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On the Cover

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Rendertorial

Ah, summer. The kickback lazy days when kids are out of school and vacations abound. The heat is up and business cools down. Or does it?

Sales might be a bit slower for some. but United States (US) renderers are still a busy bunch working on preparing to meet new Food Safety Modernization Act requirements that go into effect this fall. The Environmental Protection Agency also kept the industry and its allies on their toes with the release of its proposed Renewable Fuel Standard volumes (see "Biofuels Bulletin" on page 20). Renderers, biodiesel producers, and groups such as the National Renderers Association (NRA) and National Biodiesel Board prepared and submitted comments calling for higher volumes to meet the growing capacity of the biomass-based diesel industry.

NRA has also been busy educating, first by holding its annual Washington, DC, fly-in (see "From the Association" on page 18), then by releasing a notable infographic that shows rendering is the preferred method of disposal for meat by-products over anaerobic digestion and composting (see "Rendering: The Greenest Option" on page 35). This timely illustration should help lawmakers who are looking at how to reduce food waste in this country. Rendering has been an integral part of taking a "waste" product and turning it into valuable, sought-after commodities for decades. This story needs to be told over and over again!

Finally, Render's editor was busy earlier this summer learning about the trials and tribulations of renderers across the Atlantic (see "Export Opportunities Elude European Renderers" on page 10). Although production is stable in the European Union, exporting ruminant processed animal proteins to third countries remains prohibited leading to an excess of category 3 material, lower prices, and possible incineration of valuable commodities. The European Fat Processors and Renderers Association is working hard this summer to convince the European Commission their product is as safe as others around the world and should be allowed to be exported.

Here's hoping the busyness of business doesn't keep you from enjoying a few laid-back lazy summer days.

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Reality Check in Election Politics

As this is being written, the United States (US) Congress is rushing to get out of town for the national party conventions and the traditional August recess. The full House and one-third of the Senate have until mid-September to campaign for reelection on November 8, while Democrat Hillary Clinton and Republican Donald Trump kick their presidential campaigns into high gear. This "recess" is the longest in over 30 years.

Depending on your love of politics, polling, and punditry, this is either going to be the most fascinating summer and fall in recent memory, or the longest 90 to 120 days ever.

This national election cycle, at least as far as the presidential contest goes, is unprecedented in its shock, awe, and defiance of history, polling, and conventional political wisdom. Eighteen months ago, the White House was assumed to be Clinton's for the asking; Trump was going to be a 24-hour news cycle. Yet, Clinton wound up fighting the election battle of her political career against "democrat socialist" Senator Bernie Sanders (I-VT), who surprised every analyst with his demographic strength. Trump ended the primary cycle as the last man standing in a field of 18 GOP presidential wannabes.

So how does the political game play out over the next three months, particularly when it comes to the race for the White House?

Set aside congressional elections for now. It is too early to handicap what Congress will look like come November 9, but it is likely a safe bet the House will remain GOP controlled, plus or minus a couple of seats. The Senate is no lock for Republican retention. The current Senate make up is 54 Republicans, 44 Democrats, and 2 Independents who caucus with the Democrats. Of the 34 seats up this year, 24 are held by Republicans. Depending on the source, anywhere from 6 to 11 Senate races appear to be toss-ups and most of those are Republican seats. Democrats only need gain 4 or 5 seats to retake control. Whether Clinton or Trump will provide any kind of coattails effect is unknown.

The first hurdle for all good party members of either stripe is the July political conventions. Both events will likely threaten and deliver fireworks not seen at these national partisan gatherings in decades. At the same time, party platforms will be formalized with concessions made to the also-ran presidential wannabes, a vain attempt to bring those particular party documents in line with what the candidates have been preaching at rallies and in debates for the last 18 months.

Clinton and Trump are now formally locked in a one-onbattle for the White House, and giving truth to the promise of the ugliest presidential contest in recent memory. Vice presidential candidates are in tow, individuals chosen to balance out the personal and professional deficiencies of those at the top of the ticket.

When all is said and done, running mates and party platforms mean little when it comes to the outcome of a run for the White House. This is not to say they should not impact that result, but it recognizes the reality of how US presidential races have evolved. At the same time, campaign pledges and promises should be viewed as temporary indicators of how a candidate thinks, not how he/she will eventually act. The great reality check is Congress; there is very little a president can do without the cooperation of Congress.

At the same time – at the risk of being too cynical – election positions, statements, media releases, and so on, are all too fluid, shifting depending on events and the audiences addressed. While fodder for the media who dog the candidates, these "evolving" issue positions will likely never turn into program changes for the winner who moves into the White House in January 2017.

The candidates' respective websites don't give much insight into specifics of problem solving or policy positions, providing more platitudes than substance. Clinton's website can be found at www.hillaryclinton.com while Trumps' website is at www.donaldjtrump.com.

Clinton's positions tend to be very particular, seemingly embracing the full catalog of liberal issues. Her priorities include campus sexual assault, addiction, campaign finance reform, autism, climate change, disability rights, early childhood education, infrastructure, gun violence, immigration, labor rights, lesbian/gay/bisexual/transgender rights, affordable college, manufacturing, national security, paid family leave, protecting animals and wildlife, racial justice, rural communities, Alzheimer's cure, small business, Social Security and Medicare, veterans and their families, voting rights, Wall Street reform, women's rights, and "workforce skills."

Trump issue positions are much broader, framed in the rhetoric of his campaign appearances. Again, weak on details but heavy on the emotional pull important to the middle/lower "disenfranchised" class, each issue is laid out by the candidate in video snippets. His website reveals his thoughts on "the establishment," trade wars, "making deals with Congress," law enforcement respect, competent leadership, the "drug epidemic," gun rights/Second Amendment protections, political correctness, Israel, immigration, education, the military, "unifying the nation," jobs, the economy, "life changing experiences," and "live free or die, a motto for the whole country to follow."

When it comes to the importance of party platforms, no one recognizes their symbolic status more than House Speaker Paul Ryan (R-WI), the man who would have been vice president had Governor Mitt Romney won the White House in 2012.

Ryan has personally, politically, professionally, and publicly struggled with Trump as his party's standard bearer, struggles that continue as these two individuals could not represent more disparate personal and conservative political philosophies. Ryan preempted his party's platform writing committee by releasing six policy manifestos in July under the banner of "A Better Way." Also referred to as "A Better GOP," the plan covers new House Republican thinking on how to:

- reinvigorate the economy;
- comprehensively reform the federal tax code for both individuals and companies;
- take steps to address poverty;
- strengthen national security;
- maintain and preserve constitutional protections, particularly the separation of powers; and
- reform health care.

While similar in some regards, make no mistake these six key issue areas and the House GOP game plan differ in many ways from the positions and postures of the Trump campaign. Ryan is making the clearest possible statement that the winner of the presidency on November 8 ignores Congress at her/ his peril. At the same time, the Senate Republican majority has been quiet on the House package, signaling there is likely greater agreement than not among that caucus, but all the while making sure they draw no untoward attention to themselves.

For congressional Democrats, it is all about Clinton embracing a party platform she likely would not have blessed if left to her own devices. She has been forced to adopt, at least for the election cycle, core positions taken by Sanders. To gain his endorsement, Clinton's campaign had to move decidedly left of where her political record indicates she would most likely be at this point in time. Sanders laid down markers on free college tuition, forgiveness of student loan debt, free health care, his version of tax reform, Wall Street, and trade. It is fair to say the party platform probably reflects 70 percent or so of Sanders' political positions, but Clinton's camp hopes embracing these concessions will attract Sanders' young and female support base, prospects who have until now been decidedly cool to the Clinton candidacy.

Both candidates suffer from distrust and dislike by the majority of voters, setting the November election up as the ultimate voter choice between the lesser of two evils, or as pundits opine, "Who are you voting against by deciding whom to vote for?" Running up to the political conventions, the two candidates shared nearly identical and unprecedented negative ratings, with 56 percent holding an unfavorable opinion of Clinton and nearly 60 percent feeling negative about Trump. President Barack Obama's negative rating at the same time was less than 50 percent.

Trump's biggest challenge for the rest of the campaign is to at least appear and sound presidential. He needs to shed his image of bombast, rhetorical bomb thrower the world gawped at during his primary runs. A dearth of public endorsements by elected Republicans is explained by the fact Trump did not dial down the volume early on and most House and Senate Republicans continue to hope he will moderate some of their positions as the election nears. However, to the party's credit, the "never Trump" movement never caught fire and will likely die a guiet death in the GOP convention rules committee.

While many praise the New York real estate executive for giving voice to the frustrations of a lot of Americans – Trump won a record number of GOP votes and generated record turnouts throughout the primary season – his style and "shootfrom-the-lip" performances make many moderate Republicans and right-leaning independents uncomfortable at best.

Continued on page 9











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Regulatory Agenda for Midwest Renderers

The National Renderers Association (NRA) Central Region held its annual meeting in Green Lake, Wisconsin, in early June that began with Mark Lies, Seyfarth Shaw LLP, focusing on various laws and regulatory changes that affect renderers. He shared how liability has been expanded under the "multiemployer workplace doctrine" that results in each employer being potentially responsible for the safety and health of another employer's employee. Lies used the example of temporary workers because they usually are not working directly for the company. He recommended that a company protect itself by writing a defined contract that addresses what the worker is there to do and not do and then enforce the contract while supervising the employee. If the employee is behaving in a way that is not safe, Lies suggested terminating the contract. Federal government officials are particularly cracking down on repeat citations.

Because of aggressive enforcement of employment law, it is vital to use interpreters if an employee does not speak English, Lies continued. There is a native language requirement in the Occupational Safety and Health Act that requires employees be trained in a way they understand and know as well as comprehend the forms they are signing. He added that



Mark Lies, Seyfarth Shaw LLP, reports on new OSHA rules.

employers need to be aware of literacy challenges and that some employees may not be able to read so procedures for training these employees are necessary.

Lies stated that it is essential to update and train employees on lockout/tagout procedures due to

safety risks if a machine is not turned off properly. If a company has video surveillance cameras and there is an accident, the Occupational Safety and Health Administration will look at the security tapes, so be prepared.

Next, Dr. Ross Hamilton, Darling Ingredients Inc. and NRA immediate past chairman, gave an update on the Food Safety Modernization Act (FSMA). The new regulation shifts the burden of proof from the Food and Drug Administration to industry. FSMA defines animal feed as "food" and includes "raw materials and ingredients." Fortunately, the North American Rendering Industry Code of Practice has been in place for years so the framework already exists for renderers to become FSMA-compliant.

Hamilton noted all renderers must have a food safety plan developed by a "preventative control qualified individual." The plan must include written hazard analysis, preventative

FSMA represents a change in hazard prevention culture that needs to become second nature.

controls, a supply chain program, a recall plan, procedures for monitoring the preventative controls, corrective action procedures, and a verification procedure. Hamilton also described a hazard analysis for the audience and explained that the Fats and Proteins Research Foundation has funded work on preventative controls that can be used in the food safety plan. Sanitation control is important and includes cleanliness of animal food, contact surfaces, and equipment as well as prevention of cross-contamination. Supply chain control requires a risk-based supply chain program for raw materials. Current good manufacturing principles are also required under FSMA and include personnel, plants and the grounds around them, sanitation, water supply, equipment and utensils, plant operations, and holding and distribution. Hamilton pointed out that FSMA represents a change in hazard prevention culture that needs to become second nature so renderers should be prepared.

This author discussed NRA communications, showing a multitude of social media platforms and explaining what they are, what they look like, how to use them, and why renderers should care about social media. NRA's social media platforms and how they are used for outreach was addressed, focusing on examples like Twitter (www.twitter.com/renderers), Pinterest, and infographics. NRA's 2020 Strategic Plan as it applies to communications was reviewed as were the projects currently being implemented. This author also held a roundtable about ongoing Fats and Proteins Research Foundation-funded projects with considerable audience participation.

Tim Guzek, Sanimax and current NRA chairman, presented an industry update, beginning with some key insights into NRA's 2020 Strategic Plan. Members are concerned about consolidation and increased regulatory pressure as well as a talent gap. He explained how NRA needs to expand alliances yet keep focused, be aware of changing social pressures, and maintain core markets, both domestic and international, in face of societal pressures.

Guzek also talked about NRA's Washington, DC, fly-in and the Renewable Fuel Standard (RFS). He pointed out that NRA supports a strong RFS and believes the Environmental Protection Agency's new RFS proposal is a step in the right direction but hopes the agency's final rule will establish higher RFS volumes. The main challenges facing the rendering industry, Guzek said, are FSMA compliance, biofuels, preventing the "stop animal fats tax credit" act, working toward a robust RFS, and educating a new United States president and Congress next year. He also noted that NRA is working to expand exports and is aware of interest and regulations surrounding food waste, which is of increasing importance.

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Washington Continued from page 7

Former House Speaker Newt Gingrich, who lost the nod to be Trump's running mate, is the premier Trump surrogate who continually seizes electronic and print podiums to assure the public Trump is wickedly smart, deliberative, thoughtful, and can be/will be presidential if he wins. Trump needs to prove that over and over. The public tends to run with the last sound bite so the Trump ticket needs to dump the personal attacks and histrionics and seriously address employment, economics, immigration, and foreign policy issues, say presidential observers.

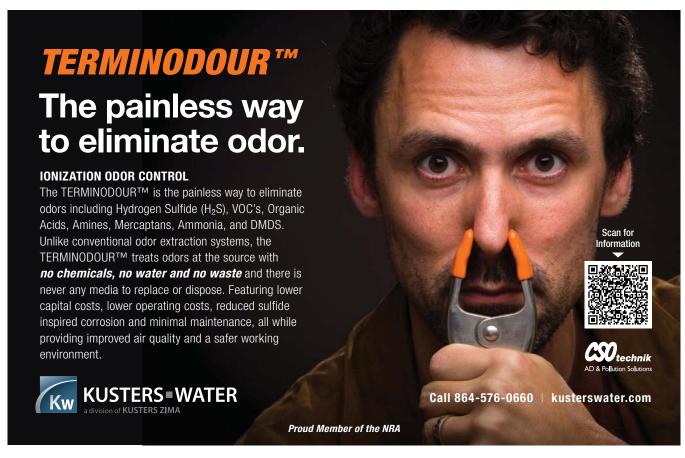
For Clinton, the issue is trust, or rather, a public lack thereof. As mentioned, the presumed inheritance of the Obama voter base has not materialized for Clinton and the trust issues are making it increasingly difficult to attract 18- to 35-year-old voters as well as Hispanics and female voters. The whole first-woman-president thing isn't resonating nearly as strongly as Obama's first-black-president excitement and voter turnout in 2008, leading at least one pundit to accuse her of "squandering the advantage of history."

Take the inevitable baggage she carries from her husband's presidency and layer it over this summer's release of the Benghazi report, her husband's ill-advised meeting with Attorney General Loretta Lynch on a government jet in Arizona, and the Federal Bureau of Investigation's scathing report of its investigation into her handling of classified e-mails on her private e-mail server, which stopped short of recommending a criminal indictment. With all this, Clinton is confronted with a steady drumbeat of reinforcement that she is part of the much-demonized inside-Washington machine.

Which way does this contest lean? It would be foolhardy to make any prediction so far out from the actual election, especially during this cycle of history-defying developments. However, to those who say Trump has it in the bag, keep the following in mind. Clinton has never lost an election where she was the anointed candidate. She has the money and the political connections — Obama, first lady Michelle Obama, former President Bill Clinton, former Senate colleagues, governors — to hammer the voting public for as long as she wants. In addition, when the brush is cleared away, Clinton is a known entity among older undecided Republicans and Independents, and she has a record on which she can run.

For those who say Trump does not have a chance, we must be reminded of professional wrestling star Jesse Ventura who was elected governor of ultra-progressive Minnesota in 1998. Ventura was a member of the state's fledgling Independent party, spent just \$300,000 on advertising, and pioneered Internet campaigning. He was dismissed by the Minnesota Democrat Farmer Labor and Independent Republican party establishments, yet he ultimately defeated a former Republican Senator and mayor of St. Paul, as well as the Democrat state attorney general, the son of former vice president and Minnesota political legend Hubert Humphrey. Ventura won narrowly and most agree it was because he gave voice to the great mass of self-defined disenfranchised voters, appealing to blue collar, middle and lower-middle class voters. He tapped into a deep vein of voter frustration, targeting the political establishment with the campaign slogan, "Don't vote for politics as usual." That election was characterized by record voter turnout – particularly among first-time voters.

Sound familiar?





While the challenges of the European rendering industry have significantly improved since bovine spongiform encephalopathy (BSE) first emerged 20-plus years ago, there are still some battles to be won and opportunities to be had. So was the focus at the 16th annual European Fat Processors and Renderers Association (EFPRA) Congress held in Messinia, Greece, in early June.

Dr. Martin Alm, EFPRA technical director, explained that 10 years ago the cornerstones to fighting BSE were a complete ban of processed animal proteins (PAPs) and fats in feed, removal of specified risk material (SRM), and monitoring (testing) of fallen stock. The situation today is much better but far from ideal for European renderers: non-ruminant PAPs are allowed in fish diets, the SRM list has been reduced, and the monitoring of fallen stock shows only a handful of BSE cases today, with many of those spontaneous cases. However, the import and export of cattle, meat, and slaughter by-products is allowed in Europe as is the importation of PAPs and category 1 and 2 fats, yet rendered products produced in the European Union (EU) cannot be exported.

"This is opposite of what European law says that what can be imported can be exported, so why not animal by-products?" Alm asked. He described the work EFPRA has ahead of it to convince the European Commission to lift the export ban.

Wouter Vanderpoorten, ETSA Group in Portugal, shared an economical and technical view of incinerating category 1 meat and bone meal, which is at the highest risk for transmissible spongiform encephalopathy. One of the benefits is it replaces 4,000 metric tons of fossil fuel annually. The company recently invested in a biomass boiler, collects waste foodstuffs (i.e., expired foods) and processes them for animal feed, and collects and processes used cooking oil for the biodiesel industry. Vanderpoorten said that future challenges include utilization of waste heat and surplus steam as well as valorization of about 250 metric tons of bottom ash, which is currently landfilled but is approved as fertilizer on non-grazing lands.

Albert Gilbert, APC Europe in Spain, revealed that the company lost 80 percent of its business when the BSE crisis hit due to its lack of crisis management and communication. Yet when porcine epidemic diarrhea virus (PEDv) hit the United States a few years ago, Gilbert and the European Animal Protein Association (EAPA) were prepared when animal blood plasma was blamed for the spread of the virus. EAPA acted quickly by contacting key decision makers with evidence that blood plasma could not be the carrier, reassuring customers, meeting with the president of the World Organization for Animal Health, or OIE, engaging the services of a public relations firm, and improving its website to show the position of the industry.

"It's not about what you say, it's about what others understand," Gilbert commented. "And luck is always needed. Europe got lucky. When PEDv came to Europe, it was a different strain and the experience in the US offered a low-key response." In preparing for a crisis response, Gilbert advised understanding who the audience is then enlisting the help of a public relations firm that can assist with a response.

Dr. Ana Garrido-Vara, University of Cordoba in Spain, shared existing knowledge on using near infrared spectroscopy (NIS) for quality control and detection of the nutritional

composition of PAPs. She said existing legislation prohibiting PAPs in animal feed will only be changed once analytical methods are available that ensure new legislation can be enforced. Although NIS has demonstrated that it is mature enough to be used by the rendering industry, the European Commission does not want to validate this method so more sampling and studies are needed to reduce errors.

Next up was Dr. Nicolai Denzin, Risk and Options Consulting in Germany, who described how to assess the impact of disease outbreaks on rendering plant capacity using a stochastic modeling approach. He showed pictures of burning pyres during the foot and mouth disease outbreak in the United Kingdom in 2001 as an example of the need to improve preparedness so as to avoid implications of second-

best disposal of diseased animals. Denzin talked about various software programs that could be used to predict when rendering capacity would be exhausted during a disease outbreak, adding that these programs may also be applied to other aspects affecting the industry, such as policy changes.



Albert Gilbert, APC Europe, shares his experience on crisis management.

Switching focus

to global markets was David Jackson, LMC, who explained the "price band" where all oil prices (including petroleum) move together, with palm oil always the lowest priced of all the vegetable oils. In the EU, vegetable oil prices never trade below the Brent crude oil price because vegetable oil can be converted into fuel/energy. He said that vegetable oil prices are traditionally set due to supply and demand, but then something odd happened this year. Although Malaysian palm oil stocks were high, the price did not fall because Indonesia introduced a 10 percent biodiesel blending mandate that took all the palm oil and thus kept prices up.

"So government did what markets usually do," Jackson commented. As for animal fats, tallow and palm oil prices have always been closely linked yet since 2010 a gap has appeared (palm oil is cheaper) due to EU legislation allowing doublecounting of tallow used in biodiesel.

EFPRA's next congress is May 31-June 2, 2017, in Hamburg, Germany.

"Fuel companies love this because they only have to use half the amount of oil in petroleum," Jackson stated. Although biofuels have taken more and more animal fat since 2010 thus driving up the price, currently the price premium with palm oil is gone due to an overstock of tallow in Europe so feed is currently the market to focus on for animal fats in Europe (see chart 1).

"We need to reinvigorate the feed sector," Jackson said.

On that note, David Primrose, Synergy Food Ingredients, focused on the global pet food market, which is predicted to grow about 4.2 percent annually until 2022. Of the 22.6 million metric tons (MMT) of dry pet food produced globally - the largest segment of all pet food - North America is currently the largest region at 8.9 MMT, followed by Europe at 5.9 MMT, and Latin America at 5.3 MMT. Primrose showed the evolution of commercial pet food since the 1860s - from cakes to wet food, then dry kibble, moist food pouches, and now premium foods including freeze dried and fresh foods. He shared that pet food sales are currently driven by three factors:

- developing maturity of markets;
- premiumization inclusion of high added-value ingredients; and
- humanization pets as a family member concept.

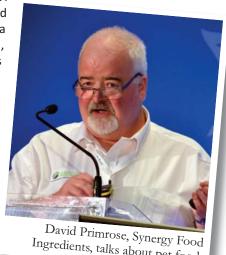
Primrose said that pet food safety is a shared responsibility from "field to bowl" and that today's consumers, especially the millennial generation, are better informed. He noted that the rendering industry is a highly sustainable partner for pet food manufacturers and encouraged renderers to use social media to transparently communicate the safety and nutritional value of their products. Primrose closed his talk with this notable quote from Charles Darwin (1809-1852):

"It is not the strongest of the species who survives, nor the most intelligent, but the one most responsive to change."

Dirk Dobbelaere, EFPRA secretary general, reiterated the importance of the pet food market for PAPs in his presentation of the yearly data for the EU rendering industry (see "European Production Remains Stable" on page 14).

Sotiria Mpourmpou, animal health division of the

Directorate of Agriculture and Veterinary Policy/Attica Region in Greece, described the country's current action plan for handling animal by-products, which includes a new national department, a working group, and regional officers and groups. addition, animal byproduct producers, transporters, and operators will be registered



Ingredients, talks about pet food.

electronically and linked to the existing

farm and slaughterhouse information system. Producers will also be legally required to report the animal by-product production amount and destination of finished product to provide better traceability and prevent illegal and fraudulent

Greece has put a four-year plan in place that includes a program for collection and management of fallen livestock by 2017 and an integrated animal by-products outline for energy uses by 2020. All department staff involved with animal byproduct control is receiving five days of training.



Ruminant PAP is already used in

third countries, either from their

own production or imported from

non-EU countries.

Editor's note – The following is a speech, in part, given by Niels Leth Nielsen, Daka SARVAL A/S, at the European Fat Processors and Renderers Association 16th Annual Congress in early June in Messinia, Greece.

his year is not much different from previous years for European renderers although we are facing more challenges than in recent memory. Changes to regulation, mainly affecting specified risk material, has meant modifications to categories of raw materials and created huge market problems.

The European market is overloaded with category 3 mixed-species processed animal proteins (PAPs), which is harming category 2 products in the fertilizer market. The only outlet for mixed PAP in the European Union (EU), the pet food market, cannot absorb these extra quantities. The consequences are that prices for these products have dropped dramatically, stocks are being built up, and some renderers may have to incinerate these PAPs or category 2 meat and bone meal.

The easy way out of this problem is for the European Commission (EC) to lift the ban on export of ruminant PAP to third countries (outside the EU). The European Fat Processors and

Renderers Association (EFPRA) has been very proactive this year trying to not only get this export ban lifted, but also to have better market access for European rendered products.

EFPRA staff held a meeting late last year with Ladislav Miko, deputy director general of the EC Health and Food Safety, known as DG Santé. A meeting was later held with Eric Thevenard, who is responsible for transmissible spongiform encephalopathy legislation at the EC.

In the meeting with Miko, EFPRA presented its main targets for 2016 as:

- the export of ruminant PAP;
- finalizing species test;
- feeding ruminant PAP to non-ruminant; and
- method 1 processing for ruminant PAP only.

The European rendering industry meets all the mega trends the world is facing for the time being: optimal use of resources, which is in line with the circular economy; highly sustainable, much better than soy, palm, and rapeseed; and a very low carbon footprint.

EU renderers agree with the argument that we must avoid another epidemic of bovine spongiform encephalopathy (BSE),

but our systems are the safest and most secure around the world. BSE is a disease of the past yet at the end of the day, who is paying the ultimate price for poor market access of rendered products? It is the farmers in Europe, who currently have a very poor economy, no matter which kind of farmer, but mainly dairy and pig. So relaxation of the feed ban and the ban on PAP exports is crucial to improve not only the rendering economy but the economy of the whole agricultural chain.

There were 2,166 cases of BSE in the EU in 2001. Compare that to 7 in 2013 and 11 in 2014, of which 3 were feed-borne classical BSE. EFPRA must continue to fight hard to fulfill its main targets, especially opening up export markets for ruminant PAP. Ruminant PAP is already used in third countries, either from their own production or imported from the United States, Canada, Australia, New Zealand, or other non-EU countries. The EU also imports meat, fish, and shrimp from Southeast Asia that most likely have been fed with ruminant PAP. As animal proteins fed PAPs are already on our

plates, the EC has to accept that third countries can control BSE themselves.

Regarding the lifting of the feed ban on non-ruminant PAP use within the EU – poultry PAP to pigs and porcine PAP

to poultry — we are still waiting for PCR tests that must be available before the EC will propose to lift the ban. The problem is that the tests cannot distinguish between legal ruminant ingredients, such as milk, and ruminant PAP. EFPRA has claimed that this can easily be resolved by testing the ingredients — the PAP — and not the finished feed where more ingredients are

EFPRA's point of view is that EU legislation must follow World Organization for Animal Health, or OIE, rules. For example, OIE allows ruminant PAP to be used in non-ruminant feed, which is done all over the world except in the EU.

mixed into the final diet. Yet the EC is reluctant.

Again, I will claim that the EU has the safest and most controlled rendering system in the world. If EU legislators and member states postulate that the feed ban and other obstacles for the rendering industry are maintained in order to protect the EU population, this cannot be the case given that we import products that have been fed PAPs, which might not even be category 3 in the way EU classifies animal by-products.

This is a long and hard fight and EFPRA seeks allies to align with its members to put constant pressure on the commission.

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With great help from Italian colleagues, EFPRA has sought the assistance of a Brussels, Belgium-based law firm that has produced a legal opinion on the existing ban of exporting ruminant PAP. The legal opinion has been sent to European Commissioner for Health and Food Safety Vytenis Andriukaitis.

The legal opinion is very detailed in 15 pages, but the conclusion is very clear and states as follows:

"The export ban for PAPs derived from ruminants is, for the reasons outlined above, clearly disproportionate and discriminatory, as well as inconsistent with other measures previously adopted by the EU. Therefore, it is not only in contradiction with the proportionality and nondiscrimination principles, but also with the precautionary principle. Moreover, it appears to be inconsistent since it disregards the international rules currently in force on this matter and the classification by risk categories adopted by the OIE."

This is a very clear conclusion in my opinion. EFPRA has not yet received an answer from the commissioner but if it is negative, the group must consider whether to ask other parties involved to raise a court case against the EC. However, EU member states are the key. Even if the EC response is positive, and I think it will be, a lift of the ban must be supported by a majority of member states.

So, dear friends, you must all do your homework and approach the European government and authorities in charge about this issue and seek support from national stakeholders, such as farmer organizations. For the time being, we know that very few EU countries are 100 percent in favor of lifting the ban on export of ruminant PAP, which includes Denmark, Finland, and the Netherlands. More countries are not directly against it but want more information. Germany is strictly against lifting the ban.

EFPRA and the EC know there is a gray market out there but for sure this is not the way forward. European renderers must have opportunity to export their products in order to maintain the reliability of the industry.



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European Production Remains Stable

The European Fat Processors and Renderers Association (EFPRA) presented its annual statistics of Europe's animal by-products industry at its congress held in Messinia, Greece, in early June.

Beef consumption in the 28 member countries of the European Union (EU) continued to decline in 2015 as consumers increasingly turned to poultry and pork. The European Commission is predicting a 15 percent increase in poultry demand by 2025.

EFPRA represents 29 members in 26 European countries that reported processing about 17 million metric tons (MMT) of raw material in 2015 into 2.8 MMT of animal fats and 3.7 MMT of animal proteins. This compares to the 2.7 MMT of animal fats and 3.9 MMT of proteins produced in 2014 and the 2.5 MMT of animal fats and 4.1 MMT of animal proteins

produced in 2013. Germany continued to process the most raw materials in 2015, about 3.0 MMT, followed by France at 2.9 MMT, Spain at 2.2 MMT, the United Kingdom at 1.7 MMT, and Italy at 1.6 MMT.

Total category 3 material processed in 2015, which is from animals fit for human consumption, was just over 12.0 MMT, a slight increase from 2014, while all other material accounted for approximately 5.0 MMT, a drop from 5.2 MMT the previous year and 6.0 MMT in 2013.

Total category 1 material, which is at the highest risk for transmissible spongiform

encephalopathy, processed in 2015 was 4.3 MMT, slightly less than the 4.5 MMT processed in 2014. Total category 2 material collected, also at high risk but not containing some specified risk materials (SRMs), was 850,000 MT, up from 720,000 MT in 2014 due to a regulation change in the SRM definition that went into effect September 2015. Most all category 1 meat and bone meal (1.0 MMT) and 108,000 MT of fat were used for combustion, with just over 400,000 MT of category 1 fat used in biodiesel last year, higher than the 350,000 MT used in 2014. Most category 2 meat and bone meal (143,000 MT) was used as fertilizer with a small amount (9,000 MT) going to feed for fur animals. Category 2 fat was mainly used in biodiesel, about 100,000 MT (up from 40,000 MT in 2014) with around 40,000 MT going to combustion.

Category 1 and 2 fats continued to see growth for use in biodiesel production – 500,000 MT in 2015 versus 400,000 MT in 2014 – due to their eligibility for double counting toward EU Renewable Energy Directive targets being firmly in place. Yet, even though category 3 fat does not qualify for

double counting, its use in biodiesel is on the rise, doubling from 200,000 MT in 2012 to 400,000 MT in 2015. This surge meant less use of edible and category 3 fats in food and pet food. Primary markets for this fat continues to be terrestrial animal feed, which saw a 20 percent increase in 2015, and oleochemicals, with an 8 percent increase.

EFPRA Secretary General Dirk Dobbelaere reported a 46 percent decline in food-grade tallow production in 2015 over the previous year with no real explanation except that 2014's unusually high production figure (260,000 MT versus 165,000 MT annual average from 2010-2013) could have included product released from storage. In 2015, around 140,000 MT of food-grade tallow was produced, while food-grade lard production rose significantly to about 220,000 MT after a reported 140,000 MT in 2014.

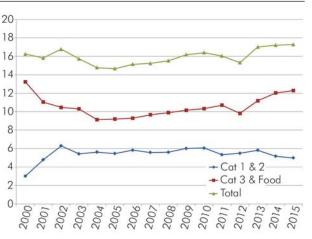
Of the 2.5 MMT of category 3 processed animal proteins (PAPs) produced in 2015 (the same as 2014), 1.8 MMT was used in pet food, up from 1.6 MMT in 2014, with just over half coming from multispecies, albeit down over the past few years. This market is instead turning to poultry meal, which increased 26 percent in 2015 over the previous year, pig meal (up 5 percent), and feather meal (up 19 percent). The increased usage in pet food means less Category 3 PAPs going for fertilizer, which took 630,000 MT in 2015 versus 825,000 MT in 2014.

"Pet food remains our

most important customer," said Dobbelaere. He then pointed out that PAP use in aquaculture remains stable since the European Commission began allowing swine and poultry PAPs in fish feed in June 2013. In 2015, 95,000 MT of PAPs was used in fish feed, down slightly from 98,600 MT the previous year, with a continual increase in poultry meal usage, from 11,000 MT in 2013 to 33,000 MT in 2014 and about 46,000 last year. Feather and blood meal use in aquaculture continues to decline, while pig meal bumped up slightly for the third year.

Dobbelaere's conclusions for 2015 are that EU animal by-product production is stable, although there was less category 1 and 2 production, and there continues to be a steady increase of all animal fat usage in biodiesel. For food and feed-grade proteins, fertilizer usage was down 24 percent while pet food was up 8 percent. As for food and feed-grade fats, their use in feed, oleochemicals, and biodiesel were all up by 20, 9, and 35 percent respectively, while usage in pet food and food was down 7 and 15 percent respectively.

Chart 1. Animal by-product processing in Europe, 2000-2015 (million metric tons)



Note: Data from EU-20 member states, Norway, and Switzerland.



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Labor Department | Updates Overtime Rule

The United States Department of Labor (DOL) has published a final rule in the Federal Register updating overtime regulations that will automatically extend overtime pay protections to over four million workers within the first year of implementation.

The final rule, effective December 1, 2016, includes an exempt employee threshold of \$47,476 (\$913 per week)

– less than the July 2015

proposed rule's \$50,440 but slightly more than double the old threshold of \$23,660. The new regulation also provides for automatic updates every three years and allows up to 10 percent of the minimum salary level to be paid through nondiscretionary bonuses, incentive pay, or commissions.

In 2014, President Barack Obama signed a Presidential Memorandum directing the department to update the regulations defining which white collar workers are protected by the Fair Labor Standards Act's (FLSA's) minimum wage and overtime standards. Consistent with the president's goal of ensuring workers are paid a fair day's pay for a hard day's work, the memorandum instructed the department to look for ways to modernize and simplify the regulations while ensuring that the FLSA's intended overtime protections are fully implemented.

Key Provisions of the Final Rule

The final rule focuses primarily on updating the salary and compensation levels needed for executive, administrative, and professional workers to be exempt. Specifically, the rule:

- Sets the standard salary level at the 40th percentile of earnings of full-time salaried workers in the lowestwage Census region, currently the South (\$913 per week; \$47,476 annually for a full-year worker);
- Sets the total annual compensation requirement for highly compensated employees (HCE) subject to a minimal duties test to the annual equivalent of the 90th percentile of full-time salaried workers nationally (\$134,004); and
- Establishes a mechanism for automatically updating the salary and compensation levels every three years to maintain the levels at the above percentiles and to ensure that they continue to provide useful and effective tests for exemption.

Additionally, the final rule amends the salary basis test to allow employers to use nondiscretionary bonuses and incentive payments (including commissions) to satisfy up to 10 percent of the new standard salary level.

The initial increases to the standard salary level (from \$455 to \$913 per week) and HCE total annual compensation requirement (from \$100,000 to \$134,004 per year) become effective on December 1, 2016. Future automatic updates to those thresholds will occur every three years, beginning January 1, 2020.

Automatic Increase

In an article written by Allen Smith of the Society for Human Resource Management (SHRM), Lee Schreter, an attorney with Littler in Atlanta, Georgia, and chairperson of the firm's board, said an increase in the minimum salary could lead to a "death spiral" for the

white-collar exemptions. The exempt salary threshold suddenly could be north of \$75,000 in several years, she said.

With the increase, employers will have to every three years monitor the

minimum acceptable salary level for exempt classification, identify employees impacted by a new minimum salary requirement, and assess whether to reclassify the affected employees or restructure jobs, noted Alfred Robinson, an attorney with Ogletree Deakins in Washington, DC, and former administrator of DOL's Wage and Hour Division.

Depending on the timing of the increases, employers may need to restructure their review/compensation cycle to more fully align with the regulatory scheme and allow them to understand the required salary amounts at the same time they are determining merit raises and bonuses, said Alexander Passantino, an attorney with Seyfarth Shaw in Washington, DC, and former acting administrator of the Wage and Hour Division. In addition, employers may look three years out to determine whether the continued salary increases are sustainable or whether the position should just be reclassified at that time.

Salary Threshold

Raising the salary level to \$47,476 results in an increase of more than 100 percent and exceeds New York's exempt threshold of \$35,100 and California's exempt threshold of \$41,600. "It will still impact millions of employees and be a huge burden for some industries, small businesses, nonprofits, and some regions," the SHRM article quoted Robert Boonin, an attorney with Dykema in Detroit and Ann Arbor, Michigan, and an immediate past chair of the Wage and Hour Defense Institute, a network of wage and hour lawyers.

The final rule "is perhaps the most significant workplace development we've seen in our professional lifetimes," he said. "It's a game changer, and not necessarily a good one."

The new salary threshold "will definitely have an impact on small businesses, especially in areas of the country that have a lower cost of living," said Lisa Chui, vice president of finance and human resources at Ubiquity Retirement + Savings in San Francisco, California, a provider of retirement and savings plans for small businesses. "However, it's a good catalyst to ask the question 'How can we work smarter?' vs. 'How can we work longer?' "

Yet a \$47,476 threshold "does not eliminate the difficult decisions that employers will face when two employees in the same position earn different salary levels – one above and one below the new mark" when the position's salary accounts for cost-of-living variances by geography, Passantino observed.

The whole point of overtime is not for employees to earn more money, but "rather to make it so expensive for employers to have people work long hours that employers will instead elect to spread the work around to more employees," said Paul DeCamp, an attorney with Jackson Lewis in Reston, Virginia, and former administrator of DOL's Wage and Hour Division. "It is no coincidence that many, if not most, companies have long had a rule that nonexempt employees are not to work overtime without permission from their supervisor or manager, and supervisors and managers are usually under pressure not to have the employees they oversee working overtime unless there is a real emergency or an unavoidable spike in the workload."

In the SHRM article, DeCamp said employees reclassified as nonexempt will, in most instances, see their hours and pay drop. "This result will make a lot of employees very unhappy," he said. "The administration's hope that employers will simply eat the cost of the additional overtime expense and in effect give all of these millions of workers a big raise is unrealistic in the extreme."

However, Allan Bloom, an attorney with Proskauer in New York City, New York, said the rationale for increasing the salary threshold was "simple." The old minimum salary for exempt workers "was found to be at or near the poverty line for a family of four," he noted.

In a May 2nd letter to Shaun Donovan, director of the Office of Management and Budget, Senator Elizabeth Warren (D-MA) said, "Too often, the voices of workers are buried beneath a flood of comments from lobbyists and lawyers. But the record before your agency demonstrates that American

workers are demanding updated overtime rules. Updated overtime rules will give millions of working families a fighting chance to build more financial security for themselves. It's time for us all to listen to those voices." Her office also released a report highlighting the benefits of the new overtime rule for workers and their families.

Action Items

Following are some steps SHRM listed for human resources to take to comply with the new rule.

- Quickly assess the costs of reclassification versus salary increases. "Determine if it's feasible to raise salaries to retain the exempt statuses of those on the cusp of the new salary level," Boonin said. "Reclassify those who fall under the new threshold and determine their pay structure salaried plus half-time, hourly plus time and one-half, bonus and commission changes." Nondiscretionary bonuses and commissions are included in the calculation of the exempt salary threshold up to 10 percent of the required salary level, as long as employers pay those amounts on a quarterly or more frequent basis.
- Implement and communicate the compliant approach
 to affected employees and managers. Determine
 whether communications about the rule will be in
 one-on-one meetings, small group meetings, large
 group meetings, memos, or a combination of these
 approaches, Boonin recommended.

Continued on page 34



Renderers Go to Washington

The United States (US) rendering industry walked the halls of Congress and met with President Barack Obama's administration officials during the National Renderers Association (NRA) 16th Annual Washington, DC, Fly-in in midJune. Renderers with operations across the country attended and heard the latest on important industry issues, livestock and poultry markets, the election outlook, and the plans of the new chief veterinarian at the US Department of Agriculture (USDA). They also talked about industry challenges in about 200 visits with their members of Congress and policy aides.

The NRA fly-in is vital because as NRA Legislative Action Committee Chairman David Kaluzny, of Kaluzny Bros. in Illinois, says, "If you're not at the table, you're on the menu." In the coming year, Congress will be making decisions that affect rendering on environment, biodiesel, feed safety, and other matters.

The fly-in provides an opportunity for the rendering industry to speak in a single voice together to policymakers in Washington, DC, who influence the industry's ability to do business and its freedom to operate. The rendering industry is more powerful and effective by working together for successful results.

"Thought educating Congress and its staffers about rendering and our issues is never-ending, it is nonetheless essential to our future," Kaluzny believes. "They need to know us and appreciate us for what we do. We affect so many industries in so many ways."

With the fall elections approaching, this year's fly-in was especially important. Whoever wins the White House, whether Democrat or Republican, will need to work closely with Congress to get things done and carry out their election mandate. As this goes to press, the House of Representatives is expected to remain in GOP control but the Senate could easily flip to a Democratic majority. There are far more vulnerable Republican senators up for reelection than Democrats. Whichever party wins the Senate, House, and White House, it is essential



Representative Jim Costa (D-CA), *left*, and Jim Andreoli Jr., Baker Commodities Inc., during NRA's fly-in.

that leaders from both parties understand rendering so they are better prepared for key votes and other decisions affecting the rendering industry.

To set the stage for congressional visits, NRA's fly-in began with an industry briefing that included speakers talking about national issues affecting the



Dr. Jack Shere, USDA

rendering industry. Colin Woodall, vice president and senior lobbyist at the National Cattlemen's Beef Association, explained his organization's top priorities in Congress and the importance of working with renderers. Dr. Warren Preston, deputy chief economist at USDA, provided an economic forecast for agriculture in general, and livestock and poultry in particular. Participants also heard about employer challenges under the Affordable Care Act, the nation's new health reform law also called "Obamacare," as well as opportunities for reforming the law.

The nation's new chief veterinarian, Dr. Jack Shere, held his first meeting with renderers at the fly-in. In May, NRA staff talked with him to introduce the association and major rendering concerns. Shere discussed a wide variety of animal issues and said the draft small ruminant rule is expected to be released this summer for public comment. Importantly, he also offered an opportunity to work together on rendering's role in animal disease management to be better prepared for an outbreak before it occurs.

Shere explained that his leadership goals for the Veterinary Services division of USDA's Animal and Plant Health Inspection Service (APHIS) are to "restrengthen and build us back to what we used to be" after budget changes over the past several years reduced APHIS' field force and the ability to respond to animal disease outbreaks as quickly as he would have liked. Before joining APHIS, he spent several years in private practice. What brought him to the veterinary field, he told fly-in participants, was his love of caring for animals. As a child, he said he would often take wounded animals home to take care of and his mother "never knew what she would find in [his] top dresser drawer."

A highlight of the fly-in was breakfast with Representative David Rouzer (R-NC), chairman of the House Livestock and Foreign Agriculture Subcommittee. A friend of agriculture, he described the political environment in Congress before renderers went to Capitol Hill and offered tips for successful meetings. Especially be sure to "ask for the sale," Rouzer urged, and get a commitment to take action for rendering, such as supporting the industry's position on a key vote.

"This year was very refreshing for NRA members and speakers alike," said Ken Gilmurray of JBS USA. "Speakers came directly to our hotel [neutral ground], rather than meeting in a government building, and were more open to speak their minds. I felt they enjoyed the opportunity and the interaction between us was even more productive."

During congressional meetings, fly-in participants met with some Congress members who were quite familiar with rendering and its role and with others who knew very little. Renderers needed to be ready to provide a general introduction to their industry as well as talk specifics, depending upon who they met with. Some renderers had six, eight, or more Capitol Hill meetings a day and so had to be nimble and able to adjust quickly. NRA provided a full issues briefing before the meetings about what to expect so participants were prepared.

"Between our industry issues briefing and the Tuesday congressional breakfast before the Hill appointments, we had a very good feel for what we would encounter during our visits," said Gilmurray. "Anyone on the fence about attending in the future should appreciate this."

Congressional meeting topics included a wide variety of rendering issues ranging from biodiesel to environmental rules on water and ozone, and from food waste to export funding for NRA's international programs. NRA receives approximately \$1.8 million annually from USDA to develop, maintain, and open foreign markets for rendered products. These funds also help support NRA's overseas offices in Hong Kong, China, and Mexico City, Mexico. Issue briefs given to members of Congress and their staff by fly-in attendees are posted on the home page of NRA's website at www.nationalrenderers.org.

Why do renderers attend NRA's fly-in when work schedules are busy, time is in short supply, and business is demanding? By coming, renderers gain new political and economic intelligence that helps in business planning and operations, as well as enjoy networking opportunities with other renderers.

"Many doors opened to our group because of the fly-in," said Jim Andreoli Jr. of Baker Commodities. "Our membership in NRA creates so many opportunities for us to tell our story and discuss important issues to a vast number of senators and representatives, opportunities that would not exist if it wasn't for NRA."

Plan on attending next year's fly-in June 12-14, 2017. The political scene in Washington, DC, will offer new opportunities and perhaps even some peril, depending upon this fall's national elections. Your voice will be important. Be sure to mark your calendars to attend!





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Proposed RFS Underestimates Industry's Potential

In mid-May, the United States (US) Environmental Protection Agency (EPA) announced proposed Renewable Fuel Standard (RFS) volume requirements for 2017 for cellulosic biofuel, advanced biofuel, and total renewable fuel. EPA also proposed volume requirements for biomass-based diesel, which includes biodiesel and renewable diesel, for 2018. EPA's proposed RFS volume requirements are found in table 1 and show a slight bump of 100 million gallons for biomass-based diesel for 2018 compared to the 2017 requirement of 2.0 billion gallons. Rendered fats and recycled cooking oils provide 34 percent of the feedstocks used to produce biomass-based diesel in the United States.

According to the National Biodiesel Board (NBB), the US biodiesel industry has the capacity to produce over 2.5 billion gallons. NBB Vice President of Federal Affairs Anne Steckel said that without stronger growth in the final rule, the administration would be missing an opportunity to reduce carbon emissions while helping to reshape America's transportation sector.

"We appreciate EPA's timeliness in releasing these volumes and its support for growing biodiesel use under the RFS, but this proposal significantly understates the amount of biodiesel this industry can sustainably deliver to the market," Steckel said of the proposed 2.1 billion gallons of biomass-based diesel in 2018. "We have plenty of feedstock and production capacity to exceed 2.5 billion gallons today, and can certainly do so in 2018." In comments submitted on the proposed rule, NBB and the National Renderers Association (NRA) both called for EPA to raise the volume requirement for biomass-based diesel to at least 2.5 billion gallons in 2018 after capacity and data show that consumption this year will significantly exceed the 2.1 billion gallons EPA is proposing. NBB and NRA are also calling for an advanced biofuel volume of 4.75 billion gallons instead the proposed 4.0 billion gallons.

"NRA considers its recommendation to be the necessary minimum 2017 and 2018 RFS levels needed to help continue to build the relatively young biomass-based diesel industry," NRA President Nancy Foster said in submitted comments. "Lower volumes would be unreasonable and constrain growth."

NRA members agreed in testimonies at an EPA public hearing in early June in Kansas City, Missouri. Chuck Neece represented NRA as its past Biofuels Committee chairman and as a previous employee of Central Bi-Products, which operated Minnesota's first commercial biodiesel plant. He explained that in the past 11 years, the "young" biodiesel and renewable diesel industries have gone from being sold in gallon cans as a fuel supplement to a 2.1 billion gallon market in 2015. In addition, the rendering industry has increasingly participated in this new market by providing feedstocks that export markets no longer import due to foreign trade barriers and other constraints.

"This past year, 28 percent of rendered fats and oils [produced] were sold into the market for use as feedstock for

Table 1. EPA proposed RFS volume requirements		
	2017	2018
Cellulosic biofuel (million gallons)	312.0	n/a
Biomass-based diesel (billion gallons)	2.01	2.1
Advanced biofuel (billion gallon)	4.0	n/a
Renewable fuel (billion gallons)	18.8	n/a

1. The 2017 biomass-based diesel volume requirement was established in the 2014-2016 final rule December 14, 2015. EPA is not re-proposing or inviting comment on this volume requirement.

domestic biomass-based diesel production of biodiesel and renewable diesel," Neece stated at the hearing. "While virgin, domestically-produced vegetable oils have been shown to have extremely good biofuel properties with dramatic reduction of greenhouse gases compared to petroleum diesel, rendered animal fats and recycled cooking oils and greases used as feedstocks further extend performance qualities exceptionally well and produce even greater reduction of greenhouse gases."

Neece went on to describe the economic and environmental benefits the biomass-based diesel industry has had on the recycling of used cooking oils from restaurants and institutional kitchens.

"Maintaining a value for these products after their initial use for cooking – through rendering – reduces the burden on landfills and municipal wastewater treatment systems while providing an attractive feedstock for biomass-based diesel production," he noted. "This also aligns with efforts to divert organic wastes from landfills and reduce organics that pathogens can grow in, helping to protect public health." Neece testified that NRA believes EPA's proposed RFS volumes are too conservative considering the current and past performance of suppliers, producers, and the transportation industry. In addition, feedstocks are readily available, the market for them is steady, and production capacity exceeds the proposed RFS levels with good quality and logistical distribution within the fuels industry.

Rick Sabol, president of Mahoney Environmental, also testified at the hearing as an NRA member and a collector of fats, oils, and greases, which is "most valuable to our end customers, the biomass-based diesel manufacturers.

"We are a true food-then-fuel company focused on the waste-to-fuel conversion," he added. Sabol shared EPA's original projected mandates from 2010 forward that represented tremendous growth expectations for biomassbased diesel volumes, which he said producers have relied on to aggressively grow plant capacity year-over-year.

"Since 2010, my company has grown on a compound basis of 7.2 percent annually in collected volume," Sabol shared. "Through our focus on what our biomass-based diesel customers require and value, we've built additional processing and geographic coverage capacity consistent with the EPA projected growth mandates, just as the producers

have done." He added that Mahoney Environmental's collection of grease trap material from restaurants is also used as a biomass-based diesel feedstock, eliminating the need for this waste material to be processed by publically-owned treatment works. Sabol echoed Neece's comment that EPA's proposed volumes are too conservative and that feedstocks are readily available, especially domestically-produced used cooking oil and yellow grease that have seen a 50 percent drop in exports over the past five years.

In its comments to EPA, NRA noted that biodiesel currently reduces greenhouse gas (GHG) emissions by 81 percent compared with petroleum diesel due to the increased ability to use low carbon footprint feedstocks such as used cooking oils, greases, animal fats, and other feedstocks. This year, biodiesel is expected to reduce carbon dioxide emissions in the United States by 25 million tons, which is equivalent to eliminating 5.3 million cars from the nation's roads. This number is in addition to the rendering industry's GHG-emission equivalent reduction of 12.3 million cars annually.

Lifecycle carbon emissions of used cooking oil feedstocks for biomass-based diesel yield approximately 3.5 pounds of carbon dioxide per 125,000 Btu compared to approximately 29 pounds for petroleum diesel. Recycled grease and animal fat feedstocks enjoy lower lifecycle carbon emissions equivalent to used cooking oil. Lifecycle carbon emissions for each of these three rendered feedstocks also compare favorably to those from cellulosic ethanol.

As a result of its low carbon-producing benefits, biomassbased diesel qualifies as the only domestically-produced, commercial-scale fuel capable of meeting the advanced biofuel mandate of lower GHG emissions, NRA stated in its comments to EPA's proposed rule.

In addition to its environmental benefits, a recent study found that the US biodiesel industry supports nearly 48,000 jobs nationwide. The study, conducted by LMC International and commissioned by NBB, also found that the 2.1 billion gallons of biodiesel and renewable diesel used in the United States in 2015 supported \$8.4 billion in economic impact across a wide variety of sectors along with \$1.9 billion in wages paid.

The report highlighted how growing biodiesel imports are eating into the domestic industry's production and economy. It found that the industry would have supported 21,200 additional jobs last year if all the biodiesel and renewable diesel used had been produced domestically. Instead, almost a third came from overseas.

The LMC study found that biodiesel production has a significant positive impact across a variety of economic sectors, including processing and manufacturing, agriculture, transportation, and animal processing. The study reported that with the 2.5 billion gallon RFS requirement NBB and NRA are calling for in 2018, the industry would support 81,600 jobs and \$14.7 billion in total economic impact if all production was domestic. The impact of the increase would be 55,000 jobs and \$9.8 billion in total impact under a split of two-thirds domestic production and one-third imports.

It is anticipated that EPA will finalize the proposed volumes by November 30, 2016.

Continued on page 22

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BIOX Acquires Toronto Biodiesel Plant, Jumps into US Market

BIOX Corporation of Hamilton, Ontario, Canada, has acquired a 50-million-liter-per-year (13.2 million gallons) biodiesel facility in Sombra, Ontario, Canada, from Methes Energies Canada Inc. for \$4.5 million (US). The facility is located on 21 acres near Sarnia, Ontario, with beneficial logistics, including onsite rail.

Originally constructed in 2009, the plant has not achieved maximum capacity due to working capital and market challenges, and is currently not in production. BIOX will spend an additional \$5 million (Canadian) over the next 12 months on upgrades to the facility that will improve its efficiency and enable the use of a broader range of feedstocks, specifically lower carbon-intensity feedstocks such as animal fats and recycled cooking oils. The Sombra acquisition represents a 75 percent increase in BIOX's production capacity.

"We believe the Ontario market will play an increasingly important role in our distribution network," said Alan Rickard, chief executive officer at BIOX. "The implementation of the Greener Diesel program in Ontario, with its increasing blend rates and move toward lower carbon intensity fuels in 2017, made Sombra an attractive asset."

The province of Ontario implemented the Greener Diesel program in April 2014 based on biofuel percentage and carbon intensity. The program escalates the biofuel percentage for all petroleum diesel sold in the province from three percent in 2016 to four percent in 2017 and onward. The regulation requires the use of an estimated 240 million liters (63.4 million gallons) of biobased diesel on an average greenhouse gas (GHG) adjusted volume basis in 2017.

"We are already seeing with the increase in the Ontario mandate for 2016 that distribution of biodiesel from our Hamilton facility is shifting quickly from dependence on the US market to fulfilling the demand in Ontario," continued Rickard. "We expect this shift in distribution away from the US market to continue as the Ontario Greener Diesel mandate increases for 2017."

Shortly after the Methes Energies acquisition, BIOX and World Energy entered into a joint venture to acquire and operate a 90-million-gallon-per-year biodiesel production facility in Houston, Texas. Each company has committed \$10 million (US) to the World Energy BIOX Biofuels joint venture.

The facility, formerly known as Green Earth Fuels, is located within the Kinder Morgan Liquids terminal on the Houston Ship Channel and is the third largest biodiesel production facility in North America. Plant commissioning and start-up will ramp up over the third quarter of this year.

The joint venture will provide BIOX an opportunity to significantly expand and diversify its production capacity in the US market, according to Rickard.

In order to fund its \$10 million contribution to the joint venture, BIOX has secured funding from a group of its existing shareholders comprising Clearwater Fine Foods Inc., T. Robert Beamish, and William Lambert. Beamish and Lambert are also directors of BIOX. With the establishment of the World Energy

BIOX joint venture, Beamish has retired from the BIOX Board of Directors and Gene Gebolys, chief executive officer at World Energy, has been appointed to the board. In addition, Rickard also now serves on the BIOX Board of Directors.

Florida Men Plead Guilty to Fraud

Thomas Davanzo and Robert Fedyna, both from Florida, have pleaded guilty for their participation in a multi-state scheme to defraud biodiesel buyers and United States taxpayers by fraudulently selling biodiesel credits and fraudulently claiming tax credits.

Davanzo and Fedyna operated several shell companies that were used to facilitate the scheme. As part of the scheme, the two operated entities that supposedly purchased renewable fuel, on which credits had been claimed making it ineligible for additional credits, produced by their co-conspirators at Gen-X Energy Group, headquartered in Pasco, Washington, and its subsidiary, Southern Resources and Commodities, located in Dublin, Georgia. They then used a series of false transactions to transform the fuel back into feedstock needed for the production of renewable fuel and sold it back to Gen-X or Southern Resources, allowing credits to be claimed again. This cycle was repeated multiple times.

In addition, both Davanzo and Fedyna laundered funds received from the scheme through various shell entities' bank accounts to perpetuate the fraud scheme and conceal its proceeds.

Davanzo and Fedyna also directed and participated in the generation of false paperwork to give the impression the renewable identification numbers (RINs) created and claimed by co-conspirators were legitimate. The paperwork included false invoices from Gen-X or Southern Resources to shell entities that claimed to show sales of renewable fuel, false invoices from shell entities to Gen-X and Southern Resources that supposedly showed the purchase of feedstock, and false bills of lading that claimed to show the transportation of fuel and feedstock by tanker truck.

From March 2013 to March 2014, the co-conspirators generated at least 60 million RINs that were based on fuel that was either never produced or merely reprocessed at the Gen-X or Southern Resources facilities. The co-conspirators received at least \$42 million from the sale of these fraudulent RINs to third parties. In addition, Gen-X received approximately \$4.3 million in false tax credits for this fuel.

Sentencing had not been annouced as of press time.

Millions in Biofuels Payments

The United States Department of Agriculture (USDA) is investing \$8.8 million to boost the production of advanced biofuels and sustain jobs at renewable energy facilities in 39 states. The funding is being provided through USDA's Advanced Biofuel Payment Program, which was established in the 2008 farm bill. Payments are made to biofuels producers based on the amount of advanced biofuels produced from renewable biomass, other than corn kernel starch. Examples of eligible feedstocks include crop residue, food and yard waste, vegetable oil, and animal fat.

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To date, USDA has made \$308 million in payments to 382 producers in 47 states and territories through this program. These payments have produced enough biofuel to provide more than 391 billion kilowatt hours of electric energy.

Some of the biodiesel producers receiving part of the \$8.8 million include:

- RBF Port Neches LLC, \$3.8 million
- Crimson Renewable Energy, \$1 million
- Louis Dreyfus Agricultural Industries LLC, \$683,648
- Owensboro Grain Company LLC, \$623,825
- Ag Processing Inc., \$486,725
- Diamond Green Biodiesel, \$199,706
- White Mountain Biodiesel LLC, \$175,365
- Deerfield Energy LLC, \$158,081
- Sequential-Pacific Biodiesel, \$110,420

Many smaller payments were also awarded, such as \$13,165 to Scott Petroleum Corporation in Itta Bena, Mississippi, for the production of more than 2.6 million gallons of biodiesel from 3.0 million gallons of waste oil, poultry fat, and non-food grade corn and catfish oil. The biodiesel is distributed throughout Arkansas, Louisiana, and Mississippi.

Navy Uses Tallow-based Fuel

Participants in June's international Rim of the Pacific (RIMPAC) maritime exercise in Pearl Harbor, Hawaii, used about 11.2 million gallons of a 10 percent alternative fuel blend, the United States (US) Navy said. The *USS John C. Stennis* Strike Group, also called the Great Green Fleet and the US Navy's pioneer in fuel efficiency measures, took part in the exercise. The alternative fuel used during RIMPAC is derived from waste beef fat from the Midwest.

In 2012, the RIMPAC exercise met one of Secretary of the Navy Ray Mabus' five energy goals, to demonstrate a Green Strike Group operating on alternative fuel. US Navy ships and aircraft used 900,000 gallons of a 50-50 blend of renewable diesel and petroleum diesel as a proof of concept. This year, participating countries will be using the same fuel the *John C. Stennis* Carrier Strike Group used during the first operational deployment of a Great Green Fleet strike group.

New Leaf Biofuel Recognized

San Diego, California-based New Leaf Biofuel was honored in late May by Assemblywoman Lorena Gonzales as Small Business of the Year for District 80. California Small Business Day recognized 85 small businesses for their contribution to the state's economy. Small business contributes to 75 percent of California's gross state product and over half of the state's private sector jobs.

"New Leaf Biofuel is helping forge a cleaner, greener future in our communities with local jobs and innovative technology that are reshaping our local economy and pointing the way to healthier neighborhoods in the years to come," said Gonzales. New Leaf Biofuel converts used cooking oil from local restaurants into biodiesel then sells the fuel back to the community, improving air quality in the region while providing good paying green jobs to San Diego's Barrio Logan neighborhood.

"At New Leaf, it is our mission to make our community a cleaner place in which to live and work," said President Jennifer Case. "We are honored to be recognized with this very

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Managing Change in the Rendering Industry

The global rendering industry is no stranger to being challenged by change. Renderers have and will experience change that can have positive or negative effects on their businesses. At times the changes have been difficult and often involved a steep learning curve for all involved. One moment it is business as usual, the next it appears there is no light at the end of the tunnel. This article is about change in the rendering industry and provides a point of view that challenges the way some may think of change.

It can be agreed that the National Renderers Association (NRA) led the way for world rendering by producing the book *The Invisible Industry* in 1978. At that time, the rendering industry diligently serviced its customers by collecting raw materials and producing animal protein meals, fats, and oils. Rendering was an industry serving society yet little was known about it by people outside the industry. *The Invisible Industry* provided knowledge for those who did not know what was done, why, and where. Rendering plants, environmental controls, and management systems at the time could be described as basic and not as sophisticated as they are today.

Almost 20 years later, in 1996, the next reference book, The Original Recyclers, was written describing a different industry that did more than collect and process animal byproducts. The industry appeared to have earned its stripes of acknowledgement. The popular word at the time and still commonly used today is recycling. Renderers were now doing the right thing by recycling and they had a story to tell. Recycling was the "now" word that people understood and appreciated for its positive contribution to society and the environment. Although rendering had always been recycling, it was now an accepted and common term throughout the world. By the 1990s, the rendering industry changed for the better with technological advances altering production systems and responding to environmental concerns. Product quality was improving, making rendered products more acceptable. The industry was now more broadly recognized and accepted.

Rendering's history was further revised, defined, and documented in the 2006 book *Essential Rendering* edited by Dr. David Meeker of NRA. Meeker and other authors wrote their views of an industry that had grown and matured. We sometimes forget all that has transpired to create what rendering is today. People, plants, process designs, products, science, and engineering have all undergone growth and development.

Over the years, many changes have been forced onto the rendering industry by various government controls, regulations, and requirements. Voluntary change has also been effective through development, implementation, and acceptance of codes of practice. Similarly, customers and markets have changed the industry by redefining product quality requirements that must be achieved. Finally, suppliers of rendering plant equipment have been enormously successful in helping drive change from within.



The World Renderers Organization meets in Greece.

The current "now" word for renderers is "sustainability." There is presently a need to explain how rendered products meet the criteria of sustainability and the world's needs. The feed industries for aquaculture, livestock, and pets are assessing from where their sustainable products be sourced. Similarly, the oleochemical and biofuel industries see the use of tallow in a positive light. It is fortunate for rendering that recycling appears to have morphed into sustainability.

The process to manage change in a company needs to be done with consideration to compliance with regulations, its people, the safety of operations, care for the environment, meeting quality criteria, and ensuring the company is financially successful. Risk can be applied to management systems to better design the required changes but we must be mindful of the people. The ability to deal or manage the process of introducing change is where one needs to carefully consider action, cause, and effect.

Some time ago, the World Renderers Organization (WRO) wrote two articles for *Render* magazine to raise awareness of different training methods. These were not new concepts but rather a reminder of what can be done to develop skills for people. One method, e-learning, is using a computer interface with presentations and questioning. The other, more familiar, is training conducted in a class-type environment. It was decided that both approaches were valuable and circumstances would determine which would be more effective and/or efficient. As change is introduced, the method of involvement and development will generally be through people and the training that is performed. Not all will see the need for change and many may not accept change. It is our challenge to explain the need and to have everyone supportive of what is needed.

The United States' Food Safety Modernization Act (FMSA) is a clear example where change has been determined for the industry. NRA has taken considerable effort to prepare its members to comply with the requirements of the new law. In turn, companies affected must develop systems of control to comply. For some, preparations for compliance were well embedded before the law is due to be implemented.

The method used by the company to introduce change will determine how successfully changes are implemented.

The rendering industry is about servicing meat producers through raw material collection and processing that raw material into value-added products. Renderers must comply or exceed the various safety, quality, and environmental requirements dictated to them.

WRO held its annual meeting at the European Fat Processors and Renderers Association (EFPRA) Congress in early June in Greece where two issues of importance were discussed that identified change and the task of managing that change.

The first matter raised was to advance the ongoing issue of foreign matter in raw material and raise awareness to create change in the quality of raw material supply. Renderers are dealing with a cultural supply perception that the animal byproducts renderers process is waste, not valuable raw material. The Australian Renderers Association (ARA) developed a presentation intended for raw material suppliers that explains the problem of foreign matter and its impact. At the WRO meeting, the presentation and how it could or should be shown more widely was discussed.

The ARA presentation places particular emphasis on quality concerns from foreign matter transferring to processing and then finished products. ARA Vice President Andy Bennett, Talloman, called it the "roadshow" and has presented it to suppliers and at the New Zealand renderers mini-symposium in Queenstown, New Zealand, in March. Comments so far have been positive and he has received good support. Further presentations have been given at rendering workshops and meetings and to industry representative bodies.

Along the same line of thinking, the June 2016 issue of *Render* included a second article to help renderers, their suppliers, and their customers better understand the complexities of potential contaminants in rendered products. The first article, "Physical Hazards in Raw Material: Their source and control," appeared in the June 2015 *Render*. The goal for these articles is to help renderers complete food safety plans, meet requirements in the new FSMA,

and control potentially harmful hazards in rendered products. So what is the next step in getting people to understand the issue and then the solution?

The second issue of discussion at the WRO meeting was the presence of foreign DNA in rendered products and testing of DNA in rendered meals. It is unclear if science has a proven methodology to find trace levels of another species, but this has now become the rendering industry's challenge. Importing country requirements are changing and species-specific rendered products are

stipulated. WRO is determining how to investigate this change through its scientific advisory panel and ascertain the impact on the industry.

Digital Challenges for Renderers

Over the past 20 years, renderers around the world have coped with the need to become good at collecting and organizing digital data as part of their daily operations. The industry has collectively identified four main

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International Continued from page 25

sources of information that hold special importance to remain viable in the market.

The first is related to the feed chain requirement to maintain traceability from raw materials to finished products. The second is related to the ability to control collection trucks to enhance capacity to grow raw material volumes without failing suppliers. The third is related to the presence of renderers on the Internet thus enabling communications to market products and ideas on how renderers serve the world by recycling animal by-products. The fourth is the necessity to be informed of changes that impact the industry on a real-time basis in the simplest possible way.

These complexities were created first by the appearance of bovine spongiform encephalopathy (BSE) followed by the eruption of the digital era. Some renderers have performed better than others at adapting and adopting new standards of operation that have certainly shaped their actual presence in the market.

Nowadays, renderers have a good presence on the Internet. Almost everyone markets their products, their values, and the concept of being a positive-balanced environmental industry. Still, not many have evolved to market this idea on other platforms, which brings forth a new challenge: Not many people have read about the industry or are convinced of the necessity of its existence.

There is always a concern in the feed chain about the security of including rendered products in feed formulas along with government concern on how dependable rendering is at being a steward to the feed chain as the first stage of the process. Renderers are working closely with governments and feed manufacturers to show their capacities and to build trust. Yet, again, there is still a gap that needs to be filled to deliver the message of a responsible industry.

Operational structures are designed with a specific number of people to carry out the tasks of running a plant and business. Yet, if after using our energy on a daily basis to maintain operations, is

there enough energy left to rethink and be ready for the next digital challenge, such as the Internet opportunities? How will the rendering industry evolve further in a world where the Internet is taking center stage? How fast must the industry adapt to the digital challenges? Which ones are more capable of bringing the rendering industry into a better future?

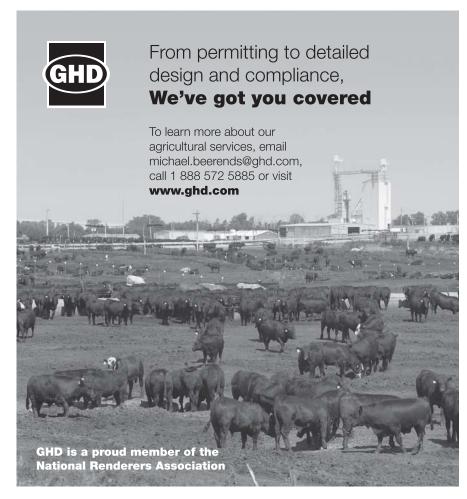
Changes in legislation normally take time and are usually well directed by the various rendering associations - NRA, ARA, EFPRA, and the Brazilian renderers association ABRA. That implies an exchange of opinions with the members about the relevant changes beforehand. Therefore active members who keep themselves informed and join the process of discussion know what is ahead. Moreover, if the changes require deep restructuring or investments, there is normally a transitional period provided. In general, every operator has it in their power to inform themselves about legislative changes and prepare accordingly.

Fortunately, legislative changes are more evolutionary than implosive. Regular participation in an association can guarantee a basic knowledge of what to expect and allows time to react. Impacts like BSE, dioxins, animal diseases, and drug residues can have an uncontrollable impact. Yet the United States and their handling of the BSE crisis, which did not lead into an overreaction, showed the good network and persuasiveness of NRA.

The next WRO meetings will be held during the following events:

- NRA annual convention, October 17-21, 2016, Amelia Island, Florida (interim)
- EFPRA congress, May 31-June 3, 2017, Hamburg, Germany (annual)
- ARA symposium, July 25-28, 2017, Surfers Paradise, Queensland, Australia (interim)

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special award for simply doing what we love to do, delivering an alternative fuel option through biodiesel."

Baker Commodities Inc. acquired a controlling interest in New Leaf Biofuels in 2014.

Six Companies Sign up for New Zealand Biodiesel

Fonterra Cooperative Group, a farmer-owned cooperative dairy company in New Zealand, is one of six cornerstone customers switching to Z Energy's biodiesel produced with tallow from the country's meat industry.

Wellington-based Z Energy is currently commissioning its \$21 million Wiri plant with production expected to start in mid-July. The plant can produce 20 million liters (5.2 million gallons) of biodiesel annually that could be doubled if the energy company spends another \$4 million on the plant. Half of that annual production will be used by six large commercial customers including Fonterra, Air New Zealand, Transports Investment Ltd, Fulton Hogan, Downer, and South Fuels. Z Energy said the remainder of its production will be sold through select service stations in the upper half of the North Island.

Fonterra will be the first company to adopt the new fuel. Fonterra chief operating officer of global operations Robert Spurway said the shift to biodiesel is part of a move toward greater efficiency and sustainability across its operations.

The alternative fuel has the potential to reduce emissions for Fonterra's milk tankers by up to four percent a year, he said.

"Fuel burned for transport contributes up to 20 percent of New Zealand's total greenhouse gas emissions, so given our scale, it's important we play our part to help the environment," Spurway added.

At current production levels, Z Energy's biodiesel plant will only use 10 percent of the country's available tallow. Z Energy said there is the potential to build more plants in other parts of New Zealand if demand warrants it. The technology was originally developed by biofuels producer Ecodiesel, which later went under when the country's government ended the biofuel grants scheme. Z Energy bought the intellectual property and some of the early production four years ago.

Washington Backs Biodiesel

United States Senators Chuck Grassley (R-IA) and Maria Cantwell (D-WA) introduced a bill in late July with 12 co-sponsors that would modify the \$1-per-gallon biodiesel blender's tax credit to a domestic producer's credit and extend it for three years. The move was applauded by industry groups.

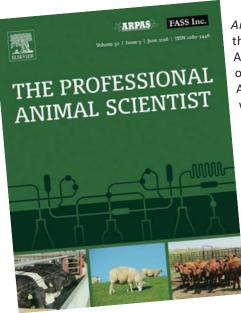
In addition, 40 senators, led by Senators Roy Blunt (R-MO) and Patty Murray (D-WA), sent a letter to the Environmental Protection Agency seeking to increase the agency's proposed Renewable Fuel Standard volume for blending biodiesel and renewable diesel into the nation's fuel supply. They argued that the proposed volume for 2018 should be at least 2.5 billion gallons to capture the full potential of the two industries. **R**





Comparing Methods of Meat By-product Disposal

One of the most important aspects of research is getting it widely distributed so results can be read and applied. Being published in peer-reviewed journals is a key part of the process because it shows that the paper has been scrutinized and accepted by other scientists. Dr. Charles Gooding, formerly of Clemson University, and Dr. David Meeker of the Fats and Proteins Research Foundation (FPRF) have successfully published an instrumental paper in The Professional Animal Scientist titled, "Review: Comparison of 3 alternatives for largescale processing of animal carcasses and meat by-products." The article was chosen as the June 2016 issue's "Editor's Choice," an honor given to a particularly noteworthy article in each volume. Due to this, the article is available online at no charge at www.professionalanimalscientist.org until the next issue of the journal is released, giving it added exposure. As of mid-July, the article was the most read on the journal's website.



The Professional Animal Scientist is the journal of the American Registry Professional Animal Scientists. whose purpose is to provide certification professional status for qualified members the society, to strengthen animal sciences among the professions, and to promote animal sciences a n d the profession of animal scientists.

Continual education is required of all certified professionals to keep abreast of rapidly changing technology in their fields.

"The Gooding/Meeker review article compares biosecurity, current environmental regulations, greenhouse gas emissions, and effective resource recovery as considerations when deciding among anaerobic digestion, composting, and rendering as alternative methods for disposal of animal carcasses and meat by-products," said *The Professional Animal Scientist*. "It addresses aspects of current societal concerns about food animal processing."

The journal article shows that rendering has several advantages over composting and anaerobic digestion for effective handling of large quantities of meat by-products. All three methods work but rendering is the best choice for a number of reasons. One is biosecurity. Both anaerobic digestion

and industrial composting are undeveloped industries that are not well regulated. Regulations vary from state to state and there is no consistent federal regulation on air emissions or wastewater for anaerobic digestion and composting as there is for rendering.

Seepage and leachate from anaerobic digestion and composting could contaminate groundwater and potentially harm people, animals, and plants. Both industrial composting and anaerobic digestion require strict parameters to be followed to destroy pathogens and if this process is not controlled, pathogen and environmental problems increase drastically. Rendering is a mature industry that is regulated both by states and the federal government though the Food and Drug Administration, Environmental Protection Agency, and United States Department of Agriculture.

Greenhouse gas production is another area where rendering is a clear winner in the article's analysis. Decomposition of meat by-products in industrial compost, landfills, or in fields would emit about five times as much greenhouse gas as the fuel used in the rendering process does. Depending on economics, renderers also use the fat produced from the rendering process to fuel their boilers, lessening dependence on outside fuel sources. Rendering retains almost all carbon so it does not become carbon dioxide or methane. As Gooding and Meeker presented in the article, industrial composting has low energy requirements yet about half to three quarters of the carbon is released as carbon dioxide with up to 20 percent of the carbon being released as methane, which has 25 times the global warming potential of carbon dioxide. Although anaerobic digestion also has low energy requirements, if the digestate slurry is stored in open tanks, the greenhouse gas emissions can increase tenfold.

Finally, the article states that end products of the rendering process are valuable. About 99 percent of meat and meat by-products rendered are recycled into ingredients for animal feed (including aquaculture) and pet food as well as biofuel, fertilizer, and industrial and consumer products. The economic value of these end products is at least three times the value of end products from anaerobic digestion (fertilizer and methane fuel gas) and five times that of industrial composting (fertilizer).

There were some challenges in getting this article published.

"The primary challenge was finding the most appropriate journal," said Gooding. "We contacted two journals that have broad scopes of interest related to waste management and recycling. They seemed to prefer papers that contain data-intensive studies on a particular process or comparison of alternatives. In the end I think we found the best journal as The Professional Animal Scientist has high scientific standards and its readers are people who have the most at stake in the issues covered by the article."

The article is at www.professionalanimalscientist.org. **R**

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ACREC Solutions

Membrane Separator for Wastewater Treatment

Clemson University researchers Drs. David A. Ladner and Yi Zheng have been selected to take recent Animal Co-Products Research and Education Center (ACREC)-funded technology to the next step toward commercial testing. They will be working to develop pallet-sized (or smaller) systems to test membrane wastewater separation processes in a rendering plant environment. Their goal is to demonstrate the membrane units are viable for accomplishing wastewater separation to clean water without the need for chemical additives such as polymers, coagulants, and acids. Ladner's and Zheng's processes will be designed to operate autonomously with only occasional remote control by the researchers. The two have several years of experience building remotely controlled, autonomous systems and will use their "lab-on-a-pallet" method to conduct experiments and further examine the technology for commercial application.

Ladner and Zheng, both assistant professors in the Clemson University Department of Environmental Engineering and Earth Sciences, initiated their discussions on this project by first visiting rendering plants in Georgia and South Carolina. They examined the needs of the companies and confirmed current state-of-the-art commercial wastewater treatment processes.

Membrane separators are used to treat wastewater as an alternative method to dissolved air flotation (DAF). DAF is effective in removing fats and proteins by utilizing a variety of chemical additives including flocculant polymers that are then introduced into the rendering product stream when DAF sludge is processed through the rendering cooker. Membranes could eliminate the use of these chemicals and create a chemical-free stream of captured fats and proteins from wastewater.

Previous ACREC-funded proof-of-concept work has proven the potential of membranes to accomplish separation and produce clean water. The focus of that previous work was in materials development. Many kinds of porous polymer (plastics) membrane sheets have been invented over the past several decades. More recently, materials scientists and engineers have found certain chemical surface modifications that greatly reduce the propensity for contaminants to adhere to the membranes. These "anti-fouling" materials show promise during well-controlled laboratory experiments. However, the next stage toward moving these membrane technologies to commercial use will be long-term testing in an actual rendering plant using real rendering plant wastewater. Wastewater varies in its concentration and composition from day to day, or even from hour to hour. It is important to evaluate the new membrane materials under these highly variable conditions.

Ladner and Zheng will create a prototype field-deployable semi-autonomous membrane separation unit (SAMSU). They will operate this SAMSU continuously on campus at Clemson University for three months with no maintenance visits during



Clemson University researchers Drs. David Ladner, *left*, and Yi Zheng will develop a field deployable "lab-on-a-pallet" system for cleaning rendering plant wastewater.

the final month as part of the testing. Afterward, the prototype SAMSU will be deployed to a commercial rendering facility to test its performance over a three-month trial.

Since typical pilot plant scale-up of new technologies normally involves major financial investment, the SAMSU offers economic advantages for moving the technology out of the laboratory. With this unit, various commercially available membrane units can be field tested to determine feasibility for commercial use. Because membrane technologies require frequent backwash steps, the automation and remote monitoring of the SAMSU makes this small pilot unit readily useable for this application. The unit can be operated and monitored remotely even when processing-plant personnel are not available onsite.

The SAMSU to be created under the current project is seen as a stepping stone for future development of autonomous or semi-autonomous unit processes. The next anticipated step will be creation of a membrane bioreactor that uses essentially the same membrane separation process as the first-generation SAMSU but with a biological reaction tank. The biological process will be similar to those used at many rendering plants and to treat domestic wastewater from cities and towns. The key difference is that membrane bioreactors are very effective at retaining active bacterial cultures so they can operate with a higher concentration of bacteria than conventional processes, allowing the tank to be smaller. A second difference is that a conventional system usually requires a separate settling tank for separations; the membrane can be inserted into the biological tank, eliminating the need for the separate settling tank. Overall, a membrane bioreactor has the potential to greatly reduce the footprint for wastewater treatment.

Ladner and Zheng have many years of experience in developing automated systems and with membrane processes. They will create the instrumentation, sensors, control algorithms, and remote communication to develop the SAMSU. They also will have sensors for pressure, conductivity, and pH incorporated into the unit. Once the unit is completed, the researchers and their graduate students will be able to send commands to the unit in order to adjust the system.

Ladner earned his doctorate from the University of Illinois at Urbana-Champaign in civil and environmental engineering, where he was a fellowship recipient from the Environmental Protection Agency. He was a postdoctoral researcher in the School of Sustainable Engineering and the Built Environment at Arizona State University prior to accepting his current appointment at Clemson University.

Zheng earned his doctorate from the University of California (UC)-Davis in biosystems engineering. He worked as a chemical engineer at the Fujian Yong'an Chemical Plant in China, as a postdoctoral researcher in biosystems engineering in the Department of Biological and Agricultural at UC Davis, as a postdoctoral researcher in biosystems engineering in the Department of Food, Agricultural, and Biological Engineering at The Ohio State University, and as a research scientist at Novozymes Inc. in Denmark.

The benefits of this project for the rendering industry will be further study of the use of membrane technologies to reduce oxidation of recyclable wastewater components and reduce or eliminate the need for chemicals in wastewater treatment. The SAMSU platform will enable more rapid market entry for new membrane materials since scale-up testing can be done more efficiently. This membrane technology will likely lead to lower energy input and costs, and can be conducted in a smaller space than current DAF units.





New Drug Testing, Retaliation, and Reporting Rules

Editor's note – Mark A. Lies II is a partner in the Environmental, Safety, and Toxic Tort Group in the Chicago, Illinois, law firm of Seyfarth Shaw LLP. He specializes in product liability, occupational safety and health, workplace violence, construction litigation, and related employment litigation.

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On May 12, 2016, the Occupational Safety and Health Administration (OSHA) published new final rules on discrimination and injury and illness reporting (Federal Register Volume 81, No. 92). First, a new anti-discrimination and anti-retaliation rule will come into force August 10, 2016, for all employers, as discussed below. Employees must be informed about the requirements of the antiretaliation rule relating to reporting injuries and illnesses by that date. OSHA interprets this rule broadly to prohibit mandatory post-accident drug testing, concluding that such tests discriminate against employees on the basis of injury and illness reporting. OSHA further explains that incentive programs are retaliatory if they offer benefits to employees or workforces that do not report injuries and illnesses. Finally, OSHA uses the rulemaking to allow compliance officers to issue citations for retaliation, upending the current statutory employee retaliation enforcement framework under Section 11(c) of the Occupational Safety and Health Act.

The new regulations further require employers to post workplace recordable injury and illness information electronically. OSHA will release this employer injury and illness information publicly on its website, believing that its disclosure will "shame" employers into improving workplace safety and health. The electronic data submission requirement will also ease OSHA's data analysis, presumably to ramp up citations against employers based on the frequency of certain types of injuries (such as OSHA's renewed focus on ergonomics injuries) or injuries caused by exposures to certain chemicals or toxic materials. The remaining provisions of the final rules, including the electronic reporting provisions, will take effect January 1, 2017.

Drug Testing

Section 1904.35(b)(1)(iv) of the final rules prohibits an employer from discharging or discriminating against an employee for reporting a work-related injury or illness. OSHA's preamble to the final rules interprets the regulation broadly to prohibit any "adverse action that could well dissuade a reasonable employee from reporting a work-related injury or illness." The agency applies the prohibition to any "blanket post-injury drug testing policies [that] deter proper reporting," concluding that drug-testing alone constitutes an "adverse employment action." OSHA instructs employers to "limit post-incident testing to situations in which employee drug use is likely to have contributed to the incident, and for which the drug test can accurately identify impairment caused by drug use." It goes on to explain with examples such as it "would likely not be reasonable to drug test an employee who reports a bee sting, a repetitive strain injury, or an injury caused by a lack of machine guarding or a machine or tool malfunction."

OSHA's interpretation of this new rule calls into question the widespread use of mandatory post-accident drug testing programs. While federal courts probably will not uphold OSHA's reasoning that a stand-alone drug test is a form of an "adverse employment action," employers should be mindful of their policies and consider taking action to ensure compliance with the regulation. To comply with OSHA's interpretation of its new regulation, employers could amend their post-accident drug-testing policy to provide for potential, rather than mandatory, drug and alcohol testing. The policy should explain that employees will be tested where there is a reasonable basis to believe alcohol or drug use contributed to the accident. Further, employers should document the reasons that prompted suspicion of drug and alcohol use when ordering a drug test. For example, if an employee was driving a forklift and may have caused an accident, an employer should document exactly what the company suspects may have happened and how the employee's actions may have been consistent with a potential risk of alcohol or drug abuse.

Drug-testing policies should be revisited for compliance by August 10, 2016, since the rule requires that the employer have a compliant anti-retaliation policy by that date.

Incentive Programs

In its preamble in the final rules, OSHA similarly condemns employer safety "incentive programs" as form of retaliation. This position is consistent with OSHA's past rulings and guidance on employer incentive programs, but goes further in widening its prohibition on incentive programs even when they are part of a broader compliance program. The new rules explain that "it is a violation of paragraph (b)(1)(iv) for an employer to take adverse action against an employee for reporting a work-related injury or illness, whether or not such adverse action was part of an incentive program." OSHA's interpretation prohibits all programs in which employees are denied a benefit on the basis of any injury or illness report, say an entire shift losing a safety bonus due to a single employee being injured.

However, an incentive program may make a reward contingent upon, for example, whether employees correctly follow legitimate safety rules rather than whether they reported any injuries or illnesses. OSHA further encourages incentive programs that promote worker participation in safetyrelated activities, such as identifying hazards or participating in investigations of injuries, incidents, or "near misses." Accordingly, employers should consider OSHA's new interpretation when reassessing their incentive programs to ensure they are offering a benefit or reward based on the reporting of injuries or illnesses. These types of programs could be adjusted to provide benefits on the basis of compliance with safety rules, for attending safety trainings, or for persevering on safety quizzes.

These rules take effect August 10, 2016, as part of the required antiretaliation policy.

New Retaliation Rules

In the preamble to the antiretaliation portion of the final rules, OSHA takes the position that its compliance officers can issue citations to employers who discipline workers for reporting injuries and illnesses when it believes that no legitimate workplace safety rule has been violated. Accordingly, the agency intends to give its compliance officers, who have no formal training in employment discrimination law, the authority to issue citations based on perceived retaliation in the workplace. OSHA's interpretation overturns the agency's longstanding statutory framework for retaliation complaints under Section 11(c) of the act, under which employees must report allegations of retaliation that are then investigated by specialized investigators. Unlike a Section 11(c) complaint, in which an employee must file a retaliation claim with OSHA within 30 days, a compliance officer has six months to issue citations from the last day that the alleged violation occurred. The employee is not required to file any complaint. Accordingly, the statute of limitations for retaliation claims could be significantly expanded. It is anticipated that the new interpretation will result in additional unfounded retaliation citations.

In its explanation to the final rules, OSHA also posits that employer policies requiring an employee to immediately report an injury or be disciplined may also be retaliatory. The agency believes that immediate-reporting policies will chill employees from reporting slow-developing or chronic injuries or illnesses, such as musculoskeletal disorders or poisoning from prolonged lead exposure. According to OSHA, to be reasonable, a policy must allow for reporting within a reasonable time after the employee realized that he or she had suffered a work-related injury, rather than just immediately following the occurrence of an injury.

These rules also take effect August 10. 2016.

Electronic Submission of Injury and Illness Data

Unlike the anti-retaliation provisions in the new rules, OSHA spends minimal time interpreting the electronic submission requirements, which are supposedly the real purpose behind the new rules. The electronic submission portion of the final rules requires individual employer establishments with 250 or more employees to submit information electronically from their 2016 Form 300A by July 1, 2017. These same employers will be required to submit information from all 2017 forms (300A, 300, and 301) by July 1, 2018. Beginning in 2019 and every year thereafter, the information must be submitted by March 2 of the following year.

Those establishments with 20 to 249 employees operating in what OSHA designates as "high hazard industries"

(including department stores, nursing homes, and construction) must submit information from their 2016 Form 300A by July 1, 2017, and their 2017 Form 300A by July 1, 2018. Beginning in 2019 and every year thereafter, the information must be submitted by March 2 of the following year.

OSHA will require employers to submit all information from their logs except information in the columns with employee names, employee addresses, health care professional names, and health care treatment facilities. The final rules do not specify how this information will be submitted electronically. However, due to privacy laws, employers should not submit information that identifies a specific employee or an employee's medical information. The electronic disclosure requirements will also apply to employers located in state plan states.

OSHA will post this data on a publicly available website that will be accessible by competitors, contractors, employees, and employee representatives. The specifics of its new data disclosure portal are not explained in the regulations.

Conclusion

These new rules require certain employer policies to be reevaluated immediately, including the antiretaliation policy and employee training. Employers should take steps to ensure they are in compliance with OSHA and local laws and regulations as quickly as possible. Proactive steps in the face of this regulatory scrutiny now may help avoid costly enforcement and litigation in the future.

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Overtime Continued from page 16

- Train supervisors on managing nonexempt employees, advised James Swartz, an attorney with Polsinelli in Atlanta, Georgia.
- Check whether state wage notification laws require a pay period or 30 days' notice of any change in pay and send out notices about the changes, if required.

Swartz said managers must understand how to train nonexempt



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employees to track and report time, avoid encouraging work after hours, and manage overtime. Employee morale should be managed in the event of reclassification or salary compression, he added.

Reclassified employees may view the change as a demotion, the SHRM article stated. In addition, if employers decide to raise the pay of employees in the same position above the new exempt salary threshold, the difference between the pay of top and low performers may be compressed, Schreter explained. Plus, the difference between the pay of those with raised salaries and their bosses may shrink as well, adding more morale problems.

Communications with employees should emphasize that reclassification was a result of changes in the regulations. Employers should note that "any reclassification is not a reflection of the value of an employee's contributions to the success of the organization and [that] the company will work with employees impacted by reclassification to make a successful and positive transition," Robinson remarked.

US Hides and Skins Contribute to Economy

The United States (US) hides and skins industry accounts for nearly \$3.4 billion in total economic output, according to a new economic impact analysis conducted by John Dunham and Associates for the North American Meat Institute, an affiliate organization of the U.S. Hide, Skin and Leather Association.

The study, which groups hides and skins with offal, found that the production, processing, and distribution of those products directly employs an estimated 5,486 individuals who collectively earn more than \$384 million in wages annually. The broader meat and poultry industry is responsible for 5.4 million jobs and \$257 billion in yearly wages, the report found.

US exports of hides and skins products, including cattle hides, pig skins, and wet blue leather, topped \$2.3 billion in value in 2015. Dunham's analysis, which uses data from 2014, is featured on the newly-designed website www.MeatFuelsAmerica.com. R

Food Facility Registration Amended

The Food and Drug Administration (FDA) issued a final rule amending the food facility registration requirements under the Food Safety Modernization Act (FSMA) in a few minor but important ways effective July 14, 2016. The next registration renewal period is October 1, 2016, through December 31, 2016, and these additional items will be required this year unless later dates are noted:

- Every facility will need to provide an e-mail address for registration or renewals.
- The rule codifies the every-two-year renewal process that FSMA mandated.
- Registration will provide assurance that FDA will be permitted to inspect
 the facility at the times and in the manner permitted by the Federal Food,
 Drug, and Cosmetic Act.
- During registration, companies will be required to check off which food product category a facility falls under for the products manufactured, processed, packed, or held at the facility (this was voluntary before).
- By January 4, 2020, every registration will need to be done electronically (unless granted an exemption).
- By October 1, 2020, a unique facility identifier (UFI) will be required with a registration – FDA will provide the UFI.
- An additional step is required for the owner, operator, or agent in charge
 of the facility to verify that the person registering the facility is authorized
 to do so

All covered facilities should already be registered since it has been required for several years with renewal of the registration due this fall. More details are available at www.fda.gov/Food/GuidanceRegulation/FSMA/ucm440988. htm?source=govdelivery&utm_medium=email&utm_source=govdelivery. R

RENDERING: THE GREENEST OPTION

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in line with federal regulations to control pathogens & ensure animal food safety

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Although fossil fuel can be required to produce steam for heating, many renderers use their fat products to fuel boilers, increasing energy independence.

Nearly all CARBON IS RETAINED within rendered products and reused rather than becoming GHG





of meat and meat by-products can be recovered as fertilizer

DIFFICULT to destroy pathogens



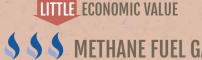
requires training and labor



REGULATIONS on composting & anaerobic digestion vary from state to state

NO CONSISTENT FEDERAL REGULATIONS

on air emissions or wastewater



Recovered resources have a relatively



METHANE FUEL GAS



FERTILIZER *

To destroy pathogens requires STRICT TIME & TEMPERATURE CONTROL



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45–75% of the carbon in meat by-products is released as CO₂

4-20% and is released as



(with 25x the global warming potential of CO₂)



Low energy requirements I Tif digestate slurry is stored in open tanks greenhouse gas emissions are multiplied by 10x

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Waste Conversion Technology Conference and Trade Show

August 15-17, San Diego, CA • www.wasteconversionconference.com

September

Global Outlook on Aquaculture Leadership (GOAL)

September 19-22, Guangzhou, China • www.gaalliance.org/goal

9th Annual National Aboveground Storage Tank Conference/Trade Show September 28-29, Galveston, TX • www.nistm.org

October

1st Mediterranean Pet Food Seminar

October 4-5, Pula, Croatia • www.medpetfood.com

Poultry Protein and Fat Council Seminar

October 6-7, Nashville, TN • www.uspoultry.org

2016 Feed/Pet Food Joint Conference

October 10-12, Des Moines, IA • www.ngfa.org

American Fats and Oils Association Annual Meeting

October 12-13, Chicago, IL • www.fatsandoils.org

National Renderers Association 83rd Annual Convention

October 17-21, Amelia Island, FL • www.nationalrenderers.org

November

Canadian Bioeconomy Conference

November 28-30, Ottawa, ON, Canada • http://ricanada.org

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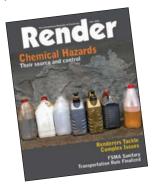
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Australian Renderer Receives Queen's Honor

Andrew Bennett, general manager of Talloman in Hazelmere, Western Australia, has been awarded the Medal of the Order of Australia in the General Division. He was recognized in the Queen's Birthday Honours List this year for his service to the rendering industry.

Besides serving as the general manager of Talloman – Craig Mostyn Group's rendering facility – since 1987, Bennett also helped establish the World Renderers Organization in 1999 and was the group's president from 2003 to 2005. He has been an active member of the Australian Renderers Association (ARA) since 1993, serving as its president from 1997 to 2001 and then again from 2010 to 2014. Bennett was also ARA vice president numerous times in 1995-1997, 2002-2007, and 2015-2016, and is currently a board member representing Australia of the Fats and Proteins Research Foundation in North America.

Frontline Receives Innovation Award

Frontline International received a bronze award in the Kitchen Innovation Challenge at the Commercial Kitchen 2016 show in early June in Birmingham, England. Frontline designs, manufactures, and distributes equipment to manage fresh and waste oil in restaurants and other foodservice establishments. Specifically, it was the company's hands-free waste oil management system that was recognized by the judges.

At the show, the "Innovation Challenge Gallery" showcased the most innovative product and technology launches in the foodservice industry over the previous 12 months. The products that received the most votes at the end of day one were invited to pitch to a panel of judges who would then determine the award winners. Frontline International's waste oil management systems — distributed by Bensons Products in the United Kingdom — were invited to the challenge and won the bronze based on the increased safety and productivity they afford restaurant employees.

Hayes Named Tyson Foods President, Smith to Continue as CEO

Tyson Foods Inc. has promoted Tom Hayes to the position of president. Formerly chief commercial officer of Tyson Foods, he will work directly with Donnie Smith who will continue as the company's chief executive officer (CEO). Hayes will be based in Springdale, Arkansas.

Prior to his role as chief commercial officer, where he was responsible for all North American sales, Hayes was president of food service at Tyson Foods. Previously, he served as chief supply chain officer for The Hillshire Brands Company, responsible for operations including procurement, manufacturing, food safety and quality, engineering, and logistics. Hayes has also served as senior vice president and chief supply chain officer for Sara Lee North America and as president of Sara Lee Foodservice.

Before joining Sara Lee in 2006, Hayes served as group vice president of US Foodservice Inc. A 29-year veteran of the consumer products industry, Hayes previously held general management, sales, and marketing roles at ConAgra Foods, The Fort James Corporation, Stella Foods, and Kraft Foods.

Hayes has served on the board of directors of the International Foodservice Manufacturers Association and the executive committee of the board of directors of the North American Meat Institute. He holds a bachelor of arts degree in psychology from the University of New Hampshire and a master of business administration degree from Northwestern University's Kellogg School of Management.

West Coast Reduction Honored

Canadian renderer West Coast Reduction was recognized by the BC Food Processors Association in May 2016 for energy conservation and sustainability in its operations. BC Food Processors, a non-profit organization, recognizes the best-of-the-best in British Columbia's food processing industry each year at its annual FoodProWest in Vancouver.

Hormel Awards Dupps

Hormel Foods Corporation in Austin, Minnesota, has presented The Dupps Company with the 2015 Spirit of Excellence Award for its role in Hormel's continuous improvement process throughout the past year. This marks the second year in a row that Hormel has honored Dupps with the award, recognizing the company and its personnel for their work in engineering, building, installing, and servicing protein recycling systems for Hormel.

To qualify for this award, Hormel evaluates vendor partners on innovation, commitment to environmental safety, workplace safety, and several other performance criteria. Chad Soukup, process engineer and project manager at Hormel, noted that of this year's award recipients, The Dupps Company scored the highest among those directly serving Hormel's engineering department. He also remarked that the new Dupps protein recycling plant recently built in Austin, Minnesota, is considered a company showpiece and a model of efficiency.

The Dupps Company designs, builds, and markets a comprehensive line of rendering systems and machinery for the protein by-products industry. In addition, the company serves the pulp and paper, oilseed, fish meal, and other industries with a wide variety of processing systems and equipment.

New Edition of NRC for Beef Cattle

Nutrient Requirements of Beef Cattle: Eighth Revised Edition has been released by The National Academies Press website.

Commonly called the Beef NRC, the new edition has been in the works for several years. Since 1944, the National Research Council (NRC) has published seven editions of the Nutrient Requirements of Beef Cattle. It has guided animal nutritionists and other professionals in academia and the cattle and feed industries in developing and implementing nutritional and feeding programs for beef cattle. The cattle industry has undergone considerable changes since the seventh revised edition was published in 2000 and some of the requirements and recommendations set forth at that time are no longer considered relevant or appropriate.

In addition to a thorough and current evaluation of the literature on the energy and nutrient requirements of beef in all stages of life, this volume includes new information about phosphorus and sulfur contents; a review of nutritional and feeding strategies to minimize nutrient losses in manure and reduce greenhouse gas production; a discussion of the effect of feeding on the nutritional quality and food safety of beef; new information about nutrient metabolism and utilization: new information on feed additives that alter rumen metabolism and postabsorptive metabolism; and future areas of needed research. The tables of feed ingredient composition are significantly updated.







Seevers Joins Harburg Executive Board

Dr. Jorn Seevers has been appointed managing director of Harburg-Freudenberger (HF) Maschinenbau GmbH. Since joining HF in January 2014, Seevers has successfully managed the curing press department of the HF TireTech Group. Between 2014 and 2015, his responsibilities included as managing director of the group's largest production facility in Belisce, Croatia. Since the beginning of 2016 he has served on the supervisory board of HF Belisce.

Seevers began his career as a process engineer at Continental Tire AG in Hanover, Germany, in 1999 and became head of the process and machine development



Dr. Jorn Seevers

department in 2004. In 2010, he relocated to Giti Tire in Shanghai, China, where he managed the central technology department and was the technical manager of the machine factory.

Seevers, Jens Beutelspacher, and Gunter Simon will be the executive officers of the HF TireTech Group and the HF Press+LipidTech at its location in Hamburg, Germany. Seevers will assume the duties of Simon when he retires from HF at the beginning of 2017.

Call for Nominees

Don Franco Distinguished Service Award

Exemplary nominees are now being accepted for the Don Franco Distinguished Service Award, the National Renderers Association's (NRA's) highest honor presented to an NRA member, staff, or friend of the association for outstanding contribution and service on behalf of the rendering industry.

Nominations are due by August 31, 2016

This prestigious award recipient will be announced and presented at the NRA Annual Convention in October. The winner will receive a plaque, a personal commendation from the NRA Board of Directors, and public recognition in *Render* magazine. A second plaque hangs in the NRA headquarters office recognizing each award recipient. The NRA Executive Committee will select the winner. Since the award is designed to recognize Franco's legacy of excellence, it will be presented when merited and not necessarily every year.

The Don Franco Distinguished Service Award recognizes truly outstanding work on behalf of the rendering industry in science, policy, marketing, or communications. Examples of important contributions that will be considered are described on the Don Franco Distinguished Service Award Nomination Form available on NRA's website at www.nationalrenderers.org.

Franco, who passed away in early 2015, was a highly respected and influential leader as vice president of NRA's 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 served as director of slaughter operations for the United States Department of Agriculture's Food Safety and Inspection Services. He held a master 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 NRA's website at www.nationalrenderers.org or by request to balexander@nationalrenderers.com, (703) 683-0155
For more info, e-mail Nancy Foster at nfoster@nationalrenderers.com

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Industry Websites

American Fats and Oils Association www.fatsandoils.org
American Feed Industry Association
American Meat Institute www.meatami.com
Animal and Plant Health Inspection Services www.aphis.usda.gov
Animal Agriculture Alliance www.animalagalliance.org
Animal Protein Producers Industry www.nationalrenderers.org/biosecurity-appi
Association of American Feed Control Officials www.aafco.org
Australian Renderers Associationwww.ausrenderers.com.au
Canadian Renewable Fuels Associationwww.greenfuels.org
European Fat Processors and Renderers Associationwww.efpra.eu
Fats and Proteins Research Foundationwww.fprf.org
Food and Drug Administration (FDA)www.fda.gov
FDA Animal and Veterinarywww.fda.gov/animalveterinary
National Biodiesel Boardwww.biodiesel.org
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USDA Food Safety and Inspection Servicewww.fsis.usda.gov
USDA Foreign Agricultural Service
U.S. Poultry and Egg Association
United Kingdom Renderers Associationwww.ukra.co.uk
World Renderers Organization



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"I feel our biggest advantage is our experience. We take our knowledge of what our customers need and apply it in ways to make better equipment." The Dupps family includes all the dedicated and hard working employees whose efforts, loyalty and pride have made our company the best in the business. Compare our level of knowledge, experience and service with any of our competitors. When you do, we're sure you'll agree that Dupps is your logical choice.

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