White House tours to the public might have been the last straw in



testing US citizens' patience. This token action by the White House during the height of tourist season and upcoming cherry tree blossoms has brought not only anger but also the recognition of the silliness of the administration's actions. Tourists, thousands of them, come from all over the country this time of year to see the sites of Washington. If they want to tour the White House, they must get tickets through their representatives well in advance of the trip. This time, the rage is coming from outside of Washington.

As of this writing, it appears the administration's campaign to excite the public has backfired. The sequestration should be an opportunity for US government officials to show that the government can manage responsibly. Instead, they try to scare us into believing they can't do what we all must do every day, which is manage our resources.

It reminds me of some local television weather forecasters when a winter storm is approaching, something just recently experienced. Schools and the federal government shut down for the day based on the snowy forecast alone. What did we get? Rain most of the day, not the six to eight inches of snow predicted. Weather forecasters get it right most of the time, but how did they miss this one so badly?

The current political divide is real on certain issues and just the way it is going to be, at least for a while. The Republicans are not likely to go for a tax increase anytime soon, believing there needs to be more spending cuts. The president and Democrats like to have a "more balanced" approach, meaning higher taxes to offset the cuts. This divide will not be closed for some time.

I've often heard that many think we ought to vote out all members of Congress and start with a completely new Congress. That might be like throwing the baby out with the bath water. An old friend who has been in Washington a long time reminded me that everyone hates Congress, but like his or her own Congressman. **R** 

# **OIE Advises Upgrading US BSE Risk Status**

In 2012, the United States (US) submitted an application and supporting information to the World Organization for Animal Health, or OIE, Scientific Commission to upgrade the bovine spongiform encephalopathy (BSE) risk classification for the United States from controlled to negligible. The commission, in turn, conducted a thorough review before recommending in February that the risk classification for the United States be upgraded to negligible. Before OIE's annual general assembly meeting in Paris, France, in May 2013, delegate countries will have the opportunity to review the commission's recommendation. The US Department of Agriculture (USDA) expects formal adoption of negligible risk status at that time.

"This is a significant achievement for the United States, American beef producers and businesses, and federal and state partners who work in coordination to maintain a system of three interlocking safeguards against BSE that protect our public and animal health," said USDA Secretary Tom Vilsack. "In recommending that the United States receive negligible risk classification, the commission stated that the risk assessments submitted for their evaluation were robust and comprehensive, and that both our surveillance for, and safeguards against, BSE are strong."

OIE determines a country's risk status based on actions the country has taken to manage the risk of the disease. These actions include instituting a strong ruminant-to-ruminant feed ban, strictly controlling imports of animals and animal products from countries at risk for the disease, and conducting appropriate surveillance.

Using the latest science and current knowledge on BSE, the OIE *Terrestrial Animal Health Code* provides guidelines for the safe trade of animals and products based on a country's risk status and the risk presented by the specific item being traded. Negligible risk is the lowest risk level under the OIE code. Countries defined as negligible risk have conducted extensive surveillance and testing in domestic cattle to demonstrate a minimal risk for BSE. OIE administers and governs the foundational international standards on animal health as well as trade in livestock and animal products. With 178 member countries, including the United States, OIE is recognized as a reference organization by the World Trade Organization (WTO), the only global international group dealing with the rules of trade between nations. The official recognition of disease status by OIE of member countries is of great significance for international trade and constitutes one of the most important links between OIE and WTO.

The United States has a long standing system of three interlocking safeguards against BSE: the removal of specified risk materials from all animals presented for slaughter, a feed ban that protects cattle from the disease, and an ongoing surveillance program that allows USDA to detect the disease if it exists at very low levels in the cattle population. **R** 

# High Performance Systems





# **California Awards Millions for Biofuels**

Two California companies were awarded millions of dollars by the California Energy Commission toward building commercial biodiesel production facilities in the state.

In Fresno, Eslinger Biodiesel, Inc. was awarded \$6 million for a \$32 million refinery slated to be operating within a year of funding, annually producing five million gallons of biodiesel made from waste vegetable oils collected from restaurants and commercial food producers and animal fats obtained from rendering operations. Eventual biodiesel production is expected to be 45 million gallons a year. The output will be shipped by pipeline to commercial blending facilities and is planned to be pre-sold to companies obligated to purchase carbon credit offsets under California's low carbon fuel standard.

In addition to biodiesel, the plant will produce pharmaceutical and technical grade glycerin. Pipeline transport of fuel and waterless processing will result in nearzero production emissions at the facility.

Buster Biofuels, LLC, based in San Diego, CA, will receive \$2.6 million to convert a 7,300 square foot industrial warehouse building into a biodiesel manufacturing and fueling facility. The plant will use renewable waste-based feedstocks such as used cooking oil from restaurants and is expected to produce nearly five million gallons of biodiesel annually.

Eslinger Biodiesel's award was part of \$17.2 million handed out in February to eight clean transportation projects through the California Energy Commission's Alternative and Renewable Fuel and Vehicle Technology Program. The program, which is essential to fulfilling the state's climate change policies, is slated to invest approximately \$90 million during this fiscal year to develop new transportation technologies as well as alternative and renewable fuels. It is paid for through surcharges on vehicle and boating registrations, and smog check and license plate fees.

Blue Line Transfer, Inc., a public disposal and recycling facility, received nearly \$2.6 million under the program to build an anaerobic digestion plant in South San Francisco, CA. The facility is slated to convert 9,000 tons per year of food and plant waste from commercial food producers, businesses, and residential customers into biomethane that will be used to produce compressed natural gas for a fleet of five refuse and recycling collection vehicles. Other award recipients will invest in hybrid and electric vehicles and charging stations, and computer models.

Buster Biofuels' award was part of \$5.5 million given out in late March for two projects awarded under the same alternative and renewable fuel program. The balance of the funds was earmarked for a pilot production line capable of assembling 20 electric power control systems per month.

California's investments in these projects are safeguarded by matching fund requirements for awardees, and by making payments on a reimbursement basis after invoices are submitted.

# **California Biodiesel Alliance Elects New Officers**

California Biodiesel Alliance (CBA) board members elected new state trade association leadership. The new officers represent California-based producers and stakeholders and will help lead the small but growing industry as it navigates a bourgeoning California market, which is demanding every drop of low carbon biodiesel its members can produce.

The new officers will serve two-year terms and include Curtis Wright, Imperial Western Products, chairman; Russ Teall, Biodico Sustainable Biorefineries, president; Joe Gershen, Crimson Renewable Energy, vice chairman; Jennifer Case, New Leaf Biofuel, vice president and treasurer; and Doug Smith, Baker Commodities, secretary.

Wright has managed Imperial Western Products' biodiesel production facility in Coachella, CA, since its startup in 2001. As a California industry pioneer, he has seen biodiesel's ups and downs as the new fuel has found its way to market and as state and federal policy has evolved. Teall has been involved with the industry since 1993 and first produced biodiesel from used cooking oil in California in 1998 under a grant from the United States Department of Energy.

# **California Municipalities Collect FOG for Biogas Production**

The Sacramento Regional County Sanitation District (SRCSD) partnering with Sacramento Municipal Utility District (SMUD) recently completed construction of a receiving station for fats, oils, and grease (FOG) and liquid food processing waste at the Sacramento Regional Wastewater Treatment Plant (SRWTP) in Elk Grove, CA. The Biogas Enhancement Facility will improve SRCSD's ability to convert FOG collected from local restaurants and businesses into methane biogas. Designed to process up to 42,000 gallons of FOG each day, construction and initial testing of the facility was completed in December 2012 and is expected to start receiving FOG by late April 2013.

According to SRCSD, the new facility offers a local alternative to businesses currently hauling FOG to distant, outof-county locations. In addition, instead of unloading FOG into the headworks at the wastewater treatment plant, haulers will upload directly at the facility, which will load FOG directly into the mixed sludge loop that feeds the digesters. This direct access to the digesters will break down FOG substance more efficiently and produce more biogas, which will be used by SMUD to generate renewable electricity for 2,000 homes at its Cosumnes Power Plant located in southern Sacramento County.

The total project cost is estimated at \$3.5 million. SMUD

and SRCSD received approximately \$1.45 million in American Recovery and Reinvestment Act funding from the United States Department of Energy and \$100,000 in matching funds from the California Energy Commission to help construct the facility. The remaining cost was funded by SRCSD.

# **Conviction in RIN Fraud Case**

Rodney R. Hailey of Perry Hall, MD, was sentenced to 12 years and six months in prison for selling over 35 million renewable fuel credits he falsely claimed were produced by his company, Clean Green Fuel, LLC. The credits, which represent 23 million gallons of biodiesel, were part of a massive fraud scheme that the company engaged in between March 2009 and December 2010. During that time, Clean Green Fuel sold the RINs to brokers and oil companies even though the company neither produced the fuel nor had a facility capable of producing it.

The criminal investigation was initiated after Maryland's federal financial crimes task force was informed about a large number of luxury cars parked outside of Hailey's home. The task force in turn contacted the Environmental Protection Agency who initiated the criminal investigation that led to the conviction. In addition to the jail sentence, Hailey was ordered to pay restitution of approximately \$42.2 million to over 20 companies and forfeit \$9.1 million in proceeds from the fraud. Many smaller biodiesel companies were affected, some of which were unable to sell their RINs and were forced out of business.

# **BIOX Resumes Production** at Hamilton Facility

BIOX Corporation, a Canadian renewable energy company, resumed biodiesel production at its Hamilton, ON, facility in late January after suspending production in October 2012.

"The improvements in [the] US biodiesel market have provided us with sufficient confidence in the market outlook to resume production," said Kevin Norton, BIOX chief executive officer, referring to the expanded renewable fuel standard, which increases the mandated minimum volume requirement for biomass-based diesel to 1.28 billion gallons in 2013, a 28 percent increase from the 2012 requirement. In addition, the passage of the American Taxpayer Relief Act in early January reinstated the biodiesel tax incentive, retroactive from January 1, 2012 through December 31, 2013.

# **Electrawinds Opens Biodiesel** and Rendering Plants in Europe

As part of its vertical integration strategy for animal fats, Electrawinds, a Belgium-based renewable energy company, recently opened two new facilities in Europe.

The first is a biodiesel plant located in Sluiskil, the Netherlands, which has stood since 2008 and, except for a

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### Biofuels Continued from page 55

short start-up period, has never been operational. With a storage capacity of 25,000 metric tons and direct access to the Ghent-Terneuzen canal, the site has been retooled to produce so-called second-generation biodiesel produced from waste streams.

As majority shareholder of the plant, Electrawinds will be responsible for all operations, logistics, and commercial activities as of the takeover. The company will operate under the name Electrawinds Greenfuel and plans to trade the biodiesel on the European market taking advantage of the European directive that at least 10 percent of fossil fuels must be a mix of biofuels by 2020.

In addition, Electrawinds has built a rendering plant in Indjija, Serbia, that is said to currently be the most modern and innovative animal waste processor in the country. The facility is billed as a zero waste plant and will focus on category 1 waste fats that are not fit for human consumption. Studies show 80 percent of the offal in Serbia goes untreated due to lack of capacity, creating a potential health hazard. The plant fits into Serbia's Clean Serbia Project aimed at tackling the country's general waste problem.

The start-up is a 21 million euro (\$27.7 million) collaboration between Electrawinds and other Serbian investment partners that will operate under the name Energo Zelena (Serbian for green energy). The plant will have an eventual capacity of 150,000 metric tons per year. In addition to the environmental benefit, the controlled processing will give Serbia the eventual ability to export meat products to Europe, a requirement to enter the European Union.

# EPA Makes Changes to Renewable Fuels Program

Following a number of high profile fraud cases involving renewable identification numbers (RINs), the Environmental Protection Agency (EPA) is proposing changes aimed at making the Renewable Fuel Standard program more efficient and effective. Established in 2005 and later modified in 2007, the standard sets specific volumes of renewable fuels to be used in the transportation, home heating, and jet fuel sectors each year. Under the program, renewable fuel producers and importers generate RINs based on the volume of compliant renewable fuel made available. The RINs can then be traded and used by other parties to show compliance with the program.

The program's changes would validate RINs thru a voluntary quality assurance process along with other alternative compliance options leveraging industry practices and market forces. The changes will provide protection against liability for civil violators resulting from the transfer or use of invalidly generated RINs in certain cases. The changes also specify conditions under which invalid RINs must be replaced and by whom. EPA expects the rule changes to improve overall liquidity in the RIN market and make it easier for fuel producers to sell RINs.

In response to the proposed changes, the National Biodiesel Board released a statement thanking EPA for working

aggressively to address the issue. Anne Steckel, NBB vice president of federal affairs stated, "While we are still reviewing the details, this proposal appears to be another positive step toward ensuring that RIN fraud is a thing of the past."

# European Biofuels Coalition Formed

The chief executive officers of seven leading European biofuel producers and airlines have launched an industry-led initiative to speed up the deployment of advanced sustainable biofuels in Europe.

"Leaders of Sustainable Biofuels" aims at supporting the development of second-generation biofuels in Europe, which have been shown to reduce greenhouse gas emissions by at least 65 percent. The leaders of Chemtex, British Airways, BTG, Chemrec, Clariant, Dong Energy, and UPM are joining forces to ensure the market uptake of advanced sustainable biofuels by all transport sectors.

According to the group, the world is taking action to reduce greenhouse gas emissions and second-generation biofuels are a key part of the solution because they are cost-competitive and have less environmental impact than fuels made from oil or natural gas. In the European Union, 10 percent of all fuels must be alternative fuels by 2020, the large majority being biofuels.

The coalition has established a common strategy aimed at accelerating market penetration and technology deployment and use. The group also plans to address national policymakers, the European Commission, and the European Parliament with a single voice.

# **INCBIO Secures Orders for Two Biodiesel Plants**

INCBIO, a leading Portuguese engineering company, has signed agreements to build two biodiesel plants in 2013. The first, scheduled for completion in summer of 2013 in Kuala Lumpur, Malaysia, will be built for Biofuel Ltd., a wholly owned subsidiary of Green Energy Group Ltd. The facility will utilize ultrasonic reactors as well as heterogeneous catalyst-based multi-feedstock technology capable of converting a wide range of raw materials into biodiesel. Although the technology is useful in processing any type of animal fat or vegetable oil waste, the intention is to use grease trap oil that is currently landfilled by local municipalities.

Green Energy Group has been working since 2008 to make the production of biodiesel from the waste streams a viable business venture. An established feedstock supply chain that has support from the Malaysian government was recently acquired by the company and with that stable supply, Green Energy Group hopes to take production of biodiesel to the next level in Southeast Asia.

INCBIO's second plant is slated for construction in the Washington, DC, area for DC Biofuels, LLC. Scheduled for completion in late 2013, the facility will have a potential output of 7.5 million gallons of biodiesel per year utilizing the same multi-feedstock technology. DC Biofuels' plant will

produce biodiesel that exceeds strict European and United States standards and be certified as a BQ-9000 facility. The company expects to blend biodiesel with ultra low-sulfur diesel at blend levels from two to 20 percent biodiesel and supply home heating oil to area residents in winter months.

DC Biofuels recently formed a strategic partnership with Beltway Biodiesel, LLC to supply the national capital region with biodiesel made from locally collected waste vegetable oil. The two companies are launching a combined and expanded collection, outreach, and marketing effort aimed at restaurants, large food service institutions, and others in the region to supply feedstock for the proposed plant.

# KLM Takes Next Steps in Sustainable Flights

KLM Royal Dutch Airlines has begun its first-ever series of biofuel-powered intercontinental flights in partnership with Schiphol Group, Delta Air Lines, and the Port Authority of New York and New Jersey. This unique step emphasizes KLM's plans to use sustainable biofuel on a regular basis.

One weekly KLM flight on a Boeing 777-200 from John F. Kennedy (JFK) International Airport to Amsterdam Airport Schiphol, the Netherlands, will use sustainable biofuel obtained from used cooking oil with 26 flights planned. If successful, KLM and Boeing will establish new operational procedures and recommendations for follow-on development programs with various partners. In June 2012, KLM's longest biofuel flight ever travelled from Amsterdam to Rio de Janeiro. The airline first began testing flights using biofuels in 2009 with 200 flights between Amsterdam and Paris, France.

The airline's biofuel is supplied by SkyNRG, a company that KLM founded in 2009 together with ARGOS (North Sea Petroleum) and Spring Associates. SkyNRG now supplies more than 15 carriers worldwide and is the operating partner in KLM's biofuel program. For the JFK to Schiphol route, SkyNRG is supported by its longstanding United States partner EPIC Aviation, LLC to distribute the fuel.

# New Biofuel Plant Opens in Connecticut

Greenleaf Biofuels recently opened a biofuel plant utilizing a continuous feed system developed by JatroDiesel of Miamisburg, OH. The facility is slated for an eventual production capacity of 10 million gallons per year.

Constructed within the company's current tank farm in New Haven, CT, the location is a key hub for the nearly 400 million gallons of home heating oil the company delivers to local businesses and residents in the area. Greenleaf Biofuels intends to use a feedstock of trucked-in waste vegetable oil from the Boston, MA, to New York corridor although the placement of the plant provides the company with additional options including rail, barge, and deep-water delivery. **R** 



# **Opening Eyes to the World of Rendering**

This issue's column highlights the main World Renderers Organization (WRO) activities since the start of the year, a year in which the WRO leadership hopes will mark significant progress for the organization.

The key event for WRO in the first half of 2013 is its involvement with the 4th Global Feed and Food Congress (www.gffc2013.com) to be held in Sun City, South Africa, April 8-12. There will be a half-day WRO program to include a number of international speakers knowledgeable on the rendering industry and its end product usage in feed for pets, poultry, swine, and aquaculture. In designing the program, the WRO leadership tried to ensure as many aspects of the industry were covered by as wide a variety of people as possible from around the world. WRO is particularly pleased to include two speakers from Renderers RSA, the new and united trade association for the Republic of South Africa (RSA). It is hoped that in time, Renderers RSA will join WRO as its newest member.

That highlights a key point for WRO attending such an event: making contact with new countries and in particular, those from the developing countries that will attend such an event. Of course, thanks also go out to the other speakers in advance, including Martin Alm from the European Fat Processors and Renderers Association (EFPRA), Jeff Firman and Albert Tacon from the United States, and Tony Edwards from Australia. WRO President Dave Kaluzny II will give the keynote address and this author will attempt to keep everyone in good order and on schedule. All the speaker presentations will be made available on WRO's new website.

There are other aspects of the Global Feed and Food Congress worthy of note, including an opening address by the president of the International Feed Industry Federation, Mario Cutait from Brazil, and a welcome from the Honorable Tina Joemat-Pettersson, South African Minister of Agriculture, Forestry, and Fisheries. On day one, there is a global outlook panel discussion followed by sessions on animal production, feed manufacturing practices, and sustainability.

On day two, the WRO program is featured in the morning alongside sessions on technology, feed additives, and speciesspecific nutrition topics. On day three, there is a standalone workshop held by the International Dairy Federation in conjunction with sessions on feed and food safety and challenges facing South Africa.

Overall, the meeting will cover a wide range of topics, some of which may not appear to be directly relevant to WRO. However, the organization's delegates should be able to learn a lot from both listening to the presentations and interacting with attendees in breakouts. It's also possible to open delegates' eyes to the world of rendering! As silver sponsors of the congress, WRO will be able to distribute its new brochure to all who attend, so hopefully that increased awareness is the least of the benefits we will see from our participation.



Although by the time you read this it may be too late to consider attending yourself, a full report on the Global Feed and Food Congress will appear in the June issue of *Render* magazine.

As part of the WRO agenda to attract a wider membership and participation in 2013, the leadership confirmed a proposal to update the organization's website as a priority. This work has now been completed, and we are pleased to announce that the newly designed WRO website is now fully open for business. One of the big advantages of the new website is that it is fully compatible for use with tablets, smartphones, and other mobile devices. This will make www.worldrenderers.org much more accessible for all and hopefully encourage people to visit, learn, and consider joining WRO as a member.

The objective of the work has been to present a welcoming, fresh, and interesting website that can be maintained with input from members. As we all know, keeping a website updated and current is a most important aspect of presenting a good image. The new site will give WRO a great opportunity to exchange, link, and network with such valuable contacts as international trade associations and worldwide regulatory bodies. Importantly, the website will be able to host all presentations made by the leadership or members, such as from the Global Feed and Food Congress mentioned earlier. All interested parties, whether WRO members or not, are urged to have a look and send comments and ideas for future updates.

Last but not least, there are upcoming meetings where WRO business will be debated in dedicated sessions. In Europe, the EFPRA Congress (www.efpraprague2013.com) will be held in Prague, Czech Republic, June 12-15, 2013, and in Australia, the city of Melbourne will play host to the Australian Renderers Association Symposium (www.arasymposium.com. au) July 23-26. From all the promotional information coming up from "down under," those attending will be subjected to the prospect of some great hospitality from our Australian hosts (and no doubt, their New Zealand neighbors as well). In both Prague and Melbourne, WRO will hold interim meetings to progress the group's current strategy, then continue the development and refinement of the organization's program for further debate and decisions at the National Renderers Association convention in Naples, FL, in late October. R

# **EU Clears Use of Some Animal Proteins in Fish Feed**

The European Union (EU) has officially ended a long-standing ban on using certain processed animal proteins (PAPs) in fish feed with the validation and approval of the polymerase chain reaction, or PCR, test.

"This final step ensures the necessary controls are now in place for processed animal proteins to be utilized in feed for farmed fish," said Niels Leth Nielsen, president, European Fat Processors and Renderers Association. "We can now clearly demonstrate robust and effective traceability to ensure the safety and security of the feed chain."

Beginning June 1, 2013, PAPs derived from animal by-products that are fit for human consumption at the point of slaughter can be used in feed for farmed fish. Stringent controls including species-specific processing and species-of-origin testing will ensure that only poultry and porcine PAPs enter the feed chain. Ruminant PAPs remain prohibited. The use of PAPs in feed was banned in 1997 for cattle, and extended to all animals in 2001 in an effort to control the bovine spongiform encephalopathy (BSE) outbreak in Europe.

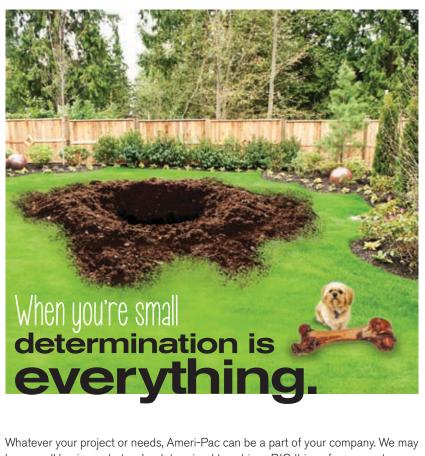
The European Commission has said the latest data shows that the EU is close to eradicating BSE in its cattle population while the latest scientific option indicates that "the risk of BSE transmission between non-ruminant animals is negligible provided that intraspecies recycling is prevented." In the absence of PAPs, farmed fish have been fed fish and soybean meals.

This latest measure is a first step as the commission, subject to specific analytical tests, intends to propose a further regulation to reintroduce the use of swine and poultry PAPs in poultry and pig feeds. However, the commission does not intend to propose the reauthorization of PAPs for ruminant animals or the re-use of PAPs from ruminants for feeding non-ruminant farmed animals.

Patrick Vanden Avenne, president of the European Feed Manufacturers' Federation (FEFAC), also welcomed the decision, saying, "This measure paves the way for our EU aquaculture producers to step up their efforts to encourage the sustainable development of EU aquaculture by creating a level playing field with seafood imports from third countries.

"EFSA [the European Food Safety Authority] has provided clear scientific evidence that non-ruminant PAPs produced in accordance with the high EU processing standards are safe," Avenne noted. According to FEFAC, farmed fish in the 27 EU member countries consume approximately 1.3 million metric tons of fish feed per year. Norway and Turkey produce another 1.6 million metric tons of fish feed annually.

Animal by-product processors and fish feed producers will adopt new traceability and testing procedures in order to meet the requirements of the legislation. With that in hand, EFPRA hopes PAPs could be included in the diets of farmed fish starting in June. **R** 



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# **ACREC Solutions**

# 30,000 Petri Dishes Later

The need for validated thermal processing parameters for rendering continues to grow with implementation of increasing food and feed regulatory actions. In food microbiology terminology, a thermal death rate curve is a graphical depiction showing how a microbial population declines over time when heat is applied. Using a measure of bacterial population on the y-axis and time on the x-axis, bacterial populations are plotted as points through time. As a result, a thermal death rate curve can be established. The "D-value" or decimal reduction time was defined by Banwart (1979) as "the time required to reduce the microbial population by 90 percent at a specified temperature." In other words, the D-value is the amount of time required to reduce a population of microorganisms by one log colony forming units per gram at a particular time in a particular matrix.

Thermal death time information for various pathogenic microorganisms has been established in thousands of products within the food industry. However, in the hundreds of thermal death time studies conducted over the past 100-plus years, food microbiologists have repeatedly proven that thermal death rate curves of microorganisms are dependent on three factors: (1) the temperature, (2) the organism, and (3) the product (matrix). For instance, in a study conducted by Juneja et al. (2001), the number of minutes required to reduce a Salmonella cocktail was impacted by the percentage of fat. In chicken held at 58 degrees Celsius (C), it took 7.38 minutes to kill one log of bacteria when the fat content was two percent but it took 7.33 minutes at 6.3 percent fat, 8.54 minutes at nine percent fat, and 9.04 minutes at 12 percent fat to kill the same one log of the bacteria. In turkey held at 58 degrees C, it took 7.50 minutes to kill one log of bacteria when the fat content was two percent but it took 7.71 minutes at 6.3 percent fat, 6.91 minutes at nine percent fat, and 7.41 minutes at 12 percent fat to kill the same one log of the bacteria. At different temperatures, with different microorganisms, and with different products containing different percentages of fat, moisture, and protein, the thermal death time is different and typically unpredictable. Therefore, the food industry has spent the past 100 years testing thermal death times for each combination of conditions in order to validate their thermal processing.

Clemson University Animal Co-Products Research and Education Center (ACREC) researchers have been working on experimentally developing thermal death time validation data for eventual inclusion in a table of values related to product, percentage fat, temperatures, and microorganism. Initial work was centered on developing new laboratory techniques when the researchers discovered that standard methodologies for enumeration of bacteria in rendering materials often did not work due to the high fat content of the products. After learning how to deal with these unique products, the researchers continued their studies on validating thermal death times for pathogens in rendered animal by-products.



Microbiologist Lissa Hayes examines a Petri dish in her study of the thermal death time validation of rendered animal by-products.

Melissa "Lissa" Hayes is conducting thermal death time studies on four of the eight pathogenic strains of Salmonella recognized by the Food and Drug Administration as dangerous for feed. Hayes is a PhD student in microbiology working in Dr. Annel K. Greene's laboratory at Clemson University on this ACREC-supported project. Using Salmonella choleraesuis, Salmonella Dublin, Salmonella enteriditis, and Salmonella Newport, Hayes is growing each culture individually and concentrating them to produce a final population of at least 10 million bacteria per gram in beef rendering materials adjusted to 50 percent fat content and in poultry rendering materials adjusted to 50 percent fat content. Adding the cultures after the rendering materials have reached a treatment temperature of 240 degrees Fahrenheit (F), Hayes is testing thermal treatment times of zero, 15, 30, 60, 90, 120, 180, 240, and 300 seconds. The chosen treatment temperature of 240 degrees F represents the low end of commercial rendering processing temperatures, and was selected as the starting temperature to begin the thermal death time studies in consultation with the rendering industry members of the ACREC Research Committee.

After thermal treatment of the samples and uninoculated controls, Hayes then conducts a series of tests to determine if each strain of *Salmonella* survived the heat treatment. Approximately 30,000 Petri dishes will be used to obtain the data for these four *Salmonella* at this one temperature in 50 percent fat beef and 50 percent fat poultry rendering materials. Initially scheduled for completion at the end of June 2013, the rendering industry asked Hayes to fast-track the project for earlier completion and she is doing so. She has completed the thermal death time analysis at 240 degrees F on *Salmonella* choleraesuis, *Salmonella* Dublin, *Salmonella* enteriditis, and *Salmonella* Newport in 50 percent fat beef at treatment times of zero, 15, 30, 60, 90, 120, 180,

240, and 300 seconds. Data indicates some variability in Salmonella thermal destruction and there appears to be heat resistant background organisms present. However, at 240 degrees F for Salmonella enteriditis, the last positive sample appeared at 180 seconds and it was destroyed afterwards. For Salmonella Newport and Salmonella Dublin under the same conditions, the last positive sample appeared at 240 seconds and each was destroyed afterwards. For Salmonella choleraesuis, the last positive appeared at 240 seconds on only one day of experimentation; on the other three days of the experiment, the bacteria were destroyed at zero seconds. Beef fat is harder than poultry fat so it will be interesting to see if type of fat has an impact on thermal death of these pathogenic Salmonella. As of early March, Hayes had completed approximately one-third of the poultry project.

Upon completion and preparation and counting of 30,000-plus Petri dishes, Hayes will have eight data points for inclusion in a table of thermal death time values that would show destruction of Salmonella choleraesuis. Salmonella Dublin, Salmonella enteriditis, and Salmonella Newport in 50 percent fat beef and 50 percent fat poultry at 240 degrees F. Further studies will be conducted at the direction of the ACREC Research Committee members whether to move the temperature up and keep the fat percentages the same, or change the fat percentages and continue testing at 240 degrees F. The eventual goal of the researchers is to develop a table where renderers can look up their tissue type (poultry, beef, pork, mixtures), percentage of fat, and processing temperature and find the minimum amount of time required to kill a particular pathogen (each of the pathogenic Salmonella and eventually *Clostridium perfringens*). This is very time-consuming and expensive work to conduct but the results will be a document of great value for validation of processing conditions within each rendering processing plant.

Hayes, the young woman from Camden, SC, who loves the color pink, is a dedicated and extraordinary student of microbiology. She is rapidly becoming one of the world's leaders in rendering microbiology. Hayes is scheduled to graduate with her PhD in microbiology later this year and we hope to secure funding to hire her as a post-doctoral candidate to continue her work on the thermal death time studies for the rendering industry. **R** 

### References:

Banwart, G.J. 1979. *Basic Food Microbiology*. The AVI Publishing Company, Inc. Westport, CT.

Juneja, V.K., B.S. Eblen, and H.M. Marks. 2001. "Modeling non-linear survival curves to calculate thermal inactivation of Salmonella in poultry of different fat levels." International Journal of Food Microbiology 70: 37–51.

# NRA Moves Offices

The National Renderers Association has moved its offices just down the street from its prior location. The new address effective immediately is 500 Montgomery Street, Suite 310, Alexandria, VA 22314. Phone and fax numbers remain the same at (703) 683-0155 and (703) 683-2626, respectively.

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# Tech Topics

# **Nutrient Water Quality Standards**

Nearly all production operations that process animal by-products generate wastewater that contains significant concentrations of nitrogen and phosphorus. Rendering plants generate wastewater that has nitrogen concentrations that are more than 30 times the levels in typical municipal sewage. Wastewater treatment for removal of nitrogen and phosphorus to extremely low amounts can be very expensive.

Water quality standards are developed by states for protection of streams and lakes. These standards define the allowable concentrations of contaminants in streams that are required for the protection of aquatic life and other stream uses such as recreation and drinking water supply. Water quality standards are used in the derivation of discharge permit limits for wastewater treatment facilities with many states developing total nitrogen and phosphorus standards that will significantly impact the rendering industry. It is important that renderers take an active role in the development and review of nutrient standards at the state level to ensure practical and economically achievable rules are developed.

Nitrogen and phosphorus are essential nutrients for life. However, discharges of excessive nitrogen and phosphorus to lakes and streams stimulate algae growth and subsequent secondary effects on water quality such as low dissolved oxygen. This nutrient-induced water quality condition is termed "eutrophic" and can impact both aquatic life and recreational uses. in quantities which would produce undesirable or nuisance aquatic life." States must develop lists of waters that do not meet water quality standards, which are then classified as "impaired waters." Since most states have not adopted numeric water quality standards for nitrogen and phosphorus concentrations, waters with excessive algal growth attributed to nitrogen and phosphorus have been classified as impaired due to failure to meet narrative water quality standards.

The total maximum daily load (TMDL) process is a Clean Water Act requirement for waters that are impaired. The process identifies the maximum amount of a pollutant that can be discharged from all sources to a stream or lake and still meet water quality standards. The allowable amount of pollutant discharge from each source (discharge permit limits for wastewater treatment plants) is then determined as the maximum watershed load and is allocated to each discharge source. Discharge sources include point sources such as treatment facility discharges and nonpoint sources such as stormwater runoff and tile drainage from agricultural land. In many agricultural areas, most of the nitrogen and phosphorus loads are attributed to nonpoint sources rather than wastewater treatment facility discharges.

### **Chesapeake Bay**

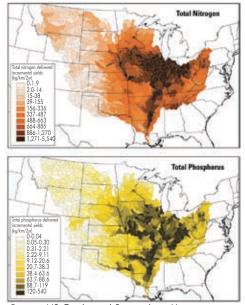
Chesapeake Bay is perhaps the most notorious recent example of nutrient pollution and subsequent regulatory action followed by extensive litigation. Most of the bay was listed as impaired due to excess nitrogen, phosphorus,

# Clean Water Act and Nutrient Regulation

The Great Lakes were the first bodies of water to raise significant national attention to the impacts of excess nutrients. Lake Erie was declared "dead" in the 1960s when algal blooms resulted in oxygen depletion that killed fish and coated beaches with slimy, odorous algal biomass. The Great Lakes Water Quality Agreement in 1972 resulted in a significant reduction in phosphorus discharge to the Great Lakes and a tremendous successful recovery of their aquatic life and water quality.

The United States (US) Clean Water Act (CWA) requires all waters to be "fishable" and "swimmable" and comply with state water quality standards for pollutant concentrations and "narrative" criteria such as "free from aesthetically objectionable conditions" and "free from substances

# Figure 1. Nitrogen and phosphorous loads to the Mississippi River Basin.



Source: US Geological Survey, http://wi.water. usgs.gov/ma/9km30/index.html.

and sediment that attributed to the declines in blue crab, waterfowl, and fish populations. The US Environmental Protection Agency (EPA) issued the final Chesapeake Bay TMDL in late 2010 in response to President Barack Obama's 2009 executive order that directed the federal government to lead the effort to restore and protect the Chesapeake Bay watershed. This is the largest and most complex TMDL in the United States as it covers a 64,000 square mile watershed in six states and the District of Columbia. The TMDL allocated nitrogen and phosphorus loads to each major river basin and to point and nonpoint sources. Each state or jurisdiction is responsible for developing watershed improvement plans (WIPs) that include allocations of the nitrogen and phosphorus total basin allowable load to each source.

EPA continues to maintain close surveillance of the WIP

implementation process to ensure the nitrogen, phosphorus, and sediment loads are reduced. The agency plans to take more aggressive steps in reducing nutrient loads if required, including significantly more stringent discharge limits on wastewater treatment plants and more aggressive regulation of agricultural operations, if the target nutrient load reductions are not achieved.

Agricultural groups including the American Farm Bureau and several commodity and producer groups filed a lawsuit that challenges the Chesapeake Bay TMDL. The lack of federal authority to issue and implement a TMDL unless a state fails to act is one of the most significant legal issues in this case. The reliance by EPA on inaccurate information to establish the TMDL is one of the most significant technical issues. Point source discharge groups and environmental coalitions have intervened in the lawsuits. The most fundamental issue with these groups is how to equitably spread the burden of improving water quality between heavily regulated point sources and relatively unregulated agricultural nonpoint sources. Hundreds of millions of dollars have been and continue to be spent on legal battles and environmental studies regarding the Chesapeake Bay nutrient issues.

More information on the Chesapeake Bay TMDL is available at www.epa.gov/reg3wapd/tmdl/ ChesapeakeBay/tmdlexec.html.

### Florida

Florida was in the process of implementing an EPA approved plan for nutrient criteria in 2008 when several environmental groups sued EPA to force immediate development of numeric nutrient standards. They successfully argued that the Florida narrative standards were not adequate for protection of aquatic life and recreational uses. The courts forced EPA to establish stringent numeric nitrogen and phosphorus water quality standards for Florida. The agency later approved some of the standards that were developed by the state. Several lawsuits were filed in response to EPA's actions alleging the standards

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### Tech Topics Continued from page 63

are not scientifically sound. Florida is an example of how legal actions can force adoption of stringent, technically questionable nitrogen and phosphorus standards even though the state is actively implementing an EPA approved nutrient control plan.

# EPA Nutrient Reduction Framework Memo

Very few states have adopted numeric nutrient and phosphorus criteria. Based on the Florida experience, EPA indicated it does not want to set state nutrient standards, instead each state should develop its own standards.

In March 2011, EPA Acting Assistant Administrator Nancy Stoner issued a memo, Working in Partnership with States to Address Phosphorus and Nitrogen Pollution Through Use of a Framework for State Nutrient Reductions, which set forth an eightpoint approach for states to reduce nutrient loads.

- 1. Prioritize watersheds.
- 2. Set watershed goals.

3. Ensure effectiveness of point source permits.

4. Develop watershed plans that target the most effective practices in agricultural areas in highest priority watersheds. 5. Identify tools to reduce nutrient discharges from communities not covered by Municipal Separate Storm Sewers Systems programs (storm water and septic systems discharges).

6. Verify and quantify implementation of best management practices and achieving load reductions in targeted watersheds.

7. Publish an annual report of progress in reducing nutrient loads from targeted watersheds.

8. Develop work plan and schedule for numeric criteria (water quality standards) development.

This "Stoner framework memo" has become a standard guideline used by many states in developing nutrient standards and nutrient reduction programs.

### **Gulf of Mexico Hypoxia Zone**

Nitrogen and phosphorous loads to the Mississippi River basin have been identified as the most significant factor in the dead zone, or "hypoxia zone," in the northern Gulf of Mexico. Hypoxia refers to the condition of low dissolved oxygen. Excessive algal growth results in decreased dissolved oxygen in the lower levels of the water column. Freeswimming aquatic organisms leave the hypoxia zone and other organisms die. Fish and shrimp are less abundant in the Gulf hypoxia zone. The 2008 Hypoxia Action Plan established a goal



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of 45 percent reduction in nitrogen and phosphorus loads from the Mississippi River. Figure 1 illustrates the significant nitrogen and phosphorus loads from the Midwestern Corn Belt agricultural states of Iowa, Illinois, Indiana, and Ohio.

In March 2012, a broad coalition of environmental advocacy groups filed a lawsuit against EPA in US District Court for the Eastern District of Louisiana that demands EPA force states in the Mississippi River Basin to adopt stringent numeric nitrogen and phosphorus water quality standards. The suit also demands that EPA prepare a TMDL for the entire Mississippi basin. On the same day, the Natural Resources Defense Council filed a separate lawsuit in the US District for the Southern District of New York that demanded EPA revise the definition of secondary wastewater treatment technology for municipal plants to include nitrogen and phosphorus discharge limits. These minimum "technology-based limits" would be applicable to all municipal wastewater treatment facilities in the United States. These two lawsuits could have very significant impacts on the rendering industry in the Midwest and throughout the country.

### **EPA Nutrient Criteria**

In 1998, EPA developed guidelines for nitrogen and phosphorus water standards that included quality recommendations for 14 "nutrient ecoregion" numeric criteria. These recommendations have received significant criticism from the scientific community due to a lack of scientific evidence correlating excessive algal growth and other negative impacts with specific nitrogen and phosphorus concentrations. Based on the EPA criteria, more than 50 percent of the streams in the United States would exceed the phosphorus criteria and be classified as impaired.

Adoption of these stringent EPA numeric criteria as state water quality standards would result in discharge limits for facilities on small streams that would not be technically or economically achievable. For example, the 1998 EPA criteria for the upper Midwest region are 2.18 milligrams per liter (mg/L) total nitrogen and 0.076 mg/L total phosphorus. The limits of

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biological nutrient removal treatment technology are 3.0 mg/L total nitrogen and 0.10 mg/L total phosphorus. Dischargers to small streams would have extremely stringent limits with values nearly the same as the EPA criteria. Table 1 is a summary of the EPA criteria and four tiers of nutrient removal technology for municipal wastewater treatment facilities. As illustrated, the EPA ecoregion criteria are more rigorous than the limits of technology. Therefore, several states are opting to use the narrative criteria approach rather than the "one size fits all" numeric standard approach. The narrative approach relies on observed stream water aquatic life quality and other indicators of nutrient induced stresses in evaluation of acceptable nitrogen and phosphorus loads.

### **Iowa Nutrient Reduction Strategy**

lowa released the draft lowa Nutrient Reduction Strategy for public comment in November 2012, a coordinated plan for assessing and reducing nitrogen and phosphorus discharges to Iowa streams and lakes from point and nonpoint sources. There are two significant overall objectives:

1. Reduce Iowa's nitrogen and phosphorus loads to the Gulf of Mexico by at least 45 percent (as per the Gulf Hypoxia Task Force); and

2. Improve and protect lowa's waters with respect to nutrient impacts.

The strategy was developed by a cooperative effort of the Iowa Department of Agriculture and Land Stewardship, the Iowa Department of Natural Resources (DNR), and a team of nonpoint source experts from Iowa State University, the US Department of Agriculture, and EPA with significant input from point and nonpoint source stakeholders. The strategy follows the March 16, 2011, Stoner framework memo for state nutrient reduction programs. It was developed in response to the Gulf Hypoxia Task Force goal of at least 45 percent reduction in nitrogen and phosphorus loads to the Gulf of Mexico and the EPA requirements for development of nutrient water quality standards for protection of Iowa's streams and lakes.

Very detailed evaluations of management practices and edge of field treatment alternatives for reducing nutrient discharges from nonpoint sources are included in the strategy. The evaluation contains capital and operation cost estimates, including costs per pound of nitrogen and phosphorus reduction for each nonpoint source reduction alternative. This is probably the most comprehensive evaluation of nonpoint source alternatives to date in the United States. This information will be used in developing nonpoint source

policy and incentive programs for nonpoint source nutrient reduction.

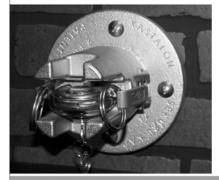
The strategy is based on the State of Kansas approach to nitrogen and phosphorus standards. The concept was actively promoted to the Iowa DNR by point source discharger groups, including the Iowa Water Environment Association.

The strategy takes the following

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### Tech Topics Continued from page 65

general pragmatic and coordinated approach to nutrient reduction and nutrient water quality standards.

1. Reduce nutrient loads from point and nonpoint sources now.

2. Evaluate stream and lake water quality based on nutrient stressor-response analysis (dissolved oxygen, chlorophyll A, and biological assemblage indicators such as algae, invertebrates, and fish).

3. Continue to reduce nutrient loads as required to achieve water quality goals (adaptive watershed management approach).

4. Evaluate the need for numeric nitrogen and phosphorus water quality standards as part of the DNR triennial water quality standards review process and implement appropriate standards long-term on a site-specific basis

Level of treatment technology

1 – Biological nutrient removal (BNR)

3 – Limits of BNR technology

EPA ecoregion criteria

Typical municipal sewage

2 – Enhanced BNR with chemical treatment

4 – Limits of technology (membrane processes)

Point sources contribute an estimated eight percent of the total nitrogen load and 20 percent of the total phosphorus load on Iowa's streams and lakes. These relative contributions from point and nonpoint sources are typical of many agricultural economy-based states. Even though point sources have a relatively low impact on the nutrient load to the Gulf of Mexico as compared with nonpoint sources, point sources can have significant impacts on nutrient concentrations and water quality in small streams during low flow conditions.

The point source approach is based on reduction in total nitrogen and total phosphorus discharges from major municipal and industrial wastewater treatment facilities using technology-based total nitrogen and total phosphorus discharge limits. This approach is an alternative to the

**Total phosphorus** 

1.00

0.20

0.10

0.02

0.07

7.00

numeric stream water quality standard approaches that have been forced on some states by litigation and EPA. The strategy requires installation of nutrient removal at 102 major municipal treatment facilities (facilities greater than one million gallons per day average wet weather design capacity) and 28 major industrial treatment facilities where nutrient removal is economically and technically feasible. Schedules for construction of plant improvements will be negotiated and the schedules will consider affordability.

Industrial wastewater treatment facilities that are subject to EPA categorical industry technologybased total nitrogen and phosphorus discharge limits will continue to have limits equal to EPA categorical industry limits. For example, meat packing and rendering facilities with direct discharge treatment facilities will have total nitrogen limits that are equal to the technology-based EPA Effluent Limitations Guidelines and New Source **PerformanceStandardsfortheMeatand** Poultry Products Point Source Category (40 Code of Federal Regulations, Part 432), or 134 mg/L monthly average total nitrogen concentration. Currently there are no total phosphorus effluent limitation guidelines for meatpacking and rendering facilities. The nitrogen and phosphorus discharge limits will

Table 1. Effluent concentrations (mg/L) achievable with various levels of treatment technology

Total nitrogen

10.00

6.00

3.00

2.00

3.00

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not be more stringent for 10 years after completion of plant improvements for nutrient removal.

The implementation of nutrient removal at the major treatment plants has the potential for four percent reduction in nitrogen and 16 percent reduction in phosphorus loads from the current total point and nonpoint source annual loads.

The draft Iowa Nutrient Reduction Strategy is designed to achieve a near-term significant reduction in nutrient loads without establishing overly stringent numeric stream water quality standards. It results in efficient expenditure of limited resources in attaining the maximum environmental benefits per dollar invested. The strategy for point sources has received favorable review comments from EPA Region VII and EPA headquarters staff. The draft strategy received favorable review comments from many industrial and trade association groups including the National Renderers Association, American Meat Institute, and Iowa Association of Business and Industry. Midwestern states Some other are considering adopting nutrient reduction programs similar to the Iowa approach.

The draft Iowa Nutrient Reduction Strategy is available at www. nutrientstrategy.iastate.edu.

### Summary

The implementation of nitrogen and phosphorus water quality standards will have significant impacts on the rendering industry. Legal actions have forced the adoption of stringent numeric water quality standards in some states that may not be economically or technically achievable with conventional wastewater treatment technology.

Alternative approaches to numeric water quality standards are being developed at the state level. These alternative methods, such as the lowa Nutrient Reduction Strategy and the Kansas approach, include flexible technology-based discharge limits that result in the most efficient capital investment per pound on nitrogen and phosphorus reduction. Significant reductions in point source nutrient loads are realized now with investment in treatment facility modifications rather than wasting money on litigation regarding appropriate numeric standards. Appropriate numeric stream water quality standards are developed on a site-specific basis over a period of several years, rather than adopting the EPA "one size fits all" ecoregion numeric standards.

Although these nutrient water quality decisions are being made at the state level, there is significant national attention and pressure from environmental groups to expedite the implementation of nutrient standards. The March 2012 lawsuits may force EPA to take action regarding nutrient standards in the Mississippi River basin and require technology-based nitrogen and phosphorus discharge limits for all wastewater treatment facilities throughout the United States.

It is important that impacted stakeholders, including firms and trade organizations in the protein processing industries such as the meatpacking, poultry, and rendering industries, take an active role in the development of nutrient standards and nutrient reduction policies at the state level. If states do not take action, they are at risk of legal actions that may result in excessively stringent numeric nitrogen and phosphorus standards that result in unachievable nitrogen and phosphorus discharge limits. **R** 

Greg Sindt is a senior principal engineer at Bolton & Menk, Inc. Consulting Engineers in Ames, IA, and an associate member of the National Renderers Association. He was a stakeholder who provided significant input to the development of the Iowa Nutrient Reduction Strategy.

Sindt can be contacted at gregsi@ bolton-menk.com.



## **DUBOIS CHEMICALS:** PROVIDING ADVANCED CLEANING PRODUCTS, APPLICATION METHODS, SUPPORT AND TRAINING WORLDWIDE.



# **OSHA Trumps ADA in Drug and Alcohol Testing**

Editor's note – Mark A. Lies II is a labor and employment law attorney and partner with the Chicago, IL, law firm of Seyfarth Shaw, LLP. He specializes in occupational safety and health law as well as related personal injury and employment law litigation. Legal topics provide general information, not specific legal advice. Individual circumstances may limit or modify this information.

As most employers are aware, employee impairment at the workplace due to drug and alcohol use is a chronic problem. By some studies conducted of workplace accidents, 20 percent or more of employees at the typical workplace are impaired due to drug and alcohol usage on any given day. Post accident drug and alcohol tests confirm the significant number of fatalities and serious injuries that have been caused by such impairment. A recent federal court decision, *Equal Employment Opportunity Commission (EEOC) v. United States (US) Steel Corporation, et al.*, Civil Action No. 10-1284 (February 20, 2013), gives employers added support for random drug and alcohol testing to combat these safety risks.

The case involved a US Steel facility in Clairton, PA, which had established a random drug and alcohol testing program for its probationary employees at its coke production plant. The company's goal was a "drug- and alcohol-free workplace." A probationary employee was selected for a random breath alcohol test that indicated the presence of alcohol. The employee claimed the positive test result was attributable to her diabetic condition. She was terminated and filed a charge with the EEOC claiming discrimination under the Americans with Disabilities Act



(ADA). The EEOC brought a court action against the company claiming that the random alcohol test violated the ADA.

The ADA does not permit employers to conduct medical examinations of employees once the employee has commenced employment, unless the employer can establish that the medical examination is "job related and consistent with business necessity." The EEOC claimed that the company had not met its burden to permit such testing.

The court disagreed and found that the company had proved that the coke plant was an extremely dangerous workplace given the nature of the equipment, molten coke, and the various employee job duties in the vicinity of the operation.

The court also recognized that the drug and alcohol testing was related to legitimate safety concerns, including the obligation under the Occupational Safety and Health Administration's (OSHA's) General Duty Clause, to protect employees against hazards to their safety and health. The court held "there is no question that maintaining workplace safety is a legitimate and vital business necessity."

After an extensive analysis, the court granted the company's motion for summary judgment dismissing the lawsuit.

### Conclusion

This decision is meaningful as it provides strong support for employer efforts to maintain workplace safety by eliminating injuries due to drug and alcohol impairment. Employers should consider the efficacy of such programs as a means of reducing such injuries and a means to prove to OSHA that they are taking all reasonable means to eliminate accidents caused by such impairment.

There is one important caveat regarding such programs. Where this decision relates to federal law, employers must also determine whether there are any state law restrictions on such programs and tailor those programs to comply accordingly. **R** 

# Letters

# <u>Mark Your Calend<mark>ar</mark></u>

### Dear Editor,

Great industry magazine with super possible sales contacts. Nice news stories. Thanks!

Mary Hukill Empowermidwest Evansville, IN

### Dear Editor,

Thank you so much for sending *Render* to me for so many years. I look forward to reading it and the updates on what is happening. I was at the PCRA [Pacific Coast Renderers Association] meeting when we voted to okay the publication. Frank Burnham was elated. I have a large box full of *Render* magazines since the onset. I am looking forward to more. I turned 90 on January 3, 2013.

You are really appreciated! Gil Metzler (formerly with Royal Tallow and Soap) Philomath, OR

# **Correction**

It was reported in "New Grease Theft Law in North Carolina" on page 12 of the February 2013 issue of *Render* that starting January 1, 2013, anyone collecting and hauling used restaurant grease in North Carolina will have to carry liability insurance of \$1 million. It has been brought to our attention that the insurance requirement was removed from the bill prior to the legislation being approved. *Render* apologizes for any inconvenience this error has caused.



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### **Petfood Forum and Workshop**

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**California Grain and Feed Association Annual Convention** April 24-27, Huntington Beach, CA • www.cgfa.org

American Oil Chemists' Society 104th Annual Meeting and Expo April 28-May 1, Montreal, QB, Canada • http://annualmeeting.aocs.org

### National Renderers Association and Fats and Proteins Research Foundation Spring Meetings

April 30-May 2, Chicago, IL • http://nationalrenderers.org

### June

World Pork Expo

June 5-7, Des Moines, IA • www.worldpork.org

National Renderers Association Central Region Annual Meeting June 12-14, La Crosse, WI • E-mail dhildebrandt@centralbi.com

**European Fat Processors and Renderers Association Congress** June 12-15, Prague, Czech Republic • www.efpraprague2013.com

### July

Australian Renderers Association 12th International Symposium July 23-26, Melbourne, Australia • www.arasymposium.com.au

Log on to http://rendermagazine.com for a complete listing of industry meetings.



# **Bagwell Donates to Poultry Endowment, Inducted into Hall of Fame**



Elton Maddox (right) accepts the donation from Chantal and Tommy Bagwell.

The USPOULTRY Foundation accepted a \$1 million gift from Tommy and Chantal Bagwell to endow the Leland Bagwell Education and Innovation Fund. The fund is in memory of Leland Bagwell, founder of American Proteins and past chairman of the Southeastern Poultry and Egg Association (now United States Poultry and Egg Association), and recognizes the many contributions the former vocational agriculture teacher and

visionary leader made to the poultry industry. The \$1 million gift will offer young people the opportunity to be a part of the poultry industry with a focus on innovation, education, and providing opportunities to lower-income students.

"My wife and I decided to focus most of our philanthropy on education issues so as to provide an opportunity for students," remarked Tommy Bagwell, chairman and chief executive officer, American Proteins. "We established our own family foundation for this purpose. We normally do not give to endowments; however, we made an exception for the Harold E. Ford Foundation. The first reason concerns Harold Ford and my father, Leland Bagwell, and their friendship. The second, the poultry industry is where our family has made its living. Finally, we could not think of a better steward of these funds than people from the poultry industry."

"We are honored and grateful to receive this \$1 million gift," said Elton Maddox, treasurer, USPOULTRY Foundation. "The endowment will help support the US Poultry and Egg Harold E. Ford Foundation's mission of continuing to attract young leaders to our industry, as well as fund research that will ensure the poultry and egg industry's sustainability and prosperity in the future."

Shortly after the donation, Tommy Bagwell was inducted into the Northeast Georgia Business Hall of Fame for his well-known involvement in the economic and civic development of northeast Georgia, as well as the entire state. He was recently appointed to the Georgia Governor's Energy Policy Council, is an active member of the Republican Governors Association, and is involved in many local organizations, such as the Northeast Georgia Council of the Boy Scouts, the Forsyth Rotary Club, and the Kennesaw State University Board of Trustees.

# Haarslev to Build Italian Rendering Plant

The Danish company Haarslev Industries has secured an order for a new greenfield rendering plant in Italy for the Amadori Group. The facility will be built near the company's headquarter in Cesena, Italy.



The plant will consist of two continuous rendering lines: one line for meat byproducts and one for processing feather. The lines will be built utilizing the latest technology in process control and energy conservation. Plant installation and startup will take place during second quarter of 2013.

Founded 40 years ago in San Vittore di Cesena, Amadori is one of the leading companies in the Italian agro-food sector with sales in 2011 of over 1.2 billion euros (\$1.5 billion USD). The company relies on collaboration with over 7,000 workers and has industrial plants, subsidiaries, and branches all over Italy.

# NCBA Votes Officers

Scott George, a dairy and beef producer from Cody, WY, was elected president of the National Cattlemen's Beef Association (NCBA) in early February. Others elected include Bob McCan, Victoria, TX, as president elect, and Don Pemberton, Hopkinsville, KY, as the association's vice president.

# Fines for Waste Oil **Sludge Discharge**

Green Diesel Canada, Ltd., of Hamilton, ON, Canada, was fined \$120,000 for discharging waste oil sludge into a municipal ditch in the City of Hamilton, impairing the ditch and the downstream receiving waters. The company has approval from the Ministry of the Environment to transport waste cooking oil and processes this oil for sale, generating an oil sludge that must be properly managed and disposed of.

The ministry responded to reports of oil being dumped to a ditch on Swayze Road in Hamilton and a truck registered to Green Diesel Canada was later found to have been in the area. Thousands of liters of a greasy oily substance were found in the ditch that was cleaned up by the City of Hamilton. The ditch flowed to Sinkhole Creek, a tributary of Twenty Mile Creek that flows into Lake Ontario.

About two months later, a City of Hamilton employee noticed a tanker truck stopped at the same turnaround on Swayze Road and upon checking the site found thousands of liters of waste oil sludge in the ditch. The tanker truck was registered to Green Diesel Canada. The site was cleaned up again by the City of Hamilton.

The company was fined a total of \$120,000, plus victim fine surcharges of \$30,000, and was given 12 months to pay. In addition, the court issued a restitution order requiring Green Diesel Canada to immediately pay the City of Hamilton \$25,371.11 for the clean-up costs of the two spills.

# Long-time SRC Member Passes

Alfred Franzoia Sr., a long-time member of the Sacramento Rendering Company (SRC) family, passed away in February at the age of 91.

Back in the early 1900s, Franzoia's father, Sabino, co-founded what was then called Sacramento Reduction and Tallow Works. Alfred eventually obtained ownership from his father and continued to work at the company in collection and processing, even after selling to the Koewler family when it was renamed Sacramento Rendering. He dedicated over 55 years to the company until his retirement.

Franzoia was one of the early members of the Pacific Coast Renderers Association and an avid golfer, winning the association's golf tournament numerous times. He is survived by his wife, Denise, six children, and 16 grandchildren.

# Poultry Association Elects Officers

James Adams, president and chief executive officer of Wenger Feeds, was elected chairman of the board of directors of the United States Poultry and Egg Association during the group's annual International Poultry Expo in Atlanta, GA.

Adams received his bachelor of science in poultry technology and management and a master's in business administration, both from Penn State University. He joined Wenger Feeds in 1980 and held a variety of responsibilities in egg production, feed manufacturing, transportation, purchasing, and sales and marketing. Adams has served on the association's board of directors since 2002.

Other officers elected were Elton Maddox, Wayne Farms, as vice chairman; Sherman Miller, Cal-Maine Foods, as treasurer; and Paul Hill, West Liberty Foods, as secretary. Mark Waller, Ingram Farms, became immediate past chairman.

### **New Process Line for Australian Renderer**

A.J. Bush & Sons (Manufacturers) Pty Ltd., the largest independent service renderer in Australia, recently put into full production a new continuous high temperature rendering process at its New South Wales processing plant. This new process line was designed, supplied, installed, and recently commissioned by Keith Engineering (Australia) Pty Ltd.

A.J. Bush and Keith Engineering have a long history in rendering dating



back to the 1960s. Originally established in 1956 by Jack Keith, Keith Engineering pioneered the continuous high temperature rendering process in the early 1960s in conjunction with the Jerome Brothers of Baker Commodities in the United States. The process was further enhanced by the association formed in 1963 with Jack Dupps of The Dupps Company, also in the United States. A.J. Bush was among the first to use this technology in Australia. Many years later and after using many varied processes over the years, including low temperature (or wet rendering) in the 1990s and more recently the "hybrid" low temperature/high temperature combined process, A.J. Bush has returned to the trusted and durable latest evolution of the Keith continuous high temperature process in this new 20 metric ton per hour prime production line.

The plant can process up to 20,000 kilograms (44,000 pounds) of mixed raw material per hour and is housed in a purpose-built building occupying a restrictive parcel of land without compromising maintenance access or operator movements. The latest technology metal detection systems and electronic control package with recorded data access was incorporated to facilitate low operator levels and improved process management.

The continuous high temperature rendering process and satellite tube cooker design was preferred by A.J. Bush due to their vast hands-on experience with the various process methods currently available today. Process footprint, energy efficiency, odor profile, as well as product yield and quality led the renderer to the Keith high temperature process.

Through their longstanding 40-plus year association with The Dupps Company, Keith Engineering was able to offer the best possible options regarding sizing and the performance required for raw material reduction, cooking, and pressing equipment. The plant consists of a Dupps Precrushor, 260U Super Cooker, 12-10-4 Expellor Pressors, and a Keith fixed hammer Supermill. The process layout and respective material handling systems from raw material receiving bins through metal detection, screw conveyors, pumps, pipelines, odor control, and building ventilation were all part of the Keith Engineering scope of supply, as was the design supply, installation, and commissioning of the electronic programmable logic controller and data acquisition package.

To maximize the natural contours of the site and reduce building requirements, the live bottom raw material receiving bin was designed with a hydraulically operated lid. Cake bins were fitted with breathable membrane covers allowing heat and vapors to escape and dust to be contained.

A first for the Keith process was the installation of a bottom cooker discharge control screw, quite unconventional in that the discharge control screw actually holds back the discharge of the flooded cooker, as opposed to drawing material from the cooker as is the case with other bottom discharge systems. As such, tallow and solids can be control discharged from the cooker, having the same consistency as the material within the cooker, offering superior and consistent temperature control.

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# **Industry Websites**

American Fats and Oils Association www.americanfatsandoilsassociation.com
American Feed Industry Association www.afia.org
American Meat Institute
Animal and Plant Health Inspection Services www.aphis.usda.gov
Animal Agriculture Alliance www.animalagalliance.org
Animal Protein Producers Industrywww.nationalrenderers.org/biosecurity-appi
Association of American Feed Control Officials
Australian Renderers Association
Canadian Renewable Fuels Association
European Fat Processors and Renderers Associationwww.efpra.eu
Fats and Proteins Research Foundationwww.fprf.org
Food and Drug Administration (FDA)www.fda.gov
FDA Animal and Veterinary www.fda.gov/animalveterinary
National Biodiesel Boardwww.biodiesel.org
National Cattlemen's Beef Associationwww.beefusa.org
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National Pork Producers Council www.nppc.org
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National Renewable Energy Laboratory
Occupational Safety and Health Administration
Pet Food Institutewww.petfoodinstitute.org
Processed Animal Proteinswww.papinfo.eu
U.S. Animal Health Association www.usaha.org
U.S. Department of Agriculture (USDA) www.usda.gov
USDA Food Safety and Inspection Service
USDA Foreign Agricultural Service www.fas.usda.gov
U.S. Poultry and Egg Association www.poultryegg.org
United Kingdom Renderers Associationwww.ukra.co.uk
World Renderers Organization www.worldrenderers.org

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