

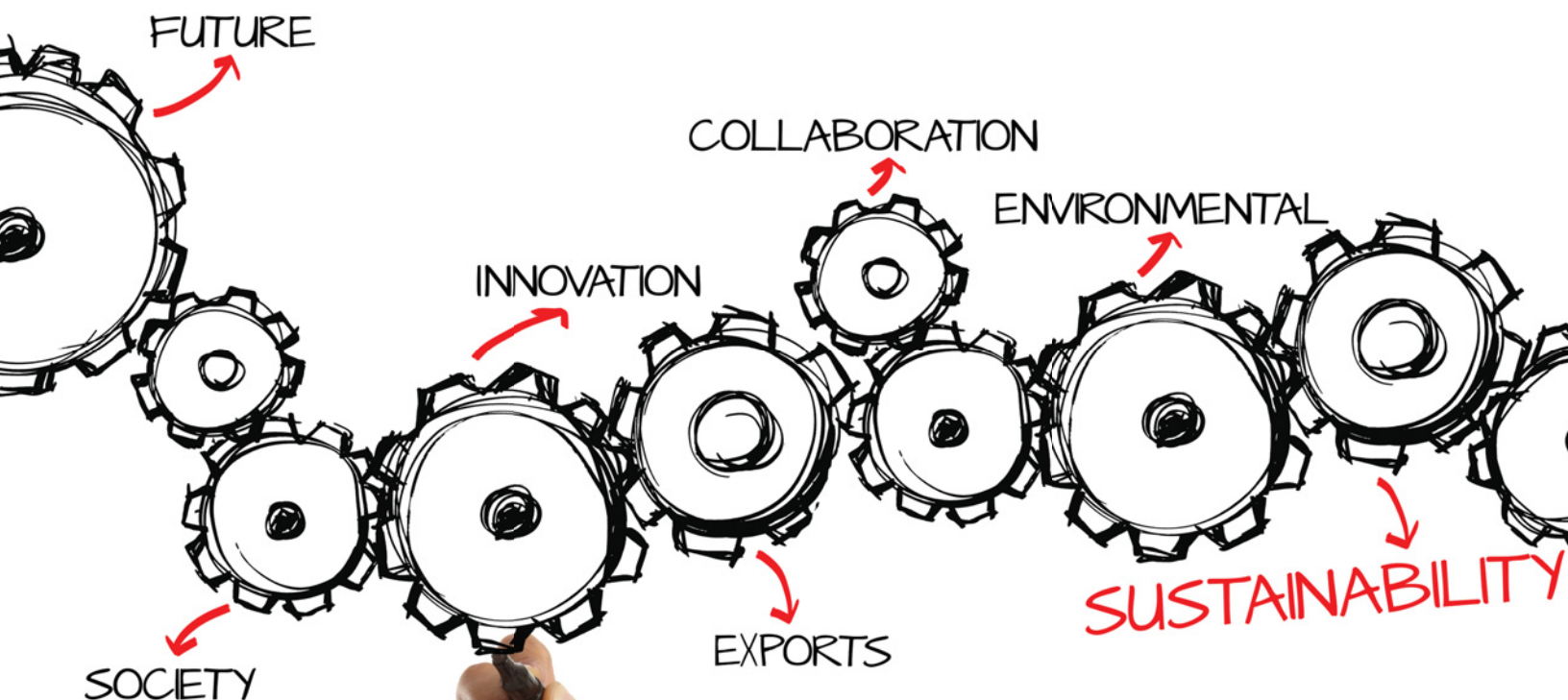
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The International Magazine of Rendering

August 2017

Europe and Australia

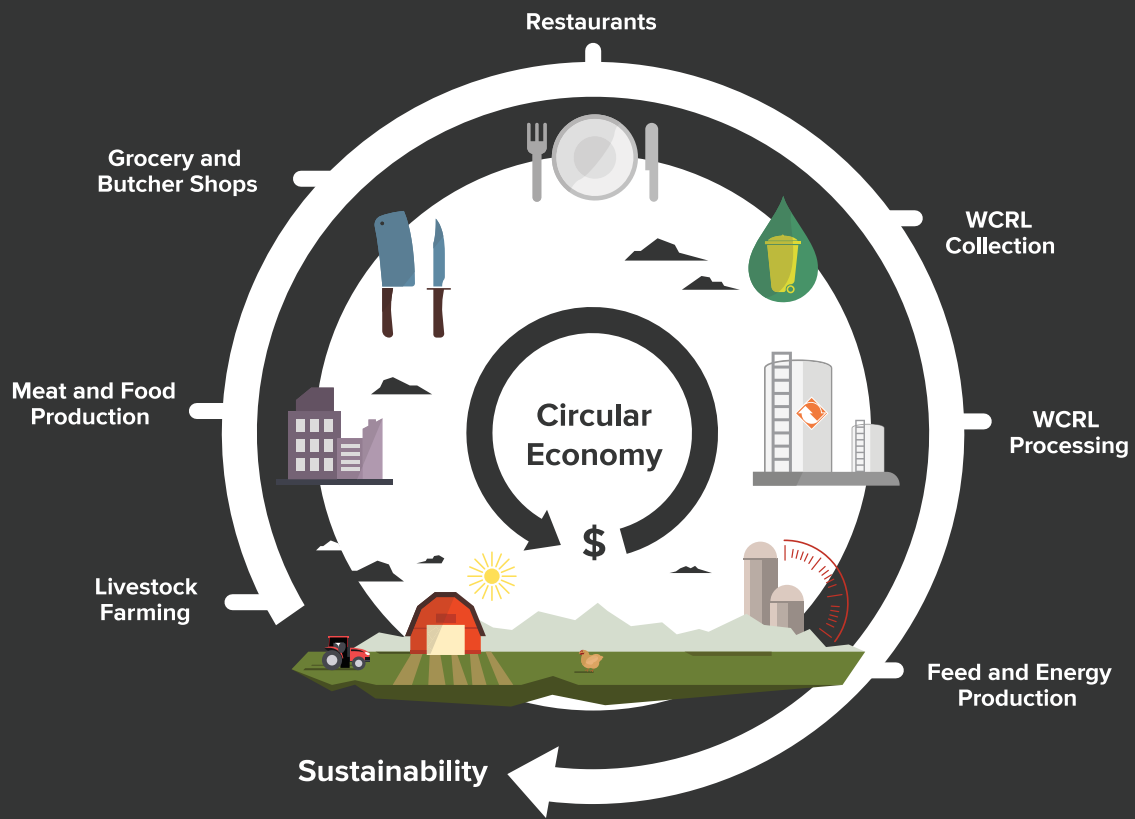
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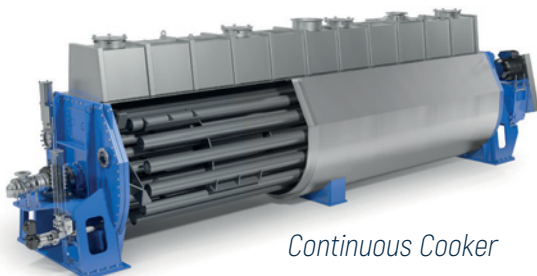
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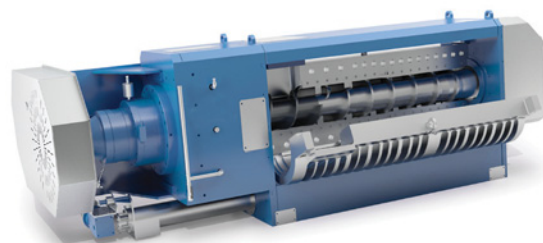
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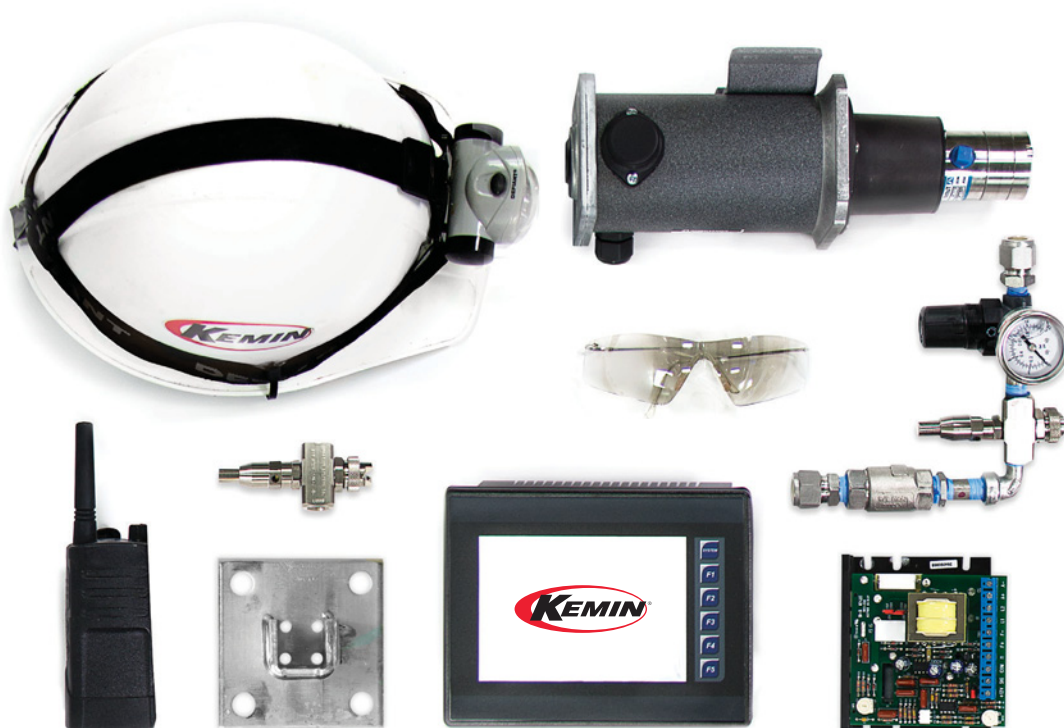


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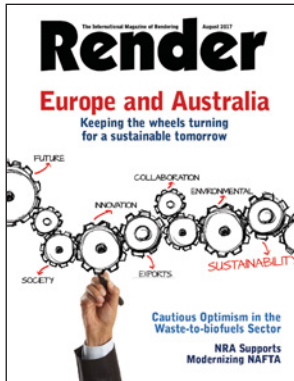
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Say what? A National Beef Tallow Day? Well, why not?

Jumping the gun by a full year, the Healthy Fats Coalition (HFC) is establishing an annual National Beef Tallow Day beginning July 13, 2018. HFC is a new educational initiative dedicated to embracing healthy fats as an essential part of a balanced human diet.

Timed to coincide with National French Fry Day – also observed on July 13 – National Beef Tallow Day is a celebration of a traditional healthy animal fat, pure beef tallow shortening, that is enjoying a resurgence within America's food culture in restaurants, fast food operations, and home kitchens, according to HFC. National Beef Tallow Day will be observed in the United States and Canada.

Ernest Miller, corporate chef for Coast Packing Company, the leading supplier of animal fat shortenings in the Western United States and principal organizer of HFC, says the time is right for a National Beef Tallow Day.

"Artificial trans fats are out and minimally processed animal fats like beef tallow – for superior French fries and a host of other cooking and frying applications – are making a comeback," said Miller. "The color, texture, and flavor that beef tallow imparts make it a vastly superior alternative to heavily processed, industrially produced substitutes."

In addition to Coast Packing, HFC's founding supporters include a nonprofit nutrition education initiative; a popular Italian restaurant in San Diego, California; a Colorado-based online retailer of premium animal fats – beef tallow, lard, and duck fat; a supplier of organically processed meat and poultry products; the author of *The Artisan Lard Cookbook*; and an Akaushi beef producer in Texas, among others.

As an awareness campaign, HFC reflects the change in how Americans think about the benefits of healthy, minimally-processed animal fats. HFC is fostering a conversation about the food Americans eat through news and editorial commentary, social media, opinion surveys, and more. Its mission is simple: affirm that animal fats deserve a central place in the American diet.

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Gridlock on the Hill

The question on everyone's mind these days is how many of the goals and promises so loudly touted as part of President Donald Trump's ambitious "first 100 days" will actually be achieved? In fact, those who have watched the Washington, DC, machine crank away for years wonder out loud how much of the routine "stuff" is going to get done during Trump's first year in office. The codicil to that query is, "can Congress get done what GOP leadership says must get done?"

Washington insiders most cynical about the success of Congress and the new administration point at what has become almost the perfect storm of seemingly insurmountable barriers to policy success for the two government branches. The business community, which salivated over the return of federal regulatory "certainty" when Trump was elected and the Republicans remained in control of Capitol Hill – translating to tax reform, infrastructure investment, regulatory easing, and so on – continues to scratch its head that what was promised will materialize despite the courts and in spite of Congress.

The gridlock of Washington, DC, is not a GOP phenomenon by any means. Three quarters of the way through Trump's first year in office and the Democrat minority cannot seem to accept the fact it lost the 2016 general election and that Trump won. Democrat leadership in both chambers, particularly Senate Minority Leader Charles Schumer (D-NY), have systematically slowed down or blocked just about every Republican initiative or even prospective policy move.

Exaggerating this situation is that media attention seems focused only on those things deemed "scandalous" – whether they are or not – with little or no attention paid to policy goals and successes by either party or branch of government.

Trump's administration is somewhat constrained by the slow pace of Senate executive branch subcabinet nomination approvals, something that can be laid at the feet of Senate Democrats. Subcabinet nominees are those folks who serve as deputy, under, and assistant secretaries, as well as their seconds in command, and Democrats have deftly used procedural dodges to slow some nominations or simply not show up at some committee confirmation hearings so as to deny the panel a quorum to complete its business.

However, Trump is dragging his feet too. There are over 550 executive branch nominations to be forwarded to the Senate for confirmation – the United States Department of Agriculture (USDA) alone has nearly 200 such jobs – and as of mid-July, the president had nominated only about 200 prospective executives and the Senate had confirmed just fewer than 50 of those nominations. At the same point in his first term, President Barack Obama had made over 350 nominations, with the Senate confirming just over 200.

While Steve Censky, chief executive officer of the American Soybean Association, has been nominated for USDA deputy secretary, nominees for most USDA undersecretaries have been chosen but their names are slow to be sent to the Senate. Yet in late July, Trump nominated Indiana Agriculture Director

Ted McKinney for undersecretary for Trade and Foreign Agricultural Affairs and Dr. Sam Clovis, former professor of economics at Morningside College in Iowa and a top ag advisor during Trump's campaign, for undersecretary for Research, Education, and Economics. Publicly, blame is placed on a slow security/ethics review process. However, Trump said early on in his tenure his dearth of subcabinet nominees was in part because he was not sure he would fill all those jobs "because I'm not sure all of them are necessary." However, he has also not spared congressional Democrats his frustration over the snail's pace of nomination confirmations.

If the apparent lack of policy progress on Capitol Hill was all Democrat political intransigence – and that intransigence is significant – analysts would write-off the situation as business as usual. However, there is enough blame to go around, including a president who continues to believe he can steer the federal administration just as he steered a New York real estate company, while maintaining an active Twitter account; a White House that needs to decide whether it is the politicos or the policy wonks who should have the president's ear; congressional Republican leadership who say all the right things and achieve little; and an ultra-conservative GOP Capitol Hill contingent – 75 or so members who maintain their "our-way-or-the-highway" attitude on most major issues – effectively blocking the path forward.

Senate Majority Leader Mitch McConnell (R-KY) is fond of saying, "We need more time to deal with important items." To that end, the Senate delayed its August recess two weeks to try to catch up with a seriously impeded Republican agenda, including confirmation votes on Trump nominees.

Given that Washington cannot seem to shift out of neutral, the public remains hopeful the policies for which they voted will be the policies that rule the day. Markets, firmly in the grasp of the "Trump rally," continue to grind higher with little or no regard for the unfulfilled promises of lower taxes, better trade deals, revamped universal healthcare, or federal budget cutting.

The adrenaline rush the economy received immediately after Trump was elected has passed and overall growth continues at the same one to two percent per year seen during the second Obama term. Three percent-plus per annum growth, the pot of gold that is at the end of the Republican business/economic rainbow, continues to rely on comprehensive federal tax reform, analysts contend.

House Speaker Paul Ryan (R-WI) speaks confidently about achieving tax reform in 2017 and, at least to date, the House goal remains comprehensive reform in the sense both corporate and personal income tax rates will be adjusted, loopholes closed, and sweetheart tax breaks eliminated. Ways and Means Committee Chair Kevin Brady (R-TX) echoes Ryan, himself a former Ways and Means Committee chair.

The White House approach to making good on Trump's pledge to fix the tax code is similar to that touted by Ryan and Brady. Corporate rates would be cut dramatically, with

the top rate under the Ryan/Brady plan dropping to 20 to 22 percent – the White House wants a 15 percent rate – depending on how the numbers fall in the full package. There is also a push for significant repatriation of about \$2.3 trillion in US corporate profits fenced off from US taxes by holding them in affiliates headquartered in tax-friendly countries. A one-time 10 percent US tax on repatriated profits would generate a conservative \$1 trillion.

The good news for most of US business is that the controversial border adjustment tax (BAT) is likely no longer part of the Ryan plan, mainly because the cost of such a tax throws his broader plan out of whack. In theory, a BAT levies a tax depending on where goods are consumed rather than where they are produced. Supporters say a BAT evens out money flow across borders and reduces corporations' incentive to off-shore profits. This is the camp in which Brady, the biggest BAT booster in Congress, sits and he continues to tell the media the tax reform bill that will pass the House by year's end will include some form of BAT, also known as the "destination-based cash flow tax." Brady says almost all other industrial nations have such a tax – generating a lot of money – and the United States needs to get on a level playing field with its competitors. Critics argue a BAT jacks retail prices on imported goods and will hurt US consumers and retailers more than it will help manufacturers by creating jobs.

The Senate remains mum on its plans for fixing the tax code, with Senate Finance Committee Chair Orrin Hatch (R-UT) and Senate Majority Leader McConnell nodding knowingly when Ryan leads another cheer for tax reform.

If the White House and the House unify behind a single tax reform package, a reform bill could be approved by the full

chamber by the end of the year. It is assumed once the House does the heavy lifting on the politics of tax reform, the Senate could/would accept the House bill and call it a day.

In another important area, it is mystifying on the policy front why the Republicans continue to repeat the mistakes of the Democrats when it comes to healthcare. The Democrats, when they controlled Congress, were so eager to be the party to deliver "universal healthcare" that they guaranteed themselves major problems by hammering together the Affordable Care Act (ACA) in the backrooms of Capitol Hill. They ignored the Republicans and used simple majority votes to ram through "Obamacare." The Democrats effectively took a broadly supported policy concept (i.e., healthcare for all) and wrote a technically bad bill. The Republicans are committing the same mistakes by promising to repeal and replace the ACA but coming at it in a very ham-handed fashion, hence the cancelled votes and numerous reinventions.

It is likely the GOP leadership now sees the task of repealing the ACA and replacing it with a new law that does not mess with existing healthcare benefits as too heavy a political lift. The issue is arcane to most members, complicated to the level of nuclear physics, and will touch not just federal government services but also private health insurance providers, broad industry, physicians, hospitals, state governments, and input providers (i.e., drug and medical device makers, etc.).

The House has voted to repeal and replace the ACA; the Senate is mired in indecision but may vote to repeal the law and replace it later with a new universal healthcare package. In any event, both versions of Obamacare action must be

Continued on page 29

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Central Region Renderers get Educated

A small but mighty group of renderers met in early June in Elkart Lake, Wisconsin, for the annual National Renderers Association (NRA) Central Region Convention. Energy, government issues, research, and election of the group's new leadership filled the two-day agenda.

New officers elected for the next two years were Mike Karman, Sanimax, president; Jason Hartman, Mendota Agri-Products, vice president; and Tom Beseman, Central Bi-Products, secretary/treasurer. Darrell Palmer, Energy Management Resources Inc., kicked off the convention by explaining why renderers should work with an energy manager.

"Energy markets change continually," he began. "Managers act as an agent for the client negotiating rates; managers do not sell energy." Palmer said natural gas storage in the United States (US) is about 13 percent lower than last year but 9 percent higher than average over the past five years. Although oil rigs are more efficient today, drilling for oil in the country is down and will remain so over the next 12 to 24 months due to low crude oil prices. Palmer also reported that electricity prices are down 1.2 percent this year but are expected to increase about 1.7 percent next year.

NRA President Nancy Foster shared national issues that have occurred since the last convention: a new US president has taken office and Congress is now controlled by the Republican party, requirements under the Food Safety Modernization Act have begun, the food waste movement aimed at renderers' raw materials is still a threat, and new opportunities abound under a renegotiated North American Free Trade Agreement (NAFTA). In addition, renderers are seeing sustained low energy prices, there is uncertainty over the renewal of biofuel tax credits, the American Association of Feed Control Officials has revised definitions for fats and oils and is looking at proteins next, and used cooking oil exports to the European Union face new challenges.

Foster believes Congress will repeal and replace the Affordable Care Act known as "Obamacare," aim to eliminate the individual/employer mandate, and guarantee access to "affordable" coverage. NAFTA has been a win for agriculture and renderers over the years, increasing exports of rendered products to Canada by 460 percent and Mexico by 180 percent since 1990. NRA's goals for a new trade agreement include gaining market access into Mexico for US ruminant meat and bone meal (NRA's highest objective), keeping zero tariffs into both countries, and including international animal health standards to permit trade that Mexico has delayed for years.

"We want to regain this \$30 million market," Foster commented. "The US government supports our mission." NRA's export activities are funded by members of its International Market Development Committee and \$1.7 million in matching government funds each year from the Market Access Program and Foreign Market Development program. However, both must be reauthorized in the 2018 farm bill. Funding for these programs has not increased in two decades.



New NRA Central Region officers are (from left), Jason Hartman, Mendota Agri-Products, vice president; Mike Karman, Sanimax, president; and Tom Beseman, Central Bi-Products, secretary/treasurer.

"Exports benefit the entire rendering industry, even if a company is not exporting," Foster stated.

Mike Carlson, Sanimax, presented an update on the Fats and Proteins Research Foundation (FPRF), which annually earmarks about \$200,000 for at-large projects at various universities and \$300,000 for studies at Clemson University's Animal Co-Products Research and Education Center (ACREC). Carlson reviewed many of the research projects just completed or in progress, including Colorado State University's research determining the location and influence of impurities on *Salmonella* in poultry fat intended for pet food use at.

"How can fat contain *Salmonella* when there is no protein?" Carlson questioned. "This project will help determine that and is the first project FPRF has done with the Pet Food Institute." One ACREC project aimed at separating fat from protein would create a tremendous amount of value for renderers, according to Carlson.

"FPRF continues to require additional funding for projects that benefit the entire industry," he commented. "At the end of the day, the foundation has done a great job." **R**

OSHA Proposes Delay in Compliance for Electronic Injury, Illness Reports

The United States Occupational Safety and Health Administration is proposing a delay in the electronic reporting compliance date of the rule, Improve Tracking of Workplace Injuries and Illnesses, from July 1, 2017, to December 1, 2017. The proposed delay will allow the agency time to further review and consider the rule.

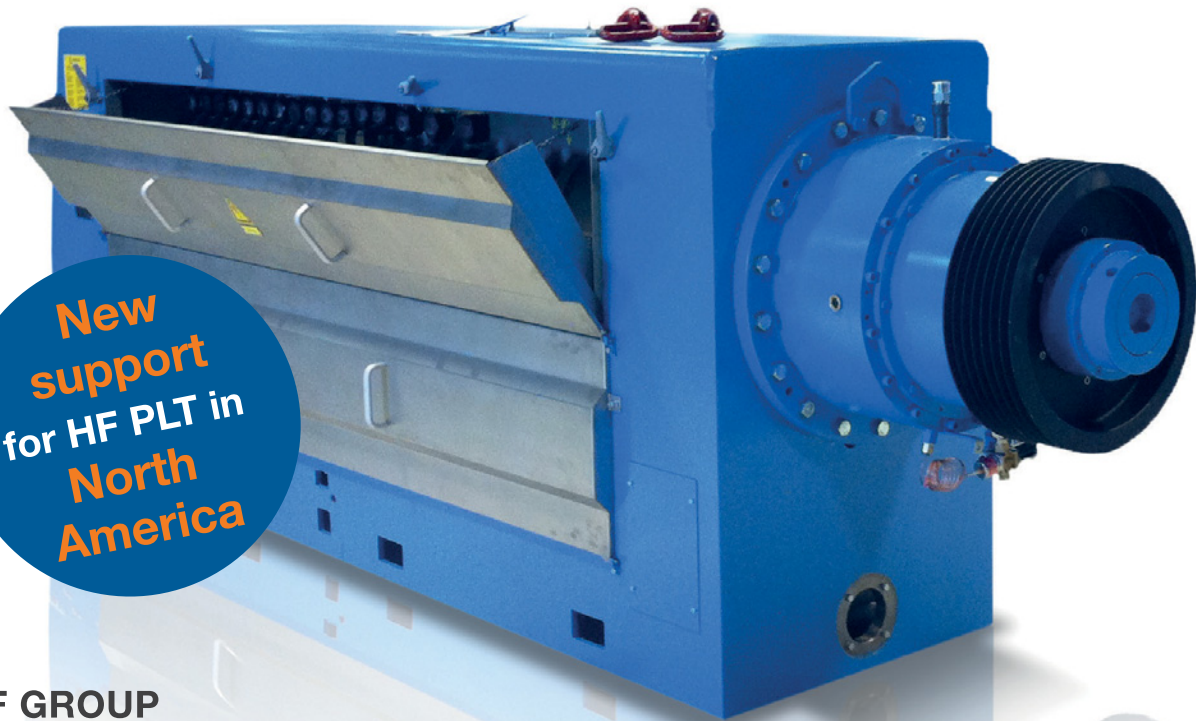
The agency published the final rule on May 12, 2016, and has determined that a further delay of the compliance date is appropriate to allow for additional review into questions of law and policy. The delay will also provide employers the same four-month window for submitting data that the original rule would have provided. **R**

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Small Steps Forward For European Renderers

By Tina Caparella

The European rendering industry is making small strides in reentering the global marketplace but still has a ways to go as was discussed at the European Fat Processors and Renderers Association (EFPRA) 17th Annual Congress held in early June. A record 400-plus individuals from Europe, the United States, and as far away as Australia attended the two-day event.

One step in the right direction for the industry is the reopening of European ruminant and mixed processed animal proteins (PAPs) exports to third countries beginning July 1, 2017. Dr. Martin Alm, EFPRA technical director, applauded this move after much work was done by the organization. In an effort to convince buyers of the benefits of these PAPs, EFPRA is funding a feeding trial at Wageningen University in the Netherlands focusing on nutrient digestibility, bone quality, and gut health parameters of animal by-products in pigs and poultry. The trial will study the digestibility of pork PAP in poultry and vice versa as well as growth performance, feed intake and conversion, bone characteristics, gut health and morphology, adverse effects, and so on. Trials with poultry will begin this year with pig studies taking place in 2018.

Reiterating food safety and the use of PAPs for the sustainability of Atlantic salmon production was Dr. Marc Berntssen, National Institute of Nutrition and Seafood Research in Bergen, Norway. The Norwegian aquaculture industry utilized 1.6 million metric tons of feed in 2015, traditionally consisting of fish meal and oil. However, since 1990 more alternative feed ingredients have increasingly replaced fish sources, primarily plant proteins and oils. Yet with

the reauthorization of PAPs in European aquaculture feed in June 2013, a four-year project by the Norwegian Research Council concluding later this year is

examining the safety of using terrestrial animal by-products in salmon production.

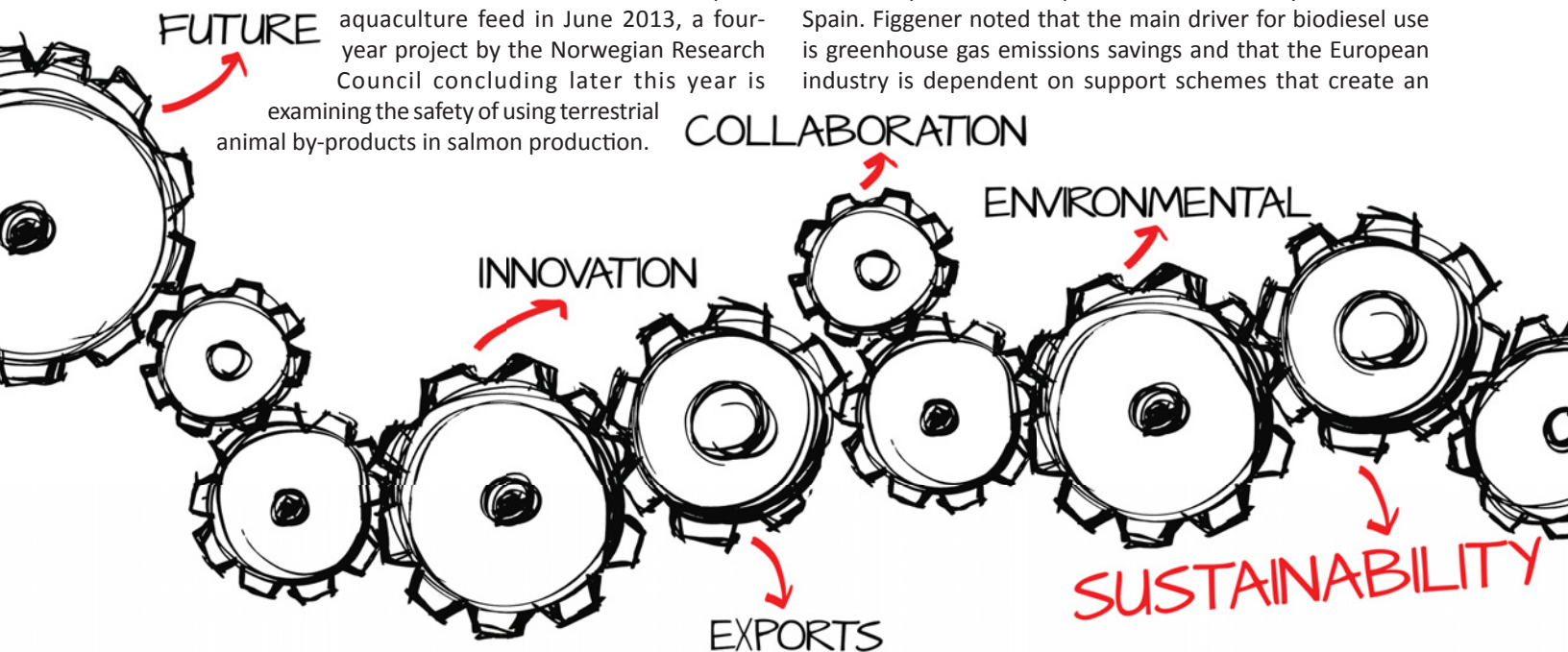
“Twenty percent of ingredients in fish feed in Chile and Canada are PAPs so we know they are beneficial,” Berntssen commented. He presented the project’s findings to date, including the need for an identification test to ensure PAPs do not contain ruminant material, which is prohibited in feed.

“The outcome [of the project] so far is very positive,” Alm stated.

Dr. Olivier Fumière, European Union Reference Laboratory in Gembloux, Belgium, recapped the progression of the gradual lifting of Europe’s feed ban. Currently, fish meal is allowed in pig and poultry feed and in milk replacers for ruminants while non-ruminant PAPs are allowed in aquaculture feed. Polymerase chain reaction, or PCR, assays for pork proteins were validated/implemented in 2015 and validated for poultry in June 2017, big steps toward allowing these PAPs in pig and poultry feed.

“We think we now have all the tools to further lift the ban,” Fumière noted. “But it’s not that easy.” He went on to explain the complex challenges still ahead, including the need for complementary analytic methods to determine the species origin of the PAP and provide evidence of the absence of prohibited ingredients. Another challenge is the analytical developments for insect protein that are already pending, creating increased competition for PAPs.

The future of tallow in biofuels was addressed by Dr. Robert Figgenger, ecoMotion in Selm, Germany, as revisions to the European Renewable Energy Directive (RED) beyond its sunset in 2020 are being evaluated. EcoMotion has five biodiesel plants in Europe – four in Germany and one in Spain. Figgenger noted that the main driver for biodiesel use is greenhouse gas emissions savings and that the European industry is dependent on support schemes that create an



artificial market. Biofuels made from tallow and used cooking oil, or “waste” oils, are double-counted in most European Union (EU) member states under the 10 percent biofuels blending requirement in the RED. In Germany, tallow is excluded from the double-counting mandate due to the thinking that tallow would best be used in other markets so any biodiesel produced with tallow in Germany is exported and not used domestically. According to Figgner, 2.2 million metric tons of used cooking oil-based biodiesel and 500,000 metric tons of tallow-based biodiesel were blended in the EU in 2016.

Proposed amendments for the RED were released in November 2016 and include the phasing out of conventional biofuels, no EU mandate, no double-counting for waste fats and oils, and more focus on “advanced” biofuels made from algae, straw, crude glycerin, animal manure, nut shells, and so on. No decision on the amendments is expected before spring 2018 but EFPRA is currently lobbying to ensure a good outcome for tallow and used cooking oil-based biofuels.

A highlight of the congress’ technical symposium was a presentation by Dr. Frank Mitloehner, University of California at Davis, who discussed similar information on the facts and fiction of livestock and climate change he wrote about in the June 2017 *Render*. He noted that 40 percent of all food produced in the United States and EU – 50 percent of vegetables and 20 percent of meat – goes to waste.

“Nobody does a better job at recycling than your industry, but no one knows about you,” Mitloehner stated. “Environmentalists and non-governmental organizations are not against animal agriculture, it’s the activists and niche markets [i.e., competition] that are.”

Harald Niemann, Servicegesellschaft Tierische Nebenprodukte mbH, provided an overview of the German rendering industry. There are 20 company members in the German renderers association processing three million metric tons of raw material annually, with more than half from category 3 (animals fit for human consumption) slaughter by-products (1.8 million metric tons in 2016). Of the more than 500,000 metric tons of category 3 PAPs produced, over 400,000 metric tons went to feed, primarily pet food, with the rest going to fertilizer. More than 300,000 metric tons of category 3 animal fats were produced, with around half going to the oleochemical industry, about 105,000 metric tons used for biodiesel, and 65,000 metric tons going to feed. Just over 105,000 metric tons of animal fat from category 1 by-products, which are the highest risk for transmissible spongiform encephalopathy, also went for biodiesel production.

There is a different disposal scheme in Germany for category 1 and 2 animal by-products than in other EU member states. Under federal law, farmers must call renderers for collection of fallen stock while each district in the country is responsible for the collection and processing of animal by-products. However, the laws vary among the many districts in the 16 states in Germany including some using “public” rendering plants operating under a joint authority. There are no administrative restrictions applicable to category 3 and food-grade by-products.

The congress wrapped up with an insightful observation of how long Earth will exist if humans continue to live like they do by Dr. Michael Braungart, founder of the Environmental Protection Encouragement Agency and Cradle to Cradle



Harald Niemann (*center*) from the German renderers association recognized David McDowell (*left*), Federation of Irish Renderers, and Niels Nielsen, EFPRA president, for their 40 years of dedication to the European rendering industry.

design concept. He agreed with United States President Donald Trump’s decision to pull the country out of the Paris climate agreement, which Braungart said does not help the environment’s future as it is currently written. He highlighted the 20 most polluted cities in the world, which are primarily in Nigeria and Middle Eastern countries, but warned that oftentimes indoor air can be worse due to trapped particulates from such things as cleaning products, electronic equipment, carpet, and animal dander. Braungart explained the Cradle to Cradle concept as all-encompassing product quality, usefulness, and eco-effectiveness and showed many examples of such innovative new products in paper, textiles, furniture, flooring, and packaging.

“Little changes turn into big changes later,” he remarked. “New innovation takes time so be patient.”

EFPRA’s next congress is June 20-23, 2018, in Barcelona, Spain.

R



Sven Orthmann (*left*), Harburg Freudenberg, listens to Rudolf Herrmann, TKV-Technik, reminisce about his years working in the European rendering industry, including helping start the rendering industry in Poland.

European Production Stays on Track

Dirk Dobbelaere, secretary general of the European Fat Processors and Renderers Association (EFPRA), presented the annual statistics of Europe's animal by-products industry at the group's congress held in Hamburg, Germany, in early June. He noted that input from EFPRA members for 2016 was considerably better than in previous years, especially from the poultry sector. Production numbers represent 85 percent of category 3 raw material, which is from animals fit for human consumption.

Dairy cattle production in the European Union (EU) 28 member states was up considerably in 2016 from the year before as were pig prices, by about 35 percent, due to increased pork exports to China. The EU was the second largest producer of pork in the world in 2014 at 22.6 million metric tons (MMT) – 19 percent of world production (China is number one at 55.3 MMT, or 48 percent). The United States is third at 10.3 MMT, or 9 percent. Dobbelaere pointed out that 10 years ago, the United States supplied China with over 80 percent of its pork imports; today it supplies around 10 percent while European countries such as Spain, Germany, and Denmark along with Brazil now supply over 80 percent of China's pork imports.

"It is mostly because of surging European pork exports into Asia, and especially China, that America's share of the world pork market has fallen," Dobbelaere commented. He added that the United States pulling out of the Trans-Pacific Partnership is good news for EU pork producers.

EU poultry production continued to climb with 14.3 MMT produced last year, up from 13.7 MMT in 2015, 13.2 MMT in 2014, and 12.7 MMT in 2013 with predictions for stabilization in 2017 and 2018. Poland is now the top poultry producer in Europe after being in the fifth position five years ago.

EFPRA represents 29 members in 25 European countries that reported processing over 17 MMT of raw material in 2016, up slightly from 2015, into 2.8 MMT of animal fats and nearly 4.0 MMT of animal proteins. These figures are similar to those reported the last four years.

Total category 3 raw material processed in 2016, which is from animals fit for human consumption, was around 12.0 MMT, about the same as in previous years, while all other material (category 1 and 2) accounted for approximately 5.5 MMT last year, up from 5.0 MMT in 2015 and 5.2 MMT in 2014, but down from 6.0 MMT in 2013.

Total category 1 raw material processed in 2016, which is at the highest risk for transmissible spongiform

encephalopathy, was 4.6 MMT, up from 4.3 MMT processed in 2015. Total category 2 material collected, also at high risk but not containing some specified risk materials, was 830,000 MT, down slightly from 850,000 MT in 2015. Nine EU member states have at least one dedicated category 2 processing line translating into 18 total dedicated lines.

Most all category 1 meat and bone meal (1.0 MMT) and 108,000 MT of fat were used for combustion, with about 400,000 MT going to biodiesel last year, the same as in 2015. Most category 2 meat and bone meal (180,000 MT, up from 143,000 MT in 2015) was used as fertilizer with a small amount (10,000 MT) going to feed for fur animals. Category 2 fat was mainly used in biodiesel, about 110,000 MT, with very little going to combustion.

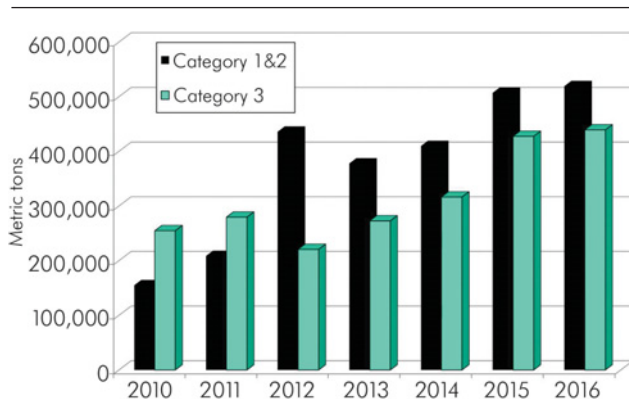
Use of category 1 and 2 fats in biodiesel production was up slightly compared to 2015 at just over 500,000 MT as their eligibility for double counting toward the EU Renewable Energy Directive targets remain in place until 2020. Yet, even though category 3 fat does not qualify for double counting, its use in biodiesel increased about 3 percent to just over 400,000 MT in 2016, double the 200,000 MT four years earlier.

Production of food-grade and category 3 fats last year was about 2.1 MMT, down slightly from 2.2 MMT in 2015. Multi-

species animal fat production, which accounts for more than half of all fats, was down about 8 percent, tallow saw a drop of 36 percent with no real explanation, and poultry fat was up 18 percent reflecting the increase in poultry production. The primary destinations for multi-species animal fat are oleochemicals, animal feed, and biodiesel. Poultry fat is primarily used in animal feed and pet food while pig fat is used mostly in feed with some going into biodiesel.

Of the 2.7 MMT of food-grade and category 3 processed animal proteins (PAPs) produced in 2016 (up from 2.5 MMT in 2015), nearly half was from multi-species albeit down 4 percent from the previous year. Pig meal and feather meal production saw large increases of 64 percent and 39 percent respectfully. Nearly three-quarters of PAPs (1.9 MMT) went to pet food, up six percent from the 1.8 MMT in 2015, with a slight increase of 4 percent going into fertilizer. The use of multi-species PAPs in pet food continued a downward trend in 2016, declining four percent over 2015. This market instead used 43 percent more pig meal last year than it did in 2015 (which was up 5 percent from 2014) and 11 percent more feather meal after jumping 19 percent in 2015 over 2014. Poultry meal use in pet food dropped 6 percent in 2016 after an increase of 26 percent in

Animal fat usage in EU biodiesel production, 2010-2016



2015 over 2014. Category 3 PAPs going for fertilizer ticked up to 690,000 from 630,000 MT in 2015, albeit still down from the 825,000 MT in 2014.

Although pet food remains the EU rendering industry's most important customer, PAP use in aquaculture nearly doubled in 2016 over 2015. The European Commission began allowing swine and poultry PAPs in fish feed in June 2013. In 2016, 170,000 MT of PAPs were used in fish feed, up from 95,000 MT in 2015, with poultry meal being the preferred PAP followed closely by feather meal, which more than doubled last year after a drop in 2015. Blood meal, pig meal, and blood products also saw increases in fish feed usage.

Dobbelaere's conclusion for 2016 is that EU animal by-product production remained stable, although less category 3 and food-grade material was produced while more category 1 and 2 was produced, which is reverse from 2015, resulting in 9 percent more PAPs and 5 percent less category 3 and edible fats.

There continues to be a steady increase of animal fat usage from all categories in biodiesel. For food and feed-grade proteins, fish feed use was up 74 percent, pet food was up 8 percent, and fertilizer usage was up 4 percent. As for food and feed-grade fats, production was down 5 percent resulting in a drop of use in oleochemicals (19 percent) and food (31 percent) while feed and biodiesel use remained stable. **R**

Success, but Challenges Still Ahead

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

Editor's note – The following is a speech, in part, given by Niels Leth Nielsen, Daka Denmark A/S, at the European Fat Processors and Renderers Association 17th Annual Congress in early June in Hamburg, Germany.

This year is not much different from previous years as the European Fat Processors and Renderers Association (EFPRA) is still facing many challenges that keep it busy in maintaining its members' interests. However, in 2016, EFPRA had great success when, after a long and intense struggle, it succeeded in getting the export ban lifted on ruminant processed animal proteins (PAPs) to third countries. The regulation goes into effect July 1, 2017.

Of course it is unknown if European renderers will face any complications, but after some introduction period, European ruminant and mixed PAPs have great potential to be sold close to world market prices.

With the legal export of ruminant and mixed PAPs, the previous irregularities with export of mixed PAP to third countries will come to an end. Yet EFPRA and its members must still be aware of possible indiscretions that could take place with the export of category 2 meat and bone meal. This type of gray market can be a threat to the liability of the industry and harm the good reputation EFPRA has with the European Commission and Parliament as well as other political bodies. Further self-regulation is imperative in the rendering sector so EFPRA staff will work on proposals that can then be discussed with the group's council.

Lifting the ban on export of ruminant and mixed PAPs was the top priority for EFPRA in 2016. Therefore, the list of main targets going forward has changed somewhat to include:

- porcine PAP fed to poultry and avian PAP fed to pigs with species identification;
- ruminant PAP fed to aquaculture;
- other heat treatment methods for porcine PAP; and
- ruminant PAP in non-ruminant diets.

However, one very important issue is the performance of European porcine PAP and poultry meal in feed. It was nearly 20 years ago that these products were in the market for feeding farmed animals and no doubt the composition of PAPs

has changed so test results from 2000 may not be valid anymore. Consequently, the EFPRA council has decided to cooperate with the University of Wageningen in the Netherlands to conduct performance and digestibility testing over the coming year.

Such tests are expensive and will cost around 214,000 euros. EFPRA is contributing 75,000 euros with the rest graciously donated by member organizations and individual companies. I am pleased that many companies and organizations offered to contribute toward these important tests that will no doubt be a great benefit when European porcine and poultry PAPs are ready to reenter the marketplace.

After that, EFPRA intends to open the discussion on ruminant PAP in aquaculture diets. In fact, ruminant PAP in aquaculture is in line with World Organization for Animal Health recommendations and is currently allowed in aquaculture feed outside the European Union (EU). A risk opinion from the European Food Safety Authority will be needed on this issue so it will take some time.

Another important area for EFPRA is the pending revision of the EU Renewable Energy Directive. While not all EFPRA members produce biodiesel most are producing animal fat that is used as feedstock for tallow methyl esters (TME). Once again, this market is greatly challenged and I personally do not understand why biofuels are not promoted and supported more. Recently, 2016 figures of carbon dioxide emissions from the transport sector in Denmark were released showing an increase despite a mandatory blend of biofuels and more fuel-efficient cars being produced. Yet these good efforts are being taken over by more cars and trucks on the roads. EFPRA will need to lobby strong for TMEs in the future with support from organizations like Copa-Cogeca, the European Biodiesel Board, and European Waste-to-Advanced Biofuels Association.

As always, it is extremely important to do our homework and approach the European government and authorities in charge of the different issues the industry is dealing with. These efforts must be followed up by seeking support from other stakeholders, a task EFPRA is willing to do. **R**



Tough Times Down Under



By Tina Caparella

Australian renderers are having a tough go of it these days. The country's meat producers are now using more of the animal for food meaning fewer by-products are going to rendering. In addition, a depletion of the cattle herd over the last few years and a reduction in sheep/lamb meat production has meant even less raw material available for renderers down under. The industry is also seeing challenges in export markets, energy and labor costs, and product prices. Because of these hurdles, renderers gathered to see "what tomorrow holds" at the Australian Renderers Association (ARA) 14th International Symposium in late July on the Gold Coast of Queensland.

A panel of meat producers provided a look at the big picture beginning with beef, which accounts for 48 percent of the country's total animal protein production despite its substantial decline over the past 45 years. A record cattle sell-off in 2014 and 2015 has led to a 23 percent drop in production in the second half of 2016 and into this year.

Michael Nolen, Nolan Meats, confirmed that "back-to-normal" beef production may take a very long time to reach the levels of 2014/2015 but herd rebuilding is taking place in eastern Australia. He noted one downside of the situation has been the loss of skilled and knowledgeable workers due to plant shutdowns. Nolan shared the steps his company is taking to better prepare for the future, such as creating a more value-added product, maximizing the recovery of previously low-demand products for human consumption, and minimizing unnecessary costs, especially energy.

Poultry is Australia's second largest meat sector, about 27 percent of all animal protein production. There have been eight consecutive years of record poultry production with expectations of this continuing as consumers change eating habits and opt for a more affordable protein source. Graeme Dillon, Ingham's Group, which processes 3.5 million birds weekly, reiterated animal protein producers' move toward adding value to raw materials that traditionally went to rendering, such as livers, hearts, lungs, feet, heads, and gizzards. He added that the industry is also seeing more demand for chicken raws going directly to wet pet food production.

Accounting for 16 percent of all animal protein production, sheep meat saw a slight decline (3 percent) in 2016 from the highs in 2014 and 2015, with a further reduction expected this year. This downward trend is due to producers retaining ewes for flock rebuilding and sheep for wool production. Roger Fletcher, Fletcher International Exports, noted that the industry is changing with less family farms and more corporate production, less domestic consumption leading to increased exports, and, again, use of more of the animal so less by-products are going to rendering. Rising energy costs are also a challenge in the sheep meat industry.

At only 9 percent of all animal protein production in Australia, pork has seen steady growth over the past four years. Linchon Hawkes, Swickers, stated the industry is seeing increased exports as only 60 percent of pork

production is consumed domestically. He sees significant opportunity for Australian renderers under the United States (US) Environmental Protection Agency's Food Recovery Hierarchy that shows feeding animals and industrial uses are preferred methods of food waste disposal over other options. Hawkes concluded that new rendering technologies and rethinking old solutions (i.e., collection and distribution) will be needed to address hurdles in the pork industry.

Allan McCallum, Tassal, reported that fish consumption is growing at a faster pace than all other animal proteins. Salmon consumption in Australia has doubled since 2004/2005 forcing Tassal to sustainably manage salmon by-products at their facility on Tasmania's east coast. A new rendering plant was commissioned in November 2015 with 60 percent of its output being fish oil and the rest as fish meal supplying animal feeds and some pet food applications. However, as is the case in other animal protein sectors, there is some increase in consumer demand for fish by-products such as heads, belly, and trimmings leading to less material going to rendering. Yet growth in more value-added products like filets will ensure a balance of raw materials.

Thomas Mielke, Oil World, focused on the outlook for tallow and other fats/oils, saying that the annual price of tallow cannot be relied upon; instead look at the monthly and quarterly prices to understand tallow's price movement. He noted that palm oil is the driver for all oils and fats.

"It is the elephant in the room," Mielke commented. He went on to say that US tallow prices are overvalued while Australian tallow prices are undervalued, something he doesn't expect to continue as one major biodiesel producer in the European Union wants to replace vegetable oil feedstock with tallow in the years ahead. As biodiesel production worldwide rises, tallow is of increasing importance for sustainability, Mielke declared. However, world demand cannot be met without Australian tallow, which is seeing low production.

He then shared that tallow production is rising worldwide with 9.5 million metric tons (MMT) forecasted for October 2016 through September 2017, up from nearly 9.2 MMT during the same time period in 2014/2015. Although there are ample supplies of oilseeds worldwide, primarily soybean, India and China are losing markets for oilseed production and there is a moratorium in Malaysia on the further planning of oilseeds. Soybean production will decline in 2017/2018 but supplies are still ample while rapeseed and canola will remain tight as European Union farmers lose interest.

Dave Elsenbast, Renewable Energy Group, reviewed the complex US biofuels market, which is becoming a mature, resilient industry despite unsettled federal policy at times. Currently, 60 percent of feedstock used for biomass-based diesel (biodiesel and renewable diesel) production in the United States is soybean and canola oils. Elsenbast believes more tallow will be used in the future due to an increase in renewable diesel production and state policy, such as in

California. The state is the largest consumer of biomass-based diesel in the country because of its low carbon fuel standard, utilizing 412 million gallons in 2016, 12 percent of the state's diesel market. Predictions are for 1 billion gallons to be used by 2020, 28 percent of California's diesel pool. On a global scale, Elsenbast showed current production of biomass-based diesel at 10 billion gallons with projections of 14 billion gallons by 2021.

Feed Focus

Several presenters discussed sustainability in the feed industry, beginning with keynote speaker David Bray, Darwalla Milling and chairman of the Stock Feed Manufacturers' Council of Australia as well as director at International Feed Industry Federation (IFIF). Australia's total feed consumption last year was 13 MMT, with nearly half going to the beef and dairy industries and 24 percent to poultry. The feed council has been working with IFIF to create an environmental footprint for feed and to try to bring consistency to US, Canada, and European Union feed regulations. One question raised is whether shipping soybean meal across the world remains sustainable.

"Without imported soybean meals, [feed] mills would use more domestic canola and animal protein meals," Bray stated. Other components being examined in feed sustainability are rising labor and energy costs and labor availability. As an association, Bray believes IFIF should conduct more research on why the poultry industry needs to use rendered products in feed. He shared that several poultry producers in New Zealand attempted to feed an all vegetarian diet but the birds were not responding well.

Roger Bektash, Mars Petcare and president of the Pet Food Industry Association of Australia, said foreign material contaminants in both fresh whole meats and rendered animal proteins is of utmost concern to the pet food industry as is *Salmonella* found in tallow and palatants. In addition, the environmental footprint of pet food production needs to be balanced with the value that pets bring to society.

International Interests

One morning of the symposium was dedicated to reports from around the world. Christine Wang, China Feed Online, gave a clear and concise explanation on the complexities of exporting rendered products to the Chinese market while Lucas Cypriano, Associacao Brasileira de Reciclagem Animal, or ABRA, examined both the Mexican and Brazilian rendering markets. In Mexico, just 28 percent of a cow goes to rendering while 24 percent of a chicken and just 12.6 percent of a pig that is not used for food is rendered. Despite this, newer and more state-of-the-art rendering plants are coming online although

Mexico remains a net importer of animal proteins and fats for candles, soaps, and feed.

In Brazil, 12.2 MMT of raw material from ruminants, poultry, swine, and fish were rendered in 2015 with 680,000 MT coming from ruminants and 438,000 MT from poultry. This translated into 334,000 MT of protein meals of which 80 percent went into domestic animal feed and 16 percent to pet food. Fats and oils production was 192,000 MT of which 40 percent went for biodiesel, 35 percent for animal feed, 17 percent for health and personal care, and 5 percent to pet food. Brazil exports very few rendered products and is a net importer of animal fats.

Martin Alm, European Fat Processors and Renderers Association, updated attendees on the European market while Tim Guzek, National Renderers Association, highlighted the US rendering industry, which is seeing favorable prices for most rendered products. However, the United States is seeing an increasing trend to an all-veggie diet in the poultry industry due to a marketing misperception.

"We will always have some obstacles, but in the long run I think the rendering industry will do just fine," said Guzek.

New Zealand meat and bone meal exports have been wobbling around 140,000 MT to 165,000 MT since 2001, noted Bruce Rountree, New Zealand Renderers Group. Tallow exports have ranged from 120,000 MT to 150,000 MT over the past 16 years. However, the tallow export market has switched dramatically from China being the primary importer up until 2013 when Singapore took over the top spot, except for a significant drop in 2015.



ARA recognized several individuals who have made impacts on the association and industry. *From left*, Graeme Banks, former ARA executive officer, received the Brian Bartlett award; Andy Bennett, ARA president, was given a lifetime ARA membership; and Bob Mostyn, chairman and former chief executive officer of Craig Mostyn Group, was presented with the Ron Lyon Award.

Technical Topics

The ARA symposium also featured a technical workshop and presentations by several individuals who addressed DNA testing of meals for specific species, steam optimization,

air classification, feather processing, the emergence of insect meals, pressing, process management, removing foreign matter from raw material, and the efforts in Australia to curtail the vast amount of marine debris. Michael Betar, Standard Commodities Group, summed up the symposium with these words.

"Sustainability is a buzzword today across so many sectors, but it is a word that started with this industry," he remarked. "It's natural, it's pure, and it's recycling. Today's world definitely applauds renewables, and tallow as a feedstock is recognized as an important raw material in the supply chain for many sectors and, in particular, biofuels. Animal protein has more options in the feed chain today than ever before and as the middle class grows so too will the opportunities for these products."

R

“Extremely Challenging” for Australian Renderers

George Schinard, of Wilmar Gavilon and an Australian Renderers Association director, reviewed the country's production and consumption of rendered products at the group's international symposium in late July.

In line with the decline in beef and lamb production from the highs seen in 2014/2015, production of rendered products suffered in 2016 and in the first half of 2017. Poultry and pork rendered products have seen increases but not enough to stem the downward trend in overall production, which was 15 percent lower in 2016 from 2015 levels. The expectation is that 2017 will be at the lowest level in recent years with another 5 percent drop expected from 2016. Based on forward production projections of each meat sector, Australian renderers should see levels start to increase slowly in 2018 and 2019 but will still remain well below the highs of 2015.

Animal Protein Meals

Australia's animal feed sector produces over 12 million metric tons annually. Rendered products are an important ingredient in feed rations for poultry, pigs, fish, and pets. More than half of the animal proteins produced in Australia are used domestically with 43 percent exported, while 75 percent of tallow production is exported with the rest used in the country for pet food and industrial and edible applications. In years of lower production (2016 and 2017), the percentage of overall local usage increases and vice versa for higher production years (2014 and 2015) with local demand relatively stable.

For meat and bone meal, the top six markets in 2016 took over 80 percent of total Australian exports. Indonesia remains the largest export market for meat and bone meal, which makes up 40 to 45 percent of Indonesia's imports. Taiwan volumes are fairly consistent year over year. Exports to the United States (US) and Canada have increased with more Australian producers segregating their ovine raw material for the lucrative North American pet food market. China volumes continue to slide predominantly due to market access issues. Some of Australia's other export markets include the Philippines, Vietnam, Papua New Guinea, the Netherlands, Germany, and Bangladesh.

A similar export market spread is expected for 2017. Indonesia's percentage could potentially scale back with very competitive pricing from the United States. With less export volume available, there may be an increase into other markets that have limited origins from which to procure product. China's future market share has the potential for further decline with ongoing market access issues.

For poultry and feather meal, the top six markets took over 95 percent of total exports. Indonesia is once again the largest export market after lifting its avian influenza (AI) ban in May 2015. It has taken more than a year for these volumes to get back to historical levels after a number of Indonesian customers switched to more economical alternatives. Taiwan and Malaysia have had steady growth over the past five years while Thailand continues to grow, although the current system of plant registration is slowing down this expansion. Vietnam

volumes have fallen as Australia regained access into the majority of historical markets after AI incidents. The only major historical market that has not lifted its AI ban on Australia is China. This is a significant market the industry is missing out on as it imports over 120,000 metric tons of poultry meal from the United States and New Zealand each year.

The expectation for 2017 is for a similar market spread. Indonesian volumes should remain high while the majority of US exports continue to be shipped into China. Taiwan and Malaysia demand should remain steady and there is potential for an increase to Thailand if market access can be improved to allow greater volume of Australian product into this region.

Tallow

Australia's main animal tallows are pure beef tallow, mixed species tallow, and poultry fat. The renewable fuel market in Singapore is by far the largest market, taking 77 percent of all Australian tallow exports in 2016, an exponential increase since 2010. Tallow has an advantage as a renewable fuel feedstock over other competing vegetable oils as it qualifies for additional subsidies and credits under the US renewable fuel structure. Singapore has taken market share largely from China but also from other historical markets like Taiwan, South Korea, and Australia's own oleochemical and renewable diesel industries. China volumes have continued to drop as values for tallow have been too high compared to competing oils. Exports to Taiwan remain on a downward trend as a number of end users look to switch to alternative cheaper oils. Strict regulations for margarine in Taiwan have caused production to move offshore or an increase in usage of alternative oils to tallow. Korea volumes have remained steady while exports to Pakistan continue to fall.

Many variables will shape how 2017 and beyond look making it difficult to predict. Singapore's demand for Australian tallow dropped in the first half of 2017 with its recent preference for either alternative feedstocks or tallow from other origins. The result is tallow values have fallen back in line to historical spreads to palm oil. Demand is extremely price sensitive in a lot of applications so as tallow prices fall, there has been previous demand coming back to the market in addition to new demand created. Traditional markets such as the Far East, Africa, Middle East, and the Pacific Islands have all resumed where they left off in 2011 while at the same time there is demand from North America that has historically been a net exporter.

Conclusion

The past couple of years have been extremely challenging for the Australian rendering industry. Raw material volumes have dropped, operating costs have increased, and there have been numerous changes in market access, both good and bad. The remainder of this year and next year are expected to be as difficult, if not more so, but with the work currently being done and future plans being implemented, the future looks very bright. **R**




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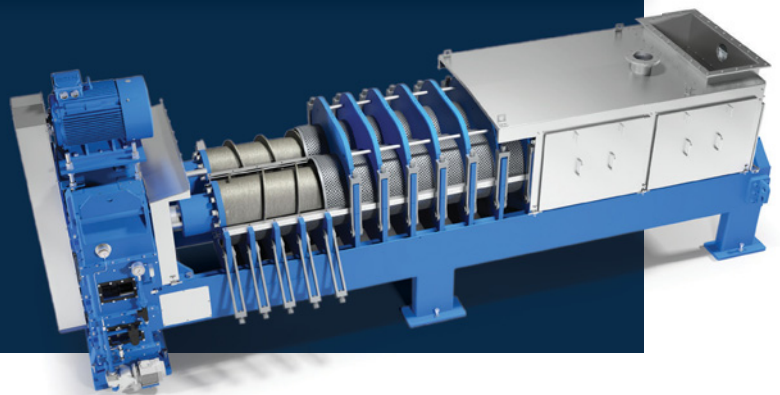
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WRO Welcomes New Officers and PCRA Tests

During the European Fat Processors and Renderers Association (EFPRA) congress in Hamburg, Germany, in early June, the World Renderers Organization (WRO) held its annual meeting. In addition, as happens every two years, WRO officers changed for the period 2017-2019. Tim Juzefowicz from Australia stepped down as president, Fernando Mendizabal Fernandez from Mexico was named president, Dr. Martin Alm from Germany became first vice president, and Bruce Rountree from New Zealand entered the lineup as second vice president. Nancy Foster from the United States will remain in charge of WRO administrative duties. John Brennan from Canada, Lucas Cypriano from Brazil, Shane Leath from New Zealand, Dr. David Meeker from the United States, and Alm will all continue serving on WRO's Scientific Advisory Panel.

The new directive of WRO is working on two main concerns: prepare the organization to remain sustainable in this new digital era and define standardized processes to work efficiently with members and other global organizations.

Efforts are being made to connect WRO's website to Google Analytics, to build a platform with institutional e-mails for each officer and scientific advisory panel member, and to use Google Drive to create a digital backup of WRO. These efforts will change the way the organization coordinates and is able to reach its members for a closer relationship to WRO leadership.

Of special interest during the congress and WRO meeting was the DNA testing development for the identification of species in meat and bone meal (MBM). Some Asian countries are requesting a DNA test for MBM being imported. Before the WRO meeting, Dr. Olivier Fumière from the European Union Reference Laboratory (EURL) for animal proteins in feedstuffs gave a presentation at EFPRA's Technical Symposium where he shared the status and next challenges of species identification. EURL has 15 years of work in this field and is leading the design and implementation of standards and calibration materials.

EURL has developed polymerase chain reaction (PCR) assays to be used as standards to identify prohibited species in feed ingredients and compound feed in Europe. In 2012, EURL presented a test for ruminant species that led to the partial lifting of the feed ban in Europe. Since 2013, aquaculture feed is allowed to contain non-ruminant processed animal proteins (PAPs). Due to European regulation, pig protein cannot be fed to pigs or poultry protein to poultry so EURL is working on pork and poultry PCR tests. These are expected to be completed soon.

PCR is used in molecular biology to amplify a copy of DNA across several orders of magnitude generating thousands to millions of copies of a particular DNA sequence that can be detected. Unfortunately this test is only qualitative, not quantitative, which means any presence of a forbidden substance between 0 to 100 percent can give a positive result.



New WRO officers are (from left) Bruce Rountree, New Zealand, second vice president, and Martin Alm, Europe, first vice president. Fernando Mendizabal Fernandez (pictured on page 19), Mexico, was elected WRO president for the next two years.

The tests are so sensitive that everything above 0.1 percent can be detected with the lowest detection limit nearly 0.0025 percent. EFPRA and the European Feed Manufacturers Federation have asked the European Commission for a solution to exclude "not relevant" positive findings below 0.1 percent.

Furthermore, the tests should work for compound feed as well so it is necessary to combine different techniques (e.g., microscopy and PCR) to identify allowable and forbidden substances. Examples of the envisaged difficulties: ruminant PAP is prohibited while milk protein is allowed; porcine plasma is allowed in pork feed but pork PAPs are not.

A race by laboratories or countries to detect the lowest, non-relevant traces of species should be avoided. It should be kept in mind that feed provides "nutrients" not "ingredients." A species-to-species barrier, as foreseen by the EU, can also be handled with sufficient heat treatment of proteins.

Due to the strictest standards, the rendering industry is waiting for the European results of acceptable levels of DNA from other species in MBM. This definition will become the standard for assessing results globally, avoiding disruptions in supply chains of the feed industry. WRO will report any updates on this situation.

An interim meeting of WRO will be held October 25, 2017, at the National Renderers Association conference in San Juan, Puerto Rico. The organization's next annual meeting will take place at the EFPRA congress in Barcelona, Spain, June 20-23, 2018.

More information on the work and services WRO provides can be found at www.worldrenderers.com. **R**

Time for Reflection and Renewal

By Tim Juzefowicz
Past President, World Renderers Organization

My two years as president of the World Renderers Organization (WRO) came to an end at the group's meeting in Hamburg, Germany, in June. I am saddened to step down but pleased as WRO will have a new leadership team who will be strong, confident, and knowledgeable, and will receive good support from WRO members.

As my term ended, I also reached a milestone in my career by achieving 20 years of experience in rendering. This is not something one thinks about and suddenly it is 20 years later. Looking over those years back to when the industry was "invisible" and trying to stay low, there have been many issues that the industry has managed to resolve.

Renderers today are confident and proud to be known as part of the sustainable industry. People now want to know what the industry does and why, so it is time to go out and tell them. Have employees be the advocates by informing others about the importance of rendered products. Argue the fact that rendering is the solution and not a problem.

The rendering industry still has its challenges and the WRO is actively providing leadership to its members. Recently, a customer was displeased after a test indicated tallow had a high polyethylene level. Another customer stated that pet food pellets exported into Japan were almost banned because a plastic speck was identified and not a declared ingredient. At the Argentinean renderers congress it was made clear that for tallow to be a viable feedstock for biodiesel manufacturing the polyethylene level needs to be less than 50 parts per million. Moving forward, managing raw material supply is of utmost importance for renderers around the world so a foreign material handbook is being developed by WRO as a management tool.

Similarly, WRO's work on DNA testing is being closely watched by the pet food industry, which is in a similar situation when ingredients specify one species and another species

is identified. Is one molecule too much? Does it need to be declared in specifications that protein meal "may contain foreign species"? What is the reasonable limit? WRO's project on DNA will assist in understanding limitations and pave the way forward.

The WRO scientific panel consisting of Martin Alm, Lucas Cypriano, David Meeker, Shane Lieth, and John Brennan has been able to provide valuable thought and scientific knowledge to help lead direction where required. All are thanked for their continued support and WRO is proud to have them working on behalf of the organization.

I worked in the chemical and food industries before venturing into rendering and this industry has been interesting, challenging, exciting, intriguing, and most enjoyable. It is the people we work with who make the 20 years feel like a fleeting moment.

The process of renewal is important for WRO so as one individual steps away another person brings fresh ideas, passion, and thinking. The organization also needs members who challenge and push the boundaries to give leadership perspective and an alternate point of view.

So I join my predecessors – Stephen Woodgate, David Kaluzny, Alan von Tunzelman, Andy Bennett, and Niels Nielson – who all still play a role in the back room of WRO by

providing guidance and thought. I greatly respect these "men of rendering" and their assistance and guidance over the years is much appreciated.

I have enjoyed working with WRO first vice president Fernando Mendizabal Fernandez, second vice president Martin Alm, and Nancy Foster of the National Renderers Association and thank them for their time, effort, and cooperation over the past two years.

Most of all, thanks to the WRO members for their support. I won't be a stranger. **R**



Tim Juzefowicz (left), Australia, is recognized for his service as WRO president by incoming president Fernando Mendizabal Fernandez, Mexico.

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Renderers Tell Their Story on Capitol Hill

In June, renderers from across the United States (US) met in Washington, DC, to take their message of recycling and its important role in agriculture to Capitol Hill. With decisions being made that affect the future of rendering, National Renderers Association (NRA) members educated legislators about rendering's contribution to the food chain, biodiesel, and thousands of consumer and industrial products.

NRA's Annual Washington Fly-in is held each June when Congress is usually in the midst of considering major legislation. Important issues on this year's agenda for Capitol Hill were tax reform and renegotiation of the North American Free Trade Agreement (NAFTA) by the United States, Canada, and Mexico. The rendering industry has a major stake in both issues.

During the two-day fly-in, renderers held 180 meetings with legislators about priority issues for the industry. Each year, NRA's Legislative Action Committee identifies the most important issues to be addressed during the fly-in, selecting topics with the greatest potential to directly impact the economic sustainability of rendering.

"Every year, as members of Congress and their staff change, it becomes more and more evident that we need to keep our story in front of them," said Dave Kaluzny II of Kaluzny Bros. Inc. and chairman of the Legislative Action Committee. "There seem to be even fewer senior staff members to go around and they're the only ones who know us already."

This year's top NRA fly-in issues were:

- **Biodiesel** – Preserve biodiesel tax credits that are threatened with possible elimination of individual industry incentives. These tax credits expired December 31, 2016. Until then, blenders received a \$1-per-gallon tax credit for production of biodiesel and renewable diesel. NRA also supports the 50-cents-per-gallon credit for alternative fuel mixtures.
- **US Department of Agriculture (USDA) Export Funding** – Maintain strong funding for the Market Access Program (MAP) and Foreign Market Development (FMD) program since President Donald Trump's administration proposed to eliminate monies for both. NRA receives about \$1.7 million annually from these programs to support overseas market development for US rendered products.
- **NAFTA** – Encourage export market growth for rendered products under a new NAFTA. In a new agreement, US renderers will seek market access for ruminant meat and bone meal (MBM) into Mexico to restore this lost market worth approximately \$30 million in new sales. Adopting consistent standards for animal health certification following World Organization for Animal Health, or OIE, standards among NAFTA countries would eliminate this trade barrier. The United States also needs access to mixed animal fat and used cooking oil from Canada.



Representative Lucille Roybal-Allard (left, D-CA) and a staff member read *Render* magazine with Jim Andreoli Jr. (right) of Baker Commodities Inc. Roybal-Allard is a member of the House Appropriations Committee.

- **Sustainability** – Educate Congress that rendering is sustainable by “upcycling” organics and carbon into new ingredients for livestock feed, biofuels, and numerous products that benefit consumers and partner industries.
- **Food waste** – Animal by-products are not “food waste” but are valuable inputs upcycled by renderers into ingredients for new products. NRA opposes diversion of raw animal materials to other disposal means (such as composting and anaerobic digestion) prompted by government incentives meant to reduce food waste. NRA's handouts used by renderers in their Capitol Hill meetings included “10 Facts about Rendering” and infographics on sustainability and food waste. While readers of *Render* know the fine points of rendering, many in Congress do not know what rendering is and best understand it in short and quick facts. Some basic rendering factoids shared with legislators were:
 - The US rendering industry accounts for \$10 billion in economic activity across the country.
 - High cooking temperatures used in rendering assure animal food and consumer safety to protect against bacteria, viruses, and other safety hazards. Meeting customer needs for quality and safety is a high priority.
 - Rendering is sustainable as recycling of animal by-products sequesters at least five times as much greenhouse gas emissions as it emits and produces far fewer emissions than landfilling or composting. Rendered products help animal agriculture and other customers reduce their environmental footprint and become more sustainable. Without rendering, all US landfills would be full in four years, posing a serious public health threat.

- Rendering produces valuable fats and proteins that improve nutrition in foods that consumers and farmers use to feed their pets as well as livestock, poultry, and fish.
- Renderers collect the nation's used cooking oil from restaurants then clean it and recycle it into ingredients for animal feed and biodiesel and renewable diesel for cars, trucks, airplanes, and other equipment.
- Unknown by most, people use rendered products every day in soaps, paints, varnishes, cosmetics, pharmaceuticals, shaving cream, deodorant, crayons, leather (i.e., handbags, car seats, and furniture), lubricants, caulking compounds, candles, cleaners, perfumes, polishes, rubber products, plastics, fertilizers, and even explosives and fireworks.

This year, rendering sustainability was especially embraced by many members of Congress and their staff, perhaps due to increased consumer interest in sustainability for the products they buy. Rendering's sustainability was a surprise to most newly-elected members.

"The younger staffers do love the renderer's 'green' story even more than the senior staff who have been around a while and seen it all," according to Kaluzny. "During these interesting and transitional times it is so important that they all know our story both nationwide and in their own districts and states."

The fly-in began with an industry issues briefing with speakers about agriculture in the Trump administration, the outlook for the agricultural economy, export opportunities,

and the Food and Drug Administration's (FDA's) approach to feed safety regulation, including pet food.

Brian Klippenstein, a senior staff aide to Agriculture Secretary Sonny Perdue, explained the new administration's approach to common-sense regulations and the importance of new technology to help US agriculture feed people in the future. Perdue is a veterinarian and believes in sound science, he said.

Agriculture would have taken the brunt of downside risk if the United States had pulled out of NAFTA instead of agreeing to modernize the trade pact, said Klippenstein. US agriculture has benefitted greatly from the agreement and so had much to lose if the United States withdrew. Last year, rendered exports to Canada reached \$112 million and sales to Mexico were \$279 million.

USDA's Chief Economist Rob Johansson gave renderers an overview of the current farm economy and prospects ahead. He reported real farm income is off 30 percent since 2013 and farm debt is back down to 1980s levels. Interest payments are still low but land values and cash rents are starting to decline. Record production of beef, pork, broilers, and milk, spurred in part by relatively low feed grain prices, will soften prices. Continued firming up is expected in the dairy sector this year and next while poultry production is still in recovery after the outbreak of highly pathogenic avian influenza (HPAI) several years ago but is moving toward a return to pre-HPAI levels. Poultry producers understand the importance of biosecurity, said Johansson, and USDA now understands the need to get

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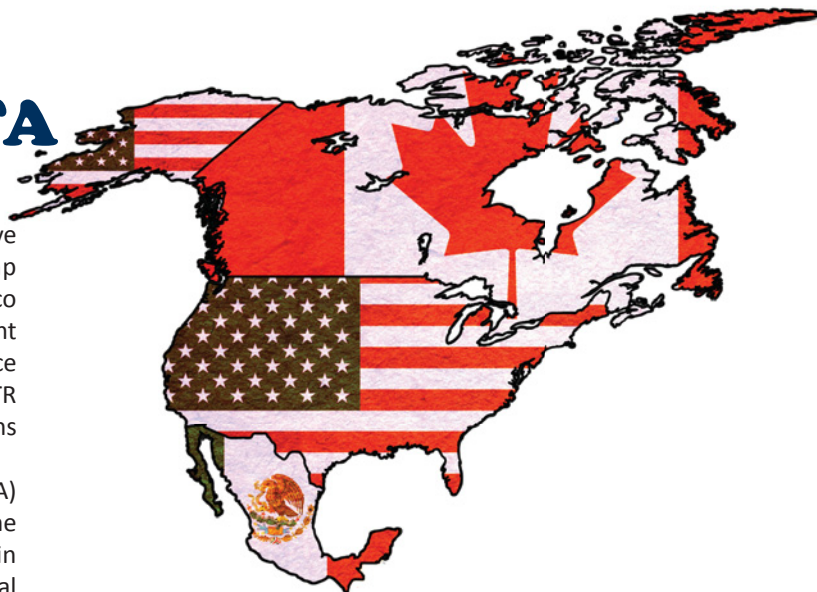
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NRA Supports Modernizing NAFTA



On May 18, 2017, the United States Trade Representative (USTR) informed Congress that President Donald Trump intended to commence negotiations with Canada and Mexico with respect to the North American Free Trade Agreement (NAFTA). On May 23, the USTR issued a *Federal Register* notice asking for public comments and a public hearing to assist USTR as it develops its objectives and positions for the negotiations surrounding the modernization of NAFTA.

In response, the National Renderers Association (NRA) submitted comments to the notice and testified during the NAFTA hearings at the International Trade Commission in late June. Kent Swisher, vice president of NRA International Programs, testified as part of an animal products panel. Each participant was given five minutes with a 20-minute question-and-answer session that followed. The three main points in NRA's testimony were:

1. Do no harm – keep the industry's tariffs at zero and do not harm current trade.
2. Gain market access into Mexico for ruminant meat and bone meal (MBM).
3. Allow imports of used cooking oil (UCO) and mixed species fat from Canada into the United States.

Opening comments revolved around explaining what rendering is and the importance of the North American market. During the question-and-answer session, Swisher was asked how the rendering industry is interdependent in the North American market. He took the opportunity to expand on what rendering is and also how the industry needs to be able to move offal and finished products across borders in North America. Peter Tabor of the Pet Food Institute was asked about sanitary barriers to trade and he specifically mentioned the rendering industry's issue with Mexico regarding the ban on exporting ruminant MBM. Tabor said the ban also hurts pet food exporters. After the hearing, a gentleman from the Canadian Embassy approached Swisher and asked about the ban on UCO and mixed species fat from Canada. Swisher explained the situation and suggested this should be an easy fix via the NAFTA negotiations if Canada pushed this issue.

The representatives of the beef industry got in a lengthy discussion over Country of Origin Labeling (COOL). The National Cattlemen's Beef Association, Farm Bureau, and American Meat Institute are strongly against COOL being included in NAFTA negotiations while the Ranchers-Cattlemen Action Legal Fund, or R-CALF, and the US Cattlemen's Association are in favor of COOL.

NRA Comments

NRA submitted comments to the *Federal Register* notice on negotiating objectives regarding the modernization of NAFTA. Exports are vital to the American rendering industry as 16 percent of total US rendered production is exported around the world. In particular, trade in the North American market is extremely important to the US rendering industry as it has greatly benefitted from the tariff-eliminating effects

of the current NAFTA. Exports of rendered products to Mexico in 1990 (pre-NAFTA) were \$102 million. In 2016, exports to Mexico reached \$279 million, a 179 percent increase. Over the same period, US exports of rendered products to Canada grew from \$20 million to \$112 million, a 460 percent increase. The rendering industry supports modernizing NAFTA to improve industry trade with Mexico and Canada.

Following are NRA's product-specific and general comments regarding the modernization of NAFTA.

- Chapter 3: National Treatment and Market Access for Goods – Maintain all current tariff preferences on rendered products with no additional tariffs and quotas. Rendered products should continue to be exported to Mexico and Canada tariff free.
- Chapter 7: Agriculture and Sanitary and Phytosanitary Measures – Recognize and adopt the World Trade Organization (WTO) sanitary and phytosanitary (SPS) agreement, and adopt expanded WTO SPS-Plus standards, such as those that were proposed in the Trans-Pacific Partnership agreement.
- Chapter 9: Standards Related Measures – Reinforce science-based regulations to prevent non-tariff trade barriers.

US renderers seek market access for ruminant MBM to Mexico that would restore lost trade worth approximately \$30-\$40 million. Due to unjustified sanitary trade barriers, US renderers cannot sell ruminant MBM into Mexico even though both countries are classified as "negligible risk" by the internationally-recognized World Organization for Animal Health (OIE). OIE recommends that only "controlled" and "unknown" risk countries do not export ruminant MBM whereas negligible risk countries are not held to that same restriction. Adopting consistent standards for animal health certification following OIE standards among NAFTA countries would eliminate this trade barrier.

The United States needs access to mixed animal fat and UCO from Canada. Currently, due to archaic bovine spongiform encephalopathy regulations, the United States cannot import animal fat and UCO from Canada mixed with fats from small ruminants, such as lamb or goats. This blocks a large portion of tallow and UCO from entering the United

States from Canada and lacks scientific rationale. The US rendering industry endorses the US Department of Agriculture's proposed small ruminant rule and urges the Trump administration to finalize it. NRA strongly supports the United States gaining access to Canadian tallow and UCO.

North American trade is critical to the US rendering industry. A modernized NAFTA has the potential to further enhance and protect this trade. **R**

Association *Continued from page 21*

in the field immediately with abatement support.

Ambassador Darci Vetter, former chief agricultural trade negotiator in the President Barack Obama administration, urged that agriculture's first priority in new NAFTA negotiations should be to "do no harm." (NRA included this request in its regulatory comments and oral testimony to the Office of the US Trade Representative earlier this year.)

Vetter recommended the new free trade agreement have a stronger commitment to transparency and science-based decisions that would support American agriculture. This would specifically benefit NRA members regarding ruminant MBM into Mexico. Vetter encouraged NRA to press the Trump administration to be clear in what it wants from a new NAFTA before entering into negotiations and to not leave important agriculture trade problems until the end where they could be easily dropped or traded away.

Dr. Dan McChesney, director of the Office of Surveillance and Compliance at FDA's Center for Veterinary Medicine, told fly-in participants that an increasing number of consumers are reporting problems in pet food safety that can be traced back to wet pet food. Consumers' view of safety can be related to what ingredients are called rather than scientific fact, he said. There is a trend in pet food toward using raw and only slightly processed ingredients and consumer groups are interested in developing a "human grade" definition for pet food ingredients. This new approach began in small pet food companies and is now being adopted by larger companies, especially for slightly processed ingredients.

All active members of NRA are encouraged to attend the annual fly-in meetings in Washington, DC. Join other renderers to "tell your story" to decision makers who could impact your future. Be sure to mark your calendar for next year's NRA Washington Fly-In, June 11-13, 2018. **R**

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Biodiesel Antidumping Investigation Postponed

On June 5, 2017, the United States (US) Department of Commerce's (DOC's) International Trade Administration announced in the *Federal Register* that the preliminary determination in the antidumping and countervailing duty investigations on biodiesel from Argentina and Indonesia will be postponed. On May 22, 2017, an extension was received by DOC from the petitioner, the National Biodiesel Board (NBB) Fair Trade Coalition, allowing the department to analyze information it collected during June, July, and part of August. The preliminary determination will be made by August 21, 2017, and the final determination will be due within 75 days of the issuance of the preliminary determination.

The extension is "standard procedure," according to NBB vice president of federal affairs Anne Steckel.

"It is typical to extend the timing of the commerce department's preliminary determination in these cases," she said. "This is consistent with the statute and with the agency's regulations, in order to give the department more time to process all of the information being received. The case is proceeding as expected."

Recent data supporting NBB claims show that dumped and subsidized biodiesel imports from Argentina continue unabated and, in fact, have further surged into the United States. On June 2, a business intelligence company reported that biodiesel exports from Argentina in April reached a five-month high, all of which was shipped to the United States. Shipment tracking information shows that significant volumes were expected in June. These reports indicate much higher volumes than were seen in January through March, which ranged from 6 million to 23 million gallons, according to the Energy Information Administration.

In March 2017, the NBB Fair Trade Coalition filed petitions with DOC and the US International Trade Commission alleging that increased volumes of subsidized and dumped biodiesel imports from Argentina and Indonesia have taken market share away from US manufacturers and have injured producers. Subsequent to the filing of this petition, Argentina substantially reduced its export taxes on biodiesel and then lifted those taxes, contributing to the increase in shipments and exacerbating already challenging circumstances for US producers.

"We've received information of potentially 75 million gallons of biodiesel flooding our ports soon – a significant increase from the import levels we saw in January, February, and March," Steckel stated. "We filed the petition to level the playing field for US producers and the NBB Fair Trade Coalition will use every legal tool available to address these unfairly traded imports."

One of those tools, a request for a finding of critical circumstances, was filed with DOC by the NBB Fair Trade Coalition on July 10 against imported Argentine biodiesel. If the government agrees with NBB's allegations, it would allow duties to be imposed retroactively on imports reaching

US shores from Argentina up to 90 days prior to DOC's preliminary determinations on the claims in the petitions. The department's preliminary determinations regarding the estimated rates of subsidization and dumping is expected on or about August 22, 2017, and October 20, 2017, respectively.

EPA Proposes Reducing Biofuels Requirements in 2018

The US Environmental Protection Agency (EPA) released its proposed 2018 renewable volume obligations (RVOs) under the Renewable Fuel Standard (RFS) program on July 5, 2017. This first RFS proposed rule from President Donald Trump's administration reduces the volume of biofuels required to be blended into gasoline and diesel fuel next year and indicates a move toward a potential broader overhaul of its biofuels program.

The proposal covers RVOs for conventional, cellulosic, and advanced biofuels as well as for biomass-based diesel, which EPA proposes to keep at 2.1 billion gallons for 2019, the same as was set last year for 2018. The overall proposal seeks to maintain conventional biofuels at the same level, which is about 20 percent below targets originally laid out in 2007 under the RFS that requires increased volumes of renewable fuels each year.

The National Biodiesel Board (NBB) has been calling for EPA to set the 2018 advanced biofuel requirements at a minimum of 5.25 billion ethanol-equivalent gallons, which is close to a billion gallons more than in 2017. NBB has advocated for EPA to set biomass-based diesel requirements at 2.75 billion gallons for 2019, an increase from 2.1 billion gallons for 2018. The National Renderers Association also supports RVOs for advanced biofuels and biomass-based diesel. The group plans to submit regulatory comments to EPA and testify at the agency's hearing scheduled in August.

This increase does not seem too ambitious given that the US biodiesel market consumed roughly 3 billion gallons last year, producing about 2 billion of those gallons domestically and importing another 1 billion gallons. The market had been expected to increase this year and next; however, no increase in RVOs provides no incentive for growth. In addition, EPA's proposal for advanced biofuels, a category that biodiesel can also fulfill, is being decreased slightly rather than increased, from 4.28 billion ethanol-equivalent gallons this year to 4.24 billion gallons in 2018.

"This is only a proposal and, in the past, EPA's final numbers have been higher than those in the proposal," said Anne Steckel, NBB's vice president of federal affairs. "We will continue to work with EPA and ensure the administration doesn't turn its back on our domestic energy producers."

"This is a missed opportunity for biodiesel, which reduces costs, provides economic benefits, and results in lower prices

at the pump,” Steckel added. “Higher advanced biofuel and biomass-based diesel volumes will support additional jobs and investment in both rural economies and clean-energy-conscious communities. The EPA should be committed to diversifying the diesel fuel market and prioritizing advanced biofuels. Targets like this ignore reality and the law, inhibiting growth in the industry.”

EPA’s proposed cuts to advanced and cellulosic biofuels “will have a chilling effect on the push toward next generation biofuels,” said Iowa Senator Chuck Grassley.

The RFS has become a battlefield between corn and petroleum interests. The law has been a boon to agriculture, supporting economies across the Midwest. Environmentalists, who have been critical of corn ethanol, have called for Congress to reform the program.

NOx Additive Approved for Biodiesel

The California Air Resource Board (CARB) has certified an additive that will make 20 percent blends of biodiesel in California the cleanest proven and tested diesel fuel with the lowest emissions profile. The National Biodiesel Board led the initial research and development into the additive in order to maintain biodiesel’s competitive advantage under the state’s low carbon fuel standard (LCFS). The additive ensures the reduction of every measurable regulated emission, including nitrogen oxide (NOx), when blended with California’s unique diesel formulation called CARB diesel.

Branded VESTA1000, the CARB-certified additive ensures compliance with the January 1, 2018, implementation of CARB’s Alternative Diesel Fuel regulation. A 20 percent blend of biodiesel with VESTA 1000 reduced NOx by 1.9 percent and particulate matter by 18 percent compared to CARB diesel fuel. California Fueling LLC will produce the formula and Pacific Fuel Resource LLC will deliver the product to market.

Aemetis Enters Into Biodiesel Supply Agreement with BP

Aemetis Inc. has announced its Universal Biofuels subsidiary in India has signed a three-year biofuels supply agreement with BP Singapore Pte. Limited (BPS), the regional trading arm of BP Plc, which has an expanding biofuels portfolio. Production is expected to commence this summer with shipments to foreign markets to begin in the third quarter of this year.

The Aemetis plant in Kakinada, Andhra Pradesh, has a capacity of 50 million gallons per year and is the first and only Indian biofuels producer approved under California’s Low Carbon Fuel Standard for delivery of tallow- and waste oil-based biodiesel into the state. In April 2017, Aemetis filed a patent on process technology developed at the Kakinada, India, plant for the conversion of a wide range of waste feedstocks into biodiesel.

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Delek Acquires Renewable Diesel and Jet Fuel Producer

Delek US Holdings Inc., a downstream energy company with assets in petroleum refining, renewables, logistics, convenience store retailing, and asphalt, has taken full ownership of Alon USA Energy Inc., an independent petroleum refiner, marketer, and retailer, and owner of renewable diesel and jet fuel producer AltAir Fuels in California. Prior to this transaction, Delek owned approximately 47 percent of the common stock of Alon. In addition to its other assets, Delek's renewables division includes approximately 61 million gallons per year of biodiesel and renewable hydrocarbon diesel production from biodiesel plants in Cleburne, Texas; Crossett, Arkansas; and now the AltAir renewable hydrocarbon diesel and bio-jet fuel facility in Paramount, California.

REG President Resigns, Plant Suffers Fire

Daniel J. Oh resigned as president and chief executive officer (CEO) of Renewable Energy Group (REG) on July 3, 2017. No reason was given for his departure. REG's board appointed long-time director Randolph (Randy) L. Howard as interim president and CEO until a replacement is found. Howard was

previously a senior executive with Unocal Corporation for 33 years, including as president of its North Asian energy business, vice president of refining, and vice president of supply, trading, and transportation.

In early June, a major fire broke out at REG's biodiesel plant in DeForest, Wisconsin. No injuries were reported at the facility, which was acquired from Sanimax last year, and damages were estimated to be \$1 million by the DeForest Windsor Fire Department. However, REG is reported in local news media as indicating it is too early to determine the damage to the plant.

Shell Signs Agreement with SBI BioEnergy

Royal Dutch Shell Plc, through its subsidiary Shell International Exploration and Production B.V., and SBI BioEnergy Inc. have reached an agreement granting Shell exclusive development and licensing rights for SBI's biofuel technology. Edmonton, Canada-based SBI has a patented process that can convert a wide range of waste oils, greases, and sustainable vegetable oils into lower carbon drop-ins for diesel, jet fuel, and gasoline. Under the agreement, Shell and SBI will work together to demonstrate the potential of the technology and, if successful, scale up for commercial application.

SBI uses a continuous catalytic process to make drop-in biofuels that do not require blending or any modifications to engines or infrastructure. **R**

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Cautious Optimism in the Waste-to-biofuels Sector

By Bruce Ross
Ross Gordon Consultants SPRL

This correspondent attended the Oleofuels 2017 conference in late June in Krakow, Poland, on behalf of the National Renderers Association (NRA) and led a panel discussion on vegetable oil availability in Europe. The conference is one of a series organized by Active Communications International that attracts excellent speakers and an audience of biofuels industry stakeholders from Europe and beyond. Participants this year included national government officials, traders in biofuels and biofuel raw materials, renderers, European Union (EU) biodiesel/renewable diesel producers, trade association officials, biofuel machinery manufacturers, fuel storage companies, non-governmental organizations involved in developing certification standards, and journalists.

Krakow is a stunningly beautiful city, especially in the summer, and the one-time hometown of Pope John Paul II. However, a local attendee at the conference said the city is not as stunning in the winter when there is so much pollution many residents wear face masks. The pollution is caused mainly by the burning of whatever is available as fuel to heat homes, not just coal that is locally abundant but also wastes such as plastics.

So, it was appropriate that the aim of the conference was to discuss cleaner fuels under the theme “Current and future trends for liquid biofuels produced from oils and fats.” Speakers included biofuels producers Argent Energy, ecoMotion, Eni, Neste, and Renewable Energy Group/Petrotec, all of which use animal fats and/or used cooking oil (UCO) as feedstocks. Some are customers of NRA members.

The mood of a conference is usually a good guide as to the state of the industry. Despite uncertainties about the future regulatory environment on both sides of the Atlantic, there was a strong feeling that biofuels produced from by-products, wastes, and residues are finally being recognized as providers of relatively easy ways for countries and industry players to meet renewable energy targets and aspirations in the transport fuel sector. Many EU member states are encouraging the use of UCO and animal fats as feedstocks for biodiesel, renewable diesel, and/or hydrotreated vegetable oil (HVO) production. This is resulting in potential shortages of these materials in regions such as Asia. United Kingdom biodiesel production is almost 100 percent waste-based.

For the first time, oil refining companies are getting into the waste fuels sector at scale, with the Eni and Total investment in France as an example. International arbitrage in waste oils and fats has emerged and existing producers of biofuels from wastes are building new plants. Argent, for example, is opening a second plant in Liverpool, England, and Neste has plans for another large facility. There has also been an increase in investment in advanced biofuels. One possible fly in the ointment though could be if Europe ends its love affair with diesel cars – there are signs of this since the Volkswagen vehicle emissions scandal. Yet Neste argues that renewable diesel is the lowest cost way of reducing carbon dioxide emissions from passenger cars and heavy road vehicles.

Regulatory Environment, Traceability, and Certification

While there is “many a slip ‘twixt the cup and the lip” (or “don’t count your chickens before they hatch”), most conference delegates believe that EU and United States (US) policy will continue to favor fuels from waste oils. In the EU, the European Parliament and member states are in the early stages of debating a European Commission proposal to revise the Renewable Energy Directive (RED) to produce RED II. This generally favors biofuels from waste but there is a long way to go. The Commission wants to encourage advanced biofuels but the consensus at the conference was that there will not be enough advanced fuels available to make any blending obligations for such fuels relevant in the near term.

Interestingly, the remark was made several times over the two-day conference that California, Oregon, and Canada are the places to watch for the direction of future biofuels policy. Speakers attested that several US states are setting the pace in America (or “taking up the slack from the federal government” as one speaker put it) in the same way that Germany and the Nordic countries lead the way in Europe.

No discussion of waste-to-biofuels would be complete without the matter of traceability being raised. Yet, instead of the usual accusations that UCO trade, for example, is rampant with fraud, there was recognition that all feedstocks transactions are vulnerable to this. There was less focus on certification at this year’s conference, perhaps because it is less of a novelty and programs have been seen as workable and adaptable to regional situations, independent, and necessary by all stakeholders, including biofuel producers.

First Generation Biofuels Fight Back

The conference was not monopolized by talk of biofuels from waste oils and fats. Since it was held in Poland, which majors in fatty acid methyl esters from rapeseed, there was a spirited defense of the need to nurture first-generation biofuels while advanced fuels are developed. A site visit to a Grupa Lotos biofuels plant near Czechowice–Dziedzice gave delegates a first-hand look at that part of the sector. Ironically, the facility derives combustion energy from locally-abundant coal.

Most representatives of the waste-to-biofuels sector expressed the view that the EU should not, as the Commission proposes, push first-generation crop-based biofuels out of the market so fast. This would be short-sighted as it cannot be expected that other products will be immediately able to fill the gap. In addition, it would shrink the overall market, making competition with fossil fuels more difficult.

A speaker from the World Bioenergy Association contended that the food versus fuel argument is no longer valid, which undermines one of the Commission’s concerns. He said that carbon taxes were a more efficient tool to steer rapid decarbonization rather than present alternative approaches.

The overall conclusion of most conference delegates was summed up by a spokesman from ecoMotion (the biodiesel arm of Europe’s largest renderer, SARIA) who said “we need to focus on a variety of feedstocks” based on trustworthy traceability systems. All agreed the biofuels sector needs all available feedstocks as there is danger of insufficient supply. **R**

Variety is the Spice of Research Life

The Fats and Proteins Research Foundation (FPRF) has two main funding streams. One is the Animal Co-Products Research and Education Center at Clemson University with projects approved and funded at the foundation's spring meeting each April. The second stream is "at-large" and open to researchers interested in conducting studies to benefit the rendering industry. Submitted research proposals are reviewed and chosen for funding at both the spring meeting and National Renderers Association National Convention each October. Currently, FPRF is funding four at-large projects.

A recently funded project will examine the "Presence, tissue distribution, and concentration of residues associated with administration of barbiturates and other commonly used pharmaceuticals to euthanize livestock" by Dr. Steve Ensley and his team at Iowa State University. Even though livestock mortalities are a comparatively small proportion of the raw materials going to rendering, they can present a potential risk for by-products destined for the food chain.

Currently, the tissue distribution and concentration of barbiturates in dead stock that have been euthanized with these and other pharmacologic agents are not well defined or understood. This FPRF study aims to determine those parameters in ruminants, swine, and horses in an effort to establish the stability of commonly used pharmacologic agents under typical rendering temperatures. The project will also assess the stability of barbiturates and other pharmacologic agents administered prior to euthanasia in livestock at temperatures more than 50 degrees higher than typical rendering temperatures, providing important data to renderers.

The second project is "Assessing factors affecting *Salmonella* in poultry fat" by Drs. Valentina Trinetta, Greg Aldrich, and Cassandra Jones at Kansas State University. In rare instances, *Salmonella* contamination of pet foods has been linked to rendered animal fat. This can be a problem when fat is applied to pet food that does not go through a final heat treatment. There has been very limited research on the mechanisms that contribute to *Salmonella* contamination in fat. The goal of this project is to identify the major factors impacting the presence of *Salmonella* in animal fat, which is imperative for the continued use of rendered animal fats by the pet food industry.

The objective of the study is to identify the roles of moisture, storage temperature, contamination type, and contamination level on *Salmonella* spp. concentration over time. The researchers are making progress and have finished all segments of the experiment utilizing the wet inoculation technique, which mimics contamination from moisture. They have moved to experiments using a dry inoculation technique that mimics contamination from the insoluble fraction of the fat.

A third project looks at the "Effect of different fat sources and vitamin E status on antioxidant status, carcass characteristics, and meat quality of pigs grown to heavy slaughter weight" led by Dr. Merlin Lindemann at the University of Kentucky.

The project will evaluate coconut oil, corn oil, and tallow in conjunction with vitamin E supplementation specified in the National Research Council (NRC) nutrition guide and at a higher amount. The goal is to demonstrate that supplemental fat source affects performance and pork quality greatly because of the difference in the fatty acid profiles between these fats. The project is also likely to show the vitamin E requirement estimate in the NRC guide is low for modern genetics and the need for this vitamin differs according to which type of supplemental fat is included in the diet.

The researchers will follow up this study with a project looking at corn oil and tallow at multiple levels of vitamin E to better define its requirement for enhanced pork quality depending on the type of added fat in the diet. Vitamin E is important because it can affect lipid oxidation and improve pork quality as well as extend the shelf-life of the product. This project is part of a much larger study funded by the National Pork Board looking at the nutrition of heavyweight market hogs and the impact of nutrition on performance, health, and pork quality. Co-funding research is a beneficial way to leverage resources and share costs between associations for projects of mutual interest. FPRF funds were included to add animal fat to the project as one of the fat sources and should result in valuable information about the supplemental feeding of tallow to pigs.

The final at-large project funded by FPRF will examine the "Flow behavior and spray coating efficiency during the production of rendered protein meals" by Aldrich at Kansas State University. Rendered protein meals will oxidize if not treated so uniform application of antioxidant preservative is important to maintain the quality of these meals. Antioxidant coating uniformity depends on the flow of protein meal.

The objective of this project is to study the dynamic flow characteristics of rendered protein meals and measure the coating uniformity through imaging techniques for a better understanding of flow rates and to improve the efficiency of antioxidant coating systems. So far the research has determined there are flow property differences between chicken meal and beef meal that suggest the coating process would have to be optimized based on raw material.

FPRF has started a new joint venture with Colorado State University called the Alliance for Research and Innovation in the Rendering and Pet Food Industries, which merges the best aspects of the at-large program and a research center. The inaugural meeting in mid-May was attended by representatives of both the rendering and pet food industries and academics. Discussions of challenges, possible solutions, research topics, short-term responses, and longer-term opportunities were frank, rich, and productive. Additional meetings are planned along with a webinar to include more stakeholders and interested researchers. This long-term effort will hopefully lead to focused research proposals that will attract new funding and enhance the use of rendered products in pet food. **R**

reconciled and the agreed-to compromise package re-passed by both chambers before it reaches the president's desk, an outcome highly unlikely this year.

The modernization/tweaking/re negotiating of the North American Free Trade Agreement (NAFTA) is another candidate for completion by year's end. In June, a Mexican government official announced he and US Special Trade Representative (USTR) Robert Lighthizer agreed mid-December would be their deadline for completing the updated tripartite trade treaty with Canada. Lighthizer quickly denied that agreement, saying there is no deadline for completion of the discussions.

Secretary of Commerce Wilbur Ross, Trump's trade czar, has told a number of agriculture exporter audiences the administration enters the NAFTA reboot with a single overriding goal to "do no harm." Ross' acknowledgement of this endpoint indicates he has listened to US agriculture interests who have pleaded with USTR and Commerce to do nothing to NAFTA in pursuit of US heavy manufacturing jobs creation that will undo any of the significant successes and benefits the 23-year-old agreement has brought US ag exporters, particularly tariff-free movement of goods across borders.

In late June, more than 130 witnesses (including the National Renderers Association) appeared at a three-day Commerce/USTR public hearing held at the International Trade Commission to hear what the private sector – associations, companies, and individuals – sees as NAFTA renegotiating priorities. While nearly all witnesses echoed the "do no harm" mantra, there was a general consensus that sanitary/phytosanitary standards should reflect those modernized standards included in the Trans-Pacific Partnership (TPP) agreement. There is also consensus on the application of new technologies to expedite shipments and remove cross-border delays as well as a need to update both job protections and environmental safeguards.

USTR's Lighthizer is also preaching the value of bilateral trade deals for the United States – Trump made it clear during his White House run he is no fan of multilateral trade treaties – and says his office is eagerly pursuing such arrangements wherever it finds opportunities.

According to the USTR's "2017 Trade Policy Agenda and 2016 Annual Report," the following is the heart of Trump trade thinking:

"The overarching purpose of our [US] trade policy – the guiding principle behind all of our actions in this key area – will be to expand trade in a way that is freer and fairer for all Americans. Every action we take with respect to trade will be designed to increase our economic growth, promote job creation in the United States, promote reciprocity with our trading partners, strengthen our manufacturing base and our ability to defend ourselves, and expand our agricultural and services industry exports. As a general matter, we believe that these goals can be best accomplished by focusing on bilateral negotiations rather than multilateral negotiations – and by renegotiating and revising trade agreements when our goals are not being met. Finally, we reject the notion that the United States should, for putative geopolitical advantage, turn a blind eye to unfair trade practices that disadvantage

American workers, farmers, ranchers, and businesses in global markets."

In a section entitled "Top Priorities and Reasons Therefor," USTR lays out the following priorities: defense of national sovereignty over trade policy; strict enforcement of US trade laws; using "leverage" to open foreign markets; and negotiating new and better trade deals. Other priorities include open competition; elimination of unfair trade barriers "including exports of agricultural goods"; protection of US intellectual property; antidumping trade law enforcement; a ban on import of goods made with forced labor; and pushback against World Trade Organization complaints by trade competitors "that would weaken the rights and benefits of, or increase the obligations under, the various trade agreements to which the US is a party."

Trump has made clear all existing bilateral trade deals are up for review to ensure they meet this national trade policy. Preliminary discussions have been held with Japan, but that nation's government says the kind of access US agriculture would have enjoyed under TPP is not in the cards in a Japan-US bilateral. Now that Japan and the European Union have inked their monster bilateral trade pact, Japan's interest in another major negotiation and treaty may be waning. USTR has also begun discussions with Australia, Chile, all parties to the Central American bilateral treaty, and to update the US-Korea bilateral.

All government initiatives, whether administrative or congressional, come down to a very basic element: budget. The last formal budget resolution – a non-binding outline of spending priorities and amounts not requiring the president's signature – on which Congress agreed was in 2015 for fiscal year 2016. Prior to that, Congress failed to agree to a budget number for six straight years.

There is still no basic budget agreement between the House and Senate, and Representative Diane Black (R-TN), chair of the House Budget Committee, appears to be moving more quickly than her Senate counterpart, Senator Mike Enzi (R-WY). The two are looking to cut overall federal discretionary spending by \$200 billion or so for fiscal year 2018, leaving \$549 billion for defense spending and \$516 billion for non-defense discretionary spending. Black appears less concerned about producing an initial House budget bill that mirrors Senate thinking because it will all get sorted out in a bicameral conference committee, she says.

House and Senate budget chairs have tough jobs. Not only do they need to try to come to an agreement on a top-line budget number, they must also decide which program areas take the biggest cuts to reach that number, specifically "reconciling" real world spending with those budget numbers. Then they must fashion a bill to get over that goal line as well as take separate action to shoehorn room for tax reform initiatives and an increase in the federal debt ceiling, always an ugly fight.

The 12 appropriations bills for fiscal year 2018 will likely see individual committee action and are all but guaranteed to be rolled once again into an omnibus spending package. While all 12 of those spending bills are supposed to be enacted by October 1, the start of the federal government's new fiscal year, the last time all appropriations bills were enacted by that deadline was over 20 years ago, in 1996. **R**

Chill Out! Avoiding OSHA Heat Illness Liability

Editor's note – Mark A. Lies II is an attorney in the Environmental, Safety, and Toxic Tort Group in the Chicago, Illinois, office of Seyfarth Shaw LLP. He is a partner who focuses his practice in the areas of product liability, occupational safety and health, workplace violence, construction litigation, and related employment litigation.

Patrick D. Joyce is an associate attorney in the Workplace Safety and Health Practice Group at Seyfarth Shaw LLP while Kerry M. Mohan is a partner with the law firm of McDermott Will & Emery. O'Brien Mills is the director of occupational safety and health for Aldridge Electric Company where he manages 14 full-time safety professionals and one in-house safety trainer.

Legal topics provide general information, not specific legal advice. Individual circumstances may limit or modify this information.

Since 2012, the Occupational Safety and Health Administration (OSHA) has aggressively prosecuted employers based on injuries and illnesses due to heat. In doing so, OSHA has focused its efforts on employers in the construction industry, foundry operators, chemical producers, and employers in warm climates. Because OSHA does not have a heat illness standard, employers are left in the cold as to what they should do to mitigate risk and safeguard employees from excessive heat. This article discusses the issue of heat illness, OSHA's guidance, and how to prepare and protect employees from the hazard of heat.

A recent landmark decision by an administrative law judge from the Occupational Safety and Health Review Commission in *Secretary of Labor v. Aldridge Electric Company*, Docket No. 13-2119, is a must-read for all employers who have potential employee heat exposure in their workplaces. After an 18-day trial, the judge issued a 54-page opinion vacating one OSHA General Duty Clause citation involving a national electrical contractor arising from a workplace accident.

What is "Heat"?

For OSHA purposes, the term "heat" is comprised of two main components: (1) environmental or ambient heat; and (2) metabolic heat. Environmental or ambient heat is the heat that we all experience due to the natural environment. Factors impacting environmental or ambient heat include ambient temperature, wind, humidity, solar irradiance, and cloud coverage. Metabolic heat is heat generated internally within the human body. The harder a person works, the more metabolic heat is generated. An individual's body mass, weight, age, sex, and medical history can all impact the amount of metabolic heat generated during any particular task.

What is Heat Illness?

Heat is not always a hazard. In fact, humans need heat to survive, particularly during cold winters. Rather, heat becomes

a hazard when it is "excessive" and the body is unable to dissipate heat quickly enough.

Heat illness is complex largely because of individual variability as well as a number of external parameters that affect the individual and his or her response to the environment they are in. There are four main types of heat illness: heat rash, heat cramps, heat exhaustion, and heat stroke. Heat syncope is also a form of heat illness but is typically not considered life threatening.

Heat rash, otherwise known as prickly heat, occurs when an individual sweats in areas of restrictive clothing. Its symptoms usually involve itchy and sometimes painful red bumps. Heat cramps are muscle cramps usually caused by performing hard physical labor in a hot environment and have been attributed to an electrolyte imbalance caused by sweating. Heat cramps often occur in the back and leg muscles. Treatment for heat cramps includes having an individual rest in a cool and/or shaded area and providing water and electrolytes.

Heat exhaustion is an illness that occurs when a body overheats but the core body temperature does not rise above 101 degrees Fahrenheit (F). The signs and symptoms of heat exhaustion are heavy sweating, headache, nausea, fatigue, vomiting, vertigo, weakness, thirst, and giddiness. Workers suffering from heat exhaustion should be removed from the hot environment and placed in a cool and shaded area, given fluid replacement, and encouraged to get adequate rest.

Heat stroke, the most severe form of heat illness, occurs when the body's temperature regulation system fails and body temperature rises to critical levels, above 101 degrees F. Heat stroke is caused by a combination of highly variable factors and its occurrence is difficult to predict. The primary signs and symptoms of heat stroke are confusion, irrational behavior, loss of consciousness, convulsions, a lack of sweating (usually), hot and/or dry skin, and an abnormally high body temperature. Workers experiencing heat stroke require immediate advanced medical attention.

What Does OSHA Say About Heat Illness?

Because OSHA does not have a heat illness standard, it relies on the General Duty Clause, Section 5(a)(1), to cite employers in cases related to heat illness. To prove a Section 5(a)(1) violation, OSHA must establish by a preponderance of the evidence that: (1) a condition or activity in the workplace created a hazard; (2) the employer or its industry recognized the hazard; (3) the hazard was likely to cause death or serious physical harm; and (4) feasible means existed to eliminate or materially reduce the hazard. To present its case, OSHA must define the hazard so that an employer is apprised of its obligations and the conditions or practices in which it can reasonably be expected to exercise control. As such, a hazard under Section 5(a)(1) cannot be established based on a "freakish or unforeseeable death."

Currently, only two OSHA state-plan states have heat illness standards: California and Washington. Both state's standards are based solely on the dry bulb-temperature (air measured by a thermometer freely exposed to the air but shielded from radiation and moisture) in Fahrenheit.

OSHA's Guidance on Heat Illness

In 2012, OSHA implemented its Heat Illness Prevention campaign through its "Water. Rest. Shade." program. Based on Cal-OSHA's materials, OSHA's "Water. Rest. Shade." program focuses on the heat index to indicate when to use suggested precautions. As part of the program, OSHA has provided employers an all-in-one publication titled *Using the Heat Index: A Guide for Employers* about how to use the heat index to determine "when extra precautions are needed at a worksite to protect workers from environmental contributions to heat-related illness."

The heat index guide is "advisory in nature and informational in content," and, as such, "is not a standard or regulation, and it neither creates new legal obligations nor alters existing obligations created by OSHA standards or the Occupational Safety and Health Act." Even though the heat index typically does not register until the ambient temperature has reached 80 degrees F, OSHA's heat index guide is based on four different levels as shown in table 1 on page 33.

In evaluating the heat index, OSHA recommends that employers use the National Oceanic and Atmospheric Administration heat index chart, taking the relative temperature and humidity levels to determine where it falls on the chart. Consequently, if the heat index falls in the "caution" range,

employers are directed to adhere to the OSHA-provided precautions.

Heat index values were designed for shady, light wind conditions. Exposure to full sunshine can increase heat index values by up to 15 degrees F. Though the heat index guide states that full sunshine can increase the heat index values, OSHA has not provided any scientific basis for such a conclusion. Moreover, OSHA does not provide any definition as to what "direct" or "full sunshine" means, how employers should add "up to 15 degrees F" based on the sunshine, or when it should be applied. OSHA also does not provide any definition for "shady" or "light wind conditions."

What does OSHA want Employers to Do?

OSHA's heat index guide provides what would seem to be relatively straightforward directions as to what employers should do at any particular heat index. However, it is far from straightforward as OSHA has shown a tendency to claim that suggested protections at higher temperatures should be used at lower temperatures based on vague and undefined conditions of "strenuous work," "full sunshine," and "light wind." Despite OSHA's inconsistency on these issues, the heat index guide provides the following suggestions for employers:

- Develop a heat illness prevention program.
- Provide employee training on the heat illness prevention program, including how to recognize, prevent, and treat heat illness.

Continued on page 33



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2nd Annual Canadian Beef Industry Conference

August 15-17, Calgary, AB, Canada • www.canadianbeefindustryconference.com

September

10th Annual National Aboveground Storage Tank Conference and Trade Show

September 13-14, Galveston, TX • www.nistm.org

October

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

October 3-6, Dublin, Ireland • www.aquaculturealliance.org/goal

Poultry Protein and Fat Seminar

October 5-6, Kansas City, MO • www.uspoultry.org

American Fats and Oils Association Annual Meeting

October 11-12, Chicago, IL • www.fatsandoils.org

US Animal Health Association 121st Annual Meeting

October 12-18, San Diego, CA • www.usaha.org

2017 Feed and Pet Food Joint Conference

October 23-25, Louisville, KY • www.ngfa.org

National Renderers Association 84th Annual Convention

October 23-27, San Juan, Puerto Rico • e-mail Marty Covert at co@martycovert.com or call (703) 754-8740

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

OIE to Establish US Liaison Office

The World Organization for Animal Health (OIE) is establishing a liaison office at the Institute for Infectious Animal Diseases based in College Station, Texas, a unit within the Texas A&M University System that was recognized as an OIE Collaborating Center in the domain of biological threat reduction in 2014. The OIE office is expected to open October 1, 2017, with the aim of increasing collaboration, establishing partnerships, and maintaining donor relations with several United States state agencies and departments as well as organizations that have an interest in global animal health and welfare. The office will also offer support to OIE Headquarters based in Paris, France.

With respect to its standard-setting mandate, OIE is recognized as the reference organization for animal health and zoonoses by the World Trade Organization. OIE currently has 181 member countries and 12 regional and sub-regional representations located on each continent.

Uzelac Names VP and GM

Mike Hobbs has been named vice president and general manager of Uzelac Industries Inc., a manufacturer of design-build rotary drying systems based in Greendale, Wisconsin.

Before joining Uzelac, Hobbs served as operations manager at Rockwell Automation. He began his career at Siemens, where he held engineering, project management, sales, and management roles. He later served as general manager at Avanti Wind Systems.

A Wisconsin native, Hobbs graduated with honors from the Milwaukee School of Engineering where he earned a bachelor's degree in mechanical engineering technology. He is a Leadership in Energy and Environmental Design, or LEED, accredited professional and a registered professional engineer in the state of Wisconsin. **R**



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- Develop a system to monitor weather conditions on at least a daily basis and, preferably, multiple times per day.
- Provide water, shaded areas, and cooling stations for employees.
- Develop an emergency response plan in case an employee suffers from heat illness.
- Acclimatize new and returning workers.
- Develop regimented work/rest regimens for when the heat index is elevated.
- Actively supervise employees to evaluate for signs and symptoms of heat illness.
- Perform physiological monitoring.

What Is Acclimatization?

Acclimatization is the process by which individuals physiologically adjust to warmer or colder temperatures. For instance, you may notice that when you travel to a warm location for a vacation, you tend to sweat more at the beginning of the vacation than you do at the end of the vacation. The heat index guide states that, under certain temperature conditions, new workers or workers returning from time away from work should be acclimatized to the level of work.

Yet, what is considered the correct pace to acclimatize workers remains unclear. The heat index guide suggests 50 percent work per hour for the first day, 60 percent the second day, and so on until one reaches 100 percent. However, some of OSHA’s compliance officers and experts have asserted that acclimatization should begin at 20 percent work per hour (or 12 minutes per hour) and gradually increase from there. It has yet to be determined which rate is accurate.

Another issue that remains unclear is at what temperature employers should implement an acclimatization program. Under OSHA’s former heat index guide, acclimatization was not recommended until the heat index reached 91 degrees F. Under the current guide, OSHA inconsistently states that acclimatization may be required even if the heat index is below 91 degrees F. In fact, some OSHA compliance officers and experts have asserted that acclimatization should occur no matter what the ambient temperature is.

Employers may also have questions about when employees return to work from an extended absence whether due to injury, holidays, or vacation. The heat index guide states that acclimatization may be necessary if an existing employee is returning from an absence of two weeks or more. On the other hand, some of OSHA’s compliance officers and experts have asserted acclimatization should occur if an employee has been gone for three or more days. In other words, any time an employee has an extended weekend, (s)he would need to be re-acclimatized.

What Are Regimented Work/Rest Regimens?

Similar to, but distinct from, acclimatization is a structured work/rest regimen, a defined process requiring employees to rest a certain amount of time per hour. For instance, depending

Heat Index	Risk Level	Precautions
Less than 91°F	Low (caution)	Basic heat safety and planning
91° to 103°F	Moderate	Implement precautions and heighten awareness
103° to 115°F	High	Additional precautions to protect workers
Greater than 115°F	Very high to extreme	Triggers even more assertive protective measures

on the conditions, an employer should establish work/rest regimens where an employee works 45, 30, or 15 minutes per hour and then takes a break for 15, 30, or 45 minutes per hour.

Although it may seem like telling employees to take a break during a hot day whenever they experience a need to temporarily rest would be sufficient, OSHA has taken the stance that employers need to take affirmative action to ensure that employees take mandatory breaks. This involves requiring employees to sign sheets identifying when their breaks start and stop, supervisors actively monitoring the sheets to ensure the appropriate amount of breaks of sufficient duration are taken, and disciplining employees who fail to take the required amount of break.

The heat index guide does not specifically indicate how employers should actively supervise their employees. Nonetheless, it is advisable for employers to implement a “buddy system,” where employees are not left alone, so a co-worker(s) can identify if someone is suffering from heat illness and bring it to the attention of a supervisor. Also, employers have used, with great success, programs to identify new employees – such as colored hard hats, colored vests, and other markers – who may need closer observation.

What is Physiological Monitoring?

The heat index guide recommends that employers perform physiological monitoring of employees at “hot worksites.” Specifically, the guide recommends employers conduct heat exposure history evaluations, monitor employee heart rates, perform oral temperature readings, conduct body weight and body water loss measurements, perform blood pressure readings, and perform respiratory rate analyses. In other words, OSHA has asked employers to medically evaluate employees to determine which employees have “risk factors” that may make them more susceptible to heat illness.

Conclusion

Because OSHA has decided to rely on the General Duty Clause to enforce cases related to heat illness, there is no one answer that fits all circumstances as to what employers should do to ensure they remain fully compliant. In fact, as the recent *Aldridge Electric Co.* OSHA Review Commission decision shows, no matter how thorough an employer’s heat illness prevention program is, OSHA will still issue a citation, even if an unavoidable incident occurs.

Employers must take proactive steps in the face of OSHA’s use of the General Duty Clause for heat-related illness enforcement. Taking such steps now may allow the employer to avoid costly enforcement and litigation in the future. **R**

American Proteins CEO Honored

Tommy Bagwell, owner and chief executive officer of American Proteins Inc. in Cumming, Georgia, was recognized along with his wife, Chantal Bagwell, as Philanthropists of the Year by the North Georgia Community Foundation. The two have been previously honored with the award by the foundation.

American Proteins was founded by Bagwell's father, Leland, in 1949 and is today one of the largest rendering companies in the world. With five poultry by-product conversion plants in Georgia and Alabama, the company processes five billion pounds of raw material into over 750,000 tons of finished products each year that are used as ingredients in pet food, animal feed, fertilizer, and biodiesel.

Also honored posthumously was Loyd F. Strickland, founder of Crystal Farms Inc. in 1947, which at one time was one of the largest commercial egg producers in Georgia and the United States. He passed away September 6, 2013.

Darling Buys Tallowmasters

Darling Ingredients Inc. has acquired the assets of Tallowmasters LLC, a family-owned rendering and recycling company with headquarters in Medley, Florida, and processing operations in Miami, Florida. Tallowmasters has been rendering and recycling used cooking oil and animal by-products since 1958, selling their finished products in both the domestic and international biofuels markets.

"We were pleased to work with Darling Ingredients, a world leader in the production of sustainable natural ingredients," said Charles Largay, chief executive officer of Tallowmasters. "Our goals fit in ideally with those of Darling, where transforming residual bio-nutrients into valuable resources is the center of the business."

Frontline Opens South American Sales Office

Ohio-based Frontline International has opened a South American sales office in Bogota, Colombia. Santiago Montejo will head the office that will allow restaurant customers and Frontline equipment dealers on the continent to receive regular visits from a used cooking oil (UCO) collection expert and environmental steward.

"By opening an office in Colombia, we can respond more effectively to the needs of our customers in all of Latin America," said John Palazzo, president of Frontline International. "And we are very lucky to welcome Santiago to the Frontline family; he's a bit of a pioneer in his region when it comes to the collection, disposal, and recycling of waste cooking oil."

In 2011, Montejo started his own business to collect UCO with the environmentally related goals of reusing and repurposing this potentially valuable commodity that might otherwise be disposed of improperly. At the time, there were no local biodiesel plants that could process UCO so it had to be exported to Spain. In 2014, Montejo learned about Frontline International through the company's website and contacted them to learn more. In 2015, Frontline sent Montejo equipment to collect UCO from professional kitchen fryers and by 2016, he was attending the National Restaurant Association conference on the company's behalf.

While he originally focused on collecting and repurposing the oil, the more he learned about the safety hazards involved with handling UCO, the more driven he was to approach sales and service from the perspective of making kitchens safer, cleaner places. He has worked with the Colombian government to create and standardize formal processes for UCO collection, even assisting with writing the related regulations and lobbying the government for change. He is now an environmental consultant for both the country and the broader South American restaurant industry.

The Bogota office will run independently from Frontline International's Oil Care branded operations headquartered in Puerto Rico.

Wallace and Farm Brands Merge

Wallace Corporation Limited and Farm Brands Limited have merged their respective coproducts businesses and operations to create Wallace Group Limited Partnership. The new multi-million dollar entity acquired the assets and business of Dunedin, New Zealand-based rendering company, Keep It Clean Ltd. The merger of the two multi-generational coproducts businesses aims to optimize its processing capability, including developing higher-value finished products and establish an expanded casualty cow collection service in the South Island of New Zealand.

"I am delighted to be able to continue the evolution of our over-80-year-old business," said Sir James Wallace, chairman and managing director, Wallace Corporation.

"Our family has traded rendered products with the Wallace family for over 40 years," stated Hugh Spence, chief executive officer, Farm Brands. "Wallace Group is a very positive outcome for staff and supplier customers as we'll be able to deliver even higher levels of operational excellence."

Graham Shortland, formerly chief executive officer of Wallace Corporation, will lead the new company that will be headquartered at Wallace Corporation's Waitoa site.

Under the terms of the merger, Auckland-based Farm Brands, owned by Modena Investments (NZ), contributed rendering plants in Timaru and Dunedin and a substantial export trading business based in Auckland primarily focused on protein meals and tallows. The Farm Brands office in Auckland has been retained and will continue to operate the export trading activities under the Farm Brands name.

Wallace Corporation, based in Waitoa, contributed their Waitoa industrial site and businesses including the tannery, rendering plant, and compost business, a casualty collection center in Northland, their Feilding operation, and Hororata rendering plant. **R**

Dear Editor,

I read with interest the article in the June 2017 *Render* by [Dr.] Frank Mitloehner, professor at the University of California, Davis, about “Livestock’s Contribution to Climate Change.” There is one aspect of this topic I was looking for in the article that was never mentioned. Cows, pigs, chickens, and human beings are all “biomass.” Everything we eat and discharge in any way contains biogenic carbon, not fossil carbon.

The reason that GHGs [greenhouse gases] (particularly carbon dioxide) are growing in concentration in our atmosphere is because we are digging up, or pumping up, fossil-based carbon fuels and burning them. In contrast, the amount and complexity of life forms on planet Earth, on land, in the oceans, plants, and animals are all part of the natural carbon cycle. If we were not digging up and burning fossil-based carbon, there would be no net increase of carbon (dioxide) in our atmosphere.

Now people can argue that we use fossil fuels to run tractors and agricultural machinery to grow crops and feed cattle and pigs and chickens. So, from an “accounting” point of view, those fossil-based fuels used in agriculture can be transferred to the cows and pigs and chickens that are being supported. But, those fossil fuels could eventually be replaced with renewable fuels. Then, would the natural emissions from animals still be considered GHGs? We could cut trees to use as fuel to burn and generate electricity (and carbon dioxide). If we did this “sustainably” and cut only two or three percent of a forest in a given year to run the electrical power plant, and re-plant the harvested two or three percent, the designated forest could generate electricity forever, with no net carbon emissions, since the other 97 to 98 percent of the forest would continue to grow and re-absorb carbon dioxide from the atmosphere via photosynthesis every year.

So, I don’t think that natural emissions from cows, or other animals, should even be considered in the GHG mass balance equation. This is biomass-based biogenic carbon, not fossil carbon. If methane gas from a (fossil-based) natural gas well is leaking gas to the atmosphere, yes, that is contributing to the overall GHG mass balance. But methane from a cow’s stomachs is all biogenic carbon; it should not be added to the GHG mass balance as it is part of the natural carbon cycle. The carbon dioxide that we all exhale every day, along with every other person and critter on this planet, is not contributing to GHGs, but if we dig up coal and burn it, that resulting carbon

dioxide is contributing to the GHG mass balance. “Carbon dioxide” and “carbon dioxide” appears to be the same, but it isn’t. It depends upon the source of the carbon – is it biogenic-based carbon or fossil-based carbon? That is the question!

So, I disagree with the author’s conclusion – “Livestock accounts for only 4.2 percent of all GHG emissions in the United States.” On the contrary, livestock contribute zero percent GHGs to our atmosphere.

Kirk Cobb
Senior Process Design Engineer
Superior Process Technologies
Minneapolis, Minnesota

Render offered Dr. Mitloehner the opportunity to respond:

Kirk Cobb has made some valid points and some that require clarification.

It is correct that carbon dioxide (CO₂) from livestock respiration is not counted in any of the serious lifecycle assessments. The reason is that the forage that livestock consumes assimilates atmospheric CO₂ and releases oxygen. Once the animals eat these feedstuffs, they metabolize the nutrients and expel CO₂ – a wash overall.

CO₂ emissions are not a major consideration from animal agriculture but the much more heat trapping gases methane and nitrous oxide are. Methane is 25 times and nitrous oxide almost 300 times more potent than CO₂ and livestock production is one of the major emitters of both. In the emission inventories, they are converted into CO₂ equivalents.

Cobb maybe half jokingly refers to cow farts as not being the issue and he is right. It is not the back end but rather the front end of ruminants that are a main methane source. The animals consume carbonaceous feed and then microbes make some of that into the potent methane or even into nitrous oxide. This conversion of nutrients into belched- or manure-derived methane or that of fertilizers into nitrous oxide is what makes up the majority of the impacts the livestock sector has on greenhouse gases.

The time has come to own the sector’s environmental responsibilities and continue the path of making further improvements that are called for by today’s society and the marketplace.

Frank Mitloehner
Davis, California

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