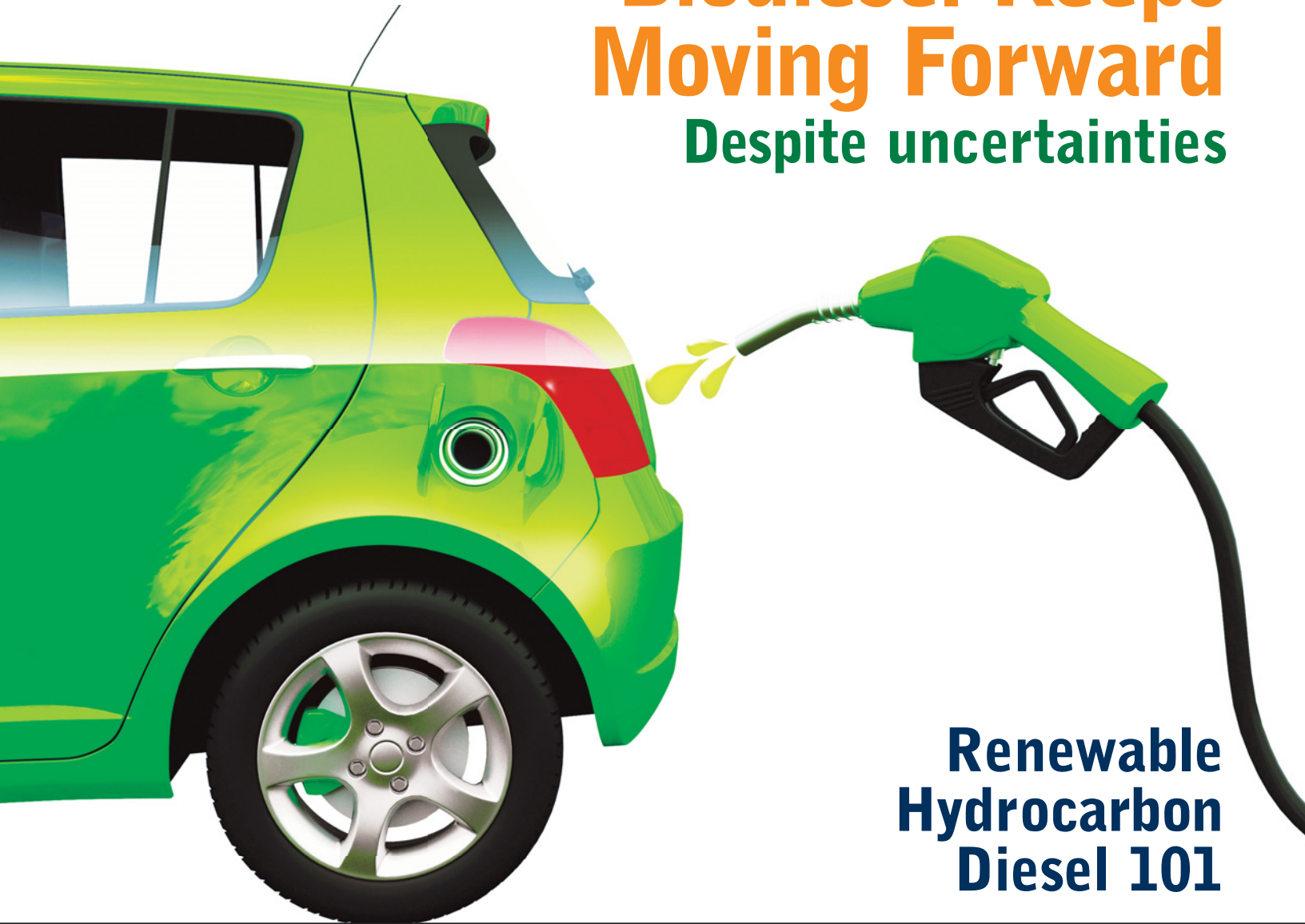


The International Magazine of Rendering

February 2017

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Biodiesel Keeps Moving Forward Despite uncertainties

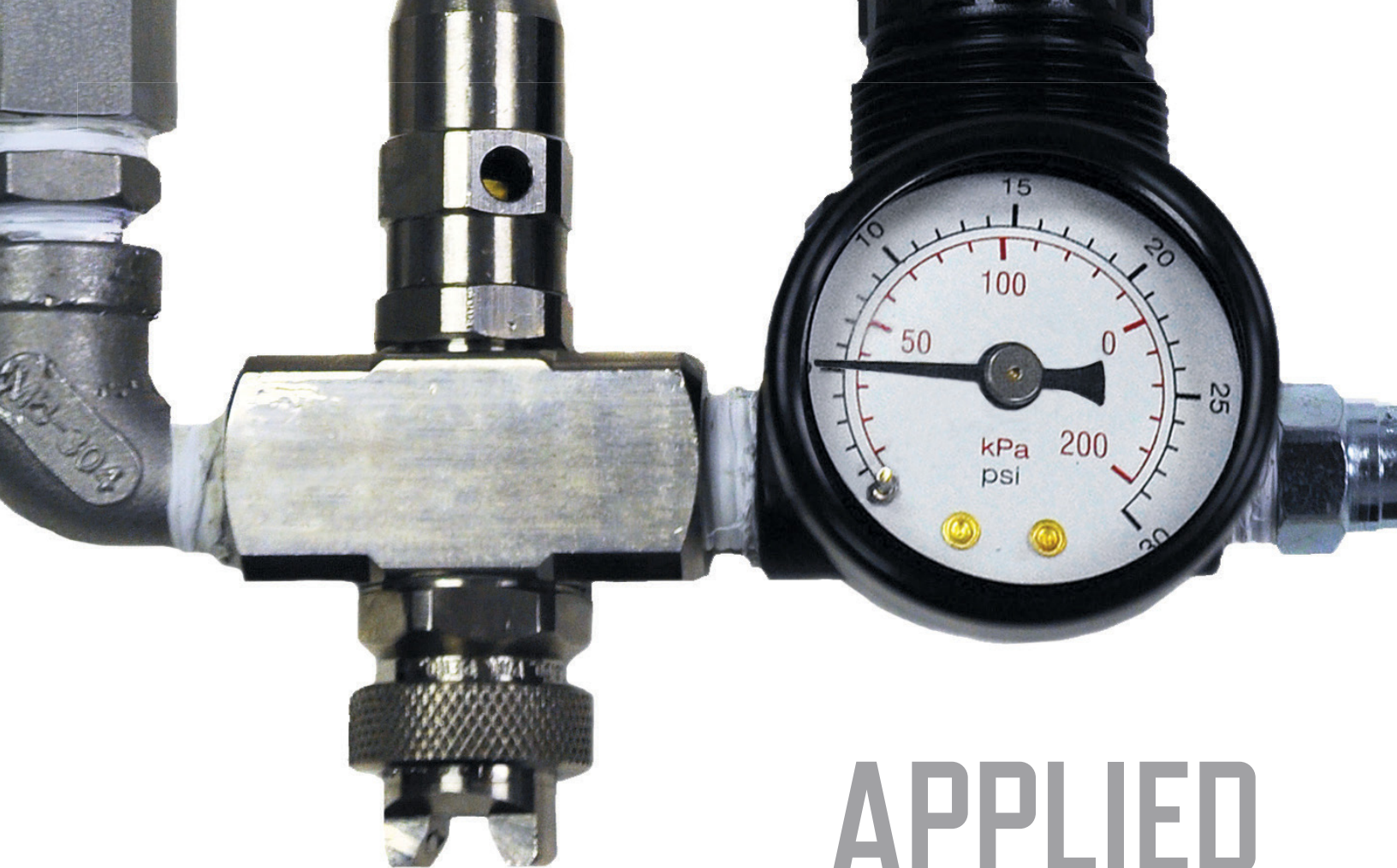


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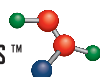
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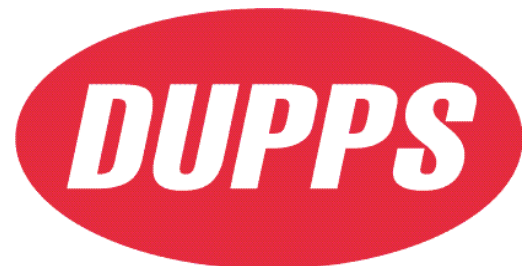
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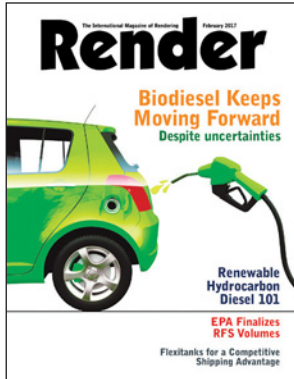
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Won't Let You Down



On the Cover

The biodiesel industry remains committed to its cause despite continued challenges. **p. 10**

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Renderitorial

This new year brings with it a new United States president, new challenges, new opportunities, and new resolutions to exercise and lose weight.

Okay, maybe that last item has already been tossed aside but the beginning of every year usually means a look ahead to what might be in store both personally and professionally. Renderers know they have their work cut out for them in 2017 complying with new food safety regulations, getting tax credits for biofuels reinstated, and educating a new administration, Congress, and others on the importance and sustainability of the rendering industry.

For over the past decade, *Render's* first issue of the year has focused on biofuels and it is again front and center as 2017 begins. As reminded at the National Biodiesel Conference and Expo (see page 10), biofuels continues to be a strong market for rendered fats and oils but challenges for this industry continue. Although obligated volumes of biomass-based diesel are in place through 2018, the \$1-per-gallon biofuels tax credit expired at the end of 2016. Efforts are already underway to inform the new administration and Congress on the importance of this incentive. The biomass-based diesel industry may consider themselves underdogs, but they're a scrappy lot who have had much success in their young existence.

This issue also marks the beginning of *Render's* 46th year serving the rendering and allied industries. Six times a year, these pages are filled with articles and advertisements that we hope provide you – the reader – with the news, information, and resources needed to make the best decisions possible in running your business. If there is anything that has been missing on the pages of “The International Magazine of Rendering,” please don't hesitate to drop us a note telling us what you'd like to see covered. *Render* is a communication tool and hearing from our readers allows us to ensure we are being the best the industry deserves.

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The Infamous First 100 Days

A lot of big promises were made by United States (US) President Donald Trump during the seemingly never-ending primary election season and throughout the general election campaign, particularly as to what he would do during his first days in office. Trump ballyhooed his “Contract with the American Voter” – his agenda for his first 100 days – during the waning days of the 2016 campaign. So what is expected?

The first couple of years in a new president’s first term are considered golden. It is this relatively brief period during which most new chief executives enjoy their biggest achievements. Think President Barack Obama and the Affordable Care Act (ACA), no matter that as this is being written the GOP-controlled Congress is dismantling that Obama legacy item.

However, what must be remembered is the president is constrained by relatively limited executive authority to make big changes in policy and programs. This would explain why several of Obama’s executive orders, alleged to have circumvented Congress, landed the administration in federal court. It is that federal court landing that also complicates the legal status of various rules and program operations. So in essence, the degree to which Trump can fulfill his campaign promises will be directly related to how clever White House, agency, and department lawyers can be, along with the issue priorities of Congress.

Right out of the block, Trump can be expected to focus on his nominee to the US Supreme Court to fill the vacancy left by the late Justice Antonin Scalia. He will also take some perverse glee in sending legislation to Capitol Hill to term-limit members of Congress – three terms, or six years, for House members and two terms, or 12 years, for Senators.

Also early on, Trump said, will be a federal government hiring freeze unless the new hires work in the military, public safety, or public health. His challenge will be what to do about the explosion of contract workers on the government payroll. There are currently about 2.1 million federal employees – a six percent increase during the Obama years – along with 1.3 million military employees, but there are 3.7 million contract players, mainly due to Middle East military and security needs.

Trump famously announced he will “cancel every unconstitutional executive action, memorandum, and order” issued by his predecessor. He has also pledged to cancel all federal funding to so-called sanctuary cities, those that he says ignore federal laws governing the arrest and deportation of undocumented workers.

On the regulatory front, Trump can use the power of his office to order agencies and departments to reverse or outright kill objectionable rules and regulations, just as Obama used such authority to order the rules in the first place. Trump pledged during the campaign that “for every new federal regulation, two existing regulations must be eliminated.” That is a tough one to deliver.

However, the poster child for this kind of executive action is the controversial waters of the US (WOTUS) final rule, or as

the Environmental Protection Agency (EPA) likes to call it, the clean water rule. The mechanism by which WOTUS will be rescinded will generally inform all executive actions to mitigate the Obama rulemaking legacy.

It is WOTUS by which EPA and the US Army Corps of Engineers seek to expand their authority under the Clean Water Act (CWA) to bodies of water not heretofore under CWA protections, including ditches, ponds, and so forth. The old version of the CWA cited EPA/corps authority over navigable waters of the US; WOTUS removes the word “navigable,” effectively opening all waters – permanent or transient – to federal oversight.

At the urging of general business and agriculture, including the National Renderers Association, Congress tried to kill WOTUS on several occasions but failed. The strategy was always to legally force EPA to withdraw the rule and start again but with greater stakeholder input. Trump, however, never talked about the agency starting the process anew; he talked about killing the rule outright.

In this new Congress, the game to end WOTUS has begun. Senate Environment and Public Works Committee members Senators Joni Ernst (R-IA) and Deb Fischer (R-NE) reintroduced a resolution under the Congressional Review Act (CRA) to force EPA to withdraw or formally kill the controversial WOTUS. Ernst and Fischer acknowledge the CWA is important, but also contend the agency process from proposal to final rule was flawed. The CRA resolution is more for show, but it will force the Senate at least into a public vote on WOTUS, something most Democrats hoped to avoid.

Complicating any straightforward move to simply order EPA to rescind WOTUS are two realities. First, the rule is final but enforcement is blocked because two dozen or so states sued to stop the rule, pushing it into review by the Sixth Circuit Court of Appeals in Cincinnati, Ohio. The White House would have to petition the federal court to hold the case in abeyance until the new EPA and Army Corps of Engineers decide what they want to do to make Trump happy. However, Justice Department and EPA attorneys say federal judges may be reluctant to hold the rule since it is already finalized and on hold by court order.

The federal attorneys explained that for the federal government to make WOTUS disappear, the agencies would have to either suspend or withdraw the rule, and then follow the lengthy notice of public comment and rulemaking under the Administrative Procedures Act (APA). This action will take a lot longer than 100 days. The Trump administration would then have to decide if it intended to repropose the rule, and if it did, would have to start from square one.

Similar circumstances will surround other controversial rulemakings now successfully tied up in federal court, including those executive orders exempting certain classes of undocumented workers and their families from deportation, rules to force carbon recapture at new and existing coal-fired

power plants, EPA's seriously confused smog/ozone rule, an unnecessary rewrite of federal overtime rules, and other rulemakings scattered across the federal government.

For itself, Congress is also aggressively pursuing its pledge to lift the federal regulatory burden off the backs of American businesses and entrepreneurs. In the first week of the 115th Congress, which began January 3, 2017, the House, under its banner of a "better way" to govern, approved by a vote of 237 to 187 the Regulations from the Executive in Need of Scrutiny (REINS) Act. This is an ambitious rewrite of the way the executive branch promulgates regulations, including requiring congressional approval for any rule with a price tag to regulated industry of \$100 million or more – a so-called major rule – but limiting congressional review of any pending qualifying regulation to the second and fourth Thursday of each month (seriously).

In a second round of its rush to regulatory reform, House Speaker Paul Ryan (R-WI) tied the Regulatory Accountability Act (RAA) to the REINS Act. The RAA requires federal agencies to choose "the least costly option" when regulating unless an agency can demonstrate a pricier rulemaking is needed to protect the public. Ryan raised eyebrows when he reported at a press briefing that the Obama administration promulgated nearly \$1 trillion in rulemakings – 4,432 rules – during its eight years and those rules required 754 million hours of paperwork by regulated industry to comply. Ryan said the cost of "midnight rules," those published by the administration in the last days of Obama's term, carried a \$6 billion price tag and that most, if not all, of those rules will disappear during the infamous first 100 days.

One of perhaps the most disconcerting public positions taken by the Trump administration is what agriculture generally sees as antipathy toward globalization broadly and trade specifically. Trump has pledged to formally withdraw from the Trans-Pacific Partnership (TPP), but has said he is open to improving the treaty. He also wants to renegotiate the North American Free Trade Agreement (NAFTA) or withdraw from the three-nation trade deal under its Article 2205.

TPP was the whipping boy of bad multination trade pacts during the campaign. Trump did not like it, Hillary Clinton did not like it, and partisan players in both parties did not like it because their party leaders did not like it. Trump's NAFTA declaration – "the worst trade deal the US ever signed" – was generally lost on the public at large. However, both Canada and Mexico have acknowledged a willingness to talk about NAFTA. Mexico particularly has changed its tune from an early-on "heck no" to a "let us talk about these things," predicated, insiders say, on US companies cancelling plans to build facilities in Mexico, talk of a border tax, and a falling peso.

Beginning on November 9, agriculture groups took no chances that their pro-trade message might get lost in the rush of Trump's first 100 days. Letters of every stripe circulated around Washington, DC, hammering home to the Trump White House the importance of trade to the growth of domestic agriculture. One letter sought to cast NAFTA in a more realistic, less political light: "The importance of trade to America's farmers and ranchers cannot be overstated. The share of US agricultural production exported overseas is 20

Continued on page 9



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Biomass-based Diesel Delivers but Challenges Ahead

For the United States (US) biomass-based diesel industry, 2016 proved to be a strong year. Producers continued to deliver high-quality, lower carbon intensity fuel across the country in high volumes. As the industry looks ahead in the new year, it faces many challenges but also opportunities for growth.

Blender's Tax Credit versus Producer's Tax Credit

The Biodiesel Mixture Excise Tax Credit, commonly referred to as the blender's tax credit, lapsed at the end of 2016. This incentive provides \$1 per gallon to parties that blend biodiesel and/or renewable diesel into the distillate pool. This credit also applies to nearly all qualifying gallons blended including those that were produced outside of the United States. The US biomass-based diesel industry supports a switch from a blender's tax credit to a producer's tax credit in 2017 and beyond.

Switching to a producer's tax credit benefits American producers, feedstock providers, and consumers in a number of ways. First and foremost, US taxpayer dollars would stop going off-shore to subsidize foreign fuel imports. In 2015 alone, more than \$600 million in US tax dollars went to imported biodiesel and renewable diesel. That amount increased in 2016. This money further incentivized foreign production that, for the most part, already enjoys subsidies from other countries, whether it is from Argentina's differential export tax or companies that are partially owned by other governments. According to the Joint Committee on Taxation, reforming the tax incentive would save US taxpayers \$90 million as imports would no longer qualify for the credit and domestic production grows.

According to the National Biodiesel Board, the change would also mobilize domestic production. Today, there are 3.1 billion gallons of installed capacity in the domestic biomass-based diesel industry that can fulfill growing volumes of this alternative fuel, strengthen energy security, and create

new jobs in communities. With fewer imported gallons, the domestic industry could expand and better utilize existing infrastructure and capacity allowing higher volumes of domestically produced lower carbon intensity products to enter all US markets.

Renewable Fuel Standard

In November 2016, the Environmental Protection Agency (EPA) finalized the 2017 renewable volume obligations (RVO) for cellulosic, advanced, and total renewable fuel, as well as the biomass-based diesel minimum volumes for 2018. EPA increased the total advanced biofuel RVO above its proposed 4.0 billion gallons to 4.28 billion gallons, a 670-million-gallon increase over 2016. Biomass-based diesel supplied the vast majority of fuel used to meet the advanced biofuel RVO in 2016 and should continue to do so in the coming years.

EPA also confirmed the biomass-based diesel RVO of 2.1 billion gallons for 2018, which is 100 million gallons more than the final 2017 level and 200 million gallons above the 2016 minimum volume. In doing so, EPA stated they believe approximately 2.9 billion gallons of biodiesel and renewable diesel can be produced, distributed, and consumed in 2017.

Feedstock Availability

As domestic production increases, the demand for rendered fats and oils will continue. In the 2017-2018 final RVO from EPA, there was extensive discussion surrounding the perceived limited availability of qualifying feedstock for growing volumes of biodiesel and renewable diesel. While both the rendering and biodiesel/renewable diesel industries understand that this is not accurate, EPA and other concerned groups must be informed about industry advances and changes in technology that allow more from less. To successfully address this concern would allow for continued growth in volumes finalized by EPA. **R**

Thriving in the California Biodiesel Market

Biodiesel has been at the epicenter of California's low carbon fuel standard (LCFS) since its inception. An even greater boost is coming to the biofuels market with the passage of Senate Bill 32, which requires greenhouse gas emissions reductions of 40 percent below 1990 levels by 2030. The California Biodiesel Alliance (CBA) is highlighting how businesses can thrive in the state's flourishing but complex biodiesel market at its sixth annual California Biodiesel Conference on March 1, 2017, in Sacramento.

On the heels of the re-adoption of the LCFS in 2016, one conference panel will discuss the role of feedstocks and other factors in carbon intensity scoring as well as sustainability and indirect land use change issues and the planned mandatory

LCFS enforcement rulemaking. The array of unique and complex policy issues will also be addressed by CBA's lobbyist and high-level state agency staff from the California Air Resources Board (CARB), the California Energy Commission, and the California Department of Food and Agriculture. Developments in Canada and Oregon will also be discussed.

Featured speakers include CARB member Dean Florez and National Biodiesel Board Chief Executive Officer Donnell Rehagen. Conference attendees are welcome to attend an open CBA member meeting after the conference for a discussion of current and future organizational issues and policy directions. More information is available at californiabiodieselalliance.org. **R**

percent by volume, with some sectors being much higher.” The groups explained that targeted economies – including China, Mexico, and Canada – are major US markets.

“US agricultural exports in FY [fiscal year] 2016 were nearly \$27 billion to China, over \$24 billion to Canada, and nearly \$19 billion to Mexico,” the groups wrote. “Disrupting US agricultural exports to these nations would have devastating consequences for our farmers and the many American processing and transportation industries and workers supported by these exports.”

Also a head scratcher for most of agriculture is Trump’s decision to put the Department of Commerce in charge of trade initiatives for the administration. Trump wants Commerce Secretary Wilbur Ross to “lead and steer” his administration’s trade efforts, aided and abetted by former President Ronald Reagan trade guru Robert Lighthizer, Trump’s choice to be US Special Trade Representative (USTR), and Peter Navarro, chair of Trump’s White House Nation Trade Council.

Up to this point USTR was the lead administration on trade negotiations. Commerce lacks any expertise in treaty negotiating, generally being thought of as a statistical repository, particularly when it comes to ag trade. The trade council is new so no one has a clue what it is supposed to be doing.

Senate Agriculture Committee Chair Pat Roberts (R-KS) met with Lighthizer early on, stressing to him the need for agricultural exports to be protected and “an aggressive trade policy that involves agriculture is absolutely essential.” Roberts said the Trump camp might be overcomplicating its trade agenda by reorganizing the players.

Trump will jump start, but he cannot complete several priorities without the blessing of Congress. The two biggest goals of both Trump and Ryan are federal tax reform and infrastructure investment. On the tax reform front – an effort expected to take much of the first two years of Trump’s term – both GOP leaders want to see personal and corporate taxes restructured, with corporate rates slashed as first priority. The logic is that the top US corporate tax rate at 35 percent is so anti-competitive with the rest of the planet as to be the single motivator for US corporations who have stashed nearly \$1 trillion in profits overseas where tax rates are friendlier. A lower corporate tax rate, coupled with lower and fewer individual rates, means more US investment, more hiring, and so on.

While the devil will be in the details, Ryan has already begun his drive to lower the corporate rate to around 15 percent while offering a one-time repatriation of overseas profits. Trump is generally in line with this move as a major engine to drive economic growth and both agree a big chunk of the price tag for this reform will be the closing of various and sundry loopholes, several of which benefit only a single industry or a handful of companies.

On infrastructure, this is a rewrite of the old Obama “shovel-ready” investment. Trump campaigned on the need to fix roads, bridges, waterways, and airports, and pledged to lift federal restrictions on “\$50 trillion worth of job-producing American energy reserves, including shale, oil, natural gas, and clean coal.” He plans to cancel “billions” in payments to the United Nation’s climate change initiatives, using the savings to “fix America’s water and environmental infrastructure.”

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Biodiesel Keeps Moving Forward

Despite uncertainties

By Tina Caparella

24 years ago, a trade association was created for a product that didn't exist. Today, the National Biodiesel Board (NBB) and the industry it represents remain committed to the cause – increasing production, usage, and support of biodiesel and renewable diesel. Such was the message at the National Biodiesel Conference and Expo held in mid-January in San Diego, California.

"We've come far, but we're still big underdogs," declared NBB Chief Executive Officer Donnell Rehagen as he kicked off the three-day event. NBB was formed in 1992 as a research organization to determine if biodiesel could be made from soybean oil, Rehagen explained to the 850 attendees. The organization spent several years funding and overseeing research at the University of Missouri to determine the viability of turning soybean oil into fuel. Early pioneers like Ag Processing Inc., Renewable Energy Group, and others invested in some of the first biodiesel plants in the late 1990s.

"The industry started to really grow after the passage of the biodiesel tax credit in 2004," Rehagen stated, sharing stories of biodiesel producers who built facilities in rural communities across the country and lent their voices and advocacy in federal and state government policy.

"In less than a decade, we went from just a few major producers to 89 NBB member production facilities across the country and a mandate for billions of gallons of production," NBB Chairman Kent Englebrecht, Archer Daniels Midland Company, told attendees. "But we were not always victorious." He shared the challenges NBB and member companies have continually battled through – recession, expiration and reinstatement of tax credits multiple times, and lenders who didn't understand the industry.

"It's important to remember that even through the worst of times, even when we were pushed down, we've managed to rebound and continue on a path of growth," Englebrecht said. Today, biodiesel and renewable diesel production supports 47,400 jobs and \$1.9 billion in wages in the United States (US). The industry's total economic impact is \$8.4 billion across many sectors, which could escalate to \$14.7 billion and 81,600 US jobs if the Renewable Fuel Standard (RFS) obligated volumes for biomass-based diesel increased to 2.5 billion gallons per year, according to NBB.

Rehagen announced that the association is expanding its staff in Washington, DC, with the addition of another lobbyist and an advocacy director for outreach to national and state

elected officials. NBB state legislative efforts currently account for one billion gallons of incentivized demand for biodiesel in the United States.

"It's certain that these are uncertain times," Rehagen commented. "But as Albert Einstein said, 'Life is like riding a bicycle. To keep your balance, you must keep moving.' And there's no question that NBB is moving forward to fuel the future."

Anne Steckel, NBB Federal Affairs, shared the industry's success stories in Washington, DC, over the past year, including a 280,000-gallon increase in the RFS advanced biofuel volumes after a record number of senators signed on to the NBB's letter supporting stronger growth. She said despite the "noise" in the US Capitol and the expiration of the tax credit, "We've been here before...and we prevailed."

"While I am proud of our continued efforts, we can't let up," Steckel continued, highlighting three important things the industry and NBB must do in order to be successful in 2017.

First, key messages must continue to be heard and understood by policymakers, such as the 47,000 jobs and \$1.9 billion in wages the biodiesel/renewable diesel industry supports; that a producer's tax credit would be a powerful economic stimulant by creating thousands of additional jobs and billions of dollars in economic activity; and that biodiesel and renewable diesel are key to diversified fuel options that increase America's energy security.

Second, support of the NBB Political Action Committee allows attendance at events with members of Congress to discuss the benefits of biodiesel and renewable diesel. Third, NBB and the industry must continue to be highly engaged politically with allies on Capitol Hill and those inside President Donald Trump's administration.

"By continuing to stay unified, we can continue to be a positive and effective force," Steckel concluded.

John Schwegman, director of commercial and medium duty product for General Motors, took the stage at the opening session to announce the automaker is expanding its support of B20 (20 percent biodiesel blended with petroleum diesel) to its entire line of diesel vehicles. With eight new diesel vehicle options hitting the market in 2017-2018, General Motors now offers a full line of 20 different diesel models, from passenger cars, pickups, and sport utility vehicles, to commercial vans and low cab forward trucks – all of which are approved for use with B20.

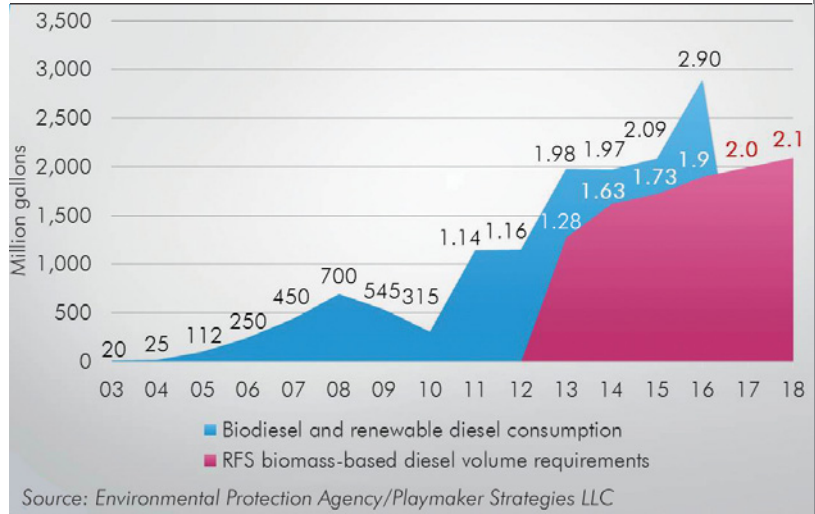
“Diesel propulsion deserves wider consideration by fleet managers across the country,” Schwegman said. “With biodiesel production and retail distribution expanding, and so many proven benefits, we believe more fleets will embrace the technology as part of their sustainability plans.”

Breakout sessions focused on various topics, from how biodiesel actually makes food cheaper by decreasing the price of protein due to an outlet for leftover oil and fat, to examining California’s thriving but complex low carbon market. Jennifer Case, New Leaf Biofuels in San Diego where the conference was held, shared that in 2006, 2 million gallons of biodiesel was produced in California. In fiscal year 2016, 360 million gallons of biomass-based diesel (which includes renewable diesel) was consumed in the state, double the amount just two years prior. Of that amount, 142 million gallons were biodiesel, almost five percent of the state’s total diesel consumption.

As the sixth largest economy in the world, California and its climate change legislation are on the radar of the biodiesel and renewable diesel industry. The state’s cap and trade program, which is now considered a tax, officially expires in 2020 unless the legislature takes action. California has appropriated \$3.4 billion in cap and trade auction proceeds to reduce emissions by funding transit and high speed rail, affordable housing near jobs and schools, forest and watershed improvements, healthy soils, recycling opportunities, and home energy upgrades. Of the \$2.1 billion earmarked for 2017-2018, \$363 million is slated for reduction of petroleum use by 50 percent.

Ryan Lamberg, California Biodiesel Initiative, explained the various standards, regulations, and plans put in place to reduce the state’s greenhouse gas emissions – most of which comes from transportation – 40 percent by 2030. He showed that of the low carbon fuel standard (LCFS) credits generated in California in fiscal year 2015-2016, 41 percent was from ethanol, 20 percent came from biodiesel, and 22 percent was from renewable diesel. The LCFS projected volumes for

Chart 1. US biomass-based diesel market, 2003-2018



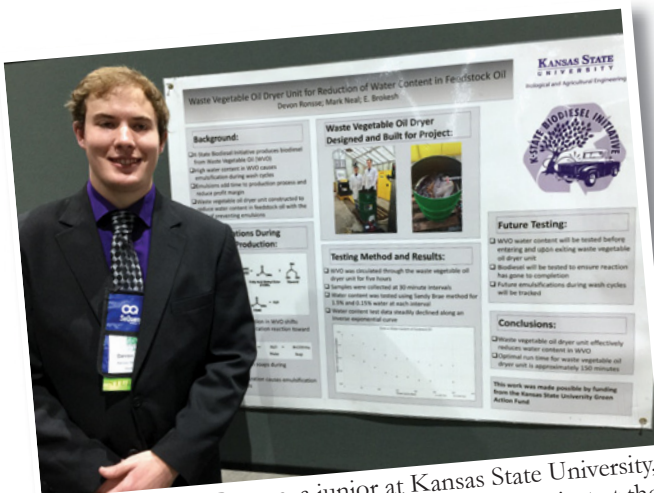
biomass-based diesel use shows substantial growth, from nearly 600 million gallons in 2022 to 1.2 billion gallons by 2024 and 1.6 billion gallons by 2030.

One of the more popular sessions was a look ahead at the Environmental Protection Agency (EPA) and its RFS program. Paul Argyropoulos of EPA, appearing via videoconference due to the presidential inauguration activities in Washington, DC, confirmed that the RFS volume obligation rules are complex, but assured the industry the agency is on track and already working on the 2018 and beyond volume requirements. He said EPA anticipates having a very busy year with the new Trump administration.

“We have a lot before us, but we look forward to continually working with you,” Argyropoulos told the audience.

Larry Shafer, Playmaker Strategies, reported that since July 2010 when the current RFS went into effect, US biomass-based diesel consumption has increased by 900 percent to 2.9 billion gallons in 2016 (see chart 1 above).

Continued on page 12



Devon Ronsse, a junior at Kansas State University, presents his waste vegetable oil dryer unit project at the Next Generation Scientists for Biodiesel poster session. The unit reduces water content in used cooking oil collected from the school’s dining halls.



Anne Steckel, NBB Federal Affairs, discusses the increasing need to work with lawmakers.

“That’s an incredible job,” he said. NBB’s goal is to increase the RFS advanced biofuels volume, under which biodiesel and renewable diesel qualify, beyond the 4.28 billion gallons EPA set for 2017, 670 million gallons higher than in 2016.

Susan Olson, Genscape, informed conference attendees that biodiesel imports doubled to 695.3 million gallons in 2016 from 352.8 million gallons in 2015. Renewable diesel imports were 209.0 million gallons last year compared to 204.7 million gallons in 2015, most of it going to the California market.

“Imports from Argentina exploded in 2016,” she commented, from 196 million gallons in 2015 to 426 million gallons last year, 47 percent of total biomass-based diesel imports. Olson said it is possible to see even more imports from Argentina in 2017 due to capacity and there being no other market for their biofuel.

The most popular session of the conference was the spotlight on Washington, DC, and what to expect with the new administration and Congress as there is a lot of uncertainty. Former Senator Byron Dorgan, a long-time supporter of biodiesel, began the panel discussion by saying Trump likes success so the hope is he will recognize what the biodiesel industry has done for jobs in rural communities and be supportive. Lobbyist Jim Massie chimed in that during his campaign, Trump saw the growing rural economy, toured farm states, and has since realized that these are the people who got him to the White House so Massie too feels Trump will be supportive of the alternative fuels industry.



Former Senator Byron Dorgan talks to attendees.

Timothy Urban, Washington Council Ernst & Young, talked about the administration’s and Congress’ goal of tax reform, the “P’s” of Washington – policy, politics, processes, and personality – and the 36 temporary tax provisions that expired December 31, 2016, which include the biodiesel tax credit.

Dorgan encouraged audience members to continue taking the industry’s good messages – including how biomass-based diesel can help revitalize the economy – to policymakers in Washington, DC.

“Washington is a steep hill to climb,” Dorgan commented. “You have a need for good policy to continue the growth of this industry.” **R**



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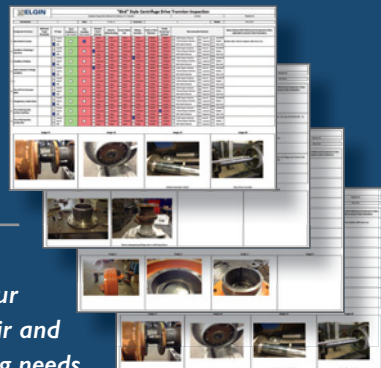


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Biodiesel Industry Honors Champions



The biodiesel industry saw record market growth last year and the National Biodiesel Board (NBB) “Eye on Biodiesel” awards for 2017 highlight champions who have had major impacts on the use of biodiesel. All were honored in mid-January during the National Biodiesel Conference and Expo in San Diego, California.

Climate Leader Award –

Costa Constantinides, New York City Council member

New York City has been a leader on biodiesel and clean air issues, taking a giant leap forward in 2016. In September, the New York City Council overwhelmingly passed a bill introduced by Constantinides creating a fuel standard for heating oil that includes increasing amounts of biodiesel over time. The measure grows the amount of biodiesel in heating oil in the city from the current 2 percent to 5 percent on October 1, 2017. The blend then moves to 10 percent in 2025, 15 percent in 2030, and 20 percent in 2034.

Constantinides has long been a champion of improving air quality in the city and recognizes policies that reduce the fossil fuel content of heating oil and increase the use of cleaner-burning, renewable energy that pay dividends from a health perspective. He represents the New York City Council’s 22nd District and serves as the chair of the council’s Environmental Protection Committee.

It is estimated that the increase from a 2 percent biodiesel blend to a 5 percent blend in the city would reduce the emissions equivalent to taking 45,000 cars off the road with the increase to 20 percent the equivalent of removing more than a quarter of a million cars.

National Energy Leadership Award –

Iowa Governor Terry Branstad

The state of Iowa is the number one biodiesel producing state in the country with 13 plants thanks in large part to strong leadership within the state. In 2016, Branstad rallied support for and signed legislation that extended the Biodiesel Production Credit through 2024, extended and expanded the Biodiesel Promotion Retail Tax Credit also through 2024, and secured another year of funding for the state’s successful biodiesel and ethanol blender pump program, the Renewable Fuels Infrastructure Program.



Costa Constantinides shares his passion and work toward using biodiesel to help improve New York City’s air quality after receiving his NBB award.

Additionally, the governor has provided critical national leadership through his service on the Governors’ Biofuels Coalition. These efforts have a major impact on the national energy landscape as more American-made, environmentally-friendly, advanced biofuels like biodiesel make their way into the marketplace.

Industry Partnership Award –

The Illinois Soybean Association Checkoff Program and the American Lung Association in Illinois for the B20 Club

Together, the two organizations have created a unique and impactful program in Illinois called the B20 Club. This program is focused on raising the profile of exemplary fleets that use a blend of 20 percent biodiesel, or B20, in

any type of diesel engine. Members range from municipalities to school buses to over-the-road trucking companies.

Sharing their success stories with other fleet managers and decision makers has had a significant impact on those who have been hesitant to use B20 for reasons ranging from economics to engine warranty questions. The B20 Club showcases real stories of how, when, and why members began using B20, what their experiences have been since the switch, and provides peer support for fleet managers and other decision makers who are considering B20 for their own fleets.

Influence Award –

Ron Flowers, Greater Washington, DC, Clean Cities

Ronald “Ron” Flowers is the executive director of the Greater Washington, DC, Region Clean Cities Coalition, a post he has held since 2010. He has more than 45 years of service in the public and private sector and has worked closely with NBB as well as the National Biodiesel Foundation, resulting in the use of thousands of gallons of B20 blends.

Flowers’ knowledge of fuels and fleets was instrumental in transforming the nation’s capital region from a community of biodiesel naysayers to biodiesel believers and in getting the DC government, Smithsonian Institution, American University, and others to switch to biodiesel. Many of these fleet staff not only converted their own fleets but became champions of biodiesel who mentor their peers to join them in using biodiesel to improve air quality and reduce American’s dependence on foreign oil.

R

Renewable Hydrocarbon

Diesel 101

By Tina Caparella

Biodiesel has been an emerging advanced biofuel in the United States for more than two decades while renewable diesel has only come on the market in recent years. Both are biomass-based diesel fuels that are highly effective in reducing greenhouse gas emissions and providing energy independence.

Because of their beneficial properties and various state and federal policies and incentives, biodiesel and renewable diesel are projected to continue growing in production and consumption. Although both are manufactured utilizing some of the same feedstocks, each is unique in production, final product properties, and end use.

At the 2017 National Biodiesel Conference and Expo held in mid-January in San Diego, California, Dave Slade of Renewable Energy Group (REG) provided a layman's explanation of what exactly is renewable diesel, or what the industry has renamed renewable hydrocarbon diesel (RHD) to differentiate it from straight oil products being labeled renewable diesel. Currently there are only two RHD facilities in the United States – REG's 75 million-gallon-per-year plant in Geismar, Louisiana, and Diamond Green Diesel's 150 million-gallon-per-year facility in Norco, Louisiana, which is a joint venture of Darling Ingredients Inc. and Valero Energy Corporation.

Similar to petroleum diesel, RHD is a hydrocarbon fuel – hydrocarbons are molecules consisting of only carbon and hydrogen (i.e., no oxygen, sulfur, or other atoms) – made from animal fats, used and virgin oils, and other biological feedstocks



REG's renewable hydrocarbon diesel plant in Geismar, Louisiana.

known as triglycerides. First the fats and oils are pretreated to remove impurities. They then go through hydrotreating, which is reacting molecules with hydrogen to remove atoms other than hydrogen and carbon, and isomerization, which changes the structure of the hydrotreated molecules without changing the

number of atoms involved. The next step in the process is fractionation to separate the hydrocarbons into finished products – RHD that meets ASTM International D975 standard for diesel fuel, naphtha, and renewable liquefied petroleum gas, which is predominantly propane from the glycerin portion of the triglycerides.

By comparison, biodiesel is a methyl ester manufactured from the same oils and fats (triglycerides) by transesterification, a chemical reaction with the alcohol methanol. Its resulting products are methyl esters that must meet ASTM D6751 to be sold as biodiesel and glycerin. One benefit of the RHD process is that removal of free fatty acids (FFAs) in pretreatment is not necessary as it is less sensitive to FFAs – unlike in biodiesel production – giving animal fat and used cooking oil an advantage as a lower-cost RHD feedstock.

ASTM D975 now specifies diesel fuel must contain hydrocarbons. Slade shared

that REG'S RHD specification limits are similar to ASTM D975 with a few exceptions shown in table 1. He stated that RHD is just another diesel fuel but with greater benefits than petroleum, such as reduced emissions, higher cetane (an indicator of combustion quality), and lower aromatics and sulfur.

RHD can be used in existing diesel engines without modification and blended at any level with petroleum diesel or biodiesel. It is approved for pipeline transport as a blend component and included in the Energy Policy Act of 1992 standards to meet a portion of the alternative fuel vehicle acquisition requirements. RHD has also been tested by the Environmental Protection Agency and passes its Clean Air Health Effects testing conditions, qualifies for state and federal incentives, and reduces nitrogen oxides in diesel engine exhaust. It has an additional advantage as a potential low-carbon fuel option for aircraft.

R



Dave Slade of REG

Table 1. REG renewable hydrocarbon diesel specifications versus ASTM D975 petroleum diesel

Property	Current REG limit	D975 ULSD limit
Copper corrosion, max	No. 1b	No. 3
Sulfur, max (parts per million)	5	15
Aromaticity, max (% volume)	2	35
Cetane number, min	65	40
Cloud point, max (Celsius)	<-10	Report

*ULSD – ultra-low sulfur diesel

A Little Tallow with that Cash?

The Bank of England's new five-pound note is made of thin, flexible plastic...and tallow. When asked on its Twitter account back in November, the bank confirmed a trace of tallow from animal fat is in the new polymer five-pound note. The same polymer is used in New Zealand's new banknote and "may" also be in Canada's new money, so said the Bank of England. The supplier of the polymer substrate for both countries' banknotes, Innovia Security, verified a "trace amount of tallow" (about one percent of the additive, according to the bank) is in the polymer to assist with manufacturing and processing. The new note features a portrait of Winston Churchill and is favored for its durability, water resistance, and difficulty to counterfeit. It will replace the old paper notes that will be removed from circulation in May 2017.

Yet, not everyone is happy, notably vegans and vegetarians. As of mid-January, over 130,000 electronic signatures were received in an online petition asking for tallow to be removed from the notes. However, comments to an article that appeared on the New Zealand Business Day website overwhelmingly support the additive. The Bank of England, which had printed 440 million new five-pound notes as of November 2016, has not announced plans to change the makeup of its bills.

Alan Sentman, a chemist at Polymer Solutions, told *The Washington Post* that small beads of tallow are likely used to help the currency feed smoothly through machines. He said the bank could produce the notes with a vegetable alternative but that it is a bit cheaper with animal fat. **R**

Glycerin Market to Reach \$2.1 Billion by 2024

The global glycerin market is estimated to be worth \$1.4 billion in 2016 and increase to \$2.1 billion by 2024, according to a new publication titled, *Glycerin Market: Global Industry Analysis and Forecast, 2016-2024* by Persistence Market Research. The report analyzes the global glycerin market performance over an eight-year forecast period and offers insights into the key factors and trends driving the market.

Increase in the production of biodiesel supported by governmental regulations over the mandatory blending of biodiesel has resulted in an abundance of glycerin across the world. Industrial focus on the utilization of glycerin in novel applications and for biochemical production are the driving growth factors for the global glycerin market. However, fluctuations in supply as well as availability of substitutes are likely to hinder growth over the forecast period.

Among regions, sales of glycerin in Asia-Pacific were \$563.6 million last year and are expected to reach \$920.6 million by 2024. The region is predicted to emerge as the most attractive market for glycerin by the end of the forecast period. North America accounted for nearly 16.3 percent of overall revenue from glycerin sales in 2016 at approximately \$230.2 million and is anticipated to reach \$338.6 million by 2024. **R**

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EPA Finalizes RFS Volumes, Industry Hits Record

In late November 2016, the United States (US) Environmental Protection Agency (EPA) finalized increases in renewable fuel volume requirements across all categories of biofuels under the Renewable Fuel Standard (RFS) program for 2017 and for biomass-based diesel for 2018. This is positive news for the rendering industry as more than 30 percent of US biodiesel and renewable diesel is produced using rendered animal fats and used cooking oils.

Under the new RFS final rule, biomass-based diesel requirements would increase to 2.1 billion gallons in 2018, up from 2.0 billion gallons in 2017 and 1.9 billion gallons in 2016. Biomass-based diesel—a diesel subset of the overall advanced biofuel category—is made up of biodiesel and renewable diesel. Additionally, the new RFS rule increases advanced biofuels to 4.28 billion gallons in 2017, up from 3.61 billion gallons in 2016 with biomass-based diesel continuing to fill a large portion of the advanced program.

EPA final RFS volume requirements		
	2017	2018
Cellulosic biofuel (million gallons)	311	n/a
Biomass-based diesel (billion gallons)	2.0 ¹	2.1
Advanced biofuel (billion gallons)	4.28	n/a
Renewable fuel (billion gallons)	19.28	n/a

1. The 2017 biomass-based diesel volume requirement was established in the 2014-2016 final rule December 14, 2015.

However, as of press time, EPA has delayed the effective date of the final rule to March 21, 2017, to allow officials time to further review new regulations per a memorandum issued by the assistant and chief of staff to President Donald Trump. This regulation was one of 30 published by EPA since October 28, 2016, delayed by the agency.

The National Renderers Association (NRA) submitted regulatory comments to EPA last summer supporting increases in the RFS with guidance from its Biofuels Committee and in coordination with the National Biodiesel Board (NBB). Per NBB, any future increases in the RFS will likely be in alternative biofuels (not ethanol) since EPA set the ethanol RFS at its maximum legal limit. However, still unknown is the position of President Donald Trump’s new administration on alternative fuels coupled with serious interest to overturn the RFS in the new Congress.

The RFS levels finalized might have been higher if EPA had not been concerned about feedstock availability in 2017-2018. However, based on regulatory comments from NRA, NBB, and others, EPA was persuaded that there would be sufficient supply available to increase the RFS from its proposed level last May. NRA and NBB had advocated even higher RFS levels.

The RFS—a bipartisan policy passed in 2005 and signed into law by President George W. Bush—requires increasing volumes of renewable fuels to be blended into the US

fuel stream. The law is divided into two broad categories: conventional biofuels that must reduce greenhouse gas emissions by at least 20 percent, and advanced biofuels, which must have a 50 percent reduction. Biodiesel is the first advanced biofuel to reach commercial-scale production nationwide and has made up the vast majority of advanced biofuel production under the RFS to date.

In late January, EPA announced that nearly 2.9 billion gallons of biodiesel and renewable diesel were consumed in 2016, an increase of 800 million gallons from 2015 and all-time high. At the same time, domestic production rose from around 1.4 billion gallons in 2015 to more than 1.8 billion gallons last year, albeit well below available capacity.

Imports of biodiesel and renewable diesel also increased in 2016 to over 1.0 billion gallons, up substantially from the estimated 670 million gallons imported the previous year.

The biomass-based diesel category under the RFS alone saw a record 2.6-billion-gallon market last year, allowing the advanced biofuel program to reach over 4.0 billion ethanol-equivalent gallons. These numbers exceeded EPA’s estimates for 2016 and track the National Biodiesel Board’s projections, showing the industry can deliver on the goals set by Congress.

EPA estimates total biodiesel and renewable diesel use to again be about 2.9 billion gallons in 2017 with about one-third of that volume coming from imports.

French Companies turn to UCO

Suez and Total are joining forces to collect and recycle used cooking oil (UCO) into biofuel in France. As part of their 10-year partnership, Suez will supply 20,000 metric tons of UCO a year to Total, who will process it into biofuel at its La Mede biorefinery, France’s first and one of the largest in Europe.

Currently, 45,000 metric tons of UCO is collected annually in France out of an estimated 100,000 metric tons countrywide. The partnership between Suez and Total will increase the amount of UCO collected by more than 20 percent and improve its conversion through a short-energy production loop beneficial to the environment.

Iowa Biodiesel Sets Record

Iowa’s biodiesel production last year reached a recording-breaking 297 million gallons, surpassing the 242 million gallons produced in 2015 by 55 million gallons. The 23 percent increase is largely attributed to policy certainty at the federal level during 2016, including the biodiesel tax incentive and Renewable Fuel Standard. State-level policies targeting higher biodiesel blends, such as Iowa’s excise tax differential on 11 percent biodiesel blends with petroleum diesel, also helped drive demand.

Compared to 2015, soybean oil remained the largest feedstock for Iowa biodiesel production at a steady 66 percent. Animal fats dropped slightly to 14 percent of production, while corn oil held at around 10 percent. Used cooking oil and canola oil doubled their 2015 numbers, combining to account for roughly 10 percent of 2016 biodiesel production in Iowa.

More Prison Sentences for Fraud

Jeffrey Wilson and Craig Ducey were sentenced in December to serve prison terms of 120 months and 74 months, respectively, for their roles in multi-million-dollar fraud schemes involving biodiesel tax credits, renewable fuel credits, and shares of Imperial Petroleum Inc. In addition, Chad Ducey was sentenced to an 84-month prison term for his role in the same schemes. These defendants were the last to be sentenced from a group of seven charged co-conspirators. The others, Joseph Furando, Katirina Tracy, Brian Carmichael, and Chris Ducey were sentenced at prior hearings. Although charged in three separate cases, all the defendants participated in fraud involving federal incentives to produce renewable fuels, specifically biodiesel.

The December sentences were the first to address securities fraud charges leveled against Wilson and Craig Ducey. That fraud stemmed from lies those defendants told in the course of their dealings with investors, auditors, and the Securities and Exchange Commission (SEC) while representing Imperial Petroleum. Wilson, president and chief executive officer of Imperial Petroleum, drafted and certified the accuracy of Imperial's quarterly and annual reports and made

those reports available to the investing public through filings with the SEC. He also lied to the company's outside auditor to keep him from learning of the scheme. In April 2015, Craig Ducey admitted to related crimes and began cooperating with United States authorities; he testified at Wilson's trial and the court recognized his assistance by giving him a lesser sentence than Wilson.

The securities fraud began when Wilson learned that e-biofuels LLC – a business that Wilson arranged for Imperial Petroleum to buy – was falsifying paperwork to claim incentives for biodiesel it had not manufactured. As e-biofuels managers fraudulently claimed millions in federal tax rebates and other incentives that had no basis in real manufacturing, Wilson directed the managers to move more gallons of such fuel rather than incur the cost associated with legitimate biodiesel production. Despite their knowledge that the e-biofuels facility was dormant, Wilson and Craig Ducey told investors, auditors, and SEC that it made millions of gallons a month from raw materials like chicken fat. This defrauded biodiesel buyers – who were duped into taking bad tax credits and renewable fuel credits – and also defrauded investors.

Chad Ducey was sentenced for his role in the underlying wire, tax fraud, and environmental crimes that were hidden by the securities fraud (he was not charged with securities fraud). He owned e-biofuels together with his brother Craig Ducey until they sold it to Imperial Petroleum. Chad Ducey was intimately familiar with how the e-biofuels facility worked and knew that it was not manufacturing biodiesel between

Continued on page 23



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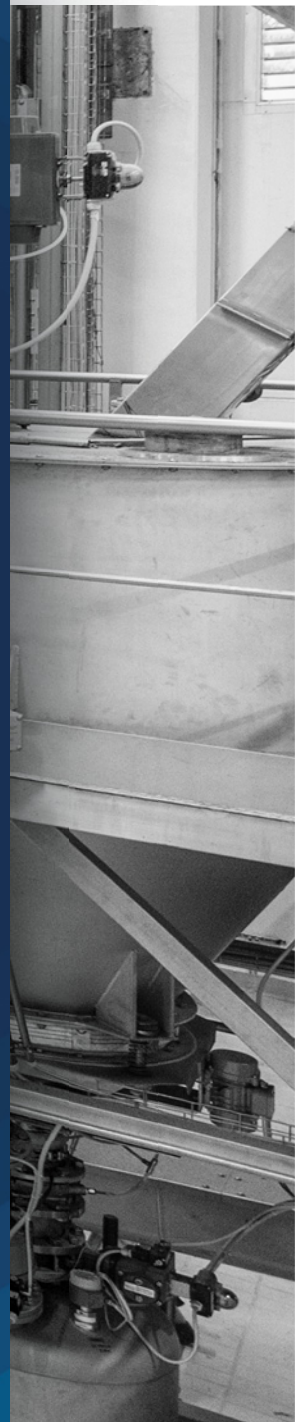
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Looking Ahead in 2017

As I write this column, it is early January and snowing with near-zero temperatures outside. The National Renderers Association (NRA) wishes everyone a prosperous and healthy New Year. The coming year offers a lot to look forward to.

This year will bring interesting and perhaps unexpected rendering challenges to navigate as well as a new presidential administration and Congress. Opportunities will come up so the rendering industry must be sharp to turn them into advantages. Agriculture is cyclical so better times will eventually come with stronger prices and improved returns. The challenge is to weather the 2017 headwinds until economics improve.

Looking into 2017, NRA's programs and staff will focus on improving opportunities for renderers and their business partners. The association's rendering members represent over 95 percent of production in the United States (US) and Canada. In addition, NRA's allied members provide important goods and services to the rendering industry. The future of each is linked to the other.

This year, NRA's programs and projects will continue to carry out the association's mission "to advocate for a sustainable food chain, public health, and the environment through the production and marketing of rendered products and services." This mission was adopted recently as part of NRA's 2020 Strategic Plan, which is driving the association's work in 2017 through five key programs: industry information, scientific services, international market development, legislative advocacy, and communications and education. NRA operates by the maxim that all it does must add value to rendering by increasing business opportunities and preventing harm and loss of income for members that can come from many places, such as government regulation or legislation, media coverage, activist attacks, a new disease outbreak, or customer concerns.

Industry Information, Science, and Regulation

NRA's Scientific Services continues to closely track implementation of the Food Safety Modernization Act (FSMA). This year will be the first full year the rendering industry must comply with the new and extensive regulations so continued training and guidance for members on how to abide with this major law is a high priority. NRA will closely monitor the Food and Drug Administration's (FDA's) inspection process and work with the agency to resolve problems that may arise. FDA said FSMA inspections are not intended to be punitive but instead focus on improvements where needed. NRA will compile experiences of its members so please advise the association of any difficulties with FSMA inspections so NRA can ensure government inspectors comply with the requirements of the new law and the agency's own implementing regulations.

The Animal Protein Producers Industry (APPI) will offer its annual *Rendering Code of Practice* seminar in June to train preventive control qualified individuals (PCQIs) who are required under FSMA. With over six months of field experience

in FSMA implementation, participants will learn about actual approaches used by inspectors since renderers will have the opportunity to share experiences. This will help NRA staff learn what adjustments may be needed. In addition, NRA agreed to FDA's request for a number of FSMA inspectors to attend this APPI training to increase the chances that industry and regulators are working from a similar knowledge base about FSMA legal and regulatory requirements.

The *Rendering Code of Practice* will be updated to fully reflect FDA's final FSMA regulations and presented at the APPI training in June. NRA is also working with the American Feed Industry Association (AFIA) to ensure its updated Safe Food/Safe Feed program is aligned with the new code of practice.

NRA will continue to focus on sustainability this year. Education will be a main focus to allow member companies to use general information NRA has developed and tailor it for their own use. This profile will also help other industries and policymakers understand the important role the rendering industry has always played in making the food system more sustainable.

This year, NRA will again work with the American Association of Feed Control Officials (AAFCO) as they continue revising nearly all feed ingredient definitions. AAFCO recently focused on fat definitions and will eventually evaluate protein definitions to meet standards of the FDA Amendments Act that was passed by Congress several years before FSMA was enacted. NRA vigilantly monitors AAFCO meetings because when rendered products are discussed, activists often demand that sick or dead animals be prohibited from rendering as they allegedly create unsafe animal feed. Since FDA officials and feed manufacturers attend these meetings, NRA is there to speak up about the food safety and public health importance of rendering. NRA uses this opportunity to regularly reassure AAFCO about the safety and effectiveness of the rendering process.

In 2017, NRA and the Fats and Proteins Research Foundation will continue to coordinate closely on challenges facing the rendering industry. Research can provide important scientific knowledge necessary to help the industry or to convince a regulator, customer, or skeptical reporter.

Growing Exports and Trade

Since almost 20 percent of US rendered products are exported, NRA's international market development program plays an important role in the industry. Its goals are to increase foreign market access for rendered products and promote them to customers overseas. Even though the high-valued US dollar now challenges exports, foreign markets are built and kept over time based on quality, safety, reliability, and service.

In 2017, NRA will work to grow access in a number of foreign markets – such as China, Mexico, Thailand, and South America – while maintaining the current market for used

cooking oil (UCO) in Europe that is at risk from legislative threats. NRA has overseas trade offices in Mexico City, Mexico, and Hong Kong, China, and a team of international export consultants around the world. The association's international market development program is funded through membership dues as well as about \$1.7 million in matching grants from the US Department of Agriculture (USDA) each year.

The first exports of US tallow recently arrived in China and customers were pleased with the product. After lengthy effort, NRA successfully gained access last fall for US tallow into this 100,000 to 200,000 metric-ton-per-year market. NRA encourages more renderers to become registered to export tallow under China's requirements.

A shutdown of non-ruminant protein exports to China was avoided at the end of 2016 due to audits of US plants coordinated by NRA and conducted by China's Administration of Quality Supervision, Inspection, and Quarantine (AQSIQ). NRA coordinated with AFIA and the Pet Food Institute to arrange the AQSIQ trip. The audits had to be completed by a December 31 deadline to keep this important market open.

Gaining entry into Mexico for US ruminant meat and bone meal (MBM) is a high priority in 2017. NRA believes these products should be eligible for export there since Mexico recognizes standards of the World Organization for Animal Health (OIE). The United States is classified as negligible risk for bovine spongiform encephalopathy by the OIE and therefore should be able to export MBM to Mexico. NRA is currently encouraging approval of a new Mexican regulation to allow these exports to occur.

At NRA's recommendation, USDA's Animal and Plant Health Inspection Service (APHIS) has asked Thailand for market access for MBM. New veterinary staff joined APHIS last year and in 2017 NRA will continue educating them about rendering, including providing plant tours.

APHIS's small ruminant rule, which would allow Canadian exports of ruminant small animal products into the United States, is in the final stages of approval at USDA. NRA has called on the agency to finalize this regulation as soon as possible. However, it is on hold until approved by officials of President Donald Trump's new administration.

NRA supports ensuring product integrity throughout the export shipping process. To protect renderers' brands and overseas markets, the association worked with APHIS last year to establish a new audit process. For exports to Indonesia, third-party exporters first must pass an APHIS inspection and then renderers with whom they do business must sign and submit an approval form to APHIS each year. APHIS will only sign off on export certificates for rendered products after receiving these approvals.

Keeping current markets open is just as important as opening new ones. Ill-advised legislation introduced in the United Kingdom would greatly reduce demand for UCO imports from the United States. The rest of Europe could follow and adopt this legislation as well, which would establish an indirect land use change (ILUC) measurement for UCO based on the erroneous belief that the oil is used extensively in feed. ILUC

Continued on page 22

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supporters believe diversion of UCO from feed will increase use of soybean oil to replace it, resulting in increased soybean production and release of more carbon into the atmosphere. NRA believes no ILUC value should be applied to UCO since it is not primarily a major feed ingredient. The association is coordinating opposition to the ILUC proposal with European customers.

Legislative Advocacy

It is a team effort when it comes to NRA's lobbying program in Washington, DC. The association's job is to advocate on behalf of the rendering industry on priority issues affecting the industry's ability to do business and its freedom to operate. One of NRA's greatest political strengths is the rendering industry's huge footprint across the country. Renderers operate in almost every state and in hundreds of congressional districts. This translates into grassroots ability to gain a listening ear of many members of Congress in the House of Representatives and Senate.

In 2017, NRA's priority legislative issues are tax reform and biodiesel, overturning environmental regulations, food waste legislation that could potentially reduce raw material supplies, the new farm bill, and funding from USDA for NRA's international marketing programs. Since "expect the unexpected" is a given in Washington, DC, politics, there undoubtedly will be additional issues that will offer opportunities and dangers for renderers. Much depends upon the actual priorities of the new Trump administration and Congress, which are still being revealed as this goes to press.

NRA's political consultant, Steve Kopperud of SLK Strategies, is NRA's lobbyist on Capitol Hill. This author often accompanies him to educate congressional staff and members of Congress on specifics of the rendering industry and the impacts of proposed legislation. Kopperud has extensive experience in animal agriculture and the feed industry in the Washington, DC, political world.

Each year, renderers come to NRA's Washington Fly-in held in June. They meet with their members of Congress on important rendering issues, partake in an industry issues briefing with top government experts and customers, and attend a legislative breakfast featuring a congressional speaker. This year's fly-in will be especially important. Speakers will talk about what a Trump administration and new GOP-controlled Congress mean for renderers, American agriculture, and the nation. The fly-in also offers outstanding networking opportunities with others in the rendering industry. Mark your calendars for this year's fly-in, June 12-14, 2017.

Communications and Education

Increasing understanding of the rendering industry is a major priority of NRA's 2020 Strategic Plan and is reflected in this year's communications projects. To reach students and excite them about rendering, a "Rendering 101" teaching module was sent in January to university and community college meat science professors at schools across the country. The slide set can be used on its own to teach a session on rendering or be incorporated into a more general curriculum on livestock agriculture. With greater awareness of rendering and its good career prospects, the industry hopes to attract outstanding young talent and build appreciation for its role among future agriculture leaders.

NRA will also adapt this Rendering 101 introduction for use by its members to educate their local communities. It will include slides and a speech that members can tailor for their companies, employees, and local issues.

NRA is updating its popular *North American Rendering* handbook this year to include information on the rendering process, rendered ingredients, and safety as well as pet food, sustainability, biofuels, and other issues that have gained importance since the last guide was published. It will add new material to NRA members' business toolbox and provide a valuable resource for foreign government officials and overseas buyers about the industry. The handbook will be translated for use by NRA foreign offices and export consultants.

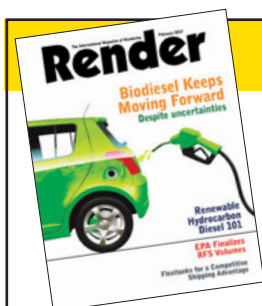
To raise awareness about rendering's positive environmental benefits among restaurant customers, NRA is developing an information kit renderers can use to promote their services to their UCO accounts. The goal is to build customer loyalty, encourage UCO and grease recycling, and provide "green" information restaurants can use to promote their own commitment to sustainability and the environment.

During 2017, NRA plans to maintain a strong web presence and provide publications to keep members up-to-date on information affecting their business.

This Year's NRA Meetings

All NRA members and companies with an interest in joining are invited to NRA's meetings this year that provide unparalleled networking and educational opportunities. Many say these rendering meetings are an essential part of doing business. Mark your calendars for NRA's 2017 Spring Meeting, April 18-20 at The Four Seasons hotel in Chicago, Illinois. NRA's 2017 Annual Convention will be held October 23-27 at The Ritz Carlton in San Juan, Puerto Rico.

With a new political agenda in Washington, DC, major changes are ahead. Some are known but many are not. NRA will be closely involved as Trump and his political appointees take control of government and chart their own agenda. **R**



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July 2010 and June 2011. Nevertheless, he twice persuaded an outside engineer that the facility was a biodiesel producer as essential steps to registering and claiming renewable fuel incentives.

In addition, Chad Ducey worked with Wilson and others to try to establish “beachheads” in Texas, which is a fuel transload facility used to disguise the transfer of biodiesel to an e-biofuels customer from a Texas fuel terminal where it was purchased. Workers at e-biofuels called these remote, no-production transfers “ghost loads” and the transload facility was planned to hide those loads. Ghost loads occurred in Texas and between fuel terminals and e-biofuels customers in Illinois, Indiana, and Pennsylvania.

In a separate case, William Letona, an employee of a New Jersey feedstock collector and processor, pleaded guilty to conspiracy for his role in a scheme to alter and destroy documents following the company’s receipt of a subpoena issued by a federal grand jury. Letona admitted to conspiring with others to obstruct a grand jury investigating the fraudulent generation of renewable fuels credits (known as RINs) and Internal Revenue Service (IRS) tax credits connected to the purported production of renewable fuel. Specifically, documents were falsified and destroyed in order to hide the fact that fuel purchased from a broker by Letona’s employer, Unity Fuels, was sold back to the broker as “recycled vegetable oil blend.” This maneuver enabled RIN and IRS credits to be claimed multiple times on the same material.

Renewable Diesel Arrives in Finland

Neste has launched a renewable diesel made from waste and residues under the brand name Neste MY Renewable Diesel, which replaces the previous brand name NEXBTL, at select service stations in Finland’s Helsinki region. The waste-based fuel reduces greenhouse gas emissions by 90 percent throughout the life cycle of the fuel compared to conventional diesel. The product is priced somewhat higher than Neste Pro Diesel, which contains at least 15 percent renewable diesel.

In addition, Neste has signed partnership agreements with Schenker Oy and Lassila and Tikanoja for use of Neste MY Renewable Diesel. Some 20 Schenker vans and trucks in the Helsinki metropolitan area and six to eight transportation vehicles in Turku will be fueled by the renewable diesel while

select waste transportation vehicles in Lassila and Tikanoja’s Helsinki metro-area fleet will use the fuel. In December 2016, Neste and Lassila and Tikanoja worked together in a campaign that encouraged people to recycle the waste fat from their roast ham to be used as a feedstock for renewable diesel. Lassila and Tikanoja collected the waste fat donated from 40,000 homes and transported it to preprocessing. Neste then turned the fat into 2,600 gallons of renewable diesel.

In late November, the government of Finland approved a new national Energy and Climate Strategy outlining how the country plans to reach both domestic and European Union climate targets by 2030. In the outline, Finland’s government set a goal to have the share of renewables in the Finnish energy pool surpass 50 percent during the 2020s, with a long-term goal of reaching carbon neutrality.

The share of biofuels in the fuel pool will be increased to 30 percent by 2030 as part of emission reduction plans’ special focus on road transport, where the government said the potential for reduction is the greatest. Finland also wants to speed up renewing its car fleet and have 250,000 electric and 50,000 gas-fueled vehicles on the road by the end of the strategy.

Subsidies for investment will be targeted primarily at commercializing new technology and at the burden-sharing sector, with a focus on advanced biofuel facilities. Imports of petroleum products – including petrol, diesel, fuel oil, jet fuel, and kerosene – for domestic use will be decreased by 50 percent from 2005 levels by 2030. The government is also examining further steps to steer Finland toward an energy economy based entirely on renewables by 2050.

Singapore Companies Buy Arkansas Biodiesel Plant

Two Singapore-based companies, Agritrade Resources Ltd. and Solfuels Holdings Pte Ltd., have jointly acquired the former Delta American Fuel LLC biodiesel plant in Helena, Arkansas. The 40-million-gallon-per-year facility originally built to process soybean oil has been idle for an extended period of time. The new owners will retrofit the plant to use multi-feedstocks, including yellow grease, animal fats, inedible corn oil, and refined vegetable oil and expect it to be operational by April 2017.

Agritrade Resources is an integrated energy and shipping solutions provider while Solfuels is an experienced biofuel operator. **R**



The advertisement features a central image of the Zeco Eco Triple OnBoard Filtration unit, which is a white, wheeled machine with a hopper on top and a filter assembly. To the left, there are two smaller images of the unit, one showing the hopper and the other showing the filter assembly. A QR code is located below the leftmost image. To the right of the main image, there is a stylized graphic of a white truck with a trailer, labeled "The Shortening Shuttle". Below this graphic, the text reads "Onsite Filter with the Zeco®eco!" and "ph:800-533-5711". At the bottom right, the website "Shortening-shuttle.com" is listed. The text "Zeco®Eco TRIPLE OnBoard Filtration! Made in USA" is positioned at the bottom center.

Research Paying off in the New Year

The New Year is off to an exciting start for Fats and Proteins Research Foundation (FPRF)-funded research. The portfolio is always changing as researchers come up with novel ideas and FPRF members discuss challenges that research could potentially solve.

One of FPRF's main focus areas is new uses for rendered products. Dr. Mark Blenner at Clemson University is working to develop a bioprocess that will convert the fat in tallow to high-value and high-demand omega-3 fatty acids. One of the biggest factors inhibiting commercial fish production is the lack of omega-3 fatty acids derived from fish oil that is dependent on a decreasing supply of small fish caught. Blenner is using a strain of yeast for the conversion, which is showing promising results. He believes that biosynthesis of these fatty acids could provide an economic, reliable, and sustainable alternative to traditionally used fish oil.

Another example of new use research is an automotive polymer being developed by Dr. Srikanth Pilla, also at Clemson University. The overarching objective of the project is to create high-strength, toughened, self-healing, cross-linked thermosets, and composites from proteinaceous materials from the rendering industry for performance-oriented applications. Pilla is a professor with the Clemson University Research Foundation, one of the most highly respected automotive programs in the United States (US). He is working on the addition of a self-healing capsule to the thermoset so the epoxy could recover, on its own, from scratches. Pilla points out this thermoset would be highly recyclable, leading to a considerably reduced environmental footprint and increasing the bio-friendliness and acceptance of the composite. This in turn will add value to rendered animal proteins.

Clemson University researchers Drs. Alexey Vertegel and Vladimir Reukov are also examining new uses for rendered products by developing a novel natural antioxidant that can be used in pet food and is comparable to commercially available antioxidants. The researchers currently are focusing on shelf-life studies to strengthen their new ingredient petition to the Food and Drug Administration (FDA). Vertegel and Reukov are also collaborating with Dr. Rafael Garcia at the US Department of Agriculture's Agricultural Research Service, who is using the waste product from the antioxidant production as a natural flocculent for wastewater.

One area of research important to both independent and packer members, as well as plants of all sizes, is rendering plant efficiency. Research is being conducted on water quality, odor, and other issues that are common to most rendering facilities.

The current rendering industry standard for wastewater treatment uses dissolved air flotation (DAF) to remove fats, proteins, and other suspended material from wastewater. The DAF process uses flocculants to aid the coagulation and

removal of solids. DAF material is high in fat, which makes it a challenge to deal with. Dr. Christopher Kitchens at Clemson University is working on alternatives to polyacrylamide. If successful, this project has the potential to improve the rendering process by lowering the amount of fats and polyacrylamide in wastewater and provide the ability to recover those fats.

Two more Clemson researchers, Drs. David Ladner and Yi Zhang, are also focusing on improving wastewater by developing a field deployable system for testing different membranes. This project builds on previous FPRF-funded research that determined some membranes worked as well as added polymers or other additives at reducing fat in the wastewater system. These "pallet systems" could be used to field-test membranes in a plant environment and could be vital for scale-up.

Drs. Daniel Whitehead and Frank Alexis at Clemson are developing nanoparticles to deal with odor issues that are a common problem in most rendering plants. They have created the nanoparticles, tested them for selectivity of malodorants, determined they are nontoxic and biodegradable, and are working to optimize the synthesis of the materials on a greater scale. The researchers are also testing and refining the nanomaterials at the plant level rather than the benchtop, and performing an FPRF-funded project to determine if some of these nanoparticles exhibit antimicrobial properties.

"We envision that these novel materials might provide a safe and reliable method: (1) to decontaminate work surfaces at rendering sites [including raw material staging areas, raw material front-end loaders, raw-material trucks, and grease collection bins]; and (2) as a potential nontoxic additive or filter treatment for rendered products, especially fats, to prevent bacterial recontamination during trucking," Whitehead and Alexis reported.

Dr. Greg Aldrich at Kansas State University is researching flow behavior and spray coating efficiency during the production of rendered protein meals so that antioxidants can be used in the most efficient manner. The project was intended to characterize the flow properties of animal protein meals by mathematically modeling the material as a bulk solid. The intent was to use this more explanatory approach in creating a baseline for future work and engineer a more ideal system to achieve optimized particle sizes, conveyance equipment, and topical application equipment.

FPRF has also co-funded several new projects with the Pet Food Institute and National Pork Board. Dr. Merlin Lindemann at the University of Kentucky is beginning to examine the effect of different fat sources and vitamin E on antioxidant status, carcass characteristics, and meat quality of pigs grown to a heavy slaughter weight. The researchers believe that fatty acid impacts on human health are an important area of



Fats and Proteins Research Foundation

research and the same ill-health effects of a diet high in n-6 fatty acids that exist in humans undoubtedly exist in pigs. This project will provide accurate, statistically-valid information about pig health and pork quality that will be increasingly meaningful as pigs are taken to heavy slaughter weights.

Drs. Valentina Trinetta, Cassandra Jones, and Aldrich, all at Kansas State University, are starting a project to identify the major factors impacting the presence of *Salmonella* in animal fat, which is pertinent for the continued use of this beneficial product by the pet food industry. The objective of this research is to identify the roles of moisture, storage temperature, contamination type, and contamination level on *Salmonella* species concentration over time. This research is vital to both the rendering and pet food industries as *Salmonella* is a major concern in feed safety.

FPRF has a novel portfolio of ongoing research. The focus is currently on rendering plant issues and novel, high-value non-feed uses for rendered ingredients. A number of multiyear research projects may turn into possibly patentable products so stay tuned. **R**

USDA Funds Overseas Programs

In November 2016, the United States Department of Agriculture's (USDA) Foreign Agricultural Service (FAS) awarded \$200 million to more than 70 US agricultural groups to help expand export markets for US farm and food products through the Market Access Program (MAP) and the Foreign Market Development (FMD) Program.

Under MAP, FAS will provide \$173.5 million in fiscal year (FY) 2017 funding to 70 nonprofit organizations and cooperatives, of which the National Renderers Association (NRA) will receive just over \$1 million. Organizations use the funds to help US agricultural producers promote their products to consumers around the globe through activities such as market research, technical assistance, and support for participation in trade fairs and exhibits. MAP participants contribute an average 137 percent match for generic marketing and promotion activities and a dollar-for-dollar match for promotion of branded products by small businesses and cooperatives.

Under FMD, FAS will allocate \$26.6 million in FY 2017 to 26 trade groups that represent US agricultural producers, of which NRA will receive \$685,700. FMD focuses on generic promotion of US commodities rather than branded products, and preference is given to organizations that represent an entire industry or are nationwide in membership and scope. The trade groups, which contribute an average 130 percent cost share, conduct activities that help maintain or increase demand for US agricultural commodities overseas.

A new study conducted by noted land grant university economists shows that MAP and FMD contributed \$309 billion to farm export revenue between 1977 and 2014, an average of \$8.2 billion per year. From 2002 through 2014, the programs boosted average annual farm cash income by \$2.1 billion, annual US economic output by \$39.3 billion, annual gross domestic product by \$16.9 billion, and annual labor income by \$9.8 billion. In addition, the programs generated economic activity that directly created 239,000 new jobs, including 90,000 farm sector jobs. **R**

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Argentina Renderers Work toward Sustainability

In early December 2016, the second national congress of proteins and fats from animal origin took place in Los Cardales, Argentina. Organized by the Camara de Subproductos Ganaderos de la Bolsa de Comercio de Buenos Aires (chamber of animal by-products of the commerce of Buenos Aires), the congress hosted renderers from many countries, including Australia, Denmark, United Kingdom, Italy, United States, Mexico, Colombia, Brazil, Chile, and Uruguay.

The main subject of the meeting was the recycling of animal by-products as a sustainable model, analyzed on the three axes of sustainability: economic, social, and environmental. Regarding economic sustainability, a series of talks focused on availability of raw material and efficient animal by-product processing technologies. Concerned by the need to remain competitive in the global market, Argentinian renderers

examined short- and medium-term raw material availability as well as new technologies to save energy and maintain or leverage quality of finished products. At the end of the lectures, a roundtable with equipment manufacturers idealized the best options to invest in.

For addressing the positive impact on communities and the environment, local authorities from Servicio Nacional de Sanidad y Calidad Argoalimentaria (Argentina's national animal health), Organismo Provincial para el Desarrollo Sostenible (sustainable development of Buenos Aires), and Autoridad de Cuenca Matanza Riachuelo (regional environmental authority) were invited to share their views on how legislation can be improved to provide better operational conditions for renderers. Similar to the technology lectures, there was also a roundtable that assembled authorities together to discuss options

to challenges with transporting animal by-products from meat packing houses to rendering companies.

It was encouraging to see authorities open up to listening and establishing bridges with renderers to find the best opportunities and solutions to their concerns. Renderers globally are learning how to become better communicators about rendered products as well as the virtues of rendering. Still, rendering remains the invisible industry to many people so whenever there is opportunity to speak about it, listeners are surprised at the benefit rendering provides in avoiding pollution with unprocessed animal by-products.

World Renderers Organization (WRO) President Tim Juzefowicz from Australia and this author from Mexico were in attendance receiving comments on global concerns and sharing useful experiences. Juzefowicz gave a lecture explaining the objectives and challenges the global rendering industry is facing and invited Latin American countries to be part of WRO.

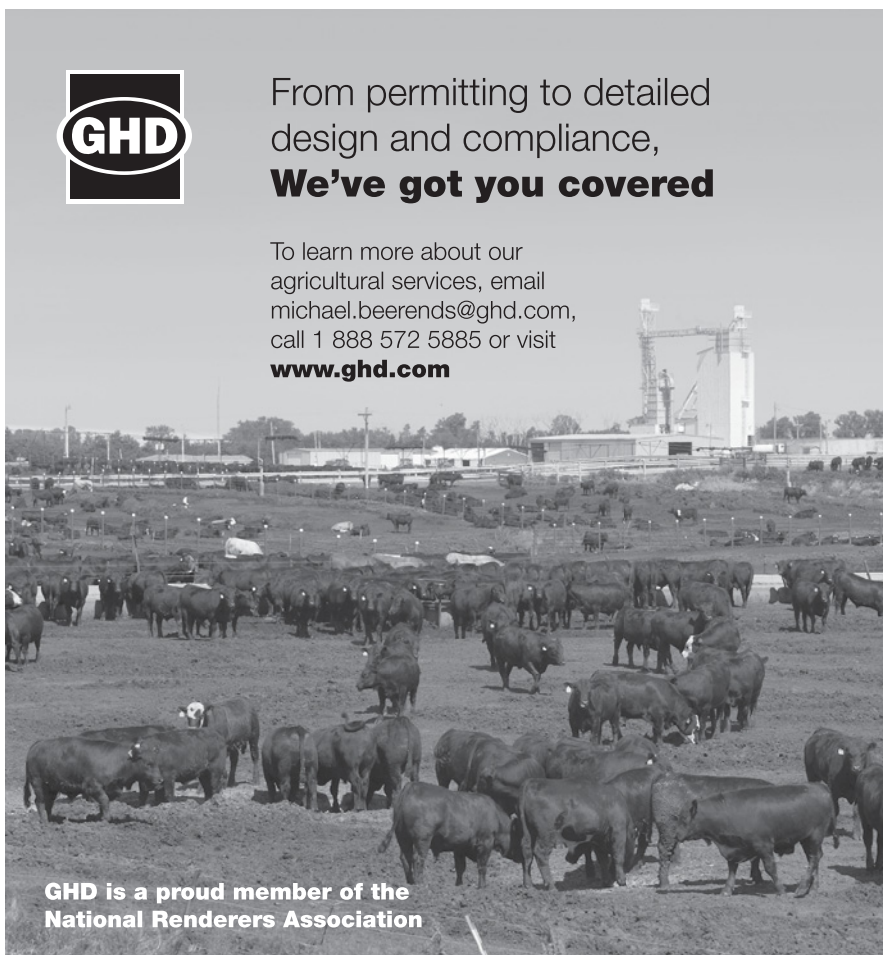
During the congress a new Latin American renderers organization was founded. Named CLIRSA, it is a board of country associations from Argentina, Uruguay, Brazil, and Mexico. Representing Argentina are Jorge Rossoti, Vicente Materia, Jaime Sasson, Evelino Roman, and Daniel Di Pardo. Representing Uruguay is Ricardo Cabrera and Jorge Cabrera while Brazil is represented by Lucas Cypriano and Mexico is represented by this author. The main purpose of this board is to strengthen and integrate the Latin American rendering industry. The volume of rendered products this board represents is as important as the European Union and United States, bringing a new regional integration onto the global stage.

Overall, the experience at Argentina's congress was of professionalism and goodwill to leverage the rendering industry in Argentina and Latin America. It provided an invitation for others to promote their regions and strengthen the industry globally. **R**



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New Zealand Renderers Gather for Seminar

The New Zealand Renderers Group (NZRG) held another successful training workshop in late September 2016 with participants from New Zealand and Australia. As part of the workshop, attendees submitted a solution to a problem they had been involved with at their companies. The projects were assessed on approach and innovation in finding a solution to the challenge with the winner receiving registration to the Australian Renderers Association Hygienic Rendering Workshop. The 2016 awardees were Kelvin Davison and Mike Fausett of the Wallace Corporation, who were also presented the Rendertech-Wallace Renderers Trophy, a bronze figurine of an early renderer sculptured by Samantha Lissette.

In conjunction with their annual general meeting held at the same time, NZRG also conducted a technical seminar covering a range of topics of interest to members. The following is a summary of the key presentations.

In 2010, Z-Energy took over the fuel distribution assets of Shell in New Zealand. Stewart Gibb from Z-Energy explained how in 2013 the company decided to make a difference toward sustainability on a scale that few other companies had done. They looked at different processes and feedstocks to create a sustainable fuel option that would matter to New Zealand, ultimately choosing a process to manufacture biodiesel from tallow. In August 2014, Z-Energy began construction of their biodiesel plant that is the only type in the world. Building and commissioning such a plant had a number of challenges, which Gibb spoke about. It was noted that New Zealand is the only country that has no government mandate, support, or direction for biofuels.

Greg Zemke-Smith from the Ministry for Primary Industries gave an overview of the United States Food Safety Modernization Act and the impact it may have on New Zealand renderers exporting product to the United States. Richard Brake from the New Zealand Petfood Manufacturers Association and a member of the executive committee of the Global Alliance of Pet Food Associations spoke on how the number of pets in New Zealand is decreasing

but the market value of the industry is growing. He also gave an overview of the trends in the global pet food market, which include premiumization, humanization, and pet foods such as treats that are natural and free of such ingredients as artificial preservatives and colors, salt, sugar, fillers, and grains.

Rob Gibson from Beef and Lamb New Zealand provided an outlook for the red meat sector, predicting a drop in sheep

numbers of 3.0 percent and an increase in cattle of 3.0 percent in 2017. However, with past climate effects and the economic environment it is anticipated that the meat processing numbers for 2016/2017 will be down for sheep and cattle by 2.0 percent and 1.5 percent, respectively. Challenges for New Zealand farmers are increasing compliance costs, alternative (competing) uses for land, and financial resilience. **R**

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Flexitanks for a Competitive Shipping Advantage

As part of its 2020 Strategic Plan, the National Renderers Association will continue to focus on the development of international markets. This attention is timely given the new realities taking shape for North American renderers: opening of China markets for tallow and poultry products, a demand shift to vegetable diets in the feed industry, and increased use of rendered fats and oils as feedstock for biodiesel, to name a few. Many United States suppliers who wish to survive in an ever-changing marketplace must prepare to compete abroad.

A presence in foreign markets requires a capable logistics partner and the right modality. For rendered fats and greases, flexitanks are uniquely suited to the demands of international transportation, yet the flexitank is only half of the equation. Working with a vertically integrated flexitank provider reduces risk, miscommunication, and the challenges of managing multiple points of contact. Shippers should exercise due diligence in searching for the right logistics partner. As Red Adair, the famous oil well firefighter, said, "If you think it's expensive to hire a professional to do the job, wait until you hire an amateur." In that spirit, following is a brief background on the flexitank industry and questions to guide shippers in distinguishing between expert and inexperienced, undercapitalized logistics providers.

Role of Flexitanks in International Trade

From the 1980s to the early 2000s, most flexitanks were reusable rubber tanks that had to be repositioned and cleaned between loads, adding to costs and lead times for shippers. This also made them operationally indistinguishable from International Organization for Standardization (ISO) tanks. In 2001, the single-layer, recyclable flexitank was perfected using a linear low density polyethylene, thus transforming the market.

The primary benefit flexitanks offer nonhazardous liquids, including animal fats and recycled oils, is a reduction in unit shipping costs by maximizing product payload. By some estimates, as much as 30 percent more product can be shipped per container using flexitanks as compared to totes, intermediate bulk containers, or drums.

The safety of product and personnel should not be overlooked. After all, what good is a competitive freight rate if product is rejected or personnel are injured? The single-layer, single-use flexitank made from virgin polyethylene is kosher, halal, European Union, and Food and Drug Administration compliant, and eliminates contamination risk from prior products. Unlike ISO tanks, which require repeated washes and sometimes entry by cleaning personnel, flexitanks are a closed system from manufacturer to supplier to receiver. Additionally, there is no risk of moisture resulting from inadequate cleaning practices or condensation due to fluctuations in ambient temperature. Both are common causes for rejection of ISO tanks by loading supervisors.

Personnel should not have to manually manipulate the

flexitank to achieve a complete discharge. There is a common misconception that flexitanks must be "rolled like a toothpaste tube" to get all the product out. Shippers are often surprised to discover this is a breach of health and safety protocol. The single-layer flexitank system is designed to be operated externally – no climbing into or on top of the container as with ISO tanks. Translucent material is another benefit of single-layer technology and allows load supervisors to see the product in the flexitank during loading and discharge, something that is not possible with multilayer flexitanks due to an outer layer of polypropylene.

No less important than cost and safety is ease of use. Full-service providers arrange for the container to arrive pre-fit at the loading facility. For rendered fats and greases, a heater pad is positioned under the flexitank to promote efficient discharge at destination. What's more, most single-layer flexitanks are equipped with the same cam lock valve as ISO tanks. Precursors to the modern day flexitank had a valve on top, but newer designs have reoriented the valve to the bottom of the flexitank. Bottom discharge procedure makes for a better experience for receivers.

Finally, single-layer flexitanks are sustainably designed. They can be recycled for use in consumer packaging, geomembranes, and other large-scale applications.

Protecting Flexitank Shipments Across the Supply Chain

First, shippers should elect to work with globally integrated providers. Most companies that manufacture flexitanks do not participate in the logistics process and vice versa. Moreover, many forwarders who purchase flexitanks do not have appropriate technical support on a global scale.

Second, shippers should know how to shop flexitank providers and distinguish between expert and inexperienced, undercapitalized providers. The following questions should help shippers get past marketing gimmicks and find a strong partner with a global network.

How many wholly-owned factories does the company have? If none, they may have difficulty guaranteeing quality without controlling the means of production. Even joint ventures between logistics providers and flexitank manufacturing companies have proven insufficient to ensure quality. The most expensive flexitank is a cheap flexitank.

How does the logistics provider guarantee flexitanks are not sourced from different manufacturers? Quality standards vary among flexitank manufacturers. Shippers should expect the same quality product whether they are exporting from South Dakota or South Korea. Further, global inventories are difficult to manage so positioning flexitanks to satisfy shipper demand should be handled by a dedicated fleet manager to ensure flexitanks are properly handled and meet uniform quality standards.

How many research and development staff are employed by the company? Scale matters, as does a collaborative design

process, which yields a better product and more frequent innovation.

What technical presence and service is offered, and at what cost? Technical support should be included in the door-to-port/door rate and available globally around the clock. Technical personnel should be onsite for load and discharge to train plant personnel and as needed throughout the supply chain.

How many full-time technical personnel are employed by the company? Where are they located? Ask the provider to distinguish between dedicated technical personnel and sales or other staff doubling as technicians.

How many facilities and offices does the company have globally? Can they communicate in the local language of your customer? Ask the provider to distinguish between their own offices and third-party agents to understand the size of their network and the capital investment they have made therein.

What automated key performance indicator reports are sent to customers? Shippers should have the option to receive regular, automated reports detailing transit times, expected departure and arrival dates, container numbers, vessel changes, non-conformities, and so on.

How are non-conformities measured? Anything that causes a delay or disruption in the supply chain should be investigated by qualified personnel (often technical managers), documented, and communicated to the shipper without delay.

What insurance guarantees are offered? Marine cargo transit insurance covers all modes of transport, namely sea, road, rail, or inland waterways. Product and freight should be covered under the policy. Shippers should also confirm whether general average is covered under the standard policy.

What is the deductible in the event of a loss? Some flexitank providers offer a no-deductible policy for a reasonable premium.

Once shippers find a globally integrated logistics partner, opt for door-to-port/door service. The right partner will consolidate tasks and offer support at critical points in the supply chain. This means fewer vendors to manage, less invoicing, reduced likelihood of miscommunication and delays, and a transfer of liability away from their business. Who doesn't want that? **R**

Insect Protein Okay for Feed in Europe

European Union member states endorsed a European Commission proposal for the use of insect protein in fish feed. The text is expected to be formally adopted in the spring, which means that insect proteins could effectively be authorized for use in fish feed as of July 1, 2017, according to the International Platform of Insects for Food and Feed (IPIFF) in Europe.

The European Food Safety Authority in October 2015 concluded that insects fed with plant-based materials pose no risk if insect producers comply with best hygiene practices. Looking ahead, IPIFF will pursue efforts toward a possible authorization of insect proteins in other non-ruminant species (e.g., pig and poultry) feed or to allow the use of other "high grade" materials to feed insects. **R**

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Massive Fall Protection Rule Issued in Final Hours

Editor's note – Mark A. Lies II is an attorney and partner with the Chicago, Illinois, law firm of Seyfarth Shaw LLP. He practices in the areas of employment, occupational, safety, and health, and tort litigation.

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Craig B. Simonsen is a senior litigation paralegal with the Seyfarth Shaw Labor and Employment, Litigation, Workplace Safety and Health, and Environmental Compliance, Enforcement, and Permitting Practice Groups. Legal topics provide general information, not specific legal advice. Individual circumstances may limit or modify this information.

Despite a congressional request that agencies not move forward on new regulations during the transition to the new administration of United States President Donald Trump, the Occupational Safety and Health Administration (OSHA) issued a massive 513-page final rule last November revising and updating its general industry standards on walking-working surfaces, including ramps, ladders, gangways, roofs, and other surfaces. While this rulemaking has been in the works since the 1990s, the original 293-page proposed rule was published in May 2010. Now, without any advance warning, OSHA promulgated the final rule and provided only 60 days for compliance.

The final rule includes new and revised provisions addressing fixed ladders, rope descent systems, fall protection systems and criteria, and training. In addition, the final rule adds requirements on the design, performance, and use of personal fall protection systems.

In commenting on the new rule, outgoing OSHA Administrator Dr. David Michaels said that the "rule will increase workplace protection from those hazards, especially fall hazards, which are a leading cause of worker deaths and injuries...OSHA believes advances in technology and greater flexibility will reduce worker deaths and injuries from falls." Michaels indicated that the rule should also increase the "consistency between general and construction industries, which will help employers and workers that work in both industries."

According to OSHA, the "rule's most significant update is allowing employers to select the fall protection system that works best for them, choosing from a range of accepted options, including personal fall protection systems. OSHA has permitted the use of personal fall protection systems in the construction industry since 1994 and the final rule adopts similar requirements for general industry. Other changes include allowing employers to use rope descent systems up to 300 feet above a lower level,

prohibiting the use of body belts as part of a personal fall arrest system, and requiring worker training on personal fall protection systems and fall equipment."



The new standard will affect 6.9 million establishments that employ 112 million individuals. OSHA also found that the ladder training will apply to 5.2 million employees engaged in the construction, installation, maintenance, repair, and moving operations in general industry. Excluded from the new rules are employees that are outside of OSHA's jurisdiction due to location or operational status, such as Department of Transportation (railroad and trucking) responsibilities or those that are subject to unique industry specific fall protection standards, such as telecommunication and electric power generation, transmission, and distribution.

OSHA estimates that full compliance with this rule will prevent over 5,800 injuries and 29 fatalities per year.

Rule Timeline

The rule went into effect on January 17, 2017, providing employers very little time to come into compliance. However, some of the provisions have delayed effective dates, including:

- Training employees on fall and equipment hazards – May 17, 2017;
- Ensuring exposed workers are trained on fall hazards and workers who use equipment covered by the final rule are trained – July 17, 2017;
- Inspecting and certifying permanent anchorages for rope descent systems – November 20, 2017;
- Installing personal fall arrest or ladder safety systems on new fixed ladders over 24 feet and on replacement ladders/ladder sections, including fixed ladders on outdoor advertising structures – November 19, 2018;
- Ensuring existing fixed ladders over 24 feet, including those on outdoor advertising structures, are equipped with a cage, well, personal fall arrest system, or ladder safety system – November 19, 2018; and
- Replacing cages and wells (used as fall protection) with ladder safety or personal fall arrest systems on all fixed ladders over 24 feet – November 18, 2036.

For employers, compliance of this rule will represent a significant challenge, particularly in light of the effective date of the regulation. In addition, it will require employers to meet these requirements for outside contractors, temporary employees, and leased employees who may be at the worksite under OSHA's multiemployer worksite doctrine. OSHA's rule was published with a fact sheet and answers to questions.

Congressional Review

The new rule could come under review by the Trump administration or be subject to the Congressional Review Act (CRA), in which lawmakers have 60 legislative days to overturn a regulation from the current or, as in this case, previous administration. If lawmakers are not in session for a full 60 days after enactment of the new rule before adjourning their final session, the clock resets, and the new Congress is given another 60 days to act on the new rule. The only time the CRA was used was in 2001 to overturn an OSHA standard on ergonomics that had been implemented in the final days of President Bill Clinton's administration. **R**

For questions on this rule, contact Mark Lies II at mlies@seyfarth.com.

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2017 Western Dairy Management Conference

February 28-March 2, Reno, NV • www.wdmc.org

March

California Biodiesel Conference

March 1, Sacramento, CA • www.californiabiodieselalliance.org

Pacific Coast Renderers Association Conference

March 3-4, Carmel Valley, CA • e-mail Anita Gore at anita@agamsi.com or call (916) 441-1064

National Grain and Feed Association 121st Annual Convention

March 19-21, New Orleans, LA • www.ngfa.org

April

Pet Food Forum 25th Anniversary

April 3-5, Kansas City, MO • www.petfoodforumevents.com

National Renderers Association Spring Meeting

April 18-20, Chicago, IL • e-mail Marty Covert at co@martycovert.com or call (703) 754-8740

19th Annual International Aboveground Storage Tank Conference and Trade Show

April 18-20, Orlando, FL • www.nistm.org

American Oil Chemists' Society Annual Meeting

April 30-May 3, Orlando, FL • annualmeeting.aocs.org

May

2017 Animal Agriculture Alliance Stakeholders Summit

May 3-4, Kansas City, MO • animalagalliance.org

European Fat Processors and Renderers Association Congress

May 31-June 3, Hamburg, Germany • www.efprahamburg2017.com

June

National Renderers Association Central Region Meeting

June 7-9, Elkhart Lake, WI • e-mail Jason Hartman at jasonh@mendag.com

July

Australian Renderers Association 14th International Symposium

July 25-28, Gold Coast, Queensland, Australia • arasymposium.com.au

October

Poultry Protein and Fat Seminar

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

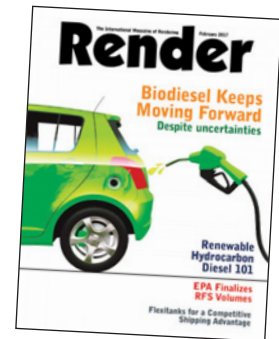
National Renderers Association 84th Annual Convention

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

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RENDERING IS RECYCLING

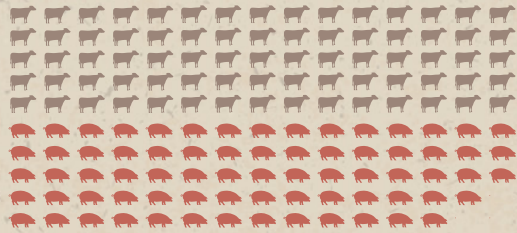


RENDERING IS AN ENVIRONMENTALLY FRIENDLY WAY TO RECYCLE MATERIAL THAT WOULD BE WASTED

WHAT MATERIALS ARE RENDERED?

Packing Plants

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



10 BILLION chickens and turkeys are processed each year in the US

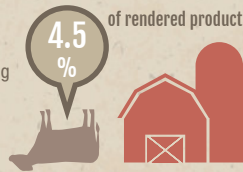


APPROXIMATELY 50%

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

Farms

Some animals die on the farm from injury, old age, or other issues. Renderers prevent this from becoming a public health hazard by eliminating pathogens in the rendering process. Fallen animals only represent 4.5% of rendered product



Grocery Stores generate

Super Foods

1.92 BILLION POUNDS

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

Renderers collect



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

RENDERING IS SAFE & ESSENTIAL

- Protects the environment
- Protects human health
- Protects animal health
- Sustainable and contributes to sustainability of animal agriculture
- Essential link in food chain



WHAT ARE THE PRODUCTS OF RENDERING?

Renderers collect:

56 BILLION POUNDS

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



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

4 YEARS

Renderers recycle these materials into:

10 BILLION POUNDS

of fat and oil products



& 9 BILLION POUNDS

of protein products annually



Rendered products are ingredients in:



Pet & livestock feed



Biofuel



Fertilizer

Plus Other products like soaps, lubricants, detergents, and more.

RENDERING IS Green!

Rendering is:

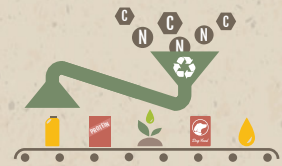
the process of breaking down animal by-products into fats & proteins



Rendering is recycling!

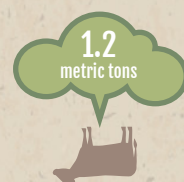
Carbon- and nitrogen-rich materials are recycled into

USEABLE PRODUCTS



Rendering reduces greenhouse gases.

Carbon dioxide, methane, and other greenhouse gas emissions from natural decomposition like in a compost pile or landfill are avoided.



A single decomposing dairy cow releases **1.2 METRIC TONS** of carbon dioxide.

Rendering avoids this!

Rendering these animal tissues has the same effect on greenhouse gas emissions as removing



12,263,316 CARS FROM THE ROAD

Dupps Buys Clapper, Receives Award

The Dupps Company of Germantown, Ohio, has acquired Clapper Corporation of Ankeny, Iowa. Founded in 1972, Clapper built its reputation as a leader in protein co-products equipment service and distribution and has been an exclusive distributor for The Dupps Company for 35 years.

Dupps President Frank Dupps Jr. stressed the importance of Clapper's experience and contribution to the industry.

"All of us are very grateful to Ted Clapper, Cory Kracht, and the staff of Clapper for all the tremendous work they have done through the years," he said. "We're delighted to announce that they will continue to work with Clapper and Dupps to ensure a seamless transition, and we look forward to expanding on their efforts in the years to come."

In late 2016, The Healthy Ohio Business Council recognized Dupps with its Healthy Worksite Gold Award as one of 11 Ohio companies with less than 300 employees that demonstrates a commitment to employee wellness through comprehensive worksite health promotion and wellness programs. Applicants for the awards are judged on how well their programs facilitate and encourage employee health, enhance productivity, and ensure a healthy work environment.

To promote better health for each employee, The Dupps Company has established a comprehensive program of healthy activities, called "Commit 2B Fit," which includes onsite health screenings, in-house doctor care, wellness counseling, and incentives for maintaining a healthy lifestyle.

FFA Awards Poultry Group and Staff



Barbara Jenkins

The U.S. Poultry and Egg Association was recognized late last year by the National FFA Organization with its Distinguished Service Citation award, which honors organizations, agencies, businesses, and other groups who have made outstanding contributions to FFA and agricultural education on a national level.

Barbara Jenkins, vice president of education and student programs for U.S. Poultry, was also awarded, receiving an Honorary American degree for her exceptional service to agriculture, agriculture education, or FFA on a national level. This is the highest honorary degree presented by the National FFA Organization.

Separators Receives Favorable Court Ruling

The Johnson County Superior Court in Indiana ruled in favor of Separators Inc. in November 2016 after the company filed a lawsuit in September 2015 alleging that former employees took confidential and proprietary information in the course of forming a competing company, Centrifuge Supplies. In the ruling, the defendants were found in contempt of court after they attempted to conceal improperly taking Separators documents and data. As a sanction for the defendants' misconduct, the court entered a default judgment in favor of Separators on claims, including computer trespass, theft, and breach of fiduciary duty. Separators was also awarded legal fees and expert costs under the court order. Centrifuge Supplies was ordered to submit to third party supervision and regular audits to prevent reconstitution of Separators/confidential information and data.

Separators Inc. provides service, equipment, and parts for a variety of markets including dairy, food, and beverage production.

Smithfield Buys Clougherty Packing, Adopts GHG Goal

Smithfield Foods Inc. has acquired Clougherty Packing LLC, parent company of Farmer John and Saag's Specialty Meats brands, and PFFJ LLC farm operations from Hormel Foods Corporation, adding three farms – one each in Arizona, California, and Wyoming – to its hog production division. Kenneth J. Baptist, vice president of operations for Smithfield's packaged meats division, will now lead Farmer John operations, which includes both the Farmer John and Saag's Specialty Meats brands. Baptist has more than a decade of experience at Smithfield and more than 30 years of experience in the food industry.

Based in Southern California, Clougherty Packing is an integrated producer and processor of a full line of branded pork products. Founded in 1931, Farmer John is the top bacon and sausage brand in Southern California while Saag's Specialty Meats is a premium brand of deli meat and specialty sausage. Together with the two California-based processing facilities and three PFFJ farms, Smithfield added 2,000 employees to its workforce of 50,000.

In a separate move, Smithfield Foods has set a far-reaching goal of reducing its absolute greenhouse gas (GHG) emissions by 25 percent by 2025. When achieved, this goal will reduce emissions by more than 4 million metric tons, equivalent to removing 900,000 cars from the road. Smithfield collaborated with Environmental Defense Fund (EDF) in setting its goal.

This commitment impacts operations across Smithfield's supply chain, on company-owned farms, at processing facilities, and throughout its transportation network. The absolute GHG emissions reduction will be measured from a 2010 baseline. Efforts toward this goal already underway will be included in the final results.

US Poultry Supports 1.6 Million Jobs

The United States (US) poultry industry provides over 1.6 million jobs, \$96 billion in wages, \$441 billion in economic activity, and \$34 billion in government revenue, according to an updated economic impact study released by the US Poultry and Egg Association, National Chicken Council, National Turkey Federation, and United Egg Producers. The report highlights the positive impact the poultry industry has on jobs, wages, and federal and state revenue in the United States.



The study breaks down poultry into three subcategories: chicken, turkey, and eggs. Key economic data from each are as follows:

- The chicken industry provides nearly 1.2 million jobs, \$68 billion in wages, \$313 billion in economic activity, and \$24 billion in government revenue.
- The turkey industry provides 374,600 jobs, \$21.3 billion in wages, \$97.4 billion in economic activity, and \$7.5 billion in government revenue.
- The egg industry provides 81,515 jobs, \$5.0 billion in wages, \$22.8 billion in economic activity, and \$1.8 billion in government revenue.

The data is hosted on interactive websites that can be viewed collectively or by individual product, and then sorted nationally by state, congressional district, state house district or state senate district, and county.

For more information about the US poultry industry's economic impact, visit www.poultryfeedsamerica.org, www.chickenfeedsamerica.org, www.turkeyfeedsamerica.org, or www.eggsfeedamerica.org.

The economic impact study was funded by US Poultry, conducted by John Dunham and Associates in New York City, New York, and uses data from 2015. **R**

Dedicated Ohio Renderer Passes

The United States rendering industry lost an invaluable member with the sudden passing of Carl Wintzer of G.A. Wintzer and Son Co. in Wapakoneta, Ohio, on December 29, 2016. He died peacefully in his sleep while recuperating from surgery. He was 61 years old.

Wintzer joined his family-owned rendering company in 1978 as vice president after attending Miami University on a full football scholarship where he participated in a championship game known at the time as the Tangerine Bowl. As an active member of the Wapakoneta First United Methodist Church, Wintzer sang in the Chancel Choir and served on several committees. He was also involved in numerous community organizations, served as president of the rendering industry's Fats and Proteins Research Foundation from 2010 to 2012, and participated on various National Renderers Association committees, including the Environmental Committee where his vast knowledge of wastewater treatment provided a valuable resource for the rendering industry.

In his free time, Wintzer enjoyed riding his Harley Davidson and driving his 1973 Chevrolet Camaro, traveling, and taking family and friends for boat rides on Grand Lake St. Mary's. He is survived by his wife of 34 years, Denise, three children, one grandson, three brothers, and many other family and friends. Memorial contributions may be directed to the Wapakoneta First United Methodist Church, 504 Glynwood Road, Wapakoneta, Ohio 45985, (419) 738-8168.

The poem below was presented at Wintzer's service. It was written by R.L. McTavish, a past renderer who was good friends with the Wintzer family. **R**



Carl Wintzer, right, enjoys meeting and talking football with Pittsburgh Steelers Quarterback Ben Roethlisberger at a National Renderers Association meeting in Georgia last April.

~ Odors ~

*You can have the rose's perfume
And North Ontario pines,
Your various bottled perfumes
From France and other climes.
But to me the only odor
Reminiscing if I may,
Is from my rendering plant
On a sultry August day.*

*I can't pat it in behind my ears
Or put it in my hair
It's a self-applying perfume
Who smells it, I don't care.
I've worked hard at the office
What does the good wife say?
"Go change your clothes! It's August.
You've been in the plant today!"*

*You can talk of Paris evenings
Of Chanel No. 5
Of Eau de this and Eau de that
But as long as I'm alive
I'll stick with things more homey
And enjoy them every day
The odor from my bone truck
On a sultry August day.*

*I guess there's jobs that's better
But, mister, not for me
What's in this game, don't ask me
For it's something you can't see.
But when I meet St. Peter
He won't ask me what I'm worth
"You step right in, my rendering friend!
You've had your Hell on Earth!"*

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Industry Websites

American Fats and Oils Association	www.fatsandoils.org
American Feed Industry Association	www.afia.org
American Oil Chemists' Society	www.aocs.org
Animal Agriculture Alliance.	www.animalagalliance.org
Animal Protein Producers Industry	www.nationalrenderers.org/biosecurity-appi
Association of American Feed Control Officials	www.aafco.org
Australian Renderers Association	www.ausrenderers.com.au
European Fat Processors and Renderers Association	www.efpra.eu
Fats and Proteins Research Foundation	www.fprf.org
National Biodiesel Board	www.biodiesel.org
National Cattlemen's Beef Association	www.beefusa.org
National Grain and Feed Association	www.ngfa.org
National Pork Producers Council	www.nppc.org
National Renderers Association	www.nationalrenderers.org
National Renewable Energy Laboratory	www.nrel.gov
North American Meat Institute	www.meat institute.org
Occupational Safety and Health Administration	www.osha.gov
Pet Food Institute	www.petfoodinstitute.org
Renewable Industries Canada	www.greenfuels.org
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USDA Food Safety and Inspection Service	www.fsis.usda.gov
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U.S. Poultry and Egg Association	www.uspoultry.org
World Renderers Organization	www.worldrenderers.com

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