



rendering: the
**(much
needed)**

secret industry

SHEDDING LIGHT ON THE ULTIMATE RECYCLERS.

(Special advertising supplement)



Ever wonder where the ingredients come from in that bag of dog food you pour into your pet's bowl? Or maybe the ingredients in your soap and cosmetics? Or in the paint you apply to your bedroom walls?

The answer: some of the ingredients found in these commonly used products are derived from animal waste, through a process known as rendering. Rendered animal byproducts are also used as feed for livestock and household pets. More recently, renderers have begun repurposing the waste as biofuel.

Every year, the North American rendering industry recycles about 59 billion tons of perishable materials generated by farms, ranches, food-processing facilities, butcher shops, restaurants and supermarkets.

Although an ancient practice, rendering continues today, adding almost \$2 billion in value annually to the U.S. livestock-production sector. Rendering also promotes biosecurity by stopping the spread of animal-borne diseases.

...but we have a problem.

Americans consume a plethora of animal products, including meat, dairy and eggs. Because of our carnivorous eating habits, our society produces an extreme amount of animal waste, in the amount of 63 million pounds a year. The total volume of animal waste equals almost one and a half that of the Empire State Building.

On-farm deaths contribute to this waste. Every year, 4 million cattle, 7 million pigs and 100 million poultry die, leaving ranchers and farmers with a disposal problem on their hands. In terms of livestock, only 50 percent of a cow, 60 percent of a pig, 72 percent of a chicken and 78 percent of a turkey end up in the meat case. The leftovers need someplace to go.

So what are the options?

Without the rendering industry, animal byproducts would go into landfills. The problem: Animal flesh is perishable material that can contaminate soil and water during decomposition with disease-causing microorganisms and vermin. Dumping 59 billion pounds of animal byproducts in landfills would reduce the country's available landfill space by 25 percent a year and fill up all available space in four years. This method would also contribute to the production of methane gas—a potent greenhouse gas and contributor to global warming—and foul odors. Animal carcasses would attract rats, cats, dogs and flies, thereby making landfills a potential place for harmful pathogens to breed and spread.

Incinerating the animal waste could also transmit diseases, not to mention it's cost-prohibitive. Composting would require massive space for storage and could create pathways for spreading disease. Several states prohibit burial because of the negative impact on ground- and surface-water quality. These alternative methods fail to adequately inactivate bacteria, viruses, protozoa and parasites. We can't incinerate, compost, bury or dump the material in landfills. So what's left?

Since 1913, the Sacramento Rendering Company has dealt with unprocessed animal waste in an environmentally safe and cost-effective way: The Sacramento-based company recycles the waste, turning animal byproducts into essential ingredients for common products we use in our daily lives.

The California Department of Food and Agriculture, California Water Resources Control Board, U.S. Food and Drug Administration, and Sacramento Metropolitan Air Quality Management District all have a hand in the regulation of rendering plants. Rendering is one of the most heavily regulated industries in our state and its regulations—which include ongoing routine inspections of facilities and regular equipment-safety checks—have become a model for other agricultural sectors.

The accumulation of animal mortalities would impede meat producers and pose a serious hazard to animal health and the environment.

The Impact

When you consider that more than 4 million cattle, 7 million pigs, and 100 million chickens and turkeys die each year and must be disposed of as a result of on-farm mortalities, we have quite the problem on our hands. The accumulation of animal mortalities would impede meat producers and pose a serious hazard to animal and human health and the environment. Inappropriate disposal of deadstock increases the possibility that humans, livestock or wildlife will come in contact with harmful pathogens. Rendering companies, such as SRC, offer a solution.

To illustrate the importance of rendering plants, think back to the heat wave of 2006, when cows were dying at an alarming rate. The Sacramento Rendering Company stepped up to help other renderers, who were overwhelmed. Here's what Dennis Thompson, chief of the Meat and Poultry Inspection branch of the California Department of Food and Agriculture, had to say about the incident:

"It was the summer of 2006, when an unusual hot period resulted in an unusually large number of deaths of livestock. At the same time, one or more rendering plants experienced prolonged mechanical difficulties. The result was far more carcasses than rendering plants could process. The accumulation of carcasses was a significant problem, especially for dairies, and represented a real challenge for government officials to protect public health, the environment and livestock. Thousands of pounds of carcasses had to be transported to landfills."

Subsequently, a working group formed to prevent similar problems in the future and improve the response to them when unavoidable, according to Thompson. This group is composed of representatives from California Integrated Waste Management Board, UC Davis, the dairy industry, California Department of Food and Agriculture, California Air Resources Board, landfill operators and several other groups.



**FROM CHARLOTTE MITCHELL, EXECUTIVE DIRECTOR OF THE
SACRAMENTO COUNTY FARM BUREAU**

Without an economically feasible way to handle dead animals, we will see a dramatic increase of other ways these animals will be handled, creating a huge health hazard. For that reason, maintaining a local rendering plant is not only important for agriculture, it is important for the whole community.

The three-step rendering process involves applying heat, extracting moisture and separating fat.

Here's how it works:

Rendering companies collect animal mortalities and viscera from animal slaughter, which includes bone and blood. Companies also collect meat after the "sale by" date from supermarkets and recycled cooking oil from restaurants.

Rendering releases fat and moisture from raw materials by dehydrating the material in a batch or continuous cooker. The material is cooked at high temperatures—up to 295 degrees Fahrenheit—to kill viruses, bacteria and other microorganisms such as foot-and-mouth disease, E. coli, staph and salmonella. The process even kills anthrax, which is a notoriously resilient bacteria that can survive extremely harsh conditions for decades or centuries. Bacteria needs a level of moisture to grow; by removing the moisture, rendering plants act as critical control points to eliminate the potential spread of animal-related diseases.

We might consider renderers the ultimate recyclers. Cave people, Eskimos, Romans and American Indians all made use of every possible aspect of the animals they hunted. American Indians, for instance, used skins and hides for shelter and clothing; teeth and bone for weapons and serving utensils; and burned waste fat to cook meat.

For 2,000 years, civilizations throughout the world have rendered animal fat to produce light in the form of oil lamps and candles. Tallow—a product rendered from the fat trim and bones of beef—drove the development of rendering through the centuries, and soap was its primary use until the late 1800s.

Re-cyclers

Today's rendering process generates two main products: protein and fat.

Protein supplements animal feed and pet food. This protein contains essential amino acids, taurine, essential fatty acids, calcium and vitamin B12 and vitamin A—these ingredients enable the efficient production of beef, veal, pork, poultry, eggs, fish and milk. The meal feeds swine, poultry and family pets.

Renderers also make use of hides, which manufacturers buy to produce leather, shoes, garments and upholstery. Recycled cooking oil is used in animal feed, biofuels and industrial chemicals.



FROM LEO VanWARMERDAM: VanWARMERDAM DAIRY

We naturally depend upon the services of Sacramento Rendering Company, as do the other 30 or so Sacramento area dairies. It is fact of nature that animals are going to die. And without a local rendering plant, farmers and individuals with animals will be put in the position of having to drive several hours each way to dispose of a down animal. This would significantly raise the cost of farming here in Sacramento.

Michael Koewler, president of the Sacramento Rendering Company, is a fourth-generation renderer. He's been in the business ever since he was a teenager and used to assist his dad's operation during summer vacations. SRC has been located in an industrial area of Sacramento since 1955,

More than 300 rendering plants exist in North America. Currently, 13 rendering plants operate in California, owned by the four companies that remain. Nowadays, SRC employs 120 employees, with 85 workers here in Sacramento. SRC owns a collection facility in both Modesto and Reno, as well as a collection and processing plant in Sacramento.

Sixty SRC trucks collect animal waste from food establishments and food-processing facilities across northern California and northern Nevada every day. They go to slaughterhouses, ranches, dairies, restaurants, butcher shops and grocery stores, serving more than 4,000 clients. By day's end, SRC will process 1 million pounds of animal waste.

SRC helps ensure the protection of our waterways by regularly pumping out malfunctioning grease interceptors at restaurants; this prevents grease from going down the drain and entering city sewers.

SRC boasts one of the cleanest and most modern facilities in the country. The company has installed air scrubbers and other high-tech equipment for improved air quality, and five years ago invested in technology to make the plant as smell-proof as possible. The Business Environmental Resource Center recently awarded SRC its prestigious Sustainable Business of the Year award. This year, the company received recognition as a sustainable business from both the California state Legislature and Sacramento County Board of Supervisors.

our own rendering company



although the company has received pressure to move for the past few years after the Sacramento County Board of Supervisors granted approval for a housing development to be built nearby. Before the current location, SRC operated a plant in south Land Park.



Allan Groves
Chief Executive Officer:
33 years

How'd you start working for SRC?

When I was 19 years old, I came for a summer job and drove a scrap route and went to supermarkets. I did that for 10 years. Then the company needed a solicitor to go out and get more business, so I decided to give that a shot. When I started, I was one of seven drivers, and we had about 25 employees; now we have 120. I manage all the customers and the Department of Transportation and legal stuff that comes up. Basically, I manage and take care of problems.

What do you like about the job?

It's fun. They called rendering "the invisible industry" because for a long time you never talked about it. You need a pretty good sense of humor to work around this stuff. When I used to ring the door at Raley's to pick up their bone and fat they'd say, "Hey, the Bone Man is here." I don't like decaying stuff. The reason I stayed is the work is steady. I've always gotten a paycheck. The Koewlers are really good people. The grandfather hired me, and at that time, I was 5-foot-6. I remember the grandfather asked me, "Can you lift a 500-pound grease barrel?" I said, "No, can you?" I just had to stay, and it's paid off.

Do you have any fond memories from SRC?

One time, an old man came wanting us to dispose of his old horse. We don't kill any animals. But the man was crying, so we agreed to take the horse and let him live outside in the field. The horse lived for another 15 years. We have two horses out there now from a guy who couldn't afford to feed them. We adopted a wild donkey from Nevada. He was wild as all get out. Now he's a pal with everything. I like the donkey. He hangs out with the horses.

What's the importance of rendering?

We recycle. The thing that drives me nuts is everyone is going green, but that's what we've always done. What frustrates me is when someone says the rendering company is throwing stuff away. We've never thrown stuff away. If we didn't do this, people would dump cows in ditches. We've had to clean up sites like that, when someone didn't know the regulations or didn't want to pay (we charge dairies). The county of Sacramento will call me and say, "I've got 10 cows rotting in a ditch, in a waterway."



What's happens with the restaurant grease you recover?

We sell the product to biodiesel companies. One of the biggest problems I've had lately is people going out and selling home biofuel kits, and they'll tell customers that restaurants just throw grease away, which isn't true. When people home-brew biofuel for their tractors and Volkswagens, they generate a lot of waste. There's glycerin that can't be used. There are bottom solids. They're illegally dumping that. We've cleaned up a couple sites in Grass Valley. At one site, there were 55 50-gallon drums full of this waste. They just left the property owner to deal with this, and the waste could have ended up in a gutter somewhere. You have to be licensed through the Department of Food and Agriculture to transport biodiesel, and these people aren't licensed so they don't care if they spill or pour the waste down the drain.

How is the rendering industry doing nowadays?

We've been losing rendering plants. California rules and regulations are tough. And it's expensive—the amount of money we spend for no return. What would happen if we couldn't operate our rendering plant here is that renderers would come all the way up from Southern California to service our area. The dairies pay for this service, and they wouldn't be able to afford it. They'd go out of business. The supermarkets need this stuff rendered and restaurants must have grease removed. So if we weren't here, I can't imagine what it would be like.



Paula Holberg
Marketing Coordinator:
18 years

What do you do for SRC?

I work in the milling department doing sales and marketing for the proteins. I started here—working the front desk—when I was 34 years old. I remember my drive here from the temp agency. I was so nervous.

Do you like working here?

I love it. It's a small business. You're close to all the coworkers. We go to lunch. We have our birthday parties here. We always have a good time. I've known a lot of good people at this company. I remember when I started here, our current president—Mike Koewler Jr.—his dad had retired and his dad would come in everyday and talk about the ducks in the field. He was a great man. My daughter worked here when she was in high school and it was a good experience for her. As for me, I learn something new all the time. I'm definitely proud of the work we do.



Alan Eckert
Plant Supervisor:
20 years

What do you do here at SRC?

I take care of the rendering process and make sure everything is rendered according to design. I take care of the tank farm and the fats we make. And I take care of the maintenance department. I have 25 employees under my wing. I used to work for six years for what's now called Darling International Incorporated, one of the largest renderers in the United States. I'm originally from Cleveland, OH. I was made an offer to come out to Sacramento. I'd never been to California before, and it was quite a move. I picked up my family and here I am, 20 years later.

What'd you do before you started in the rendering business?

I lived in Georgia for 12 years. I'm a union pipe fitter, a pipe welder by trade. I went to apprenticeship school when I got out of the Navy. I got into rendering all by accident. I got tired of traveling and went to an unemployment agency and got referred to Darling. I had no idea what they did, other than when I walked in, I noticed an odor. We went through the whole interview and they offered me the job, and I said, "What do we do here?" I took the job. Until then, I never gave rendering a thought. I like meat. I eat steaks. I never thought about what happens to the rest of the animal that doesn't get eaten. I never knew. Most people really don't know.

What do you like about your job?

It's a challenge. You have to have a pretty strong stomach to do this job. Especially in the summer, in Sacramento, when we have those days of 100-degree heat; it gets pretty rough in the plant. I've hired a few people who've lasted a day or an hour after they got a whiff. The smell never bothered me.



Tim Gover
Route Supervisor:
32 years

What is your job at SRC?

I make sure my 25 drivers get their routes done. When new customers come in, I create new routes. We have 248 grease routes, 30 or 40 scrap routes, and numerous slaughterhouses and Foster Farms that we provide service to everyday.

Your dad used to work here?

Yes, he worked here from 1944 to 1974. I grew up in the house out front. I was one of 16 kids. I'd never thought about working here, but in January of 1978, I needed a job so I tried this out. I worked on the truck for 20 years and have been in the office for 12 years. My dad was a foreman inside the plant. I like driving the truck and moving around. I like talking to customers and drivers and making sure everything gets done. I'm second generation and proud to work for SRC.

Why is this company important?

We're the original recyclers. We're recycling something that would otherwise be a waste product. We've been recycling for longer than the word "recycling" has been around. Sometimes we get overlooked. But we're doing something good here.

future



Rendering companies continually look for new products to develop. The most exciting prospect in the future of recycled animal waste is biodiesel, which is a renewable resource and alternative fuel that burns cleaner than oil. Biodiesel can be refined from animal fats, recovered cooking oils and vegetable oils. The energy from burned animal fats can be used as a biofuel to fuel furnaces or in industrial boilers. SRC operates a French Fries to Fuel program, in which the company recovers restaurant grease. Forty percent of the grease goes to biodiesel.

Rendering is a result of the world's demand for animal products. With increased population worldwide, and with standards of living improving in India, China and other developing countries, the demand for meat will only continue to increase. Food demand is expected to double by the year 2030, and animal waste will parallel this rise. Thankfully, renderers are known for being innovative and competitive. Here in Sacramento, SRC is ready to take on that challenge.

We need rendering plants. Not only do they provide a way to recycle animal waste, the industry also prevents the spread of disease-causing microbes, and it recovers billions of dollars worth of commodities.

FROM RICHARD MATTEIS: ADMINISTRATOR OF THE CALIFORNIA FARM BUREAU FEDERATION

The rendering industry is not just an important part of our integrated waste management system, it is essential. Without local rendering capacity, public and environmental health are at serious risk.

FROM RICK BETTIS: EXECUTIVE COMMITTEE MEMBER OF THE SIERRA CLUB

Reuse of material is one of the best things we can do if we want to attain sustainability. A local rendering plant is part of the sustainable solution.



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