



November 22, 2019

Honorable Kathy Castor, Chairman
Honorable Garret Graves, Ranking Member
House Select Committee on the Climate Crisis
U.S. House of Representatives
Washington, D.C. 20515

Dear Chairman Castor, Ranking Member Graves and Members of the Committee,

On behalf of the U.S. rendering industry, the North American Renderers Association (NARA) appreciates this opportunity to provide information on the climate-protective benefits of rendering and its contributions to American agriculture, carbon storage and reuse, and net reduction of greenhouse gas (GHG) emissions.

NARA is the trade association representing the interests of the rendering industry in the United States and Canada. NARA's 34 member companies operate 178 rendering plants, accounting for over 95 percent of North American production. The industry includes independent renderers, many of which are multi-generation family-owned companies, as well as integrated packer/renderers that process only their own animal byproducts. Some rendering companies are also actively engaged in production of biodiesel and renewable diesel.

The U.S. rendering industry is vitally important to reduction of carbon emissions into the atmosphere. Only about 50 percent of an animal is considered edible by Americans, which means the other 50 percent is considered inedible. Instead of wasting half of the meat we farm and buy, rendering reclaims these unwanted "leftovers" and transforms them into ingredients for countless new products — recycling 99 percent of this unwanted meat. Renderers are carbon recyclers.

By recycling perishable leftover animal material, renderers create valuable ingredients from resources that would otherwise be thrown away, taking up enormous amounts of precious landfill space.

Using technology-intensive controls running very high temperature cookers, centrifuges and presses, renderers turn these animal leftovers into value-added ingredients — high quality fats and proteins. These ingredients are clean, safe, and used to produce a vast number of new products for personal care, animal feed (including pet food), medical applications, biofuels, and industrial purposes. One-third of the fats and oils produced in the U.S. are animal fats, rendered from beef (tallow), pork (lard, pork fat, white grease) and poultry (poultry fat).

Ingredients produced by rendering are important to people's lives each day in hundreds of commonly used items, including soaps, paints, varnishes, cosmetics, pharmaceuticals, shaving cream, deodorant, crayons, coatings for medical capsules and M & M's, leather (handbags, car seats, furniture), lubricants, caulking compounds, candles, cleaners, paints, perfumes, polishes, rubber products and tires, plastics, fertilizers, and even fireworks.

Rendered animal fats and oils, and waste restaurant cooking oil collected and processed by renderers are source materials for biomass-based diesel. These products provide 28 percent of the feedstock for U.S. biodiesel and renewable diesel production.

Without rendering, the many various products made with rendered ingredients would have to be made with other less sustainable and costlier inputs.

A huge volume, some 56 billion pounds, of unused animal meat is left over from livestock and poultry farming, meat processing, supermarkets and restaurants each year. This volume of animal co-products is so massive that it would fill *all* U.S. landfills in only four years if discarded there as waste. By preventing disposal of animal leftovers in U.S. landfills or other disposal methods, renderers prevent the release of large amounts of GHGs into the atmosphere. Renderers reclaim the carbon from these animal co-products and transform them into 19 billion pounds of animal fats, oils and protein products for use as valuable ingredients for new products.

All is repurposed and reused. Nothing is wasted.

For communities, recycling of perishable animal co-products significantly reduces solid waste disposal and the cost to manage it. Communities also benefit from rendering's collection of used cooking oil from restaurants and other food service establishments that prevents disposal down the drain into municipal sewers which can cause giant "fatbergs" that clog municipal wastewater systems. Millions of dollars in damage and repairs can occur to sewer systems as a result. Clogging can also compromise water quality and safety due to blockages and overflows.

Rendering provides tens of thousands of full-time jobs with benefits in communities across the country, often in rural areas where plants are located. The industry accounts for over \$10 billion in annual U.S. economic activity and individual plants support the tax base of local towns and municipalities.

Rendering's carbon emissions reduction and other environmental contributions are significant. Rendering sequesters *5 times* more greenhouse gas (GHG) emissions from the environment (such as carbon dioxide) than it emits. Rendering avoids at least 90 percent of the potential GHG emissions compared with industrial composting. The rendering industry's contribution to carbon emission reduction in the U.S. and Canada is equivalent to removing more than 12 million cars from the road each year. Renderers also often recycle heat from processing back into their production systems and use their own animal fat to power their operations. (This sustainable practice is encouraged by the federal Alternative Fuel Mixture Credit tax incentive.) Rendering also evaporates 5.3 billion gallons of water a year from animal co-products during cooking. This huge volume of water meets federal, state and local standards for quality and safety as it is returned to rivers and streams.

Rendering reduces the amount of cropland needed to produce animal feed and biofuels. It would take 6.3 million acres a year of additional average quality U.S. crop land to replace rendered fats and proteins used for animal feed. The rendering industry recycles 4 billion pounds a year of used cooking oil/grease from foodservice operations, much of which is used for biodiesel and renewable diesel production, representing 7.8 million acres a year of U.S. average quality soybean land from which soy oil is produced. Recycled cooking oil is also used for animal food ingredients equivalent to the production of corn on 619,000 acres of U.S. average quality corn land a year. The rendering industry recycles 2.3 billion pounds of meat and poultry from retail (grocery store) food waste a year that is used for animal food ingredients equivalent to the production of soybeans on 400,000 acres of U.S. average quality soybean land.

Rendering's sustainability affects each person in the U.S. The average individual eats 220 pounds of meat and poultry products per year. For every pound of meat and poultry eaten, another pound of animal co-products is not consumed. This means 220 pounds of by-products per person per year of animal leftovers is recycled by rendering. Each of the 330 million Americans would need 2,025 square feet (the size of an average house) of new crop land to grow ingredients that would replace rendered products. Unlike crops which require added water to grow, rendering returns 16 gallons (121 half liter bottles) of clean water per person a year to the environment.

The rendering industry also contributes to reduction of carbon emissions by providing a large volume of its recycled ingredients as feedstock to produce biodiesel and renewable diesel. Used cooking oil reclaimed by renderers provides 16 percent of biodiesel feedstock and rendered animal fats, 13 percent.² Consequently, 56 percent of rendering-sourced feedstock is used cooking oil and 44 percent is animal fats. Biodiesel and renewable diesel are important to reduce carbon emissions by the large heavy-duty trucking industry.

Biodiesel's feedstocks supplied by rendering have very low lifecycle carbon emissions. In 2010, EPA concluded that biomass-based diesel produced from used cooking oil and other recycled waste greases reduced lifecycle GHG emission by 86 percent compared to average 2005 petroleum emissions.

Other overall benefits of biodiesel when compared to petroleum-based diesel fuel include:

- Lowers particulate matter by 47 percent, reduces smog and makes our air healthier to breathe
- Reduces hydrocarbon emissions by 67 percent
- For every unit of fossil energy, it takes to produce biodiesel, 3.5 units of renewable energy are returned, the best of any U.S. fuel¹

A 2018 study on biodiesel's lifecycle energy and greenhouse gas emission effects reaffirmed the benefits of using biodiesel. The report, a collaboration between Argonne National Laboratory, Purdue University and USDA, is a comprehensive lifecycle analysis of biodiesel. Results confirm that biodiesel compared to petroleum diesel reduces GHG emissions by 72 percent and fossil fuel use by 80 percent. The study examined rendered tallow (beef animal fat) and found it generates exceptionally low GHG/carbon emissions. In fact, biodiesel produced from rendered tallow reduces GHG emissions by 78.1 percent compared to petroleum diesel.³ Other rendered animal fats and waste used cooking oil used for feedstock also yield significantly lower GHG emissions.

For these reasons, NARA encourages Congress to approve an extension of the biodiesel tax incentives that expired December 31, 2017 and support additional pro-growth policies that encourage development and markets for the relatively young biomass-based diesel industry. We recommend that any climate programs should synergize with a strong Renewable Fuel Standard to support biomass-based diesel and advanced biofuels.

California's Low Carbon Fuel Standard has helped to stimulate use of biodiesel and other renewable fuel alternatives and reduced their carbon intensities. Since 2011, biomass-based diesel fuels have helped California reduce over 15 million metric tons of CO₂ of the 37 million metric tons the entire program has reduced through Q1, 2018. In California, the average gallon of biomass-based diesel reduces carbon intensity by 70 percent compared to diesel fuel (based on CARB datasets).

For additional information about the rendering industry and its contribution to GHG emission reduction, please see the attached research report, "Data for the Carbon Footprinting of Rendering Operations," by Dr. Charles Gooding of Clemson University published in the *Journal of Industrial Ecology* (Vol. 16, No. 2). The report is also found at <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1530-9290.2011.00430.x>.

In closing, NARA looks forward to being a part of the discussion as your committee considers future legislative initiatives. We would appreciate your recognition of the important role of rendering in sustainability and reducing carbon emissions. The rendering industry respectfully recommends that any legislative effort adequately recognize the early leaders in GHG reduction in order to avoid unintended consequences in the future.

Sincerely,



Nancy E. Foster
President & CEO

References:

¹ National Biodiesel Board

² National Biodiesel Board

³ Argonne National Laboratory, Purdue University, USDA; Life Cycle Energy and Greenhouse Gas Emission Effects of Biodiesel in the United States with Induced Land Use Change Impacts; Chen, Qin, Han, Wang, Taheripour, Tyner, O'Connor, & Duffield; *Bioresource Technology*, December 2017; <http://www.sciencedirect.com/science/article/pii/S0960852417321648>.