



APPLEGATE

CHANGING THE MEAT WE EAT®



MISSION REPORT

LETTER FROM

THE PRESIDENT

Joe O'Connor



Dear friends,

I don't think of myself as old. And really, I'm not! But there does come a point in your life when you realize: It's not about me anymore. It's about the next generation.

I certainly feel that about my six-year-old daughter, Annie. She sees and hears everything now and she understands most of it. Setting her up for success means showing her how to make a difference in the world, and asking myself what I personally can do to make her future safer and more sustainable. If we are going to make the future better, we have to make real change today.

That's what this report, our first, is all about. It is a testament to what we do every day at Applegate, striving for progress in each of the four pillars of our mission: People, Environmental Sustainability, Animal Welfare, and Ingredient Integrity. It's also a baseline for what we aim to accomplish going forward.

I am proud of the many strides we have made. (Read on!) But I'll highlight two here: First, our commitment to animal welfare led us this year to become one of the only companies to require third-party remote-video auditing of all processing facilities in the United States, with the plan for international plants to come online by 2025 (See pg. 35). And amid a drumbeat of alarming news about climate change, we are redoubling our focus on regenerative agriculture:

By end of 2025, our goal is that every single one of our famous grass-fed hotdogs will be made with certified regeneratively raised beef (See pg. 18).

It's exciting to be an industry leader. It's also exciting to see the change.

Last summer, I visited a regenerative bison ranch in Colorado. The animals were magnificent. And so was the soil: rich, dark, teeming with microorganisms. On the other side of a fence, a traditional pasture was dry and lifeless. Seeing, the old saying goes, is believing.

I hope that this report will let you see all that we do at Applegate, and our ambitious goals for the future.

In solidarity,

Joe O'Connor

“

If we are going to make the future better, we have to make real change today.

OUR YEAR IN REVIEW

35 PERCENT
ORGANIC
AND NON-GMO
VERIFIED PRODUCTS

MORE THAN
75 PERCENT
OF PRODUCTS
FREE FROM THE
TOP NINE ALLERGENS

\$330,000
DONATED
TO NONPROFITS

280,000
POUNDS
OF FOOD DONATED

#1 NATURAL⁴
AND ORGANIC
MEAT BRAND³

MORE THAN
4,000 FARMS
IN OUR SUPPLY CHAIN

12 MILLION
ANIMALS
RAISED IN HIGHER
WELFARE CONDITIONS¹

700 PROHIBITED
INGREDIENTS
ON OUR INGREDIENT
INTEGRITY LIST²

MORE THAN
9 MILLION
PURCHASING HOUSEHOLDS

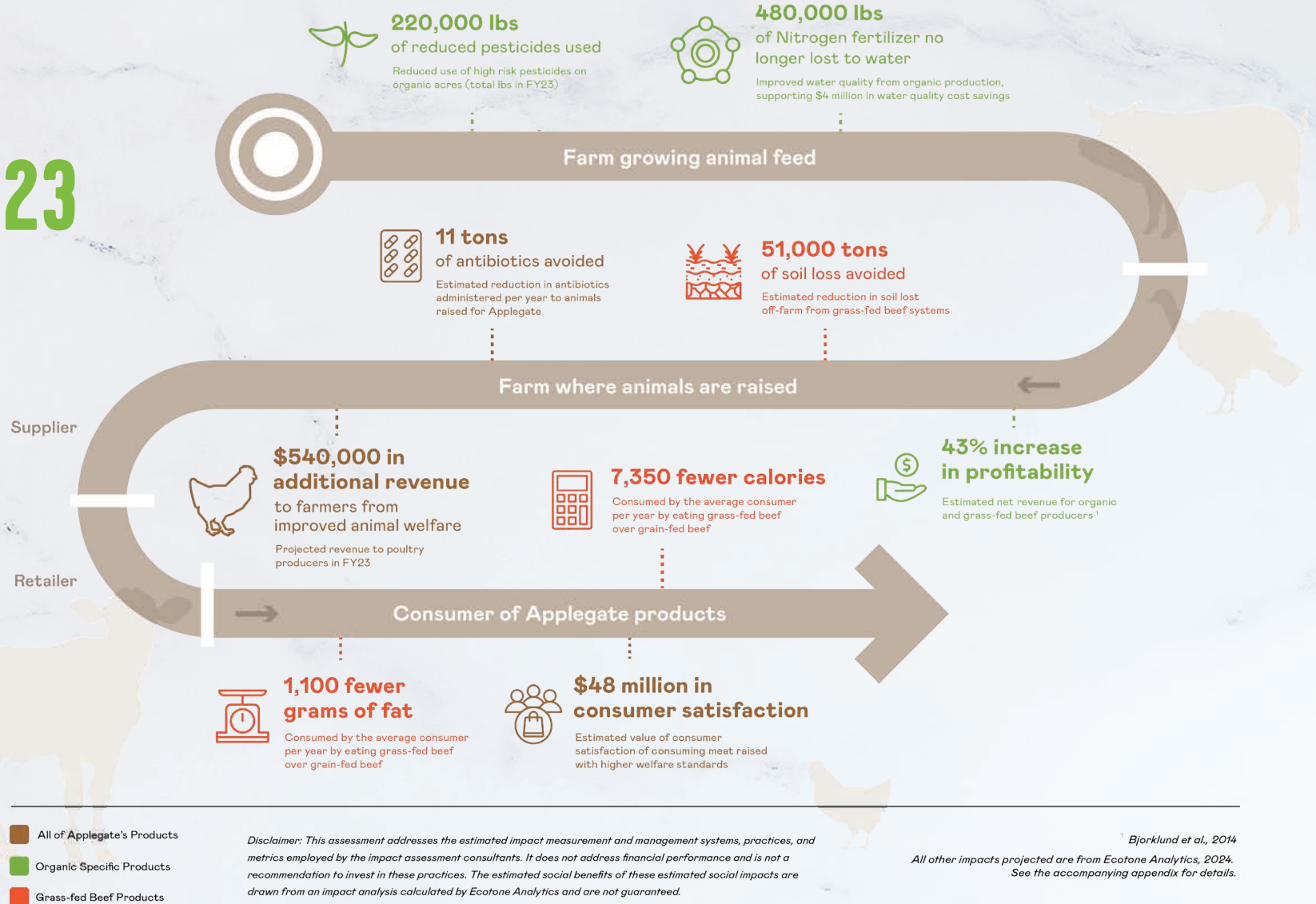


¹"Higher welfare" means the farms are audited for humane animal care that meets the standards set forth by the Global Animal Partnership or Certified Humane third-party humane animal standards.
²List developed from consumer feedback, retailer lists of banned ingredients, and government restricted ingredients.

³NielsenIQ (Total US xAOC, 52 w/e 11/18/23)
⁴No Artificial Ingredients, Minimally processed.

APPLEGATE'S ESTIMATED IMPACT IN FY23

This impact value map shows the estimated social, environmental, and economic benefits from Applegate's Humanely Raised, No Antibiotics Ever, Organic, and Grass-fed beef standards across Applegate's value chain. This analysis was undertaken to estimate these potential social benefits and to whom these benefits may accrue, based on the best available scientific evidence.



Disclaimer: This assessment addresses the estimated impact measurement and management systems, practices, and metrics employed by the impact assessment consultants. It does not address financial performance and is not a recommendation to invest in these practices. The estimated social benefits of these estimated social impacts are drawn from an impact analysis calculated by Ecotone Analytics and are not guaranteed.

¹ Bjorklund et al., 2014
 All other impacts projected are from Ecotone Analytics, 2024. See the accompanying appendix for details.



WHO WE ARE



OUR MISSION



APPLGATE IS ON A MISSION



CHANGING THE MEAT WE EAT[®]

The way food is raised can change and transform lives...from the farmer who grows it to the person who eats it.



We believe delicious, ethically-sourced meat can be good for people and the planet. We are committed to Applegate Humanely Raised⁵, environmental sustainability, and supporting a holistic food system that connects the health of humans, animals, and the planet.

Lofty goals? They shouldn't be.

But making change is never easy. It requires dedication and creativity—and people who are ready to challenge the status quo. That's why every Applegate employee is encouraged to embrace these four changemaker principles.

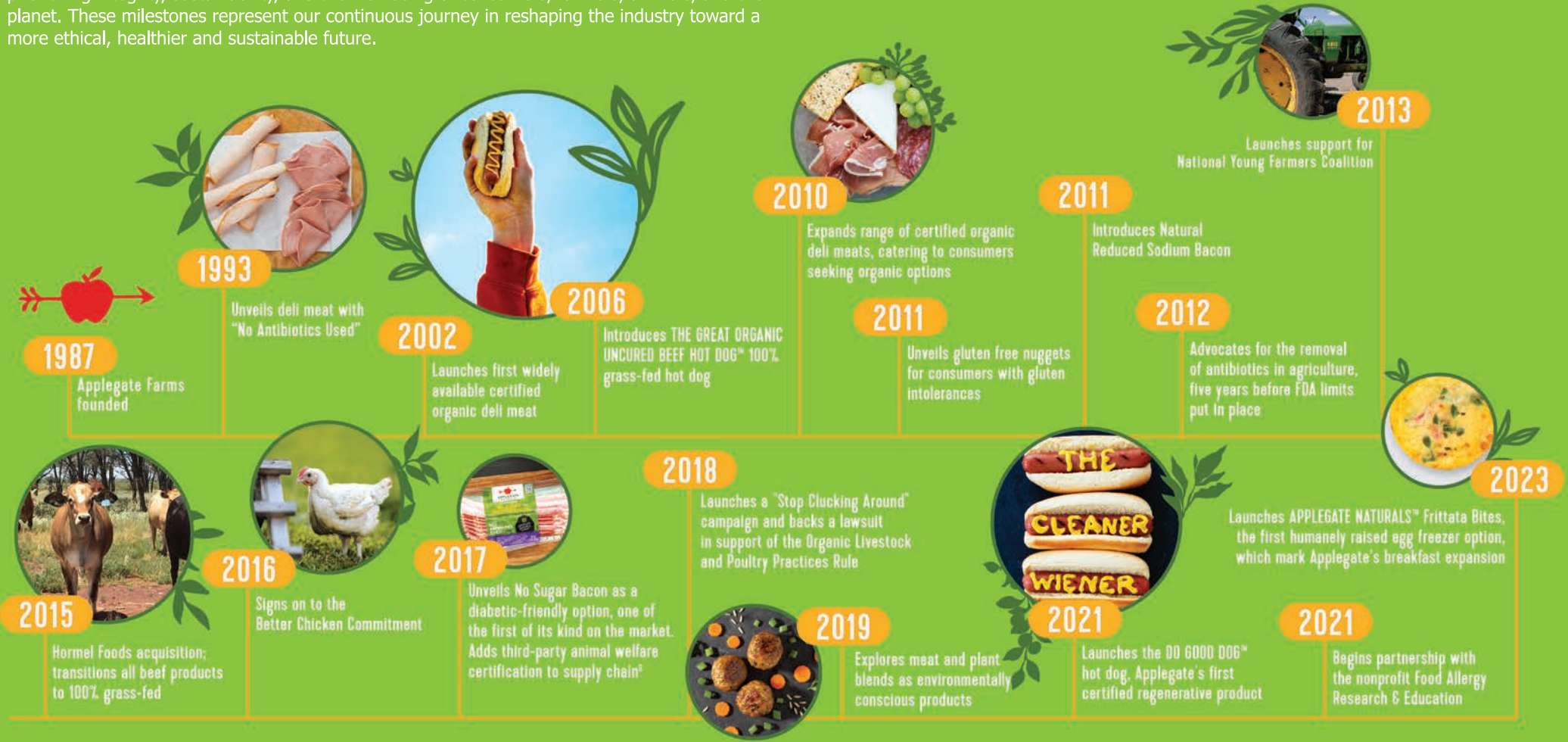
Intelligently question everything | Persevere with optimistic grit | Embrace creative solutions | Pursue smarter ways of working



⁵ <https://www.applegate.com/mission/animal-welfare>

OUR TIMELINE

Since our founding in 1987, Applegate's mission has been to transform the meat industry by prioritizing integrity, sustainability, and the well-being of consumers, farmers, animals, and the planet. These milestones represent our continuous journey in reshaping the industry toward a more ethical, healthier and sustainable future.



OUR STAKEHOLDER MODEL

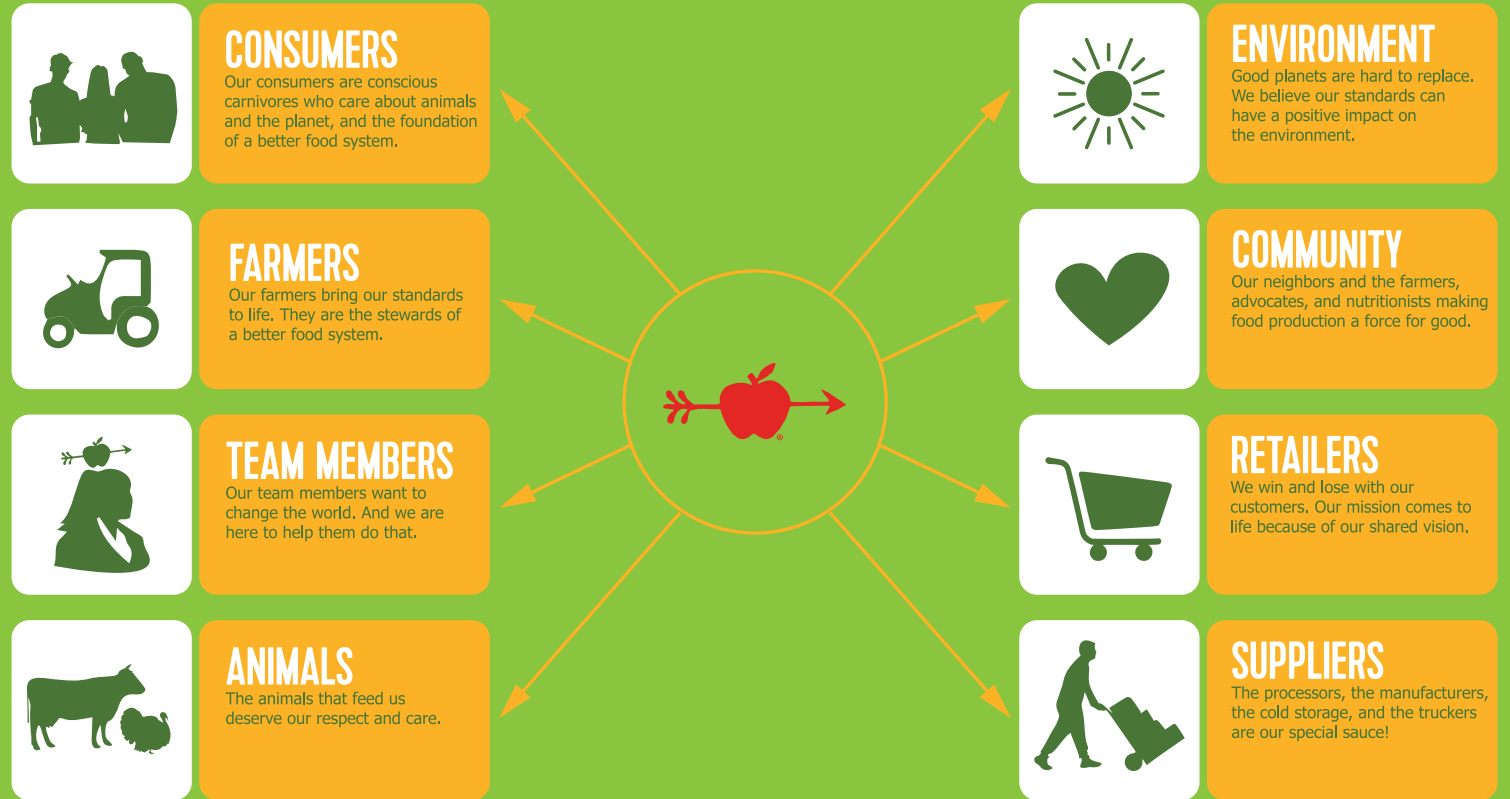
Every stakeholder matters.

That's because every one is integral in making Applegate successful:

Principled farmers heal the land, ensuring meat can remain on our tables.

Engaged team members serve our communities and our consumers, which spurs growth.

Don't you just love a win-win?



OUR FARMERS

Our goal has always been to make the highest quality meat available to the many, not the few. But when you're trying to feed everyone, you need a lot of meat.

That's why we buy from farmers and ranchers around the world. Our grass-fed beef comes from some small farms in the U.S., but also Australia and Uruguay, where warm climates and vast grasslands have made grass-fed/grass-finished beef the rule, not the exception. Our pork comes from Iowa, sure, but also Canada, the U.K., and Denmark. All our poultry comes from right here in the USA.



Producer Spotlight: Farmer Focus

USA

Farmer Focus is an organic network of family farms in the Shenandoah Mountains. Founded by a sixth-generation farmer, it was built to sustain the region's family farmers. In 2023, it announced an \$18 million expansion that will create 300 new jobs.⁸



Producer Spotlight: Danish Crown

DENMARK

A farmer-owned co-op for organic pork that sets the bar for continuous improvement. In November 2022, it set a goal to reduce its value-chain's scope 3 carbon footprint by 20 percent by 2030 and to be net zero by 2050.⁷



Producer Spotlight: Greenham Beef

AUSTRALIA

Greenham is a sixth-generation, family-owned cattle business with some 4,000 farms in its network. Its cattle have always been raised on grass.

⁷ <https://www.danishcrown.com/global/sustainability/accountability-and-key-figures/progress-and-activities/overview-of-targets-and-activities/>

⁸ <https://www.virginiabusiness.com/article/farmer-focus-to-create-300-jobs-with-17-8m-expansion/>

<https://www.farmerfocus.com/>

OUR THREE-YEAR GOALS

Our mission drives our business. To set our goals, we use a decision-making framework we call our Mission Standards Index. It has four pillars: People, environmental sustainability, animal welfare, and ingredient integrity. Any initiative—whether it's developing a new product or bringing on a new supplier—must be in service to our mission objectives.



PEOPLE

GOAL

Foster inclusivity, respect, and a celebration of diverse perspectives across our business.

WHAT ARE WE DOING?

Launching DEI initiatives across four areas: consumer marketing, supply chain, workplace culture and community engagement.



ENVIRONMENTAL SUSTAINABILITY

GOAL

Reduce our climate impact and promote land health.

WHAT ARE WE DOING?

We have set an ambitious goal that by the end of 2025, 100 percent of all APPLGATE® beef hot dogs will be sourced from certified regenerative farms.



INGREDIENT INTEGRITY

GOAL

Increase our offerings of nutrient-dense, allergen-free, clean-label products.

WHAT ARE WE DOING?

Joining the non-profit Food Allergy Research and Education advisory committee and investing in research to measure the nutrient density of regenerative meats.



ANIMAL WELFARE

GOAL

Continue leadership with Applegate Humanely Raised standards.⁹

WHAT ARE WE DOING?

We will launch an Animal Welfare Advisory Board and we are implementing third-party remote video auditing in all processing facilities.

⁹ <https://www.applegate.com/mission/animal-welfare>



PEOPLE



**ENVIRONMENTAL
SUSTAINABILITY**

**INGREDIENT
INTEGRITY**

**ANIMAL
WELFARE**



A COMMITMENT TO DIVERSITY, EQUITY & INCLUSION

Our products don't exist in a vacuum. They exist thanks to the hard work of our team members, our farmers and suppliers, our consumers, and the communities in which we operate.

To advance equitable opportunities and access for all, we have set three-year diversity, equity, and inclusion goals in the areas of supply chain, inclusive marketing, leadership development, and food access.

Our goals for positive people outcomes include:

1

Enable team members to build DEI into their everyday work, set goals within their professional objectives, and provide accessible opportunities for professional leadership development.

2

Uphold inclusive values in our supplier code of conduct with a goal of increasing the number of certified diverse enterprises and socially disadvantaged farmers in our supply chain annually.

3

Identify product innovation, inclusive messaging, and channel/media opportunities that will extend the brand's reach with underrepresented consumer groups.

4

Provide opportunities for team members to engage with their communities and support food education and food access for children.

THE POWER IN PEOPLE



Jamie Dehl

APPLEGATE CONSUMER RELATIONS SPECIALIST



*A small group of us had
the privilege*

to spend our afternoon at Boggy Creek Farm. We came together for a day of meaningful connection with nature and community at a small regenerative farm nestled in the heart of Austin, Texas. We were able to get our hands dirty as we worked together to nurture the land, prepare for the upcoming growing season, and cultivate sustainable practices. We gained such valuable insight into how much hard work it takes to keep a successful farm running.

Applegate's 123 team members make a difference every day, to our business and within their own communities.

We believe this is good for everyone. It's why our company offers one paid day off for volunteering to each team member every year, plus multiple opportunities to perform community service in the areas where we live and work. This year we launched a new program, Share the Love, that rewards team members who demonstrate their changemaking bona fides with a \$100 donation to the non-profit of their choice.

Here are some highlights from 2023.



BOGGY CREEK TRAIL

AUSTIN, TEXAS

Volunteers tilled and prepped the land for planting.



ASBURY PARK BEACH & BOARDWALK

ASBURY PARK, NEW JERSEY

Applegate sponsored the Clean Ocean Action Beach Sweeps. We had almost 20 people join the cleanup efforts including staff, families, and friends.

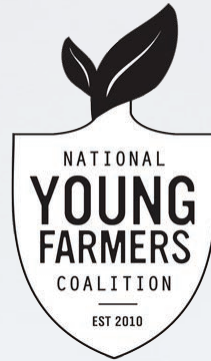


LONGMEADOW FARMS

BLAIRSTOWN, NEW JERSEY

Applegate staff gleaned nearly 1,300 pounds of apples to be donated through the Foodshed Alliance. In addition, we provided a \$10,000 check to the Foodshed Alliance to support their ongoing effort to feed the local community.

OUR PARTNERS IN COMMUNITY CARE



Conscious Alliance brings food and other essential goods directly to economically isolated communities across the country, partnering with schools, pantries, and others. In 2023, Applegate helped to provide nearly 59,000 meals to kids, families, disaster victims, and those experiencing homelessness. Since its founding, Conscious Alliance has served more than 11 million meals.¹⁰

The National Young Farmers Coalition works to shift power, change policy, and equitably support a new generation of working farmers. We have partnered with NYFC since 2013, and in 2023, we supported NYFC with funds for general operations and to underwrite their annual survey of young farmers. We believe this work is essential, given that the average age of farmers in the U.S. is 58¹¹ and 40 percent¹² of the nation's farmland is at risk of transitioning out of agriculture in the next decade.¹³

The Whole Kids Foundation Whole Kids, a project of Whole Foods Market Foundation, supports schools and inspires families to improve children's nutrition and wellness. Applegate's donations support, among other things, school garden programs, salad bars, and beehives across the country.¹⁴

After-School All-Stars is one of the country's largest nonprofit organizations working to close the opportunity gap for low-income youth. In 2023, Applegate donated funds to support the All-Stars Health & Wellness initiatives at 725 school sites and summer camps in 78 cities across the country.¹⁵

¹⁰ From Conscious Alliance reporting figures for Applegate partnership

¹¹ <https://www.usda.gov/media/blog/2023/02/22/2022-census-agriculture-impacts-next-generations-farmers>

¹² <https://farmland.org/keeping-farmers-on-the-land-read-more/>

¹³ <https://www.youngfarmers.org/wp-content/uploads/2022/09/NationalSurveyReport22-1.pdf>

¹⁴ <https://www.wholekidsfoundation.org/>

¹⁵ <https://afterschoolallstars.org>

WHY I CARE ABOUT

ANTIBIOTIC RESISTANCE



Carolyn Gahn

SENIOR DIRECTOR, MISSION & ADVOCACY



As a former farmer,

clean ingredients have always been a priority. On the farm, we raised most of our food, including our vegetables, dairy, eggs, and most importantly, our meat. Raising our own beef, pork, and chicken was personal. We wanted animals to have a full and happy life, and to guarantee there were no antibiotics, hormones, or growth promotants of any kind.

As a mom, I am hyper-aware of threats to my family, such as antibiotic resistance. This threatens to turn what we think of as run-of-the-mill infections, like strep throat, into real dangers to our children. Resistance is caused by the misuse and overuse of antibiotics in both humans and animals. Too much exposure to antibiotics allows bacteria to evolve and overcome the medicine's effectiveness. The World Health Organization lists antibiotic resistance as one of the 10 most pressing global health threats.¹⁶

Everything is connected. Some 70 percent of all antibiotics in the U.S. are used in livestock.¹⁷ I knew there had to be a better way, a more thoughtful way, to raise meat that would not contribute to this looming crisis.

Luckily, I also found like-minded companies, like Applegate, which for years has been fighting to remove antibiotics from livestock systems and preserve these precious medicines.

I joined Applegate earlier this year as the senior director of mission and advocacy. An important part of my role is to educate our partners and our suppliers on the global threat of antibiotic resistance. In Europe, governments have taken important action, and seen great success, according to a small study, in reducing the use of antibiotics on the farm without undermining profitability.¹⁸

Here at home, the federal government has taken some measures to protect antibiotics. In 2017, the FDA banned the use of antibiotics in livestock feed to promote growth¹⁹, which has effectively reduced sales of antibiotics since their peak use in 2015²⁰, but since then, sales have been increasing.²¹ There is still more work to do. At the top of the list, according to Lance Price, director of the Antibiotic Resistance Action Center (ARAC) at George Washington University, is changing the exception that allows for the broad use of antibiotics for disease prevention.²²

No Antibiotics Ever²³ has always been part of the Applegate philosophy. But choosing not to use antibiotics in our supply chain is only half the battle. We continue to support advocacy groups such as ARAC in their efforts to encourage policy action and to educate consumers about the dangers of antibiotic resistance. We will continue to preach its importance until we win this fight.

¹⁶ <https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance>

¹⁷ <https://www.nrdc.org/bio/david-wallinga-md/antibiotic-use-remains-far-too-intensive-us-livestock>

¹⁸ <https://www.sciencedirect.com/science/article/pii/S0167587719306245>

¹⁹ <https://www.fda.gov/animal-veterinary/development-approval-process/fact-sheet-veterinary-feed-directive-final-rule-and-next-steps>

²⁰ <https://www.pigprogress.net/health-nutrition/usa-antibiotics-usage-came-down-in-2017/>

²¹ <https://www.cidrap.umn.edu/antimicrobial-stewardship/fda-report-shows-small-decline-antibiotic-sales-livestock-2021>

²² <https://battlesuperbugs.com/antibiotic-use-food-animals>

²³ If animals do get sick and require antibiotics, they are treated and removed from the Applegate supply chain.



Photography Courtesy of Greenham

PEOPLE

ENVIRONMENTAL SUSTAINABILITY



**INGREDIENT
INTEGRITY**

**ANIMAL
WELFARE**

REGENERATIVE AGRICULTURE: A GIANT LEAP FOR LANDKIND

Our goal: by the end of 2025, 100 percent of all APPLGATE® beef hot dogs will be sourced from certified regenerative farms. This will help transition more than 6 million acres of grassland to regenerative.

It is no secret that cattle raised for beef contribute to greenhouse gas emissions. On average, every kilogram of beef produced is responsible for 40 to 50²⁴ kilograms of carbon dioxide emissions. We wanted to know how we could make a difference.

In 2021, we collaborated with the University of California's Berkeley Haas School of Business to understand what it would take. The research showed that more than 80 percent of emissions were attributable to the cattle's life on pasture. Yes, even for grass-fed animals. The work has helped us to focus our efforts where they count, with agriculture practices, rather than on processing or transportation, which are responsible for a far smaller share of emissions.

Regenerative agriculture practices promise to help reduce emissions at the farm. Managed grazing can help store carbon, reduce erosion, and boost biodiversity.²⁵ In 2021, we launched our first regen product: The DO GOOD DOG™ hot dog, in partnership with a few passionate farmers. The cattle that supply the beef for that hot dog are part of a system that is contributing to the regeneration of up to 260,000 acres of U.S. grasslands.²⁶ Now, we are doubling down on our commitment to regenerative agriculture.

Our goal: by the end of 2025, 100 percent of all APPLGATE® beef hot dogs will be sourced from certified regenerative farms. This will help transition more than 6 million acres of grassland to regenerative.

How will we make this happen? By creating a standard that works for farmers, who, after all, know their land best. To that end, we are developing an Applegate regenerative standard that is not one-size-fits-all. Much like our successful Applegate Humanely Raised program, it will require third-party certification to measure land health outcomes, but it will offer farmers a menu of certifications to choose from.²⁷

Additionally, over the next year, we will work with collaborative umbrella frameworks, such as GRASS (Generalized Regenerative Agriculture Sourcing Specification) and the Textile Exchange Regenerative Outcomes Framework, to ensure we are aligning our standard with industry-accepted metrics for ecological outcomes, animal welfare, and human rights.

The transition will be beautiful—and messy. But it has to be done, and we will be the ones to do it!

MEASURING CHANGE

It's easy to talk about change. But at Applegate, we're focused on delivering it. That means measuring our impact, and making changes based on what we learn.

To understand our products' environmental impacts, we partnered with HowGood, an independent research company that helps us set and track clear, measurable impact-reduction strategies for our ingredient sourcing.

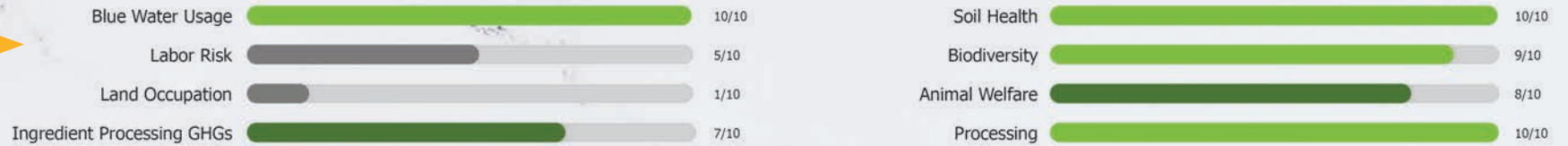
HowGood's data comes from over 600 vetted sources, including ingredient and product life cycle assessments, non-governmental research and guidance, peer-reviewed journal articles, and aggregated commercial databases, among others.

HowGood measures²⁸ product profiles by core sustainability attributes: biodiversity, processing, blue water usage, labor risk, land use, soil health, and animal welfare.

How does our **APPLEGATE® DO GOOD DOG™** beef hot dog stack up? **Pretty darn good for beef.**



IMPACT DETAILS

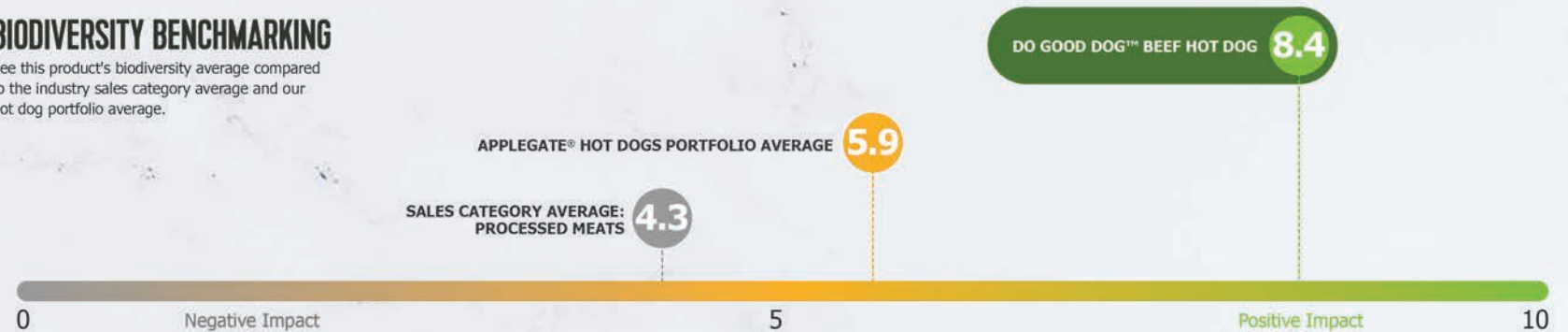


Benchmarking against the category, the **DO GOOD DOG™** hot dog scores more than twice as well for biodiversity as the average processed meat.



BIODIVERSITY BENCHMARKING

See this product's biodiversity average compared to the industry sales category average and our hot dog portfolio average.



²⁸ <https://howgood.com/research/>

SETTING NEW STANDARDS

What do hiking boots and hot dogs have in common? Not much, on the face of it. But when it comes to scaling up regenerative agriculture, they are very much linked.

The reason is simple. To be profitable, regenerative ranchers need to sell every part of the animal: Steaks go to fancy restaurants, the trim goes into hot dogs, and hides are used to make leather. This means it isn't enough for us just to buy what we need, because it would leave farmers scrambling to sell the rest. In 2020, we embarked on a collaborative sourcing project with Timberland. The same cattle supplied regeneratively raised meat for APPLGATE® hot dogs and regenerative leather for Timberland™ Boots.

Cross-industry collaboration is rare for a reason. It's not easy. To source materials together, Applegate and Timberland had to first agree on the certifications and verifications required to validate materials as regeneratively sourced. In partnership with Other Half Processing, a supplier of traceable hides and byproducts, the two companies aligned around the Generalized Regenerative Agriculture Sourcing Specification, or GRASS, an innovative approach to regenerative verification.

GRASS lays out a menu of certifications and verifications that farmers can choose from, providing them with clear guidelines, but also allowing them to choose what works best for them and their farm. In 2023, Other Half Processing and its partner, the American Sustainable Business Institute, received \$35 million from the USDA to expand GRASS and support regenerative cattle ranchers in meeting the specification.

To unlock further opportunities, Applegate also joined the Textile Exchange's Regenerative Agriculture Community of Practice. The goal is to align GRASS and Applegate requirements with the Textile Exchange Regenerative Agriculture Outcome Framework.



To be profitable, regenerative ranchers need to use every part of the animal. Applegate and Timberland are making that happen.



Timberland 

OUR PARTNERS IN SOIL HEALTH

“ Applegate has been an incredible partner to the Organic Trade Association throughout their 20-plus year membership as an active participant in our Sustainability Council and Animal Welfare Task Force. Thank you for your continued efforts to increase soil health and to promote sustainable and responsible organic agriculture.

Cassandra Christine

DIRECTOR OF INDUSTRY RELATIONS, MEMBERSHIP AND DEVELOPMENT, ORGANIC TRADE ASSOCIATION



Kiss the Ground

is raising awareness for regeneration through storytelling, education, and advocacy. Through their Regenerate America™ platform, they work to elevate the voices of farmers and ranchers demanding that U.S. agricultural policies shift resources toward regenerative agriculture.²⁹

Land to Market

was founded by the Savory Institute and is the world's first outcomes-based regenerative verification and sourcing solution. Their Ecological Outcome Verification™ is entirely outcomes-based and uses empirical data to back up regenerative claims.³⁰

The Textile Exchange

is a global non-profit driving positive action on climate change across the fashion, textile, and apparel industries. Textile Exchange's Regenerative Agriculture Outcome Framework lays out the key metrics that make for a regenerative system. Applegate is proud to be the first food brand to join the community.³¹

The Organic Trade Association

is the business association for organic agriculture and products in North America. Its members work together to encourage and protect organic farming practices, and to share positive messages about the environmental and nutritional attributes of organic.³²

²⁹ <https://kisstheground.com/>

³⁰ <https://www.landtomarket.com/>

³¹ <https://textileexchange.org/>

³² <https://ota.com/>

ADVOCATING FOR A NEW FARM BILL

The U.S. Farm Bill is a critical piece of legislation that regulates many parts of our food system. Renewed every five to seven years, each Farm Bill cycle is an opportunity to assess current food, agriculture, and conservation programs and propose new initiatives to bolster commodities, nutrition, rural development, research, forestry, crop insurance, and more.³³ We are proud to collaborate with groups such as the National Young Farmers Coalition and American Farmland Trust, which are advocating for legislation to support regenerative agriculture practices on behalf of small, beginning, and socially disadvantaged farmers.

When it comes to federal legislation, there is power in a collective voice. That is why we are a member of Regenerate America™, a bipartisan coalition working to elevate the issues facing farmers and ranchers and allocate funds from the Farm Bill to regenerative agriculture. Through this coalition of fellow brands and businesses, we are supporting a portfolio of bills, including the Soil Care Act and the Streamlining Conservation Practice Standards Act.³⁴



Photography Courtesy of National Young Farmers Coalition

Here are the bills³⁵ and petitions we have endorsed:

THE OFFICE OF SMALL FARMS ESTABLISHMENT ACT

would create an office within the U.S Department of Agriculture specifically tasked with supporting the unique needs of small-scale producers, ensuring farmers have better access to the full suite of USDA programs and services.

THE FARMER-TO-FARMER EDUCATION ACT

aims to strengthen existing farmer-led education networks and build capacity for new ones, particularly in historically marginalized communities, through the use of cooperative agreements and existing funding.

LAND ACCESS, SECURITY, AND OPPORTUNITY ACT

is a bipartisan, bicameral bill aiming to remove barriers faced by young, beginning, and historically marginalized farmers and ranchers by expanding and authorizing funding for USDA's Increasing Land, Capital, and Market Access Program.

³³ <https://sustainableagriculture.net/our-work/campaigns/fbcampaign/what-is-the-farm-bill/>

³⁴ <https://kisstheground.com/advocacy/>

³⁵ <https://farmland.org/2023-farm-bill/>

ORGANIC MEAT MEANS

We talk a lot about regenerative agriculture. It's new! It's exciting! But that doesn't mean we're not still devoted to organic. More than 35 percent of APPLEGATE® products are certified organic, the only federally regulated environmental label.

We continue to grow our network of organic farmers and to support fraud-prevention programs and efforts to strengthen organic standards, especially around animal welfare. The reason is simple: Organic meat has lots (and lots) of benefits.³⁶

- ✓ Organic meat farmers use holistic, preventative health care practices
- ✓ The health and natural behavior of animals are prioritized
- ✓ All livestock feed must be 100 percent organically produced
- ✓ No antibiotics, synthetic growth hormones, GMOs
- ✓ Cattle are pasture-raised and grazed throughout the grazing season
- ✓ Organic meat production helps protect the environment



Photography Courtesy of Farmer Focus

³⁶ <https://pubmed.ncbi.nlm.nih.gov/26878675/> https://www.organic-center.org/sites/default/files/MeatReport/meatstudy-final_05_14_1.pdf

THE BENEFITS OF ORGANIC MEAT

NUTRITION OF ORGANIC MEAT

Meat can be a great source of protein, fat, iron, and vitamin D; these nutrients are more readily available in meat than other food sources. But not all meat is created equal. Organic ruminant meat like beef, lamb, and goat can contain more “good” omega-3 fatty acids, less cholesterol, and more antioxidants than non-organic ruminants. Organic regulations require animals to graze on certified organic pasture throughout the entire grazing season.³⁷

ORGANIC PRODUCTION OF ANIMAL FEED INCREASES BIODIVERSITY

The production of organic feed for animals supports important biodiversity—including natural enemies to pests and pollinators—for two main reasons. Organic farming prohibits the use of harmful synthetic pesticides that are known to be toxic to bees, birds, and other wildlife. Also, organic farming is generally more diversified with habitat that is beneficial to all types of wildlife.

ORGANIC LIVESTOCK AND CLIMATE CHANGE

What animals eat, how their feed is produced, where they are housed, and how their waste is managed influence greenhouse gas emissions and the potential for contributing to or mitigating climate change. The National Organic Program requires ruminant livestock to spend more time in the pasture than conventional animals on high-density feedlots. When they aren’t on pasture, they are required to eat a 100 percent organically produced diet. More time on pasture can help mitigate climate change because pasturing ruminant animals helps store carbon in the soil.³⁸

MANAGED GRAZING SEQUESTERS CARBON

Organically managed ruminant livestock are pasture-raised during the grazing season. Managed grazing is important for climate change because well-managed pastures can improve soil quality and store carbon, which would otherwise add carbon dioxide to our atmosphere.³⁹



³⁷ <https://pubmed.ncbi.nlm.nih.gov/26878675/>

³⁸ <https://www.sciencedirect.com/science/article/pii/S0308521X17310338>

³⁹ <https://www.intechopen.com/chapters/66122> https://www.organic-center.org/sites/default/files/MeatReport/meatstudy-final_05_14_1.pdf



PEOPLE

**ENVIRONMENTAL
SUSTAINABILITY**

INGREDIENT INTEGRITY



**ANIMAL
WELFARE**

COMMITMENT TO A CLEAN LABEL

Why is reading an ingredient label such hard work? It shouldn't be. Yet so many labels feature unpronounceable ingredients that overcomplicate our food system and don't benefit human health.

We have advocated for a clean label⁴⁰ for over 35 years. Our rolling list of prohibited ingredients⁴¹ now includes more than 700!

OUR BANNED INGREDIENTS INCLUDE:

HYDROGENATED FATS & OILS

CORN SYRUP

MODIFIED STARCHES

SODIUM PHOSPHATE

GMO INGREDIENTS & PROCESSING AID

HEXANE-EXTRACTED INGREDIENTS

BROMINATED VEGETABLE OIL

⁴⁰ The meaning of clean label may vary person to person, but it tends to involve the following: natural ingredients; simplicity; recognizable ingredients that do not sound chemical or artificial; transparency; information on how ingredients are sourced and how products are manufactured; minimal processing; manufacturing techniques that consumers understand to be simple or natural.

⁴¹ List developed from consumer feedback, customer lists of banned ingredients, and government restricted ingredients.



Applegate has 70 products that are free from the top nine allergens.

THE IMPORTANCE OF LABELING: LIVING WITH FOOD ALLERGIES

More than 75 percent of APPLEGATE® products are free from the top nine allergens. But we don't just concern ourselves with what's on the shelf. We also partner with Food Allergy Research & Education (FARE), a leading advocacy group for transparent labeling and food safety. Through this partnership, Applegate works to ensure all consumers have access to safe, sustainable choices.

How? For more than a decade, FARE has championed efforts to improve labeling and safety. In 2021, it notched a meaningful victory with the passage of the Food Allergy Safety, Treatment, Education, and Research (FASTER) Act. The FASTER act makes food allergies a public health priority and expands allergen labeling to include sesame—1.5 million Americans have sesame allergies! It simplifies the process for labeling new allergens as they emerge and supports new drug treatments for food allergies. The act was signed into law by President Biden, and went into effect on January 1, 2023.⁴²

⁴² <https://www.foodallergy.org/resources/how-fare-advocates-helped-pass-faster-act>

THE APPLIGATE CULINARY COLLECTIVE



with Fred Maurer

CHARCUTIER AT BKLYN LARDER

How do we make APPLIGATE® products taste so good?

We have a simple recipe for great taste. Use the highest-quality meat. Add real, flavorful ingredients. And don't mess with it too much!

Oh... and bring together a team of chefs, farmers, and progressive thinkers to weigh in and let us know how to make it even better. Who gets this amazing job? People like Fred Maurer, a charcutier at BKLYN Larder. Also known as the Hotdog Boyfriend, Fred knows his emulsified meat...and what to drink with it.

When and why did you find a passion for food?

I grew up in the Midwest, where food really wasn't appreciated. I started cooking as a creative outlet but didn't plan to pursue it as a career until right before I graduated college. It was a perfect storm of the Food Network's popularity—giving me access to a world I didn't know anything about—and having divorced parents, so I was home alone and could cook whatever I wanted. I made a lot of weird things, I'm sure!

The first time I ever had real charcuterie was at Bar Boulud (New York), and it opened my eyes. I was in love. It was magical. How was this made? What am I even eating? That really started it for me in the world of charcuterie. That was in 2008.

What do you think about charcuterie's place in history and culture?

I'm no anthropologist, but it's pretty damn important! What would Poland be without kielbasa? Germany without wurst? You can find really beautiful high-end pâtés, and they're made with the same basic principles as homemade sausage you hang in your garage.

What is the most challenging or fun thing about working with meat?

Charcuterie is a beautiful representation of waste management. You take all the parts that are unfamiliar, take a long time to process, or are hard to cook, and you create something people want to eat and pay money for! Watching the transformation—from a whole animal to a muscle group, to a muscle, to grind, then emulsification—always delights me. It's using meat to create something new, something you can take pride in. Credit for a beautiful steak should go more to the farmer than to the butcher. But charcuterie, you're using the meat as a medium. I think even the common hot dog deserves some elevated appreciation.

What's so great about hot dogs?

Hot dogs are just fun. Everyone is into them. For me, a great hot dog has good smoke, a nice snap, plenty of warm spice. A hot dog fresh out of the smoker is better than almost anything I can think of culinarily. The toppings are up to you. But if the dog is good, you don't even need them.

Any cool ways to use hot dogs in recipes?

Ever tried a hot dog on a toasted potato roll with sauerkraut and mustard? It'll blow your mind!

Best beverage pairing with hot dogs?

Think about the beverage's ability to play delicately with the smokey overtones of the frankfurter, sliding on your tongue between the coriander, garlic, and mace. Kidding. Just a beer, people. (Not that I would say no to a glass of bubbly with a wiener.)



OUR PARTNERS IN NUTRITION



The Applegate RD Network

The Applegate RD Network (Applegate Registered Dietitian Network) is a nutrition-based program open to RDs and RDs-to-be. Members of the program receive a monthly newsletter and product information to share with their communities. The network allows RDs to connect directly with Applegate for any nutrition or product-based inquiries.



Whole30

Co-founded by Melissa Urban, Whole30 is a 30-day elimination program that emphasizes whole foods, including more than 25 APPLEGATE® products. As part of this partnership, Applegate works with Whole30 to create informational content surrounding natural and organic meat, provides support to the 100-plus members of Whole30's coaching network, and curates content for Whole30 and Applegate social channels.⁴³



FARE

FARE serves as a company advisor, informing Applegate and guiding our strategy for allergen-free products. In 2023, Applegate joined FARE's Food Allergy Advisory Council to share our expertise about building an allergy-safe food-supply chain and best practices in marketing, compliance, labeling, and food-allergy product innovations.⁴⁴

⁴³ <https://whole30.com/>

⁴⁴ <https://www.foodallergy.org/>

NUTRIENT DENSITY: A NEW APPROACH TO HEALTH

“Managed grazing” and “regenerative agriculture” are new terms to many people. But a quick explanation makes the benefits clear.

When cattle are responsibly grazed on grass, they help enrich the soil, which can help minimize erosion and boost biodiversity.⁴⁵

Raising animals this way has other benefits, too. New work from researchers such as Dr. Stephan van Vliet is building the case that meat from animals fed a grass-fed diet is higher in nutrients beneficial to human health.

For example, emerging data indicate that when livestock eat a diverse array of plants on pasture, additional health-promoting phytonutrients—terpenoids, phenols, carotenoids, and antioxidants—become concentrated in their meat and milk.⁴⁶ Indeed, several phytochemicals found in grass-fed meat and milk are in quantities comparable to those found in plant foods.⁴⁷

Meat from animals fed a grass-fed diet are higher in important nutrients that can be beneficial to human health.

At Applegate, we are keen to learn more about potential health benefits associated with the nutrient density of grass-fed meat. To that end, we support the Bionutrient Food Association, which is conducting a multi-year study with farmers across the U.S. to analyze meat, stool, forage, and soil samples in combination with the farmers’ management practices.

The analysis measures hundreds of compounds, including fatty acids, phenolic acids, flavonoids, amino acids, carboxylic acids, alkaloids, benzoic acids, hydroxycinnamic acids, and polyamines in the meat.⁴⁸ The study aims to comprehensively define nutrient density in beef and its causal factors. We believe this work will benefit farmers by illustrating the benefits of more agroecological practices, and will benefit consumers by encouraging purchasing decisions based on nutritional value.

We also are working with the University of Minnesota and the Hormel Institute to better understand how the nutrient density of meat impacts human health. The two-year human health study will measure health biomarkers of participants who consume a diet that includes regenerative, organic 100 percent grass-fed beef. This study will inform assumptions about how a regenerative agricultural system might bring benefit to consumers.⁴⁹



⁴⁵ <https://www.npr.org/sections/thesalt/2019/08/13/746576239/is-grass-fed-beef-really-better-for-the-planet-heres-the-science>

⁴⁶ <https://www.frontiersin.org/articles/10.3389/fsufs.2020.555426/full>

⁴⁷ <https://stephanvanvliet.com/publications/>

⁴⁸ <https://www.bionutrientinstitute.org/beef>

⁴⁹ <https://www.hi.umn.edu/>

SHINING A

NEW LIGHT ON NUTRITION

Once upon a time, not that long ago, post-doctoral researcher Stephan van Vliet had an idea for a new kind of study: One that would examine whether grazing bison on pasture improved the animals' health and healthy compounds in the meat. After all, he reasoned, it only made sense. When people eat a diet full of whole foods rather than more processed ingredients, doctors tend to see better health outcomes. Why wouldn't it be the same for animals?

But back in 2019, the idea did not make sense to the people van Vliet needed to convince most: funders. Van Vliet saw 16 grant applications rejected before he finally got the green light to begin his research. So began his journey to understand and illuminate the links between human health and how animals are raised.

Van Vliet, 36, has a swoop of blond hair, a trim goatee, and an infectious enthusiasm when explaining wonky subjects like nutrient density (the beneficial nutrients found per gram in various foods) and metabolomics (the analysis of small molecules in foods and the body, with the goal of understanding the influence of factors such as disease, dietary, and lifestyle choices). In other words, he has precisely the type of star power needed to push a new and potentially groundbreaking idea into the mainstream.

"What we're doing is looking at the 'dark matter' of nutrition," van Vliet said. "The ways the stuff that doesn't show up on a nutrition fact panel can affect our metabolism and our health."

In the last decade, several studies have suggested that how animals are raised may impact human health. One small study showed that eating grain-fed wagyu beef spurred higher levels of inflammation in the body immediately after eating compared to consuming leaner, wild-fed kangaroo. Another showed that eating eggs raised levels of Vitamin D in the body more effectively than is typically seen in studies with Vitamin D supplements, likely because of the way it is packaged in foods. Perhaps most interestingly, the consumption of grass-fed beef raised levels of omega-3s and other unsaturated fatty acids in the human bloodstream.

"It all supports the idea that it's not only what nutrients are in a food but how other compounds in that food may or may not offer better absorption or more protection thanks to the presence of these co-factors," he says. "We're looking at a complex food matrix, rather than individual, isolated ingredients."

Van Vliet is working on a study (in partnership with the Massachusetts-based Bionutrient Institute) that explores how the nutrient content of beef differs depending on how the cattle were raised. Funded in part by Applegate, researchers are testing 750 steaks from 250 farms. Research will be completed in 2024, but so far, van Vliet says, the data shows that animals raised on farms using regenerative practices (or agroecological practices, as Van Vliet likes to call them), such as rotational grazing across biodiverse landscapes, produced steaks with far superior ratios of omega-6 to



omega-3 fatty acids; about 1 to 1.5 for regeneratively raised meat versus as high as 10:1 for conventionally raised.

"Think of a cow as having a salad bar with 40 different plants, as opposed to a more simple ration of grain and hay," he says. "In humans, we accept that a diet can make a difference. A cow is not that different from us as a mammal."

Will these studies ultimately show that healthier livestock animals make healthier people? It's too early to say—yet. "It's science, and it is complex. It takes time," says van Vliet. "We'll see what the data says."



PEOPLE

**ENVIRONMENTAL
SUSTAINABILITY**

**INGREDIENT
INTEGRITY**

**ANIMAL
WELFARE**



APPLEGATE HUMANELY RAISED

For more than 30 years, we have championed animal welfare standards through our Applegate Humanely Raised program⁵⁰. This is the foundation for our relationships with our farms and suppliers.



THIRD-PARTY CERTIFIED



ANNUAL AUDITING



NO ANTIBIOTICS EVER



**NO GROWTH HORMONES
OR BETA AGONISTS**



VEGETARIAN FEED OR GRASS-FED



MORE SPACE



ENVIRONMENTAL ENRICHMENTS⁵¹



NO GESTATION CRATES

⁵⁰ Animal welfare standards are compared to industry standard and are certified by third party animal welfare verifiers such as Certified Humane and Global Animal Partnership, <https://www.applegate.com/mission/animal-welfare>

⁵¹ We follow enrichment guidelines set forth by Global Animal Partnership and our farms are audited against these guidelines.

THE FIVE FREEDOMS⁵²

Developed in the United Kingdom in the 1960s, the Five Freedoms of Animal Welfare are widely considered as the foundation of humane treatment and our Applegate Humanely Raised program.

1

FREEDOM FROM DISCOMFORT

Providing an appropriate environment, including shelter and a comfortable resting area

2

FREEDOM FROM FEAR AND DISTRESS

Ensuring conditions and treatment that prevent mental suffering

3

FREEDOM FROM HUNGER AND THIRST

Ready access to fresh water and a diet to maintain full health and vigor

4

FREEDOM FROM PAIN, INJURY, OR DISEASE

Prevention, or rapid diagnosis and treatment

5

FREEDOM TO EXPRESS NORMAL BEHAVIOR

Providing sufficient space, proper facilities and company of the animal's own kind



Photography Courtesy of Greenham

THIRD-PARTY REMOTE VIDEO AUDITING

In 2023, we announced that we will require third-party, remote video auditing of all species in processing facilities in the United States, which we hope to have fully implemented by March of 2024, and internationally for pork and beef by the end of 2025.

This will allow us to have enhanced transparency to measure animal welfare outcomes in all plants and administer corrective actions, if necessary.



Photography Courtesy of Virginia Poultry Growers Cooperative

A BANNER YEAR FOR ANIMAL WELFARE LEGISLATION



Applegate founder Stephen McDonnell was famously a conflicted vegetarian. He wanted to eat meat, but only meat he could feel good about. In the more than 30 years since Applegate was founded, we've fought a sometimes lonely battle for animal welfare. Then came 2023.

Proposition 12⁵³, a landmark California animal welfare rule, is now the law of the land⁵⁴, thanks to the U.S. Supreme Court. So is Massachusetts Question 3, a similar voter-passed initiative that got the green light after the Court's ruling. In October, the USDA announced its final Organic Livestock and Poultry Practices (OLPP), which mandates outdoor access for organic poultry and clarifies living conditions, healthcare, transportation, and processing practices to support animal welfare for all organic poultry and livestock species.⁵⁵

It has been a long time coming. Also known as the Farm Animal Confinement Initiative, Prop 12 was overwhelmingly passed by California voters in 2018.⁵⁶ Massachusetts voters cast their ballots on Question 3 in 2016.⁵⁷ Both laws prohibit the sale of eggs, veal, or pork from animals that were confined in small spaces.

In both cases, that means no more battery cages—communal cages just a few feet wide and 15 inches high—for laying hens. Breeding sows must be given at least 24 square feet of space. (Though no specific amount of space is specified in Question 3, animals must be able to stand up and turn around.) Gestation crates, which were widely used for pregnant sows but severely limit their movement, are now almost entirely banned.

In both cases, the laws apply not only to California and Massachusetts farms but all farms that sell fresh pork, veal, and eggs in those states.

None of these laws affect Applegate directly. We exceed the standards set by Prop. 12 and Question 3, and we do not use gestation crates. We also lobbied for the changes to the organic standard with a five-year campaign we called "Stop Clucking Around."⁵⁸

Here at Applegate, we are celebrating the good news, and we're applauding the animal welfare advocates and voters who made their voices heard.



Here at Applegate, we are celebrating the good news, and we're applauding the animal welfare advocates and voters who made their voices heard.

⁵³ <https://preventcrueltyca.com/sites/preventcrueltyca.com/files/Act-language.PDF>

⁵⁴ https://www.supremecourt.gov/opinions/22pdf/21-468_5if6.pdf

⁵⁵ <https://ota.com/advocacy/critical-issues/organic-animal-welfare-standards>

⁵⁶ [https://ballotpedia.org/California_Proposition_12,_Farm_Animal_Confinement_Initiative_\(2018\)](https://ballotpedia.org/California_Proposition_12,_Farm_Animal_Confinement_Initiative_(2018))

⁵⁷ [https://ballotpedia.org/Massachusetts_Minimum_Size_Requirements_for_Farm_Animal_Containment,_Question_3_\(2016\)](https://ballotpedia.org/Massachusetts_Minimum_Size_Requirements_for_Farm_Animal_Containment,_Question_3_(2016))

⁵⁸ <https://applegate.com/blog/posts/tell-the-usda-to-stop-clucking-around-with-organic-standards>



Photography Courtesy of Farmer Focus

BROILER **WORKING GROUP**

In 2021, Applegate became a founding member of the U.S. Working Group for Broiler Welfare.

The Working Group was created to allow industry leaders to collaborate in a pre-competitive manner on how to improve broiler chicken welfare and meet the demands of the Better Chicken Commitment (BCC). Facilitated by the animal-welfare advocacy group Compassion in World Farming and Blue House Sustainability Consulting, the Working Group has grown from seven to 20 companies that are committed to moving the industry forward.

The Working Group meets regularly to explore practical strategies and creative solutions that will enable progress toward BCC commitments, especially the challenge of commercializing slow-growing breeds.

BETTER CHICKEN **COMMITMENT**

Applegate signed on to the Better Chicken Commitment in 2016. This year, we published a roadmap⁵⁹ outlining the steps we are taking to meet our commitment.

We are fully compliant with the requirements for stocking density, environmental enrichments, and third-party auditing. In the coming years, we will partner with breeders, researchers, and our own research and development team to pilot new breeds at scale and to measure the results against our Mission Standards Index, which charts outcomes in the areas of animal welfare, environmental sustainability, people, and ingredient integrity.

⁵⁹ <https://www.applegate.com/blog/posts/a-new-roadmap-for-poultry-welfare>

BETTER CHICKEN COMMITMENT⁶⁰ ROADMAP

		2023*	2024*	2025**	2026*	2027*	2028*
STOCKING DENSITY	Maximum 6 lbs/sq ft and prohibits all forms of broiler cages.	100%					
LITTER	At least 3 inches of litter bedding, light cycles that mimic natural day lengths, and enrichments to encourage natural behaviors.	100%					
LIGHTING		100%					
ENRICHMENTS		100%					
CAS	Processing practices would use controlled atmosphere stunning methods.	50%**	Implement third party remote video auditing throughout processing	Measure Animal Welfare Outcomes (AWO) in all plants and administer corrective actions if necessary. Discontinuation with noncompliant suppliers.			
				50-75%**	75-100%**	100%**	
BREEDS	Only approved slow-grow breeds.	10%**	Partner with breeders and researchers on developing breeds that meet Applegate mission standards. Pilot breeds at scale and measure against mission standards. Continuously improve AWO of all breeds in use.				
			10-20%**	20-45%**	45-60%**	60-100%**	100%**
			Evaluate all current Applegate breeds and commercially viable BCC approved breeds against Applegate mission standards. Develop list of Applegate preferred breeds.			Research alternative feed rations and other environmental mitigation solutions for impact on product quality, human health and environmental impacts.	

⁶⁰ <https://betterchickencommitment.com/us/policy/>

* By end of year.

** Percentages reflected are of total volume. However, this could fluctuate based on what is available from suppliers and our current demand.



APPLEGATE[®]
CHANGING THE MEAT WE EAT[®]

APPENDIX: APPLGATE'S FY23 IMPACT ESTIMATION PROCESS AND SOURCES

This appendix details the process used by Ecotone Analytics to estimate the social, environmental, and economic benefits from Applegate's Humanely Raised, No Antibiotics Ever, Organic, and Grass-fed beef production standards (as shown on page four of this Mission Report). This analysis was performed at Applegate's request. The estimates are derived from Applegate's data combined with evidence from scientific studies, and covers Applegate's beef, pork, chicken and turkey production volume in FY23. Estimates serve as the first baseline of Applegate's impact. Actual measurements of Applegate's impact were not conducted for this analysis, nor have they previously been conducted, due to the large expense and time that would be incurred.

Approach

Ecotone worked closely with a core team of Applegate stakeholders to build impact estimates. The process began with a comparison of the production standards implemented by Applegate and how those standards compare to conventional industry practices. This was paired with a literature review by Ecotone which explored available scientific evidence on each production standard for each animal species in scope. Over 80 resources were reviewed including statistics such as pounds of meat consumed by Americans, cost analyses (e.g. the cost of fertilizer runoff to society), and causal studies that assess the extent a given intervention causes a measured change. The quality of an impact estimation relies on the strength of the causal linkage between what Applegate production standards entail, the measured outcomes of those standards, and how those outcomes compare to conventional practices. To assess the strength of a causal study, Ecotone uses 7 levels of evidence of causality to rank the approach a study used to estimate causality, ranging from a meta-analysis of randomized controlled trials (strongest level of evidence) to expert opinion (weakest level of evidence). Review of resources for non-causal statements (e.g. nutritional value of grass-fed beef) utilizes other factors to determine the reputability of the source: credentials of the authors, whether a peer-review process took place, publishing institution and/or funders of the analysis, acknowledgement of potentially differing results in other resources, and date of publication. Studies are also reviewed and selected for the extent the characteristics of the producers and/or consumers included within the study are reflective of Applegate's producers and consumers.

Impact estimates were first developed per unit (i.e. per producer, per consumer, per acre, etc.). To scale the per unit impacts estimated for Applegate's FY23 product volume, it was necessary to estimate the number of Applegate consumers, number of acres in feed/grazing production, and number of producers, each disaggregated by the appropriate Applegate production standard(s). Estimates for these figures were built in collaboration with Applegate, leveraging both internal data and external literature.

The analysis was conservative in all calculations to reduce risk of overstating impact and ensure there's no "double-counting" of impact. Ecotone built estimates only for those impacts with sufficient evidence. Those without sufficient evidence were excluded.

Assumptions

To develop a suitable model for the impact analysis, and to isolate the impact of Applegate's production standards relative to conventional industry practices, a series of assumptions were relied upon. These included:

1. Producers would otherwise be raising animals and growing feed using conventional industry standard practices;
2. Land being used for grass-fed beef production would not otherwise be in a pasture or perennial forage that is rotationally grazed;
3. Consumers would not otherwise be eating products with the same production standards as Applegate; and
4. Impacts are estimated over 1 year, although in some cases it may take longer for the benefits to be realized.

APPENDIX: APPLGATE'S FY23 IMPACT ESTIMATION PROCESS AND SOURCES

Estimation details of each impact

Value chain tier	Impacts quantified	Estimation process and sources used
Farm growing animal feed	220,000 lbs of reduced pesticide used from organic feed production	Change in pesticide use from organic crop production compared to conventional production multiplied by the estimated number of acres of organic feed production for Applegate animals in FY23. <i>Sources: Benbrook, C., Kegley, S., & Baker, B. (2021); Cornelius and Schnitkey, 2023; Applegate proprietary data</i>
	480,000 lbs of nitrogen fertilizer no longer lost to water due to organic feed production	Pounds of nitrogen lost per acre of corn and soybean production per year multiplied by the reduction in rate of nitrogen loss from organic crop production compared to conventional production multiplied by the estimated acres of organic feed production for Applegate animals in FY23. <i>Sources: The Nature Conservancy, 2016; USDA, 2022; Mondelaers et al., 2009; Cornelius and Schnitkey, 2023; Applegate proprietary data</i>

Farm where animals are raised	51,000 tons of soil erosion avoided from grass-fed beef production	Reduced rate of erosion from perennial forage compared to row cropping or fallow land multiplied by the average rate of erosion for the relevant geography of production multiplied by the estimated acres of grazing land for Applegate's FY23 purchasing volume. <i>Sources: Francesconi et al., 2015; NSW Environmental Protection Authority; Teng et al., 2016; Cornelius and Schnitkey, 2023; Applegate proprietary data</i>
	11 tons of antibiotics avoided from antibiotic restrictions	Intensity of antibiotics given per kg of animal per year multiplied by the weight of meat purchased (by species) by Applegate in FY23. <i>Sources: Wallinga, (2022); Applegate proprietary data</i>
	43% increase profitability to organic and grass-fed beef producers	Estimated change in profitability from organic, grass-fed beef production system compared to conventional beef system. <i>Source: Bjorklund et al., 2014</i>
	\$540,000 additional revenue to farmers from avoided chicken bruising	Proportion of chicken and turkey meat with bruising under conventional practices compared to high animal welfare practices ¹ that avoid bruising multiplied by the value lost per pound of meat bruised multiplied by the estimated number of chickens and turkeys purchased by Applegate in FY23. <i>Sources: Nijdam et al., 2004; USDA, 2023; Applegate proprietary data</i>

¹<https://applegate.com/mission/animal-welfare>

APPENDIX: APPLGATE'S FY23 IMPACT ESTIMATION PROCESS AND SOURCES

Estimation details of each impact (cont.)

Value chain tier	Impacts quantified	Estimation process and sources used
Consumer of Applegate products	1,100 reduced grams of fat from grass-fed beef per consumer	Average beef consumption per Applegate consumer per year multiplied by the average difference in grams of fat between grass-fed beef and grain-fed beef. <i>Sources: Applegate proprietary data; Kaestner et al., 2022</i>
	7,350 reduced calories from grass-fed beef per consumer	Average beef consumption per Applegate consumer per year multiplied by the average difference in calories between grass-fed beef and grain-fed beef. <i>Sources: Applegate proprietary data; Kaestner et al., 2022</i>
	\$48 million increase in consumer satisfaction	Percent increase in willingness to pay for higher animal welfare practices ² by consumers multiplied by the average meat expenditures per Applegate consumer multiplied by the estimated proportion of meat expenditures going to Applegate products multiplied by the estimated number of Applegate consumers in FY23. <i>Sources: Bennett et al., 2012; Applegate proprietary data</i>

Sources

Levels of Evidence of Causality (1 is highest, 7 is lowest)	
1	Evidence from a systematic review or meta-analysis of all relevant RCTs (randomized controlled trial) or evidence-based clinical practice guidelines based on systematic reviews of RCTs or three or more RCTs of good quality that have similar results.
2	Evidence obtained from at least one well-designed RCT (e.g. large multi-site RCT).
3	Evidence obtained from well-designed controlled trials without randomization (i.e. quasi-experimental).
4	Evidence from well-designed case-control or cohort studies.
5	Evidence from systematic reviews of descriptive and qualitative studies (meta-synthesis).
6	Evidence from a single descriptive or qualitative study.
7	Evidence from the opinion of authorities and/or reports of expert committees.
N/A	Information provided in the source does not make causal claims. This includes statistics and/or other facts.

APPENDIX: APPLGATE'S FY23 IMPACT ESTIMATION PROCESS AND SOURCES

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5	Kaestner, J., Lloyd, S., Nardi, A.M., Paine, L., & Schriefer, G. (2022). A Consumer's Guide to Grassfed Beef. <i>Grasslands 2.0</i> .
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Disclaimer

This assessment addresses the estimated impact measurement and management systems, practices, and metrics employed by the impact assessment consultants. It does not address financial performance and is not a recommendation to invest in these practices. The estimated social benefits of these estimated social impacts are drawn from an impact analysis calculated by Ecotone Analytics and are not guaranteed.



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