



The Rendering Industry

2017

Nothing Wasted

For over 180 years, the U.S. rendering industry has empowered society to follow this wise advice: “Nothing wasted.” The industry is a major force in ensuring a clean and healthy environment, recycling the things we don’t want to or can’t eat – animal bones, fat or hides – into usable, valuable products for consumers.

From its roots in creating tallow for soaps and candles and hides for leather, the U.S. rendering industry has responded to changes in society about what we eat, how we clean ourselves and our homes, what we feed our pets and how we preserve and beautify our environments.

56 Million Tons Recycled

U.S. renderers annually recycle more than 56 billion pounds of byproducts from livestock and poultry farming, meat processing, supermarkets and restaurants. Without renderers, consider how this material would be disposed and at what cost to public health, the environment and taxpayers.

Using technology-intensive controls that run very hot temperature cookers, centrifuges and presses, renderers turn this leftover material into valuable ingredients — high quality fats and proteins.

Other industries rely on these ingredients for products people use every day, including soaps, paints, varnishes, cosmetics, pharmaceuticals, crayons, leather, textiles, lubricants, rubber products, plastics, animal food ingredients (including pet food), agricultural fertilizers, biodiesel and even explosives. Rendered animal fats and oils, and recaptured restaurant cooking oil, provide 30 percent of the feedstock for biodiesel production.

Farmers rely on rendered feed ingredients for meat, poultry and fish production. In fact, the rendering industry returns the majority of its finished products to the animal feed and pet food industries. Renderers produce sustainable high-energy fats and high-quality protein ingredients that supplement animal diets as guided by government regulations. These ingredients lead to more efficient production of beef, veal, pork, poultry, fish, eggs, fish and milk and contribute to healthy nutrition for consumers.

\$10 Billion Rendering Industry: Vital to Agriculture & Communities

The economic impact of manufacture and trade in rendered products is critical to U.S. agriculture and exports. Overseas sales represent 16 percent of total rendered production. More than 19 percent of rendered animal proteins are exported and

about 13 percent of rendered fat is sold overseas. Important export markets are Mexico, China, Indonesia, and Canada.

For communities, this recycling of perishable animal byproducts significantly reduces solid waste disposal and the cost to manage it. Rendering plants also offer much-needed employment opportunities in rural areas.

Rendering Plants Are High-Tech

More than 170 rendering plants operate in the U.S. Approximately one-third are part of animal slaughtering facilities (meatpacking, poultry processing renderers) and process only that facility's byproducts. The rest are companies that gather raw material from other processors, supermarkets, butcher shops and restaurants.

Rendering plants are high-tech systems that use a largely computerized process to release fat by dehydrating raw material in a cooker. This cooking and drying process yields fat of varying grades and protein meals for livestock, poultry, aquaculture and pet food. It eliminates direct contact of raw material with added water and live steam, avoiding possible contaminated wastewater from processing.

Product Safety and Quality

Rendered product quality relies on a combination of plant operations and monitoring using both voluntary and government standards. Incoming raw materials must be heated quickly to prevent enzymes and bacteria from degrading the fat and protein. Raw product is chopped into small pieces to cook uniformly. This also helps increase production rates and lower energy costs.

Product safety controls are used throughout the industry. Hazard Analysis, Preventive Controls, and Good Manufacturing Practices were used for years and are now part of FDA's new animal food regulations under the Food Safety Modernization Act. Cooking destroys all bacteria and other pathogens, but resulting meals must be stored, handled and distributed under carefully controlled conditions to prevent post-process recontamination. Adherence to the industry's voluntary *Rendering Code of Practice* provides food safety and quality assurance to customers.

The Industry's Future

With 95 percent of the world's population outside the U.S., growth for the rendering industry will mainly be in overseas markets. Some lack the agricultural infrastructure to produce consistent quality products competitive with imports. Others are established markets that find U.S. products cost-effective to buy.

Industry analysts suggest the rendering industry will continue to consolidate through mergers and acquisitions, similar to other industries. Renderers will further upgrade existing plants to improve sustainability, quality control and efficiency. They will also pursue improvements to develop new value-added products, such as nutritionally-enhanced animal meals and novel industrial uses. Importantly, the rendering industry will continue to focus on biosecurity, with progressive programs to eliminate biological hazards throughout their processing and delivery to customers.