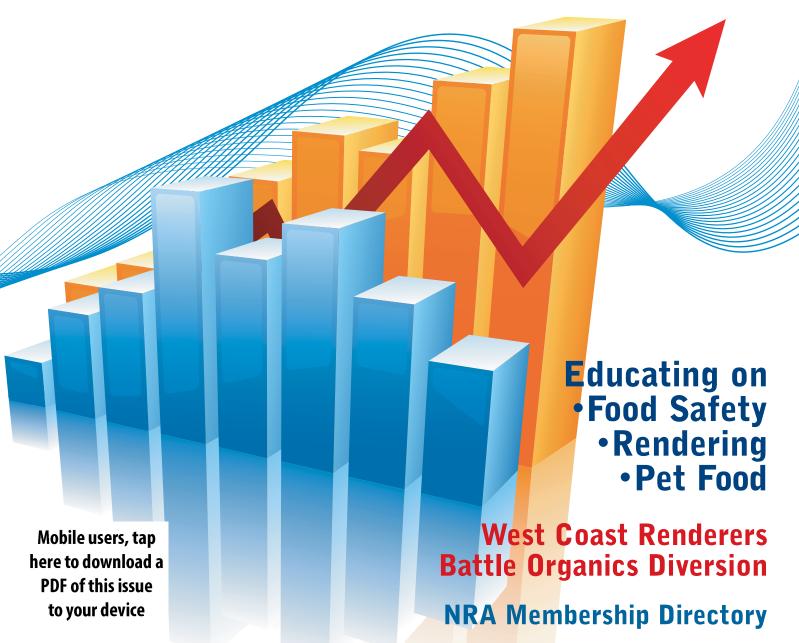
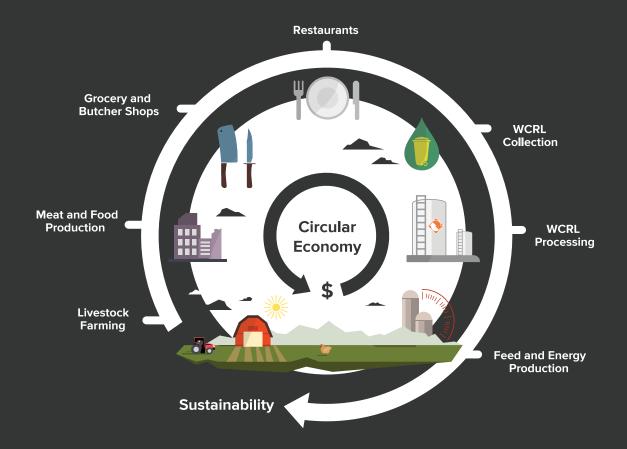


US Market Report

Fat usage up but protein demand down





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Renewable fuels drove up fat usage in the United States last year while export markets took more animal proteins. **p. 10**

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Editorial Offices

1621 Glen Dr.
Placerville, CA 95667
Phone: (530) 306-6792
editors@rendermagazine.com
www.rendermagazine.com

Editor and Publisher Tina Caparella Associate Editor Lindsay O'Connor

Magazine Production Sierra Publishing

Contact the National Renderers Association at 500 Montgomery St., Ste. 310, Alexandria, VA 22314 (703) 683-0155 Fax (571) 970-2279 renderers@nationalrenderers.com www.nationalrenderers.org

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Rendertorial

Only four months into 2018 and this year is already shaping up to be a busy and challenging one for renderers.

For the 38th year, this issue of Render features the annual market report on the state of the United States (US) rendering industry. Kent Swisher, National Renderers Association, has done a superb job sorting out the whats and whys of US animal proteins and fats in 2017. While raw material supplies appear to be growing and fats continue to find a home in biofuels production, proteins are suffering from a vegetarian trend among poultry producers. Existing and new markets both domestically and abroad are critical to ensure these nutritional products remain a viable ingredient in a growing global feed industry.

In California and Canada, renderers are closely monitoring regulatory movement targeting the diversion of organics from landfills, including meat products they already collect. California renderers are pleased to now have a champion in their corner at the state agriculture department to ensure other agencies are educated about rendering's long-standing role in collecting meat byproducts. Several recent meetings show how renderers can no longer remain invisible and must inform regulators about the valuable service they provide to animal and human health.

Another group facing challenges as well as opportunities that affect renderers is biofuel producers. Although expired federal tax credits were recently reinstated, legislation only covers last year, making it difficult for the biodiesel and renewable diesel industries to plan for 2018 and beyond. On the bright side, California's embracement of these alternative fuels is driving the market and providing a golden opportunity for further usage of animal fats and used cooking oil in biofuels.

Finally, renderers across the United States are keeping their eyes on Washington, DC, as North American trade negotiations become more intense, presenting yet one more reason renderers must educate regulators who make decisions that could affect their industry.

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Trade's Love-Hate Relationship

When it comes to United States (US) trade policy, the nation's business community is tired of being jacked around by the White House and President Donald Trump's strategy that is his "art of the deal." If markets hate uncertainty, this is the most uncertain global business atmosphere in recent memory as agriculture in particular waits for the other shoe to drop when it comes to maintaining, never mind building, export markets.

On March 2, the president shocked industry and his own inner circle by dropping the bunker buster of trade bombs when he announced his intent beginning March 23 to impose 25 percent tariffs on all steel imports to the United States and a 10 percent tariff on aluminum imports, citing national security as the raison d'etre. On March 8, he explained that under Section 232 of the Trade Expansion Act of 1962, he has authority to investigate US imports to determine if a product or products affect national security. Trump said his steel/aluminum decision was predicated on the outcome of a nine-month Department of Commerce investigation that found imports of steel to the United States were four times this country's exports, and aluminum imports made up 90 percent of total domestic demand.

To most trade observers, it is clear the president's primary target is Chinese steel exports that US industry contends have flooded world markets and driven down prices. Chinese production alone surpasses that of the United States, Russia, Japan, and the European Union (EU) combined. Trump's hopedfor secondary "win" is leveraging North American Free Trade Agreement (NAFTA) negotiations to include more US priorities by forcing Canada to actively negotiate on several issues.

However, when the cries of foul are silenced, will the United States action turn out to be more smoke than fire?

Production agriculture, processing, and agribusiness see the move as the latest in a series of illogical trade policy decisions potentially blitzing agriculture with a series of retaliatory tariffs from US trading partners. That said, the increasingly familiar administration strategy — threaten the worst to up the chances of producing the best — did nothing to minimize the gnashing of teeth, the scratching of heads, and the see-sawing of both stock and commodity markets. When it comes to the Trump tariffs on steel/aluminum — a decision on the issue was not expected until mid- to late-April — the president brushed off warnings of a tariff trade war, including one from the World Trade Organization (WTO), and apparently lost no sleep over the prospect.

"When a country (US) is losing many billions of dollars on trade with virtually every country it does business with, trade wars are good, and easy to win. Example, when we are down \$100 billion with a certain country and they get cute, don't trade anymore-we win big. It's easy!" is what Trump tweeted at 5:50 a.m. Eastern Standard Time on March 2.

However, within a week, Trump's intractable position on global steel/aluminum tariffs imposed, at least in part, to

save domestic steel industry jobs – a demographic that voted strongly for Trump in 2016 – had morphed into what some analysts called a very elaborate and melodramatic warning to US trade partners. Despite declarations of "I won't back off," "no exceptions," and "this will move forward," the president used a press gaggle prior to a weekly cabinet meeting to say his tariff order would give him "a right to go up or down [with tariff rates] depending on the country, and I'll have the right to drop out countries or add countries – we just want fairness."

A large part of the Trump strategy is to keep trade partners guessing as to just how serious this White House is in punishing those nations it believes are taking unfair advantage of US markets. Agriculture Secretary Sonny Perdue said of the president in March, "He's got some countries just where he wants them," meaning major trading partners are "off-balance" as to what actions like the steel/aluminum tariffs really mean and exactly to what lengths Trump is willing to go to get what he wants, described as "fair and flexible" trade relationships.

"Let's use this off-balance technique to decide what we'd like in exchange...whether it's with Mexico, Canada, or EU partners," the ag secretary told a Washington, DC, forum hosted by *The Wall Street Journal*.

Perhaps the most telling insight to this strategy was the president's explanation of how exceptions, exemptions, or exclusions to the steel/aluminum tariffs might be granted. Canada and Mexico received exceptions for at least 30 days because "if we reach a deal [on a new NAFTA treaty], we won't be charging those two countries the tariffs." The not-so-subtle message translated to an implicit Trump version of "our way or the highway" when it comes to a final NAFTA agreement on such thorny issues as ag trade (i.e., Canadian dairy pricing and supply management, Mexican fruit/vegetable antidumping complaints, and Canadian wheat export subsidies), dispute resolution, a NAFTA sunset provision, and labor/wage concessions demanded of Mexico.

Yet even as he talked of exempting Canada and Mexico from the tariff regime, Trump reiterated threats to pull out of the 23-year-old treaty if a "fair deal" is not achieved. April 30 is the deadline to complete what is the eighth and hopefully last round of formal NAFTA 2.0 negotiations.

Perdue, a consistent voice of reason over time in White House trade tug-of-wars and a cabinet secretary not timid in reminding Trump for whom farmers and ranchers voted for in 2016, said after the cabinet meeting that farmers and ranchers are "rightfully concerned" about trade partner retaliation against agriculture exports as the steel/aluminum tariffs were rolled out

"If this has an impact on us completing a beneficial NAFTA deal for US producers, that's a great result," he said "We've got a lot of flexibility built into the tariffs. We're going to use this to get NAFTA done." Canada is the largest foreign supplier of steel and aluminum to the United States, while Mexico is the

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fourth largest steel supplier and the tenth largest aluminum exporter, according to the Department of Commerce.

For its part, the Mexican government released a statement saying it would/will respond if Mexico is included in the steel/aluminum tariffs. The United States "is going to shoot themselves in the foot," said Economy Minister Ildefonso Guajardo, who is also his country's chief NAFTA negotiator. "We're bound – if they do it, we're going to respond." Guajardo was in Washington, DC, right after Trump announced the tariff scheme, reminding US trade leaders that the NAFTA treaty carries a clause allowing exceptions from such tariffs.

"We are allies in national security," he said.

Mexico has a track record of putting action behind words. During President George W. Bush's administration when the US-Mexico cross-border trucking agreement included in NAFTA was blocked by congressional Democrats, Mexico made good on threats to place "carousel tariffs" on a shifting list of US products sold into Mexico. A good share of the targeted products were food and agriculture and the tariffs lasted several weeks, costing US producers millions.

Canada, reported the Canadian Broadcasting Corporation, kept "its powder dry," refusing to issue threats as some nations did. Canada's reaction could, if NAFTA goes off the rails, begin with retaliatory tariffs targeting agriculture exports from congressional districts that can exert pressure on the White House to back down.

In addition to the Canada-Mexico exemptions, and based on military relationships and the United States' balance of trade, Trump cited the likelihood Australia and other unnamed nations could remain tariff free.

"We have a very close relationship with Australia," Trump said. "We have a trade surplus with Australia. Great country, long-term partner. We'll be doing something with them. We'll be doing something with some other countries. We're going to be very flexible."

A nation need not wait to be granted an exception, the White House said. If a government can prove it has a mutual national security relationship with the United States and wishes to be added to the so-called exclusion list, it can petition the White House to negotiate to be added. For instance, it is expected the EU will join Canada, Mexico, and Australia on the exclusion list, but in true Trump fashion, the EU will have to come on bended knee and petition for that consideration.

Both global and domestic reaction to the president's original tariff announcement was swift and nearly universally negative. The EU employed a standard three-part plan to thwart the impact of such trade actions, some retaliatory, some in the interest of self-protection. First, it filed a formal WTO complaint (Brussels has a maximum 90 days to notify WTO of what kind of retaliation it chooses against Trump's tariffs). The EU then imposed safeguards to prevent steel not heading to the United States from being dumped in the EU, and then quickly put together a list of about \$3.6 billion in US products on which retaliatory tariffs can be slapped. Of that total, about \$427 million would be against agriculture and food products, and that list was quickly leaked to the media.

When word of the tariffs first crossed the Atlantic, European Commission President Jean-Claude Juncker told a

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California's Grease Program Making Strides

Members of California's Rendering Industry Advisory Board (RIAB) are pleased with the progress the California Department of Food and Agriculture's (CDFA's) inedible kitchen grease (IKG) program has taken over the past year under the direction of new Meat, Poultry, and Egg Safety Branch Chief Paula Batarseh. Since coming onboard last spring, Batarseh has focused on three key areas:

- a robust enforcement strategy that includes education and outreach;
- building partnerships and relationships with the California Highway Patrol (CHP) and other law enforcement groups along with state and local regulatory agencies; and
- continuous improvement among CDFA team members and within the program.

"The team has been putting 200 percent into the program and this board is critical to our success," Batarseh told renderers at a late February meeting. "Your input is valuable."

One relationship CDFA's IKG team has worked hard at building is with the California Department of Resources, Recycling, and Recovery, or CalRecycle, because of Senate Bill 1383 that was signed into law in September 2016. The bill directs CalReycle to adopt regulations to divert organic waste from landfills by 50 percent by 2020 and 75 percent by 2025 based on 2014 levels. While raw material collected by renderers is considered organic, including meat scraps from supermarkets and butcher shops, they are regulated under CDFA to ensure proper heat processing to remove any potential pathogens. Batarseh, her team, and state renderers have been meeting with CalRecycle staff to educate them on this fact and that these materials do not currently go to landfills. CalRecycle is moving forward with a study to determine the types of organics currently going to landfills, which CDFA will review and provide feedback regarding rendering materials.

Elizabeth John with the California Energy Commission's Fuels and Transportation Division told RIAB members that millions of dollars in funds are available each year for in-state technology projects aimed at reducing greenhouse gases. Previous grant

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Millions of dollars in funds are available each year for in-state technology projects aimed at reducing greenhouse gases.

recipients include \$5 million awarded to Alt Air Fuels to increase the capacity of its biodiesel plant that uses corn oil and tallow as feedstock. New Leaf Biofuels received \$3.8 million in state funds to expand and upgrade its San Diego-based biodiesel plant to accept low carbon feedstocks. John noted there is currently \$20 million available this fiscal year and \$25 million is budgeted for fiscal year 2019-2020.

CHP Captain Sean Duryee and Lieutenant Robert Nance provided an overview of the commercial vehicle enforcement program. Last year about 500,000 commercial trucks were inspected; however only one in seven CHP officers working on the road has commercial truck training. An educational dialogue between these two officers and RIAB members provided helpful insight on the state's IKG program that will be taken back to the highway patrol's enforcement office.

CDFA staff presented IKG program improvement goals, which include an investigative tracking database for complaints on illegal grease theft activity, outreach programs to educate counties and cities on the IKG program, and a revamping of the rendering program website to include a manifest training video that is currently being finalized. CDFA's investigators shared their actions on illegal IKG activities, such as an unregistered rendering operation and IKG transporter, and unlicensed transporters of inedible material and collection centers. In the case of the illegal collection center, the Santa Clara County district attorney is actively pursuing the case.

The next RIAB meeting is scheduled for June 6, 2018, in Sacramento, California.

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The tools to build a sustainable world

US Market Report

Fat usage up but protein demand down

By Kent Swisher, National Renderers Association

Domestic Developments

Raw Material Supply Increases

US cattle slaughter in 2017 was 32.2 million head, up more than 5 percent from 2016, showing a strong upswing in the cattle cycle that began in 2016. Average live weight dropped slightly from 1,363 pounds in 2016 to 1,348 pounds last year. Swine and poultry production continue to surge as well. Hog slaughter was approximately 121.3 million head, up almost 3 percent over 2016, with live weight remaining unchanged at 282 pounds. Broiler and mature chicken production grew by nearly 2 percent in 2017, totaling over 9 billion birds slaughtered while live weight increased from 6.16 to 6.20 pounds, continuing an upward trend of heavier birds.

Production and consumption data for the rendering industry was historically reported in the US Census Bureau's M311K – Fats and Oils: Production, Consumption, and Stocks report but it was discontinued in July 2011 after government cutbacks. Hence, in industry market reports after 2011, the data in table 2 was derived by the National Renderers Association using historic relationships between livestock production as reported by the National Agricultural Statistics Service (NASS) and historic rendered product production. However, in May 2015, NASS statisticians began surveying and publishing monthly rendered product production so 2016 was the first full year this data was available. Therefore, 2016 and 2017 production in table 2 is data from the NASS Fats and Oils: Oilseed Crushings, Production, Consumption, and Stocks Annual Summary publication that is released each March.

The 2012-2015 data in table 2 has been revised from previous reports published in *Render* using NASS monthly data as a baseline to derive historic production via the relationship between the production of rendered products and slaughter data. Yellow grease production in 2016 and 2017 is NASS data but prior to 2016 it was calculated using the relationship between yellow grease production numbers in the 2010 report A Profile of the North American Rendering Industry by Informa Economics and cooking oil consumption as reported by the US Department of Agriculture (USDA). Unfortunately, the NASS publication does not include consumption so data for rendered fats use in biodiesel/renewable fuel production in table 2 is compiled from the Energy Information Agency (EIA) Monthly Biodiesel Production Report. Other consumption data is derived by subtracting production estimates from export estimates and biodiesel use.

egardless of an individual's political leanings, one of the biggest events in the United States (US) last year was the inauguration of President Donald Trump on January 20, 2017. He brought an "America first" theme to the White House. On the trade front, one of his first actions was to pull the country out of the Trans Pacific Partnership, a trade agreement that was aimed at helping America compete with China. By May, US Trade Representative Robert Lighthizer notified Congress that Trump intended to renegotiate the North American Free Trade Agreement, or NAFTA. These negotiations began later in the year and continued through early 2018.

The new administration also committed to the enforcement of trade laws and agreements. In 2017, the US Department of Commerce increased its antidumping and countervailing duty investigations by over 50 percent. One of these investigations focused on Argentine and Indonesian biodiesel imports. In 2016 and 2017, imports of biodiesel into the United States were 40 percent of total domestic consumption; however, countervailing duties put in place in the fall of 2017 stopped imports of biodiesel from Argentina and Indonesia. While Indonesia imports were not substantial, Argentina accounted for over two-thirds of all US biodiesel imports. This action should give relief to US biodiesel producers in 2018.

The "all-vegetarian" diet trend in poultry production continued in 2017. Some experts report that over 25 percent of broiler operations now feed an all-vegetarian diet, a trend that has made the export market even more important for US animal proteins. Exports of meat and bone meal, poultry meal, and porcine meal have risen 87 percent since 2012 but that still has not been enough to support the downward trend in prices due to the drop in domestic demand.

The International Monetary Fund (IMF) estimates the world's economic growth rate increased from 3.2 percent in 2016 to 3.7 percent in 2017 led mainly by the strength in advanced economies. Output in these economies increased from 1.7 percent in 2016 to 2.3 percent last year. The IMF forecasts global growth to be 3.9 percent in 2018 and 2019.

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The increase in livestock slaughter in 2017 was reflected in overall increases in rendered product production to 10.5 million metric tons, up 1.4 percent from 2016. Over the last 5 years, total rendered product production has increased 4 percent with animal proteins rising 6 percent and fat up 2 percent.

In 2017, fat production was 5.7 million metric tons, up a slight 0.2 percent from 2016. Overall tallow production rose 1.4 percent to 2.6 million metric tons. Inedible tallow production increased to almost 1.7 million metric tons, up 4.8 percent over 2016. Technical tallow production was down 7.3 percent and edible tallow production remained unchanged at around 410,000 metric tons. Even though hog slaughter was up in 2017, white grease production was down 4.7 percent to 751,000 metric tons, lard production dropped 5.4 percent to 158,000 metric tons, and choice white grease production declined 4.5 percent to 592,000 metric tons. Yellow grease/ used cooking oil production was 913,000 metric tons, down slightly from 2016. The other grease category was up nearly 10 percent in 2017 at 369,000 metric tons.

Animal protein meal production was close to 4.8 million metric tons in 2017, up nearly 3 percent over 2016. Meat and bone meal production was up about 3 percent at 2.8 million metric tons, poultry by-product meal rose 4 percent to 1.4 million metric tons, and feather meal was down 1 percent to 522,000 metric tons.

This is the first year imports of rendered products into the United States are included in table 2. While these imports have not been uncommon in the past due to intra North American trade and lamb meal imports for pet food production, recent increases of fat imports are due to US biodiesel and renewable diesel demand. In 2017, overall imports of fat were 167,500 metric tons, up 28 percent from 2016, with imports of fat into the United States increasing more than 73 percent over the past 5 years. Animal protein meal imports were 84,300 metric tons in 2017, up 1.8 percent. As mentioned previously, these imports were mainly lamb meal from Australia and New Zealand that are used by the US pet food industry.

Demand for Fats Up, Proteins Down

As mentioned earlier in this report, NASS does not include domestic consumption in its monthly surveys. Therefore, domestic consumption in table 2 is derived by adding production plus imports and then subtracting biodiesel/renewable diesel inputs, as reported by EIA, and subtracting exports as reported by the Global Trade Atlas. Table 2 does not account for any carryover stocks.

Domestic consumption of rendered products was up 2 percent in 2017 to 7.1 million metric tons. Over the past 5 years, domestic consumption has grown by 5 percent mainly due to increased fat use in the biodiesel/renewable fuel sector. In 2017, total rendered fat use in the United States for non-biodiesel/renewable fuel was slightly off showing a 1.4 percent decline from 2016 at 3.6 million metric tons. Over the last 5 years, domestic consumption of the same category was stable except for an increase of 1.5 percent in 2016. Domestic fat use for biodiesel/renewable diesel production continued to grow in 2017, reaching 1.2 million metric tons, a 4.3 percent increase from 2016 and a 33 percent increase over the last 5 years.

Domestic consumption of animal protein meals in 2017 tells a different story, which was virtually unchanged from 2016 at 3.8 million metric tons. Over the last 5 years, domestic use has dropped by over 143,000 metric tons, or roughly 4 percent. This decline in domestic consumption is mainly due to the all-vegetarian diet trend in the broiler industry. As reported earlier, between 25 and 30 percent of broiler operations now use all-vegetarian diets. This drop in demand occurred at the same time domestic production was increasing. Over the last 5 years, the total supply (production plus imports) of animal protein meals grew by 270,000 metric tons, about 6 percent. Hence, the supply/demand scenario for protein meals in the United States is critically off balance and shows the crucial need to grow new markets for animal protein meals.

Overall rendered product exports in 2017 were approximately 1.7 million metric tons, up 5.3 percent from

Continued on page 13

Table 1. Average annual prices of select rendered products, 2012-2017 (per metric ton)							
Product (Location)	2012	2013	2014	2015	2016	2017	% Change 16/17
Fats							
Beef tallow, packer (Chicago)	\$963	\$887	\$801	\$581	\$638	\$682	7
Choice white grease (Missouri River)	\$926	\$846	\$711	\$498	\$537	\$549	2
Edible tallow (Chicago)	\$1,068	\$946	\$865	\$638	\$714	\$762	7
Edible tallow (Gulf)	\$1,034	\$966	\$803	\$563	\$746	\$731	-2
Lard (Chicago)	\$1,279	\$1,081	\$959	\$670	\$708	\$729	3
Poultry fat (Mid-South)	\$864	\$793	\$660	\$502	\$546	\$605	11
Yellow grease (Missouri River)	\$788	\$727	\$612	\$462	\$505	\$524	4
Protein meals							
Blood meal, porcine (Midwest)	\$1,214	\$1,308	\$1,643	\$1,086	\$899	\$968	8
Blood meal, ruminant (Missouri River)	\$1,122	\$1,232	\$1,580	\$1,070	\$857	\$931	9
Feather meal (Mid-South)	\$715	\$701	\$772	\$521	\$391	\$437	12
Meat and bone meal, porcine (Missouri River)	\$552	\$527	\$556	\$377	\$314	\$314	0
Meat and bone meal, ruminant (Missouri River)	\$473	\$464	\$502	\$359	\$294	\$273	-7
Poultry by-product meal, 57% protein (Mid-Sout	h) \$594	\$582	\$610	\$447	\$330	\$306	-7
Poultry by-product meal, 67% protein (Mid-Sout	h) \$919	\$821	\$871	\$602	\$614	\$688	12
Source: The Jacobsen.							

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Table 2. US production, impo	% Chang						
Category	2012	2013	2014	2015	2016	2017	16/17
Production			2014			2017	10,17
Tallow	2,608.7	2,589.3	2,441.4	2,385.7	2,559.5	2,594.9	1.4
Inedible tallow	1,643.4	1,631.2	1,538.0	1,502.9	1,587.4	1,663.8	4.8
Technical tallow	547.9	543.9	512.8	501.1	562.5	521.5	-7.3
Edible tallow	417.4	414.3	390.6	381.7	409.6	409.6	0.0
Poultry fat	1,025.2	1,040.2	1,056.5	1,088.8	1,113.3	1,095.3	-1.6
Yellow grease/used cooking oil	885.9	896.4	933.2	926.4	916.4	913.0	-0.4
White grease	720.0	718.0	707.3	758.7	787.6	750.5	-4.7
Choice white grease	569.2	567.6	559.2	599.8	620.3	592.3	-4.5
Lard	150.8	150.4	148.1	158.9	167.3	158.2	-5.4
Other greases	348.6	346.7	333.9	341.7	336.0	369.2	9.9
Subtotal	5,588.4	5,590.6	5,472.3	5,501.3	5,712.8	5,722.9	0.2
Meat and bone meal	2,643.8	2,629.9	2,532.4	2,591.8	2,711.5	2,790.2	2.9
Poultry by-product meal	1,345.9	1,365.6	1,387.1	1,429.4	1,382.1	1,438.8	4.1
Feather meal	505.3	512.7	520.7	536.6	527.2	522.0	-1.0
Subtotal	4,495.0	4,508.2	4,440.2	4,557.9	4,620.8	4,751.0	2.8
Total production	10,083.4	10,098.8	9,912.4	10,059.2	10,333.6	10,473.9	1.4
•	10,003.4	10,070.0	7,712.4	10,037.2	10,555.0	10,475.9	1.7
Imports	40.4	50.5	40.4	440	70.0	99.9	24.4
Tallow	62.6	59.5	62.6	64.0 22.4	78.9		26.6 68.2
Yellow grease/used cooking oil	16.1	20.6	17.2		23.0	38.7	
White grease	17.7	21.8	20.8	34.4	28.8	27.0	-6.3
Choice white grease	11.2	15.3	13.5	28.0	24.1	21.2	-12.1
Lard	6.5	6.4	7.3	6.5	4.7	5.8	23.3
Poultry fat	0.5	0.4	0.4	0.6	0.6	1.9	238.4
Subtotal	96.9	102.2	101.0	121.4	131.3	167.5	27.6
Meat and bone/poultry/porcine		73.8	69.6	64.1	82.2	83.6	1.7
Feather meal	0.5	1.0	0.4	0.2	0.6	0.7	11.1
Subtotal	70.9	74.7	70.0	64.3	82.8	84.3	1.8
Total imports	167.7	177.0	171.0	185.7	214.1	251.8	17.6
Consumption							
Feed, food, fatty acids,	0.500.0	2.500.1	0.474.0	2.4/0.0	0 / 41 7	2.500.5	1.4
carryover, other	3,538.3	3,522.1	3,474.9	3,462.9	3,641.7	3,592.5	-1.4
Tallow	1,934.5	1,990.3	1,899.6	1,846.8	2,084.4	2,116.1	1.5
Poultry fat	931.4	952.6	959.0	983.7	999.4	1,000.9	0.2
White grease	526.4	498.5	492.5	505.9	534.8	491.4	-8.1
Yellow grease*	146.0	80.6	123.7	126.5	23.1	-16.0	-169.1
Biodiesel and renewable fuel	896.3	1,116.7	1,051.8	1,201.1	1,142.6	1,192.1	4.3
Animal fat	461.3	500.7	468.5	576.5	512.6	524.9	2.4
White grease	185.1	211.4	213.6	267.2	262.2	268.1	2.3
Tallow	174.6	205.0	161.0	195.0	150.6	176.5	17.2
Poultry fat	79.8	73.0	79.8	89.4	99.8	80.3	-19.5
Other	21.8	11.3	14.1	24.9	n/a	n/a	5.0
Recycled oils	435.0	616.0	583.3	624.6	630.0	667.2	5.9
Yellow grease/used cooking		475.4	493.5	569.3	630.0	667.2	5.9
Other	131.1	140.6	89.8	55.3	n/a	n/a	0.5
Subtotal	2,830.8	3,107.1	2,951.4	3,047.9	3,227.0	3,308.2	2.5
Meat and bone/poultry/porcine me		3,415.4	3,414.7	3,399.4	3,331.2	3,344.4	0.4
Feather meal	413.6	334.8	355.1	449.8	464.2	442.1	-4.7
Subtotal	3,929.4	3,750.3	3,769.8	3,849.2	3,729.0	3,786.5	1.5
Total consumption	6,760.2	6,857.3	6,721.3	6,897.1	6,956.0	7,094.7	2.0
Exports	4047	000.0	400.5	0.40.1	0000	0045	7.4.4
Inedible tallow/technical tallow	486.7	382.3	402.5	343.1	283.3	324.5	14.6
Yellow grease	452.1	361.0	333.1	253.0	286.2	300.5	5.0
Edible tallow	75.4	71.1	40.8	64.8	120.1	77.7	-35.3
Lard	24.8	29.4	21.4	19.8	19.1	17.2	-9.8
Poultry fat	14.5	14.9	18.2	16.4	14.7	16.1	9.0
Choice white grease	1.4	0.5	0.6	0.2	0.4	0.8	113.1
Subtotal	1,055.0	859.2	816.7	697.2	723.8	736.7	1.8
Meat and bone/poultry/porcine me		580.1	504.7	621.9	762.5	884.6	16.0
Feather meal	92.2	178.8	166.0	87.0	63.6	80.6	26.7
Subtotal	566.1	758.9	670.7	708.9	891.8	965.2	8.2
Total exports	1,621.1	1,618.1	1,487.3	1,406.1	1,615.6	1,701.8	5.3

Total exports 1,621.1 1,618.1 1,487.3 1,406.1 1,615.6 1,701.8 5.3

Sources: Global Trade Atlas for exports, US Energy Information Agency for biodiesel inputs, and NASS Fats and Oils: Oilseed Crushings, Production, Consumption, and Stocks Annual Summary for 2017 production.

Notes: n/a = not available; *2017 domestic use is negative due to carryover from previous year.

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Market Report Continued from page 11

2016 and up approximately 5 percent over the last 5 years. Of that amount, 965,000 metric tons were protein meals and 737,000 metric tons were fat. This export growth was carried by a dramatic increase in protein meals while being offset by a substantial decrease in fat exports. Over the last 5 years, rendered protein meal exports grew 70 percent by approximately 400,000 metric tons while rendered fat exports decreased 30 percent or close to 320,000 metric tons.

Outlook Mixed

As the US cattle cycle rebounds and poultry and pork production continues to increase, there will be a greater supply of rendered products on the market. According to the USDA *Agricultural Projections to 2027,* over the next 10 years, beef production is forecast to grow by 15 percent, pork production by 13 percent, and poultry production by 10 percent. Using these forecasts, it is projected animal protein meals will increase over 474,000 metric tons and approximately 812,000 metric tons of additional fat will be produced.

On the demand side, if the all-vegetarian diet trend continues, use of rendered protein meals and fats in livestock feed will continue to decline so the need for new markets for animal protein meals will be critical. With regard to fat, demand from the US biodiesel industry should increase partly due to the absence of Argentine biodiesel imports. In addition, demand from the renewable energy sector is projected to grow dramatically. In particular, Diamond Green is nearly doubling production at its renewable diesel plant in Norco, Louisiana, from 150 million gallons per year to 275 million gallons, increasing its raw material need from approximately 500,000 metric tons to over 1 million metric tons. This plant expansion is projected to be finished by the second quarter of 2018. In addition, Diamond Green will begin a feasibility study to further expand the plant to 550 million gallons, which would increase its need for raw materials to over 2 million metric tons. Therefore, the 10-year projected growth in rendered fat production should be absorbed by increased demand from the renewable fuel sector. However, the projected rise in rendered protein meal production will need to be offset by expanding existing markets and finding new markets for these products.

International Market Conditions

Protein Meal Exports Surge

Global demand for animal protein meals continued to grow dramatically in 2017 coming from the livestock feed, aquatic feed, and pet food sectors. According to the 2018 Alltech Global Feed Survey, global feed production set a new

record in 2016 by growing to over 1 billion metric tons and in 2017, global production increased by 2.6 percent to nearly 1.1 billion metric tons. The largest feed producer in the world is China, followed by the United States and Brazil. China is also the largest importer of feed ingredients in the world. In 2017, China produced 186.9 million metric tons of feed, down 0.5 percent from 2016. The United States produced 173 million metric tons of feed in 2017, up nearly 2 percent from the previous year, while Brazil produced 69.9 million metric tons of feed, up over 1 percent.

Total US meat and bone/poultry/porcine meal exports were up 16 percent in 2017 from the previous year, and have grown 87 percent in the last 5 years. The global expansion of poultry, pet, and aqua feeds have led the demand surge. Fish meal production has continued to decline so in diets that demand an animal protein, terrestrial animal protein meals are essential. Indonesia was the largest importer of US animal protein meals in 2017, taking 370,000 metric tons, up 11 percent over 2016. China imported 165,000 metric tons of non-ruminant animal protein meals last year, up 20 percent from 2016 and up over 600 percent in the last 5 years. Exports of non-ruminant meals to Mexico reached a record 130,000 metric tons in 2017, up 20 percent from 2016, mostly due to the porcine meal price dropping well below the price of soybean meal during several months last year.

Fat Exports Declining

Total rendered fat exports were 736,700 metric tons in 2017, up slightly from 2016. Over the last 5 years, fat exports have declined 30 percent. Inedible tallow exports to Mexico,

Continued on page 15

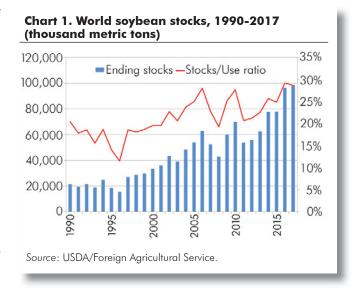


Table 3. US annual livestock and poultry slaughter, 2012-2017 (thousand head)							
Species	2012	2013	2014	2015	2016	2017	% Change 16/17
Broilers/Mature chickens	8,576,195	8,648,756	8,669,628	8,822,692	8,908,986	9,050,716	1.6
Cattle	32,951	32,462	30,266	28,843	30,578	32,175	5.2
Hogs	113,163	112,077	106,958	115,512	118,220	121,308	2.6
Turkeys	250,192	239,404	236,617	232,389	243,255	241,617	-0.7
Source: NASS.							

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							% Char
roduct/Country	2012	2013	2014	2015	2016	2017	16/1
nedible tallow							
Mexico	271,378	238,079	235,843	227,876	145,636	126,544	-13
Singapore	5,000	0	5,000	14,275	46,312	119,240	157
Canada	12,772	14,841	18,493	20,797	22,600	20,000	-11
Guatemala	19,117	13,332	21,470	20,449	20,094	15,249	-24
Venezuela	18,589	18,799	3,800	0	0	7,500	
Nigeria	0	0	0	0	0	7,500	
Turkey	79,495	45,871	59,474	20,898	19,249	7,200	-62
Morocco	10,501	5,000	9,000	7,000	7,198	6,450	-10
Honduras	24,597	14,097	11,499	9,000	8,240	5,641	-3
Dominican Republic	2,000	2,499	3,000	3,500	4,550	2,750	-39
Haiti	1,750	4,519	8,348	917	275	2,000	62
Colombia	7,199	3,899	6,100	8,000	0	1,856	
El Salvador	4,699	4,199	3,750	2,900	3,000	1,200	-60
Nicaragua	7,749	3,199	4,325	3,700	3,550	1,200	-60
Trinidad and Tobago	122	179	264	205	78	159	103
Total	486,735	382,263	402,548	343,115	283,280	324,505	14
llow grease (includes us			402,540	040,115	200,200	024,505	•
European Union-28	154,095	147,289	153,813	128,128	185,000	176,348	-4
Mexico	113,534	95,892	95,574	72,564	50,034	63,454	20
Bosnia and Herzegovina	520	1,567	499	3,883	11,045	24,407	12
Dominican Republic	17,629	18,082	15,518	9,585	10,639	9,652	-12
Singapore	1,656	2,593	2,675	1,755	1,541	7,900	41:
Canada	15,604	11,533	10,604	11,716	9,073	7,725	-14
Honduras	6,920	3,605	5,890	7,057	6,939	2,167	-6
China	572	144	276	965	1,796	1,952	
Jamaica	4,802	6,991	7,300	1,310	1,568	1,211	-22
Colombia	584	388	439	593	1846	805	-5
Guatemala	7,611	3,799	7,125	6,066	651	618	
Ecuador	25	99	373	48	301	554	8.
Nicaragua	2,449	1,052	1,932	712	187	543	190
South Korea	385	502	552	961	1,350	307	-7
Brazil	236	278	189	252	272	289	(
Total	452,067	361,031	333,133	252,959	286,226	300,474	
lible tallow							
Mexico	70,205	66,278	35,840	61,076	114,154	72,120	-30
Canada	5,163	4,870	4,807	3,657	5,706	5,552	-2
United Kingdom	0	. 0	. 0	0	0	4	
Total	75,399	71,148	40,783	64,762	120,146	77,678	-3
ırd	,	,	,	,	•	•	
Mexico	23,487	28,299	18,848	17,691	16,924	15,876	-(
Canada	598	596	612	393	988	605	-3
South Korea	0	19	0	0	0	346	0.
Total	24,826	29,398	21,390	19,768	19,050	17,181	_
hoice white grease	24,020	27,070	21,070	17,700	17,050	17,101	
Mexico	92	33	208	27	67	659	883
Dominican Republic	11	0	66	22	3	54	1,70
China	27	38	0	58	136	37	-72
		ەە 491	63 9	202	374		
Total	1,387	491	039	202	3/4	797	11:
oultry fat	10 //7	11.075	10.070	10.040	0.200	10 111	
Canada	10,667	11,065	13,072	10,943	9,320	10,111	1
Mexico	806	854	1,731	2,418	2,139	2,545	11
Peru	0	0	0	0	958	1,597	6
Guatemala	287	370	458	446	516	567	(
Dominican Republic	513	644	577	616	671	443	-34
Vietnam	143	160	157	180	188	227	20
Total	14,536	14,895	18,173	16,376	14,728	16,051	9

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the largest importer, fell by more than 13 percent in 2017 and over 53 percent in the last 5 years. At the same time, Singapore has become the second largest export market for US tallow, importing about 120,000 metric tons for renewable fuel production. The European Union has continued to be the largest US export market for used cooking oil at 176,000 metric tons, or close to 60 percent of total yellow grease exports that go to biodiesel and renewable fuel production in export markets. To put this in perspective, 40 percent of all US rendered fat exports now go to biodiesel and renewable diesel production. The global use of US rendered fat is now mostly for biodiesel and renewable fuel production and for use in the oleochemical industry.

The key for rendered animal protein meals will be to continue to find niche markets like aquaculture and pet food.

Outlook

US rendered product production will continue to expand with increased livestock production. Over the next 10 years, more than 474,000 metric tons of animal protein meals and 811,000 metric tons of rendered fat are projected to be added into the supply chain. As mentioned earlier, the global demand for fat as a biodiesel/renewable energy source will continue to grow and offset the added supply. However, additional international demand will be needed to make up for the increased amount of animal protein meals due to the decreasing demand in the United States from the allvegetarian diet trend in the poultry industry. Aside from that, the global protein meal market is awash in an oversupply of soybean meal. Global carryover stocks and high stock-to-use ratios for soybeans are at record highs (chart 1) so the key for rendered animal protein meals will be to continue to find niche markets for these products such as the aquaculture and pet food industries.

Kent Swisher, vice president of International Programs at the National Renderers Association, has been reporting on the US rendering market in Render for the past 14 years. He can be reached by email at kswisher@nationalrenderers.com.

Product/Country	2012	2013	2014	2015	2016	2017	% Change 16/17
Animal protein meals							
Indonesia	197,397	227,122	218,855	257,694	333,465	369,070	10.7
China	23,420	54,483	63,174	81,400	138,088	164,515	19.1
Mexico	99,043	83,474	74,874	103,789	99,618	129,392	29.9
Canada	38,044	43,368	48,690	58,743	64,283	66,287	3.1
Vietnam	2,050	1,780	1,613	8,214	28,392	39,764	40.1
Chile	45,937	59,689	32,026	57,084	18,144	26,963	48.6
Thailand	12,884	14,965	5,743	5,166	3,492	16,904	384.1
Malaysia	2,060	16,902	13,300	1,446	3,842	16,807	337.5
Ecuador	2,620	9,796	10,299	8,470	11,550	15,808	36.9
Philippines	33,035	29,729	12,462	10,734	9,267	6,605	-28.7
Cambodia	206	5,308	305	0	0	5,574	
Peru	680	1,156	994	1,019	2,410	5,564	130.9
Honduras	900	3,406	1,100	3,704	10,693	4,102	-61.6
Germany	0	0	12	0	16,939	3,945	-76.7
Guatemala	1,037	12,595	7,399	1,381	4,130	2,934	-29.0
Sri Lanka	0	0	0	0	0	1,964	
Myanmar	0	0	0	0	120	1,905	1487.5
Panama	659	353	65	62	278	1,760	533.1
Costa Rica	349	781	749	1,176	2,603	1,564	-39.9
Total	473,929	580,107	504,726	621,889	762,455	884,563	16.0
Feather meal							
Indonesia	46,929	110,087	98,990	41,750	27,373	29,177	6.6
China	0	183	1,265	977	7,391	19,422	162.8
Canada	17,035	8,961	16,227	15,573	16,889	18,136	7.4
Chile	25,667	52,972	48,135	24,403	10,046	11,744	16.9
Philippines	0	0	0	100	200	800	300.0
Colombia	0	0	0	0	150	726	384.0
Peru	0	0	0	578	0	427	
Total	92,195	178,815	165,952	87,000	63,596	80,551	26.7

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Educating on Food Safety, Pet Food, and Rendering By Tina Caparella

"Food security is national security," declared United States Department of Agriculture (USDA) Secretary Sonny Perdue as he addressed attendees at the Poultry Market Intelligence Forum at the International Production and Processing Expo (IPPE) in Atlanta, Georgia, in late January. "My goal at USDA is to create an environment where ag businesses can become safe, strong, and proud of what you all do. I think our role as policymakers is to create a fertile environment and a fertile field for you all to do what you do best, that is to innovate, create, and execute in a way that is profitable to you.

"We all know trade is critically important to your industry," Perdue continued. "We all want a fair and modernized free trade agreement. The president wants that too." Perdue, who grew up on a dairy and diversified row crop farm in rural Georgia, is convinced the United States will get a sound-science trade agreement everyone can live with. He complimented poultry producers on their advancement in research and manufacturing, noting that the industry is one of the bright spots in US manufacturing productivity.

"We must depend on sound science, not political science, to make decisions on food safety," Perdue added. He explained the close working relationship USDA has with the Food and Drug Administration, Environmental Protection Agency, Secretary of Interior, and Secretary of Commerce and shared how he is striving to build a strong partnership with the agriculture industry.



"My goal at USDA is to be the most efficient, most effective, customer-focused agency in the US government," Perdue went on. "We want to treat you as the customer." He said USDA is seeking the industry's input on identifying regulations that are a burden by setting up an interactive regulatory reform task force.

Other speakers at the forum addressed trends and market drivers for the poultry industry in 2017 and moving forward in 2018, such as no antibiotics and a move toward vegetarian diets. Michael Donohue, AgriStats, showed that in June 2011, nearly all broiler producers were using animal proteins and fats in feed rations but by October 2017, only 75 percent were including these nutritional products in feed due to the all-veg diet trend. In addition, fewer by-products are going to rendering as more of the bird is being used by the packer and consumer.

Pet Food Focus

Another educational session at IPPE centered on pet food, which saw \$110 billion in global sales in 2017, a growth of about five percent annually over the past five years. Jared Koerten, Euromonitor International, reported that while the United States and Canada continue to be the strongest markets for dog and cat food, Brazil is now the second largest market, up from the sixth place spot in 2012, followed by the United Kingdom in third. He described Blue Buffalo, the fifth largest US pet food manufacturer and the number one brand in 2016 that was just acquired by General Mills for \$8 billion, as the poster child for the shift in pet food as consumers are driven by emotion and often seek pet foods produced with similar ingredients as what they eat.

John Stewart, American Feed Industry Association (AFIA), disclosed that projected pet food exports for 2017 are expected to be similar to 2016, which is trending downward due to increased manufacturing overseas. Canada, Japan, and Mexico are the top three export markets for US pet food so the North American Free Trade Agreement (NAFTA) is very important.

"NAFTA is huge to our economy and especially huge to the pet food market and agriculture," Stewart noted. Animal food exports, which are comprised mostly of feed ingredients, to Canada and Mexico have nearly tripled over the past 20-plus years, growing from \$764 million in 1994 to \$3 billion in 2016. Half of all pet food exports go to Canada and Mexico so the priority is to preserve current trade agreements that enjoy tariff-free market access. Stewart encouraged all to reach out to lawmakers and share why trade is so important to their business.

George Collings, Collings Nutrition Solutions, took conference attendees on a journey through the history of pet food, showing advertisements from the 1940s, 1950s, and 1960s that brought about a revolutionary change in how



An attentive crowd learns about the aspects of rendering.

consumers can help the health of their pet. Ads talked about meat by-products and grains, and were always very positive. Where are we today? Collings showed the overwhelming increase of what used to be 50 to 60 available feed ingredients to what is now nearly 500 today. He also noted how the industry's positive image has become more negative in recent years due in part to social media providing an outlet for anyone to state their opinion of a food or ingredient as fact.

"Pet products have become more about what is not in them rather than what they actually contain," Collings stated. With the humanization of pets, many consumers want to feed their companions the same foods they eat, but many human ingredients are not approved for or necessarily nutritional for pets. Collings urged attendees to use positive messaging when dealing with consumers as negativity fuels more negativity.

Dr. David Meeker, National Renderers Association (NRA), told conference goers that, "this is not your father's rendering industry" as it operates a lot differently than it did just five years ago. Due to government regulation and customer demand, including pet food companies, many rendering plants now have dedicated species lines or facilities to ensure specific products are not comingled. Meeker reiterated the sentiment that negativism is keeping some in the pet food industry from using animal proteins and fats.

"We need to talk about animal by-products as part of helping pet food be sustainable as all of the food-producing animal is being used," he commented.

Rendering's Sustainable Story

Wrapping up the week-long IPPE was the International Rendering Symposium where NRA President Nancy Foster kicked things off with an overview of the \$10 billion US and Canadian industry. She declared that "rendering is sustainable and is an essential link in the food and feed chain." AFIA's Leah Wilkinson followed with an explanation of the purpose and activities of the American Association of Feed Control Officials (AAFCO). Animal feed is now termed "food" under the federal Food Safety Modernization Act (FSMA) and any unapproved food additives are considered chemical hazards under FSMA. Wilkinson reported that US states have the authority to set their own regional feed ingredient definitions in addition to adopting AAFCO definitions, and that AAFCO is looking at modernizing the entire pet food label with "friendlier" terminology for pet food ingredients.



From left, John Stewart, AFIA, talks pet food with Scott Lehoullier, Peterson Company, and Ken Giesbrecht and Roger Giesbrecht, both of Hogan Farms in Canada.

"Consumers are not sure what 'by-products' and 'meals' are," Wilkinson said.

Tim Law, Darling Ingredients Inc., stated that today's pet food consumer now considers their dog or cat as family and not a pet. There are roughly 164 million dogs and cats in 85 million US households spending approximately \$1,800 per year per dog and \$1,100 per year per cat. Globally, adult dog owners post a photo or talk about their dog six times per week on social media while some animals even have their own social media accounts. The top 10 pet influencers on social media – such as Grumpy Cat – reach 68 million people worldwide.

"Consumers want for their pet what they want for themselves," Law shared. According to petfoodindustry.com and a Nielsen study, the top human food trends for the pet food industry in 2018 are:

- full disclosure as consumers demand transparency;
- self-fulfilling practices that include the health benefits of owning a pet and the health benefits of their food;
- a new era of personalized shopping, such as e-commerce and home delivery; and
- an aversion to genetically modified organisms and other bioengineered food ingredients.

"It's not just about the pet anymore, it's about the pet parent," Law concluded.

Mike Rath, also of Darling Ingredients, focused on the federal Renewable Fuel Standard (RFS) and what it means for the rendering industry. Increased compliance costs along with loss of export markets and greater trade barriers for animal fats and proteins has US renderers looking for alternative markets, which is where renewable fuels has stepped in. Signed into law in 2007, the RFS is designed to increase the use of renewable fuels in the US fuel supply to help reduce emissions and create energy independence. Biodiesel and renewable diesel both use animal fats and used cooking oil as feedstocks that have experienced increased domestic usage as the RFS fuel volume obligations have been raised over the years.

Dr. B.J. Bench, Tyson Foods, spoke on oxidation of rendered products, which is the breakdown of organic compounds. He shared that the challenges for the industry are understanding degradation, antioxidants, and laboratory results. Bench and Tyson Foods are leading an initiative with other NRA renderer

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members and several laboratories, pet food companies, and universities to validate peroxide value fat extraction and testing methods.

"We need standardization through collaboration," Bench commented. $% \label{eq:comment} % \l$

Allyson Jones-Brimmer, Animal Agriculture Alliance, showed ways the industry can adapt to rising social pressures, such as those consumers who are hungry to learn more about where their food comes from. She noted that communication and transparency are important to maintaining customer, community, and consumer confidence, and put a face on animal agriculture and rendering operations in an effort to make emotional connections, such as showing photos of employees, family farms, and products on company websites. Most of all, Jones-Brimmer said the rendering industry needs to tell its sustainability story, including how rendering repurposes and reuses as much of the animal as possible.

"Share how there is more to a cow than milk and steaks, and more to a pig than chops and bacon" using infographics, she remarked, many of which are available on Animal Agriculture Alliance's Facebook page.

NRA's Meeker echoed rendering's sustainable message, adding that sustainable ingredient sourcing for livestock feed or pet food must include rendered products, which are produced safely under regulatory standards. NRA's Dr. Jessica Meisinger highlighted the activities of a newly established Pet Food Alliance that will focus on uniting members of the pet food and rendering industries to address challenges such as:

- oxidation and maintenance of product quality;
- Salmonella and other threats to product safety;
- consumer perception; and
- industry sustainability.

Dr. Merlin Lindemann, University of Kentucky, talked about rendered products from a nutritional standpoint. A growing population of over nine billion people worldwide by 2050 will desire more food-producing animals that will need safe feed ingredients. Lindemann noted that animal protein meals are a natural source of digestible amino acids, phosphorous, and metabolizable energy that can help lower diet formulation costs. In addition, including animal proteins in a chicken's diet is keeping with the animal's natural behavior.

Finishing out the rendering symposium with a view on a changing import/export climate was NRA's Kent Swisher, who showed an expected 13 to 14 percent growth in US rendered proteins and fats over the next 10 years based on USDA meat production projections. Swisher explained that historically, a rise in meat production leads to an increased demand for rendered products, yet in the past few years an all vegetarian poultry diet movement has meant less animal protein meals being used domestically thus reducing prices. This resulted in more US proteins being exported in 2016, especially to China, which is a large poultry producer along with Mexico.

"Markets are changing," Swisher commented. "Animal proteins were primarily used domestically and fat was exported. Now that has flipped due to the domestic biofuels industry using tallow, yellow grease, and used cooking oil and poultry's push for all-veg diets." His takeaway message is there is a domestic protein glut that needs a home in the export market. **R**

World Feed Production Stays above 1 Billion Metric Tons

The 2018 Alltech Global Feed Survey estimates that international feed tonnage has exceeded 1 billion metric tons (MT) for the second consecutive year, with a total of 1.07 billion MT produced in 2017. The feed industry, valued at \$430 billion, has seen 13 percent growth over the past five years for an average of 2.5 percent per annum.

The seventh edition of the annual survey is the most comprehensive, covering 144 countries and more than 30,000 feed mills. China and the United States remain the top two countries, producing one-third of all animal feed, and that predominant growth came from the pig, broiler, and dairy feed sectors as well as the European and Asia-Pacific regions. The top seven feed-producing countries in 2017, in order of production output importance, were China, the United States, Brazil, Russia, Mexico, India, and Spain. These countries contain approximately 54 percent of the world's feed mills and account for 53 percent of total production.

US Hide, Skin, and Leather Exports Increase in 2017

The United States (US) hide, skin, and leather industry exported more than \$2.08 billion in cattle hides, pig skins, and semi-processed leather products in 2017, a \$40 million increase over 2016. US hides and skins companies – including producers, processors, brokers, and dealers – regularly export more than 90 percent of total US production of these products and are one of the top raw material suppliers to the global leather manufacturing industry.

According to US Department of Agriculture data, exports of wet salted cattle hides (cattle hides that have been preserved using brine solutions) reached nearly \$1.48 billion in value, a six percent increase from 2016 levels. Meanwhile, exports of wet blue cattle hides (semi-processed hides that have undergone the first stages of leather tanning) fell seven percent from 2016, totaling \$656 million in value. Lower market prices for US hides and wet blues in 2017 were offset by a five percent increase in cattle slaughter for the year, making more hides available at a lower price per piece.

China was the largest buyer of salted cattle hides, with imports valued at more than \$871 million, while Italy was the single largest destination for wet blue cattle hides, with imports valued at more than \$216 million in 2017. Other large export markets included South Korea, Mexico, Taiwan, and Vietnam.

US pigskin exports showed significant gains, rising 48 percent in value to \$48.6 million in 2017. Mexico was the largest market for US pigskins with Thailand and Taiwan rounding out the top three destinations. Together, all three countries accounted for the vast majority of US pigskin exports. Significant gains were also seen in exports to China, which increased to \$1.4 million in value. The United States regained full market access for pigskin exports to China in 2015.

Export data continues to show that global leather consumption remains sluggish, including reduced leather utilization in footwear globally. ${\bf R}$



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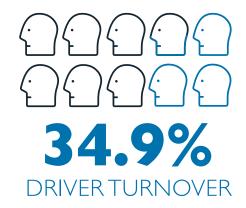
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Vice President:

Ken Kage Darling Ingredients Inc. 303-295-7551

2018 Active Members

Producers of animal fats and proteins

American Proteins Inc. -Headquarters

4705 Leland Drive Cumming, GA 30041 www.americanproteins.com Contact: Stan Gudenkauf Phone: 770-886-2250 Fax: 770-886-2296 Email: 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 Email: brandon.kyzar@ amprot.com Products: CM,PB,PF,PM,SF Region: Eastern

American Proteins Inc. -

Cumming Division 4990 Leland Drive Cumming, GA 30041 Contact: Jonathan Green Phone: 770-887-6148 Fax: 770-889-2820 Email: 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 Email: jason.spann@ amprot.com Products: SF,PB,FM Region: Eastern

American Proteins Inc. -

Ampro Division 2305 O'Kelly Drive Gainsville, GA 30501 Contact: Scott Duchette or Bryan Kattelmann Phone: 770-535-6646 Fax: 770-535-7207 Email: e.scottduchette@ amproproducts.com, bryan.kattelmann@ amproproducts.com Products: Animal protein blends Region: Eastern

American Proteins Inc. -

APF&O Division Rt 1 Box 150, Hwy 82 East Cuthbert, GA 39840 Contact: Brian White Phone: 770-886-2250 Fax: 770-886-2292 Email: brian.white@ amprot.com Products: Fat blends Region: Eastern

Product code key:

Blender - Fat and Proteins BLF Blender of Fat Blender of Protein Blood Meal BM BR Broker Chemicals Chicken Meal CH CM CN Consultant Choice White Grease CWG

Dry Rendered Tankage

EΩ Equipment Edible Tallow ΕT Exporter Fatty Acids **FGAF** Feed Grade Animal Fat FΜ Feather Meal ΗΙ Hide IN Insurance

LG Lard/Grease Laboratory/Testing Meat and Bone Meal MM Meat Meal

Poultry By-product Meal Poultry Fat

РΒ PM Poultry Meal RF Refined Fats

SF Stabilized Animal Fats SS Samplers and Surveyors Storage Terminals Tallow and Grease Yellow Grease



APC Inc.

The Lauridsen Group, Inc. 2425 SE Oak Tree Court Ankeny, IA 50021 www.functionalproteins.com Contact: Jerry Frankl Phone: 515-289-7600 Fax: 515-289-4360 Email: jerry.frankl@ functional proteins.com Products: Spray-dried blood and plasma products Region: Central

APC Inc. - Arion 2248 Lincoln Way Arion, IA 51520 Contact: Andy Etnyre Phone: 515-289-7688 Fax: 712-263-6772 Email: andy.etnyre@ functional proteins.com Products: Spray-dried blood and plasma products Region: Central

APC Inc. - Boone 2621 Mamie Eisenhower Ave. Boone, IA 50036 Contact: Andy Etnyre Phone: 515-289-7688 Fax: 712-263-6772 Email: andy.etnyre@ functional proteins.com Products: Spray-dried blood and plasma products Region: Central

APC Inc. - Dubuque 1300 Inland Lane P.O. Box 1398 Dubuque, IA 52003 Contact: Andy Etnyre Phone: 515-289-7688 Fax: 712-263-6772 Email: andy.etnyre@ functional proteins.com Products: Spray-dried blood and plasma products Region: Central

APC Inc. - Selma 1451 West Noble Street Selma, NC 27576 Contact: Andy Etnyre Phone: 515-289-7688 Fax: 712-263-6772 Email: andy.etnyre@ functional proteins.com Products: Spray-dried blood and plasma products Region: Central

APC Inc. - Sublette 1197 US Highway 83 Sublette, KS 67877 Contact: Andy Etnyre Phone: 515-289-7688 Fax: 712-263-6772 Email: andy.etnyre@ functional proteins.com Products: Spray-dried blood and plasma products Region: Central

Boyer Valley Company

LGI Company 2425 S.E. Oak Tree Court Ankeny, IA 50021 www.boyervalley.com Contact: Walter Lauridsen Phone: 515-289-7600 Fax: 515-289-4369 Email: walter.lauridsen@ boyervalley.com Products: PBM,BM,FM,YG 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 Email: jandreoli@ bakercommodities.com Products: EX,RF,SF,TG,HI,MM, MB,FGAF,ST Region: Western

Baker Commodities Inc. -

Billerica P.O. Box 132 No. Billerica, MA 01862 Contact: Walter Gurschick Phone: 978-454-8811 Fax: 978-454-0448 Email: waurschick@ 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: Paul Tower Phone: 808-682-5844 Fax: 808-682-4389 Email: ptower@ bakercommodities.com Products: TG,MB Region: Western

Baker Commodities Inc. -

Kerman P.O. Box 416 Kerman, CA 93630-0487 Contact: Manuel Ponte Phone: 559-846-9393 Fax: 559-846-7671 Email: mponte@ bakercommodities.com Products: EX,FGAF,HI,MB,SF,TG 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 Email: swang@ bakercommodities.com Products: EX,RF,SF,TG,HI,MM, MB,FGAF,ST

Region: Western

Baker Commodities Inc. -

Phoenix P.O. Box 6518 Phoenix, AZ 85005 Contact: Beverly Norris Phone: 602-254-5971 or 602-275-3402 Fax: 602-272-1846 Email: bnorris@ bakercommodities.com Products: TG,MM,MB,SF,FGAF Region: Western

Baker Commodities Inc. -

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

Baker Commodities Inc. -

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

Baker Commodities Inc. -

Spokane P.O. Box 11157 Spokane, WA 99211-1157 Contact: Joe Jacobson Phone: 509-535-5435 Fax: 509-536-3817 Email: jjacobson@ bakercommodities.com Products: SF,TG,HI,MB Region: Western

BHT ReSources

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

Caraill Meat Solutions Inc. - Headquarters

Excel Corporation P.O. Box 2519 Wichita, KS 67201 www.excelmeats.com Contact: Dan Schaefer Phone: 316-291-3409 Email: daniel schaefer@ cargill.com Products: EX.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: Mario Rivera Phone: 303-867-1540 Fax: 303-867-1564 Email: mario rivera@ cargill.com 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 -

Schuyler P.O. Box 544 Schuyler, NE 68661 Contact: Dave Limbach Phone: 402-352-5411 Fax: 402-352-8334 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 Regional Beef**

P.O. Box 188 Wyalusing, PA 18853 Contact: Lisa Kerr-House Phone: 570-746-9224, x7347 Fax: 570-746-1235

Email: lisa kerr-house@ 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 www.fuillc.com

Contact: Jerry Lupkes Phone: 507-641-3831 Fax: 507-637-5409 Email: jlupkes@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: Tom Beseman Phone: 320-732-2819 Fax: 507-637-5409

Email: tbeseman@centralbi.com Products: FM,PB,SF,TG,HI,MM, MB,PM,BFP,FGAF,BM,OT(Pet food)

Region: Central

Central Bi-Products

Farmers Union Industries LLC 1842 Highway 4 Estherville, IA 51334 Contact: Sheldon Andrews Phone: 712-362-2901 Email: sandrews@centralbi.com Products: FM,PB,SF,TG,HI,MM, MB,PM,BFP,FGAF,BM,OT(Pet food)

Region: Central

Darling Ingredients Inc. -Headauarters

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

Darling Ingredients Inc.

P.O. Box 615 Des Moines, IA 50306 www.darlingii.com Phone: 515-288-2166 Fax: 515-288-1007 Region: Central, Western,

Eastern

Darling Ingredients Inc.

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

Rothsay

A Division of Darling

International Canada Inc. 150 Research Lane, Suite 307 Guelph, ON, N1G 4T2 Canada

www.rothsay.ca Phone: 519-780-3342 Fax: 519-780-3360 Region: Central

Terra Renewal

Part of Darling Ingredients Inc. 4221 Alexandria Pike Cold Spring, KY 41076 www.terrarenewal.com Phone: 479-668-4503 Region: Central

For rendered fat sales

DAR PRO Ingredients, a Darling Brand

www.darpro-ingredients.com Contact: Michael Rath Phone: 800-669-1209 Fax: 972-717-1959 Email: fats-proteins@ darpro.com Products: BLF,BR,CN,DL,EQ,ET, EX,FGAF,HI,LT,RF,SF,ST,TG,YG, OT (bio-based diesel)

For rendered protein sales

DAR PRO Ingredients, a Darling Brand

www.darpro-ingredients.com Contact: Doyle Nauman Phone: 877-659-8438 Fax: 859-781-2569 Email: fats-proteins@ 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

www.darpro-solutions.com Contact: Todd Mathes Phone: 972-717-0300 Fax: 972-717-1588 Email: recyclingservices@ darpro.com

Rousselot

Part of Darling Ingredients Inc. 1231 S. Rochester Street, Suite 250 Mukwonago, WI 53149 www.rousselot.com Contact: Lawrence Jeske Phone: 262-363-6051 Fax: 262-363-2789 Email: larry.jeske@ darlingii.com Products: Gelatin, hydrolyzed collagen

Sonac USA LLC

Part of Darling Ingredients Inc. 1299 E. Maple Street Maguoketa, IA 52060 www.sonac.biz Contact: Ryan Tranel Phone: 563-690-1168 Fax: 563-652-6633 Email: ryan.tranel@ darlingii.com Products: Spray-dried blood and plasma products, gelatin, hydrolyzed collagen, protein isolates, other functional proteins Region: Central

Foster Farms

P.O. Box 457 Livingston, CA 95334 www.fosterfarms.com Contact: Dennis Richmond Phone: 318-368-4344 Fax: 318-368-4310 Email: dennis.richmond@ fosterfarms.com Products: PM,FM,PF,CM,OT (organic fertilizers) Region: Western

G.A. Wintzer & Son Co.

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

Gelita USA Inc.

Region: Eastern

Gelita AG 2445 Point Neal Road Sergeant Bluff, IA 51054 www.gelita.com Contact: Gina Swanson Phone: 712-943-0310 Fax: 708-891-8432 Email: gina.swanson@ gelita.com

Products: Gelatine,Hydrolyzed callagen

Region: Central

Gelita USA Inc.

P.O. Box 927 Sioux City, IA 51102 www.gelita.com Contact: Tonya Hanson Phone: 712-943-5516 Fax: 712-943-3372 Email: tonya.hanson@ gelita.com Products: MB,SF,Gelatine Region: Central

Hardy Industrial Technologies

Magnus International Group 16533 Chillicothe Road Chagrin Falls, OH 44023 Contact: Bret Ayers Phone: 216-592-8355 Fax: 216-592-8407 Email: bayers@magnusig.com Products: SF,TG,FA,RF 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 55912-3680 Contact: Mike Vandertie Phone: 507-437-5207 Email: mdvandertie@ 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 Email: 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: John Peterson Phone: 402-753-3302 Fax: 402-721-0445 Email: jspeterson@hormel.com Products: MB,HI,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 Email: jim.fisher@jbssa.com Products: TG,RF,HI,MBM,BM,EX Region: Western

Plant locations

JBS Swift & Company

800 N. 8th Avenue Greeley, CO 80634 Contact: Keith Neddermeyer Phone: 970-304-7247 Fax: 970-304-7320 Email: keith.neddermeyer@ ibssa.com

Products: TG,HI,MB,BM,EX

Region: Western

JBS Swift & Company

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

Email: steve.caravan@jbssa.com Products: TG,HI,MB,BM,EX

Region: Central

JBS Swift & Company

P.O. Box 524 Dumas, TX 79029 Contact: Needham Carswell Phone: 806-966-5103 Fax: 806-966-5481 Email: needham.carswell@

ibssa.com

Products: TG,HI,MB,BM,EX

Region: Central

JBS Swift & Company

1200 Story Avenue Louisville, KY 40206 Contact: Dave Dewitt Phone: 502-582-0235 Fax: 502-582-6295 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 Email: 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 Email: kevin.schweigert@

ibssa.com

Products: TG,MBM,BM Region: Central

Mountain View Rendering Company

JBS Souderton Inc. 173 Rocco Road Edinburg, VA 22824 Contact: Jason Janita Phone: 540-984-4158 ext. 239 Fax: 540-984-4159 Email: jason.janita@jbssa.com Products: SF,FM,PB,PF,BM, FGAF,OT Region: Eastern

JBS - MOPAC

JBS Souderton Inc. P.O. Box 64395 Souderton, PA 18964 Contact: Ken Gilmurray Phone: 215-703-6085 Email: ken.gilmurray@ jbssa.com Products: BLF,BLP,FGAF,SF,TG, EX,LT,MB,PB,BM Region: Eastern

JBS Packerland Tolleson

651 S. 91st Avenue Tolleson, AZ 85353 Contact: Jeremy Eatherton Phone: 970-506-8355 Email: jeremy.eatherton@ ibssa.com Products: DT,HI,MB,SF,TG

Region: Western

JBS Packerland **Green Bay**

P.O. Box 23000 Green Bay, WI 54305 Contact: Jim Holly Phone: 970-506-8355 Products: DT,HI,MB,SF,TG Region: Central

Pilgrim's Pride Corp. -Rendering Headquarters

P.O. Box 1268 Mt. Pleasant, TX 75456 www.pilgrims.com Contact: Mark Glover Phone: 903-434-1190 Fax: 972-290-8345 Email: mark.glover@ 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: Hal Davis Phone: 540-901-6130 Fax: 540-901-6181

Email: hal.davis@pilgrims.com Products: SF,PM,FM,PB,PF

Region: Eastern

Region: Eastern

Pilgrim's Pride Corp. -

Moorefield 129 Potomac Avenue Moorefield, WV 26836 Contact: Hal Davis Phone: 304-538-7834 Fax: 304-538-3540 Email: hal.davis@pilgrims.com Products: SF,PM,FM,PF,PB

Pilgrim's Pride Corp. -

Mt. Pleasant 1220 Pilgrim Street Mt. Pleasant, TX 75455 Contact: Bill Welborn Phone: 903-575-3284 Fax: 903-575-3911 Email: bill.welborn@ pilgrims.com Products: SF,PM,FM,BM,PB,PF Region: Central

Pilgrim's Pride Corp. -

Sumter 2050 Highway 15 South Sumter, SC 29150-8799 Contact: Nick Wilen Phone: 803-481-6265 Fax: 803-481-4263 Email: nick.wilen@ 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 Email: 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 www.krugerinc.com Contact: James H. Kruger Phone: 402-896-1324 Fax: 402-896-1784 Email: jim@krugerinc.com Region: Central

Kruger Commodities, Inc.

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

KCI Restaurant Services

Kruger Commodities Inc. 4125 Dahlman Avenue Omaha, NE 68107 Contact: Scott Ethridae Phone: 402-898-4700 Fax: 402-898-4702 Products: YG 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: DT,TG,YG Region: Central

Maple Lodge Farms Ltd.

8301 Winston Churchill Blvd. Brampton, ON, L6Y 0A2 Canada Contact: David Willison Phone: 905-455-8340 x 2359 Fax: 905-455-8370

Email: dwillison@ maplelodgefarms.com Products: SF,PB,FM Region: Eastern

Mendota Agri-Products Inc. - Headquarters

712 Essington Road Joliet, IL 60435 www.mendotaagriproducts.com Contact: John Mahoney Phone: 815-730-2080 Fax: 815-730-2087 Email: johnm@ mahoneyes.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 www.mendotaagriproducts.com Contact: John Setchell Phone: 815-539-5633 Fax: 815-539-7943 Email: johns@mendag.com Products: BLF,DT,FGAF,SF,TG,

MB,YG Region: Central

Mahoney Environmental

712 Essington
Joliet, IL 60435
www.mahoneyenvironmental.com
Contact: Rick Sabol
Phone: 815-302-3912
Fax: 815-730-2087
Email: ricks@mahoneyes.com
Product codes: BLF,FGAF,LG,
YG,TG

Mountaire Farms of Delaware

Mountaire Corporation P.O. Box 1320 29093 John J. Williams Hwy Millsboro, DE 19966 www.mountaire.com Contact: Brian Schoeberl Phone: 302-934-4178 Fax: 302-934-3445 Email: bschoeberl@ mountaire.com Products: SF,PB,FM Region: Eastern

National Beef Packing Company LLC -Headquarters

P.O. Box 20046
Kansas City, MO 64195-0046
www.nationalbeef.com
Contact: Doyle Leefers or
Tyler Nicholson
Phone: 800-449-2333
Fax: 816-713-8859
Email: doyle.leefers@
nationalbeef.com or
tyler.nicholson@
nationalbeef.com
Products: SF,TG,HI,MM,MB,
BM,EX

National Beef - Dodge City 2000 E. Trail Street Dodge City, KS 67801 Contact: Randy Lyle or Mike Clayton Phone: 620-227-7135 Fax: 620-338-4339 Email: randy.lyle@

nationalbeef.com or mlclayton@nationalbeef.com Products: SF,TG,HI,MM,MB,

BM,EX Region: Central

Region: Central

National Beef - Liberal

P.O. Box 978 Liberal, KS 67905 Contact: Austin Boggs Phone: 620-626-0692 Email: austin.boggs@ nationalbeef.com

Products: SF,TG,HI,MM,MB,

BM,EX Region: Central

Nutri-Feeds Inc.

101 SE 11th Avenue Amarillo, TX 79101 Contact: Garth Merrick Phone: 806-350-5525 Fax: 806-357-2292 Email: garth@ merrickpetcare.com Products: TG,MB Region: Central

Protein Products Inc. -Headquarters

P.O. Box 2974
Gainesville, GA 30503
www.proteinproductsinc.com
Contact: Jeff Gay
Phone: 770-536-3922
Fax: 770-536-8365
Email: jeffg@ppicorp.com
Products: Fish meal and fish oil
Region: Eastern

Protein Products Inc.

1042 Highway 3 Sunflower, MS 38778 www.proteinproductsinc.com Contact: Eric Hilley Phone: 770-536-3922 Fax: 770-536-8365 Email: erich@ppicorp.com Region: Eastern

Sacramento Rendering Company

SRC Companies 11350 Kiefer Boulevard Sacramento, CA 95830 Contact: Michael Koewler Phone: 916-363-4821 Fax: 916-363-8641 Email: 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

Sanimax - Headquarters

9900 Maurice-Duplessis Montreal, QB, H1C 1G1 Canada www.sanimax.com Contact: Martin Couture Phone: 514-648-6001 or 888-495-9091 Fax: 514-648-3013 Email: info@sanimax.com Region: Eastern

Sanimax

P.O. Box 45100 2001 Avenue de La Rotonde Charny, QB, G6X 3R4 Canada www.sanimax.com Contact: Vincent Brossard Phone: 418-832-4645, x3190 Fax: 418-832-6995 Email: 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 www.sanimax.com Contact: Eric Caputo Phone: 514-648-6001, x3249 Fax: 514-648-0597 Email: info@sanimax.com Products: EX,FM,PB,SF,TG,BM, RF,FGAF,BLF,HI,PM Region: Eastern

Sanimax

P.O. Box 10067
2099 Badgerland Drive
Green Bay, WI 54303
www.sanimax.com
Contact: Donn Johnson
Phone: 920-494-5233
Fax: 920-494-9141
Email: info@sanimax.com
Products: EX,SF,TG,HI,DT,FGAF,MB,BFP
Region: Central

Sanimax

505 Hardman Avenue South St. Paul, MN 55075 www.sanimax.com Contact: Donn Johnson Phone: 651-451-6858 Fax: 651-451-6542 Email: 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
www.sanimax.com
Contact: Donn Johnson
Phone: 920-494-5233
Fax: 920-494-9141
Email: info@sanimax.com
Products: SF,TG,FGAF
Region: Central

Simmons Feed Ingredients

10700 S. State Highway 43 Southwest City, MO 64863 www.simmonsfeedingredients.com Contact: Ken Wilson Phone: 417-762-3001 Fax: 417-762-3867 Email: ken.wilson@ simfoods.com Products: SF,PB,PM,FM Region: Central

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

Smithfield - Clinton 424 E. Railroad Street Clinton, NC 28328 Contact: Andrew Jordan Phone: 910-385-7751 Fax: 910-299-3001 Email: ajordan@ smithfield.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Eastern

Smithfield - Crete 2223 County Road I Crete, NE 68333 Contact: Henry Jaimes Phone: 402-826-8885 Email: hjaimes@smithfield.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Central

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

Smithfield - Kansas City 11500 NW Ambassador Drive Kansas City, MO 64195 Contact: Austin Angel Email: aangel@smithfield.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Central Smithfield - Milan 22123 Highway 5 Milan, MO 63556 Contact: Gary Banner Phone: 660-865-4061 Email: gbanner@ smithfield.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Central

Smithfield - Monmouth 1220 N. 6th Street Monmouth, IL 61462 Contact: Scott Peel Phone: 309-299-4753 Email: speel@smithfield.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Central

Smithfield Foods - North 501 N. Church Street Smithfield, VA 23430 Contact: Scott Piper Phone: 910-818-2924 Email: spiper@smithfield.com Products: SF,RF,HI,LG,MM,MB, BM,EX,OT(Heparin, plasma, runners, hydrolized hog hair) Region: Eastern

Smithfield - Sioux Falls 1400 N. Weber Avenue Sioux Falls, SD 57103 Contact: Don Johnson Phone: 605-330-3295 Email: djohnson@ smithfield.com Products: BFP,TG,FGAF,MM, EX,OT(Pet food meat products) Region: Central

Smithfield - Tar Heel
15855 Highway 87 West
Tar Heel, NC 28392
Contact: Ted Stafford
Phone: 910-879-5758 ext. 758
Email: tstafford@
smithfield.com
Products: SF,RF,HI,LG,MM,MB,
BM,EX,OT(Heparin, plasma,
runners, hydrolized hog hair)
Region: Eastern

Smithfield - Vernon 3049 E. Vernon Avenue Los Angeles, CA 90058 Contact: Gregg Redd Phone: 757-635-7782 Email: gredd@smithfield.com Products: SF,MB,BM,Lard Region: Western

Coastal Protein

1600 Martin Road Godwin, NC 28344 Contact: Blake Bullard Phone: 910-567-5604 Email: bbullard@ coastalproteins.com Products: MM,LG Region: Eastern

Pine Ridge Farms

1800 Maury Street Des Moines, IA 50317 Contact: Brady Stewart Phone: 515-266-4100 Email: bstewart@ pineridgefarmspork.com Products: MM,LG Region: Central

South Chicago Packing Company

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

Tyson Foods Inc. -Headquarters

2200 Don Tyson Parkway, CP721 Springdale, AR 72762 www.tyson.com Contact: Bo Watson Phone: 479-290-2897 Email: 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 393 S Scranton, AR 72863 Contact: Jim Rofkahr Phone: 479-938-2025 Fax: 479-757-7731

RVAF - Sedalia 20003 Menefee Road Sedalia, MO 65301 Contact: Ben Wilson Phone: 660-826-7071 x1 Fax: 660-826-7119 Email: benjamin.wilson@ tyson.com

RVAF - Seguin 1200 W. Kingsbury Street Seguin, TX 78155 Contact: Keith Yovonavich 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 5465 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

Email: bob.bestgen@tyson.com or kim.broekemeier@tyson.com

Plant locations

Beef sites: Amarillo, TX Dakota City, NE Holcomb, KS Joslin, IL Lexington, NE Pasco, WA

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

Valley Proteins Inc. -Headquarters

P.O. Box 3588
Winchester, VA 22604-2586
www.valleyproteins.com
Contact: Gerald F. Smith Jr.
Phone: 540-877-2590
Fax: 540-877-3210
Email: jismith@
valleyproteins.com
Products: BFP,BM,CM,EX,FGAF,FM,HI,MM,PF,PM,SF,TG,YG,OT(Pet food meat products, turkey meal)
Region: Eastern

Valley Proteins Inc. -

Amarillo Division 8415 S.E. 1st Avenue Amarillo, TX 79118-7302 Contact: Tom Green Phone: 540-877-2590 Fax: 806-374-1207 Email: tgreen@ valleyproteins.com Region: Central

Valley Proteins Inc. -

Baltimore Division 1515 Open Street Baltimore, MD 21226 Contact: Robert Hutson Phone: 540-877-2590 Fax: 410-355-3095 Email: rhutson@ valleyproteins.com Region: Eastern

Valley Proteins Inc. -

Fayetteville Division 1309 Industrial Drive Fayetteville, NC 28301 Contact: Jason Wright Phone: 540-877-2590 Fax: 910-213-1140 Email: jwright@ valleyproteins.com Region: Eastern

Valley Proteins Inc. -

Gastonia Division 5533 S. York Road Gastonia, NC 28052 Contact: Matthew Beadle Phone: 540-877-2590 Fax: 704-861-9252 Email: mbeadle@ valleyproteins.com Region: Eastern

Valley Proteins Inc. -

Knoxville Division 9300 Johnson Road Strawberry Plains, TN 37871 Contact: Bobby Watson Phone: 540-877-2590 Fax: 865-932-5713 Email: rwatson@ valleyproteins.com Region: Eastern

Valley Proteins Inc. -

Lewiston Division P.O. Box 10 Lewiston, NC 27849 Contact: Mike Anderson Phone: 540-877-2590 Fax: 252-348-2389 Email: manderson@ valleyproteins.com Region: Eastern

Valley Proteins Inc. -

Linkwood Division 5420 Linkwood Road Linkwood, MD 21835 Contact: Reed Parks Phone: 540-877-2590 Fax: 410-228-9389 Email: rparks@ valleyproteins.com Region: Eastern

Valley Proteins Inc. -

Linville Division 6230 Kratzer Road Linville, VA 22834 Contact: Hobie Halterman Phone: 540-833-2007 Fax: 540-833-6504 Email: hhalterman@ valleyproteins.com Region: Eastern

Valley Proteins Inc. -

Oklahoma Division 2228 S. Santa Fe Avenue Okalahoma City, OK 73109 Contact: Shayne Bartlett Phone: 540-877-2590 Fax: 405-235-9960 Email: sbartlett@ valleyproteins.com Region: Central

Valley Proteins Inc. -

Rose Hill Division
P.O. Box 1026
469 Yellow Cut Road
Rose Hill, NC 28458
Contact: Steve Lester
Phone: 540-877-2590
Fax: 910-289-3312
Email: slester@
valleyproteins.com
Region: Eastern

Valley Proteins Inc. -

Terre Hill Division 693 Wide Hollow Road East Earl, PA 17519 Contact: John Hamzik Phone: 540-877-2590 Fax: 717-445-6379 Email: jhamzik@ valleyproteins.com Region: Eastern

Valley Proteins Inc. -

Veribest Division 8394 FM 380 San Angelo, TX 76905 Contact: Ronnie Meine Phone: 540-877-2590 Fax: 325-659-3823 Email: rmeine@ valleyproteins.com Region: Central

Valley Proteins Inc. -

Wadesboro Division P.O. Box 718 Wadesboro, NC 28170 Contact: Chris Bivans Phone: 540-877-2590 Fax: 704-694-6145 Email: cbivans@ valleyproteins.com Region: Eastern

Valley Proteins Inc. -

Ward Division 271 Val-Pro Road Ward, SC 29166-9801 Contact: Shannon Owen Phone: 540-877-2590 Fax: 803-685-2591 Email: sowen@ valleyproteins.com 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
Email: rgolightly@
valleyproteins.com
Region: Eastern

West Coast Reduction Ltd. - Headquarters

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

West Coast Reduction Ltd.

Vancouver Plant Operations
105 Commercial Drive North
Vancouver, BC, V5L 4V7
Canada
Contact: Doug Davidson
Phone: 604-255-9301
Fax: 604-255-1803
Email: 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

West Coast Reduction

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

West Coast Reduction

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

West Coast Reduction

Ltd. - Saskatoon 3018 Miners Avenue Saskatoon, SK, S7K 4Z8 Canada www.wcrl.com Contact: Geoff Smolkin/Dale Steinbach Phone: 306-934-4887 Fax: 306-934-3364 Email: info@wcrl.com Products: EX,FM,PB,SF,TG,MB, DT,BM,ST,FGAF,BLF,HI,RF,YG, Fish meal Region: Western

Western Mass. Rendering Co. Inc.

94 Foster Road Southwick, MA 01077 www.westernmassrendering.com Contact: David T. Plakias Phone: 413-569-6265 Fax: 413-569-6512 Email: 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.

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South Chicago Packing Co 26	Tyson Foods Inc RVAF 26		
Tyson Fresh Meats			

2018 Associate Members

Brokers of fats and proteins, equipment manufacturers, and firms serving the rendering industry

Air/Water Treatment

Aulick Chemical Solutions

P.O. Box 127
Nicholasville, KY 40340
www.aulickchemical.com
Contact: Jesse Chula
Phone: 859-881-5422
Fax: 859-881-8194
Email: jchula@
aulickchemical.com
Products: H2S elimination, odor
control, wastewater treatment
Region: Eastern

Chem-Aqua Inc.

NCH Corporation 2727 Chemsearch Boulevard Irving, TX 75062 www.chemaqua.com Contact: Jay Wilkison Phone: 478-731-0184 Email: jay.wilkison@nch.com Contact: Mike Gruver Phone: 641-455-6635 Email: mike.gruver@nch.com Products: Water treatment Region: Central, Western

ChemE Solutions Inc.

816 E. Lakeshore Drive Lake Stevens, WA 98258 www.chemesolutions.com Contact: Geoff Stensland Phone: 206-817-6667 Email: geoff@ chemesolutions.com Region: Western

Chemtron Corporation

3500 Harry S. Truman
Boulevard
St. Charles, MO 63301
www.chemtroncorporation.com
Contact: Joe Schott
Phone: 800-940-5445
Fax: 636-940-0773
Email: orders@
chemtron.h2o.com
Region: Central

Clean Water Technology Inc.

151 W. 135th Street Los Angeles, CA 90061 www.cleanwatertech.com Contact: Colette Lukasiewicz Phone: 310-380-4648 x4526 Email: ctassin@ cleanwatertech.com Region: Western

FRC - A JWC Environmental Brand

P.O. Box 3147 Cumming, GA 30028 www.jwce.com Contact: Leah Surber Phone: 770-534-3681 Fax: 770-783-8632 Email: leahd@jwce.com Products: Dissolved air flotation equipment, screens Region: Eastern

Kusters Water

Kusters Zima Corporation P.O. Box 6128 Spartanburg, SC 29304 www.kusterszima.com Contact: Bill Guarini Phone: 864-576-0660 Fax: 864-587-5761 Email: bill.guarini@ kusterszima.com Region: Eastern

LANXESS Corporation

111 RIDC Park West Drive Pittsburgh, PA 15227 www.lanxess.com Contact: Jeannie McClaning Phone: 412-310-1831 Email: jeannie.mcclaning@ lanxess.com Region: Eastern

SCP Control Inc.

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

Steen Research LLC

19363 Willamette Drive, Suite 235 West Linn, OR 97068 Contact: Steve Temple Phone: 408-828-8177 or 503-722-9088 Fax: 503-722-1336 Email: stemple@ steenresearch.com Region: Western

VanAire Inc.

840 Clark Drive Gladstone, MI 49837 www.vanaireinc.com Contact: Mandy Iverson Phone: 906-428-2731 Fax: 906-428-9061 Email: aiverson@ vanaireinc.com Region: Eastern

Antioxidants

Ameri-Pac Inc.

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

Caldic USA

2425 Alft Lane Elgin, IL 60124 www.caldic.com Contact: Sandy Boston Phone: 913-302-0132 Email: sboston@caldic.us Region: Central

C.F. Zeiler & Company Inc.

8601 LaSalle Road, Suite 203 Towson, MD 21286 www.cfzeiler.com Contact: Patrick Higgins Phone: 410-828-7182 Fax: 410-828-7183 Email: phiggins@cfzeiler.com Region: Eastern

CFS North America LLC

Camlin Fine Sciences 3179 99th Street Urbandale, IA 50322 www.camlinfs.com Contact: Sandra Grossmann Phone: 515-423-9854 Email: sandra.grossmann@ camlinfs.com Region: Central

FoodSafe Technologies 94 East Jefryn Boulevard,

Unit H
Deer Park, NY 11729
www.foodsafetech.com
Phone: 631-392-1526
Fax: 631-392-1529
Email: render@
foodsafetech.com
Region: Eastern, Central

Kemin Nutrisurance Inc.

1900 Scott Avenue
Des Moines, IA 50317
www.kemin.com
Contact: Chris Gloger or
Kevin Custer
Phone: 281-615-7924 (Chris)
or 515-289-6842 (Kevin)
Email:
chris.gloger@kemin.com or
kevin.custer@kemin.com

Novus International Inc.

20 Research Park Drive St. Charles, MO 63304 Contact: Vanessa Stewart Phone: 314-550-1592 Fax: 314-576-6041 Email: vanessa.stewart@ novusint.com Region: Central

Peak Tech Inc.

Region: Central

P.O. Box 7 Jeffersonville, IN 47130 Contact: Jim Sparrow Phone: 812-283-6697 Fax: 812-283-0765 Email: jsparrow@pfauoil.com Region: Central

Videka

A Diana Pet Food & Kalsec Alliance 3713 West Main Street Kalamazoo, MI 49006 www.diana-group.com Contact: Kevin Meyle Phone: 800-323-9320 Fax: 269-382-3060 Email: kmeyle@kalsec.com Region: Eastern

Vitablend USA

Amtech/Barentz
1200 Hosford Street, Suite 204
Hudson, WI 54016
www.vitablend.nl
Contact: Yohann Hureau
Phone: 715-381-5746
Fax: 715-381-5745
Email: contact@
vitablend-usa.com
Region: Central

VRM Labs

109 Ash Court Easley, SC 29642 www.vrmlab.com Contact: Dr. David Meisinger

Contact: Dr. David Meisinger Phone: 515-975-3557 Email: meisinger@vrmlab.com Products: Specialty chemicals

Region: Central

Bulk Liquid Storage / Transportation

CST Storage

A Division of CST Industries Inc. 345 Harvestore Drive DeKalb, IL 60115 Contact: Tim O'Connell Phone: 815-220-5730 or 405-380-5410 Email: toconnell@ cst-storage.com Region: Central

Dupré Logistics LLC

201 Energy Parkway, Suite 500 Lafayette, LA 70508 www.duprelogistics.com Contact: Alfred Parker Phone: 504-812-8622 Email: aparker@ duprelogistics.com Region: Central

Dura Cast Products Inc.

16160 Hwv 27 Lake Wales, FL 33859 www.duracast.com Contact: Gabe Madlang Phone: 863-638-3200 Fax: 863-638-2443 Email: gmadlang@ duracast.com 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 Email: smartdispatcher2@ gmail.com Products: Transporters Region: Central

Stoller Trucking Inc.

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

Trans Ocean Bulk Logistics Solutions

10344 New Decade Drive Pasadena, TX 77507 www.transoceanbulk.com Contact: Brennan Spearman Phone: 713-449-0716 Email: b.spearman@ transoceanbulk.com Region: Central

Chemicals

Anderson Chemical Co.

325 S. Davis Litchfield, MN 55355 www.accomn.com Contact: Brett Anderson Phone: 320-693-2477 Fax: 320-693-7740 Email: bca@accomn.com Region: Central

BASF Corporation

11501 Steele Creek Road Charlotte, NC 28273 www.basf.com Contact: Scott Bryan Phone: 704-587-8044 Email: scott.bryan@basf.com Products: Water treatment Region: Eastern

Elkem Silicones

Bluestar Co. 2 Town Center Boulevard New Brunswick, NJ 08816 www.elkem.com Contact: Tom Stremlau Phone: 678-477-3366 Email: tom.stremlau@ elkem.com Region: Central

CCI

3540 East 26th Vernon, CA 90058 Contact: Joe Graffies Phone: 800-767-9112 Email: jgraffies@ ccichemical.com Region: Western

Chem-Tech Solutions Inc.

427 Brook Street Belmont, NC 28012 www.chemtechsolutions.com Contact: Tony Phillips Phone: 704-829-9202 Fax: 704-829-9203 Email: info@ chemtechsolutions.com Products: Degreasers/cleaners Region: Eastern

Impact Cleaning/DuBois Distribution

N8898 River Road Berlin, WI 54923 www.duboischemicals.com Contact: Dale Jezwinski Phone: 513-504-6036 Fax: 800-543-1720 Email: dale.jezwinski@ gmail.com Products: Degreasers/Cleaners for trucks, equipment, walls and floors, truck wash systems Region: Eastern, Central

Vantage Oleochemicals

4650 South Racine Avenue Chicago, IL 60609-3321 Contact: Jason Bettenhausen Phone: 773-376-9000 Fax: 773-376-1936 Email: jason.bettenhausen@ vantagegrp.com Products: Oleochemicals Region: Central

Commodity Brokers/ Traders

Agri Trading

P.O. Box 609 340 Michigan Street SE Hutchinson, MN 55350 www.agritradingcorp.com Contact: Kim Anderson Phone: 320-587-2133 or 320-583-3209 Fax: 320-587-5816 Email: kim.anderson@ agritradingcorp.com

Calpine Energy Solutions

130 Voyage Mall Marina del Rey, CA 90292 www.calpinesolutions.com Contact: Gene Owens Phone: 310-686-5702 Email: gene.owens@ calpinesolutions.com Products: Natural gas and power

Region: Western

Region: Central

Decom Inc.

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

E.B. Wakeman Company

408 S Main Street, Suite 220 Templeton, CA 93465 Contact: Gary Gibson Phone: 805-781-8475 Fax: 805-781-0516 Products: FM,PB,MB,TG,BR Region: Western

Gavilon Ingredients LLC

1331 Capitol Avenue Omaha, NE 68102-1106 www.gavilon.com Contact: Aaron Perkinson Phone: 402-889-4304 Fax: 402-221-0343 Email: 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 Email: 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 Email: bill.hurley@ hurlevbrokerage.com Products: BR,FM,PB,RF,SF,TF,ET, FGAF,MM,MB,DT Region: Central

Mini Bruno North America Inc.

Mini Bruno Sucesores C.A. 2483 Tracer Boulevard, 17th Floor Stamford, CT 06901 www.minibruno.us Contact: Alves Neri Phone: 203-422-2923 Fax: 203-422-0441 Email: aneri@minibruno.com Region: Eastern

Pasternak, Baum & Co. Inc.

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

Perdue Agribusiness LLC

6906 Zion Church Road Salisbury, MD 21804 www.perdueagribusiness.com/ animal-nutrition Contact: Darryl Betts Phone: 410-341-2598 Fax: 410-341-2603 Email: darryl.betts@ perdue.com Products: Poultry and dairy Region: Eastern

POET Nutrition

POET LLC 4506 N. Lewis Avenue Sioux Falls, SD 57104 www.poet.com Contact: Ashley Hummel Phone: 605-965-6232 Email: ashley.hummel@ poet.com Products: Fats and oils Region: Central

Sunbelt Commodities Inc.

P.O. Box 70006 Marietta, GA 30007-0006 Contact: Dave Haselschwerdt Phone: 770-578-8883 Fax: 844-269-8316 Email: dave@ sunbeltcommodities.com

Products: BR,TG,ET,FM,PB Region: Central

Third Coast Commodities LLC

220 N. Green Street Chicago, IL 60607 Contact: Paul Dickerson Phone: 800-869-5124 Fax: 847-589-0820 Email: paul@

thirdcoastcommodities.com Region: Central

Universal Green Commodities

11 Beacon Street, Suite 415 Boston, MA 02108 www.ugcinc.com Contact: Jamie O'Brien Phone: 617-742-1111 Fax: 888-782-5671 Email: j.obrien@ugcinc.com Region: Eastern

Wilbur-Ellis Feed Division

Wilbur-Ellis Company
2001 SE Columbia River Drive
Vancouver, WA 98661
www.wilburellis.com
Contact: Diane Kimmel
Phone: 360-816-0748
Fax: 360-892-4097
Email: dkimmel@
wilburellis.com
Region: Western

W.W.S. Inc.

4032 Shoreline Drive, Suite 2 Spring Park, MN 55384 www.wwstrading.com Contact: Brett Perry Phone: 952-541-9001 or 888-645-6328 Fax: 952-541-9206 Email: brett@wwstrading.com Products: Commodity merchandiser of fats, oils, and proteins Region: Central, Eastern, Western

Consultants

Bolton & Menk Inc.

1519 Baltimore Drive Ames, IA 50010 www.bolton-menk.com Contact: Greg Sindt Phone: 515-233-6100 Fax: 515-233-4430 Email: gregsi@ bolton-menk.com Products: Environmental engineering and permit services, wastewater treatment facility design and studies Region: Central

East Manufacturing Corp.

1871 State Route 44
Randolph, OH 44265
www.eastmfg.com
Contact: Chris Cooler
Phone: 330-325-8213
Fax: 330-325-7851
Email: ccoler@eastmfg.com
Products: Trailers

Energy Management Resources Inc.

Region: Eastern

6324 N. Chatham, Suite 166 Kansas City, MO 54151 www.emr-energy.com Contact: Ginger Needham Phone: 816-883-1000 Fax: 816-883-1001 Email: gneedham@ emr-energy.com Region: Central

GHD Services Inc. 7086 N. Maple Avenue,

Suite 101
Fresno, CA 93720
www.ghd.com
Contact: Michael Beerends or
Jason Haelzle
Phone: 559-326-5900
Fax: 559-326-5905
Email: michael.beerends@
ghd.com or
jason.haelzle@ghd.com

Reid Engineering Company Inc.

Region: Western

1210 Princess Anne Street Fredericksburg, VA 22401 www.reidengineering.com Contact: Shane H. Reid Phone: 540-371-8500 Fax: 540-371-8576 Email: sreid@ reidengineering.com Products: Wastewater, water, utility, and site development Region: Eastern

Equipment

AC Corporation

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

Alfa Laval Inc.

111 Parker Street Newburyport, MA 01970 www.alfalaval.com Contact: Todd Blasé Phone: 262-716-3417 Email: todd.blase@ alfalaval.com Region: Eastern

Alloy Hardfacing & Eng. Co. Inc.

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

Anco Rendering Equipment

1420 Lorraine Avenue
High Point, NC 27263-2040
www.ancoeaglin.com
Contact: Thomas Stanford
Phone: 336-855-7800
Fax: 336-855-7831
Email: tom_stanforth@
ancoeaglin.com
Region: Eastern

Artex Manufacturing

P.O. Box 88
Redwood Falls, MN 56283
www.artexmfg.com
Contact: Mike Anderson
Phone: 507-644-2893
Fax: 507-644-7000
Email: manderson@
artexmfg.com
Products: Aluminum rendering
trailers, air/water treatment
Region: Central

Brown Industrial Inc.

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

Cablevey Conveyors

Intraco Inc.
P.O. Box 148
Oskaloosa, IA 52577
www.cablevey.com
Contact: Karl Seidel
Phone: 641-673-8451
Fax: 641-673-7419
Email: Karl.Seidel@
cablevey.com
Region: Central

Consolidated Fabricators

14620 Arminta Street Van Nuys, CA 91402 www.con-fab.com Contact: Kerry Holmes Phone: 818-933-0885 Email: kholmes@con-fab.com Products: Waste containers Region: Western

Dupps Company

P.O. Box 189
Germantown, OH 45327
www.dupps.com
Contact: Frank Dupps Jr. or
Richard Weeks
Phone: 937-855-6555
Fax: 937-855-6554
Email: info@dupps.com
Region: Central, Eastern,
Western

Dupps Company - Ankeny

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

Dupps Separation Technology / Dupps Gratt Centrifuges

P.O. Box 189
Germantown, OH 45327
www.dupps.com
Contact: Ray Jobe
Phone: 937-855-6555
Fax: 937-855-6554
Email: rjobe@dupps.com
Region: Central, Eastern,
Western

Frontline International Inc.

187 Ascot Parkway Cuyahoga Falls, OH 44223 www.frontlineii.com Contact: John Palazzo Phone: 330-861-1100 Fax: 330-861-1105 Email: ipalazzo@ frontlineii.com Products: Used cooking oil automated system (equipment only) Region: Eastern

Genesis III Inc.

P.O. Box 186
5575 Lyndon Road
Prophetstown, IL 61277
www.g3hammers.com
Contact: Jonathan Paul
Phone: 815-537-7900 or
866-376-7900
Fax: 815-537-7905
Email: jonathan.paul@
g3hammers.com
Products: Hammermill hammers
Region: Central

Haarslev Inc.

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

HF Press + Lipidtech

Harburg Freudenberger
Machinenbaj Gmbh
103 Western Avenue
Akron, OH 44313
www.hf-press-lipidtech.com
Contact: Jon Hanft
Phone: 330-864-0800
Fax: 330-864-5941
Email: jon.hanft@
us.hf-group.com
Region: Eastern

Industrial Hardfacing Inc.

218 E. Main Street Lamoni, IA 50140 www.industrialhardfacing.com Contact: Chip Millslagle Phone: 800-247-7778 Fax: 641-784-6923 Email: sales@industhard.com Products: Equipment, repair, and consulting Region: Central

Industrial Steam

1403 SW 7th Street
Atlantic, IA 50022
www.industrialsteam.com
Contact: Jeremy Zellmer
Phone: 712-243-5300
Email: jzellmer@
industrialsteam.com
Products: Deaerators, firetube
boilers, and high pressure
condensate systems
Region: Central

Leem Filtration

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

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MAC Trailer Mfg.

14599 Commerce Street Alliance, OH 44601 www.mactrailer.com Contact: Joe Dennis Phone: 330-823-9900 Fax: 330-823-0232 Email: jdennis@mactrailer.com

Region: Eastern

Martin Sprocket & Gear

3600 McCart Street
Ft. Worth, TX 76110
www.martinsprocket.com
Contact: Juan Fletes
Phone: 817-258-3000
Fax: 817-258-3173
Email: jfletes@
martinsprocket.com
Products: Bulk material
handling and mechanical
power transmission equipment
Region: Central

MMI Tank and Industrial Services

3240 S. 37th Avenue Phoenix, AZ 85009-9700 www.mmitank.com Contact: Casey Wilstead Phone: 602-272-6000 Fax: 602-272-6700 Email: casey@mmitank.com Products: Fabricate/install tanks and repair/replace equipment Region: Western

MPI - Magnetic Products Inc.

683 Town Center Drive Highland, MI 48356 www.mpimagnet.com Contact: Kyle Rhodes Phone: 248-887-5600 Email: info@mpimagnet.com Products: Equipment design Region: Central

Olson Manufacturing/ V-Ram

620 S. Broadway
Albert Lea, MN 56007-4526
www.vram.com
Contact: Rose Modderman
Phone: 507-373-3996
Fax: 507-373-5937
Email: rmodderman@
vram.com
Region: Central

Onkens Inc.

P.O. Box 72 320 E. Main Easton, IL 62633 www.onkens.net Contact: David Hull Phone: 309-562-7271 Fax: 309-562-7272 Email: 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 www.orthman.com Contact: Jimmy Rios Phone: 817-542-8859 Email: jrios@orthman.com Region: Central

Par-Kan Company

2915 W 900 S Silver Lake, IN 46982 www.par-kan.com Contact: Kyle Bruner Phone: 260-352-2141 Fax: 260-352-0701 Email: kbruner@par-kan.com Products: Grease containers/lids Region: Central

Phelps Fan LLC

P.O. Box 190718 Little Rock, AR 72219-0718 www.phelpsfan.com Contact: Harold Specht Phone: 501-568-5550 Fax: 501-568-3363 Email: hspecht@ phelpsfan.com Region: Central

Rendeq Inc. 1813 Frank S. Holt Drive

Burlington, NC 27215 www.rendeq.com Contact: Mark DeWeese Phone: 336-226-1100 Fax: 336-270-5357 Email: info@rendeq.com Region: Eastern

Roll Rite LLC

650 Industrial Drive Gladwin, MI 48624 www.rollrite.com Contact: James Kenyon Phone: 989-896-1111 Fax: 989-345-7805 Email: jamesk@rollrite.com Products: Automated tarp system for trucking industry Region: Central

RW Manufacturing

P.O. Box 599
Stuttgart, AR 72160
www.rwmfginc.com
Contact: Randy Sweetin or
Kevin Sweetin
Phone: 870-673-7226
Fax: 870-673-6131
Email:
rsweetin@rwmfginc.com
ksweetin@rwmfginc.com
Products: Replacement parts
for hammer mills and shakers
Region: Central

Saeplast Americas Inc.

100 Industrial Drive Saint John, NB, E2R 1A5 Canada www.saeplast.com Contact: Mike Kilpatrick Phone: 506-633-0101 Fax: 506-658-0227 Email: mike.kilpatrick@ saeplast.com Products: Plastic containers Region: Eastern

Scan American Corp.

9505 N. Congress Avenue Kansas City, MO 64153 www.scanamcorp.com Contact: Jeff Drake Phone: 816-880-9321 Fax: 816-880-9343 Email: jdrake@ scanamcorp.com Products: Pumps, cookers, presses, driers, grinders, coagulators, crushers, mixers Region: Central

Seepex Inc.

Seeberger Gmbh
511 Speedway Drive
Enon, OH 45323
www.seepex.com
Contact: Aaron Renick
Phone: 937-864-7150
Fax: 937-864-7157
Email: arenick@seepex.net
Products: Aseptic designs for food processing
Region: Eastern

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Sturtevant Inc.

348 Circuit Street
Hanover, MA 02339
www.sturtevantinc.com
Contact: Joe Muscolino
Phone: 781-829-1431
Email: jmuscolino@
sturtevantinc.com
Products: Air classifier/
separator to reduce ash and
increase protein in animal
protein meals
Region: Eastern

Summit Trailer Sales Inc.

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

Superior Process Technologies

1915 Broadway Street NE Minneapolis, MN 55413 www.superiorprocesstechnologies.

com

Contact: Doug Smith Phone: 612-378-0800 Fax: 702-975-5758 Products: Biodiesel production

Region: Central

Titus Manufacturing LLC

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

Travis Body and Trailer Inc.

13955 FM 529 Houston, TX 77041 www.travistrailers.com Contact: Stuart Swint Phone: 713-466-5888 or 800-535-4372 Fax: 713-466-3238

Email: sswint@travistrailers.com Products: Trailer manufacturer

Region: Central

Uzelac Industries Inc.

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

Virginia Truck Center

Region: Central

P.O. Box 96
Weyers Cave, VA 24486
www.virginiatruckcenter.com
Contact: Greg Witt
Phone: 540-453-1003
Fax: 540-234-0997
Email: gwitt@
virginiatruckcenter.com
Region: Eastern

Walinga USA Inc.

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

Equipment - Centrifuges

Centrifuge Chicago Corporation

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

Centrisys Corporation

9586 58th Place Kenosha, WI 53144 www.centrisys.com Contact: Jerod Swanson Phone: 262-654-6006 Email: info@centrisys.com Products: Dewatering and thickening centrifuges, replacement parts, aftermarket service Region: Western

CentriTEK - Industrial Centrifuge Specialists

Chris Gatewood Industries Inc. 77 Solano Square, #303 Benicia, CA 94510 www.centritek.us Contact: Chris Gatewood Phone: 209-304-2200 Email: chris@centritek.com Region: Western

Elgin Separation Solutions

Elgin Equipment Group 10050 Cash Road Stafford, TX 77477 www.elginseparationsolutions. com Contact: Raymond Pietramale Phone: 281-261-5778 Fax: 281-499-4080 Email: ray.pietramale@ elginindustries.com

Flottweg Separation Technology Inc.

Region: Central

Region: Eastern

10700 Toebben Drive Independence, KY 41051 www.flottweg.com Contact: Darren Smith Phone: 937-564-7900 Fax: 859-448-2333 Email: dsmith@flottweg.net

GEA Westfalia Separator

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

GreySun Equipment Company

3102 Avenue M Ex Conroe, TX 77301 www.greysuncentrifugerental. com Contact: Kye Keliehor Phone: 936-524-5162 Fax: 936-494-3897 Email: cbrock@

Region: Central

greysunrentals.com

GTech
27341 Spectrum Way
Oakridge, TX 77385
www.gtechus.com
Contact: Dennis Edwards
Phone: 832-616-2922
Fax: 936-494-0012
Email: dennis.edwards@
gtechus.com
Region: Central

Jenkins Centrifuge Company LLC

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

Separators Inc.

5707 W. Minnesota Street Indianapolis, IN 46241 www.separatorsinc.com Contact: Quenton Lind Phone: 317-484-3745 Fax: 317-484-3755 Email: qlind@sepinc.com Region: Central, Eastern

Equipment - Repair

Brown's Milling Supply Inc.

P.O. Box 500 Alma, NE 68920 www.brownssupply.com Contact: Mike Stemper Phone: 402-721-7899 Fax: 866-313-2256 Email: billing@ brownssupply.com Region: Central

MDH Boiler Service & Repair Inc.

12106 S. Center Street South Gate, CA 90280 Contact: Mauro Donate Phone: 562-630-2875 Fax: 562-630-2595 Email: mdonate@ mdhboiler.com Region: Western

Exporters

Fornazor International Inc.

455 Hillsdale Avenue Hillsdale, NJ 07642 www.fornazor.com Contact: John Fornazor Phone: 201-664-4000 Fax: 201-664-3222 Email: john@fornazor.com Region: Eastern

International Feed

2500 Shadywood Road,
Suite 300
Excelsior, MN 55331
www.internationalfeed.com
Contact: Derek Michalski or
Bernie Kaiser
Phone: 952-249-9818
Email: dmichalski@
internationalfeed.com or
berniek@internationalfeed.com
Products: Supplier/Exporter/
Marketer of animal protein
meals and co-products
Region: Central

K-Pro U.S. LP

475 Regency Park Drive, Suite 175 O'Fallon, IL 62269 www.k-pro.us Contact: Erin Rochman Phone: 314-425-8550 Email: erin@k-pro.us Region: Central

KimShe International Grain and Feed LLC

475 County Road 520, Suite 104 Marlboro, NJ 07746 www.kimshellc.com Contact: Sherif Gendi Phone: 732-444-1136 Email: sgendi@kimshellc.com Region: Eastern

Scoular

250 S Marquette Avenue, Suite 1050 Minneapolis, MN 55401 www.scoular.com Contact: Michael McCartan Phone: 612-335-8205 Fax: 612-335-8770 Email: mmccartan@ scoular.com Region: Central

Feed Manufacturers/ Ingredients

3D Corporate Solutions

601 N. 13th Street Monett, MO 65708 www.3Dsolutions.com Contact: Jessica Kutz Phone: 417-236-9602 Fax: 417-236-0039 Email: jkutz@3dsolutions.com

Region: Central

Feed Energy Company 4400 E. University Ave Pleasant Hill, IA 50327 www.feedenergy.com Contact: Joe Green Phone: 800-451-9413 Fax: 515-265-4163 Email: sales@feedenergy.com Products: BLF,FA,FGAF,RF,SF Region: Central

International Ingredient Corporation

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

International Nutrition

P.O. Box 27540 Omaha, NE 68127 www.ini-agworld.com Contact: Steve Silver Phone: 402-331-0123 Fax: 402-331-0169 Email: info@ini-agworld.com Region: Central

Mid-South Milling Company

710 Oakleaf Office Lane Memphis, TN 38117 www.msmilling.com Contact: Nathan Pappas Phone: 901-681-4301 Fax: 901-681-4337 Email: npappas@ msmilling.com Region: Eastern, Central

Midwestern Pet Foods Inc.

9634 Hedden Road Evansville, IN 47725 www.earthbornholisticpetfood.com Contact: Bruce Blackford Phone: 812-867-4504 Email: bblackford@ midwesternpetfoods.com Region: Central

NF Protein LLC

1919 Grand AVenue Sioux City, IA 51106 www.nfprotein.com Contact: Eric J. Lohry Phone: 712-279-1938 Fax: 712-279-1973 Products: Animal protein

producer Region: Central

Premier Ag Resources Ltd.

747 Hyde Park Road, Suite 205 London, ON, Canada N6H 3Ś3 www.parltd.ca Contact: Paul Primeau Phone: 519-657-1177 Email: pprimeau@parltd.ca Region: Eastern

The Peterson Company

6312 W. Main Kalamazoo, MI 49009 www.thepetersoncompany.com Contact: Leigh Ann Sayen Phone: 269-350-2900 Email: leighanns@ thepetersoncompany.com Region: Eastern

Wellens & Co. Inc.

6700 France Avenue South Suite 106 Minneapolis, MN 55435 www.wellenscompany.com Contact: Matthew Wellens Phone: 952-925-4600 Fax: 952-922-1555 Email: wellens.company@ gmail.com Region: Central

Financial/ **Professional Services**

Williams Mullen

1441 Main Street, Suite 1250 Columbia, SC 29201 www.williamsmullen.com Contact: Ethan Ware Phone: 803-567-4610 Email: eware@williamsmullen.com Products: Law firm Region: Eastern

Laboratory/Testing

Bureau Veritas

12622 Highway 3 Webster, TX 77598 www.bureauveritas.com Contact: Carly Borel Phone: 713-451-2121 Email: carly.borel@ inspectorate.com Region: Central

Diversified Laboratories Inc.

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

FOSS North America

8091 Wallace Road Eden Prairie, MN 55344 www.foss.us Contact: Tim Welby Phone: 800-547-6275 Fax: 952-974-9823

Email: twelby@fossna.com Region: Central

199 W Rhapsody

FSNS - Food Safety Net Services

San Antonio, TX 78216 www.fsns.com Contact: Faustine Curry Phone: 888-525-9788 Fax: 210-525-1702 Email: faustine.curry@fsns.com

Products: Laboratory/Testing 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 Email: 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 Email: cmssfo@pacbell.net 2126 E. 7th Street Long Beach, CA 90804 Contact: John Spenik Phone: 562-433-4355 Fax: 562-433-3457 Email: john.spenik@ cullenmaritime.com 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 Boulevard, Suite 810 Arlington, VA 22201 www.afia.org Contact: Joel G. Newman Phone: 703-524-0810 Fax: 703-524-1921 Email: jnewman@afia.org Region: Eastern

Pet Food Institute

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

Poultry Protein and Fat Council

1530 Cooledge Road Tucker, GA 30084 www.poultryrenderers.com Contact: Rafael Rivera Phone: 678-514-1978 Fax: 770-493-9257 Email: rrivera@uspoultry.org Region: Eastern

Western United Dairymen

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

Other

Anitox Inc.

1055 Progress Circle Lawrenceville, GA 30043 Contact: Jesse Unsicker Phone: 309-648-1199 Email: junsicker@anitox.com Products: Pathogen control, milling efficiency Region: Eastern

Arreff Terminals Inc.

Fornazor International Inc. 3600 Elm Avenue Portsmith, VA 23704 Contact: Gloria Lambert Phone: 757-393-6534 Fax: 757-393-2976 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 Email: caitosf@mcn.org Products: Seafood processor Region: Western

Chemol Company Inc.

P.O. Box 16286 Greensboro, NC 27416 www.chemol.com Contact: Fred Wellons Phone: 336-333-3050 Email: fred@chemol.com Products: Bio-based and biorenewable chemicals Region: Eastern

Countryside Hides Inc.

Boston Hides and Furs 10261 Twin Angela Lane Alma Center, WI 54611 Contact: Sidney Erickson Phone: 715-964-5021 Fax: 715-964-5023 Email: cowboycountryside@ gmail.com Products: Dead stock removal, pet food, hides

Region: Central

Jacob Stern & Sons Inc.

2104 75th Street Houston, TX 77011 Contact: Jay Van Valen Phone: 713-926-8386 Fax: 713-926-8128 Email: jvanvalen@ tx.jacobstern.com Products: Tallow Region: Central

Kappa Products Corp.

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

NSF International 789 Dixboro Road

Ann Arbor, MI 48105 www.nsf.org Contact: Elaine Vanier Phone: 757-319-2820 Email: evanier@nsf.org

Products: Certification body Region: Eastern

Olymel S.E.C.

2200 Avenue Pratte Bureau 400 St-Hyacinthe, QB, J2S 4B6 Canada www.olymel.ca Phone: 450-771-0400 Fax: 450-771-4872 Email: ClaudeBourgault@ olymel.com

Products: Meat processor

Region: Eastern

Renewable Energy Group

416 S. Bell Avenue P.O. Box 888 Ames, IA 50010 www.regfuel.com Phone: 515-239-8117 Products: Biodiesel production, feedstock procurement, marketing Region: Central

Southwest Hide Co.

9207 W. Blackeagle Drive Boise, ID 83709 www.southwesthide.com Contact: John Rueb Phone: 208-378-8000 Fax: 208-377-9069 Email: ir@southwesthide.com Products: DL,EX,HI Region: Central, Western

Sustainable Sourcing LLC

19633 LaGrange Road Mokena, IL 60448 www.sustainablesourcingllc.com Contact: Jody McCarthy Phone: 815-714-8055 Fax: 812-645-1830 Email: jodi.mccarthy@ sustainablesourcinglic.com Products: Sustenance (food) for

probiotic (animal) processes Region: Central

The Jacobsen

Region: Central

3980 N. Broadway 103/PMB #148 Boulder, CO 80304 www.thejacobsen.com Contact: Ryan Standard Phone: 563-223-9021 Email: rvan@ thejacobsen.com

Universal Maintenance Inc.

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

Val-U-Meat Pkg

Region: Eastern

2107 So. Milliken Ontario, CA 91761 Contact: Steve Stiles Phone: 909-390-9828 Fax: 909-390-9833 Email: stevestiles@ dslextreme.com

Products: Dead stock removal - dairy

Region: Western

Validus

A division of Where Food Comes From Inc. 10538 Justin Drive Urbandale, IA 50322 www.validusservices.com Contact: Brian Bennett Phone: 571-830-6603 Fax: 703-563-6027 Email: bennettb@ validusservices.com Products: Professional services

Wells Fargo Food and

Region: Central

Agribusiness 21 North Main Street, Alpharetta, GA 30009 www.wellsfargo.com Contact: Jim Nutt Phone: 678-448-4472 Fax: 678-448-4476 Email: james.h.nutt@ wellsfargo.com Region: Eastern

Worcester Industrial Products

7 Brookfield Street Worcester, MA 01605 www.shortening-shuttle.com Contact: Martha Hawley Phone: 800-533-5711 Fax: 508-831-9990 Email: mhawley@shorteningshuttle.com

Products: Grease transport

Region: Eastern

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akiolis.com

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MM,PF,SF,TG,YK

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Mexico
www.bachoco.com
Contact: Juan Alejandro
Hernandez Ripalda
Phone: 46-1618-3593
Email: juan.hernandez@
bachoco.net

Daka Denmark A/S

Products: BM,FM,PM,PB,PF

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

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San Jose S/N - A. Col. Nueva Mina Minatitlan, Veracruz, 96760 Mexico www.harinasdeminatitlan.com Contact: Andres Arbesu Lago Phone: 922-221-0909 Fax: 922-221-0908 Email: arbesu1@prodigy.net.mx

Jabon y Grasas S.A. de C.V.

Products: MB, Tallow

Cerrada Rafael Angel de la Peña #247 INT 1 Colonia Transito Mexico City, Distrito Federal, 06820 Mexico www.jabonygrasas.com.mx Contact: Rodrigo Gonzalez Lopez or Andres Gonzalez Lopez Phone: 52-55-5788-8614 Fax: 52-55-5788-8614

Fax: 52-55-5788-8614 Email: rgonzalez@jygsa.com. mx, agonzalez@jygsa.com.mx Products: Horn/hoof meal, TG

Kaura Coproducts S.L.

Ctra. SE-3410 KM 3 Salteras, Sevilla, 41909 Spain www.kaura.es

Contact: Maria Pabon Phone: 34-902-26-00-10 Email: sales@renfeed.es Products: PM,Animal fat

Peerless Holdings Pty. Ltd.

21 Evans Street Braybrook, Victoria, 3019 Australia Contact: Julius Rath Phone: 613-9214-7777 Fax: 613-9318-2396 Products: TG,MB,BM,FM

Productos para Aves y Animales S.A. de C.V.

Porvenir 67, Los Olivos, Del Tlahuac Mexico City, D.F., 13210 Mexico Contact: Eduardo Lopez Phone: 52-555-845-0126 Fax: 52-555-845-0127 Products: MB,Animal fat

Rengra - Rendimientos Grasos

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Products: MBM,YG,Technical

grade tallow

Ryco Jamaica Ltd.

P.O. Box 239 Mandeville, Manchester Jamaica W.I. www.rycoja.com Contact: Kevin Mullane Phone: 876-987-1891 Fax: 876-987-1629 Email: rycoja@aol.com Products: PB,YG,PF

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

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25th Floor Global Center 19 West Lake Culture Plaza Hangzhou, 310014 PR China www.cnbioms.com Contact: Jim Zhao Email: msn572@hotmail.com Phone: 86-571-85268601 Fax: 86-571-88333322

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Cámara de Subproductos Ganaderos

25 de Mayo 347 5* piso oficina 556 Buenos Aires, Argentina C1041AAE www.camsubprodganaderos. com.ar Contact: Daniel Di Pardo

Phone: 54-11-5258-0997 Email: ddipardo@ camsubprodganaderos.com.ar Products: MB,Tallow

ChinaFeedOnline.com

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

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Zapopan, Jalisco, 45116
Mexico
www.scoular.com
Contact: Rodolfo Sanchez
Phone: 52-33-3679-3000
Fax: 52-33-3630-4807
Email: rsanchez@scoular.com

Products: Commodities broker

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

FMC International Corp.

16th Floor, No. 866-1 Zhong Zheng Road Zhonghe District New Taipei City 23586 Taiwan, China www.fmcintco.com Contact: Slim Chou Phone: 886-2-8221-5733 Fax: 886-2-2653-7006 Email: fmc@fmcintco.com

Guandong Guonon Economic & Trade Co. Ltd.

Rm. F, 18/F, Mingyue Ge Mingyeu One Road Wuyang New City Guangzhou, Guangdong 510600 China www.guo-nong.com Contact: Helen Zhou Phone: 86-20-87358081 Fax: 86-20-87358082 Products: Purchaser of US/ Canadian proteins, YG, and T

Haarslev Industries A/S

Bogensevej 85 P.O. Box 65 Bogense, DK 5400 Denmark www.haarslev.com Contact: Tony Johnson Phone: 45-63-83-1100 Fax: 45-63-83-1120 Email: info@haarslev.dk

Keith Engineering (Australia) Pty. Ltd.

P.O. Box 354 St. Clair, NSW, 2759 Australia www.keitheng.com.au Contact: Derek Henderson Phone: 612-9852-1000 Fax: 612-9852-1001 Email: admin@keitheng.com.au

Materia Hnos SA CIF

Int. Camusso 1364 Mar Del Plata, Buenos Aires Argentina 7600 www.materiaoleochemicals.com Contact: Vicente Materia Phone: 54-223-499-3000 Products: Oleochemicals

MJI Universal Pte Ltd.

133 Cecil Street, #11-01A/B Keck Seng Tower Singapore 069535 Contact: Johnny Hooi Phone: 65-6220-0067 Fax: 65-6220-6678 Email: johnhooi@ mjiuniversal.com Products: MB,FM,PM,BM

Natural Agricultural Co. (WA) Ltd.

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

egg supplier Oleon nv

Products: EQ

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

Proteinas Marinas y Agropecuarias S.A. de C.V.

Calle Dos Cañas 2775 La Nogalera Guadalajara, Jalisco, 44470 www.protmagro.com Contact: Raul Iniquez Phone: 52-33-38-10-21-85 Fax: 52-38-38-10-30-49 Email: rauliniquez@ protmagro.com Products: DL

Shanghai Gentech Industries Group Co. Ltd.

15F, Bldg 3, Lane 90, Jiuxin Road Songjiang District, Shanghai China 201615 www.gentechchina.com Contact: Mark Rottmann Phone: 86-021-57633535 Fax: 86-021-57632800 Email: mrottmann@ gentechcnina.com Products: Importer

Shanghai Roadbright International Trading Co.

Room 916, Port Compound No. 4100 Shanghai, China 201108 Contact: Cui Yu Min Phone: 86-21-34200811 shanghairoadbright@163.com

Stord Process AS

Liamyrane 6, 5132 Nyborg Bergen, Norway www.stord-as.com Contact: Harald Nesse Phone: 47-551-97230 Fax: 47-551-97239 Email: 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

World Renderers Organization

Fernando Mendizabal, President E-mail: fmf@rengra.mx www.worldrenderers.org 500 Montgomery Street, Suite 310 Alexandria, VA 22314 Contact: Nancy Foster Phone: 703-683-0155 Fax: 571-970-2279 Email: nfoster@ nationalrenderers.com

NRA Headquarters and Support Offices

National Renderers Association Inc.

500 Montgomery Street, Suite 310 Alexandria, VA 22314 www.nationalrenderers.org Phone: 703-683-0155 Fax: 571-970-2279 Email: renderers@ nationalrenderers.com

Headquarters Staff

Administrative Nancy Foster, President Phone: 571-858-5412 Email: nfoster@ nationalrenderers.com

Heather Davis, Coordinator of Member Relations and **Operations** Phone: 703-683-0155 Email: hdavis@

nationalrenderers.com

Scientific Services David L. Meeker, PhD, MBA, Senior Vice President Phone: 703-683-2633 Email: dmeeker@ national renderers com

International Programs Kent Swisher, Vice President Phone: 703-683-3561 Email: kswisher@ nationalrenderers.com

Education Jessica Meisinger, PhD, MBA, Director Phone: 703-683-2914 Email: jmeisinger@ nationalrenderers.com

Communications, Science and

15460 Turnberry Drive Haymarket, VA 20169-1908 Contact: Marty Covert Phone: 703-754-8740 Fax: 703-754-7426

Convention Coordinator Covert Operations

Email: co@martycovert.com

NRA Regional Offices

Asia 21/FL., Causeway Bay Commercial Building 1-5 Sugar Street Causeway Bay Hong Kong Contact: Peng Li, PhD, Regional Director Teresa Hon, Admin. Assistant Phone: 852-2890-2529 Fax: 852-2576-8045 Email: nrahkg@ nrahongkong.com.hk

Latin America Email: nramex@ nralatinamerica.org

Animal Protein Producers Industry (APPI) Committee

P.O. Box 132 1143 C.R. 1123 Huntsville, MO 65259 Contact: Dara John, Programs Coordinator

Phone: 660-277-3469 Fax: 660-277-3466 Email: appi@cvalley.net

Fats & Proteins Research Foundation (FPRF)

500 Montgomery Street,

Suite 310 Alexandria, VA 22314 www.fprf.org Contact: David L. Meeker, PhD, MBA, Director of Research Phone: 703-683-2633 Fax: 571-970-2279 Email: dmeeker@ nationalrenderers.com

Render Magazine

1621 Glen Drive Placerville, CA 95667 www.rendermagazine.com Contact: Tina Caparella, Editor Phone: 530-306-6792 Email: editors@ rendermagazine.com

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PLASTIC



By Tina Caparella

Facing an increased regulatory environment from both federal and California lawmakers, Pacific Coast Renderers Association (PCRA) members gathered in Carmel Valley, California, in early March to discuss and strategize their future.

PCRA President Doug Smith, Baker Commodities Inc., proposed renderers spend one or two days each year in the state capital to educate and build alliances with legislators and their staff so the industry is heard on pending issues.

"We are just not being loud enough," Smith declared. Another arena where renderers need to present the industry in a positive light is schools, something that has been well-received in Reno, Nevada. A suggestion was to focus on science

competitions, 4H groups, and other events at elementary, middle, and high schools. A \$15,000 proposal to develop print materials, a website, and contest prizes for students was presented and ultimately jointly funded by Baker Commodities and Darling Ingredients Inc. PCRA and National Renderers Association (NRA) members and staff are invited to contribute program materials.

Ross Hamilton, Darling Ingredients, covered current issues, including the Food Safety Modernization Act (FSMA). He shared that the Food and Drug Administration (FDA) has delayed inspections under the act due continued

inspector training so inspections this year will be educational regarding current good manufacturing practices and FSMA plans.

"We can expect to see once-a-year inspections much like when BSE [bovine spongiform encephalopathy] regulations went into effect in 1997," Hamilton remarked. In his opinion, based on the way FSMA is written, animal food standards will become more and more like human food, especially with regard to pet food.

David Meeker, NRA scientific services, joined the conversation about concerns over a recent discovery of pentobarbital in pet food, which some are blaming on animal proteins. He was quick to note that rendering companies who sell to pet food manufacturers do not process euthanized farm animals. The Pet Food Institute firmly believes that feed ingredients from on-farm deadstock pose an elevated animal health and food safety risk and petitioned FDA in 2017 to ban all deadstock from the food/feed stream. At the time, FDA responded that the matter was a low priority, yet in a recent

guidance document on preventive control, the agency includes pentobarbital as a chemical hazard and recommended against using tissues containing residues as animal food.

Hamilton highlighted PCRA priorities as the consequences of state actions on diversion of raw materials/organics, rendering's essential service of deadstock collection to state veterinarians, and examining developing a California disposal hierarchy similar to a federal one used by the Environmental Protection Agency (EPA).

Paula Batarsch, California Department of Food and Agriculture (CDFA), made her inaugural appearance at PCRA's convention since joining the department last spring.

"What attracted me to CDFA nearly one year ago was the

rendering industry," she commented. "I am learning a lot about food safety and animal health." As a chemical engineer, Batarsch worked for California EPA (CalEPA) for 28 years prior to being hired as chief of the Meat, Poultry, and Egg Safety Branch last year. She believes discussions with CalEPA are an opportunity to ensure inedible meat material is handled in the safest way possible, and is hiring three additional team members to join the CDFA inedible kitchen grease program.

"We are looking at a very good year ahead and working with all of you," Batarsch commented.

Dennis Albiani, California Grain and Feed Association, commented that Batarsch is a "breath of fresh air to build the relationships with state government agencies that are important to renderers." He also agreed with Smith that political action is an area PCRA needs to focus on more. Albiani then talked about the external stressors faced by the state's renderers this year, such as mid-term and fall elections in which all statewide offices, including governor, and 20 senate and 80 assembly seats are up for grabs, and a state legislature that is against most of President Donald Trump's actions.

Albiani highlighted a number of legislative issues in California that renderers need to pay attention to:

- Assembly Bill 3036, introduced by the state's cattlemen, would prohibit feeding food waste to cattle (PCRA supports this bill);
- Senate Bill 71 is primarily aimed at those who steal recyclable cans and bottles from household bins put out for collection but could possibly include organics;



Paula Batarsch, CDFA, talks about the work being done with California's renderers.

- Senate Concurrent Resolution 100 is a threat to livestock production as it is aimed at meat products that could contain carcinogens; and
- Assembly Bill 1745 that would ban the combustion engine by 2040. Although it is unlikely this bill will go through, it threatens the state's biofuels industry and dampens investments into renewable fuels.

Albiani declared that the 800-pound gorilla in the room is implementation of the state's organics recycling rule, Senate Bill 1383, that was signed into law in September 2016. However, while it is a threat to rendered products, Albiani thinks there is also an opportunity to "get it right." He credited CDFA for doing a "great job" engaging with other state agencies on this matter, adding that renderers need to take a more aggressive approach to educate counties, cities, retailers, food processors, and livestock organizations on rendering as they do not know about the industry.

NRA Chairman Ridley Bestwick, West Coast Reduction, shared the Canadian landscape, where the country's Clean Fuel Standard imposes a 29-cent-per-gallon fuel tax on diesel and a 19 percent carbon tax on companies that brings in a staggering \$1 billion per year that goes toward green energy projects.

"The [carbon tax] impact is \$500,000 per year on West Coast Reduction as a company, which goes to a process that diverts product away from West Coast Reduction," Bestwick explained. "It makes it almost impossible to compete." Canadian renderers have requested meetings with government to ensure a level playing field as existing rendering companies do not receive any subsidies or credits for already diverting organics. Bestwick showed how West Coast Reduction has

adapted EPA's food waste recovery hierarchy to show the importance and sustainability of rendering in these efforts.

Meeker recapped a presentation he gave at the Pet Food Conference held in conjunction with the International Production and Processing Expo in Atlanta, Georgia, in late January, where he declared "this is not your father's rendering industry." He noted that although BSE regulations came out 20 years ago, the rendering industry continues to face additional feed rules.

NRA President Nancy Foster reviewed events that have taken place since PCRA's last convention a year ago, including challenging governing issues for Trump, bold new proposals in Congress with little Republican consensus, continued uncertainty for support of biodiesel federal tax credits, and major tax reform that should benefit renderers and their employees. Foster stated that with mid-term elections coming up this fall, there is debate in Washington, DC, on how much Republican lawmakers will compromise to appease more voters. One of the biggest agriculture issues in Washington this year is a new North American Free Trade Agreement (NAFTA), which is important for rendered product exports to Canada and Mexico. While Trump touts a "buy American, hire American" agenda, many are working to educate him on the importance of NAFTA exports for American-made products.

Foster pointed out that food waste legislation has been introduced again in Congress that would provide federal funding to build large-scale composting and food waste-to-energy facilities. NRA is actively working to ensure lawmakers are aware of rendering's role in food waste.

PCRA's next convention is scheduled for March 8-9, 2019, in Carmel Valley, California.









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Speak Up for Rendering in Washington

Many decisions about to be made in Washington, DC, could help or possibly harm the United States (US) rendering industry. Consider the recently announced import tariffs on steel and aluminum that invite foreign retaliation against US agricultural exports, including rendered products. Or new threats to biodiesel from the US Environmental Protection Agency with its weak support of the Renewable Fuel Standard in addition to no federal biofuels tax credits for 2018, at least not yet.

These challenges and others from lawmakers in Washington, DC, will affect rendering businesses. For example, the Food and Drug Administration (FDA) will decide soon whether to increase regulation for rendered products in pet food after discovery of the presence of pentobarbital. A new North American Free Trade Agreement (NAFTA) could benefit renderers or, if it contains certain "poison pills," may seriously harm rendering raw material suppliers with collateral damage to the industry.

To encourage members of Congress to support the rendering industry when they vote, the National Renderers Association (NRA) invites all active renderer members to come tell their story at the association's Washington Fly-in June 11-13, 2018. By attending, renderers will gain a good understanding of the issues shaping the opportunities and risks to their businesses and build stronger rendering relationships.

The fly-in kicks off with a private briefing from leading political and economic influencers on key issues affecting the rendering industry. A networking dinner the first evening provides an inside look at Capitol Hill and this fall's congressional elections. After breakfast with a congressional speaker the next morning, renderers will head to Capitol Hill for meetings with their senators, representatives, and their staff. Members of Congress are glad to hear about rendering and how their decisions will affect renderers in their states and congressional districts.

Renderers may not fully realize how important it is to speak personally with their elected representatives. These members of Congress very much want to understand how the laws they are considering impact renderers as their constituents. Senators and representatives need to better understand the important role renderers play in their communities as employers and also as local leaders. Rendering companies provide valuable full-time jobs with benefits, often in rural communities that do not have widespread employment opportunities. The world would look a lot different without rendering. By speaking up, renderers can influence congressional action that impacts the future of their business, their freedom to operate, and the cost of complying with new laws and regulations.

NRA uses a two-pronged strategy to advocate the interests of the rendering industry to Congress. First, NRA lobbies and educates Capitol Hill, the president's administration, and federal regulatory agencies. Second, personal meetings by renderers with their Congress members carry much weight

By coming to the fly-in, renderers educate Congress on the important role of their \$10 billion industry in agriculture, environmental protection, and the manufacturing of hundreds of industrial and personal care products.

when they talk about the real world influence of legislation on their business.

As the industry's "boots on the ground," the association serves as the leading voice for rendering in Washington, DC, and is regularly consulted for advice and analysis. There is no other organization that promotes and defends the US rendering industry. NRA works with other agricultural organizations and allied groups to advance the rendering agenda and to keep rendering's interests in front of decision makers on the industry's important issues.

NRA's Washington political consultant, Steve Kopperud, monitors Congress and lobbies on behalf of the rendering industry. The NRA staff also educates and advocates for rendering in coalitions, to government regulators, and with Kopperud on Capitol Hill.

Advocacy for the rendering industry is a high priority in NRA's 2020 Strategic Plan. The association's overall mission is to advocate for a sustainable food chain, public health, and the environment through the production and marketing of rendered products and services. To accomplish this, NRA

- promotes effective public policy, regulation, and technology;
- encourages responsible business practices;
- supports free movement of rendered products in domestic and international markets; and
- improves stakeholder awareness and understanding of the value of rendering.

The NRA Legislative Committee will soon identify this year's issues that are recommended for renderers to discuss during congressional fly-in meetings. Members of Congress like to talk about important proposals they will vote on soon, so much depends upon the summer legislative agenda. By the June fly-in, the farm bill may be approaching a floor vote and 2018 biodiesel tax credits could be on the front burner. FDA will also be closer to making decisions on pet food ingredient regulations and hopefully good progress will have been made in NAFTA negotiations with some rendering problems solved through the agreement. However, this new NAFTA will not be official until ratified by Congress so Capitol Hill will play an important role.

So mark your calendars for June 11-13 and come to NRA's Washington Fly-in. It is always a popular event. For more information, please contact Heather Davis, NRA's coordinator of member relations and operations, at hdavis@ nationalrenderers.com. I hope to see you there!

EVERY APPLICATION, ASSURED



At Kemin, we understand how rendered animal proteins and fats, production processes and other factors impact the final pet food diet. When it comes to designing innovative product application systems, overseeing system fabrication, installation and maintenance — our team of engineers and technical experts consults with customers to guarantee the performance of every design, every time. **Kemin is assurance.**



Biofuels Tax Credit Reinstated, but Only for 2017

After the second United States (US) government shutdown earlier this year, Congress ultimately passed a two-year funding bill that included a reinstatement of the \$1-pergallon blender's tax credit for biomass-based diesel – but only retroactively covering 2017.

The bill was signed by President Donald Trump in February and was welcomed by the biofuels industry. However, it was disappointing there was no provision for 2018 or beyond, effectively continuing the uncertainty that contributes to price volatility, particularly in the biodiesel market. The tax incentive has had bipartisan support since its inception at the end of 2005, but has lapsed five times since then.

Industry participants plan to continue working with legislators on bills to extend the program long term, although it is unclear what will happen in 2018. The National Biodiesel Board (NBB) has worked for years to reform the blender's tax credit into a domestic producer's tax credit that would exclude foreign producers from receiving federal tax dollars. This effort, however, has not resulted in any meaningful legislation.

In state news, the California Air Resources Board (CARB) released "unofficial" Low Carbon Fuel Standard (LCFS) rulemaking documents on February 20, the first time an unofficial label was used in a document release. These proposed amendments were not associated with a workshop or board meeting but did contain some provisions previously addressed in CARB workshop documents, including additional electric vehicle credits for renewable energy and time-of-day, renewable jet fuel, transportation propane, and the option to add military fuels, among other things.

A day after CARB's announcement, the federal US Department of Commerce (DOC) announced the affirmative final determinations in the antidumping duty investigations of imports of biodiesel from Argentina and Indonesia. DOC determined that exporters from these two countries had sold biodiesel in the United States at 60.44 to 86.41 percent and 92.52 to 276.65 percent, respectively, below fair market value. As a result of those determinations, DOC will instruct the US Customs and Border Protection to collect cash deposits from importers of biodiesel from Argentina and Indonesia based on these final rates.

This ruling comes on the heels of a related DOC decision last December in the countervailing duties case that determined Argentina and Indonesia unfairly subsidized their biodiesel exports. Exporters from these two countries must pay both antidumping and countervailing duties on every gallon sold in the United States. In 2016, imports of biodiesel from Argentina and Indonesia were valued at an estimated \$1.2 billion and \$268 million, respectively.

California Conference Well-received

The California Advanced Biofuels Alliance (CABA), which recently changed its name from the California Biodiesel Alliance, held its seventh annual conference in Sacramento, California, in early March. This event has grown in size and stature over the years and offers information and current market status updates in the Golden State.

As part of his presentation on the LCFS's 2018 amendments, Floyd Vergara, chief of CARB's Industrial Strategies Division,

Table 1. Proposed LCFS schedule for carbon intensity percentage reduction											
2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
6.25	7.50	8.75	10.00	11.25	12.50	13.75	15.00	16.25	17.50	18.75	20.00

The most important provision was the change in reduction target percentages for carbon intensity (CI) from 2010 levels. This new rulemaking would significantly change the overall CI reduction targets in transportation fuels for years 2019 through 2030, starting by lowering 2019 to 6.25 percent and then raising it 1.25 percent per year going forward (table 1). This would effectively straighten out the curve but most importantly it would allow much more achievable targets in the near term. It was previously thought the 7.5 and 10 percent targets in 2019 and 2020, respectively, would be difficult to reach so both years' goals are now a less ambitious 6.25 and 7.5 percent with the 10 percent target set for 2022. It is significant to note that the previous 2030 target was 18 percent but, with these new provisions, that has been raised to 20 percent.

Even though CARB preannounced this unofficial rule-making, the LCFS credit market reacted strongly to the news, falling about 30 percent from just over \$150 per metric ton (MT) the next day before rebounding to about \$125 per MT.

assured attendees that state government recognizes the need for biofuels. Alexander "Lex" Mitchell, manager of CARB's Emerging Technology Section, reviewed the Alternative Diesel Fuel (ADF) regulation's new 2018 requirements and revealed that CARB is planning to split the sunset provision of the regulation in the next version so it applies separately to onroad and off-road vehicles under the 2018 amendment. This is important because Mitchell had previously suggested the two provisions would be combined and the sunset would be pushed until 2030 or beyond.

Steve Howell, MARC-IV, gave an overview of the exhaustive work he has done to research and present technical arguments to the California State Water Resources Control Board. This has led to positive engagement toward changing the state's underground storage tank regulations to reflect the US Environmental Protection Agency's (EPA's) 2015 guidance requiring no materials compatibility documentation for blends up to 20 percent biodiesel. If EPA's guidance is adopted, this would allow existing double-walled underground storage

tanks to hold blends up to 20 percent biodiesel immediately, opening up blending opportunities around the state and potentially increasing biodiesel consumption dramatically.

Keynote speaker Senator Henry Stern (D) stressed his belief that California can achieve its climate goals through big, bold actions and added another policymaker voice to the day's chorus citing biofuels as necessary for that success. He thanked the group for taking the time to come to Sacramento and urged at least quarterly visits to legislators.

This author began a regional panel by reviewing the range of issues impacting the California market and ended with a focus on the need to solve a bottleneck caused by inadequate terminal blending infrastructure. Tyson Keever, SeQuential, detailed the important progress being made in Oregon as the state's Clean Fuels and related programs expand. Jeff Haas, General Biodiesel, discussed Washington's long struggle to make progress on biofuels, pointing to the light now visible at the end of the tunnel due to new state democratic leadership. Fred J. Ghatala, Advanced Biofuels Canada, surveyed the inspiring range of low carbon policies in the nation and provinces of Canada.

During the conference, NBB honored retiring CABA Executive Director Celia DuBose with its Climate Leader Award. DuBose was the first employee and a founding member of the California Biodiesel Alliance. She played a key role in grassroots biodiesel development efforts in the San Francisco Bay Area and has been a leader and trusted resource on biodiesel technical and policy issues in California for well over a decade. Her leadership greatly contributed to making California the largest biodiesel market in the nation.



Celia DuBose (*left*) and NBB's Donnell Rehagen

This and That

Advanced biofuel producer World Energy LLC, based in Boston, Massachusetts, has purchased Delek US Holdings Inc.'s interests in renewable diesel/jet fuel producer AltAir Paramount LLC and its Paramount Petroleum LLC refinery assets, both co-located in Paramount, California, as well as an adjacent tank farm and most of Delek's California pipeline assets. The buy includes a 63-acre complex consisting of a 45-million-gallon-per-year renewable jet fuel/diesel production facility, 1.7 million barrels of product storage, a truck rack with 28,000 barrels per day of throughput capacity, rail storage for up to 70 railcars, and pipelines stretching over 71 miles connecting the facility to major Southern California distribution hubs including Long Beach. AltAir's cofounder, Bryan Sherbacow, will join World Energy's executive leadership team.

AltAir is the world's first renewable jet refinery and one of only three US renewable diesel plants; the other two are owned and operated by Renewable Energy Group and Diamond Green Diesel, a joint-venture between Darling Ingredients Inc. and Valero Energy. Founded in 1998, World Energy operates biodiesel manufacturing plants in Houston, Texas; Natchez, Mississippi; Rome, Georgia; Harrisburg, Pennsylvania; and now Paramount, California. The company also operates distribution hubs throughout the country.

Renewable Energy Group Inc. President and Chief Executive Officer Randy Howard said he was very pleased

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PAPs – A Feed Ingredient of the Past?

"In 2050, there will be nine billion people in the world with an increasing appetite for meat, milk, and eggs. How can we meet the needs of this future population?"

It seems as if every second or third presentation in the food and feed sector starts with this statement. This was also the case at the Feed Protein Vision 2018 held in Amsterdam, the Netherlands, in early March organized by feednavigator.com.

As the conference title states, the focus was on available protein supply in the future. Aquaculture outperforms beef production while poultry outperforms pig production. Both fish and poultry need higher inclusion of protein in their diets so this shift can exacerbate the situation. Soybeans have been optimized for higher oil content, which leads to reduced protein yields independently whether they are produced in South or North America or even China. Moreover, the so-called first generation biofuels are under pressure due to the fuel versus food discussion. If European Union (EU) countries reduce their biofuel promotion scheme, some European farmers might stop growing rapeseed. Contrary to that, calculations show that Europe has a protein self-sufficiency up to 60 percent if all hidden protein sources in grain, including by-products like dried distillers grains or forage are included. If Ukraine is included as part of Europe, then 100 percent self-sufficiency can be achieved in just a few years.

Some new emerging protein sources and techniques were presented at the feed conference.

Insects: This protein source has been hyped for years and now everyone has heard about it. The EU recently changed legislation to allow novel food and feed from insects. A German supermarket just put pasta with 10 percent meal worms on the shelf for 24 euro per kilogram (\$13 per pound). Europe allows six insect species to be used for feed and because they are considered farmed animals, all relevant legislation must apply (i.e., no feeding with food waste, manure, etc.). One advantage is their production rate, which today is 10 times more biomass of insects per square meter than that of cattle. If the production is layered, it can be increased even more. The current problem is that no plant exists that can produce 10,000 to 15,000 metric tons. Another issue is insects are what they eat, which means they can pose a risk due to accumulation of contaminants in feed. Some species accumulate heavy metals, some do not. Some are able to break down completely or partly toxic components like mycotoxins, such as Deoxynivalenol or Ochratoxin A. Research on insecticides, pesticides, and pathogens like Salmonella, E. coli, and campylobacter are ongoing. Insects' proven harmlessness will be a prerequisite for all European food safety schemes.

Amino acids: Supplemental use of amino acids to achieve a balanced diet can reduce the protein content in feed. This requires good knowledge of the feed composition. A general reduction of two percent protein in pork or poultry diet is possible. One percent less protein reduces about nine percent nitrogen excretion through faeces.

The challenge is that in 17 years since the EU feed ban, three to four generations of animal nutritionists have finished their university educations without any knowledge about PAPs.

Seaweed: Different red, brown, and green seaweed are already available but depending on species and place of harvest, the nutrient content like proteins show high variations. The digestibility is 25 percent compared to soy but probiotic effects could be shown such as anti-bacterial or anti-inflammatory. An inclusion in low volumes could stimulate the immune response.

Microalgae: Contrary to seaweed (macroalgae), microalgae are a single cell protein. Digestibility is comparable to soy, but not better. Inclusion is limited due to ash content (salt, marine species). The replacement potential is envisaged to be 15 percent in diets. Microalgae provide micronutrients, increase the omega 6:3 ratio (after defatting), and color egg yolk.

Single cell protein (SCP): The production rate for SCP is manifold of that from plants, with opportunities in profiling them as well. In Norway, successful tests were done with Methanotroph bacteria using natural gas as its feed. First results showed enhanced feed intake and feed efficiency in piglets and a low risk in high quality meal. The current low natural gas prices make the production profitable. Plants are being built in Teeside, United Kingdom, and in Tennessee in the United States. Also in Norway, yeast was grown on enzymatically treated lignocellulose. Production is only viable when residues from a whole bio-refinery concept are used as the yeast substrate. Feeding trials with both SCPs showed good results.

A presentation given by Rabobank, a Dutch bank that specializes in agriculture, illustrated the investment potential of every alternative protein production. It showed a high interest in all novel protein production opportunities, their industrial implementations, and their future expansions. While many investments were start-ups, larger well-known companies were named.

A conference panel discussion about processed animal proteins (PAPs) in fish diets in Europe showed the high potential this protein source immediately has. This author explained the available volumes, the average protein contents, and the digestibility of nitrogen and phosphorus. Trygve Berg Lea, Skretting, looked back on a long experience with PAPs and favors their good digestibility and sustainability. Fish farmers in southern Europe are already using PAP while Norwegian salmon farmers still need some time but are interested. Brett Glencross, University of Stirling, who worked for a long time in Asia and Australia, is still surprised over the reluctance of not

only European fish farmers to use PAPs but also by feed mills and retailers.

Fish meal from fish trimmings is highly welcome in the EU yet PAPs are not, an ignorance that must change. The challenge is that in 17 years since the EU feed ban, three to four generations of animal nutritionists have finished their university educations without any knowledge about PAPs. For them, it is now an old novel feed. The animal byproduct industry must recognize this and provide education.

The conference showed interesting and promising solutions for the coming protein challenge. Many novel technologies must provide consistencies in supply and safety and then in available volumes. Once established, they have the potential to grow to global players. On the contrary, PAPs are immediately available in relevant volumes and their quality is well-known. Outside Europe, their use in feed is accepted but Europe is now on the move to relearn old knowledge of PAPs.

Therefore, the answer to this article's headline question is yes, PAPs are proteins of the past but of the future as well. Reliable quality is timeless! **R**

Biofuels Continued from page 45

with how Trump expressed his continued support for renewable fuels at a White House meeting on March 1, where at least one issue was made very clear — there is no concern with biodiesel in the Renewable Fuel Standard. Howard joined other top biofuel company executives who met with Trump, Vice President Mike Pence, EPA Administrator Scott Pruitt, and several petroleum refiners to discuss modifications to the standard.

Agron Bioenergy, a 15-million-gallon-per-year biodiesel producer in the California central-coast agricultural town of Watsonville, reopened in February after being acquired last year by Wall Lake, lowa-based Western Iowa Energy, which produces 45 million gallons of biodiesel annually at its Midwest plant. The company has hired eight people and plans to hire another 10, and has not yet disclosed what feedstock will be used to produce biodiesel at the plant.

Targray Technology International has been granted a certification by CARB for its nitrogen oxide (NOx) mitigation additive. Targray intends to use this additive to comply with CARB's ADF regulation that requires mitigation of a slight increase in NOx emissions in biodiesel blends higher than five percent. This is the third additive made available for ADF compliance. California Fueling has been marketing two other additives since last year and more companies are expected to announce products this year.

In the 2018 Hawaii state legislative session, Senator Lorraine Inouye (D) introduced a bill requiring on-road fuel sold in the state to contain no less than 10 percent biofuel by volume. The bill also amends the definition of biofuels to include ethanol and biodiesel. If the bill passes, it would move the state toward its intended transportation renewable energy goals and further support the achievement of the Hawaii Clean Energy Initiative's objective of 100 percent clean energy by 2045.

The Western Contra Costa Transit Authority public transportation service in the east San Francisco Bay Area in California has switched its entire fleet of 45 heavy-duty buses from petroleum diesel to Neste renewable diesel. The transit authority operates a network of 14 fixed routes carrying more than 1.3 million passengers annually.



Pet Food Alliance: A New Way of Engagement

While food safety and animal nutrition are important for the use of rendered products in pet food, the area of pet food functionality deserves its own research emphasis. The pet food market is growing fast and there are value-added opportunities for rendered products. With this in mind, the Fats and Proteins Research Foundation solicited proposals to find a university interested in running a program that would bring together various groups that focus on pet food and work on issues crucial to the entire supply chain. Colorado State University won the bid and the new Pet Food Alliance was created. The goal of the alliance is to identify, research, and advance opportunities for rendered products in the high-value pet food market.

The Pet Food Alliance brings together members of the pet food, meat processing, and rendering industries to collaboratively develop implementable solutions for industry challenges and recognize opportunities for innovation, growth, and mutual success. The key pillars of the alliance are to focus on uniting these groups to engage with and encourage widespread participation from additional industry members, to facilitate research guided by industry input to address real-world challenges, to establish multidisciplinary collaborations with academia and industry, and to proactively engage in building sustainability across all efforts.

The inaugural meeting of the Pet Food Alliance was May 2017 at Colorado State University in Fort Collins, Colorado. This began the process of bringing professionals from the pet food, rendering, and meat industries together with research scientists. The intention was to advance both the pet food and rendering industries by identifying high priority research needs and working together to design projects that will enhance the use of rendered products in pet food.

During this meeting, four opportunities were identified and prioritized: oxidation control, extending shelf life, new ingredients extracted from animal by-products, and new consumer-friendly ingredient definitions. The core of the meeting began by discussing attendee survey results aimed at pinpointing industry challenges. Small groups identified the top two challenges in each sector of the industry that were later used as prompts for targeted small-group discussions. The conversations led to the creation of a list of questions to be answered. Through discussion and voting, the top two challenges in each area were identified.

The alliance met for the second time in December 2017. More than 50 people attended – 28 percent from rendering companies, 11 percent from meat packers/poultry processors, 33 percent from pet food companies, 22 percent were researchers, and 6 percent were other suppliers. The original four opportunities developed at the first meeting were explored in more detail. The working groups include oxidation and the maintenance of product quality, *Salmonella* and other threats to public safety, consumer perception, and industry sustainability.



Each of these groups developed the following set of action items for 2018:

- Oxidation and maintenance of product quality
 - Determine why peroxide value is utilized and what threshold is used.
- Salmonella and other threats to product safety
 - Develop request for proposals around industry practices.
 - Develop good manufacturing practices around transportation and storage.
 - Gather information about the pet food supply chain: do they follow the same rules?
 - Develop request for proposal regarding mitigants of Salmonella in pet food.

Consumer perception

- Engage the American Association of Feed Control Officials to set the stage for ingredient definition change.
- Invite more pet food companies to alliance meetings.
- Begin pet food focus groups to better understand the consumer market.

Industry sustainability

- Generational engagement
 - * Alliance-housed structure for undergraduate fellows/interns (2019).
 - * Develop projects, find institutions, and create a budget (2018).
- Identify models for bridging generations and transitioning into new eras.

Participants are not restricted to one working group. Discussions and work will continue between meetings by email and conference calls. The intent is to (1) identify problems, (2) conduct necessary information gathering and research, (3) find solutions, (4) publicize and implement solutions throughout industries, and (5) repeat.

Future meetings include a webinar on oxidation and another research strategy meeting June 27-28 immediately following the American Meat Science Association's 71st Reciprocal Meat Conference in Kansas City, Missouri.

For more information, contact Jennifer Martin at jennifer. martin@colostate.edu, Dr. David Meeker at dmeeker@nationalrenderers.com, or log on to http://fprfalliance.agsci.colostate.edu.

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German media outlet, "We will put tariffs on Harley-Davidsons, on bourbon, and on blue jeans - Levi's," products from politically-sensitive Republican states. Other provisional targets favored by Europe include steel products but also orange juice, tobacco, kidney beans, rice and rice products, cranberries, peanut butter, dairy, and other agricultural products. Juncker added, "This is basically a stupid process, the fact that we have to do this. But we have to do it. We can also do stupid." The WTO reported more than 18 countries expressed concern over US tariff actions within 48 hours of the Trump proclamation.

Nevertheless, targeting US agriculture exports has long been the go-to method of striking back at America in trade disputes. "If they're looking for ways of inflicting pain on the US, then agriculture is going to be a prime target," said the Institute for International Economics in an interview during the flurry of hand-wringing and hair-pulling shortly after Trump's announcement.

The general business community announced coordinated efforts to derail the tariff tactic. In a rare show of bipartisanship led by Republicans, both leadership and the rank-and-file in Congress condemned the tariff concept as out of hand. Legislation to block or roll back the tariffs is inevitable - Senator Jeff Flake (R-AZ) leads the Senate charge - and House bills are likely to be introduced by Republicans. Within hours of Trump's announcement, 107 House GOP lawmakers sent a letter to the White House pleading with the chief executive to at least narrow the targets of the tariffs, a plea sent earlier by Speaker Paul Ryan (R-WI).

However, even with the promise of flexibility in exempting certain countries from the tariffs, both general business and the ag community are not taking the tariff decision lying down or counting on the White House to mitigate their collective pain.

The National Foreign Trade Council – with a membership of many major ag exporters such as the American Soybean Association, National Council of Farmer Cooperatives, National Pork Producers Council, and U.S. Wheat Associates – formed the Alliance for Competitive Steel and Aluminum Trade, moving swiftly to

lobby Congress and the administration to ensure the economic consequences of tariffs are well understood. The group's message is that any tariffs are a regressive tax on food, beverages, and consumer products and will work to put the brakes on an accelerating US economy. The group cited the "double whammy" of increased costs to domestic producers along with economic pain to industries whose products are the target of retaliation.

A casualty of the president's let'smake-a-deal approach to world trade and a negative consequence of the Trump tariffs program was the resignation of former Goldman Sachs executive Gary Cohn as director of the National Economic Council. Cohn has been the loudest voice within the president's inner circle opposing the tariff idea as antithetical to broadening US export markets and strengthening this country's balance of trade. Cohn's departure was lamented as the loss of a major agricultural ally on free trade, leaving the president to stand with Commerce Secretary Wilbur Ross and trade advisor Peter Navarro, both protectionists, or as Trump likes to call them "nationalists." Cohn would be a "globalist" in the president's vernacular.

However, during that same cabinet meeting where Trump talked about tariffs 2.0, he said he expects Cohn to return to the White House in the nottoo-distant future. Multiple media outlets reported Cohn was in discussions with the president for several weeks on a promotion to a cabinet level job so it appears part of Cohn's reason for resigning was due to the dearth of cabinet level jobs he covets. "The president has a treasury secretary, he's got a chief of staff, so there was no place to go, at least right now," opined one television talking head.

On trade broadly, Trump does not hide his distaste for and distrust of multinational trade deals, NAFTA, or just about any other trade treaty signed by the United States in the last few decades. He says the United States is routinely "ripped off" by such treaties as they exacerbate US trade deficits with trading partners. He pledged during his campaign that if elected, every US treaty would be up for reexamination and possible renegotiation.

Trump is not a president who talks free trade but rather "fair trade." He machine guns statistics at the media on trade imbalances suffered by the United States, pointing at a general \$800-billion trade deficit. The man right now is the quintessential protectionist, strongly believing the United States has been used and abused by just about all of its trading partners going back to the President Dwight D. Eisenhower administration.

Continued on page 51



Involvement in the Fats and Proteins Research Foundation gives you a first look at rendering research results that can help your company. **Be the first to know.**



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Air Classification = Low Ash, High Protein Products

Rendered animal meals provide a great source of protein for livestock but often contain levels of ash that are too high to be used in pet food for domestic animals (i.e., dogs and cats). This forces producers to rely on the quality of raw materials to determine when pet food-grade meals can be made. When there is a shortage of low-ash raw materials, producers simply cannot make high-value pet food-grade products.

The challenge is to convert livestock-grade protein meals into meals favored by pet food manufacturers without any waste. In other words, create two products from one.



Rendered animal protein meals are produced through a series of steps that include pressing, cooking, defatting, milling, and screening. This process creates animal protein meals that are sold for livestock. Specialized air classification technology separates the finer powder meal from the coarse meal. The resulting air classified fines fraction contain higher protein/lower ash that can then be sold at a premium value for pet food or for aquaculture feed. At the same time, the air classified coarse fraction could still be sold as a regular protein/ ash feed meal product for livestock animals.

Air classification has been proven to reduce the ash content and increase the protein in every species of animal meals tested. Table 1 shows examples of the air classifier's performance with various animal protein meals. Typical results include reduction of ash content as low as five to seven percent and an increase of protein levels by three to five percent, which is suitable for the ultra-premium pet food grade market.



with the machine. Once the best selector blade setting is determined, operators can simply dial in a speed adjustment using a variable speed drive to fine-tune the desired product specifications or to compensate for any unexpected changes in the composition of the raw materials (i.e., ash, protein, fat, moisture). In all cases, there is a controllable relationship between protein/ash levels and output yields of the fines fraction (lower ash/higher protein) and the coarse fraction (regular ash/regular protein).

Capacity versus Energy

The Whirlwind Air Classifier has only one motor that controls the entire machine. The motor rotates a feed distribution plate that scatters the meal into an open area. The same motor rotates an internal fan creating updraft airflow that accelerates finer/lighter protein particles, separating them from coarser/heavier ash particles.

The same motor also rotates a series of selector blades that reject some of the undesirable near-size ash particles. By using only one motor, the energy consumption is very low (approximately three to five horsepower per tons per hour of feed capacity).

The Whirlwind Air Classifier features an internal fan and air recycle design that does not require auxiliary equipment (i.e., baghouses, cyclones, or ductwork) to capture the lower ash and higher protein fine product. The fluidized meal is also resistant to major clogging because the machine has minimal dead zones where high fat and sticky material can settle. This makes the air classifier both low maintenance and reliable for continuous use.

Table 1. Performance of air classifier on various animal protein meals							
Meal type	Ash content/ reduction	Protein content/ increase	Ultimate results				
Poultry and chicken meal	17% down to 10-12%	67% up to 70-75%	5-7% ash reduction, 3-5% protein increase				
Lamb meat and bone meal	27% down to 14-21%	56% up to 60%	6-13% ash reduction, 4-5% protein increase				
Porcine/Pork meat and bone meal	27% down to 17-21%	53% up to 57-61%	6-10% ash reduction, 4-8% protein increase				
Fish meal	21% down to 14-18%	62% up to 64-68%	3-7% ash reduction, 2-6% protein increase				
Bovine/Beef meat and bone meal	33% down to 25-29%	50% up to 52-59%	4-8% ash reduction, 2-9% protein increase				
Duck meal	24% down to 11-17%	58% up to 64-69%	7-13% ash reduction, 6-11% protein increase				

Controlling Quality

Sturtevant's Whirlwind Air Classifier uses an internal fan to fluidize the protein meal and mechanical selector blades to separate the animal feed meal into a fines and a coarse fraction. This process is much more selective and versatile than cyclones or screens as the air classifier does not clog like fine screens do. By changing the quantity of selector blades, a wide range of low-ash, high-protein products can be made

Summary

Air classification technology produces a high-value, lowash pet food-grade product from lower-quality feed meals. At the same time, the coarse fraction still contains enough protein that it can be sold as a regular livestock-grade feed product.

For more information, email the author at jmuscolino@ sturtevantinc.com.

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Trump routinely uses China and the 28-nation EU as the most egregious manipulators, hence new and immediate 30 percent tariffs on Chinese solar panel components, a 20 percent tariff on imported washing machines, and threats of 25 percent import tariffs on EU-made automobiles. Trump loathes trade deficits — the United States has large deficits with China and the EU — while the rest of the world, it seems, views such deficits as situational and inevitable, depending on the product and the market.

Once in the White House, Trump's love-hate relationship with trade began on a sour note for agriculture with the abrupt but telegraphed withdrawal of the United States from the Trans-Pacific Partnership (TPP). Now the White House message is all about "improvements" and a "better deal for the US" and this country might rejoin the 11 nations who signed TPP.

"The promised bump of \$10 billion in agricultural output over 15 years, based on estimates by the US International Trade Commission, won't materialize," said the American Farm Bureau Federation at the time of the US withdrawal. Yet today, the president and his trade mavens talk of the new priority on negotiating a bilateral trade deal with geocritical Asian nations, most notably Japan.

With the mantra "do no harm" to the North American open border on trade thrumming in the background, the administration's on-again, off-again threat to withdraw from NAFTA - "the worst deal this country ever signed," says Trump - has kept agriculture/ agribusiness on tenterhooks for several months. One week the president talks about how great the outcome of the ongoing talks will be for the United States, with such optimism inevitably followed by a comment from Trump or one of his lieutenants that the United States will not hesitate to pull out of NAFTA if the negotiations do not go its way. During 2016, \$38 billion in US agricultural products were exported north and south of its borders, with approximately \$20.3 billion going to Canada and \$17.8 billion to Mexico. Going into the fourth quarter of 2017, exports to Mexico were up six percent

from the year before and total NAFTA exports were up three percent.

The Korea-US trade agreement is another deal Trump dislikes because it has generated a US trade deficit since put in place in 2012. The United States exports \$42.3 billion in goods to Korea and imports \$69.9 billion, totaling a \$27.7 billion deficit. *Forbes* reports that trade deficit doubled from 2011 to 2016, according to the US Special Trade Representative. However, agriculture enjoys an ideal environment for selling into Korea. US beef producers sold

\$1.03 billion worth of products in 2016-2017 and so far this year, Korea has imported more beef from the United States than Australia for the first time in 14 years. Korea's agriculture deficit with the United States totals \$6.14 billion, reported *Yonhap News* last July. Nevertheless, the United States and Korea are renegotiating the treaty after a very stormy preliminary review of the deal. On deck for a rethink are the Central American Free Trade Agreement and about three dozen other trade treaties.



Workplace Violence: Arming Managers with Guns?

Editor's note — Mark A. Lies II is an attorney in the Workplace Safety and Environmental Group in the Chicago, Illinois, office of Seyfarth Shaw LLP. He is a partner who focuses his practice in the areas of product liability, occupational safety and health, workplace violence, construction litigation, and related employment litigation. Individual circumstances may limit or modify this information.

As the incidents of workplace shootings tragically continue in the United States, society is searching for solutions to stem the tide. The answer is complex, involving societal values, constitutional rights, legal liabilities, insurance coverage, and a host of other issues. One proposed solution is to allow managers to be armed with firearms to respond in the event of a potential or actual active shooter incident. This article is intended to identify the potential practical advantages, disadvantages, and legal liabilities as well as offer some recommendations, although the legal landscape is constantly evolving with new proposed legislation.

The Good and Bad of Letting Managers have Guns

There could be a limited advantage in allowing managers to bring guns into the workplace (assuming it is a handgun). The manager would have to obtain a Firearm Owners Identification card to carry a firearm and also a Concealed Carry Permit (CCP) if the firearm will be concealed. If the manager has these various documents, there should be some confidence they are knowledgeable about and trained in the use of a firearm. In addition, the manager should be required to attend credentialed active shooter or other equivalent training and obtain certification of successful completion. In the event of an incident, the manager would have a firearm available that could be used to disarm or stop the potential shooter.

However, the potential disadvantages are many. Initially, the manager is not a sworn law enforcement officer so the legal immunities that such officers have for liability to themselves and the employer will not attach. While the manager certainly has his/her right under the Second Amendment to carry the firearm assuming they have the necessary permits, such permits do not authorize the manager to bring the firearm into the workplace premises itself or to use force. Rather, the manager would be relying upon his/her inherent right to self-defense that only permits reasonable use of force to protect the manager or others.

In the event of an incident where the manager utilizes the firearm to subdue or cause injury to an active shooter or innocent bystander, the issue would then become whether the manager exceeded the scope of reasonable force and acted negligently or recklessly. In both cases, there could be liability for civil damages for personal injury, wrongful death, intentional infliction of emotional distress, and, in the case of reckless conduct, punitive damages to any individual who

suffers physical or emotional harm. If the manager acted in a reckless manner, there could also be criminal liability. Because the manager would be acting as an agent of the employer, there would be potential agency liability for the employer. The employer may not be able to purchase liability insurance to cover this risk and would potentially be uninsured for any damages.

Crafting, Communicating, and Impact of a Gun Policy

The employer's gun policy would have to be carefully crafted to comply with applicable federal, state, and local laws and ordinances regarding permitting an individual (manager) to bring the firearm within the workplace as described above. The policy would also have to require the manager to have all current permits and/or licenses, and it would have to define the circumstances under which the manager would be allowed to use the firearm. That then raises the issue of defining reasonable use of force in situations that are not predictable and require the manager's judgment on a split-second basis. This type of instantaneous decision-making is a challenge faced by even seasoned law enforcement officers on a daily basis and is difficult to reasonably anticipate the appropriate response for every situation.

Such a policy could have varying impacts on employee morale. The manager who is authorized to use the firearm may feel very secure, especially in regard to his/her own self-defense. Other employees may likewise feel some sense of security because of this policy, although other employees may feel insecure because of concerns about the capabilities of the manager to properly react in an emergency. They may also worry whether the manager could overreact and discharge the firearm improperly, unintentionally injuring the employee.

Additional Screening for the Manager

Since there is no statutory right to carry a firearm into an employer's physical premises – although employees who have a valid CCP can bring it onto the parking lot but it must remain in a locked container (i.e., vehicle trunk or glove box, weapon container) out of sight – the employer should seriously consider additional screening. For example, confirm if the manager has prior experience using a firearm in the military or law enforcement.

If the employer so desires, it could conduct a background check complying with the Fair Credit Reporting Act to determine if the employee has any prior history of civil or criminal activity involving violence or the use of a firearm. In addition, although there would certainly be potential Americans with Disabilities Act issues, the employer might consider an evaluation by a mental health professional regarding the employee's ability to react with a firearm in an emergency situation. Such psychological evaluations are routinely conducted for potential law enforcement officers across the country.

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Potential New Laws

Because of the current impetus to enact new federal and state laws, it is clear that employers will have to keep informed on such changes in order to remain in compliance. In addition to the general statutes that provide an individual with a valid CCP permit the authority to bring a firearm onto the parking lot, there have already been several proposals to increase liability for the employer if a qualified and permitted employee is not allowed to carry his/her firearm into the workplace and use it for purposes of his/her self-defense and the employee sustains injury.

Recommendations

If the employer decides to allow managers to be armed within the workplace, it should carefully consider the following factors:

- Confirm all federal, state, and local laws and ordinances that apply to licensing and qualifying a manager to carry a firearm into the workplace itself and utilize it in the workplace.
- Ensure that any manager who is permitted to carry a firearm in the workplace has successfully completed all required training and that documentation is obtained and kept current.
- Conduct an exhaustive background check of the manager to confirm there is no prior civil or criminal history of violent behavior or mental or emotional health conditions that would impact the manager's ability to responsibly carry the firearm and utilize it properly within the limits of reasonable use of force in an incident.
- Develop a written policy that incorporates the foregoing elements as well as any generally recognized industry practices for such activity including active shooter protocols.
- Confirm whether the employer's general liability and workers' compensation insurance will be applicable to the potential risks associated with the employer's policy.

As discussed above, authorizing managers to be armed with and to utilize a firearm in the workplace can have advantages although there are many potential risks that must be considered. If the employer develops and maintains a written policy that incorporates the foregoing elements, it should be able to address the legal issues arising from pursuing such a course of action.

Safety Group to Develop Active Shooter Guide

The American Society of Safety Engineers (ASSE), the world's oldest professional safety organization, is taking steps to help curb workplace incidents involving active shooters by collaborating with safety and health experts to develop an active shooter technical report.

Incidents of workplace violence caused 866 deaths in 2016, a 23 percent increase from the 2015 total of 703, according to data from the United States Bureau of Labor Statistics. Workplace violence was the second-leading cause of on-the-job fatalities in 2016, trailing only transportation-related deaths.

When a critical safety issue demands more timely action, ASSE produces a technical report to serve as an incremental step in providing initial guidance on that safety matter. A technical report can also be a value-added first step in the creation of a more detailed workplace safety standard. Both are consensus-based documents, according to the organization.

The development process is expected to be completed before the end of the year and the final report will be made available nationwide following its registration with the American National Standards Institute. ASSE began writing the technical report after its members and other stakeholders requested technical insight and guidance addressing active shooter events from the perspective of the occupational safety and health professional.

In addition to the report, ASSE will conduct a general session on the active shooter issue at its Safety 2018 Professional Development Conference and Exposition this June in San Antonio, Texas. A panel featuring experts from the Department of Homeland Security, law enforcement, corporate risk management, and employee assistance programs will discuss how safety professionals can best prepare for and react to workplace violence.

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Australian Renderers Say Goodbye to Icon

On March 6, the Australian rendering industry lost an icon with the passing of Reginald John Evans, a life member, foundation member, past president, and past director of the Australian Renderers Association (ARA) and one of the group's and industry's great supporters over many decades.

Evans started out as an accountant before joining a number of companies to end up as chief executive officer of Colyer Fehr Tallow until the company's owners decided to sell in 1991. Being a determined individual, Evans bought the name and started trading tallow once again, eventually becoming a leading tallow trader representing Kerry Australia and through his own company, Colyer Fehr.

It was also at this time that Evans became ARA president, succeeding Brian Bartlett, and headed up a number of association committees. He purchased land in the western suburbs of New South Wales and built a terminal tank farm along with a bleaching plant. In 2003, Evans received the Ron Lyon Award for his service to the industry after being made an honorary life member of ARA in 2001.

Evans is survived by his wife, Bernice, and six children. He eldest child, Luke, predeceased him last year. Three of his children still run the business today headed by Damien, an ARA director, Tim, and Alicia.

Darling Ingredients' Recipe for Success

In February 2003, Randy Stuewe, Darling Ingredient's current chairman and chief executive officer, took over the \$250 million, financially troubled renderer of animal by-products and waste cooking oil. Since then, he has led its transformation into a profitable, \$3.4 billion global giant with 215 factories on five continents.

Stuewe recently shared with *The Dallas News* the trials and successes of what is the largest rendering company in the world. The article reports that it is nearly impossible to go a day without using something containing one of Darling's natural and sustainable ingredients that are marketed internationally to the pharmaceutical, food, animal feed, pet food, biofuel, fertilizer, sports nutrition, and cosmetic industries.

"As the world's largest producer of collagen — the fancy name for gelatin that is extracted from bones and hides — Darling makes gummy worms gummy, puts the puff in marshmallows, helps smooth wrinkles, promotes mobility in bone and joint health, and makes gel caps digestible," the paper noted. "People at the White House dine on fine English bone china made with its bone ash. Drive a fine luxury German or Italian automobile and your tush may be sitting pretty on Darling's leather."

Stuewe told *The Dallas News* that the renderer's joint venture with Valero Energy to make renewable diesel from animal fats is Darling's "next big thing."

"We laugh when people talk about Bitcoin, cryptocurrencies, and disruption," he said. "The most disruptive thing in the history of the food chain is making a hydrocarbon out of animal fat." The article describes the various products Darling produces and how Stuewe ended up in a position that ultimately benefited him and the 135-year-old rendering company.

The entire article is available at www.dallasnews.com/business/business/2018/02/23/15-years-blood-guts-bones-ceo-behind-turnaround-company-puts-puff-marshmallows. $\bf R$



Water buses in Venice, Italy, to run on used cooking oil.

Insect Meal Allowed in North America

Enterra Feed Corporation in Langley, British Columbia, Canada, has received new approvals to sell its insect-based feed ingredients in the United States, Canada, and the European Union (EU). The Association of American Feed Control Officials (AAFCO) in the United States has agreed to the company's request to include black soldier fly larvae meal in feed for salmonids – which includes salmon, trout, and arctic char - in its list of authorized feed ingredients. The supporting material and change in the definition was reviewed and supported by the Food and Drug Administration (FDA). The company's first product, whole dried larvae, was approved by AAFCO in 2016.

Enterramanufactures and markets feed ingredients derived from the larvae of the black soldier fly. The larvae are reared under controlled conditions on locally sourced, preconsumer food waste. The larvae are then dried to produce whole dried larvae, or defatted to produce a powdered protein ingredient similar in profile to fish meal but with much less impact on the environment.

Enterra also received approval from the Canadian Food Inspection Agency (CFIA) to sell whole dried larvae in Canada as a feed ingredient for tilapia and poultry. This builds on previous approvals for the same product in salmonid feed in 2017 and broiler chicken feed in 2016.

The company is now registered in the EU Trade Control and Expert System, which allows Enterra to export its insect feed ingredients to all EU member countries. New EU regulations came into effect on July 1, 2017, that permit the use of insect ingredients in aquaculture feed. Approvals for poultry and pig feed are expected to follow.

With production at its Langley facility at maximum capacity, Enterra is planning to expand to a larger second facility near Calgary, Alberta, Canada, in the fourth quarter of 2018.

April

National Institute for Animal Agriculture Annual Conference

April 9-12, Denver, CO https://animalagriculture.org

Petfood Forum 2018

April 23-25, Kansas City, MO www.petfoodforumevents.com

National Renderers Association Spring Meeting

April 24-26, Vancouver, BC, Canada Contact Marty Covert at co@ martycovert.com or (703) 754-8740

May

Animal Agriculture Alliance Stakeholders Summit

May 3-4, Arlington, VA www.animalagalliance.org

American Oil Chemists' Society Annual Meeting and Expo

May 6-9, Minneapolis, MN http://annualmeeting.aocs.org

FENAGRA 2018 – Brazilian Rendering Congress

May 16-17, Sao Paulo, Brazil www.editorastilo.com.br/fiai-2018/ fenagra/

May (continued)

22nd World Meat Congress

May 30-June 1, Dallas, TX • https://2018wmc.com

June

National Renderers Association Central Region Meeting

June 6-8, La Crosse, WI ◆ Contact Mike Karman at mike.karman@sanimax.com or (920) 884-3925

Animal Protein Producers Industry Rendering Code of Practice Training

June 19-21, Kansas City, MO • Contact Dara John at appi@cvalley.net

European Fat Processors and Renderers Association Congress

June 20-23, Barcelona, Spain • www.efprabarcelona2018.com

American Meat Science Association 71st Reciprocal Meat Conference

June 24-27, Kansas City, MO • www.meatscience.org/rmc

July

Association of American Feed Control Officials 2018 Annual Meeting
July 29-August 1, Fort Lauderdale, FL • www.aafco.org

October

National Renderers Association 85th Annual Convention

October 22-26, Dana Point, CA • www.nationalrenderers.org

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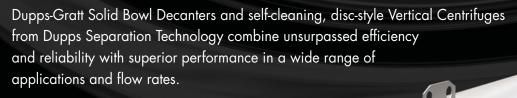
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