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August 2018

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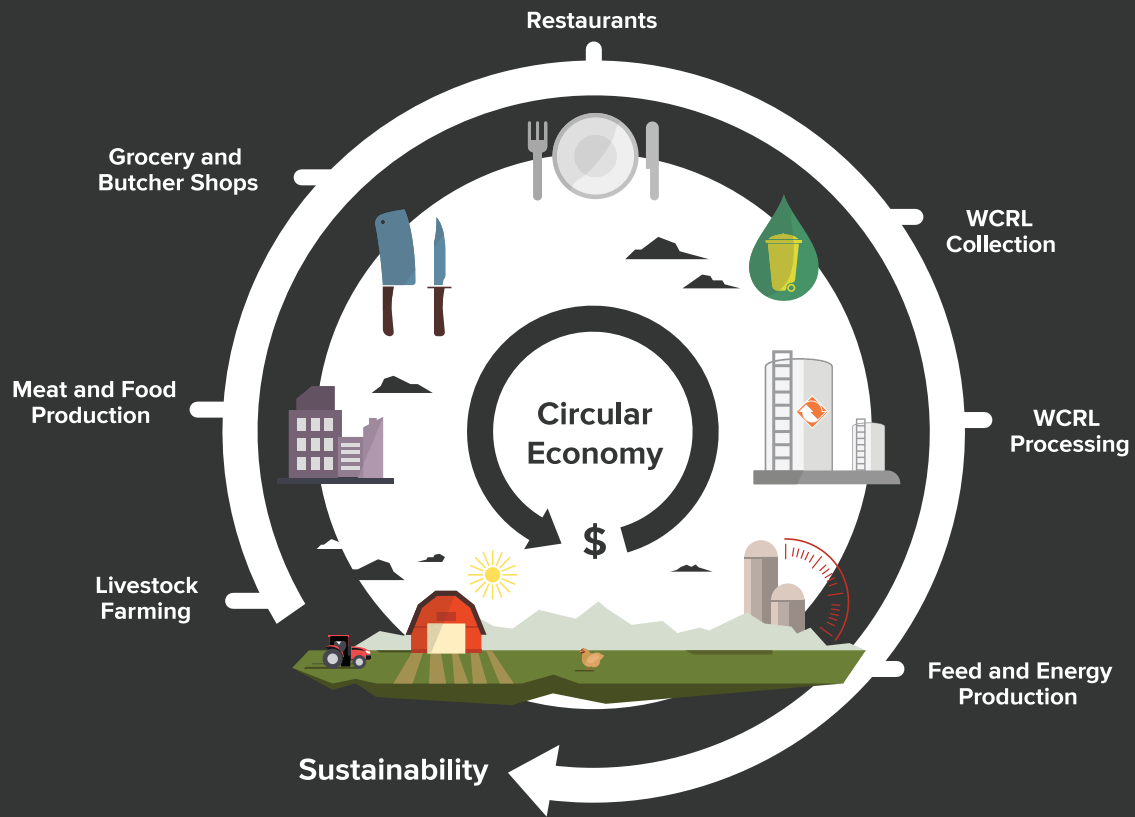
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Editorial Offices

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



Editor and Publisher Tina Caparella

Associate Editor James McGibbon

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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Renderitorial



Traveling can be daunting or thrilling depending on one's perspective and experience. It is oftentimes very necessary, however, in order to conduct business. Renderers from around the world obviously felt that way in June as hundreds of individuals converged in Barcelona, Spain, to attend the European Fat Processors and Renderers Association Congress.

Perhaps this fascinating European city was partly the draw, but listening to conversations in the hallways during congress breaks indicated meeting up with colleagues is still the best way to network and learn about the challenges and opportunities within the industry. Reconnecting at meetings provides the chance to share experiences, discover new or improved products and technologies, or learn of needs a company or industry might be facing. It is also an opportunity to strengthen relationships or build new ones.

Since bovine spongiform encephalopathy emerged in Europe over 20 years ago, European renderers have been like salmon—swimming against the current in a river of regulations and obstacles to meet the ultimate goal of producing and providing safe and nutritious feed ingredients. While at times the struggle has been relentless and never ending, the industry is now making headway in collecting, processing, and utilizing more rendered products as feed, fuel, and industrial ingredients.

With a new leader at the helm of their association, European renderers remain diligent as they work with other industries to prove that processed animal proteins and fats are sustainable, nutritious, and necessary in a region that is a net importer of feed ingredients.

Another important gathering is approaching—the National Renderers Association 85th Annual Convention in Laguna Niguel, California, October 22–26. The event will feature industry movers and shakers, like Randy Stuewe, chairman and chief executive officer of Darling Ingredients Inc.; Cameron Bruett, sustainability and corporate affairs at JBS USA; and Donnell Rehagen, chief executive officer of the National Biodiesel Board, among others. Check out convention.nationalrenderers.org. **R**



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Playing a Game of Trade Tariff Chicken

While the rest of America is laser focused on whether the United States (US) Senate will confirm President Donald Trump's nomination of federal Appeals Court Judge Brett Kavanaugh to the US Supreme Court, those folks broadly called agriculture—including renderers—will be focused on: (1) how long Trump's tariff tsunami will continue; and (2) whether Congress will enact a 2018 farm bill before September 30, when current law expires.

As far as Congress is concerned, the dog days of August are gone in a midterm election year. The House of Representatives will eagerly depart Washington, DC, for its five-week summer recess, not returning until September 4 as all 435 members are up for reelection. The Senate declared itself the more responsible chamber and intends to work all but one week during August, given the Kavanaugh nomination and the fact there are more vulnerable Democrats up for reelection than Republicans. Senate Majority Leader Mitch McConnell (R-KY) smells a possible pickup of at least three or four seats come November 6, 2018.

Meanwhile, the president has completely reset the game board of US exports for just about every industry. His decision to threaten China with up to \$450 billion in new levies to stem that nation's "forced transfer" of intellectual property and technology from US companies doing business in China, coupled with the decision to impose new 25 percent steel and 10 percent aluminum tariffs on just about every US trading partner, abruptly canceled any temporary exemptions extended to Canada, Mexico, and the European Union. The White House has upended many agricultural export sales.

All of America's primary trading partners subject to the new steel/aluminum tariffs, including China, have retaliated against the action by imposing tariffs on US exports, and all have filed World Trade Organization complaints. All have crafted target lists for retaliatory tariffs on which the top targets are US agricultural exports, even though none of the publicly talked-about trade disputes and/or deficits has anything to do with agriculture. This makes ag exports a classic case of injury by "friendly fire" as part of these escalating trade wars. As of this writing, exports of US rendered products are not subject to retaliation.

This international hit parade of newly taxed US imports features agricultural products because those products are generally produced in politically important regions and states for Trump and other senior GOP congressional leaders. Farmers, ranchers, processors, and input creators make up a very big chunk of the president's political base, and several sitting GOP members can thank the Trump coattails for their continued congressional service.

Most foreign governments recognize that all US politics is local, so they are leveraging down-home voter pressure during a US congressional election year to force Trump to reconsider his global tariff assault on agriculture's biggest overseas markets. For instance, because the House Speaker is

Ground zero in all of this trade tit-for-tat is China. The United States' \$375.2 billion trade deficit with the world's second largest economy sticks in Trump's craw and he wants it gone.

Representative Paul Ryan (R-WI), processed dairy is targeted; because Senator Mitch McConnell (R-KY) is Senate Majority leader, Kentucky bourbon figures prominently on most retaliation lists.

"These are products with political implications in districts where important House members and Senators have been raising concerns to President Trump," explained Mexico's Secretary of Economy Ildefonso Guajardo of his country's tariff list, on which ag imports figure prominently. "At the end of the day, the effect of this will fall over voters that live in districts that have a voice and a vote in Congress."

Mexico also provides a template to the rest of the world for how to effectively wage a tariff war. The Mexicans are astute at the "carousel" tariff game, in which the list of commodities shifts over time as does the rate of tariff. The American Farm Bureau Federation warns, "The US agricultural industry should expect the number of agricultural products on the [Mexican] list will both increase and some analysts warning President Trump's success in jump-starting the US economy through enactment of federal tax cuts and other moves are at risk."

Make no mistake; ground zero in all of this trade tit-for-tat is China. The United States' \$375.2 billion trade deficit with the world's second largest economy sticks in Trump's craw. He wants it gone. Optimists contend the Chinese tariff wars are classic Trump "big stick" diplomacy, a chronicled negotiating strategy born and refined from his New York City real estate experience. Key to this strategy is for the United States to take unorthodox and unexpected actions against countries the White House says have more to lose than America if the tariff stand-offs continue, in this case China.

At the point Trump gets as much as he believes he can squeeze from the Chinese, these optimists say he will declare victory. They argue the current trade pain will disappear when China agrees to reinvent its economic policies/practices on trade, while increasing US ag and energy purchases. The steel/aluminum tariffs will be lifted when Trump decides he has sufficiently reinvigorated US steel and aluminum industries.

Critics contend, however, not only has the president seriously underestimated the resolve of targeted trade partners to take on the United States and ride out this latest tariff tirade, but also not all the ultimate damage done to US industries will be undone with the stroke of a pen on a new trade deal somewhere. Almost daily, the White House is warned its success in jump-starting the domestic economy with tax cuts and the resulting increased employment is at

risk. National agriculture and business groups are beginning to abandon their public support as tensions grow over lost immediate sales and the potential for lost long-term markets for ag products. For instance, the U.S. Chamber of Commerce has now put considerable cash behind its escalating criticism of the Trump tariffs, launching in July a national, multi-million dollar campaign outright opposing Trump's trade actions.

For most agriculture groups, it is no longer how much economic pain may be felt but how long farmers, ranchers, and agribusinesses can withstand the losses, especially as on-farm production enters its fifth year of low prices and overproduction. There is also a political price that could be paid by the Trump camp if the trade battles continue into the autumn.

"Political loyalty can only go so far when you're losing money and not confident in what the strategy is," said one veteran ag lobbyist. "To keep saying, 'if you lose a market here or there, just sell somewhere else' doesn't cut it. There are too many casualties."

Rural support is eroding quickly when Senator Pat Roberts (R-KS), chair of the Senate Agriculture Committee, calls Trump a trade "protectionist," or when the chair of the Senate Finance Committee, Senator Orrin Hatch (R-UT), says of Trump's tariff tsunami, "I'd like to kill 'em," meaning the tariffs. This amounts to a GOP-controlled Congress firing its last warning shot before it takes steps to tie the president's hands on tariffs, a self-defense move in an election year.

Also at risk, as the White House plays a game of tariff chicken with most major US customers, is the fate of the North American Free Trade Agreement. Both Mexico and

Canada have called on the United States to resume high level negotiations, the goal being to have at least an outline for a new tripartite deal in hand by the November midterm elections. Yet while Canada and Mexico seem willing and able to rise above the related-but-not steel/aluminum tariff battles, Trump says he would not sign a new North American treaty before the November elections in any event. This means lost opportunities to maintain cross-border tariff-free trading, and it means addressing import barriers for rendered products in Mexico gets put on hold at least for the rest of this year.

Of course, threatening to slap a 20 percent tariff on automobiles imported from Europe did not help the president's reputation for solid trade policy.

As national agricultural producer groups and agribusiness organizations say their daily prayers for the tariff logjam to break, the administration continues to hail farmers and ranchers at least as "patriots," promising to make them economically whole should the damage done by lost export markets become too painful and costly.

The Dutch uncle in all of this is Agriculture Secretary Sonny Perdue, a man who has spent a good chunk of his summer reassuring farmers and ranchers that the president has their collective backs. Perdue has acknowledged in newspaper and television appearances that agriculture has legitimate concerns about being in the crosshairs of China's retaliatory tariffs. He told an industry meeting in Chicago, Illinois, this summer that agriculture "understands that China has not been a fair player," and said the White House "will not allow

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California Regulations are Complex

Regulations are anything but simple, and California's renderers are discovering the complexity of legislation passed in 2016 aimed at reducing the state's greenhouse gas emissions is affecting the raw material they collect. Rendering Industry Advisory Board (RIAB) members were told at a June meeting that Senate Bill (SB) 1383 directs the California Department of Resources, Recycling, and Recovery (CalRecycle) to achieve the bill's lofty organic waste to landfill reduction targets of:

- 50 percent below 2014 levels by 2020, which equates to no more than 11.5 million tons of organic waste going to landfill annually
- 75 percent below 2014 levels by 2025, dropping that yearly amount to 6 million metric tons of organic waste

"With the state's continued population growth, that 6 million metric ton number will be challenging," stated CalRecycle's Hank Brady. The department estimates 50 percent of organic waste comes from residential sources, 40 percent from commercial, and 10 percent self-haul.

SB 1383 requires local jurisdictions to determine how best to reduce the organic waste going into landfills by using whatever technology is available in that area. Waste haulers estimate it will cost about \$3 billion and at least five years to build the 100 or more facilities needed to recycle the diverted organic material.

When Brady noted that CalRecycle is not focusing on current recycled material (i.e., meat products) to meet the organic reduction goals, RIAB Chairman Michael Koewler, Sacramento Rendering, refuted that by saying money from CalRecycle's Organics Grant Program is going to recycling technologies like anaerobic digestion that is dependent on nitrogen provided from meat products. Brady clarified that grants are contingent on proving the technology is diverting organic waste away from landfills and not other recycling methods.

Tad Bell, lobbyist for the Pacific Coast Renderers Association, reiterated how complex SB 1383 is due to waste hauling companies having jurisdiction over organic waste diversion. He then acknowledged how far CalRecycle has come in recognizing rendering's important role in organic waste recycling after conversations with the California Department of Food and Agriculture (CDFA). Current regulation specifically states that meat, poultry, and fish by-products must go to rendering. Brady explained that CalRecycle recognizes rendering as one form of organic waste recycling along with composting, anaerobic digestion, and biomass for wood.

"Our regs are not trying to change current regulations that require certain material go to rendering," he commented. The concern among RIAB members, however, is that local jurisdictions/cities that enter into contracts with waste hauling companies to collect and divert organic material will challenge renderers who are already picking up the material. Jared Trawick, Imperial Western Products, added that it will be



From left, Hank Brady and Mark de Bie, CalRecycle, address a new organics waste disposal regulation alongside Rendering Industry Advisory Board members Daniel Stonesifer, Atlas Portable Services Inc., and James Andreoli Jr., Baker Commodities Inc.

difficult for rendering companies to go city by city educating each on current rendered product collection laws.

CalRecycle's Mark de Bie informed the group that the agency is working with CDFA on a waste characterization study to clarify exactly which organics are being disposed of in landfills. Paula Batarseh, CDFA Meat, Poultry, and Egg Safety Branch chief, and her team are working to categorize the material that goes to rendering. Expected by mid-2019, the study data should also help determine if all meat by-products generated in California are actually being collected and rendered.

Other business matters addressed at the RIAB meeting included CDFA's outreach activities on the state's inedible kitchen grease (IKG) program to groups such as the California Restaurant Association (CRA) and its 93,000 members, the California Grocers Association, county environmental health departments, and law enforcement. A standardized presentation will allow CDFA staff to emphasize key components of the state's IKG and inedible meat material collection, disposal, and enforcement requirements. The department is also developing a two-minute video that will be available on CDFA's website and distributed to agencies and associations whose members would benefit from seeing it. CDFA is reaching out to the state's restaurants in an effort to show how the IKG program can help them reduce costs, protect the environment, and deter grease theft activities. Batarseh believes it is important for CDFA to build alliances and partnerships with other agencies and groups in an effort to educate them about the state's IKG program and rendering laws.

"I am really pleased CDFA is building a relationship with the state's restaurant association," commented Jim Andreoli, Baker Commodities. Paul San Gregorio, long-time IKG program investigator, reported that CRA is also struggling with how to help their members deal with SB 1383, so working together could help both industries.

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Staying the Course In Europe

By Tina Caparella



The European rendering industry has come a long way since bovine spongiform encephalopathy changed its world over 20 years ago. Today, more raw material is being collected, processed, and utilized in increasingly more markets, yet some hurdles remain and are being

addressed one by one, as was discussed at the European Fat Processors and Renderers Association (EFPRA) Congress held in late June in Barcelona, Spain.

One obstacle is convincing regulators, nutritionists, and buyers of poultry and pig meat that processed animal proteins (PAPs) are safe, nutritious, and necessary to meet the European Union's (EU's) protein demands. The conclusions of a poultry feeding trial conducted at Wageningen University in the Netherlands were presented by Dr. Marinus van Krimpen, who showed that in 2015–2016, the EU produced only 11.7 billion metric tons (MT) of feed proteins but consumed 27.8 billion MT. He noted that the EU needs to develop strategies of self-sufficiency such as increasing protein yield of current crops, improving animals' protein efficiency, and using closed nutrient cycles to prevent waste, or in essence, use PAPs.

The poultry study was conducted as current feeding tables, nutritional values, and impacts on performance are outdated, established before the EU feed ban was put in place. PAP processes have also changed since then. The study aimed to determine the effect of two different pork PAPs from two EFPRA members on performance, litter and bone quality, and gut health in male broilers. Preliminary conclusions show that both PAPs performed similar to the control study of a soybean meal-based diet. The next steps are to get the research published in a peer-reviewed journal to establish the new parameters.

Continuing the discussion on feed was Dr. Sebastian Csaki, International Feed Industry Federation (IFIF), who highlighted the Global Feed LCA (Lifecycle Analysis) Institute (GFLI), which aims to develop a publically available LCA database on feed. Csaki stated that with the world population growing to an estimated nine billion people by 2050, there is pressure on meat and feed products to be sustainable. He shared which United Nations Sustainability Development Goals the feed industry needs to focus on, such as no poverty, zero hunger, good health and well-being, clean water and sanitation, responsible consumption and production, climate action, and life below water and on land.

"These topics are going to impact what governments do over the next years," Csaki commented. "It's going to touch us as businesses." Since feed supply chains are global and complex, he said GFLI will harmonize environmental footprinting methodology to strengthen credibility and establish a level playing field. GFLI is based on work done by the United Nation's Food and Agriculture Organization and its Livestock Environmental Assessment and Performance, or LEAP, Partnership. The database will contain global coverage and methodology but be regional in data and implementation. IFIF and the United States' American Feed Industry Association are founding organizations of GFLI, which contains numerous corporate members who have an investment in feed.

As for the rendering connection, "IFIF currently uses commercially available data, but we want to make sure rendering's impact is captured correctly," Csaki explained. "This is an opportunity to clarify how to calculate rendered products." GFLI is not just a European issue as Brazil is joining due to inaccurate data being used by the government.

Another issue EU renderers are watching is a new fertilizer regulation that Chris Thornton, European Sustainable Phosphorus Platform, said will be radically different than current law and cover almost everything that is used as fertilizer. He noted the new regulation will "fix" EU criteria for composts, digestates, food industry wastes, and animal by-products.

"This is the first time a piece of legislation is given a waste-based status," Thornton said, adding that ash-based products are not included in the current proposed law and the "certain animal by-products" clarification is not described so the European Parliament is looking for proposals.

Carolina Probst, Friedrich-Loeffler-Institut, revealed that African swine fever is no longer an exotic disease in Europe. It first appeared in 2014 in Poland and has been consistently growing and spreading, primarily by human behavior such as hunting.

"Germany is quite concerned as it is the number one country in pork production in Europe," Probst stated. "The disease is jumping across distances that cannot be predicted." Germany has the highest density of wild boar in Europe, yet the biggest risk of introduction is from humans (i.e., hunters) via infected material, such as in sausages. The rate of transmission among animals is low but the death rate is high. Due to the characteristics of the virus, no vaccine is available.

Francesco Salvi, senior associate at the law firm of Pavia e Ansaldo, dissected the complicated new EU renewable energy legislation, which sets several target dates of reducing greenhouse gas (GHG) emissions up until to 2050. The proposed Renewable Energy Directive released in June is a substantial amendment to the original directive published in

2009. It sets a strategy of a 40 percent cut in GHG emissions by 2030 compared to 1990 levels and a target share of energy from renewable sources in the EU's gross final consumption of at least 32 percent, up from 27 percent by 2020. One point Salvi made was that in the proposed regulation, biofuel produced from used cooking oil and fats are limited to 1.7 percent of the energy content of the transportation fuel. Advanced biofuels produced from a slew of other feedstocks—such as algae, straw, animal manure and sewer sludge, and crude glycerin—must make up at least 3.6 percent of transportation fuels by 2030.



Dirk Sindermann, *left*, GEA Group in Europe, talks with Ridley Bestwick, West Coast Reduction Ltd. in Canada and chairman of the National Renderers Association.

Spain's Meat and Rendering Industries Thrive

Several speakers provided a glimpse into Spain's rendering and meat industries beginning with Christian Morron, executive secretary of ANAGRASA (Spain's animal by-products association), who reported that 6.6 million (M) MT of meat was produced in Spain in 2017, mostly pork at 4.2 MMT, which is second in the EU behind Germany and a slight increase from 2016. Spain is the fourth largest poultry producer in the EU at 1.5 MMT after Poland, the United Kingdom, and France, and the sixth largest beef producer at 641,000 MT. Spain's ovine production in 2017 was second in the EU behind the United Kingdom at 114,700 MT, down nearly two percent from 2016. A small quantity of rabbit and lamb meat are also produced in Spain.

On the animal by-products side, Spanish renderers collected nearly 2.5 MMT of raw material—more than 1.9 MMT of category 3, 85,000 MT of category 2, and 426,000 MT of category 1. This translated into 670,000 MT of category 3 products (56 percent protein meals, 44 percent fats), nearly 26,000 MT of category 2 products (69 percent meals, 31 percent fats), and 134,000 MT of category 1 products (67 percent meals, 33 percent fats). Of the category 3 PAPs, 43 percent were consumed in pet food, 40 percent to fertilizer, 9 percent to feed, and 8 percent to aquaculture. Proteins from category 2 are destined for fertilizer while category 1 goes to combustion. More than 70 percent of category 3 fat went for animal feed with the remainder going to food, oleochemicals, and pet food. All category 2 and 65 percent of category 1 fat is used in biodiesel, with the rest of category 1 going for combustion.

Morron then explained the three levels of government in Spain and their roles in animal by-products, which include a public subsidy to farmers for the removal and disposal of fallen livestock. He discussed the challenges and opportunities of the various rendered products within the country, such as the difficulty of exporting category 3 PAPs to third countries (outside the EU). In 2017, about 30,000 MT of pork and poultry meals were exported from Spain to Thailand, Chile, Turkey, Israel, South Africa, Serbia, and Columbia.

"The resistance of third countries to proteins is due to the prohibition of its use in the European Union," Morron commented. ANAGRASA was founded 41 years ago and currently has 31 member companies that represent 60 percent of pig production, 70 percent of poultry production, and 60 percent of ruminant production in the country.

Delving deeper into the Spanish pork industry was Albert Morera, managing director at Patel Sau, the largest private producer of pigs in the EU and top 10 in the world at 4.5 million head annually and 1,520 farms. He showed the history of pigs in Spain, which produced 25 million head in 1989—making it almost a net importer, especially in the summer tourist season—to 50 million head today.

"This is quite amazing," Morera exclaimed. The "Spanish miracle," as he called the growth, is attributed to a pre-existing livestock and meat culture, accessibility to markets—first within the EU after Spain joined in 1992, then to third countries—cooperation between government and industry, and an integrated system versus cooperative. In 1989 there was more than 200 slaughterhouses, plus local operations, with the largest one processing 10,000 pigs per week. Today, there are about 30 slaughterhouses, with the biggest one processing 15,000 pigs per day, and no local operations. In 2017, Spain exported 1 MMT of pork meat, of which 39 percent went to China, 20 percent to Japan, and 17 percent to EU countries.

Spain's pork industry considers rendering an important part of the production chain and expects maximum value from its by-products. Despite its growth, the pork industry faces challenges, including limited growth capacity mainly due to pressures on the environment and from social media and animal welfare/vegetarian groups, along with political changes.

EFPR's next congress will take place June 12-16, 2019, in La Baule, France.

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Diko Kalkdijk, *left*, Andritz in the Netherlands, shows Lucas Cypriano, Zootecnista in Brazil, the company's equipment.

European Renderers Processed More Material in 2017

Dirk Dobbelaere, secretary general of the European Fat Processors and Renderers Association (EFPRA), presented the annual statistics of Europe's animal by-products industry at the group's congress held in Barcelona, Spain, in June. He noted that with the exception of Canada, France, Greece, Ireland, and Chinese Taipei being classified as controlled risk, all other countries are enjoying negligible risk status for bovine spongiform encephalopathy by the World Organization for Animal Health, or OIE.

Pig production in the European Union (EU) is expected to be nearly 2 percent higher in 2018 compared to last year. Exports to China, which accounts for 35 percent of all pork exports, are down 11 percent in the beginning of this year versus 2017, but a new EU free trade agreement with Mexico will increase exports to that country after tariffs of 10 percent were recently imposed on US pork products. The EU is now beginning trade negotiations for pork with Australia and New Zealand.

Beef production in the EU this year and next is expected to be stable, while the region's poultry production is anticipated to go up about 1.2 percent. Poultry production is moving away from Western European countries like Spain and France to mid-European countries such as Poland, Romania, and Hungary.

EFPRA represents 29 members in 25 European countries that reported processing nearly 20 million metric tons (MMT) of raw material in 2017 into 3 MMT of animal fats and nearly 4.5 MMT of animal proteins. In 2016, 2.8 MMT of fats and 4 MMT of proteins were produced from 17 MMT of raw material. Dobbelaere attributed last year's increase to more category 3 (animals fit for human consumption) and food waste material being processed.

Total category 3 raw material processed in 2017 was over 14 MMT, a sharp jump from the 12 MMT reported in 2016. Category 1 and 2 material collected remained stable at around 5.5 MMT last year.

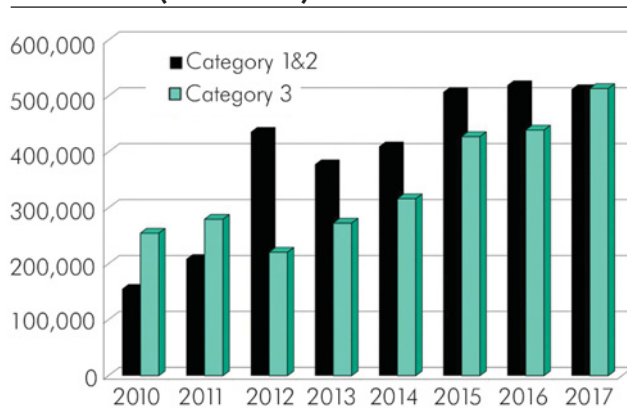
Total category 1 raw material processed in 2017, which is at the highest risk for transmissible spongiform encephalopathy, was 4.6 MMT, while category 2 material collected, also at high risk but not containing some specified risk materials, was 830,000 MT, both similar to 2016. Most all category 1 meat and bone meal (1 MMT) and 105,000 MT of fat were used for combustion, with about 400,000 MT going to biodiesel last year, the same as in 2016 and 2015. Most category 2 meat and bone meal (167,000 MT, down from 180,000 MT in 2016) was used as fertilizer with a small amount (12,000 MT) going to feed for fur animals. Category 2 fat was mainly used in biodiesel, about 112,000 MT, with very little going to combustion.

Use of category 1 and 2 fats in biodiesel production in 2017 remained stable at around 500,000 MT as their eligibility for double counting toward the EU Renewable Energy Directive targets remain in place until 2020. Even though category 3 fat does not qualify for double counting, its use in biodiesel continued to climb last year to 500,000 MT, up from about 420,000 MT in 2016, 400,000 MT in 2015, and 300,000 MT in 2014.

Production of food-grade and category 3 fats last year was around 2.4 MMT, up from 2.1 MMT in 2016. Multi-species animal fat production accounts for more than half of all fats, followed by poultry and pig fats, and lard. The primary destinations for multi-species animal fat in 2017 remained oleochemicals, animal feed, and biodiesel while poultry fat went to animal feed, pet food, and biodiesel. Pig fat is used mostly in feed with smaller amounts going into biodiesel and pet food.

Of the 3.1 MMT of food-grade and category 3 processed animal proteins (PAPs) produced in 2017 (up from 2.7 MMT in 2016), about 60 percent is multi-species, 20 percent poultry meal, and 10 percent pig meal. Nearly three-quarters of PAPs (2 MMT) went to pet food, the third consecutive year of growth, while 600,000 MT of PAPs was destined for fertilizer, down from 690,000 MT in 2016 and 825,000 MT in 2014. In one area of growth, 10 percent of

Animal fat usage in EU biodiesel production, 2010-2017 (metric tons)



PAPs are now going to terrestrial animal feed in fur-animal producing countries that previously were not taking any animal proteins.

Although pet food remains the EU rendering industry's most important customer, PAP use in aquaculture continues to climb. The European Commission began allowing swine and poultry PAPs in fish feed in June 2013. In 2017, 220,000 MT of PAPs were used in fish feed, up from 170,000 MT in 2016 and 95,000 MT in 2015. While poultry meal is preferred, 30,000 MT of multi-species PAPs were used for the first time in 2017. Pig meal usage declined from about 18,000 MT in 2016 to around 2,000 MT last year.

Dobbelaere's conclusions for 2017 are that there was 21 percent more category 3 and food waste material processed than the previous year, corresponding to a 15 percent increase in PAPs and 14 percent more fat. In the large markets, fertilizer use is down by 5 percent while pet food use is up 7 percent. In addition, use of PAPs in fish and fur feed production are both up by 30 and 21 percent, respectively, and a new export market to countries outside the EU for animal feed has already surpassed that of EU fish feed usage. In the EU animal fat market, there has been increased use of fats in feed (18 percent), biodiesel (17 percent), pet food (11 percent), and oleochemicals (9 percent).

R

Rendering in Europe Needs Active Support



By Sjors Beerendonk, Darling Ingredients Inc.

Editor's note – The following is a speech, in part, given at the European Fat Processors and Renderers Association Congress in Barcelona, Spain.

I have been given the honor and responsibility of becoming the European Fat Processors and Renderers Association's (EFPPRA's) president for the coming two years. After having been surrounded in my previous role as vice chairman by two heavyweights—Martin Alm and Neils Leth Nielsen, who has been president for the past 14 years—this is not only a new situation for me, but also for EFPPRA members.

EFPPRA represents safety, security, and sustainability in the food chain. EFPPRA has a role to play in the integrity of the rendering sector and being a reliable partner for both the industry and authorities in Brussels, Belgium, with who is shared the responsibility for a safe food chain. EFPPRA priorities may change from time to time depending on a pragmatic approach and what seems to be politically realistic or feasible at a certain point in time. Yet the common thread will always remain the same: to seek—within the boundaries of unquestioned sanitation and biosecurity—optimal valorization of rendered products and removal of all obstacles toward that goal.

Having said that, EFPPRA's traditional priorities have remained largely the same over the last few years and will not change in the near future. Making progress in Brussels is a matter for the long-run as even after so many years following the bovine spongiform encephalopathy (BSE) crisis, the fight against sentiments and prejudices is still ongoing.

Sometimes that long route is frustrating; for instance, the continued lack of a validated species tests that will enable lifting the ban on feeding pork proteins to poultry and eventually poultry proteins to pigs. This intra-species ban, which is based on politics and not science, will remain largely meaningless without the introduction of a threshold relaxation for processed animal proteins (PAPs). The discussion on the alternative of so-called "action level" or "technically zero tolerance level" appeared to provide an opening for this problem, but this is still under consideration. Fortunately, EFPPRA recently learned from European Commission officials that major steps forward can be expected in the second half of this year so we remain positive and optimistic.

In anticipation of such an important decision, EFPPRA has funded—together with leading companies—a Wageningen University research project on the digestibility of rendered products in pig and poultry diets to facilitate the acceptance of the market once it is opened. Making steps is possible with such examples as the removal of the export ban on mixed PAPs to third countries as of July 1, 2017, and the redefinition of specified risk material.

Ironically, this shift has not resulted in a higher valorization as existing markets cannot absorb an increased volume of category 3 products (fit for animal consumption) and the export of ruminant PAPs to third countries has not materialized as those countries are reluctant to receive proteins that are not allowed to be used in the European Union (EU). It is a situation that has led to price erosion in Europe and calls for the need to create more openings in the EU for rendered products so we can adequately fire back at these arguments. An opening to accept the use of ruminant PAPs in aquaculture feed is therefore important, and for this reason has become an EFPPRA priority. This restriction should be removed for sustainability reasons to end the malpractice that fish need to be caught to produce fish feed, which is a strange form of a circular economy.

In a global context, Europe remains an island. From an objective point of view, at this moment there may not be any need to differentiate the regulatory framework from the rest of the world. This has become clear from the recent World Organization for Animal Health (OIE) classification confirming the negligible BSE risk for largely all of Europe. EFPPRA had hoped this official OIE classification would become a game changer in the discussion and a starting point for authorities to speed up the further feed ban relaxation and alignment with OIE

rules. The lifting of the export ban was a first step but more needs to follow. There is continuous discrimination against European farms, feed mills, and the meat industry.

Driven by a strong increase in population and a further increase in wealth, the global outlook for animal proteins is great. In the next 40 years, more food has to be produced than in the past 4,000 years. This means an enormous increase in the demand for food and a doubling in the need for high quality proteins. Even though 90 percent of global growth will take place in emerging markets, with 60 percent of that in Asia, this is a big challenge for the world and a big opportunity and responsibility for the rendering industry.

In this respect, rendering becomes more and more important as rendered products are a safe and sustainable solution for meat by-products. Sustainability and a circular economy will be the industry's strong cards to play in the coming years.

Ironically, leading supermarkets in Europe are putting further restrictions on feed mills with regard to the use of animal proteins. Yet at the same time on the shelves of those supermarkets are king prawns originating from countries outside the EU where those restrictions do not apply. This is a frustrating inconsistency and brings up the question why rendered products are not positively recognized in the EU as sustainable and safe. If the EU takes its circular economy priority seriously, rendered products definitely need to be a major part of it and need to receive active support.



EFPPRA President Sjors Beerendonk

Continued on page 14

Future challenges for the European industry will be broader than tackling BSE, which brought rendering from a hidden industry into the full spotlight. The livestock industry and the consumption of meat are under attack. In the slipstream of that discussion, we will be involved—and need to involve ourselves—in broader societal and ethical discussions like sustainability, a circular economy, food safety, labeling, and animal welfare.

To grasp these opportunities and challenges, there needs to be better alignment and cooperation in the value chain with EFPRA and its members working actively together

with European partner organizations like the European Feed Manufacturers Federation, the European Livestock and Meat Trading Union, and Copa Cogeca, the united voice of European farmers and agri-cooperatives. Ultimately we are all allies as we all have the same goal: a sustainable and healthy livestock industry.

As EFPRA's new president, I share my responsibilities with the industry. EFPRA can only be successful in Brussels if their work is supported by the pressure of EFPRA members on their national competent authorities and their national members in the European Parliament. At the end of the day in Brussels, it is the member states that decide and the Commission will only be encouraged to act upon initiatives and pressure. **R**

Lifelong Renderer Closes Door on the Past

By Niels Leth Nielsen
Past President, European Fat Processors and Renderers Association

Editor's note – The following is a speech, in part, given at the European Fat Processors and Renderers Association Congress in Barcelona, Spain, where Nielsen was presented with the group's first honorary president award for his long-standing commitment to the industry.

I want to thank all of you for the trust and great support during my term as president of the European Fat Processors and Renderers Association (EFPRA) over the last 14 years. It is a long time and unprecedented for EFPRA, but now it is up to you to decide the future, at least in the way to run this organization.

My time in the rendering industry goes back to 1965 when I started as a trainee at Daka Denmark A/S in Lunderskov where my father was a bookkeeper at the time. For 53 years, except four years from 1968 to 1972, I have always been employed at Daka. During those four years, I worked at a slaughterhouse where I learned about animal by-products.

Since 1986, I have been involved in industry organizational work, first with the European Renderers Association (EURA), followed by EFPRA after the merger of EURA and European Animal Fat Melters Association, as well as with the World Renderers Organization. I have had the great pleasure and honor to have served as president of all three associations where I have worked with many extremely kind, skilled, and dedicated individuals, which is much appreciated, especially now at the gate to retirement.

Many of you are not only good colleagues, but have also become good friends from all over the world. My wife, Marianne, and I have experienced countless wonderful and exciting times with so many in the rendering industry, whether in Europe, the United States, or down under in Australia. We have always felt welcome and that our participation was appreciated. Thank you for the great hospitality we have encountered all over the world.

It is impossible to look over the enormous change this industry has gone through over the last 50-plus years. When I started in the industry back in 1965, there were around 35 to 40 individual rendering companies in Denmark. Today, there are only two—Daka, with three plants, and BHJ, which has a poultry rendering plant. Industry consolidation has been seen all over Europe and elsewhere globally and that will not end. There will be more consolidation in the future, which is necessary to build the strength to be innovative and meet the demands of our customers, both raw material suppliers and end users of rendered products, many of which are large global companies, such as in the pet food industry.

Over time, the rendering industry has faced big challenges, with bovine spongiform encephalopathy (BSE) and its consequences having the most dramatic effect, forever changing the industry. Yet in times of crises, innovation has always been at its highest level and BSE has led to improved changes. There are now dedicated production lines, new markets for rendered products, and even new products, such as tallow methyl ester.

Now a new generation is taking over EFPRA, BSE is a disease of the past, I am a president of the past, and as of October 1, I will be a renderer of the past. I will close the door to the past but I will close it as a very satisfied and proud man of this industry. I am grateful on behalf of myself and my wife for the many wonderful experiences, albeit difficult in between but successful at other times, always surrounded by delightful and amazing colleagues. Thank you from the bottom of my heart. Good luck to EFPRA, to everyone, and especially to the rendering industry. **R**



Niels Leth Nielsen, *left*, and his wife, Marianne, listen as Nielsen's 53-year career in the rendering industry is celebrated at the EFPRA gala dinner.



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- Howard Murray, Rendering Manager, Clemens Food Group

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Biofuels, Regulations, and Trucking on Renderers' Minds

By Heather Davis
Coordinator of Member Relations and Operations
National Renderers Association

The National Renderers Association (NRA) Central Region held its annual business meeting in June in La Crosse, Wisconsin. The group welcomed speakers addressing rendering issues and created opportunities for members to network.

Ryan Standard, The Jacobsen, opened the meeting by explaining how the value of biofuel credits, known as renewable identification numbers (RINs), have plummeted due to Environmental Protection Agency Administrator Scott Pruitt's current policy of granting RIN waivers to refineries on request, including large refineries like Mobil and Sinclair. The biomass-based diesel RIN market, which includes renewable fuels produced from rendered fats and oils, has dropped 56.5 percent since November 2017. Despite the value reduction, the Low Carbon Fuel Standard (LCFS) credits in California are at an all-time high. Tallow and used cooking oil are high-value feedstocks for the LCFS credits, with the biggest barrier for these products being the lack of infrastructure, which is creating a bottleneck. Export markets for rendered products as biofuel feedstocks also show promise in market projections.

This author was given the opportunity to speak about NRA's recent work. As Standard discussed, RIN waivers are affecting the biodiesel market. Nancy Foster, NRA president and chief executive officer, has been on Capitol Hill supporting initiatives for biofuel tax credits and a strong Renewable Fuel Standard. She has also focused on protecting the North American Free Trade Agreement (NAFTA) to include keeping zero tariffs on rendered products exported into Mexico and Canada, getting the United States (US) Department of Agriculture to issue a small ruminant rule, and gaining market access for US ruminant meat and bone meal into Mexico through a new NAFTA. Kent Swisher, NRA International Programs, is working toward exporting meat and bone meal into Mexico, Peru, and Columbia as well as gel bone into China. NRA and US renderers have met all of the requests for information, audits, and paperwork, and are waiting for various governments to provide the next steps.

As renderers and other NRA member companies consolidate, a strong foundation for the association is more important than ever. So far this year, NRA has added a new active rendering member and eight new associate/allied members. To improve communications, the group is updating its database, designing a new website, and developing new programs to engage rendering leaders. A new set of infographics telling the story of rendering was just released and marketing opportunities have been expanded at the International Production and Processing Expo held each January in Atlanta, Georgia.

Regulations and compliance expectations change regularly so Mark Lies II, Seyfarth Shaw LLC, provided an update on the Occupational Safety and Health Administration (OSHA). The number of OSHA inspectors has decreased, although the number of inspections has gone up as have potential penalties for violations. Employer liability has also expanded under a multi-employer workplace doctrine, with employers having

responsibility for the safety of other companies' employees on their premises. In light of current events, OSHA is pressuring employers to have a strong "zero tolerance" workplace violence policy, including definitions and examples of prohibited acts or threats and next steps if violations occur. When responding to OSHA communications, Lies recommends that companies be truthful, keep answers short and to the point, answer only the question(s) asked, avoid giving extra information or hypothetical scenarios, and seek OSHA-experienced legal advice.

Energy Management Resources was welcomed back to the meeting this year with an update on the energy market. Both supply and demand are strong with industrial demand continuing to rise. In 2019, coal usage is expected to decline along with nuclear and hydro power while wind capacity is likely to expand, although the majority of the energy market growth is expected to be in natural gas.

Joel Fasnacht, of Kwik Trip and the Minnesota Trucking Association, shared news about the trucking industry. All fleets, except livestock haulers, are now expected to comply with new electronic logging device (ELD) regulations. Several bills for exemptions from ELDs have been proposed, including trucks hauling agricultural commodities. Currently, about 70 percent of US freight is moved by truck. Freight volume is expected to increase while the percentage moved by truck is unlikely to change due to a lack of young, qualified drivers combined with tougher training standards for a commercial driver's license that is creating a worker shortage. Several programs are being pursued to recruit new drivers. Technological advances, including linked, self-driven, or partially automated trucks, may change or reduce the role of drivers and attract younger, tech savvy recruits.

Dennis Winters from the Wisconsin Department of Workforce Development provided information on the labor force. Unemployment rates have steadily dropped and there are more job openings than available workers. Information technology, engineering, legal, health care, management, skilled manufacturing, building trades, transportation, and warehousing have the most difficulty filling positions, although those industries are expected to see the most growth in employment.

Dr. David Meeker, senior vice president for NRA Scientific Services, wrapped up the meeting with a rendering research and issues update. The future of rendering may involve more dedicated pet food lines and new proteins. Since pet food producers are under increasing pressure from consumers to provide marketable "clean label" pet foods, Meeker is working toward establishing new Association of American Feed Control Officials premium animal protein definitions. The Fats and Proteins Research Foundation (FPRF) is funding several new projects on the safety and nutrition of rendered products, focusing on *Salmonella*, food safety, palatability, nutrition, and oxidation. Several FPRF researchers will be presenting their projects, including possible new uses for low-value rendered products, at this October's NRA annual convention. **R**

agriculture producers to bear the brunt of China's retaliation as we defend our own interests as a nation." In a July *USA Today* column, Perdue said, "There's no denying that the disruption in trade relations with China is unsettling to many in agriculture, but if the president succeeds in changing China's behavior, America's farmers will reap the benefits."

Perdue has cobbled together at the White House's behest a new U.S. Department of Agriculture (USDA) program—reportedly funded to the tune of about \$30 billion in Commodity Credit Corporation emergency and other monies—to provide economic relief to farmers impacted by the tariff war.

"We have tools at our disposal to support farmers faced with losses that might occur due to downturns in commodities markets," Perdue wrote. "To this point, we have not unveiled our strategy as it is not good practice to open our playbook while the opposing team is watching." At the same time, Perdue acknowledged in a *Chicago Tribune* interview that the details of how and when those tools will be used "are not baked in" yet. He said he is informally looking at Labor Day (September 3), as harvest begins, as a deadline to assess actual damage and decide on "mitigation strategies that have to do with actual remuneration of damages."

"Farmers should know this: They have stood with President Trump and his policies, and we will make good on our promise to stand with them as well," Perdue said. "If China does not soon mend its ways, we will quickly begin fulfilling our promise to support producers who have become casualties in these disputes."

As the nail biting over Trump trade policy continues, agriculture must also hope to shepherd a new comprehensive 2018 farm bill to the president's desk by midnight September 30. From the 30,000-foot view, the farm bill conference committee to reconcile House and Senate versions of the omnibus farm legislation should move smoothly. The only major political hurdle to get over is the House bill's insistence that federal food stamp recipients work or train for work at least 20 hours a week. The Senate bill tackled the food stamp program through fixes to waste, fraud, and abuse.

A farm bill conference committee, however, is a unique legislative event, and one that never fails to surprise. Senator Debbie Stabenow (D-MI), ranking member of the Senate Agriculture Committee, reminded reporters shortly after the Senate approved its bill that farm bill conference committees are always "wild and woolly" debates. Wild and woolly or not, that conference must produce a final product by midnight September 30. If that does not happen, Congress must pass a one-year extension of current law, a fallback move that does not bode well for several vital and long-standing USDA programs.

This is where the National Renderers Association (NRA) and its members have focused most of their attention, as a one-year extension of current law means any USDA program that does not enjoy mandatory funding as part of the farm bill baseline shuts down until the new law is in place. In NRA's case, the Foreign Market Development (FMD) program, through which renderers fund a big chunk of their export development activities, turns off the lights until a new farm bill is approved.

The good news is that both House and Senate versions of the farm bill include language supporting a strong and robustly funded FMD—repackaged in such a manner as to not be vulnerable to a future shutdown—as well as a strong Market Access Program (MAP). NRA also receives MAP funds for export promotion. The challenges are getting the two bills reconciled, the compromise package approved by both chambers, and the final product ready for Trump's signature by midnight September 30.

Rendering is considered one of the highest and best uses of recovered food waste.

In addition, squarely in the crosshairs for NRA is language primarily found in the Senate version of the farm bill that seeks to reduce food waste while increasing federally-funded options for recovery and disposal of said waste. The House bill references food waste only in that it stipulates USDA to be the lead agency on any and all federal food waste efforts, and that the director of those efforts be housed within the USDA Office of the Chief Economist.

On the Senate side, Stabenow included in her new "urban agriculture" section of the Senate bill a loan/grant program for eligible counties to fund pilot programs in at least 10 states, at the reported urging of Senator Richard Blumenthal (D-CT), author of a stand-alone food waste recovery and disposal bill. Costing as much as \$25 million a year, the program will ensure, by using various technologies, that food is disposed of in such a way as to enhance landfills and provide "urban farmers" with a source of good soils.

The only technologies referenced in the Senate language are composting and anaerobic digestion. NRA wants rendering on a level playing field with any other technology that could be used to recover and dispose of food waste. Renderers do not want to see the federal government inadvertently fund through county loans and grants a system that facilitates waste companies and others disrupting conventional and long-standing commercial relationships enjoyed by renderers with supermarkets, meat lockers, and restaurants.

To the NRA goal of a level marketplace playing field, renderers were able to get language into the bill, in a separate section, requiring USDA to report to Congress on its food waste efforts. This protects rendering supply relationships, ensuring composting, anaerobic digestion, and rendering are all recognized by USDA as acceptable means of food waste recovery and disposal.

NRA is also seeking to include in a separate House bill authored by Representative Chellie Pingree (D-ME) language that would require participants in any federal food waste reduction, recovery, and disposal program to provide in writing an assurance they understand and will comply with the Environmental Protection Agency (EPA) Food Recovery Hierarchy (www.epa.gov/sustainable-management-food/food-recovery-hierarchy). This graphic representation describes EPA, USDA, and the Food and Drug Administration's agreement on the best and highest use recommendations for food waste reduction, recovery, and disposal. Rendering, either for feed ingredient or industrial/fuel use, is considered one of the highest and best uses of recovered food waste. **R**

Renderers Speak Up in Washington

National Renderers Association (NRA) members traveled to Washington, DC, in June to educate their representatives in Congress about rendering and discuss important issues affecting the industry. They urged support for strong export provisions in this year's farm bill and cautioned against food waste provisions that could harm renderers. Increased renewable fuel volumes under the Renewable Fuel Standard (RFS) and continued biodiesel tax credits were also priorities to encourage the growth of United States (US) biodiesel and renewable diesel production.

Congressional conservatives and liberals alike warmed to the valuable role of the rendering industry during meetings with NRA members. Rendering is a \$10 billion industry and employs thousands of people coast-to-coast in both urban and rural areas. The industry is an essential link in the feed and food agricultural chain, and its sustainability, recycling, and other environmental benefits are important "green" advantages.

"It's amazing how much many members of Congress like us, both Republicans and Democrats, because of what we do," said Dave Kaluzny II, Kaluzny Bros. Inc. in Joliet, Illinois, and chairman of NRA's Legislative Action Committee. "We are as green as it gets and no one told us to be. We just are. That gets their attention for our issues."

At the NRA Washington Fly-in industry issues briefing, traditionally a popular event, five speakers discussed current issues and coming trends that will affect the rendering business.

Dr. Steven Solomon, director of the Food and Drug Administration's Center for Veterinary Medicine, talked about his agency's approach to controlling the presence of residues in rendered feed ingredients. Dr. Rob Johansson, U.S. Department of Agriculture (USDA) chief economist, presented the latest economic outlook for agriculture, livestock, and poultry production and consumption. Kurt Kovarik, vice president of the National Biodiesel Board, urged continued work to persuade Congress to extend the biodiesel tax credits that expired December 30, 2017. He also thanked NRA for working collaboratively in support of the biodiesel industry.

Ambassador Gregg Doud, chief agricultural negotiator in the Office of the United States Trade Representative, talked about the agricultural impact of international trade disputes with US trading partners. Doud understands the rendering industry well since he is from a swine and cow-calf operation in Kansas and worked for the National Cattlemen's Beef Association during his career. David Salmonsens, senior director of the American Farm Bureau Federation, explained how farmers view the growing international trade fight and themselves as potential collateral damage. Renderers enjoyed the opportunity for frank and personal conversation with each speaker.

"The briefings were on topic and very informative," according to Jeff Neil, vice president of sales and marketing for Tyson Foods Inc. "Things went well and our industry is seen as a vital part of the food supply. The more we have the fly-ins



Doug Smith, *left*, Baker Commodities Inc., met with Representative Tulsi Gabbard (D-HI) to discuss rendering issues during the NRA Washington Fly-in.

and the longer members of Congress are in place, the more they know about our industry. This allows us to briefly recap the industry and spend more time getting into the issues and legislation we are focused on."

With the trade war between the United States, China, and other nations continuing to escalate, NRA members attending the fly-in also urged Congress to support agricultural producers, including renderers, by maintaining USDA funding to preserve foreign markets. USDA provides grant funding to NRA and other agricultural groups to promote exports. The US rendering industry sells approximately 16 percent of its production overseas so foreign shipments are important. At this point, rendered products have not been hit with retaliatory tariffs from China or other countries, though some livestock industry partners have been targeted.

The RFS and biodiesel tax credits were among NRA's leading issues since the rendering industry supplies 28 percent of the feedstock used to produce biodiesel and renewable diesel. Feedstock supplied by renderers includes animal fats and processed used cooking oil from restaurants, hospitals, and other foodservice establishments. Shortly after the fly-in, the Environmental Protection Agency proposed new RFS volumes for 2019 and 2020. NRA will urge a higher RFS than planned by the agency in its regulatory comments due August 17.

NRA members warned Congress against discrimination toward rendering in last-minute food waste provisions in the Senate farm bill. The urban agriculture section of the bill would authorize 10 pilot projects with \$25 million in funding a year that could be used to divert meat/bone scraps and used cooking oil—now collected by renderers—to composters and anaerobic digesters as part of food waste disposal. NRA opposes such anticompetitive government incentives for other recyclers that could artificially distort the marketplace

and damage the rendering industry by reducing the incoming raw material volume.

Renderers held almost 190 meetings on Capitol Hill during the fly-in. Briefing information used for congressional visits is available on NRA's website (www.nationalrenderers.org) under Related Links. NRA thanks the following member companies who attended this year's fly-in:

- Baker Commodities Inc.
- BHT ReSources
- Cargill
- Darling Ingredients Inc.
- Farmers Union Industries LLC
- Kaluzny Bros. Inc.
- Pilgrim's Pride
- Sanimax
- Smithfield Foods
- Tyson Foods Inc.
- West Coast Reduction Ltd.
- Valley Proteins Inc.

The 2019 fly-in will be held June 24-26 in Washington, DC. All NRA active members engaged in rendering are invited to attend. If you believe that decisions in the nation's capital affect your business, be sure to mark your calendars now for this important event. R

Nominate an Outstanding Leader

The National Renderers Association (NRA) invites nominations for its highest award to honor an outstanding individual for their contribution and service to the North American rendering industry. The Don Franco Distinguished Service Award is the association's highest honor and is presented to a member, staff, or friend of the NRA for outstanding contribution and service on behalf of the rendering industry in science, policy, marketing, or communications. Nominations are due by August 31, 2018. Candidates nominated last year will be considered for this year's award.

The contributions of nominated individuals should be milestone improvements or have prevented serious disruptions in the rendering industry in Canada and the United States. Individuals should have demonstrated a strong commitment to excellence. Examples are:

- Communication of sound science to defend and protect the industry
- Facilitating new market segments for rendered products
- Discovery of new technologies to improve rendering sustainability or efficiency
- Political influence allowing the industry to prosper and grow

Dr. Don Franco, who passed away in early 2015, was a highly respected and influential leader as vice president for NRA Scientific Services and president of the Animal Protein Producers Industry from 1992 to 2002. He was one of the editors of *The Original Recyclers* published by NRA in 1996 and a contributing author to *Essential Rendering* in 2006. Prior to NRA, Franco worked for the United States Department of Agriculture's Food Safety and Inspection Services. He held a masters of public health degree and a doctorate in veterinary medicine. The North American rendering industry benefits today from Franco's work.

Nomination forms are available on the NRA website at www.nationalrenderers.com under Related Links or by emailing hdavis@nationalrenderers.com. R

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EPA Increases Renewable Fuel Obligations

Following its announcement in late June, the United States (US) Environmental Protection Agency (EPA) published in the July 10, 2018, *Federal Register* its proposal to increase the renewable fuel volume obligations for biomass-based diesel under the Renewable Fuel Standard (RFS) from 2.1 billion gallons in 2019 to 2.43 billion gallons in 2020. US rendered fats and used cooking oil supply approximately 28 percent of the feedstock used to produce biomass-based diesel in America, which includes biodiesel and renewable hydrocarbon diesel. EPA is also proposing an increase in RFS volumes for the advanced biofuel category, which also includes biodiesel and renewable diesel, from 4.29 billion gallons in 2018 to 4.88 billion gallons in 2019. Only biomass-based diesel obligations are being proposed for 2020. This is an encouraging development for the biodiesel industry after two years of no RFS growth by the agency.

The proposed increases demonstrate that EPA is once again recognizing the industry's ability to produce higher volumes. It follows several years of instability in the RFS program that has severely hindered industry expansion. It also upholds President Donald Trump's campaign promise to support biofuels and protect the RFS. The National Renderers Association (NRA), National Biodiesel Board (NBB), and other biofuels trade groups have repeatedly asked the agency to provide consistent and predictable growth in RFS volumes to encourage more production of biodiesel and renewable diesel.

EPA's proposal, however, did not address the "demand destruction" caused by the agency's small refiner hardship waivers that release petroleum refiners from their RFS obligations and reduce overall production of biodiesel. These exemptions have effectively reduced current obligations for biodiesel by 300 million gallons in 2016 and 2017, according to NBB. NRA called on Trump to stop EPA from issuing these small refiner waivers in a joint letter with NBB and the American Soybean Association earlier this year.

In a turn of events, EPA Administrator Scott Pruitt resigned his post on July 5 after being plagued by a series of ethics scandals. Pruitt had been criticized by the biofuels industry for mismanagement of the RFS, including the misuse of small refiner hardship waivers that resulted in the significant biofuel demand destruction. It remains to be seen whether Deputy Administrator Andrew Wheeler, who assumed the role of acting EPA administrator on July 9, will change course and act on Trump's pledge to support biofuels. A good first step would be to end abuse of refinery waivers.

Meanwhile, across the pond, negotiations between the European Council, the European Parliament, and the European Commission on the post-2020 European Union (EU) Renewable Energy Directive (RED II) took place in Strasbourg, France, in mid-June. There was agreement on an EU-wide overall target of 32 percent for renewables, with a specific target of 14 percent for renewables in transportation, by 2030. This demonstrates the EU is taking a serious position on climate

The proposed increases demonstrate that EPA is once again recognizing the industry's ability to produce higher volumes of biofuels.

policy and growing its use of renewable energy. It appears that the current feedstocks include waste and residues as well as sustainable vegetable oils. The agreement still needs to be approved by the European Parliament and the European Council.

Back in Washington, DC, a diverse group of trade associations, including NRA, delivered a letter to Congressional leaders in late June announcing a unified position to maintain and extend the biodiesel blender's and renewable diesel tax credits. The group asked that Congress provide certainty in planning by extending the full \$1 per gallon tax credits for 2018/2019 and beyond. The letter was sent to House and Senate leadership. This action will provide long-term certainty that would include a permanent tax incentive at a level that will continue to foster growth in the domestic biodiesel market.

Noting that the US biodiesel and renewable diesel market has grown from 100 million gallons in 2005 to nearly 2.6 billion gallons in 2017, the groups emphasized the tax credits' roles in encouraging investment in infrastructure, generating high-paying jobs throughout the country, and providing environmental benefits. Moreover, the credits provide customers, such as the trucking industry, a reduction in the overall cost of their fuels.

The groups also noted that the "on-again, off-again" nature of the credits disrupts access to capital, frustrates the sector's ability to make investments, and hinders companies' desire to hire and expand. The trade associations urged Congress to restore the tax credits for 2018 and 2019, and provide long-term certainty to the industry through a permanent tax incentive.

California Biofuel Use sets Record

Greenhouse gas pollution in California in 2016 fell below 1990 levels for the first time since emissions peaked in 2004—an achievement roughly equal to taking 12 million cars off the road or saving 6 billion gallons of gasoline a year.

Under Assembly Bill (AB) 32, passed in 2006, California must reduce its emissions to 1990 levels (431 million metric tons) by 2020. The 2016 Greenhouse Gas Emissions Inventory published in July 2018 showed that California emitted 429 million metric tons of climate pollutants in 2016—a drop of 12 million metric tons from 2015. Senate Bill 32, passed in 2016, requires the state to go even further than AB 32 and cut emissions 40 percent below 1990 levels by 2030—the most ambitious carbon reduction goal in North America.

The transportation sector, California's largest source of greenhouse gases, saw a two percent increase in emissions in 2016 because of increased fuel consumption, yet the state also saw cars and trucks use a record amount of biofuels (1.5 billion gallons in all) as a result of the state's Low Carbon Fuel Standard. These low-carbon alternative fuels, consisting mostly of biodiesel, renewable diesel, and ethanol, avoided 14 million metric tons of carbon dioxide from entering the atmosphere compared to fossil fuels.

The annual emissions inventory helps keep the state accountable for meeting its emissions reduction targets. The inventory published in July includes the following highlights:

- Carbon pollution dropped 13 percent statewide since a 2004 peak, while the economy grew 26 percent.
- Per capita emissions continue to be among the lowest in the country, falling 23 percent from a peak of 14 metric tons per person (equal to driving 34,000 miles) in 2001 to 10.8 metric tons per person in 2016 (equal to driving 26,000 miles). This is approximately half as much as the national average.
- Carbon pollution dropped 3 percent between 2015 and 2016, about the equivalent of taking 2.4 million cars off the road or saving 1.5 billion gallons of gasoline and diesel fuel.
- The "carbon intensity" of California's economy—the amount of carbon pollution emitted per \$1 million of gross state product—dropped 38 percent since the 2001 peak and is now one-half the national average.
- California now produces twice as many goods and services for the same amount of greenhouse gas emissions as the rest of the nation.

Argentina Exports Targeted Again

Reuters reported that Argentina's biodiesel industry is at risk after the EU threatened to impose tariffs on imports from the South American country following accusations that the nation unfairly subsidized its biofuel sector. The threat of tariffs has halted Argentine biofuel sales to the EU, industry sources told Reuters, adding that imposing a tax would leave 85 percent of the country's biofuel exports without a viable market and may force suppliers to close shop.

Boasting major producers like Cargill and Bunge, Argentina is a leader in biodiesel exports, yet the sector has suffered

trade sanctions in the past after being accused of illegally benefiting from subsidized soybeans.

"It is very likely that Europe could apply anti-subsidy sanctions in two or three months," said Claudio Molina, executive director of the Argentina Association of Biofuels and Hydrogen. "In that scenario, there is a high probability that production lines would stop."

The industry had previously avoided EU sanctions by redirecting its biodiesel shipments to other markets, but the sector, which recorded \$1.2 billion in revenue last year, can no longer export to the United States. In late 2017, tariffs were imposed that stopped Argentine biodiesel imports into the United States after similar accusations of subsidies and "dumping."

The EU's threat has already put a damper on sales to Europe, trimming Argentina's biodiesel exports to no more than 700,000 metric tons this year, down from 1.65 million metric tons shipped in 2017, according to Argentina's Chamber of Biofuels (CARBIO).

"Europe is a threat to us," CARBIO President Luis Zubizarreta said, adding that biodiesel plants can barely operate without the European market. In May, the Argentine government raised export taxes on biodiesel to 15 percent from 8 percent. The increase may also prove to hurt the industry, according to Zubizarreta.

The EU's investigation into the alleged subsidies began four months after it lost a case at the World Trade Organization (WTO) in which it accused Argentina of dumping. Following the WTO ruling, the EU revoked duties that had blocked Argentine biodiesel imports to Europe for three years.

The new investigation could drag on for over a year and sources say the EU is expected to levy provisional rates on biodiesel in the second half of 2018, contributing to a pessimistic outlook for the industry. Molina believes increasing domestic consumption may be the industry's best option. Argentine law currently mandates that fuel providers use a 10 percent mixture of biodiesel in all diesel fuel sold to the public. The country used 1.17 million metric tons of biofuel last year, according to government data. Increasing that mix to 12 percent while also using more biodiesel in power plants, public transport, and agricultural machinery could cover up to half of Argentina's annual production capabilities of 4.4 million metric tons within three years, Molina stated. Plans to raise mix quotas for publicly consumed biodiesel, however, do not yet exist, a government source told Reuters. **R**

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OIE and WRO Working Together

The World Organization for Animal Health (OIE) held its 86th General Session in Paris, France, in late May. OIE was founded in 1924 by 24 countries seeking to coordinate efforts to mitigate worldwide risks in animal health. They created what was then the Office International des Epizooties. Today, that organization is responsible for building the legal framework necessary to maintain healthy animals within 181 member countries.

OIE has signed 71 cooperation agreements with global organizations, including the World Renderers Organization (WRO). Because of this agreement, WRO was invited to join this year's general session as an observer. This author and Dirk Dobbeleare, European Fat Processors and Renderers Association, attended the meeting on behalf of WRO.

It was an interesting and valuable experience to see how OIE organizes to review in one week a huge amount of topics ranging from scientific work to identify new threats to animal health, to statistical analysis of how actions in each country are providing positive results on controlling risks, as well as vote on amendments to the *Terrestrial Animal Health Code*.

OIE's website is quite impressive and has evolved to become a valuable source of information. Visit their website at www.oie.int and click on a pair of resources. You will find extensive work created to map global animal health.

OIE General Director Dr. Monique Eloit presented the updated actions on the group's sixth strategic plan for 2016–2020 that is based on the reinforcement of trust through transparency, improving animal health and welfare by appropriate risk management, and supporting and strengthening veterinary services. A strong modernization of the World Animal Health Information System is in the process. OIE is working on this with One Health, a new initiative focused on providing science-based solutions to deal with microorganisms, considering that human, animal, and plant health are part of the equation.

Anti-microbial resistance, biological threat reduction, African swine fever, and high pathogenic avian influenza were among the more relevant topics discussed at the general session. It was surprising to be able to read what was presented during the sessions immediately after each session

was finished. There were two primary takeaways from the meeting for the rendering industry: Global networking and the update on the *Terrestrial Code*, the latter specifically for bovine spongiform encephalopathy (BSE) and avian influenza.

This author and Dobbeleare shook hands with International Feed Industry Federation President Michael Bucovici and director Alexandra Athayde in order to introduce WRO to several members of the European community and to share thoughts with the Global Alliance of Pet Food Associations, among other global players. We also spoke with OIE President Dr. Botlhe Michael Modisane from South Africa, who is familiar with rendering in his country and joked by saying that "renderers are always looking for something to render." There was also the opportunity to introduce ourselves to Eloit.

The main theme that correlates the rendering industry with OIE is the *Terrestrial Code* Chapter 11.5, dedicated to BSE controls that remain in place just as they were defined when the disease appeared back in 1997. At that time, considering that BSE was a new disease, a number of controls were established around the world following the OIE *Terrestrial Code*. After being adopted and adapted to rendering operations, it is satisfactory to say that BSE is a controlled risk today. Controls and testing are in place and veterinary bodies are well trained and prepared to act if the prion appears. The rendering industry has collaborated on every measure proposed, changing its operations and markets to accomplish the requests.

Considering these good results, OIE has organized an ad hoc group of scientists who are reviewing how to adapt the *Terrestrial Code* to the actual situation without incurring any risk. WRO looks forward to seeing how this effort evolves and will share any news.

In early June, OIE requested WRO advice on the standardized technologies to process poultry by-products, including scientific evidence that rendering process conditions are enough to kill the virus. Work done previously by the WRO Scientific Advisory Panel was divided into nine science-based documents and provided to OIE along with a proposal to change the *Terrestrial Code* Chapter 10.4 devoted to avian influenza. Any further updates on this matter will be shared. R

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Feedstock Availability Key to Growth in Oleofuels

By Bruce Ross, Ross Gordon Consultants SPRL

Biofuels industry stakeholders from Europe and beyond travelled to Helsinki, Finland, in early June to the Oleofuels 2018 conference organized by Active Communications International. Participants included traders in biofuels and raw materials, renderers, European Union (EU) biodiesel/renewable diesel producers, trade association officials, machinery manufacturers, fuel storage companies, non-governmental organizations involved in developing certification standards, and journalists.

Attendance was double that of recent years, possibly because the conference was preceded by a visit to Neste's refinery site in Porvoo, which is Finland's largest port. The company told a compelling story about its economic growth and approach to sustainability.

Absent from this year's speakers and attendees were European Commission and national government officials, as well as representatives of several EU trade associations. The debate over revisions to the EU's Renewable Energy Directive (RED II) was at a very delicate stage so officials could not leave Brussels, Belgium, and stakeholders could not risk missing an opportunity for last minute lobbying. Shortly after the conference, the European institutions reached an agreement on a post-2020 RED II (see "Biofuels Bulletin" on page 20).

Visiting Neste

Before visiting its facilities, visitors heard a senior Neste official explain that 80 percent of Neste's renewable feedstocks come from wastes and residues. The company will soon launch an online portal to allow interested parties to see where Neste sources its raw materials. For the moment, the main feedstocks used are animal fats, used cooking oil (UCO), fish fats, and some vegetable oils. Liquefied plastic waste is a potential feedstock of the future, which would be popular given the much-publicized problem of plastic waste in the world's oceans. These steps led Neste to be named by Global 100 in February 2018 as the second most sustainable company in the world across all sectors, not just energy (the Global 100 Index is a ranking of the world's most sustainable corporations). The company plans to build a new hydrotreated vegetable oil plant in Singapore that would increase its total oleofuel production to four million metric tons by 2022.

The Oleofuels Market

While there was no speaker at the conference to outline the state of the oleofuels market, this did not stop other presenters from opining on the subject. The main points of note were:

- Biofuels mandates remain the dominant market driver.
- UCO is an increasingly important feedstock. The United States has been a consistent supplier to the EU market, but, according to one speaker, China has begun selling large quantities of both UCO and UCO methyl ester biofuel on the EU market. Africa is still a long way from becoming a supplier.

- Some of the pressure on the EU biodiesel market could be eased by Indonesia's introduction of blending mandates to encourage domestic use of its fuels rather than export to the EU market.
- Vehicle owners show some willingness to pay a premium for completely renewable transport fuels, but this is very much the minority at this time.
- In the long-term, the market may be affected by a significant fall in vehicle use. Some European cities (e.g., Hamburg, Germany; Antwerp, Belgium; and London, England) are already either banning cars or making their use prohibitively expensive.
- Many EU biofuels producers are looking at ways to diversify as the vehicle fuel market faces an uncertain long-term future.

EU Regulation

Despite the absence of regulators from the conference, most speakers referenced RED II as it is expected to be the backdrop to much of what happens in the oleofuels sector through to 2030. Many underlined that feedstock availability is the key to the success of the industry and most agreed that waste- and residue-based fuels will increase in importance with RED II favoring them. EU renderer SARIA provided a speaker from its oleofuels arm, ecoMotion, who emphasized, among other things, the importance of animal fat feedstocks. Palm oil is under pressure, yet delegates, perhaps mistakenly, did not think the European Parliament's proposed ban on its use would take place.

The Technical Side

There was a lineup of speakers on such technical topics as high-octane fuels, glycerin use, bio-oils, purification systems for the pre-treatment of feedstocks, wastewater cleaning, catalysts, absorbents, and hydro-treatment. In addition, the conference heard from a grower of Pongamia (a legume) in Paraguay who hopes that his crop can provide, in his definition, sustainable, low carbon intensity oils for the oleofuels industry.

This author, representing the National Renderers Association, was asked to speak at the conference on the internecine warfare within the EU oleofuels industry that has been apparent during the RED II debate. While it is true that several stakeholders have been at each other's throats at times on the aims and details of RED II, this author's overall conclusion was that this is evidence the EU's decision-making system actually works and should produce a compromise that allows all legitimate stakeholders to have the chance to help the EU develop its oleofuels sector.

A bigger challenge might be to maintain public support for the further development of biofuels, especially at a time when politicians and commentators are talking up electrically-powered transports as the panacea. Some delegates agreed that if EU regulators made future targets for oleofuels use too strict, then demand for such sustainable fuels could actually fall away.

R

Innovation in Rendering—Dos and Don'ts

The creation of new ideas and solutions depends on innovation. Innovation is vital to the success of any business or industry. Investment in rendering research can foment innovation in technologies and increase knowledge, leading to new products, new uses for existing rendered products, improved manufacturing, and better sustainability. Whether incremental, disruptive, or radical, innovation is necessary to cope with an ever-changing world. Without innovation, an industry can be stuck in one place while its customers, partners, and even employees all suffer or move on.

Research to develop new ideas is one step of the progression, but nurturing them into a mature benefit for companies and their customers requires additional input. Taking innovations from research and converting them into useful solutions, processes, or ingredients others need also requires an entrepreneurial attitude. Being overly cautious about failure or money ill spent can prevent new ideas from being implemented. This is one reason some seemingly workable solutions remain in the laboratory and never reach market. A company with an entrepreneurial attitude would allow employees to take risks without worrying about job security and allow them to try new things without endless justification and precaution. The Fats and Proteins Research Foundation (FPRF) is simply a collection of forward-thinking companies that should also innovate and be entrepreneurial.

Geoff Tuff, principal at Deloitte Consulting LLP and a senior leader of the innovation and applied design practices, wrote an article recently for Entrepreneur.com titled “3 Questions That Kill Innovation—and What to Ask Instead.” His ideas are a thoughtful launching pad to discuss rendering research.

Tuff's first question that kills innovation: What is the return on investment (ROI)? It is natural that, as a small group burdened by carrying the research and development load for the entire rendering industry, current investors in FPRF want to get the most possible out of each dollar spent on research. This exact question has been asked many times in past FPRF meetings along with discussion on a retrospective calculation of ROI for each past project. A slightly better question might be: Is an investment in this project better than an alternative project? Both questions require predictive powers nobody possesses. Answering correctly would require clairvoyance to know market conditions and marketing results. Selection committees must use their best judgment and determine a range of possible outcomes.

Not every selected project will turn out as predicted or even in a range that could be termed successful, yet if someone could pick the winners before investment is made, they should perhaps take their talents to Wall Street and leave rendering to mortals. Tuff says, “The time for a discussion about relative performance can come only once real market data can be obtained.” This is also folly for most research done in animal nutrition, food safety, sustainability, and product quality. If one

has invented a new widget or a new technology that is selling in the marketplace, dollars made versus dollars spent could be calculated easily; however, in most cases the multivariate economic study to accurately evaluate ROI on a piece of added knowledge would cost more than the project in the first place.

Tuff's second question that kills innovation: Has anyone done this before? Nobody wants to reinvent the wheel, or do we? What if the wheel is for a different vehicle that did not even exist when the original wheel research was done? What if the road surfaces have changed? What if the genetics of a chicken has dramatically changed since meat and bone meal studies were conducted 20 years ago? What if chemicals used for food safety reasons in meat packing completely change the microbiome dealt with in wastewater treatment? What if Bryce Harper, right fielder for the Washington Nationals baseball team, struck out four times today? Would you pitch to him tomorrow? Tuff looks at this a different way and says the better question is, “What are the advantages and disadvantages of being first?” He says following the same pathway over and over again will likely lead to similar results and being concerned by what others are doing creates unnecessary and wasteful work. In rendering research, one should certainly be aware of what has been done and learn from it. If a nut is too hard to crack, perhaps a bigger hammer or a different tool is needed.

Tuff's third question that kills innovation: How can we prove this will work? For rendering, this is not as bad as the ROI question; nothing can be proven from results not yet achieved. According to Tuff, asking something similar, like “how could we learn more?”, keeps the discussion in an exploratory mode, placing value on the information, not the decision.

It is not as though impact and success of research is not important. FPRF attempts to evaluate proposals for potential to make a major contribution to the existing body of knowledge and expects researchers to avoid unnecessary duplication, dead ends, or problematic methods. The objectives and scope of a study are expected to be feasible with the proposed design, time, and resources. The potential benefit to the industry should justify the investment—FPRF asks researchers for estimates of economic impacts of results in general terms along with anticipated marketing challenges. For example, it makes a difference if a successful new product would end up in a small niche market using lesser amounts of rendered material or if a new use would demand truckloads of material per hour, day, week, or year. It would make a difference if a proposed new technology met consumer resistance like radiation, genetically modified organisms, or chemical additives have, but may be worth it if strategies for acceptance could be developed. The researcher(s) should have the academic qualifications, competence, and track record to undertake and complete the proposed research successfully.

The best way to have more successes is to make more investments. It is often said that if FPRF can improve its

success rate, more renderers would invest. Which came first, the chicken or the egg? Or, more contemporarily, which came first, the black holes or the galaxies? In either case, as more renderers become involved to facilitate better decisions and also fund more projects, then more successes will come, more problems will be solved, and more opportunities will be created. Contributors to research could lead innovation immensely by honing the right questions and brainstorm research strategies while not demanding ROI data up front.

Tull goes on in his article to pose questions that stimulate innovation. A good one is: What might be another possible way to tackle this problem? He says instead of immediately rejecting a solution or concept, this question encourages entrepreneurs to consider alternate solutions. It can also help clarify the problem to be solved. This is the kind of discussion being generated in the FPRF Colorado State University Pet Food Research Alliance, a new approach to research that is engaging more stakeholders much earlier in the research design process. The first year of these discussions has yielded some clarity and basis for collaborative research. Framing the work around customer needs is keeping FPRF from being internally focused. Pet food customers often have very different requirements, attitudes, and behaviors than other markets and rendering will do very well by including them in research decisions.

Other questions that might stimulate innovation: How might we move faster, or, if we had to try something today,

what would it be? Tull says this approach cuts to the chase and helps focus on what is important: getting something done and separating the need-to-have from the nice-to-have. Action is important, but it should be initiated after intelligence gathering. FPRF's approach to the oxidation problem is a good example of acting today while planning for future nice-to-have alternatives to peroxide value measurements. Today's activities include developing better extraction methods to reduce peroxide value variability and gathering information on what customers really need: freshness and acceptability criteria to plan future work. Tull says, "Knowing the right questions, or simply knowing how to flag the wrong questions, leads to better communication, better productivity, and a better product."

FPRF is on the right track by funding research that leads to innovation for the benefit of the entire rendering industry. More investment by individual companies into this joint effort would increase the number of potential solutions, positive incremental change, or even radical new things that disrupt markets for the better (think what biodiesel has done for the fat market).

Get a firsthand look at some of the innovations underway from rendering research at the FPRF Innovate Conference on October 23, 2018, held in conjunction with the National Renderers Association 85th Annual Convention in Laguna Niguel, California (see page 29). **R**

Alliance Brings Pet Food and Rendering Together

The Fats and Proteins Research Foundation (FPRF) entered into a five-year agreement last year with Colorado State University (CSU) to coordinate the new Pet Food Alliance. The mission of the alliance is to bring together members of the pet food, meat, and rendering industries to collaboratively develop implementable solutions for industry challenges and identify opportunities for innovation, growth, and mutual success. The ultimate success of the Pet Food Alliance remains focused on these central pillars:

- Unite members of the pet food, meat, and rendering industries
- Engage and encourage widespread participation from additional industry members
- Facilitate research guided by industry input to address real-world industry challenges
- Establish multidisciplinary collaborations with academia and industry
- Proactively engage in building industry sustainability across all efforts

The 2018 summer meeting of the alliance was held in Kansas City, Missouri, in late June. Representatives from all sectors of the pet food, rendering, meat, and analytical industries, as well as others from various academic disciplines, focused on addressing the working group priorities established in previous meetings: *Salmonella* and product safety, oxidation and product quality, and sustainability and consumer perception.

The group also listened to presentations and held a productive discussion on oxidation led by Drs. Thu Dinh,

Mississippi State University, and BJ Bench, Tyson Foods, as well as an overview of a novel technology for rapid-characterization of *Salmonella* from Dr. Jessica Prenni, CSU. Additional large delegation conversations related to product safety focused on foreign materials and concerns over other chemical/biological contaminants in rendered products and pet food. Throughout the meeting, working groups continued to address priorities, ultimately creating a series of action items for completion in the remainder of this year, including:

Salmonella and Product Safety

- Completion of transportation gap assessment for rendering and pet food industries
- Continue efforts to train/educate plant employees on foreign materials handling

Oxidation and Product Quality

- Develop call for mini-research proposals to better understand oxidation challenges (i.e., matrix issues, analytical variations, and interpretation of results)
- Continue efforts on validation of extraction methods
- Continued communication between rendering and pet food industries

Sustainability and Consumer Perception

- Work with existing National Renderers Association and Pet Food Institute members and academic partners to enhance internship programs
- Establish focus groups regarding consumer perception of rendered products/pet food
- Continue efforts to revisit nomenclature **R**

EPA Authority over Pits, Ponds, and Lagoons

Editor's note - Ethan Ware is a partner and environmental attorney with the law firm of Williams Mullen in Columbia, South Carolina. He represents businesses and industries in environmental and health and safety legal matters. Ryan Trail represents companies facing complex environmental regulatory issues in industrial, manufacturing, real estate, and banking. Individual circumstances may limit or modify this information.

Pits, ponds, and lagoons are important water management tools at most rendering plants. They are effective ways to manage the flow of process, cooling, and storm waters, especially when the impoundments do not discharge to nearby streams or creeks.

A recent decision by the United States (US) 4th Circuit Court of Appeals threatens to change how states and the Environmental Protection Agency (EPA) regulate these retention ponds. In the future, renderers may be required to apply for and obtain federal National Pollutant Discharge Elimination System (NPDES) permits or the state equivalent for no-discharge systems, even where there is no obvious connection to waters of the United States (WOTUS).

The Clean Water Act Generally

The stated purpose of the federal Clean Water Act (CWA) is “to restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” To fulfill this objective, the act prohibits “the discharge of . . . pollutants” from a “point source” to a WOTUS destination (rivers, streams, creeks, or adjoining shorelines and wetlands), unless and until the discharge is covered by a federal or state permit. The act defines WOTUS to cover virtually any body of water and wetlands. The term does not include groundwater, however, because the US Constitution limits federal authority to only those activities affecting interstate commerce and groundwater does not impact commerce across state lines—it is not “navigable” for the purpose of commerce.

A point source is “any discernable, confined, and discrete conveyance . . . from which pollutants are or may be discharged.” The most common forms of point source are pipe, ditch, channel, tunnel, or conduit. Leachate or uncontrolled migration through soils or groundwater is not the kind of discharge usually considered a point source.

States are not restricted in their regulation of non-navigable waterbodies such as pits, ponds, or lagoons. As a result, many states are free to establish state-only permit programs for no-discharge wastewater systems and the dividing line between the state and federal permit authority is the discharge point. If pollutants discharge from an impoundment outfall to WOTUS, like a creek or stream, a federal NPDES permit is triggered with effluent limits restricting the nature and concentration of any biological pollutants. Regulation of pits, ponds, and lagoons with no discharge point has generally fallen outside of EPA’s jurisdiction, and some states exempt them all together.

A New Interpretation

Two recent court decisions suggest the regulatory “status quo” may be changing. There is no guarantee that no-discharge systems can escape federal NPDES permits in the future.

In December 2017, the District Court for the Eastern District of Kentucky decided a case in which arsenic, cadmium, selenium, and other heavy metals had leached from coal ash ponds into groundwater and then to a nearby lake. The company obtained requisite state no-discharge permits but no NPDES federal permit was requested. Environmentalists filed a citizen suit asking the court to issue penalties for failure to obtain a necessary NPDES permit.

The federal court declined to require an NPDES permit for migration of metals to the nearby pond via groundwater (*Kentucky Waterways Alliance v. Kentucky Utilities Co.*). The court expressed concern any other ruling would “effectively read the ‘point source requirement out of the Clean Water Act.’” On February 1, 2018, the plaintiffs appealed the ruling to the 6th Circuit Court of Appeals where the case is now pending.

As a result of the *Kentucky Waterways* decision, EPA requested public comment on the need to obtain federal permits for discharges to groundwater. The *Federal Register* notice published February 20, 2018, presented this simple question: “[Should] pollutant discharges from point sources that reach jurisdictional surface waters via groundwater or other subsurface flow that has a direct hydrologic connection to the jurisdictional surface water be subject to CWA regulation?” The public comment period closed on May 21, 2018, with more than 10,000 comments received.

Soon after the EPA notice, the 4th Circuit Court of Appeals took the opposite view. In the case of *Upstate Forever v. Kinder Morgan*, the 4th Circuit reversed a lower court decision, which had adopted the *Kentucky Waterways* approach. The *Upstate Forever* case involved a release of gasoline from a pipeline rupture that ultimately reached a nearby stream through soils and groundwater mitigation. The 4th Circuit Court ruled the discharge of pollutants to a stream (however remote) via a groundwater release requires a federal NPDES permit, even if the release is the result of unanticipated consequences, detailed here:

[T]he plaintiffs plausibly have alleged a direct hydrological connection between the ground water and navigable waters . . . We find no merit in [the Defendant’s] concern that our holding will result in unintended coverage under the [Act] of any discharge of a pollutant into ground water. We do not hold that the [Act] covers discharges to ground water itself. Instead, we hold only that an alleged discharge of pollutants, reaching navigable waters located 1,000 feet or less from the point source by means of ground water with a direct hydrological

connection to such navigable waters, falls within the scope of the [Act].

The court concluded the pipeline itself is the “point source” from which petroleum pollutants discharged eventually to WOTUS.

Under the *Kinder Morgan* case, any “discharge of a pollutant” need not be directly from a point source into navigable water. It is enough if the release eventually reaches a navigable stream.

The Future

These cases suggest there is some confusion over whether or not EPA may require permits for no-discharge systems like pits, ponds, and lagoons. Where EPA can show pollutants from such impoundments reach a WOTUS destination via groundwater migration, the chances of regulation go up. For renderers, this changes things. Percolation impoundments are all of a sudden back in play for NPDES permit.

It may be prudent for rendering plants to plan now to avoid long-term permitting confusion and enforcement by following these steps:

1. Participate by getting involved with the National Renderers Association to encourage limits on EPA authority over no-discharge water systems and submit comments opposing expansion of the Clean Water Act’s NDPEs permit program to groundwater migration systems.
2. Audit existing pits, ponds, and lagoons to determine whether or not the systems discharge pollutants like biochemical oxygen demand, fecal coliform, or chemical oxygen demand to nearby waterways. If pollutants are affecting WOTUS, the company may be best served to close those units prior to significant EPA action.
3. Consider new technologies. Just because an impoundment system escapes EPA permitting today does not mean it will forever. Consider a long-term plan to improve technology for all wastewater treatment options at the plant.

R

August

3rd Annual Canadian Beef Industry Conference

August 14-16, London, ON, Canada
www.canadianbeefindustryconference.com

September

11th Annual National Aboveground Storage Tank Conference and Trade Show

September 12-13, Galveston, TX • www.nistm.org

2018 Feed and Pet Food Joint Conference

September 17-19, St. Louis, MO • www.ngfa.org

Global Aquaculture Alliance’s Global Outlook on Aquaculture Leadership (GOAL)

September 25-27, Ecuador • www.aquaculturealliance.org

October

Poultry Protein and Fat Seminar

October 4-5, Nashville, TN • www.uspoultry.org

American Fats and Oils Association Annual Meeting

October 10-11, New York, NY • www.fatsandoils.org

United States Animal Health Association 122nd Annual Meeting

October 18-24, Kansas City, MO • www.usaha.org

National Renderers Association 85th Annual Conference

October 22-26, Laguna Niguel, CA
www.nationalrenderers.org

Visit www.rendermagazine.com for a complete updated list of industry meetings.

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BTSA Opens US Office

BTSA, a leading European company in the manufacture of natural antioxidants, vitamin E, and omega 3 fatty acids for food, cosmetics, personal care, and animal nutrition, has opened a new sales office in the United States. After opening its Mexico branch more than three years ago, the Spanish company continues with its internationalization plans in the Americas.

The new office will be led by Chad Boeckman out of Chicago, Illinois. Boeckman has more than 15 years of sales, marketing, and management experience in the food, pet, nutritional, and feed industries, focused on functional ingredients.

BTSA exports from Spain to all of Europe, the United States, Canada, Latin America, South Korea, Japan, Malaysia, India, Australia, New Zealand, and South Africa, among others.

Centrisys Director Awarded

Hiroko Yoshida, research and development director at Centrisys/CNP in Kenosha, Wisconsin, was selected as one of *Water & Wastes Digest* top young up-and-coming professionals in the water and wastewater industry who are under 40 years old. These individuals must not only excel in their professional lives, but also give back to their community and hold globally conscious attitudes and views about the industry's importance and necessity around the world.

"I'm very excited to have won this award and love being part of such an innovative company," Yoshida said. "It's satisfying to start a project at the lab scale and see it progress into a full installation with great results."

Yoshida previously accepted an invitation to the White House to attend the Environmental Protection Agency's Nutrient Recycling Challenge conference and was named one of the top four winners at the event. She noted one of her professional accomplishments as being part of the team was to bring the first full scale AirPrex installation to the United States.

Yoshida holds a bachelor of science in environmental studies from the University of Nebraska-Lincoln, a master of science in water resource management and civil and environmental engineering from the University of Wisconsin-Madison, and a PhD in environmental engineering from Technical University of Denmark. She specializes in solids handling and hopes to contribute to the advancement of the industry as it relates to that specialty. She has worked at Centrisys/CNP for over three years and is currently leading a pilot test program for the company's newest phosphorus recovery technology. Yoshida is involved with data analysis and process optimization. She said the technology may be used in both municipal and industrial applications.



Hiroko Yoshida

Mullane Joins Dupps



Chad Mullane

Chad Mullane has joined The Dupps Company as a capital equipment sales representative. Mullane has deep roots in the rendering industry. His great-grandfather built the B.A. Toft rendering plant on Long Island, New York, years ago and his father, Dennis Mullane, built a rendering plant for Taylor Byproducts in Wyalusing, Pennsylvania, now owned by Cargill.

Mullane most recently worked at Centrisys and was previously employed by Haarslev, JCR Enterprises (now Valley Proteins), and Taylor Byproducts. He has also worked as a rendering plant manager.

Frontline to Double Size of Plant

Frontline International Inc. is doubling the size of its headquarters in Cuyahoga Falls, Ohio, to 30,000 square feet, with construction due to be completed in September 2018. Virtually every aspect of the business will be affected by the project, including significantly larger warehouse capacity to facilitate faster delivery of product and expansion of the fabrication and welding departments for quicker product turnaround while maintaining critical quality standards.

Dramatic increases in international and domestic equipment sales spurred the new construction. New Frontline programs were also contributing factors, including the launch of a turnkey initiative for which cooking oil management services are bundled with fixed monthly equipment leases. Frontline moved to the Cuyahoga Falls location in 2010 after previously being based in nearby Barberton. The plant was designed to be modular for future growth.

Frontline International designs, manufactures, and distributes commercial foodservice equipment for the storage, handling, and disposal of cooking oil.

Neste Acquires Animal Fat Trader

Neste, a producer of renewable fuels from waste and residues, has purchased 51 percent of the shares in IH Demeter B.V., a trader of animal fats and proteins in the Netherlands. The two companies will become co-owners of the renamed Neste Demeter B.V. The transaction is subject to regulatory approval.

Founded in 1924, IH Demeter has become a large trader of animal fats and proteins. Its network covers some 150 rendering facilities throughout Europe, from which it acquires animal fats and proteins and transports them to their own storage facilities. **R**



Fats and Proteins Research Foundation, Inc.

Innovate Conference

October 23, 2018 • Laguna Niguel, CA

At the National Renderers Association 85th Annual Convention

Come hear about FPRF research leading rendering's path to:

- Zero waste because of valuable uses for brown grease, hog hair, blood, meat and bone meal, feathers, fats, and proteins
- Gaining new respect for animal by-products as high-end pet food ingredients by building better relationships with the pet food industry and consumers
- No rejected loads by rethinking oxidation, improving methods, and sending everything to the right place
- A cleaner environment with efficient water treatment and by using rendered products to remediate contaminated soils

An impressive lineup of speakers:

Dr. Ken Tasaki, Los Angeles, CA

Dr. Kevin Finneran, Clemson University

Dr. Michele Sayles, Diamond Pet Foods

Dr. B.J. Bench, Tyson Foods

Rendering research leads to:

→ *More high-end products* ←

↑ *Higher value for low-end products* ↑

★ *Expansion of high volume markets into new areas* ★

✓ *Fewer rejected loads* ✓

↓ *Reduced waste* ↓

All FPRF members and NRA convention attendees are encouraged to attend!

Learn how FPRF research benefits EVERYONE in the industry and how you can get involved.

For more information, contact Dr. David Meeker at dmeeker@nationalrenderers.com

Or visit convention.nationalrenderers.org

THE STORY OF RENDERING

1

ANIMAL LEFTOVERS & OILS COLLECTED FROM



MEAT LOCKERS, PACKING PLANTS & BUTCHER SHOPS

Ex: scraps, bones, fat, blood, feathers



GROCERY STORES

Ex: scraps, expired rotisserie chickens, meats

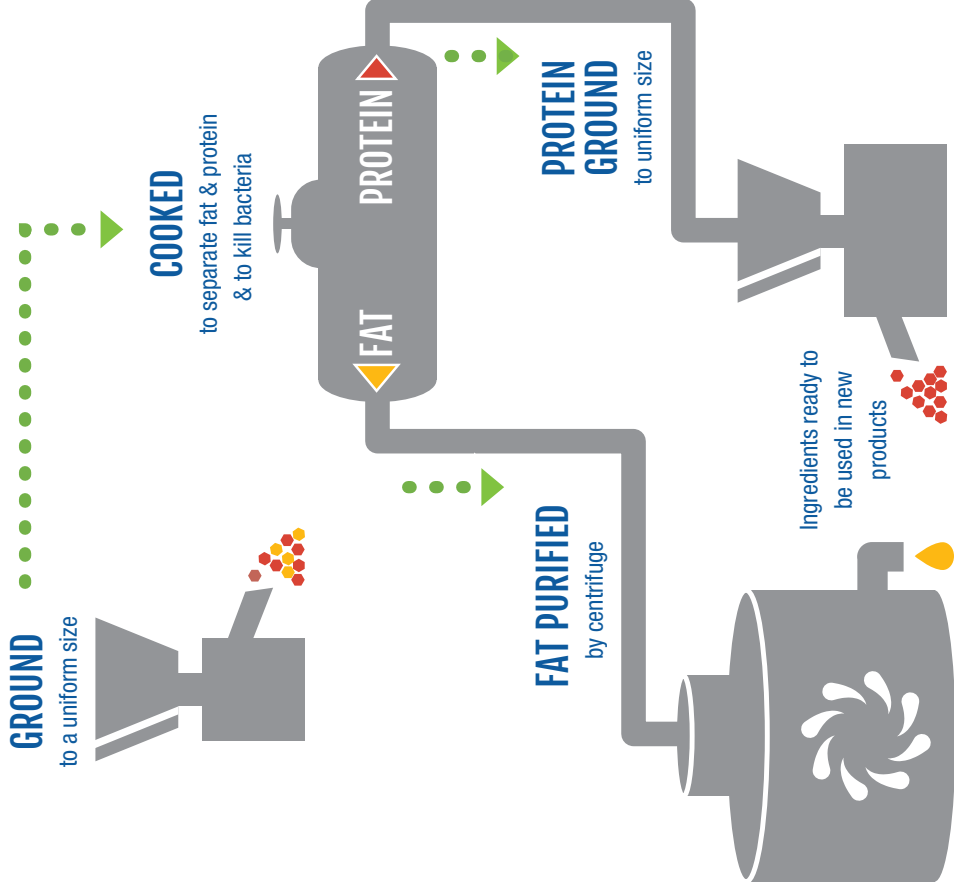


RESTAURANTS

Ex: used cooking oil

2

RENDERING PROCESS



FINISHED PRODUCTS

tallow, choice white grease,

fat for feeding, yellow grease, poultry fat

FINISHED PRODUCTS

meat meal, blood meal, meat & bone meal,

poultry meal, poultry by-product meal, feather meal

3

RENDERED INGREDIENTS ARE USED TO PRODUCE:



BIOFUEL/GREEN ENERGY



PET FOOD



LIVESTOCK FEED



AQUACULTURE FEED



FERTILIZER



PERSONAL CARE ITEMS

cosmetics, soap, perfumes, shaving cream, deodorant



INDUSTRIAL USES

leather, lubricants, paint, varnishes, cleaners, rubber



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RENDERING IS RECYCLING



WHAT MATERIALS ARE RENDERED?

Packing Plants

147.2 MILLION head of cattle, calves, hogs & sheep are
slaughtered annually in the US



10 BILLION

chickens and turkeys are
processed each year in the US



APPROXIMATELY 50%
of the animal is considered inedible by
Americans and goes to renderers
including: bones, fat, blood, feathers &
some internal organs

Farms Some animals die on the farm from injury, old age, or other
issues. These animals represent about 4.5% of rendered product

Grocery Stores generate

1.92 BILLION POUNDS

of scraps, fat, bone,
expired meat &
used cooking oil
annually

Renderers collect

4.4 BILLION POUNDS
of used cooking oil per year in the
U.S. and Canada

WHAT ARE THE PRODUCTS OF RENDERING?

Renderers collect:

56 BILLION POUNDS

of raw materials every year
in the U.S. and Canada



If all renderable product was
sent to the landfill, all available
landfill space would be used in

4 YEARS

Renderers recycle these materials into:

10 BILLION POUNDS

of fat and oil products

9 BILLION POUNDS

of protein products annually



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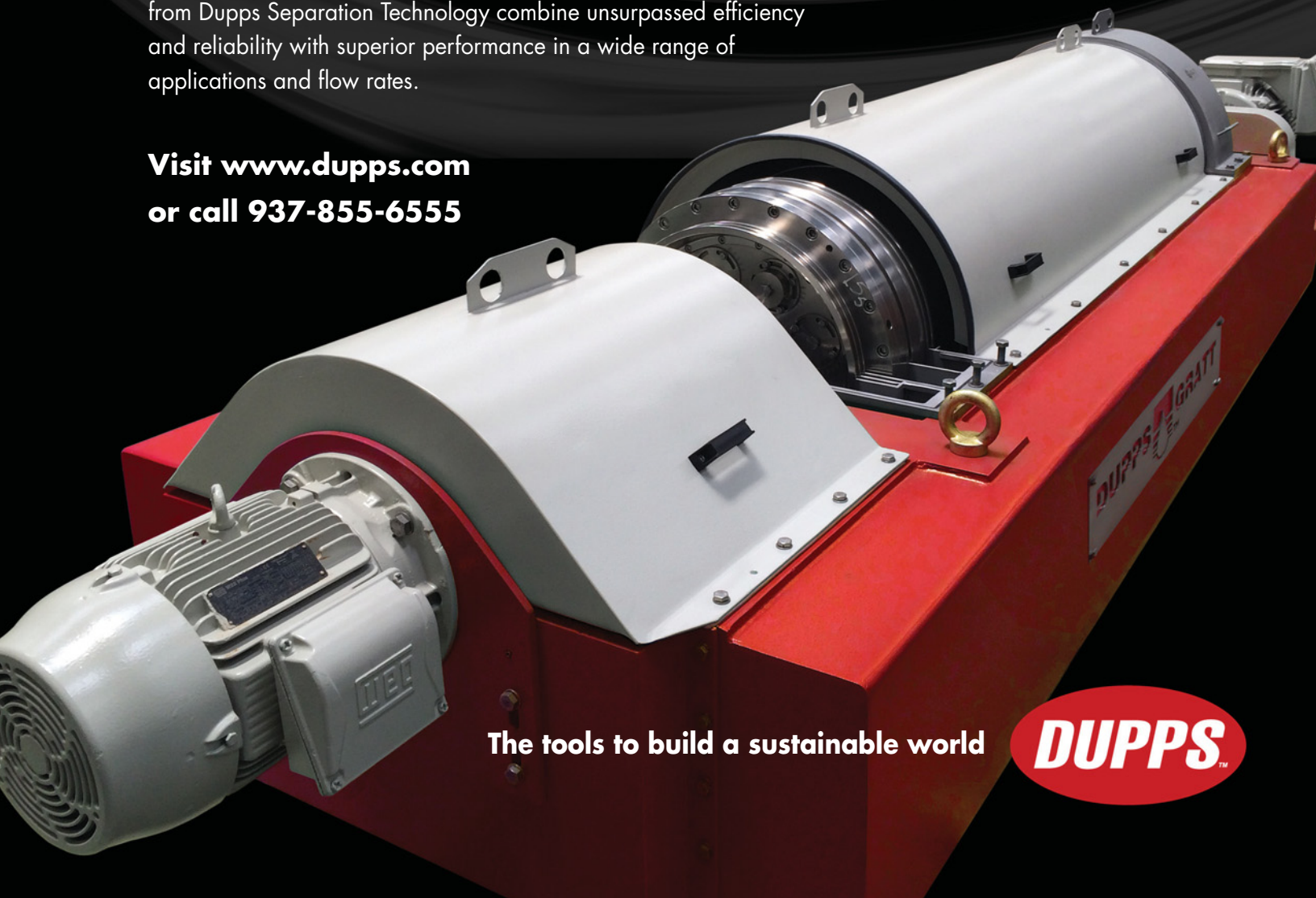
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