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Good food. Responsibly.[®]

2015 Sustainability & Financial Report

Inspected
and approved
for distribution
by Smithfield
Foods, Inc.



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Welcome

Welcome to the Smithfield 2015 Sustainability and Financial Report¹, which provides comprehensive information on our sustainability progress and performance along with information on our annual financial results.

For the first time, we are releasing our report in sections so that we can engage more deeply with stakeholders on a variety of topics. The section releases follow the schedule below:

- Animal Care: June 13
- Environment: June 27
- Food Safety & Quality: July 11
- Helping Communities and People: July 25
- Full Report: August 8

The full suite of content will constitute a “core” level report according to the Global Reporting Initiative (GRI) G4 Guidelines.

Our sustainability strategy is organized by pillars that represent our key areas of sustainability focus: animal care, environment, food safety and quality, helping communities, and people. The concept of *value creation* is an overarching focus of our sustainability strategy, underpinning these pillars.

Unless otherwise indicated, this report pertains to our U.S. and European operations and to investments in which we have a majority (51 percent or more) interest. We do not provide performance data for contract farms because they are independent businesses. We primarily use American measurement metrics and American numbering when reporting the performance of our U.S. and international operations.

We note changes in the scope of reporting or reclassifications of data previously reported, as well as other assumptions and bases for calculations in the relevant data sections. The content in this report primarily covers 2015.

Forward-Looking Information

This report contains “forward-looking” statements within the meaning of the federal securities laws. The forward-looking statements include statements concerning our outlook for the future, as well as other statements of beliefs, future plans and strategies or anticipated events, and similar expressions concerning matters that are not historical facts. Our forward-looking information and statements are subject to risks and uncertainties that could cause actual results to differ materially from those expressed in, or implied by, the forward-looking statements.

These risks and uncertainties include, but are not limited to, the availability and prices of live hogs, feed ingredients (including corn), raw materials, fuel and supplies, food safety, livestock disease, live hog production costs, product pricing, the competitive environment and related market conditions, risks associated with our indebtedness, including cost increases due to rising interest rates or changes in debt ratings or outlook, hedging risk, adverse weather conditions, operating efficiencies, changes in foreign currency exchange rates, access to capital, the cost of compliance with and changes to regulations and laws, including changes in accounting standards, tax laws, environmental laws, agricultural laws and occupational, health and safety laws, adverse results from litigation, actions of domestic and foreign governments, labor relations issues, credit exposure to large customers, the ability to realize the anticipated strategic benefits of the acquisition of Smithfield Foods, Inc. by WH Group, the ability to make effective acquisitions and successfully integrate newly acquired businesses into existing operations and other risks and uncertainties described under “Item 1A. Risk Factors.” Readers are cautioned not to place undue reliance on forward-looking statements because actual results may differ materially from those expressed in, or implied by, the statements. Any forward-looking statement that we make speaks only as of the date of such statement, and we undertake no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless expressed as such, and should only be viewed as historical data.

¹ All references to “Smithfield,” “we,” “us,” and “our” are terms of convenience used to refer collectively to Smithfield Foods and all of its subsidiaries. Similarly, the terms “division” and “business unit” may be used to refer to one or more subsidiaries, which are independent operating companies.



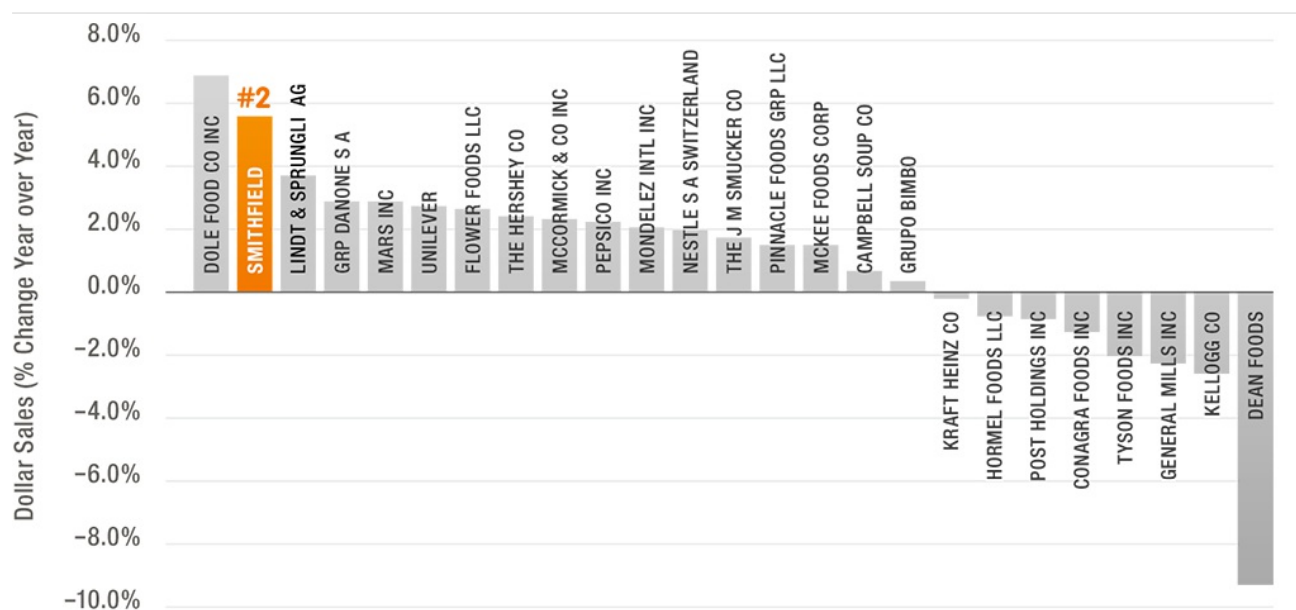
Dear Smithfield Foods Stakeholders,

I'm very pleased to introduce this report in my new capacity as president and chief executive officer.

Today, we are truly "One Smithfield." Let me explain. In early 2015, we announced a new organizational structure that unified all of our independent operating companies, brands, marketing, and more than 50,000 employees around the world under one corporate umbrella to accelerate Smithfield's growth and further its mission of providing "Good food. Responsibly.®" Our old model, which tended to foster silos, served Smithfield well for many years, but it had run its course.

When we announced the change, I predicted that One Smithfield would be a catalyst for profit improvement and that we would see many related benefits, from optimized manufacturing to cost reductions in logistics and distribution. And that has indeed been the case, with 2015 ranking as the second best year in our company's history.

Smithfield is the second-fastest-growing Top 25 food company.



Source: Information Resources, Inc. (IRI) 52 weeks ending 01/24/16; Top 25 Food Companies (without Beverage, Liquor, Private Label)

In 2014, which was Smithfield's best year ever, we made approximately \$587 million in three of our four divisions (minus Hog Production). In 2015, by contrast, we made nearly \$775 million in those same divisions—a jump of almost \$188 million year-over-year. Earnings on our hog farms, however, declined by nearly \$325 million from 2014, the result of an increase in hog supplies that put pressure on pricing across the industry.

Leaving aside the cyclical issues with hog farming, I believe much of the profit improvements we saw last year are directly attributable to the new One Smithfield structure. In our Packaged Meats Division, our operating profit reached all-time highs, with per unit profits also hitting new levels. We saw broad-based market share expansion across numerous brands and product categories.

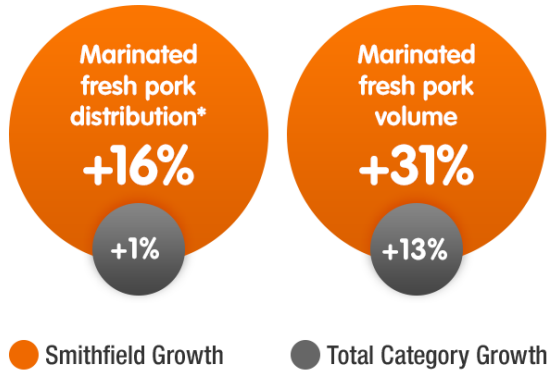
The Fresh Pork Division saw similarly impressive gains, including double-digit sales growth in retail. Export sales volume was up by more than 7 percent, led by significant increases in sales to China. Momentum continued in our International Division as well.

In fact, Smithfield was the second-fastest growing of the top 25 food companies—and not just protein companies—according to IRI data. Other highlights include the following:

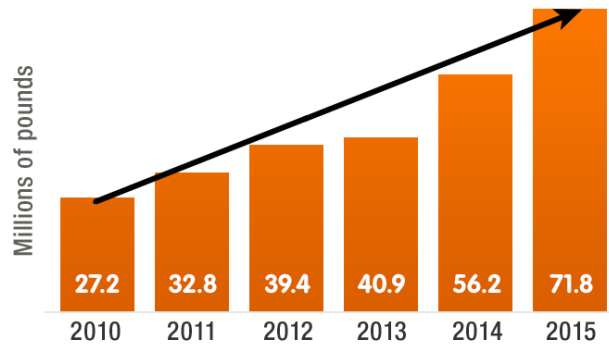
- Smithfield-branded retail bacon volume was up double digits, and Smithfield Marinated Fresh Pork reached record high distribution and captured leading dollar share and volume share of the Marinated Fresh Pork category.
- Eckrich smoked sausage reached record high distribution and all-time high market share, putting it within shouting distance of overtaking our top competitor as the #1 smoked sausage brand nationally.
- Nathan's Famous® market share of premium beef hot dogs and their distribution ascended to all-time highs for the brand.

When we look back on Smithfield five years from now, I think 2015 will stand out as a clear demarcation point for the company. It's the year when we got our organizational structure right—the year when we finally harnessed the power of our brands to emerge as a powerful market force among consumer packaged goods companies. And this is only the beginning. We have many more benefits to come from One Smithfield.

Smithfield is the No. 1 market share leader in the marinated fresh pork category. Sales have increased by \$7 million with volume up by 2 million pounds.



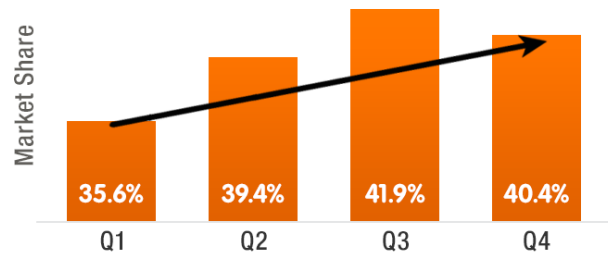
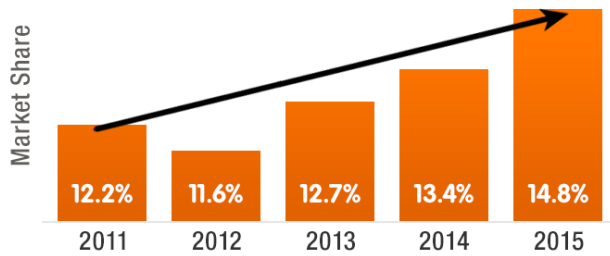
Smithfield brand bacon volume is up 44.6 million pounds since 2010 and 27.8 percent year over year.



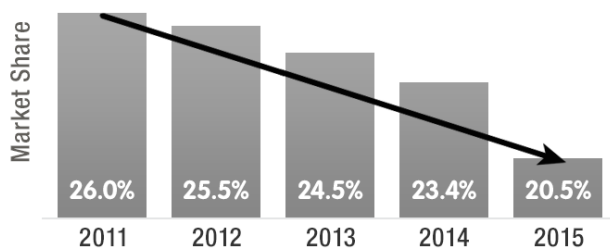
*All commodity volume. Source: Third party sales volume based on internal shipment data; Nielsen Perishables Group Fresh Facts; Quarterly Data Smithfield Custom Database; Q2 2015 vs. Q2 2014; July '14 vs. July '15 Smithfield Foods Tracking Study – National; Nielsen Perishables Group FreshFacts Online ending 12/26/15 last 13 weeks

Thus far, the benefits we've seen are mostly attributed to sales and brand management. But over the next 12 to 24 months, I expect we'll begin to see meaningful improvements in our transportation and logistics costs, as well as solid reductions in our manufacturing costs. And many of these benefits have strong tie-ins to our sustainability program, which already has saved our company millions of dollars.

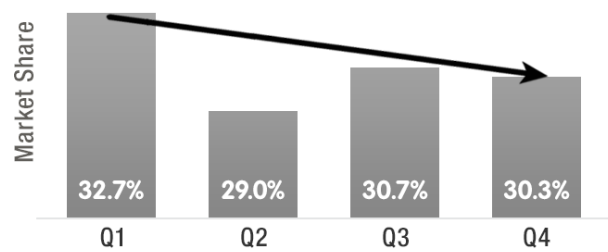
Our national brands are gaining market share and overtaking the competition.



TOP COMPETITOR



TOP COMPETITOR



Eckrich data source: Information Resources, Inc. (IRI) CY11 – CY15. Nathan's data source: Information Resources, Inc. (IRI) premium beef hot dogs CY15 Q1 – Q4

A Sustainable Smithfield

I may be new to the role of CEO, but I'm not new to Smithfield. I've been here for more than a dozen years—many of them in senior decision-making roles—and I have seen the company evolve to become a leader in our industry, from our work to improve our environmental performance to our elimination of the use of medically important antibiotics for growth promotion. The sustainability program that began under the leadership of former president Larry Pope and former chief sustainability officer Dennis Treacy has become a true differentiator for Smithfield, and I'm excited to see it grow to greater heights.

I'm confident that our new chief sustainability officer, Stewart Leeth, will push our company even further as we look for yet more ways to reduce our environmental footprint, both in our own operations and in our supply chain, improve the well-being of our hogs, and engage with our communities. This past year, we put more emphasis on our people, creating a new position of "chief people officer" and developing a variety of programs that will enable our employees to grow their skills and build more rewarding careers.

Our overall sustainability programs and vision will continue and will evolve to tackle new challenges. And we will make the ongoing investments necessary to build on our progress to date.

As we look ahead, I have asked our 50,000 employees to come together as we continue to transform Smithfield from a commodities company to a

world-class consumer packaged goods company. I see us getting there through three priorities:

- Responsibility;
- Operational excellence; and
- Innovation.

Note that the acronym for this is ROI, which is also the acronym for Return on Investment.

I truly believe that every one of us at Smithfield, at all levels of the business, is responsible for our success. Our culture of accountability permeates our entire operations. But to take Smithfield to the highest level of financial and sustainability performance we need to innovate. While we have a respectable history of innovation, I believe it's an area where we have the greatest potential. We want to be the leader in our industry, not just the largest. And being a leader requires us to embrace and create change.

We have so many examples of value-creating innovation already within our company. Take, for instance, our collaborations to promote more sustainable grain-growing practices. Or our partnerships that turn hog waste into a form of renewable energy. Or the procurement team at our feed mills in Missouri that found a solution to grain storage capacity limitations: by now storing grain in special cylindrical bags, we can buy when pricing is better for Smithfield and buy more grain locally, avoiding shipping costs and emissions, supporting local farmers—and saving millions of dollars annually.

We have launched more new products in the past two years than we have in the whole decade preceding—more than 400 over 24 months. And they are just the first steps. We are looking at new ways to improve the nutritional profiles of our foods while meeting consumer expectations for the products they know and love.

This year, we are releasing our report in sections to engage stakeholders more deeply around specific topics, starting first with Animal Care. I encourage you to return to this site over the coming weeks and learn more about our activities and commitments, as well as our goals and targets, in our core areas of responsibility. I welcome your feedback on how we are doing.

Sincerely,



Kenneth M. Sullivan
President and Chief Executive Officer

June 13, 2016

A Conversation Between Chief Sustainability Officers Past and Present

Dennis Treacy ended his successful tenure as Smithfield's chief sustainability officer at the end of 2015. He has been succeeded by Stewart Leeth, who joined the company in 2008 and also holds the title of vice president of regulatory affairs.

Both men sat before the camera recently to discuss the evolution of the company's sustainability program, the expected direction of future sustainability efforts, and the legacy they both hope to leave behind.

"When I got here, Smithfield on environmental questions was largely confused," says Treacy. "They didn't really know what to do. Fast forward to 2016, what you've got is a company that actually lives sustainability every day."

Leeth envisions Smithfield building on its strengths in compliance and focusing even more on developing innovative solutions to sustainability challenges.

"I hope to maintain our reputation and accelerate it so that we're a leader not just in the animal agriculture or even the food world, but in all kinds of areas," he says.



Our Goals and Sustainability Targets

In early 2015, we adopted a new set of goals and sustainability targets to exceed all regulatory guidelines or previous achievements. These targets are designed to hold ourselves accountable to our peers, suppliers, customers, and other key stakeholders.

We believe it's important to share our progress, including those areas where we need improvement. We consider a facilities-based target "achieved" for 2015 if 100 percent of locations have met the standard. Targets are noted as "on track" if they are less than 100 percent achieved but making appropriate progress.

KEY: **Achieved** | **On Track** | **Needs Improvement**

Animal Care **GOAL: Keep animals safe, comfortable, and healthy**

TARGETS

Each applicable facility to maintain a systematic program for animal care based on the North American Meat Institute’s (NAMI) Recommended Animal Handling Guidelines and Audit Guide.

Each farm division to continue to maintain and implement updates to the company’s Animal Care Management System and achieve annual audit score of excellent (97%–100%).

Each facility/farm division that handles live animals to maintain U.S. Department of Agriculture (USDA) Process Verified Program (PVP) certification.

All live animal suppliers to be certified to Pork Quality Assurance Plus (PQA Plus®).

All live animal transporters to be certified to Transport Quality Assurance® (TQA).

Complete conversion to group housing systems for pregnant sows on U.S. company-owned farms by the end of 2017.

Complete conversion to group housing systems for pregnant sows on U.S. contract farms and in joint ventures worldwide by 2022.

Report antibiotic usage on an annual basis.

2015 RESULTS

100% of facilities maintained systematic programs.

All farms follow Smithfield’s Animal Care Management System. Average audit score for 2015 was 95.3%.

All company-owned pig farms were 100% PVP certified, and all plants participated in this program.

97% of live animals were delivered by PQA Plus certified suppliers; 90% of supplier locations were site assessed.

100% of drivers delivering animals to processing plants were TQA certified.

81.8% of sows in company-owned group housing.

100% of sows in company-owned group housing in Poland and Romania. Joint ventures in Mexico are working toward the 2022 goal.

Reported use for the past five years.

Environment **GOALS: Reduce natural resource demand; 100% compliance, 100% of the time**

TARGETS

From 2014 to 2020 (normalized):
 Reduce water use 10%.
 Reduce energy use 5%.
 Reduce greenhouse gas (GHG) emissions 5%.
 Reduce solid waste sent to landfill 10%.

Reduce notices of violation (NOVs) to zero.

By 2018, 75% of grain purchased by Smithfield to be grown with efficient fertilizer and soil health practices.

2015 RESULTS

Since 2014 (normalized):
 Water use down 2.6%.
 Energy use down 4.0%.
 GHG emissions down 6.1%.
 Solid waste down 1.2%.

Received 11 NOVs and \$400 in fines.

15% of grain sourced from fertilizer optimization program participants.

Food Safety & Quality

GOAL: Deliver safe, high-quality meat products

TARGETS

No incident requiring U.S. Department of Agriculture (USDA) recalls.

Maintain Global Food Safety Initiative (GFSI) certification at all applicable facilities.

2015 RESULTS

Zero USDA recalls in the United States.

100% of applicable facilities were GFSI-certified.

Helping Communities

GOAL: Support our communities

TARGETS

Each facility/farm division to participate in four community events per year for charities/nonprofits. At least one event per year must include a stakeholder presentation.

Each U.S. division to sponsor at least two Learners to Leaders® (LTL) programs.

Maintain our Helping Hungry Homes® program donations of product to those in need.

2016 RESULTS

100% of facilities/farm divisions met or exceeded target.

100% of U.S. divisions supported at least two LTL programs.

Donated 10.2 million servings of protein.¹

People

GOAL: Reduce employee injury rates

TARGETS

Continue to reduce Total Incident Frequency Rate (TIFR). Maintain levels below general industry average.

Achieve annual Days Away, Restricted, or Transferred (DART) results better than the general industry average.

Increase safety engagement level to 30% of employees

2015 RESULTS

TIFR increased slightly; 2015 rate was higher than 2014 general industry averages.

DART increased slightly; 2015 rate was higher than 2014 general industry averages.

Achieved safety engagement level of 45%.

¹ After publication of our 2015 report, we restated the amount of food donations for the year to correct a miscalculation. We have centralized our tracking to more accurately reflect food donations for the entire company.



Measuring Our Performance

Smithfield believes transparency is central to ensuring accountability. Reporting helps stakeholders understand our performance over time and our performance relative to others in our industry.

Below are some key indicators we feel are particularly important to internal and external stakeholders, as well as to Smithfield as a company. Unless otherwise footnoted, 2014 and 2015 figures are reported by calendar year; data for 2013 and earlier cover our old fiscal year (May 1 through April 30). You will find additional domestic data in the relevant sections of this site.

Animal Care	2015	2014	2013	2012	2011
Sows in Company-Owned Group Housing (%) ¹	81.8	71.4	54.0	38.3	30.4
Antibiotics Used (milligrams per pound)	152	142	151	123	145
Market Hog Transportation Accidents ²	6	4	4	14	4

Environment³	2015	2014⁴	2013	2012	2011
Water Intensity (gallons per cwt ⁵)	71.1	73.0	76.2	79.5	79.6
Energy Intensity (gigajoules per cwt)	0.121	0.126	0.124	0.121	0.129
GHG Intensity ⁶ (metric tons CO ₂ e per cwt)	0.0138	0.0147	0.0145	0.0145	0.0151
Solid Waste to Landfill ⁷ (pounds per cwt)	1.58	1.60	1.85	2.36	2.72
Notices of Violation ⁸	11	18	17	29	38
Significant Fines	\$400	\$400	\$256,000	\$210,400	\$407,779
Food Safety and Quality	2015	2014	2013	2012	2011
Food Safety Expenditures ⁹	\$5.5 million	\$32 million	\$8.4 million	\$5.6 million	\$5 million
U.S. Department of Agriculture Recalls	0	0	2	1	0
Helping Communities	2015	2014	2013	2012	2011
Smithfield Foundation Scholarships	\$298,137	\$320,000	\$284,500	\$256,000	\$377,500
Learners to Leaders [®] Contributions	\$394,559	\$390,000	\$344,170	\$355,779	\$288,388
Food Donations (servings)	10.2 million ¹⁰	13.7 million	8.4 million	6.9 million	8.4 million
People¹¹	2015	2014	2013	2012	2011
Total Incident Frequency Rate	3.99	3.45	3.47	3.42	3.93
Days Away, Restricted, Transferred Rate	2.80	2.48	2.53	2.22	2.80
Days Away from Work Illness and Injury Rate	0.76	0.64	0.73	0.65	0.74
OSHA Notices of Violation	11	45	31	67	74
OSHA Penalties	\$49,095	\$243,840	\$149,210	\$320,800	\$117,449

-
- ¹ All sow housing figures are reported by calendar year.
- ² In 2015, these six accidents resulted in the deaths of 190 hogs. Overall, 82,031 truckloads of animals were transported from farms to processing plants.
- ³ Environmental performance data for 2012 and earlier cover the periods from May 1 through April 30. Figures for 2013 and later are reported by calendar year. Violation notices and fines are reported by calendar year.
- ⁴ Volumes for water intensity and GHG intensity have been restated since the last report.
- ⁵ CWT equals 100 pounds of product.
- ⁶ Total does not include hog production operations.
- ⁷ Total does not include hog production operations.
- ⁸ The 2014 report listed 20 notices of violations for 2014. Two of those were later rescinded and we are restating the total to 18 for the year.
- ⁹ Totals are conservative and do not capture all food safety-related upgrades.
- ¹⁰ After publication of our 2015 report, we restated the amount of food donations for the year to correct a miscalculation. We have centralized our tracking to more accurately reflect food donations for the entire company.
- ¹¹ All employment figures are reported by calendar year. Rates are calculated per 100 employees.



We're the No. 1 U.S. Producer of Packaged Pork Products

Smithfield Foods, Inc., a wholly owned subsidiary of WH Group Limited, is the world's largest pork processor and hog producer. Sales exceeded \$14.4 billion in 2015.

In the United States, we are the leader in numerous packaged meats categories with popular brands including Smithfield®, Eckrich®, Nathan's Famous®, Farmland®, Armour®, Cook's®, John Morrell®, Gwaltney®, Kretschmar®, Margherita®, Curly's®, Carando®, and Healthy Ones®.

In early 2015, we realigned our organization to unify all our independent operating companies and brands under one corporate umbrella. Headquartered in Smithfield, Virginia, our business operations are organized into four segments:

- Packaged Meats;
- Fresh Pork;
- Hog Production; and
- International.

Packaged Meats includes all of the company's packaged meats business previously operated under Smithfield Farmland and John Morrell Food Group. Fresh Pork encompasses the former Smithfield Farmland fresh pork operations. The Hog Production and International businesses retain their existing structures and leadership. International is comprised mainly of wholly owned and joint venture operations in Poland, Romania, Mexico, and the United Kingdom.

Our products are sold to more than 3,800 customers in 40 countries worldwide, including supermarket and hotel chains, wholesale distributors, restaurants, hospitals, and other institutions. We also sell to companies that further process our meats into consumer food products.

In June 2015, Smithfield announced the sale of our entire equity interest in Campofrio for \$354 million in cash. The sale represents approximately 37

percent of the entire issued share capital of Campofrio.

Companywide	2015	2014
Employees	50,236	48,240
Brands	13	13
Sales	\$14.4 billion	\$15.0 billion
Customers	3,800	3,200
Packaged Meats		
Pounds of packaged meats produced	3.0 billion	2.8 billion
Sales	\$7.1 billion	\$7.2 billion
Fresh Pork		
Pounds of fresh pork produced	4.4 billion	3.9 billion
Sales	\$5.1 billion	\$5.8 billion
Hog Production		
Sows	897,000	894,000
U.S. market hogs produced	15.9 million	14.7 million
Sales	\$3.1 billion	\$3.4 billion
International		
Sales volume (pounds)	1.5 billion	1.4 billion
International market hogs produced	2.8 million	2.7 million
Sales	\$1.4 billion	\$1.7 billion

Intercompany sales are included. For a detailed description of our businesses, read Smithfield Foods' [Form 10-K](#).
Employee figures as of December 2015.



Sales Exceeded \$14.4 Billion in 2015

Year Ended (\$ in millions)	Jan. 3, 2016	Dec. 28, 2014 ¹	April 28, 2013
Sales	\$14,438.4	\$15,031.3	\$13,221.1
Operating profit	793.8	931.6	519.3
Net income	452.3	556.1	183.8
Capital expenditures	375.2	301.4	278.0
Working capital	2,196.3	2,280.4	1,805.6
Net debt ²	1,583.2	2,293.0	2,159.6
Shareholders' equity	4,820.5	4,539.5	3,116.7
Net debt to total capitalization ³	25%	34%	41%

¹ Smithfield switched from a fiscal year to a calendar year beginning in 2014.

² Net debt is equal to notes payable and long-term debt and capital lease obligations, including current portion, less cash and cash equivalents.

³ Computed using net debt divided by net debt and shareholders' equity.



Our Commitment to Animal Care

Being the world's largest pork producer comes with a big responsibility: being the leader in animal care. We believe that Smithfield¹ has a role to play in guiding our industry toward even higher standards. We are committed to keeping animals safe, comfortable, and healthy.

We have taken a number of bold steps that have placed us at the forefront of the hog production industry in the United States, from our promise to convert housing for pregnant sows on company-owned and contract farms to our position on—and transparency around—the use of antibiotics.

Our Animal Care Goal

- Keep animals safe, comfortable, and healthy

Our Animal Care Targets

- Each applicable facility to maintain a systematic program for animal care based on the North American Meat Institute's (NAMI) Recommended Animal Handling Guidelines and Audit Guide
- Each farm division to continue to maintain and implement updates to the company's Animal Care Management System and achieve annual audit score of excellent (97%–100%)
- Each facility/farm division that handles live animals to maintain U.S. Department of Agriculture (USDA) Process Verified certification
- All live animal suppliers to be certified to Pork Quality Assurance Plus (PQA Plus[®])
- All live animal transporters to be certified to Transport Quality Assurance[®] (TQA)
- Complete conversion to group housing systems for pregnant sows on U.S. company-owned farms by the end of 2017
- Complete conversion to group housing systems for pregnant sows on U.S. contract farms and in joint ventures worldwide by 2022
- Report antibiotic usage on an annual basis

We have been modernizing farms to provide more advanced housing and feed delivery systems, improving quality of life for the animals while making our business even more competitive for the future. Our robust animal care management system, which guides the care of the hogs at every stage of their lives—from gestation to transportation to processing—promotes their safety and overall well-being. All company-owned farm employees, contract hog producers, and plant employees who work with live animals must employ the methods and techniques of Smithfield's animal care management system, and we take steps to verify their compliance. We have a zero tolerance policy for animal abuse or mishandling. Learn more about [animal care at our international operations](#).

All hogs that we process, whether company-owned or not, are traceable to farm of origin, including nursery and finishing. Records are maintained to support this.

Hog Production: 2015 at a Glance

- World's largest hog producer
- U.S. domestic sows: 897,000
- U.S. market hogs produced: 16 million
- Primary breeds raised: Durocs (sires); Large White, crossbred with Landrace (females)

¹ All references to "Smithfield," "we," "us," and "our" are terms of convenience used to refer collectively to Smithfield Foods and all of its subsidiaries. Similarly, the terms "division" and "business unit" may be used to refer to one or more subsidiaries, which are independent operating companies.

Value Creation

The importance of sound animal care practices to the success of our business cannot be overstated. Healthier animals mean a healthier company. Treating animals with care isn't just the right thing to do; it's also the right thing to do for our business.

Our animal care management systems, policies, and procedures are designed to ensure the proper treatment of our hogs. Our animal care performance can influence our reputation and the relationships we have with customers and consumers. It can also influence production levels: Healthy animals are more resistant to disease and gain weight faster, and healthy sows have larger and stronger litters.

Contract growing relationships provide opportunities for many hundreds of farmers to diversify their family farms, make investments for the future, stabilize their incomes, and diversify their operations. We also create markets for thousands of grain farmers across the United States and internationally who grow corn, wheat, soybean meal, sorghum, and other feed that we purchase in huge quantities. We are one of the single largest consumers of U.S feed ingredients in the world. We also purchase a wide array of non-traditional feed ingredients, such as bakery byproducts, distillers' grains, and wheat bran that might otherwise end up in landfills.

By the Numbers	2015
Contract grower payments	\$363 million
U.S. grain purchases	\$1.7 billion
International grain purchases	\$73 million

As a vertically integrated company, we are uniquely positioned to deliver products that meet the demands of our customers in the United States and abroad. (We raise about half of the pigs needed to make our products.) Vertical integration allows us to adapt and make changes at a faster pace than others in the industry, enabling us to be responsive to customer requests in areas such as sow group housing conversion, antibiotics use, and pigs raised without ractopamine, which is important for some export and domestic markets.

Learn about [grain purchases of our international companies](#).

Contract Growers

One of the keys to our success is the business relationships we form with independent farmers. Contract relationships provide a level of financial stability to offset volatile commodity markets. Contract growers are an important part of our business structure, and they are as valuable to us as our own employees.

All contract hog producers are contractually required to employ the animal husbandry methods and techniques of our company management system.



The contract growers, who are private landowners and independent farmers, are paid under agreements that typically run for multiple years. We assume the market risks and own the hogs. The growers are protected from market fluctuations and receive a predictable income stream.

The contract grower provides the following:

- A farm site that meets all the relevant local, state, and federal legal, regulatory, and permitting requirements;
- Animal production facilities that meet Smithfield's contract and animal care requirements;
- Day-to-day management of the farm; and
- Financing for the construction and operation of the farm.

We provide the following:

- All the animals to the contract grower;
- All the feed to the contract grower;
- Transportation of all animals to and from the grower's farm;
- Veterinary support services;
- Ongoing advice to ensure the animals are properly cared for; and
- A predictable and stable payment based on agreed-upon contract terms.

Type of Farm	We Own Pigs	We Own and Operate Farm
Company-owned	✓	✓
Contract	✓	✗
Independent/External	✗	✗

Independent Suppliers

Another key to our success is the business relationships we form with independent hog suppliers. Nearly 50 percent of our market hog supply is procured from independent suppliers; we work with more than 1,800 independent suppliers of various production sizes to supply eight processing plants throughout the Midwest and East Coast.

Just like other suppliers, independent suppliers are required to adhere to the following expectations:

- **Traceability.** All pigs must be traceable to farm of origin, including sow unit, nursery, and finishing farm.
- **Transport Quality Assurance® (TQA) certification.** All truck drivers must be TQA certified. This is verified on each load.
- **National Pork Board's (NPB) Pork Quality Assurance (PQA Plus®) certification.** All key management personnel must have PQA Plus certification. All premises, including nursery units and finishing sites, must have site status through the PQA Plus program.
- **Common Swine Industry Audit.** Producers should follow the elements that are described in the recently adopted industry audit standards, including, but not limited to, training programs and documentation of employees who have received training; setting up standard operating procedures as listed in the audit standards; documentation that the program is being monitored; and documentation of corrective action from findings.

Case Study: New Markets for Sustainable Feed

Feed grains are a significant expenditure, representing about 65 to 70 percent of the costs of raising hogs. We're always looking for ways to optimize our investments and to minimize risks associated with volatile prices.

But what if we could do that while simultaneously creating more sustainable alternatives to traditional feed grains such as corn? That's exactly what we're working toward through an ongoing project in the Carolinas and Virginia focused on developing a market for winter wheat and grain sorghum. Both are sturdy crops that offer excellent sources of nutrients for pigs.

In 2012, we began looking for crops that would help reduce our dependence on midwestern corn, which must be transported hundreds of miles by train to our southeastern hog farms at considerable expense. And we were also looking for ways to boost incomes and productivity for farmers in our region.

We would rather spend money to encourage local farmers to produce more grain in the Carolinas and Virginia than spend money to bring grain on trains from the Midwest to the Southeast.

"This program offers mutual benefits," says Chief Science and Technology Officer Terry Coffey. "We would rather spend money to encourage local farmers to produce more grain in the Carolinas and Virginia than spend money to bring grain on trains from the Midwest to the Southeast."

When we first began this initiative, North Carolina's livestock industries required 300 million bushels of grain to feed their animals each year. But the state's grain farmers were only able to produce about one-third of those bushels. In other words, the state had a huge grain deficit.

Benefits of Alternative Crops

Grain sorghum (also known as milo) and winter wheat have significant potential for increased production. Like corn, grain sorghum is planted in the spring for harvest in the fall. Sorghum is naturally drought-tolerant, making it especially advantageous for hot, arid regions or areas with periodic water shortages. Sorghum's low fertilizer demand reduces the risk of nutrient leaching and, thus, soil and water pollution. In addition, sorghum has a relatively short vegetation cycle, which also helps reduce demand for fertilizers and pesticides.



Wheat is grown over the winter when rainfall in the Southeast is more plentiful. Sorghum and wheat grains can be grown on the same fields in the same year (known as double-cropping) to allow for sustainable intensification of production.

We have partnered with universities and agencies to expand sorghum and wheat farming, providing more than \$2.25 million in funding through 2016 to researchers at Virginia Tech College of Agriculture and Life Sciences, North Carolina State, and the North Carolina Biotechnology Center. Scientists and agriculture experts are using these funds to conduct studies on topics ranging from the best varieties of sorghum to grow in the southeastern climate to disease management practices.

In partnership with university and state agronomists, we are actively encouraging farmers who do not achieve profitable corn yields or who farm on marginal soils to switch to sorghum—or to double-crop with sorghum after winter wheat. Both grains cost less to grow than corn and often produce more consistent yields.

Our company pays sorghum farmers 95 percent of the harvest cash price of corn, making it an economically attractive alternative. Sorghum typically costs farmers less to produce than corn, yet they can make almost as much when they sell sorghum on the open market as they can make when they sell corn (even though sorghum yields can be slightly lower).

We are also supporting Official Variety Tests, known as OVTs, of sorghum crops across the Carolinas and Virginia to help farmers make comparisons between different types of sorghum. This will enable them to make better decisions of the seed type that is most appropriate for their specific soils and locations.

“If we focus on delivering new technology and better management information to farmers, we’ll see better production,” Coffey says. “And since Smithfield is giving farmers a viable market for their grains, we’ll see economic impacts across our region.”

Several years ago, only 5,000 acres of sorghum were grown in the Carolinas and Virginia regions from which Smithfield buys grain. The amount planted each year varies based upon weather and market conditions. In 2015, planted acres totaled 57,000, with Smithfield purchasing about 50 percent of the production. Wheat acres declined due to wet weather, which prevented planting in the fall of 2014.

Coffey says Smithfield saves at least \$5 million a year by increasing local sorghum and wheat purchases rather than bringing in corn by train from the Midwest. (A local buying effort has also resulted in us purchasing more corn that is grown in North Carolina, saving an additional \$6 million that would have otherwise been used for transporting midwestern corn to the East Coast.)

Ron Heiniger, a cropping systems specialist at North Carolina State University, is one of the researchers working with us on the sorghum initiative. About 15 years ago, he worked on some sorghum trials in the Southeast. “We were disappointed because we thought sorghum would be a really good fit for this area,” he says. But he and other researchers couldn’t find a way to push farmers to adopt the crop, in part because there wasn’t a market for it.

Upgrading Feed Mills

Our direct relationships with local farmers continue to be an integral part of our business. Since 2011, we have invested \$12.4 million in upgrading feed mills, which has provided a greater capacity to source grains closer to our operations. In 2015 we purchased \$482 million and almost 100 million bushels of grain located near our feed mill and grain elevator facilities. Of those local grain bushels, 87 million consisted of corn, wheat, and sorghum, and the remaining 12 million were soybeans. The feed grain supplied 64 percent of our grain needs for the year, and the soybeans allowed us to purchase more locally produced soybean meal for our animals.

Now, Smithfield provides an outlet for farmers to sell what they grow. Moreover, new research has developed hybrids and improved management techniques that allow farmers to overcome barriers, such as disease.

“This collaboration is solving a lot of the problems that had prevented sorghum from being adopted by growers in the Southeast,” Heiniger says. “Without a market, there’s no crop, so the fact that Smithfield stepped forward to establish one is a huge step in the right direction.”

He has been focusing on helping farmers achieve yields of 100 bushels to the acre. Current yields average about 78 bushels to the acre. But he’s convinced that 140-bushel yields aren’t out of the question. Corn yields can vary significantly by region, but in the Southeast, the yields typically hover around 120 bushels per acre.

Maria Balota, an associate professor of crop physiology at Virginia Tech, says Smithfield has not only created a market for sorghum, but also has provided the opportunity for research-based justification on why farmers should grow it. “Farmers need a grain crop that can be grown right after wheat, in addition to soybean, for good crop rotation,” she says. “I do not know of a better crop than sorghum for this purpose.”

Thanks to a variety of research projects sponsored by Smithfield, she says, farmers in the region now better understand which are the most profitable sorghum hybrids for the region—and how to grow them.

North Carolina Sorghum Production	2012	2013	2014	2015
Acres of sorghum farmed in Smithfield’s trade area	72,000	100,000	50,000	57,000
Bushels of sorghum produced in North Carolina	5.4 million	7.2 million	3.9 million	3.7 million
Bushels of sorghum purchased by Smithfield	2 million	2.7 million	2 million	1.9 million

Smithfield’s trade area includes North Carolina, southeastern Virginia, and northeastern South Carolina. Much of the region’s sorghum crop is planted following the wheat harvest. Total production of all grains, including corn, wheat, and sorghum, was down significantly in 2015 due to weather conditions that resulted in fewer acres planted and poor growing conditions causing reduced yield.

Animal Care Management

As the world's largest producer of pork, we raise pigs on approximately 460 company-owned farms in the United States alone.

In addition, we contract with approximately 2,100 [contract hog farms](#) (also known as contract producers) that raise company-owned pigs in the United States. Additionally, meat processing facilities purchase pigs from large numbers of [independent hog producers](#).

Smithfield Animal Care Policy



Our Animal Care Policy, which applies to company farms, contract producers, and processing plants, underscores our commitments to providing the following:

- Shelter that is designed, maintained, and operated to provide a physical environment that meets the animals' needs;
- Access to adequate water and high-quality feed to meet nutritional requirements;
- Humane treatment of animals that enhances their well-being and complies with all applicable laws and regulations;
- Identification and appropriate treatment of animals in need of healthcare;
- Use of humane methods to euthanize sick or injured animals not responding to care and treatment; and
- Internal and external (third-party auditing) resources to verify, enhance, and update current company practices.

Smithfield Foods has a companywide Animal Care Committee that ensures that our animal policies are properly implemented. The committee, which reviews the policy at least once annually, communicates the importance of the program throughout the organization.

(Our international operations have their own animal care policies, which are modeled after our domestic operations. See the [International Animal Care section](#) of this report for more information.)

Independent suppliers that provide animal products to our facilities are expected to have similar operating policies and procedures in place to ensure the proper care of their animals during all stages of production, transportation, and processing.

Adherence to the Animal Care Policy is a condition of employment at Smithfield and a condition of agreements with contract producers. Contract producers found to be in violation of these agreements must take appropriate corrective actions. Those growers who fail to take corrective action or who are found to condone willful abuse or neglect of animals are subject to immediate termination. In the past 12 years, we have terminated contracts with 11 contract growers who did not manage their farms in accordance with their contract commitments and the standards we require. (We did not have any contract terminations in 2014 or 2015.) We encourage anyone who observes neglectful or abusive behavior on farms to anonymously contact our toll-free reporting hotline.

Biosecurity

The Porcine Epidemic Diarrhea Virus (PEDV) in 2014 highlighted how critical biosecurity is to our operations and to the safety of the animals.

Our biosecurity policy is divided into two parts:

- The animal production process at the individual farm; and
- The movement of vehicles, animals, personnel, and equipment between farms.

We have procedures to prevent contaminants from being brought onto farms, including a “shower-in” process before entering a sow farm. All employees and visitors must take a shower and change into clean clothing before entering the farm. A “shower-out” procedure is required when leaving.

Equipment and supplies delivered to the sow farm must be disinfected prior to being allowed inside the farm complex. Additional biosecurity measures are taken on genetic farms and at locations where semen collection for the artificial insemination process occurs.



The Animal Care Chain



All hog farms must adhere to the guidelines of the National Pork Board (NPB) Pork Quality Assurance Plus (PQA Plus®) program. PQA Plus provides guidelines for proper care of animals to ensure optimal health and well-being. It includes on-farm assessments and third-party verification that proper care is being implemented. In addition, the Common Swine Industry audit verifies that we are following industry standards and that our farms are compliant with our Animal Care Policy.



All drivers who transport our animals, including contract and supplier drivers, must be trained and certified under the National Pork Board's Transport Quality Assurance® (TQA) program. TQA provides education and guidelines for transporters, producers, and animal handlers on all aspects of hog handling and transportation.



Animals are treated with respect at processing plants, just as they are when growing at farms. Each plant uses a systematic approach to animal care that includes the Smithfield Animal Handling & Welfare Quality Management Plan, a comprehensive training program, and internal and third-party audits.

Animal Care Systems

We created our own animal care management system more than a decade ago. Developed in consultation with two of the world's foremost experts in animal behavior and handling, this system—which we frequently revise and update based on the latest science—still guides farming and processing operations today.

The management systems, which include employee training and various forms of audits, are designed to make certain that our Animal Care Policy is adhered to and that any issues are swiftly corrected.

Employee Training

All employees who work with livestock undergo animal care training. On farms, for example, new employees undergo training during an initial 90-day probationary period. These new workers must demonstrate competence in animal handling techniques and a thorough understanding of our Animal Care Policy before the probationary period ends. We provide written manuals and videotaped training programs in English and Spanish, along with on-the-job training and mentoring with experienced animal handlers. Regular training programs continue throughout an employee's career.

Auditing

Auditing is an essential part of the animal care program at our farms and plants. We employ several types of audits, which can occur with varying levels of frequency. Smithfield worked with the industry to help the National Pork Board (NPB) draft a new common industry animal care audit platform to be recognized by pork producers, packers, and processors. The platform, released in 2014, builds upon the NPB's Pork Quality Assurance Plus (PQA Plus®) program and is very similar to what we had already been requiring at company-owned farms. We are committed to participating in this new national audit platform in order to create a standardized, common process for humane animal handling across our industry. The goal of the new framework is to provide customers and consumers with additional assurance that we are doing our part to raise animals in the most humane manner possible.

On Farms

Our rigorous internal and external farm auditing program was developed in consultation with external animal experts who systematically reviewed our auditing protocols and recommended improvements. Today, trained internal auditors conduct animal care audits at least once annually on every company-owned farm across the country. The audit is divided into four main sections: employee competency, equipment/facilities, animal handling, and animal health.

Our annual target is for all seven of our farm divisions to achieve audit scores of excellent (97 percent or above). In 2015, three farm divisions met that goal, with another two ranking as "commendable" and two others ranking as "good." None scored below 92 percent.

2015 Farm Audit Scores on Company-Owned Farms

Number of Audits	425
Average Audit Score	95.3%

All farms are audited annually; in some cases, farms in certain regions are audited as groups, resulting in a lower total here than the 460 farms we report elsewhere in this section.

External auditors, meanwhile, conduct random, unannounced visits at our farms. About 50 company-owned farms are externally audited each year on a rotational schedule. The external auditors are looking at big picture issues and ensuring that our internal auditors are calibrated with each other.

All company-owned and contract farms are also subject to random, third-party verification and site assessments under the PQA Plus® program, which forms the basis for the new Common Swine Industry audit platform. All farms are 100 percent PQA Plus compliant at all company-owned and contract farms. The PQA Plus program complements existing procedures at hog raising operations, supplementing the internal evaluations of day-to-day practices. Regular evaluation and training allow us to identify any areas of concern and make adjustments to procedures before problems occur.

Common Swine Industry Audit

All swine suppliers (company-owned, contract, and independent) are required to follow the elements described in the [Common Swine Industry Audit Standards \(PDF\)](#). Farm sites (sow farms, nurseries, and finish farms) are randomly selected based on statistical sampling for audits. The purpose of the third-party Common Swine Industry audits is to verify that we are following industry standards, that our animal care auditing program is working as designed, and that farms are compliant with our Animal Care Policy. Audit results are shared with swine suppliers and findings require documented corrective action and demonstration of continuous improvement. In 2015, the average audit score for all swine suppliers was 95 percent.

At Processing Plants

We treat animals with respect at processing plants—just as we do when they are growing at farms. Our animal handling system continues to develop and evolve. Each plant has a multi-disciplinary committee that works on improving animal welfare programs. The committees, which meet monthly, set up correction actions and modifications as needed.

All slaughter facilities use a systematic approach that includes comprehensive employee training in line with our Animal Handling & Welfare Quality Management Plan. These operations are also subject to internal and external third-party audits.

We developed a quality management program following the standards set in the U.S. Department of Agriculture's (USDA) [Process Verified Program \(PVP\)](#). Our PVP program monitors several key aspects of production, including traceability to farm of origin; PQA Plus program adherence on farms; and Transport Quality Assurance® (TQA) status of livestock haulers. Our PVP program is verified by the USDA Agriculture Marketing Services Quality Auditing Division each year to ensure that plants and suppliers are adhering to our PVP elements.

In addition to the PQA Plus requirements, all eight slaughter plants follow a quality management program based on the North American Meat Institute's (NAMI) [Recommended Animal Handling Guidelines & Audit Guide](#). The Guidelines, which were revised in 2013, were first developed by Colorado State University's Dr. Temple Grandin, who has provided Smithfield with her animal welfare expertise for many years. All slaughter facilities are audited at minimum once per shift using these guidelines by auditors who have been trained according to the standards of the Professional Animal Auditor Certification Organization (PAACO). Audit results are scored and tracked to measure conformance and continuous improvement.

Together, these programs help ensure that the animals that come to the plants were raised where management systems address health, animal well-being, and proper use of antibiotics. Ninety-seven percent of suppliers are certified to the PQA Plus guidelines of the NPB's PQA Plus program.

In November 2014, following the release of the NPB's new common industry audits, production plants sent letters to all pork producers to update them on our expectations for suppliers, especially those suppliers that are not part of our network of company-owned and contract farms. (Approximately half of all the pigs received at plants are raised by independent suppliers.)

With the initiation of this audit, we took the opportunity to update and renew our supplier expectations, including traceability, TQA certification, PQA Plus certification, and random third-party auditing, which we started in January 2015.

Industry Training

We routinely offer training sessions on animal care and handling guidelines for customers, universities, industry groups, and trade associations. In 2015, for example, we hosted a delegation from China.

We also host annual training and instruction activities for the Professional Animal Auditor Certification Organization (PAACO), whose mission is to promote the humane treatment of animals through education and certification of animal auditors. PAACO provides uniform, scientifically sound standards to auditors through education, training, and codes of conduct.

Antibiotics Use

We believe “Good food. Responsibly.®” means providing people with safe food they are confident serving to their families. One way we honor that promise is through strictly controlled use of antibiotics to care for our animals and to provide consumers with the safest food possible.

On our company-owned and contract farms, we've led the industry by voluntarily aligning our antibiotics policy with U.S. Food and Drug Administration (FDA) guidelines, ending the use of medically important antibiotics for growth promotion. However, we don't raise all the animals that come through our processing facilities. For our outside suppliers, we support their adoption of the FDA 209 and 213 guidance for industry, which will become mandatory at the end of 2016 and which requires that medically important antibiotics not be used for growth promotion across the industry.

Antibiotics use is an extremely complicated issue, and we want to help the general public understand the nuances without oversimplifying the facts.

Let's Start with the Basics

There are two kinds of antibiotics: those used both in human and animal health (medically important antibiotics) such as penicillin, for example, and those that are only used in animal health (non-medically important antibiotics). We use both types of antibiotics, as authorized or prescribed by company veterinarians, to control, treat, and prevent disease. We do not, however, use medically important antibiotics to promote growth or for feed efficiency on farms.

Use of Antibiotics

At Smithfield, we use antibiotics to do the following:

- **Control disease.** We administer antibiotics to our animals for a limited period of time to reduce the chance of spreading a specific disease following exposure.
- **Treat disease.** We administer antibiotics to treat sick animals.
- **Prevent disease.** We administer antibiotics to healthy animals when they may be exposed to a particular disease that exists on our premises or is likely to occur.
- **Promote growth.** While we do not use medically important antibiotics to promote growth, we do use animal-only antibiotics for growth promotion and feed efficiency.

Our Commitment

We understand that potential antibiotic resistance is a public health concern, which is why we use antibiotics in a sustainable and responsible way and why we are voluntarily aligning our animal health policies with the FDA guidance for industry. This allows us to do our part to curb resistance while promoting the health of humans and animals. Visit the [FDA site](#) to learn more.

Our robust animal health management program, overseen by staff veterinarians, unifies our commitment systemwide. It maintains judicious use of antibiotics to produce healthy animals and make our food supply safe. The independent animal suppliers we work with are encouraged to judiciously administer all medications as well. Our veterinarians ensure sound animal care practices and good nutrition, perform preventive health examinations, authorize or prescribe vaccines and antibiotics, and are proactive in assessing potential health threats.

In 2015, we formed an Antibiotics Task Force, a cross-functional group made up of employees from sales, marketing, hog production, corporate affairs, and food safety and quality. The aim is to discuss this issue from a companywide perspective and figure out ways to maintain Smithfield's leadership position on antibiotics.

Preventive Management

All antibiotics used on our farms are pre-approved by a licensed veterinarian, and a written authorization or prescription is also required before they are administered to any animals. We take antibiotics use seriously. Usage is guided by extensive and regular diagnostic testing and analysis to ensure sound practices. Antibiotics are administered under veterinary supervision after careful evaluation of groups of pigs, herd history, and diagnostic testing to determine the amount and type of medication necessary for the protection of pig health and welfare.

Supporting Antibiotics Research

We have pledged \$1.4 million to support scientific studies on antibiotic alternatives at the Virginia Tech College of Agriculture and Life Sciences and the Virginia-Maryland College of Veterinary Medicine.

Researchers are using the funds to investigate methods that enhance animal well-being and production efficiency in swine-rearing operations.

The contribution, which is being made over three years, is paying for three projects that aim to improve animal health, reduce the use of antibiotics, and find alternative production methods for hog farming.

“The funding provided by Smithfield Foods will be used to develop vaccines that will reduce the need for antibiotics and the resultant development of antibiotic resistance,” says Cyril Clarke, dean of Virginia-Maryland College of Veterinary Medicine. “Such partnerships between industry and research universities are essential to control infectious disease and secure a safe and wholesome food supply.”



Employees who are responsible for using antibiotics are thoroughly trained to follow all applicable laws including the FDA's antibiotic usage policies and antibiotic withdrawal timelines.

Verifying diligence on farms is extremely important. We keep accurate records to track use of antibiotics on farms and began reporting antibiotics usage in 2007. Today we're the only U.S. hog producer to publicly provide this information. And to ensure we're always improving animal care and providing high-quality, safe food, we conduct ongoing research to identify new technologies and procedures that improve animal health while minimizing antibiotic use.

Antibiotics Q&A

There is a lot of discussion surrounding the use of antibiotics in animal agriculture. Here are the answers to a few of the most frequently asked questions on this topic.

Is the use of antibiotics in animal agriculture regulated?

Yes. The use of antibiotics in animal agriculture actually helps to keep our food supply safe, since safe food comes from healthy animals. Also, by law, any person who administers antibiotics to animals used for food must adhere to the specific antibiotic's withdrawal time. The withdrawal period, which is established by the U.S. Food and Drug Administration (FDA), specifies the number of days that must pass after the last antibiotic treatment before the animal can enter the food supply. Moreover, FDA and the U.S. Department of Agriculture have a coordinated surveillance program to help ensure compliance.

What are the main uses of antibiotics in animal agriculture?

Antibiotics are used in animal agriculture for four main reasons: to treat sick animals, to control disease, to prevent animals from becoming sick, and to promote growth. There are also two main kinds of antibiotics: those used both in human and animal health (which some have termed "shared-use" or "medically important" antibiotics), and those only used in animal health. It is important to note that many of the antibiotics used in both human and animal health also happen to be the most effective in treating sick animals, which is why the ability to continue the use of these "shared use" medicines in animal agriculture is so important.

Without these medicines, veterinarians would be unable to effectively prevent or control animal diseases. This increases the risk that the animal could enter our food supply while it is not completely healthy, which may increase the risk to public health. It also would undermine our veterinarians' ability to protect animal health and prevent animals from suffering from preventable diseases.

Many chicken producers are going to stop using antibiotics altogether in poultry production. Why can't you do the same in pork?

There are biological differences between birds and pigs with regard to the immune system and production process. For example, chickens have a very short production cycle (five to six weeks) compared with pigs (5½ months), so they don't have as long a time to be exposed to various disease agents. Even with this difference, it should be noted that only a part of the poultry supply will be produced without antibiotics because it is more expensive, and when a flock requires antibiotic treatment, the chicken will be treated and sold as a conventionally raised product.

How are antibiotics used on farms?

We use several different categories of antibiotics, as authorized or prescribed by veterinarians, to control, treat, and prevent disease. We do not, however, use medically important antibiotics to promote growth or for feed efficiency with our animals. We have also voluntarily aligned our animal health policies with the FDA guidance for industry. Visit the [FDA site](#) to learn more.

All use of antibiotics is pre-approved by a licensed veterinarian, and a written authorization or prescription is also required before antibiotics are administered to any animal. Our production management team is thoroughly trained to follow all applicable laws including the FDA's antibiotic usage policies and antibiotic withdrawal timelines.

Verifying diligence on farms is extremely important. We keep accurate records to track use of antibiotics and began reporting antibiotics usage in 2007. Today we're the only U.S. hog producer to report this information.

Antibiotics Reporting

We report antibiotics use data based on the total active ingredient given to the pigs through feed as well as via water and injections. For 2015, the total was 152.4 milligrams per pound.

In 2013, we refined our metrics to provide a more meaningful, accurate measurement. In prior years, data were calculated based on quantities of only feed-grade antibiotic products purchased each year. These products, which are bought premixed, contain active ingredients (the antibiotic itself) and inactive ingredients (such as roughage and minerals), both of which vary widely depending on the manufacturer. The new metric is more accurate because it accounts for total active antibiotics ingredients only.

The amount of antibiotics used varies from year to year based on a number of factors including weather conditions, emergency of illnesses, inventory decisions, type of antibiotic used (feed, water, or injected), and active ingredient concentration.

We have been working with others in our industry to come up with a standardized approach to antibiotics reporting. What is the best unit of measurement? What data would be most meaningful, and understandable, to the general public? These are the types of questions that we are working to answer.

Antibiotics Used

(milligrams per pound)



In 2014, we changed from fiscal year to calendar year reporting. Data prior to 2014 cover the periods from May 1 through April 30. Data for 2014 and 2015 are for calendar years.

Antibiotics Regulations

Every antibiotic we use is regulated by the U.S. Food and Drug Administration (FDA). All company-owned hogs comply strictly with all antibiotic withdrawal timelines, as established by the U.S. Department of Agriculture (USDA) and the Food Animal Residue Avoidance Databank.

Some countries, such as Japan, Russia, and several nations in the European Union (EU), require farms and suppliers to make specific adjustments to those requirements. We always adhere to the guidelines of those countries with which we do business.

Domestically, the USDA monitors meat and poultry to ensure that there are no antibiotic residues that exceed the safety levels established by federal agencies. The National Residue Program (NRP) tests animal tissues to monitor antibiotic residue. Research from the National Antimicrobial Resistance Monitoring System—a collaboration among the Centers for Disease Control and Prevention (CDC), the FDA, and the USDA—shows that antibiotic resistance in animal products and food-borne diseases has been steady or declining in recent years.

Using Antibiotics for Prevention

Antibiotics are used on hog farms in the U.S. for four main purposes: to control disease, treat disease, prevent disease, and promote growth. Recently, many groups have criticized our industry, claiming that we are administering antibiotics for disease prevention as a masquerade for growth promotion. At Smithfield, this is not the case. To assure stakeholders of this, we have developed the below definition of preventative use of antibiotics to clarify in greater detail what we mean when we use this term.

What does prevention mean?

The Food and Drug Administration (FDA) defines disease “prevention” as the “administration of an antimicrobial drug to animals, none of which are exhibiting clinical signs of disease, in a situation where disease is likely to occur if the drug is not administered.” The FDA regards “prevention” as a therapeutic and judicious application of antibiotics.

Why is prevention important?

Swine medicine is population and herd based, meaning veterinarians focus on diagnosing and addressing illnesses that threaten a herd rather than treatment of solitary animals. Treatment, control, and prevention of disease operates on a range of therapies rather than distinct types of therapeutic use.

Many common bacteria are present in all swine herds. These can emerge to sicken animals when they are more vulnerable—such as when pigs are relocated to new barns and when viral infections such as Porcine Reproductive & Respiratory Syndrome (PRRS) and flu are present in a herd—and can quickly spread to other animals.

Preventing disease in pigs and in swine herds, rather than relying solely on disease treatment, stops unnecessary illness, suffering, and mortality in pigs on farms. Forcing veterinarians to allow animals to become ill prior to instituting effective treatments will lead to poorer health outcomes and increase the total antibiotic use. This also increases the risk that the animal could enter our food supply while it is not completely healthy, which may increase the risk to public health.

What prevention is and is not at Smithfield.

Smithfield adheres to the FDA definition of prevention. Our aim is to reduce disease carriers in our herd and to prevent our animals from contracting a disease, which would then require additional treatment and potentially more use of antibiotics. Prevention is not a “catch-all” term disguising sub-therapeutic uses of medically important antibiotics for production purposes.

Examples of preventative antibiotic use within Smithfield.

Antibiotic use is just one of the many illness-prevention strategies we employ to protect our herds. Vaccinations, strict biosecurity protocols, and animal husbandry practices are among the first lines of defense in our herd health management plans. When antibiotics are used, we continually evaluate such usage based on diagnostics and testing. Examples of preventative use include the following:

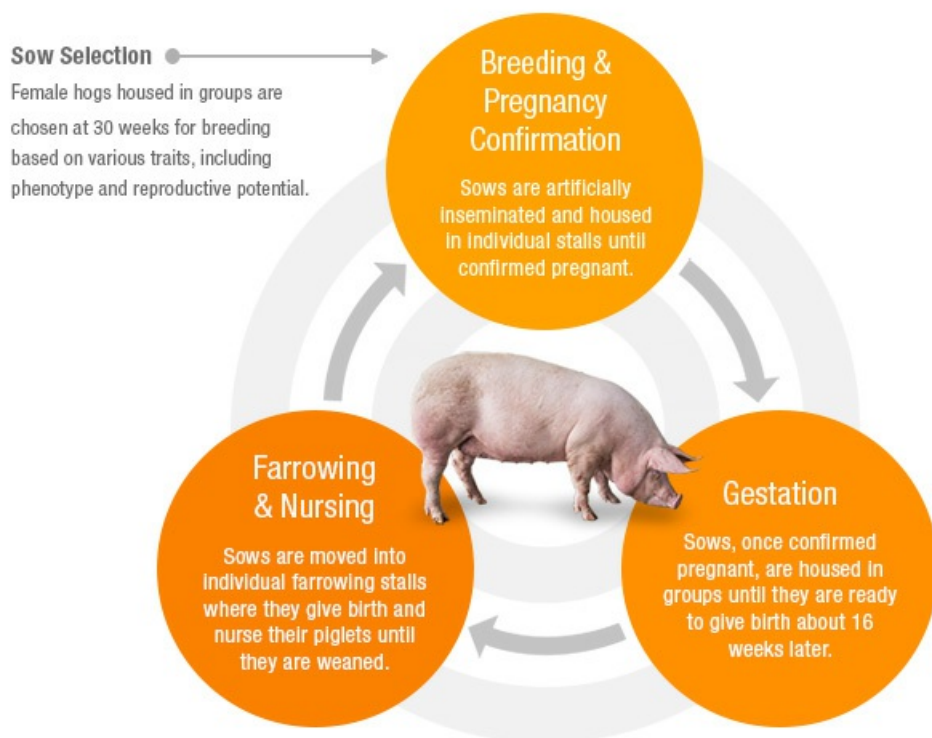
- Administering antibiotics to most new born pigs to reduce the incidence of umbilical abscesses and hernia development.
- Administering antibiotics to pigs when they enter a site already diagnosed with a disease challenge such as swine dysentery.

Housing of Pregnant Sows

Our leadership in animal care is reflected in our commitment to transition all pregnant sows on company-owned farms to group housing systems by 2017.

As of December 31, 2016, 87.0 percent of our company-owned farms housed pregnant sows in group systems. We expect to be fully converted on company-owned farms in 2017, as planned when we first announced our commitment in 2007. (Individual stalls are still used for breeding and farrowing.) Our commitment has earned us praise from a variety of organizations, including the [Humane Society of the United States](#).

Group Housing System for Pregnant Sows

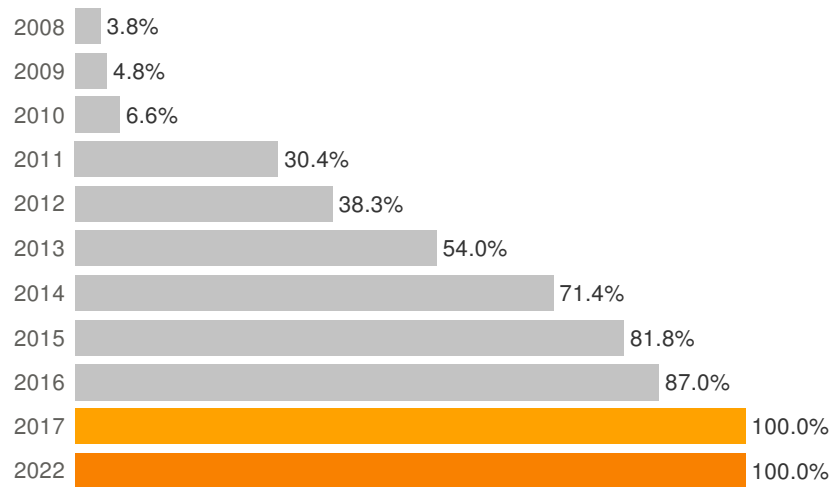


In addition to the efforts at company-owned farms, we expect all contract sow growers in the United States to complete a transition to group housing by 2022. Contract sow growers who elect not to participate won't be guaranteed contract extensions. We are providing guidance and expertise to contract growers when requested to help them through the conversion process.

Worldwide, we have pledged to convert all company sow farms by 2022. Operations in Poland and Romania have already completed their conversions from gestation stalls to group housing systems, and our joint ventures in Mexico are currently working toward the 2022 goal.

Percentage of Sows in Company-Owned Group Housing

GOAL 2017: U.S. Company-Owned Farms
GOAL 2022: Contract Producers and International Farms



Case Study: The Challenges of Sow Housing

Our group housing transition has been a challenging process—and one we are proud to have nearly completed.

For starters, no two farms are exactly alike, with each one demanding a different approach for installing the new housing systems. Group housing systems require substantially more square footage than individual stalls. To maintain the same number of sows on a farm, new barns must be built or existing ones expanded. This process typically leads to additional construction work, such as moving septic systems, changing the location of farrowing barns, digging new wells, or removing buried utility lines. Feeding and water systems very often need to be changed, and ventilation systems may need to be revamped. (See ["Reducing the Water Footprint at Our Farms"](#) in the Environment section for more information on some of the new water-saving techniques we installed as part of this process.)

We estimate the overall costs for conversion will be approximately \$360 million for all company-owned farms by the time we complete the process in 2017.

Dave Elkin, director of engineering and technical services, has been overseeing a team of more than a dozen surveyors, designers, engineers and project managers responsible for conversions of sow farms in North Carolina.

The first thing Elkin does in preparation for a conversion is to evaluate the overall site to determine whether aging equipment will need to be repaired or completely overhauled as part of the process. We also look at the environmental sustainability of each farm, including the waste treatment system, acreage needed for spray fields, nutrient utilization plans for crop production, storm water drainage, and road maintenance.



“We look at the big picture and come up with a construction plan that will keep the farm in top form for another 20 years,” Elkin says. “We want to do things right so the farm is in even better condition after we have finished the housing conversion process.”

Each conversion typically takes the better part of a year, from the initial engineering and structural evaluations to completion. At the start of each farm

conversion, Elkin and his team meet with farm managers and staff to understand specifics of their barns and to hear employees' ideas for repairs and upgrades that can be carried out simultaneously.

In some cases, we are able to keep the animals on the farm while we are creating new housing systems. In other instances, we need to remove the animals and find places for them at nearby facilities. When the animals do stay on the farm, biosecurity becomes a significant issue because we have teams of contractors and tradesmen (masons, carpenters, electricians, plumbers, ventilation experts, etc.) coming in and out each day to work on the conversion.

Jimmy Mauney manages seven sow farms in Jones County, North Carolina; all of them have been converted. Five of the farms removed the hogs during the process; the other two were retrofitted with the animals on-site.

Once the barns were converted, Mauney's staff of about 100 employees was retrained because sows housed in group systems require different management practices than those in individual stalls. For example, employees monitor the animals to protect docile sows from harassment by more aggressive sows. In addition, group pens make it more challenging to observe pregnant females that are in need of medical attention.

“The company took care of additional improvements that went above and beyond gestation housing and did simple things, such as adding more lighting at some of the barns, which makes it easier for employees to take care of the pigs. And they changed the ventilation systems to make them more up-to-date and easier for our people to manage. They took care of all the little things that make a farm run much more smoothly.”

— Jimmy Mauney, Farm Manager in Jones County, North Carolina

While he admits that the conversion process was “very stressful,” Mauney says he appreciates that Elkin and the engineers took employees' viewpoints into consideration to make improvements that benefited both the animals and those charged with caring for them.



“I was very impressed with the company’s commitment and the amount of money they spent to change the systems,” says Mauney, who grew up on a sow farm and has worked with our hog production operations for more than a decade. “The company took care of additional improvements that went above and beyond gestation housing and did simple things, such as adding more lighting at some of the barns, which makes it easier for employees to take care of the pigs. And they changed the ventilation systems to make them more up-to-date and easier for our people to manage. They took care of all the little things that make a farm run much more smoothly.”

Housing Systems

Generally speaking, the U.S. pork industry uses three types of housing arrangements for pregnant sows: individual stall housing, free-access group housing, and small group housing. We are converting to free-access and small group housing at all company-owned farms. To date, we have implemented more small group housing than free-access.

Individual sow housing. Historically used by most of the pork industry, this system puts pregnant sows in individual stalls for the duration of their pregnancies. This system allows for individual medical care and attention, minimizes fighting between sows, and allows personnel to monitor a sow’s pregnancy more accurately.

Free-access group housing. In this system, a large group of sows (between 30 and 40) has access to a common area for lounging and exercise, as well as access to individual stalls for feeding. Sows can come and go as they please and can close a gate behind them in the stalls if they choose. On company-owned farms, we have observed that about 90 percent of sows choose to spend a majority of their time in the individual stalls rather than in the common area.

Small group housing. This form of housing allows small numbers of sows to be in a common open area once they are confirmed to be pregnant. These systems typically include individual feeding stations, which help to minimize fighting among sows for feed.



Improving Animal Care

We are always looking for ways to improve the welfare of the animals in our care, from pain management in piglets to feeding strategies that minimize sow aggression.

Although controversial for some, we believe the procedures we follow make the pigs more comfortable during their lives and improve meat quality. The procedures, which include castration and tail docking, are consistent with our [Animal Care Policy](#).

The standards we follow are all approved by the American Association of Swine Veterinarians (AASV) and the American Veterinary Medical Association (AVMA).

Tail Docking

Recently, we have been conducting trials to determine if there may be an alternative to tail docking, which is standard practice in the industry to prevent tail-biting behavior (and related infections as a result). In one trial, we did not trim the piglets' tails and we monitored and measured any resulting wounds and injuries associated with tail-biting behavior. In another trial, we did not trim tails and provided pigs with more space than what they would usually need to determine if that would limit the tendency to bite.

In both trials, we found that pigs continued to bite tails when they were not docked, leading to injuries. It is clear to us that docking pigs' tails is critical for their well-being.

Now that we have determined that, we will be evaluating the piglets' pain response during tail docking in order to decide if some form of pain mitigation is necessary. For example, a non-steroidal, anti-inflammatory drug may be one option to reduce pain. We will be evaluating forms of pain mitigation to determine if it reduces a pain response, if one exists.

Market Transportation

We have been evaluating how we might make hogs more comfortable during transit from farms to processing plants. In 2015, we conducted two trials in our Utah operations to determine if providing water and electrolytes to pigs, either immediately after being loaded on trucks or at a mid-transit stop, had any benefits.

We designed a device that would allow pigs to drink water mixed with electrolytes while on the trailer. The hogs knew the water was available. However, in all cases, the pigs had little to no interest in drinking the water or electrolytes available to them, even in hot weather.

Based on the results of these studies, we determined that the water is not of interest during the rides from the farms to the processing facilities. After the hogs arrive at the processing plant stockyards, they have ready access to water in holding pens.

Feeding Strategies

Another research effort focuses on improving our feeding strategies to enhance sow well-being, specifically in group housing. In early 2016, we began a research trial for sows housed in group pens.

When sows are placed in group pens, some fighting occurs as the animals determine a social hierarchy. It's a natural part of sow behavior, and the animals need to work through their pecking order and determine who is the boss, who is submissive, and who falls in between. Another form of aggression that occurs in group pens of sows is competitive behavior that occurs during feeding time.

We are evaluating whether a change in feed could reduce the competition at meal time for sows housed in groups. We are adding more fiber to the diets of group-housed sows to see if increased satiety (i.e., feeling full) would result in less competitive aggression. Our study will look to determine if additional fiber could reduce hunger and therefore reduce competitive aggression and improve sow well-being and productivity.

We hope to determine results of the study in time for our 2016 Sustainability and Financial Report.

Genetics

The primary ingredient in the majority of our products is the hog itself. So we spend a lot of time, resources, and effort making sure that the animals are the best they can possibly be. The quality of Smithfield's pork isn't something that happens by accident.

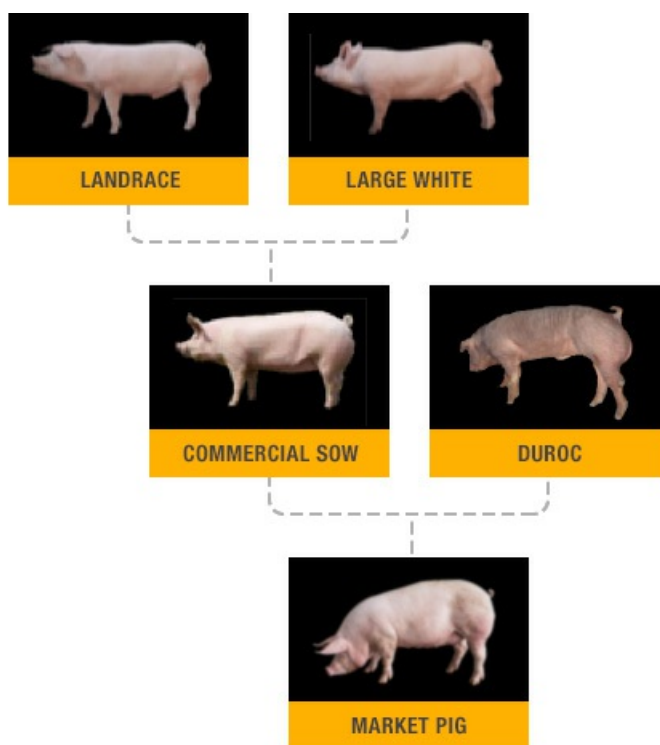
For more than two decades, our genetics team has been focused on finding the ideal hog traits that will ultimately make for that perfect rack of ribs or the tastiest smoked ham. In facilities in North Carolina and Texas, more than 200 technicians, genetics researchers, and veterinarians look for new ways to improve the genetic traits of the animals, focusing on everything from a sow's nursing skills to a piglet's feeding abilities to the characteristics that result in the greatest flavor with the perfect amount of fat and marbling. We also select for traits that will keep our animals comfortable and healthy.

"We essentially play a version of Match.com with our pigs, figuring out which animals will make the best parents to produce the best offspring that will result in the best meat," says Dr. Kent Gray, director of genetic research. "We take a lot of pride in the meat we produce, which is the result of years of genetics research and effort."

The hogs we raise today are a combination of three heritage breeds: 100% Durocs on the male side and a 50–50 cross between Landrace and Large White hogs on the mother's side. Although the three lines are common worldwide, the hogs we have bred are unique within our industry. Our genetics program itself is also unique. Other meat companies in the United States use third parties to develop their breeding programs. Thanks to our vertically integrated research, we can literally trace the genetic lines across our entire pork chain, from breeding to farms to the final product.

We firmly believe that Smithfield hogs offer superior taste and eating experience.

It's important to note that we do not add or manipulate genes that are not normally found in a hog. Rather, we employ the science of genomics: taking millions of genetic data points about the animals and their environment and, with the help of sophisticated statistical software, calculating which ones have the gene characteristics we want to see in the next generations of hogs we will raise.



We firmly believe that Smithfield hogs offer superior taste and eating experience. Moreover, the hogs also require fewer resources to raise, thanks to a targeted effort by our geneticists to identify characteristics that enable us to raise animals more efficiently. For example, in humans, some people gain weight more easily than others, the result of the genes they inherited. We want to produce hogs that gain weight more easily: Hogs that use calories more efficiently require less resources (and fewer days) to get from infancy to market weight.

Feed efficiency is especially important as we look ahead to a growing world population that could put pressure on food supplies. We're researching how to produce high-quality, high-protein products that require fewer resources and, thus, have a smaller environmental footprint.

The swine genome became available in 2009 and is the primary tool we use in our work today. From that data, we were able to refine our abilities to capture DNA information and use it to screen animals that will parent the next generation. It typically takes three to four years before we see the selections we have made show up in the animals on our farms.

"We don't want to exploit just one aspect to the detriment of other traits," says Dr. Justin Fix, director of the genetic programs. "This is about managing a whole host of objectives—growth performance, efficiency, tenderness, yield, as well as flavor."

We also keep in mind biodiversity, so we can ensure a diverse population of hogs. In other words, we breed across familial lines.

Genetically Modified Organisms

Meat and poultry livestock are not genetically modified organisms (GMOs). However, most of our animals are fed grains, including corn and soybeans, that may have used GMO technologies.

All GMO crops have been evaluated by a host of regulatory agencies, including the U.S. Food and Drug Administration (FDA) and the U.S. Environmental Protection Agency (EPA), as well as many scientific organizations, and have been found to be safe for people and animals to eat. There is no evidence that animals are affected by eating grain from plants with genetically modified characteristics.

At Smithfield, we monitor the dialogue about GMOs and stay current with the latest scientific research. We do not require any of our suppliers to be non-GMO.

Cloning

We do not produce meat products from cloned animals and have no plans to do so in the future. Although the FDA has concluded that meat products from cloned animals are safe for human consumption, the science involved in cloning animals is evolving. We will continue to monitor further scientific research on this technology.

We maintain our focus on the development and improvement of our meat products through careful selective breeding and genetic research, as detailed here.

Ractopamine

Ractopamine is a safe and effective U.S. Food and Drug Administration (FDA)-approved feed supplement that has been used by hog and beef producers for many years to produce leaner meat more efficiently. The supplement, which is widely used in the United States, can be part of a healthy, balanced diet for growing hogs.

However, a number of nations ban the use of ractopamine. China, Russia, and the European Union (EU) countries, for example, require third-party verification that pigs are not fed ractopamine. To meet this demand, we have leveraged our vertically integrated platform to produce pigs without using this supplement. We have removed ractopamine from feed for all company-owned animals supplied to our processing facilities. Several Smithfield plants now produce meat from pigs that have never received ractopamine. We still have facilities that receive pigs from other suppliers that use this product. We also have initiatives with our producers to let them participate in our "never fed ractopamine" program if that fits with their production capabilities.

Humane Euthanasia and Slaughter

There are times on farms when employees must humanely euthanize pigs—typically following injuries or illnesses.

Employees are trained by our veterinarians in accordance with the recommendations of experts, including the American Association of Swine Veterinarians (AASV) and the National Pork Board (NPB). In recent years, we have been reviewing our operating procedures around euthanasia to ensure that we are using the most appropriate methods, based on the size and weight of the animals involved.

We have invested in research to understand which techniques cause the least pain and stress to the animals and to their handlers. For pigs weighing less than 65 pounds, we use either carbon dioxide (CO₂), which causes painless loss of consciousness and death, or a device called a non-penetrating captive bolt gun, which administers a controlled blow to the head without breaking the skin, instantaneously rendering the animal insensible and causing a quick death. For pigs larger than 65 pounds, we use a penetrating captive bolt gun that fires a retractable metal bolt into the brain, resulting in insensibility and death.

According to the AASV, humane methods will achieve the following:

- Minimize pain and distress to the pig during administration;
- Cause rapid loss of consciousness; and
- Result in death quickly and consistently.

In 2014, we unfortunately had to euthanize more pigs than typical in a year because of the Porcine Epidemic Diarrhea Virus (PEDV). The virus slowed down in 2015, although we still had some losses of piglets as a result.

Slaughter Methods

Smithfield has led the U.S. pork industry toward a procedure known as carbon dioxide (CO₂) anesthetizing. All facilities use the Butina[®] CO₂ Backloader anesthetizer system. This allows the pigs to move slowly, in small groups, which is much less stressful for the animals and their handlers. CO₂ anesthetizing is very effective and produces higher-quality meat than the older, single-file, electrical stunning systems.

Safe Transportation

Transportation of animals from farms to processing plants is an important element of our animal care program.

All drivers who transport animals must be trained and certified under the National Pork Board's (NPB) Transport Quality Assurance® (TQA) program, which provides education and guidelines for transporters, producers, and animal handlers on all aspects of hog handling and transportation. It should be noted that TQA certification does not ensure or audit compliance with the provided guidelines. Each processing facility does audit transporters to evaluate key criteria for the safe and humane hauling of livestock.

In a typical year, between 80,000 and 90,000 truckloads of our animals are transported from farms to processing plants.

We comply strictly with federal animal transport time guidelines and have systems in place to maximize the comfort and safety of the animals. For example, strategically placed fans and water misters help maintain animal comfort in hot weather.



In a typical year, between 80,000 and 90,000 truckloads of our animals are transported from farms to processing plants. About 60 percent of those loads are hauled by our trucks and drivers.

Transportation Accidents Involving Market Hogs

Each year, millions of pigs are transported over many miles between farms and from farms to processing plants. The vast majority of those trips occur safely and without incident. Nevertheless, accidents do occasionally happen.

Our live-haul accident-response procedures are widely regarded by animal care experts as the best in the industry. We have five equipment trailers, known as “rescue units,” pre-positioned in key areas where our business activity is concentrated. These trailers are stocked with a variety of equipment, such as lights, penning equipment, saws, generators, and other devices that are needed when a truck carrying animals is involved in an accident. When an accident occurs, designated company employees are dispatched to pick up a rescue unit and bring it to the accident site. Our aim is to have a rescue crew arrive at an accident site within the first hour of the incident. We carefully monitor all of the rescued animals that are brought to a plant to make sure they have not been injured. Injured animals that are humanely euthanized do not go into the food supply.

We look for new ways to improve transportation to benefit the animals and the employees who work with them. For example, in recent years we have incorporated unloading doors with wide chutes on trailers at many plants. This reduces the stress as pigs exit the vehicles.

Market Hog Transportation Accidents	2011	2012	2013	2014	2015
Total number of loads hauled	90,916	84,633	89,351	80,894	82,031
Number of accidents	4	14	4	4	6
Market hogs involved	706	2,234	713	710	1,030
Market hog transportation fatalities	208	695	66	234	190

In 2014, we changed from fiscal year reporting to calendar year. Data prior to 2014 cover the periods from May 1 through April 30. Data for 2014 and 2015 are for calendar years. Number of loads hauled in 2014 declined as a result of the Porcine Epidemic Diarrhea Virus (PEDV).

Read about [safe transportation in our international operations](#).

Animal Care Policy

Smithfield¹ is committed to being the industry leader in animal care practices to assure respectful and humane treatment of animals, to produce wholesome food products, and to analyze our operations and practices, including internal and independent third-party audits, to ensure continual improvement.

All operations involved with the production or processing of live animals are required to provide the following:

- Comprehensive written animal care programs to ensure animal well-being.
- Shelter that is designed, maintained, and operated to provide a physical environment that meets the animals' needs.
- Access to adequate water and high-quality feed to meet animal nutrition requirements (production facilities) and in accordance with the Humane Methods of Slaughter Act 1978 (processing facilities).
- Humane treatment of animals that ensures their well-being and complies with all applicable legal and regulatory requirements.
- Identification and appropriate treatment of animals in need of care.
- Humane treatment of animals that meets or exceeds the requirements of the Humane Methods of Slaughter Act of 1978, and all applicable American Meat Institute Animal Handling Guidelines (processing facilities).
- Timely use of humane methods to euthanize sick or injured animals not responding to care and treatment.

Adherence to the principles of this policy is a responsibility and requirement of those who interact with animals that are owned or processed by Smithfield. Willful neglect or abuse of animals will not be tolerated and will result in immediate termination. Offenders may also be subject to criminal prosecution under applicable laws.

¹ All references to "Smithfield," "we," "us," and "our" are terms of convenience used to refer collectively to Smithfield Foods and all of its subsidiaries. Similarly, the terms "division" and "business unit" may be used to refer to one or more subsidiaries, which are independent operating companies.



Environmental Stewardship

At Smithfield¹, we are conscious of the unique challenges we face as the world's largest pork processor and hog producer. But we also recognize that our size gives us opportunities to make positive impacts on a large scale.

From the feed given to animals to the disposal of their manure to the way we distribute our products, we leverage our environmental management systems and supplier relationships to encourage efficiency and improve performance up and down our supply chain. With our Environmental Policy as our guide, we empower employees to drive improvements at each facility. Employee contributions enable us to be better environmental stewards in our priority areas: water, energy, greenhouse gas (GHG) emissions, and solid waste.

We recently updated our environmental goals and targets to realize even greater benefits. A previous set of goals and targets had an end date of December 2014. The latest set, established in 2015 with a 2020 deadline, continues to push for strong reductions (10 percent) in water use and waste sent to landfill. However, we set a reduced target of 5 percent for energy use and GHG emissions.

Our Environment Goals

- 100% compliance, 100% of the time
- Reduce natural resource demand

Our Environment Targets

- Compliance: Reduce notices of violation (NOVs) to zero
- Water: 10% reduction over 2014 by 2020
- Energy: 5% reduction over 2014 by 2020
- Greenhouse Gas (GHG) Emissions: 5% reduction over 2014 by 2020
- Solid Waste (Material to Landfill): 10% reduction over 2014 by 2020
- Grain Procurement: By 2018, 75% of grain purchased by Smithfield to be grown with efficient fertilizer and soil health practices

All water, energy, GHG emissions, and solid waste targets are normalized by production levels. GHG emissions and waste-to-landfill targets do not include hog production operations.

In the first year of our new targets, our operations nearly met our 2020 energy use reduction target and surpassed the GHG emissions target by a wide margin. Water reduction continued to progress, while our solid waste generation decreased by a modest amount.

- Normalized water use declined by nearly 3 percent;
- Normalized energy use declined by 4 percent;
- Normalized GHG emissions declined by 6 percent; and
- Normalized solid waste to landfill declined by 1 percent.

Our new "One Smithfield" initiative is creating greater efficiencies. This consolidated approach will help us better share best practices and manage data to reduce our environmental impacts as we harmonize our operations, particularly in areas such as transportation and procurement. We expect One Smithfield to drive our success as we move forward.

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Value Creation

Each day, farm and facility employees do their parts to improve resource efficiency in countless ways, whether it is finding new projects that increase recycling, eliminate leaks, or reduce packaging.

Together, their efforts have saved more than \$581.8 million since 2004, when we started tracking cost savings as part of our [Environmental Excellence Awards](#) program.

Awards Program Costs and Savings		2015
Number of projects submitted		182
Awards granted		12
Capital expenditures		\$22.5 million
Cost reductions (first year)		\$18 million
Savings since 2004		\$581.8 million

Estimated savings are conservative because they only account for the first year of projects submitted to our Environmental Excellence Awards.

We also seek out opportunities to turn operational byproducts (such as hog manure, solid waste, and grease from precooked bacon) and underutilized resources (such as company land not currently used to grow crops or raise hogs) into valuable assets for our company. We share innovative approaches across all segments so that employees can apply best practices at their facilities. Beyond economic benefits, such as reduced operating costs, efficient use of resources creates value for local communities. It also helps build strong relationships with stakeholders interested in our progress.

2015 By the Numbers	Value	Volume
Materials composted	\$0	20,512 tons
Recyclable cardboard sales	\$1,231,137	26,724 tons
Biogas captured	\$2,229,824	480,622 gigajoules
Wind energy leasing	\$274,000	122 megawatts
Solar energy leasing	\$49,100	3 megawatts
Bacon grease sales	\$7,715,156	24,289 tons

Cardboard sales are estimated based on average per-ton income. Bacon grease sales are from precooked bacon facilities only and do not include grease extracted by rendering facilities or from wastewater. Biogas value represents savings from natural gas not purchased and is based on actual cost. Wind power contribution is estimated based on the percentage of the project located on our property.

Improving Our Supply Chain

We are currently optimizing our logistics network as we transition into One Smithfield. In order to deliver best-in-class customer service at the lowest possible delivered cost, we have established a new supply chain group tasked with optimizing our logistics network. This should improve efficiencies, reduce complexity, lower operating costs, decrease our carbon footprint, and improve customer service.

For example, in the past, a hog raised in North Carolina might be sent to the slaughterhouse in Tar Heel, North Carolina. A pork belly might then be sent to a processing plant in Milwaukee, Wisconsin, where it would be turned into bacon under the Farmland brand. Once packaged, that bacon would then be sent back to stores in North Carolina. And this represents just one example for just one brand. Millions of pounds of product were being sent halfway across the country every day, creating unnecessary trips, expanding our environmental footprint, and reducing our profits.

For 2016, we're targeting \$60 million worth of reductions in transportation and logistics alone. Under One Smithfield, we're making better decisions about which products will be produced where and how to get them to customers.



More Efficient Transportation

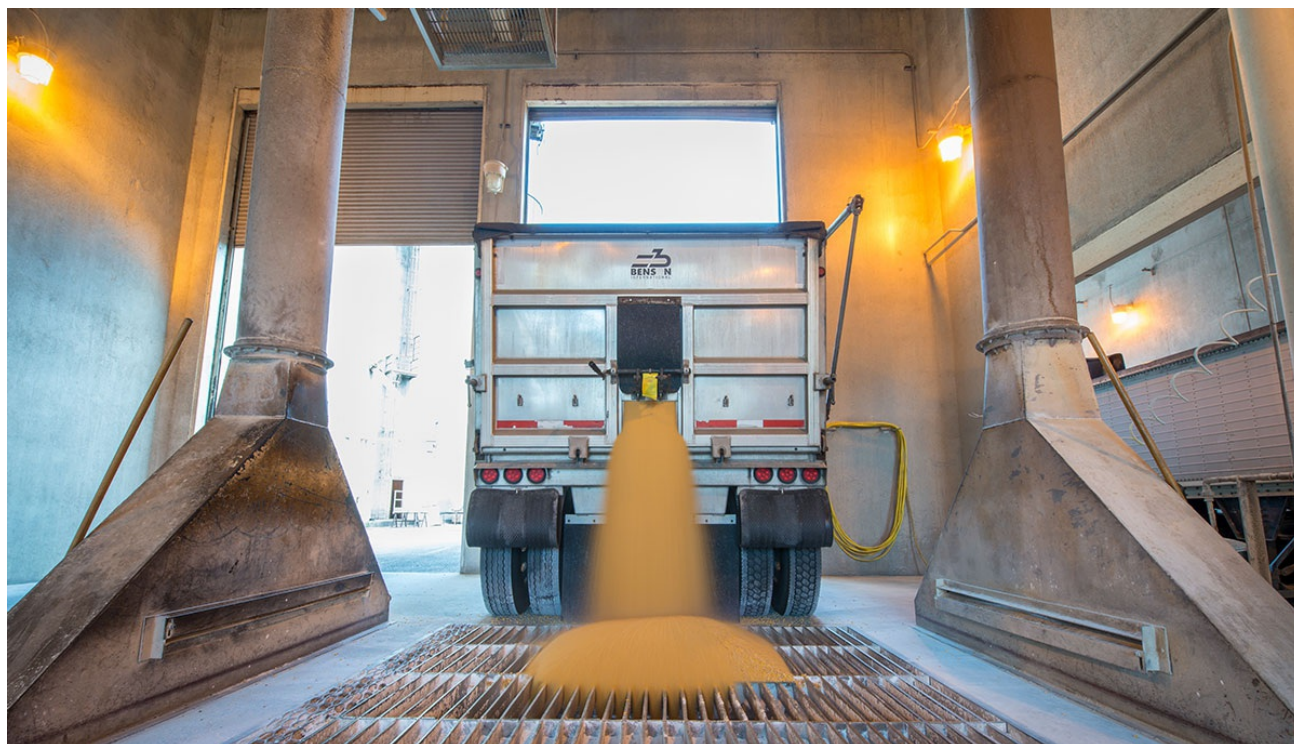
Our nearly 400 company-owned trucks carried hogs and feed over 27.3 million miles in 2015. We are improving the fleet's efficiency while limiting costs and emissions through telematics, which is the integrated use of telecommunications and information systems for tracking vehicles, shipments, and managing fleets.

Telematics enables operations to improve fuel economy, optimize truck maintenance, reduce costs, and reward good driving behaviors. The Milford, Utah, farming operation replaced the dual tires on its tractor-trailers with single, lighter, wider tires. Because it weighs less now, each truck can carry more feed, which reduces the number of trips. This saves \$106,250 in fuel costs and lowers carbon dioxide (CO₂) emissions by 100 metric tons annually.

Case Study: Making Conservation the Norm in Our Grain Supply Chain

In 2014, Walmart challenged suppliers (like Smithfield) who use large quantities of feed grains to find ways to reduce fertilizer loss from farms. This inspired a new project between Smithfield and the nonprofit Environmental Defense Fund (EDF).

The joint collaboration gives farmers access to the tools and practices they need to optimize their fertilizer application and improve soil health when growing grains for animal feed. By efficiently applying fertilizer and adopting practices such as cover crops, farmers can reduce the potential for water pollution and help address greenhouse gas (GHG) emissions while simultaneously boosting their crop yields and improving soil health.



The goal is to help farmers do more with less. Smithfield looks to partner with farmers who will be able to produce the same amount of grain with less fertilizer. Through the program, Smithfield offers free agronomy advice to grain growers, including free trials of tools to improve fertilizer efficiency, achieve higher crop yields, and save farmers money. Those who can do that will make more money while providing Smithfield with more sustainably produced feed for our animals.

Project Target

By 2018, 75% of grain purchased by Smithfield to be grown with efficient fertilizer and soil health practices.

As part of the work, our on-staff agronomist spends many of her days traveling to grain farms in North and South Carolina, showing farmers adaptations that will improve their fertilizer usage and their crop production. She also provides information on the benefits of crop rotation.

One way in which grain growers can optimize fertilizer inputs is by using the latest in farming technology. For example, the Trimble® GreenSeeker® is

a crop-sensing system mounted to fertilizer spreaders and sprayers that uses optical sensors to quantify, in real time, the variability of the crop as fertilizer is applied. Feedback from the system allows farmers to apply just the right amount of fertilizer, in the right place, and at the right time.

Our efforts so far have received attention from Walmart: The project earned a “best in class” award at Walmart’s 2014 Sustainability Expo.

“Walmart planted the seed for this project, and Smithfield is demonstrating its commitment to being a leader in improving fertilizer efficiency,” says Maggie Monast, an EDF project manager.

Smithfield and EDF conduct weekly meetings and believe we are well on our way to meeting the project’s target of having 75 percent of our southeastern grain-sourcing acres participate in the program by 2018. In 2015, the program improved practices on nearly 100,000 acres in the Southeast, and Smithfield also announced its expansion to the Midwest. EDF estimates that the collaboration will ultimately reduce excess nitrogen fertilizer on 450,000 acres of farmland and reduce GHG emissions in our supply chain.

The project also recently received a U.S. Department of Agriculture (USDA) Regional Conservation Partnership Program grant of \$500,000 in North Carolina. This will not only support farmers utilizing sustainable practices, such as nutrient management, cover crops, and conservation tillage, but it will also bring in academic and professional associations to boost participation in the program. This project has the potential to be replicated by other companies and agricultural practitioners nationwide.

Supporting NutrientStar

Smithfield also supports NutrientStar, an independent, third-party program that determines just how effective nutrient management tools are at helping farmers optimize their fertilizer use—and potentially save on input costs. NutrientStar was created by Environmental Defense Fund (EDF) and is guided by an independent panel of scientific experts.

Introducing SUSTAIN™

Smithfield is the first protein company to utilize the SUSTAIN sustainability platform, which combines a set of proven, effective technologies, practices, and products that improve nutrient use efficiency and reduce soil erosion while enhancing productivity. SUSTAIN was developed by United Suppliers—a cooperative of 560 locally owned and controlled agricultural retailers who serve growers spanning 45 million acres in North America—in coordination with EDF.

“At Smithfield, we are committed to sustainability, and to finding solutions where we can make the environment better and create value,” says Kraig Westerbeek, vice president of environment and support operations at our Hog Production Division. “Farmers spend up to half of their input costs on fertilizer, so keeping more nutrients where they belong helps growers save money and improve yields. We’re excited to offer the SUSTAIN platform to our Midwest growers because it’s a true win-win.”

Manure Management

Managing hog manure—more than a billion tons per year across the industry—is a major challenge. But manure is also a resource that can be converted into other useful products, from **fertilizer** to **renewable energy** to **potting soil**.

Smithfield uses cutting-edge science to handle manure responsibly and has invested millions of dollars in wastewater treatment facilities that help to protect local waterways. We partner with governments and nonprofit organizations to find innovative manure management solutions, from **utilizing anaerobically digested sludge** in ornamental and organic vegetable production to facilitating **nutrient recycling efforts**.

We also work to demystify **manure management** and address misconceptions.

We actively manage the nutrients found in pig manure—nitrogen, potassium, and phosphorus—during all phases of our operations. This allows us to support plant growth while avoiding environmental problems.

Giving Pigs the Right Food

Smithfield customizes diets to meet the individual nutritional needs of each pig at every stage of development. Most diets achieve this through a blend of corn, soybean meal, and wheat, with a balance of organic minerals and vitamins. This tailored approach allows the pigs to gain lean muscle and retain more nutrients, thereby limiting the nutrient levels in their waste.

Keeping Lagoons Healthy

Staff members monitor the health and optimize the operation of anaerobic lagoons on farms through regular in-person inspection and sampling. Lagoons are inspected by staff once or twice a day and by local agencies at least once or twice per year.



We sample for pH, nitrogen, phosphorus, and potassium levels, several micronutrients, and sludge volumes. Local environmental agencies review the results of our testing at least annually.

Checking on the Local Environment

We make every effort to safely and effectively use manure as rich, high-quality organic fertilizer. To determine the nutrient levels to be used for each planting season, we review and analyze data including surface waters, nutrient content in hog manure, crop nutrient needs, soil, and yields of harvested crops.

Proper Application



Our farms apply manure to both grain and grass crops to provide them with needed nutrients. These crops reduce erosion, stabilize topsoil, and recycle nutrients as grain or grass for feeding livestock. To prevent run-off and minimize risk of environmental contamination, irrigation crews follow strict land application guidelines and constantly monitor distribution lines and equipment. We use irrigation systems designed to optimize nutrient application efficiency and accuracy based on many factors including soil type, field shape, and field size.

Nutrient Recycling Challenge

Last year, Dennis H. Treacy (our then executive vice president and chief sustainability officer) and Ellen Gilinsky, the U.S. Environmental Protection Agency's (EPA) senior policy advisor for the Office of Water, challenged their teams to come up with new ways to find cost effective technologies to recycle nutrients.

Despite the development of innovative technologies for managing nutrients in manure, a number of obstacles have prevented their widespread adoption. For example, promising technologies often don't perform well outside of the laboratory. The technologies can also be expensive and time-consuming to develop and costly to operate. As a result, many of the best concepts never proceed into working designs. And many researchers and technology developers who are interested in entering the market do not have an arena for collaboration with potential customers during the early stages of their work. This means their offerings may not fully meet the needs of those who would be relying on them most.

This assignment eventually led to the development of the [Nutrient Recycling Challenge](#). On the surface, the competition pits innovators against one another as they compete for a cash prize. But it is much more than that. The effort is really meant to bring together regulators, scientists, and industry

experts to transform concepts into working technologies that can benefit livestock farms and water quality across the country.

As an active partner in this project, Smithfield is leveraging a decades-long focus on effective manure management systems. After all, we have lots of anaerobically digested manure, and we are anxious to find more ways to get the most value from it.

“We’re partnering with EPA to encourage solutions to problems that are common to the industry,” says Stewart Leeth, Smithfield’s chief sustainability officer. “In our view, this is the way progress is made, and it’s exciting to think about what may result.”

But we’re not the only ones getting excited. The challenge offers competitors public exposure, opportunities to work directly with potential customers involved in the judging panel, technical assistance that can help them refine their ideas and final project—even team together—and cash prizes.

Phase I of the challenge, which was open from November 16, 2015, to January 15, 2016, attracted 75 entrants who presented a diverse array of concept papers on nutrient recovery technologies. In March 2016, the top 10 submissions shared \$30,000 in EPA prize money.

Those semifinalists and other promising entrants were invited to a two-day partner and investor summit in Washington, D.C., and gained entry into subsequent phases of the challenge, with opportunities for larger awards. The winners get—and will continue to have—the opportunity to interact with many of the challenge’s partners, academic experts, and potential customers. The goal? Giving entrants the assistance they need to turn their ideas into successful pilot projects. Finalists are expected to be announced in January 2017, with farm demonstration pilots to follow.

Growing Flowers with Anaerobically Digested Solids

North Carolina’s commercial nurseries and greenhouses use pine bark as the primary ingredient for their growing materials. But diminishing supplies and quality have forced growers to seek alternatives.

Smithfield has perfected methods to efficiently dewater anaerobically digested solids from its wastewater treatment facilities. Material produced through this process meets requirements as a Class “A” biosolid as it relates to stability, vector attraction, and pathogen levels.

To determine if this material could supplant pine bark as a growing material, we funded two research trials (one on greenhouse foliage plants, the other on nursery plants) at North Carolina State University (NCSU) to evaluate the agronomic benefits of dewatered material. Both trials indicated that the material could reduce the amount of pine bark required and replace the need for both lime and fertilizer application to fast-growing crops that mature in short periods of time.

Encouraged by these outcomes, we will soon launch new investigations that focus on the potential benefits of using our material in organic vegetable and herb production with our research partners at NCSU. If these trials go as well as the previous experiments, we may begin seeking business partners interested in using our dewatered product for specific agricultural applications.

Manure Management Q&A

We get lots of questions about manure management. So we answered the most popular ones below.

Do pigs wallow in their own manure?

Modern barns are often designed with slatted floors and routine flushing systems to remove manure from animal pens. This helps keep the animals cleaner relative to outdoor systems.

Where does the hog manure go?

The manure goes into several types of treatment systems that vary depending on several factors, including the location and type of the farm. The majority of our hog production operations use anaerobic treatment lagoons, which have been designed and certified by qualified professionals to treat and store the manure. Although the surfaces of the lagoons are exposed to the air, they are anaerobic below the liquid surface. Lagoon sizes vary depending on the animal production on the farm. These lagoons allow the solids and the associated nutrients in the manure to break down naturally over a period of six to 12 months. Think of the lagoons as a “stomach” for a farm, where naturally occurring anaerobic organisms digest the materials. This treatment system can achieve up to 95 percent reductions in volatile solids and 85 percent reductions in biochemical oxygen demand (a common measure of the amount of oxygen necessary for bacteria to break down organic material in water). What remains is an anaerobically digested, low-solids effluent product that is highly suitable for use as an organic fertilizer and is applied for that purpose.

How are these treatment facilities managed?

Our Environmental Management System (EMS) requires daily checks on the status of all lagoons, weekly inspections, and regular internal audits. The results of all these efforts are recorded and reported to relevant agencies. We make sure that each company-owned farm has enough land available to utilize the manure to grow a variety of crops. Technical specialist staff prepare detailed and comprehensive nutrient management plans that specify the land area needed and types of crops to be grown. Land application systems are designed to ensure proper and precise application of these nutrients and are calibrated at regular intervals to maintain performance.

Are the treatment systems regulated?

The Federal Clean Water Act prohibits hog farms and other livestock operations from discharging manure or any wastewater to “waters of the state” at any time. All treatment systems on company-owned and contract farms require sign-off by state and federal regulators when they are built. In addition, hog production operations are regulated by state and/or federal water quality permits. These permits not only make comprehensive nutrient management plans enforceable under law, but they also require that we keep extensive records demonstrating compliance. Government inspectors visit hog production operations regularly (up to four times per year) to ensure compliance. Our internal requirements go well beyond regulatory compliance and record keeping; our EMS is certified to ISO 14001 standards.

Are there other location-specific regulations?

Yes. Local, state, and federal setback requirements ensure that hog farms are located in areas that minimize impacts to neighbors, as well as risks to local water sources. Setbacks vary, but examples include requiring farms to locate lagoons 500 feet from any public water-supply well and no less than 2,500 feet from schools, hospitals, parks, and other public spaces.

Are the anaerobic lagoons the best system available?

They are for certain locations and climates, but not in all places. We utilize a variety of manure management technologies, depending on regulatory requirements and regional climatic conditions. We have invested millions of dollars over the past 15 years to evaluate different manure management technologies and will continue to monitor emerging technologies. A few years ago, we sponsored research at North Carolina State University (NCSU) that analyzed 18 different treatment technologies; the researchers concluded that anaerobic lagoons are the best technology for existing North Carolina farms today.

What other types of systems does Smithfield use?

Lagoons aren't feasible in colder climates, so, in these locations, farms use slurry storage systems to maximize the nutrient content of the manure. The manure is stored in tanks or in-ground concrete pits for eventual application to crops as slurry.

How does Smithfield ensure that manure applied to fields won't wash away with the rain?

Our farms apply the fertilizer at controlled application rates and only at times when ponding and/or runoff will not occur; detailed records of all applications are kept and inspected by state regulators. Employees must inspect the fields before, during, and after manure application to make sure that no runoff occurs. In North Carolina, for example, operators carry pagers that alert them to developing weather events and are required to shut down land application when developing weather systems are within 30 minutes of the farm. This precipitation alert system has been used in North Carolina for several years.

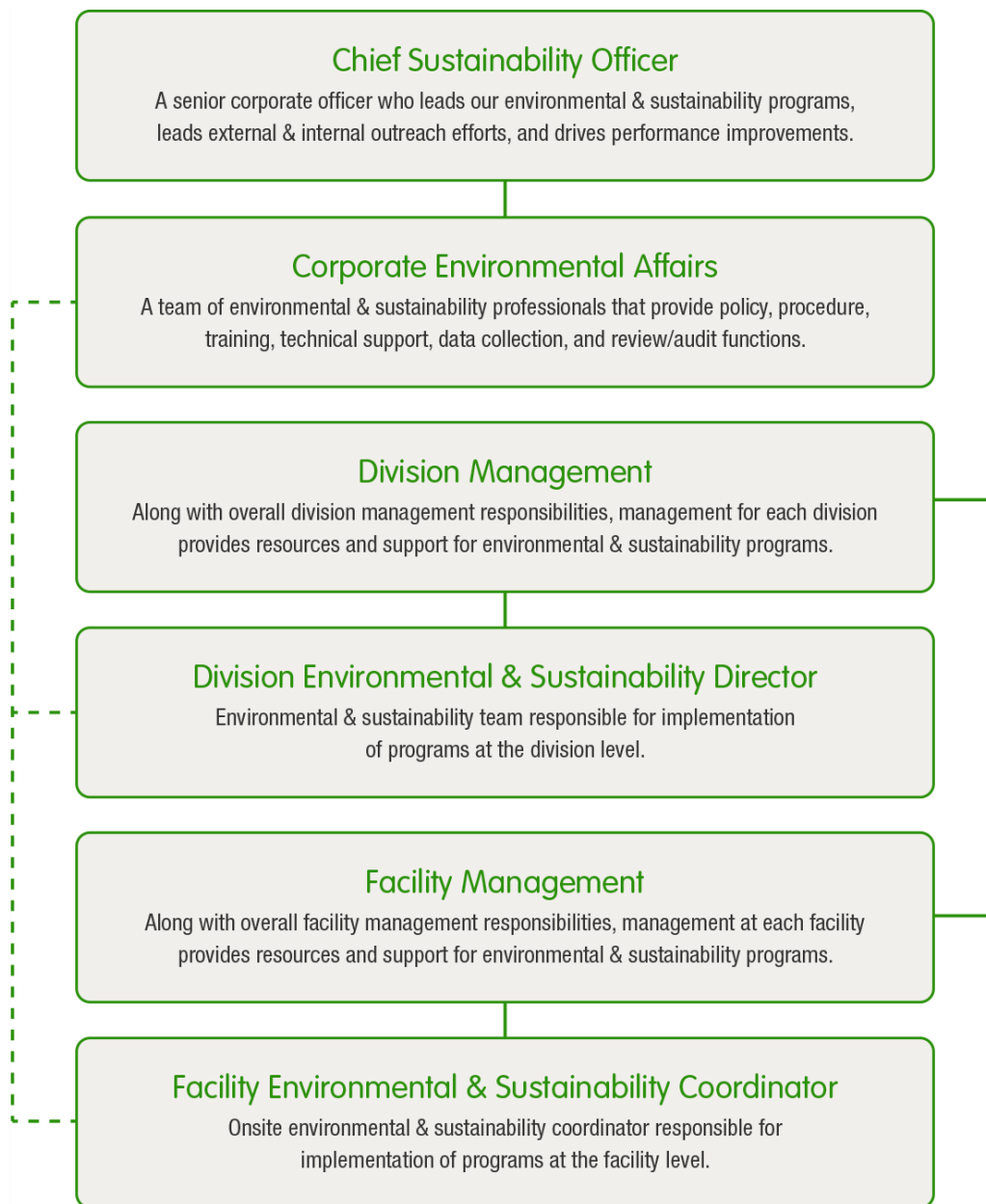
Is it better for the environment to raise hogs outdoors?

While some outdoor systems disperse manure across large areas, many outdoor animal producers locate hogs near creeks and have little or no containment to control manure runoff during rainstorms. In addition, untreated manure is deposited on the ground all year long. Modern production systems have storage systems so that manure does not need to be applied during rainstorms or in seasons when crops are not growing.

Our Management Approach

Effective environmental management is critical to the success of our business and to the achievement of long-term sustainability goals. Our **Environmental Policy** serves as the foundation for all of our efforts.

A senior corporate officer and a team of environmental specialists manage and lead environmental programs to drive performance improvements. See the **GRI Index** for more information on our management approach.



We also value—and take advantage of—the membership organizations to which we belong. They provide a venue to engage with third-party stakeholders, gain exposure to other viewpoints, and create additional management tools we can use to improve performance. Some examples of the

groups we participate in include the following:

- **Global Environmental Management Initiative (GEMI).** We use the GEMI Local Water Tool to assess water supply risk at our locations. We also help GEMI develop its “Quick Guides” for members on topics such as sustainability, employee engagement, and renewable energy. This effort provides insights into how our industry is addressing important challenges and implementing best practices.
- **North American Meat Institute (NAMI).** We participate in the NAMI Environmental Committee, which reviews pending and newly enacted regulations that affect our industry. This collaboration gives the industry a unified voice and allows us to pool our resources to address important issues. NAMI’s annual environmental conference enables sharing of best practices and information exchange with subject matter experts in wastewater treatment, employee training techniques, materiality assessment, chemical management, and other topics.

Read more about our [stakeholder engagement process](#).

Similarly, we have created sustainability opportunities through collaborative partnerships with the following organizations and projects:

- Environmental Defense Fund (EDF): Collaborating to [reduce fertilizer runoff](#) in agriculture;
- University of Minnesota: Analyzing our [supply chain’s footprint](#);
- U.S. Environmental Protection Agency (EPA): Finding innovative ways to convert manure into [valuable products](#); and
- Multiple energy generation projects, including solar, wind, biogas, and manure to energy.

Data Management

Collecting, managing, and reporting data¹ are integral steps for tracking progress toward environmental goals and targets. Our E²MS tool is customizable and web based, allowing each facility to carefully track, measure, and verify water, waste, energy, and other sustainability data that are then shared with management. These data are used to discover best practices to be shared throughout the company and to encourage continuous improvement at each facility. Each year, facility performance scorecards are created from the data, with the best facilities receiving awards.

We will also be integrating our existing ISO:14001-certified Environmental Management System (EMS) documentation and procedures into our E²MS tool. This will have several advantages, including the following:

- More consistent and flexible data collection and management;
- Enhanced sharing of best practices among facilities;
- More efficient documentation;
- Improved user interface and navigation; and
- More timely reporting.

Methodology

We collect data using North American measurement units for volume and weight (e.g., gallons, pounds). The data in this report were converted by our E²MS software to meet various reporting standards. For example, energy use totals from various domestic and international units (e.g., kilowatt hours, gallons, pounds, liters) are converted to gigajoules to better meet the requirements for GRI reporting.

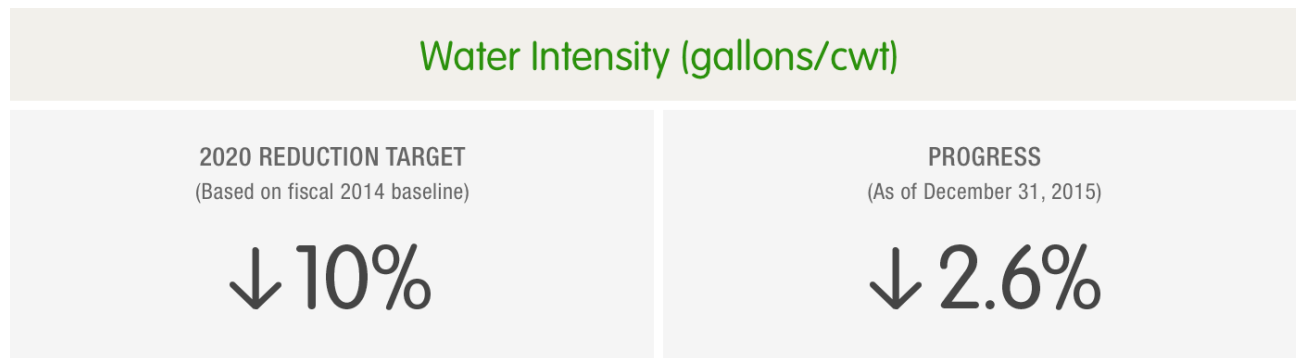
Several metrics are normalized by dividing the reporting unit by 100 pounds of the facility’s production (cwt), for relative comparison. This includes live weight of hogs raised on farms, as well as fresh and packaged meats shipped from each plant. We also provide absolute performance data to demonstrate improved efficiencies.

¹ Unless otherwise indicated or required by the context, the information and data contained in this Integrated Report cover January 1, 2015, to December 31, 2015, and relate to all wholly owned Smithfield Foods companies. Following the 2013 acquisition by the WH Group Limited, we changed the reporting timeframe from a fiscal year (May 1–April 30) to a calendar year. Data for 2013 do not include the acquisition of a controlling interest in American Skin Food Group, LLC, in September 2012. Greenhouse gas (GHG) emissions and waste-to-landfill data do not include hog production.

Water

The recent years-long drought in the western United States has heightened attention to the availability of fresh water today and the potential impacts of climate change. Like all food companies, our operations need water, and some processes—such as sanitation on farms and in plants—use water intensively.

Mindful of water scarcity and issues related to local water quality, we maintain targets for decreased water intensity and track our progress to evaluate performance over time.



CWT equals 100 pounds of product.

Assessing Water Risk

Having access to an adequate water supply is important to water-intensive operations like ours. With this in mind, we use the World Resources Institute (WRI) Global Water Tool and the Global Environmental Management Initiative (GEMI) Local Water Tool to assess risk associated with local water supplies where we operate. These tools have indicated that most of our operations face little to no risk and confirm that none of our locations withdraws water from protected sources. There were no cases that suggested the sources we utilize have been significantly impacted. We plan to reassess our water supply risks in 2018.

For the few Smithfield operations facing limited risk, we monitor water availability and potential changes closely. In one location, facility representatives joined the local water board to proactively address any issues that might develop.

To address groundwater level concerns at our facility in North Carolina, we partnered with a local water authority to build a surface water treatment plant that utilized a nearby river as a source of supply in lieu of groundwater. The river is not significantly affected by the withdrawal, and the plant's permit includes withdrawal limits.

We are developing proactive water management systems and implementing best practices to reduce water consumption in an increasingly water-constrained world. Our actions include the following:

- Feeding our pigs less water-intensive feed crops to limit our supply chain's water demand;
- Using water more efficiently at our hog production facilities;
- Using automation and technological improvements to process meats more efficiently while maintaining world-class food safety and quality standards; and
- Funding research at Northwestern University in Illinois to evaluate and optimize water reuse at our hog farming operations.

Since 2014, our segments have reduced water used per 100 pounds of product (cwt) by nearly 3 percent, putting us on pace to meet our 10 percent reduction target by 2020. Total water use increased by just over 6 percent in the same period.

Industry Leader in Water Management

A recent [report from the nonprofit Ceres](#) that evaluated companies in four industries (packaged food, beverage, meat, and agricultural products) ranked Smithfield Number 1 in water management among leading meat companies. The report examined how water risks might disrupt operations, limit growth, or increase agricultural input costs, and, therefore, affect the profitability and competitive positioning of food companies.

Ceres, an advocate for sustainability leadership, awarded Smithfield 33 out of a possible 100 points in four categories: governance and management, direct operations, manufacturing supply chain, and agricultural supply chain. The next-closest ranking for a meat-industry competitor was 12; the lowest score for any of the five competitor companies was a 3.

The ranking for Smithfield represents a significant accomplishment given the water use challenges for agricultural businesses like ours.

Some accomplishments realized in 2015 include the following:

- The facility in Sioux Falls, South Dakota, diverts treated wastewater for reuse. This continuous recycling process has eliminated the need to purchase municipal water for certain applications, reducing the plant's overall water use by 6.8 million gallons annually.
- The Sioux Falls facility also added a water level sensor to a machine that sprays and recaptures scalding water for cleaning, saving 67 million gallons of water per year. This made the water recycling process more efficient and saves \$535,150 in water, natural gas, electricity, and wastewater treatment costs.
- Our farms have installed hanging watering equipment in their barns. These new devices can adjust to account for different animal sizes and reduce water use by 13–17 percent. (Read more below.)
- The plant in Omaha, Nebraska, installed water-efficient sanitation nozzles, saving \$17,300 and using 8.7 million fewer gallons of water annually.
- The plant in Charlotte, North Carolina, installed flow restrictors and ergonomic nozzles in the spray guns used for sanitization. This will save nearly 5 million gallons of water annually.
- The facility in Kinston, North Carolina, installed a water reuse system for cleaning. This reduces water use by 4.6 million gallons a year while saving the plant \$20,400.
- The Wichita, Kansas, plant adjusted its production schedule in order to reduce the number of shifts. This cut the number of cleanings between shifts and increased production, reducing water use by 17 percent and water costs by 11 percent.

Water Intensity

(gallons/cwt)

14–15 Change: -2.6%



CWT equals 100 pounds of product.
 The volume for 2014 has been restated since the last report.

Water Use

(billions of gallons)
 14–15 Change: 6.5%

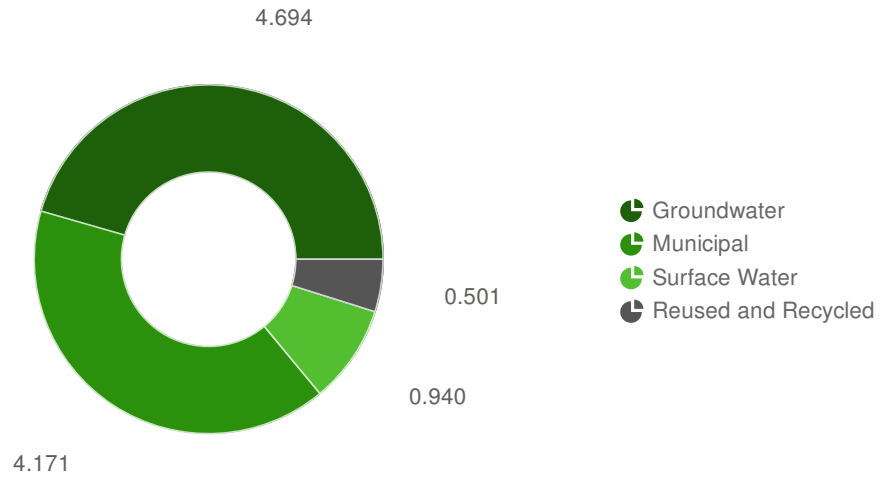


The volume for 2014 was incorrectly reported as 9.19 in the previous report.

2015 U.S. Water Management

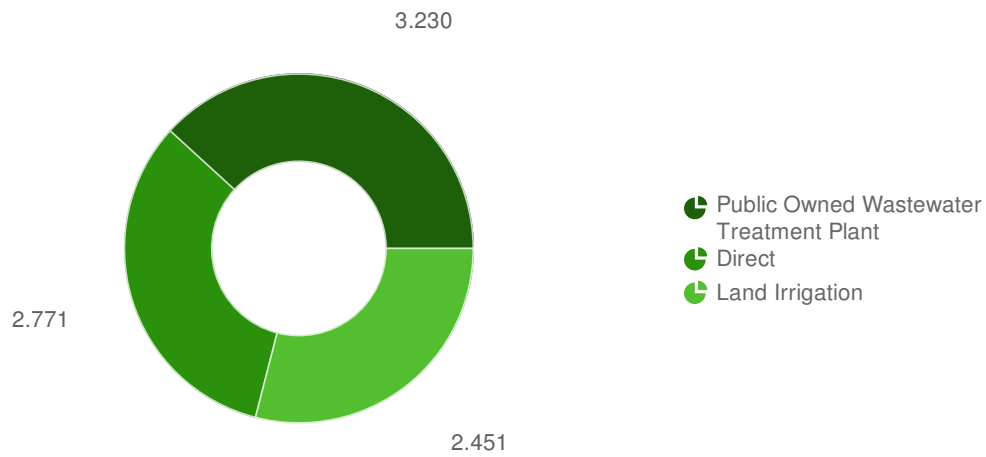
Sources

(billions of gallons)



Discharge

(billions of gallons)



Reducing the Water Footprint at Our Farms

Roughly 60 percent of the water used on our farms is drinking water for the pigs. The rest is used to support their comfort and health (sanitation, cooling, housekeeping, etc.). Our sow housing conversion efforts have provided opportunities to adopt new technologies that, over time, have driven solid water efficiency improvements in the barns. We have focused on two areas: drinking water and climate control.

Our newest drinking water systems save significant amounts of water compared to old, trough-style systems that allowed water to flow constantly:

- **Cup watering systems:** Pigs manipulate stainless steel nipples affixed to pen walls to create a flow of water. Small bowls capture water that pigs don't drink. Because pigs can drink directly from the bowl, these systems can save up to 37 percent of the water used in traditional troughs. However, the system isn't widely popular because of concerns related to cleanliness and potential spread of illness.
- **Swinging watering systems:** Drinking nipples are suspended from a chain secured to the ceiling. Because they can be adjusted for height, this system makes it easier for pigs to drink more of the water that leaves the nipple. The systems also require greater concentration by the pigs, potentially keeping them more engaged. Overall, it is the preferred method since it is highly efficient, is adjustable, and performs well in all conditions. We have adopted this system as we renovate barns.
- **Pressure regulators:** In addition, we have invested in pressure regulators that reduce the rate at which water leaves drinking nipples, lowering the amount of wasted water.

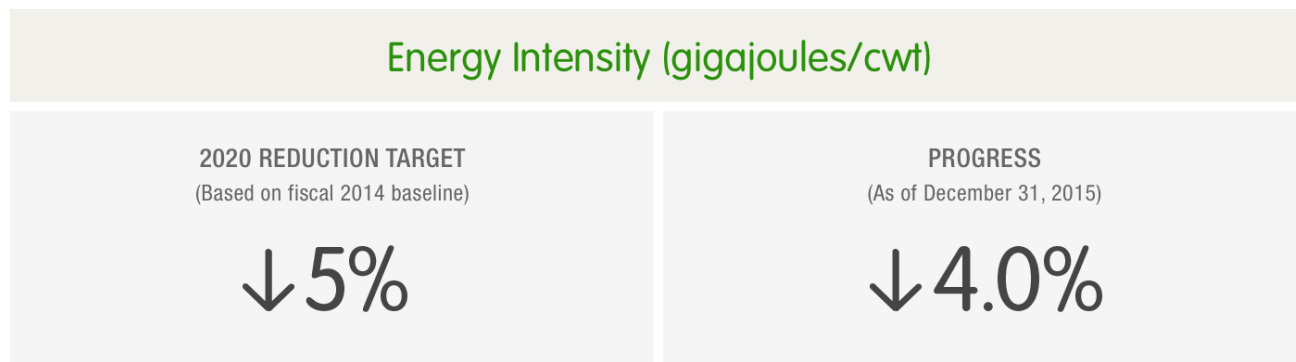
Looking Forward

While we have made great strides in reducing water use, we are also looking for other opportunities to improve water efficiency, such as the way we cool barns in the summer. The older approach worked much like a sprinkler in someone's yard; it got the job done, but we were wasting water by spraying where it wasn't needed. To remedy this, we invested in a new system that cools the barns more efficiently while using much less water. It consists of a slotted pad that is continually dampened with fresh water. The ventilation system draws air across the pad, cooling it through evaporation. Any water that isn't evaporated is collected at the bottom of the pad and recirculated.

Energy

From transporting animals to powering production facilities, our segments use significant amounts of energy in the form of electricity, fossil fuels, and biogas.

From 2014 to 2015, normalized energy use fell by 4 percent, putting us well on track to meet our 2020 target.



CWT equals 100 pounds of product.

In 2015, we implemented several energy efficiency projects, including the following:

- The Middlesboro, Kentucky, plant completed an ultrasonic leak detection survey and found 65 leaks in its air compression system. Eliminating these weak points will reduce energy use by 600,000 kilowatt hours (kWh) and lower costs by \$48,000 annually.
- The plant in Sioux Falls, South Dakota, launched an energy management and data recording system that has been used to identify and implement several sustainability projects each year. Six recent projects combined to save 1.4 million kWh annually.
- The Martin City, Missouri, facility installed a high-efficiency motor for the air compressor used to package products. Not only did it perform better, but it will be nearly \$140,000 cheaper to operate while saving the plant 1.7 million kWh per year.
- The St. James, Illinois, facility added digital controls to its air compressor. This upgrade reduces energy use by 1.2 million kWh and saves the plant \$83,325 annually.
- Three packaged meat facilities (Cudahy, Wisconsin; Sioux Center, Iowa; and Elizabeth, New Jersey) collectively participate in the U.S. Department of Energy's (DOE) Better Buildings Program. The DOE offers its services and expertise to help drive down energy usage at the facilities, with a goal of 25 percent reduction by 2020. As of July 2015, the plants' collective energy use was down 21 percent compared to the baseline year (August 2010–July 2011).

We've also made our products less energy intensive for consumers. For example, we have increased the number of ready-to-eat, prepared foods such as pre-cooked entrees, bacon, and sausage that we offer. This means our foodservice customers and consumers use less energy to prepare and enjoy our food.

Energy Intensity

(gigajoules/cwt)
14–15 Change: -4.0%

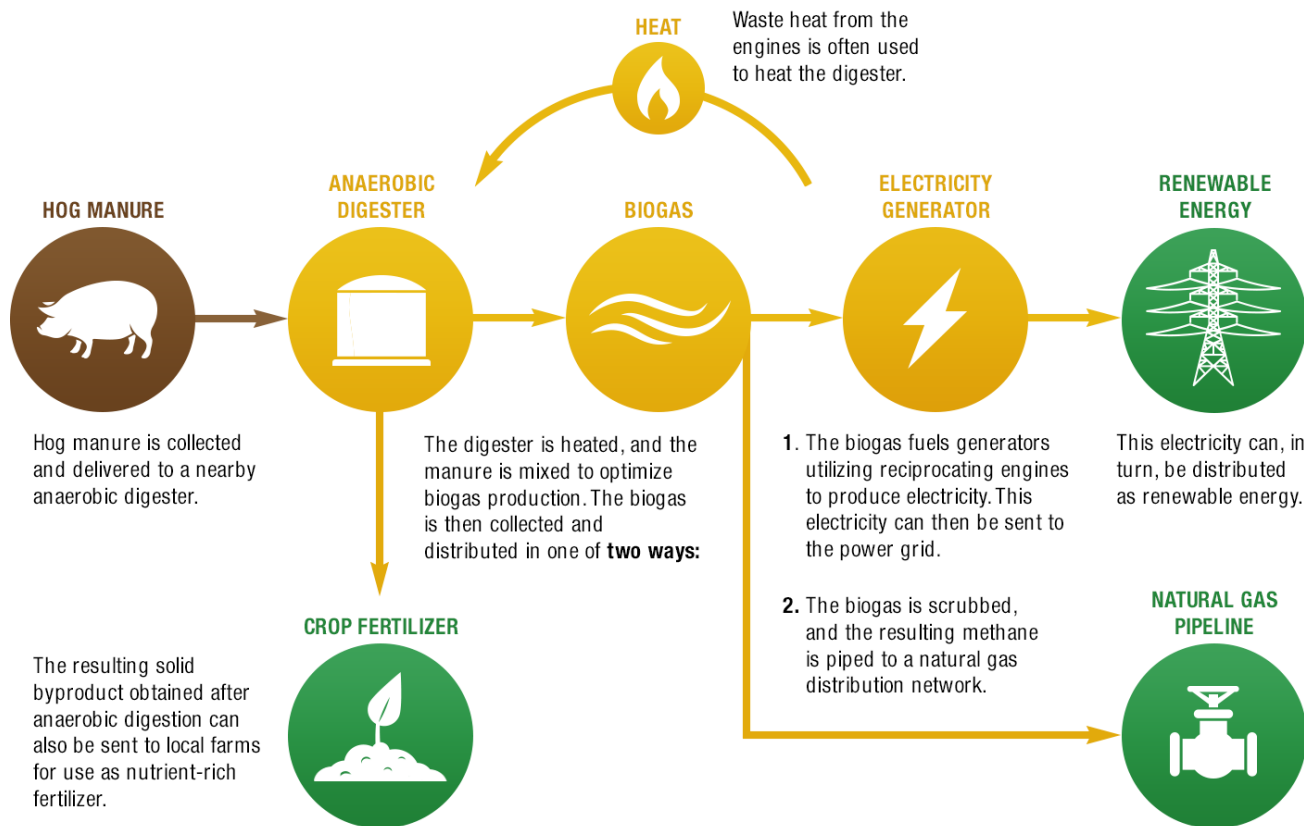


CWT equals 100 pounds of product.

Direct and Indirect Energy Use by Fuel Type (gigajoules in millions)	2014	2015	14-15 Change
Natural Gas	8.27	8.85	
Propane	1.40	1.31	
No. 2 Oil (includes transportation diesel)	0.74	0.75	
No. 6 Oil	0.13	0.0	
Biogas	0.31	0.49	
Total Direct Energy Use	10.85	11.40	5%
Electricity	5.78	5.96	
Total Indirect Energy Use	5.78	5.96	3.2%
Total Energy Use	16.63	17.37	4.4%

Renewable Energy

Since the 1990s, we have explored ways to transform manure into renewable energy and valuable fertilizer. This illustration briefly covers some of the ways manure generates value. New technologies are making hog manure more suitable for conversion to energy, and some states are encouraging electricity providers to generate power from hog manure and other renewable sources.



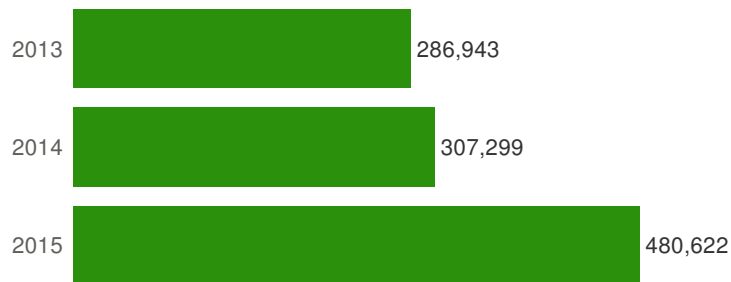
Smithfield’s Energy Technology Review Committee actively works with technology providers, utilities, and government agencies to identify and develop pioneering renewable energy technologies that can be deployed at our farms and processing facilities. We also explore business relationships where we can work with companies that have the capital and technical expertise to make these projects a success. We plan to be involved with these types of projects in the United States and internationally over the long term, and we are utilizing internal and external expertise to identify and optimize new energy sources. Examples of our current energy production strategies follow.

Capturing Biogas

Several sites use their anaerobic wastewater treatment systems to capture biogas—which is 60 to 70 percent methane—to fuel modified steam boilers. This cuts fuel costs, reduces methane emissions, and utilizes a waste product. Since 2009, our operations in Sioux Falls, South Dakota, have expanded annual production of biogas from 87.1 million cubic feet to 305.3 million cubic feet. This 350 percent increase was achieved while simultaneously reducing wastewater discharge by 7 percent. Another processing facility in Tar Heel, North Carolina, operates two 5.75-acre anaerobic basins with an average production of 21,500 gigajoules (GJ). In 2015, our facilities produced enough biofuel to power approximately 12,500 U.S. households for one year.

Biogas Captured

(gigajoules)



Partnerships

Forming partnerships with energy companies well suited to use our resources (manure and unused cropland) to generate energy creates big operational savings for our facilities and also produces local renewable energy. Over the past five years, we have pursued opportunities to supply fuel to several larger projects that could generate five to 10 megawatts (MW) of electricity throughout North Carolina. Many of these projects currently await financing.

Wind and Solar



Our farming operations in Milford, Utah, utilize unused property in two renewable energy partnerships that offset fossil fuel use, bolster the local power grid, generate lease income, and increase property taxes for both the local county and the entire state of Utah. Site management instigated these

projects:

- Allowed a developer to install a 305-MW wind power project, nearly 40 percent of which is on our property. The site has generated commercial power since late 2009 and is able to power nearly 4,000 homes in the Milford area.
- Encouraged a solar developer to install a 3.0-MW solar farm on approximately 20 acres of unused property.

Manure to Energy

- In Missouri, we collaborated with a developer that installed impermeable synthetic covers and flare systems on 88 existing lagoons, coupled with barn scraper technology, to deliver manure to the covered lagoons where it will be converted to saleable biogas. Starting in mid-2016, the project is projected to generate 2.2 billion cubic feet of renewable natural gas while keeping 850,000 tons of methane out of the atmosphere.
- The hog finishing farm complex near Milford, Utah, has a manure supply contract with an energy development firm that built power production facilities on its property. Since December 2012, the project has generated 3.2 MW of electricity and offset an estimated 107,561 metric tons of carbon dioxide (CO₂) emissions per year.
- The Vestal farm in Kenansville, North Carolina, upgraded its existing biogas production processes with the help of an energy development firm. By adding an electricity generator to the system, the farm can produce up to 100 kilowatts (kW) of electricity from hog waste.
- Our Mason City, Iowa, facility sends sludge to a local dairy farm that uses it to generate methane with its digester. But the tankers with sludge would freeze during the winter months. With the help of a \$19,200 grant from the Iowa Department of Natural Resources, our facility purchased a heated tent that allows year-round storage. This cuts landfilled waste by 45 percent (340 tons).
- Our facility in Denison, Iowa, sends spent brine (liquid injected into meat to enhance juiciness and flavor) to an anaerobic digester in Meade, Nebraska, where it is used to produce methane gas for electricity generation. The plant sent approximately 65 million pounds of this material in 2015, generating over 19.5 million kW of electricity.
- Our facilities in Peru, Indiana, and Arnold, Pennsylvania, send wastewater sludge to local dairies, saving nearly \$300,000 per year in disposal fees. These dairies use our material to create biogas and convert it into electricity sold to local utilities.

Greenhouse Gas Emissions

The production and distribution of our products result in greenhouse gas (GHG) emissions. We strive to limit energy consumption where we have the greatest control: at our processing facilities and in our logistics network.

For more on how we reduce the impacts at our farms, go to [Manure Management](#).

Greenhouse Gas (GHG) Intensity (metric tons CO₂e/cwt)

2020 REDUCTION TARGET

(Based on fiscal 2014 baseline)

↓ 5%

PROGRESS

(As of December 31, 2015)

↓ 6.1%

CWT equals 100 pounds of product. CO₂e is carbon dioxide equivalent.

Finding “Hot Spots” to Reduce our Footprint

Smithfield, the Environmental Defense Fund (EDF), and the University of Minnesota’s Institute on the Environment recently launched a project to find the “hotspots” in Smithfield’s supply chain that contribute most to our overall environmental footprint. Smithfield, EDF, and the university are contributing both funding and expertise.

This project uses custom software to identify the areas in our supply chain with the greatest carbon and water impacts. Once a baseline is developed, the software will be used to quantify the environmental and financial effects of changing our grain sourcing, manure management, and energy management practices. With this new tool, Smithfield will be able to better evaluate options and prioritize opportunities on an ongoing basis. This should enhance our air emissions and water reduction efforts in the future.

GHG emissions at processing facilities have decreased even as we have increased output and shifted product lines toward ready-to-eat products, which require more energy to produce. In 2015, normalized GHG emissions were 6 percent below 2014 levels, putting us ahead of our 5 percent reduction target.

GHG Intensity

(metric tons CO₂e/cwt)

14–15 Change: -6.1%



The volume for 2014 has been restated since the last report.

Direct and Indirect Greenhouse Gas (GHG) Emissions	2014	2015	14-15 Change
Carbon dioxide (CO ₂) emissions (metric tons)	1,202,359	1,237,626	
Methane (CH ₄) emissions (metric tons CO ₂ e)	529	546	
Nitrous oxide (N ₂ O) emissions (metric tons CO ₂ e)	4,222	4,266	
Total GHG Emissions (metric tons CO₂e)	1,207,110	1,242,438	2.9%

CO₂e stands for carbon dioxide equivalent. CWT equals 100 pounds of product. Smithfield reports GHG emissions using The Greenhouse Gas Protocol Initiative developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). Publicly available emissions figures are used where no reliable data are available from energy providers. We report on scope 1 emissions (direct) and scope 2 emissions, which include indirect emissions associated with the use of purchased electricity and steam. Farming operations are not included. 2014 figures have been restated since the previous report.

Solid Waste

Reducing solid waste is an important part of our commitment to environmental stewardship. Our approaches include redesigning packaging, increasing recycling and composting, selling materials with residual value, and using packaging with post-consumer recycled materials.



CWT equals 100 pounds of product.

In 2015, our operations sent roughly 9 percent more pounds of solid waste to landfills than in 2014 due to increased production. However, as we improved efficiency, we decreased solid-waste-to-landfill disposal per 100 pounds of product (cwt) by just over 1 percent.

Some of the waste reduction projects from 2015 include the following:

- Facilities in Sioux Falls, South Dakota, began providing wastewater biosolids for use as fertilizer on farms in Iowa. Each year, this process keeps 8,600 tons of sludge out of landfills, cutting the volume of material sent to landfill by 37 percent between 2012 and 2014. This program reduces disposal costs by \$331,000 per year while benefiting local farmers.
- The Cudahy, Wisconsin, facility's recycling program has reduced the amount of plastic sent to landfill by 20 percent and overall waste production by 9 percent since 2008.
- The processing facility in Lincoln, Nebraska, partnered with a local waste management firm to reduce waste to landfill by 50 percent and save over \$52,000 in one year.
- The Springfield, Massachusetts, plant stopped putting cardboard slip sheets on the bottom of outgoing shipping pallets. This reduced cardboard waste by 11,250 pounds and saves the facility more than \$5,000 each year.

Normalized Solid Waste to Landfill

(pounds/cwt)
14–15 Change: -1.2%



Solid Waste to Landfill

(pounds in millions)
14–15 Change: 8.6%



Data do not include hog production operations where solid waste is typically hauled away for a fixed fee; as a result, reliable weights are not available. CWT equals 100 pounds of product.

Total Waste Disposition (Tons)	2014	2015
Cardboard recycled	27,833	26,724
Metals recycled	2,016	2,153
Plastics recycled	884	1,259
Wastewater sludge land applied	12,120	52,775
Material composted	28,358	20,512
Material anaerobically digested	16,673	29,285
Waste to energy	14,506	25,916
Hazardous waste	13	9.3
Universal waste	37	62.4
TOTAL	102,440	158,695

Recycling “Dirty” Plastic

Most of our facilities recycle the majority of our plastic wastes (e.g., shrink wrap, bags, hard molded plastics, plastic drums). However, some plastics must go to landfill because many recyclers do not accept “protein contaminated” materials.

The plant in Cudahy, Wisconsin, realized this limitation meant nearly 10 percent of its waste stream was not optimally managed. To resolve the issue, facility managers recently began working with a recycling partner that was willing to accept such plastics. The plant sorts and stores the materials on-site, using a refrigerated trailer in warm months. The recycler picks up loads when requested, washes the plastics at its facility, grinds the material, and converts it into pellets that can be used to create new products. The project has cut waste to landfill by 162 tons (9 percent) and saved over \$12,500 in landfill fees. We believe this strategy could help several of our processing facilities in their efforts to achieve [zero-waste-to-landfill](#) status.

Zero Waste to Landfill

For the past few years, we have encouraged all domestic processing facilities to meet zero-waste-to-landfill best practices. We have a variety of criteria in place for facilities to follow in order to be considered zero waste.

At least 50 percent of total waste must be reused or recycled, and incineration without energy recovery is limited to wastes, such as hazardous waste, since that is the legally required disposal method. In order to keep zero waste economically viable, costs of using the zero-waste approach must not exceed 105 percent of baseline waste costs. Finally, we require record keeping of waste practices and review by staff and/or a third-party auditor.

Becoming a Zero-Waste-to-Landfill Facility

While each facility has its own challenges in meeting our zero-waste target, the most successful involve a variety of elements, as shown below.

Wood

Examples of waste:

- Pallets

How we keep this waste out of the landfill:

- Reuse: Pallets are used several times before being recycled and then sent to vendors for refurbishing.
- Ground into mulch: Used as landscaping materials.

Fibers

Examples of waste:

- Office paper, cardboard

How we keep this waste out of the landfill:

- Sold as a commodity: Recycled back into paper and cardboard. Sales were \$1.2 million in 2015.

Plastic

Examples of waste:

- Plastic sleeves, liners, ingredient bags, LDPE film, HDPE, plastic drums, plastic totes, buckets, Poly Kraft bags, supersacks

How we keep this waste out of the landfill:

- Reuse: Plastic drums and totes are used several times before being recycled.
- Cleaned, pelletized, and sold as a commodity: Pelletized LDPE and HDPE are used to make recycled plastic products.
- Waste-to-energy: Smithfield converted 26,000 tons of waste to energy in 2015. Covanta uses waste from our Bolingbrook plant to power Purdue University and several buildings in Indianapolis.

Metal

Examples of waste:

- Aluminum cans, metal drums, scrap metals

How we keep this waste out of the landfill:

- Reuse: Metal drums are used several times before being recycled.
- Sold as commodity: Smithfield sold over 2,000 tons in 2015.

Organic Waste

Examples of waste:

- Food waste, waste water, sludge

How we keep this waste out of the landfill:

- Rendering: Non-edible tallow, oleic acid, glycerine, stearic acid, linoleic acid, fat commodities, and protein meal.
- Compost: We diverted 20,500 tons of landfill waste via composting.
- Land application: Treated wastewater sludge is an excellent source of fertilizer.
- Biogas Digester: We captured 480,600 gigajoules of biogas in 2015, and several facilities send sludge to local dairies that use it to generate electricity.

Oils

Examples of waste:

- Grease

How we keep this waste out of the landfill:

- Sold as a commodity: Sales exceeded \$7.7 million in 2015.
- Used to make biodiesel: The United States used 2.1 billion gallons of biodiesel in 2015, according to the EPA.
- Other products: Industrial gels, gel caps for medicines, and cosmetics.

To date, six facilities have achieved zero-waste-to-landfill status:

Facility	Zero-Waste Certification Date	Highlights
Peru, Indiana	May 2013	Recycles more than 98% of its waste Diverted 440 tons of waste from landfills Saves \$95,000 per year
St. James, Minnesota	March 2014	Diverted 1,306 tons of waste from landfills Increased recycling 97%
Bolingbrook, Illinois	June 2014	Diverted 142 tons of waste from landfill Saved \$22,000 in operating costs Generated \$38,000 in recycling rebates
Springfield, Massachusetts	July 2014	Diverted 242 tons of waste from landfill Saved more than \$66,000 in operating costs
Sioux Center, Iowa	February 2016	Diverted 2,467 tons of waste from landfill Saved \$20,000 in disposal costs
St. Charles, Illinois	March 2016	Diverted 1,466 tons of waste from landfill Saved \$14,000 in disposal costs

We expect to certify two additional zero-waste-to-landfill facilities in the second half of 2016:

Facility	Planned Certification Date
Mason City, Iowa	August 2016
Omaha, Nebraska	August 2016

Packaging

Product packaging helps ensure food quality and safety. It offers protection during transit, extends shelf life, and communicates important nutrition and safe-handling information to consumers.

Because we offer so many types of products, processing facilities utilize a wide variety of packaging materials, including resin-based plastics, such as clear film and bags for sealing meats, and corrugated cardboard boxes for shipments. Other items include foam trays, plastic boxes, absorbent liners, folding cartons, zipper bags, plastic tubs and lids, and rigid plastic trays.

To continue to drive packaging efficiency, we have encouraged facilities to develop packaging reduction projects each year. The aim is that material use will be reduced and good practices shared across the business, driving further improvements.

Recent packaging reduction initiatives include the following:

- The plant in Omaha, Nebraska, reduced the film thickness for one of its production lines from 9 millimeters (mm) to 7. Without compromising package quality, the plant reduced annual film use by 37,500 pounds, saving more than \$50,000 per year.
- Our plant in Sioux City, Iowa, reduced the cardboard thickness for eight products, requiring 150 tons less cardboard and saving \$60,000 per year.
- The Grayson, Kentucky, plant shortened the length of the bags for “cook-in” hams, which improved the product-sealing process while reducing bag waste by nearly 26,000 pounds and saving the plant about \$102,000 per year.
- Our facility in Salt Lake City, Utah, increased the number of units that could ship in each truck. Over two years, this saved \$363,000 and reduced the facility’s carbon footprint by 944,650 pounds of carbon dioxide (CO₂).
- The plant in Cincinnati, Ohio, reconfigured the dimensions of its hot dog packaging, saving the plant \$345,500 per year.

Compliance

We seek to comply with local, state, and federal environmental requirements at all times and have compliance management programs that train and motivate employees to prevent, detect, and correct violations.

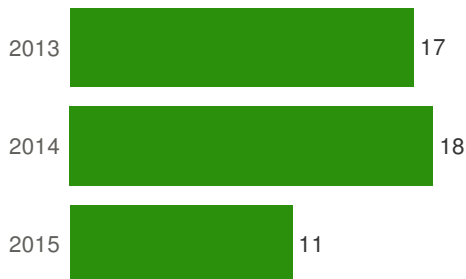
We continue improving coordination and communication within the company to realize the following:

- Improve overall environmental performance and eliminate notices of violation (NOVs);
- Effectively analyze and communicate Environmental Management System (EMS) and International Organization for Standardization (ISO) audit results to production plants;
- Expand training programs and improve training conference attendance;
- Increase participation in the Smithfield Awards program;
- Earn more third-party recognitions; and
- Share results annually with management to drive continuous improvement.

U.S. operations received 11 NOVs in 2015. As our NOV totals continue to decline, those that we do receive relate to issues regulatory agencies feel do not warrant significant penalties. This has led to a significant downward trend in environmental fines in recent years. We are taking all necessary corrective actions to resolve the concerns, which involve coordination with multiple stakeholders, including the local municipality and state agencies. We take any NOV or fine seriously and work quickly to determine how our management systems can be improved while making corrective actions. We also work with regulators to resolve potential environmental issues before they result in violations.

Notices of Violation (NOVs) and Fines for Domestic Wholly Owned Farms and Plants

NOVs



Fines



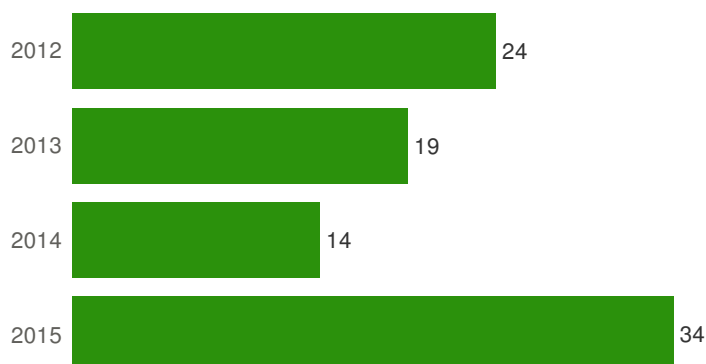
Total NOVs and fines include all domestic farms and plants. The 2014 report listed 20 notices of violations for 2014. Two of those were later rescinded, and we are restating the total to 18 for the year.

Environmental Performance of Contract Producers

We recognize that suppliers are key to achieving our goal of being the most trusted, respected, and ethical food industry leader.

Our technical personnel consult with contract growers on a regular basis on various aspects of compliance including nutrient management, environmental permitting, and new technology. We also review state databases and production staff surveys in order to monitor our contract farms' environmental performance. We offer assistance as requested by contract growers when and if issues arise. Contract growers, however, own their facilities and permits and are ultimately responsible for compliance with rules and regulations. The year 2015 was a challenging one for the agricultural industry. Record chronic rainfall throughout the eastern half of the country contributed to the number of NOVs experienced by contract growers in this region. In 2015, approximately 2,100 domestic contract farms received 34 NOVs.

Contract Farm Notices of Violation



Contract farm NOV totals are based on reviews of state databases and production staff surveys.

Biodiversity & Conservation

As a company, we avoid and minimize adverse impacts on biodiversity by not operating in protected habitats or areas of high biodiversity value. It is our understanding that there are no protected species with habitats near our domestic operations. Several facilities feature buffers and other natural areas in an effort to preserve local natural habitat.

We support biodiversity and wildlife conservation efforts when we can make a meaningful contribution:

- We donated a lease of 600 acres of company-owned land to the Missouri Prairie Foundation in an effort to restore native vegetation and the wildlife that once flourished there.
- The facility in Kinston, North Carolina, converted 14 acres of unused property into a wildlife habitat modeled after the state of North Carolina's Wildlife and Industry Together (W.A.I.T.) Program. Employees built bird boxes and bat houses to encourage local species to repopulate the property. An old retention pond provides habitat for other wildlife.
- We provide financial support to environmental stewardship programs that protect native habitats in North Carolina. In 2000, we agreed to give \$50 million over 25 years to promote environmental enhancement in eastern North Carolina. The North Carolina attorney general used these donations to create the [Environmental Enhancement Grants \(EEG\) Program](#) to fund projects that restore and protect impaired, degraded, or endangered natural resources and natural areas. To see past winners, please visit the Environmental Grants page of the North Carolina Department of Justice website.
- We work with nongovernmental organizations and government agencies on programs that protect the Chesapeake Bay through the Alliance for the Chesapeake Bay. For instance, we hosted a Project Clean Stream event on April 22, 2016, to clean up a wetlands tributary near our headquarters in Smithfield, Virginia.
- Smithfield is part a coalition of concerned businesses, environmental organizations, and outdoor enthusiasts called VIRGINIAforever.¹ Over the last decade, it has successfully advocated for increased funding for land conservation and water quality improvements to protect Virginia's natural resources.

¹ Our former executive vice president and chief sustainability officer, Dennis H. Treacy, is on the executive board of directors.

Recognition & Awards

As part of our sustainability efforts, all facilities submit at least one project to an environmental awards program run by third parties, such as local governments, trade associations, or charitable foundations.

In 2015, our operations received nearly 60 awards for environmental efforts from external organizations (i.e., governmental entities, environmental groups, regulators, etc.), recognizing performance in areas including packaging, water management, and energy reduction.

Third-Party Recognition

- The facility in Cudahy, Wisconsin, was recognized by the Milwaukee Metropolitan Sewerage District for its diligent compliance with environmental standards and help in protecting Lake Michigan and other local waterways.
- The Bolingbrook, Illinois, facility won the 2015 Governor’s Sustainability Award for its investments in sustainability, its contributions to a thriving Illinois economy, and for implementing sustainable principles and practices in its pursuit of zero-waste-to-landfill status.
- Our operations in Smithfield, Virginia, received the Hampton Roads Sanitation District Gold Award for their commitment to environmental excellence.
- The Wilson, North Carolina, facility received the city’s Gold Pretreatment Compliance Award.
- Our operations in Wichita, Kansas, were awarded the Kansas Water Environment Association Gold Pretreatment Compliance Award.

North American Meat Institute (NAMI) Foundation Awards

Our operations received a total of 49 awards from the North American Meat Institute (NAMI) for their environmental achievements.

The NAMI Environmental Achievement Awards are presented to companies that go beyond environmental compliance by designing and successfully implementing an innovative environmental program. In order to qualify for an award, all participants must support their submissions with data on natural resources, cost savings, and other metrics.

Achievement Award Winners

Environmental Technology, Outreach, and Training	
Award	Facility Location
First Place	Lincoln, Nebraska
Second Place	Cudahy, Wisconsin
Third Place	Smithfield, Virginia

Pollution Prevention

Award

Facility Location

First Place

Bolingbrook, Illinois

Second Place

Milford, Utah

Third Place

Springfield, Massachusetts

Resource Conservation

Award

Facility Location

Second Place

Milford, Utah

Third Place

Milan, Missouri

Social and Economic Sustainability

Award

Facility Location

First Place

Denver, Colorado

Second Place

Milford, Utah

A second set of awards, called the Environmental Recognition Awards, is a four-tier, voluntary environmental management system toolbox. The program begins in Tier 1 with simple environmental compliance policies and culminates with an ISO 14001 Environmental Management System (EMS) as Tier 4, the most complex program. NAMI recognized 39 Smithfield facilities with Tier 4 Environmental Recognition Awards.

Internal Awards Program

As part of our sustainability program, each facility submits at least one project to our internal awards program, the Environmental Excellence Awards. We select the most innovative projects and initiatives that reflect good environmental stewardship coupled with economic benefits. In July 2015, the winners were announced at our annual awards banquet during our Environmental Training Conference in Nashville, Tennessee.

Environmental Excellence Awards are given to specific employees or to a team, while a President's Award is given for projects that are the combined effort of a larger group of employees. Winning programs are selected based on several factors, including environmental impact and social significance, efficiency, cost-effectiveness, originality, and technical value. Winning facilities receive recognition from senior management and cash awards of \$5,000, of which \$3,000 goes to a nonprofit of the award recipient's choice.

2015 Environmental Excellence Awards Winners

In 2015, we recognized achievements that represent our strong commitment to sustainability. For the first time, we expanded categories to reflect our sustainability pillars:

Animal Care

Location	Project Summary	Project Cost	Cost Savings	Other Benefits
Rose Hill, North Carolina	Conducted study on our CO ₂ -stunning-based euthanasia program. This became the basis of the National Pork Board's "On-Farm Euthanasia Guidelines" and has been presented at its training program.	\$2,000	N/A	Eliminated outdated euthanasia programs, improved worker morale, and gained consumer trust.

Employee Well-Being

Location	Project Summary	Project Cost	Cost Savings	Other Benefits
Yuma, Colorado	Launched employee volunteer program focused on each of our core pillars	\$3,500	N/A	Increased volunteerism in our local communities.
Milan, Missouri	Began proactive wellness education program including weight management, fun runs, breast cancer screenings, blood testing, and annual community health fairs.	N/A	N/A	Increased employee awareness of health factors that impact their well-being. Portable mammogram: 120 participants Blood tests: 141 participants

Environment

Location	Project Summary	Project Cost	Cost Savings	Other Benefits
Salt Lake City, Utah	Reconfigured boxes, eliminating the need for tape.	\$0	\$63,400	Reduced solid waste by 6,950 pounds
St. James, Illinois	Replaced manual modulator for air compressor with digital controls.	\$2,060	\$83,325	Reduced energy use by 1.2 million kilowatt hours
Springfield, Massachusetts	Installed pH-activated wastewater shut-off valve to prevent improper discharge to city and eliminate permit violations.	\$6,000	N/A	Avoids permit violations and improves relationship with Springfield's Water and Sewer Commission.
Kinston, North Carolina	Made alterations to reduce discharge to local water system.	\$7,300	\$50,100	Improves wastewater quality.

Food Safety & Quality

Location	Project Summary	Project Cost	Cost Savings	Other Benefits
Peru, Indiana	Installed steam bars near the conveyor belt that carries uncooked bacon to the microwaves for cooking.	N/A	\$36,000	The plant can now sanitize the conveyor belt and kill potential pathogens without stopping production lines.

Helping Communities

Location	Project Summary	Project Cost	Cost Savings	Other Benefits
Waverly, Virginia	Established buffers on 530 acres on two farms to decrease runoff from fields receiving land applied manure.	\$9,800	N/A	Removes ammonia, nitrates, and phosphorous from storm water run-off.
Norson*	Volunteered and donated food and water to help a local town devastated by an acid spill caused by a nearby copper mine.	\$9,500	N/A	Assisted 22,000 neighbors in a time of need.

Value Creation

Location	Project Summary	Project Cost	Cost Savings	Other Benefits
Allerton, Iowa, and Coffey, Missouri	Two feed mills increased local grain purchases and stockpiled grain using cylindrical bags. This reduces local suppliers' costs and saves money when prices increase.	\$400,000	\$1.24 million	Increases storage capacity at lower cost than traditional steel tanks. Created 10 new jobs.

N/A=Not applicable. * We typically only report on companies and investments in which we have a majority (51 percent or more) interest.

2015 Savings from Awards

In 2015, 182 submitted projects achieved these savings:

- \$22.1 million
- 337 million gallons of water
- 305,000 dekatherms (dth) of natural gas
- 8.7 million kilowatt hours (kWh) of electricity
- 55,000 tons of solid waste materials not sent to landfill
- 128,000 gallons of fuel oil

2015 President's Award Winners

Our operations in Kenansville, North Carolina, developed educational information for inclusion in the fourth-grade curriculum in the public schools system in Duplin and Jones counties in North Carolina. Each lesson is designed to help students gain knowledge about pork production, the food supply chain, and how the nutrient cycle works. The program includes guest speakers from pork production, veterinarians, nutritionists, grocery store managers, county officials, feed truck drivers, processing plant managers, and chefs, among others. The Smithfield team surveys teachers who have used the curriculum and meets with school administrators three times a year to improve it. The team is also developing a website for interactive whiteboard access to make lessons more interactive.

2015 Zero Hero Award Winner

Jim Webb, environmental manager at our Hog Production Division in Milford, Utah, was selected for the facility's outstanding environmental regulatory compliance record. Webb's efforts exemplify our goal of 100 percent compliance, 100 percent of the time so that our operations can achieve zero notices of violation (NOVs).

Environmental Policy

Smithfield¹ is committed to conducting business in a manner consistent with continual improvement to protect the environment.

- We are committed to protecting the environment through pollution prevention and continual improvement of our environmental practices.
- We seek to demonstrate its responsible corporate citizenship by complying with relevant environmental legislation and regulations, as well as with other requirements to which we voluntarily subscribe. We will create, implement, and periodically review appropriate environmental objectives and targets.
- Protection of the environment is the responsibility of all employees within the scope of the environmental management system (EMS).

Smithfield communicates this policy to persons within the scope of the EMS and makes it available to the public upon request.

¹ All references to "Smithfield," "we," "us," and "our" are terms of convenience used to refer collectively to Smithfield Foods and all of its subsidiaries. Similarly, the terms "division" and "business unit" may be used to refer to one or more subsidiaries, which are independent operating companies.



Our Commitment To Safe, High-Quality Foods

The safety and quality of our foods is of critical importance. Fundamental to the ongoing success of our company, it plays a pivotal role in our mission of providing good food, responsibly. Consumers put their trust in Smithfield every time they sit down to a meal made from one of our many products.

Food safety starts on [the farm](#), where we have rigorous systems in place to raise healthy animals. It continues at the processing plants, where we follow meticulous and exacting procedures. Our vertically integrated business enables traceability from the conception of the livestock to the consumption of the final products. At Smithfield, every employee along that path has a responsibility to ensure that our processes are followed and our requirements are met.

Our Food Safety & Quality Goal

- Deliver safe, high-quality meat products

Our Food Safety & Quality Targets

- No incident requiring U.S. Department of Agriculture (USDA) recalls
- Maintain Global Food Safety Initiative (GFSI) certification at all applicable facilities

We partner with industry, government, and independent experts to create and implement leading, science-based food safety and quality practices that we constantly strive to improve. We have a zero-tolerance policy regarding food safety violations and have built a workplace culture that places responsibility for food safety squarely on the shoulders of every farm and plant employee.

In 2015, we had zero USDA recalls for the second consecutive year.

Consumers' expectations of food companies are changing. They want to know more about what is in the foods they buy—and they want labels with ingredients that they can understand. We believe it's important to be transparent about what goes into our products, so we can continue to build trust with our customers and consumers. We also are putting more emphasis on innovation and product development as we find ways to improve our foods and meet the ever-evolving demands of the marketplace.

To demonstrate even greater transparency, we are launching with this report an [ingredient glossary](#) that includes more than 100 definitions of the ingredients found in our foods. We started with the products that represent the greatest volume of retail sales—in other words, our most popular packaged meats and some fresh meat products, such as marinated pork loins. We expect to update the list with more ingredients over time. We believe this ingredient glossary is a first within the meat industry.

In the following video, learn more about fresh pork production and our leading traceability program.

Transparency Index

Greater transparency in farming, food production, and processing builds greater consumer trust. That's according to a recent study by the Center for Food Integrity (CFI), which surveyed 2,000 people in 2015 to explore what companies can do to build trust.

The results showed that consumers want to know more about what companies are doing in areas such as the impact of food on health, food safety, the treatment of animals raised for food, and impacts on the environment. Moreover, consumers want the ability to ask questions through company websites—and they expect straight answers in a timely fashion.

CFI has been developing a transparency index to give companies and organizations the tools needed to effectively demonstrate transparency. Smithfield was one of several large companies that participated in a beta test in 2015.

"We know people want to understand more about the food we produce—where it comes from and how we make it," says Stewart Leeth, Smithfield's vice president and chief sustainability officer. "Participating in this beta test pointed out where we could provide better information."

Value Creation

Maintaining the highest food safety standards is essential for Smithfield's business, building value for our own company and for the retailers and vendors that sell our products in supermarkets and restaurants.

Product quality and safety is one of the biggest areas of risk for food producers and manufacturers. Products are susceptible to contamination by disease-producing organisms or pathogens, which are found naturally in the environment. Product contamination can subject food companies to product liability claims, adverse publicity and government scrutiny, investigation, or intervention. These, in turn, could result in increased costs and decreased sales as customers lose confidence in the safety and quality of the food. But most important, product contamination threatens to affect the health and well-being of our customers and their families, which remain paramount to everything we do at Smithfield.

Given the potential negative impacts from food safety failures, our company has numerous systems in place that are designed to monitor and mitigate food safety risks.

Smithfield invests millions of dollars each year in capital improvements to facilities and equipment, focusing on the safety of our products and protection of employees while simultaneously enhancing production at existing and new facilities. During 2015, our company spent about \$5.5 million on capital projects designed to ensure that we continue to enforce industry-leading food safety and quality standards, such as upgrading refrigeration systems, maintaining physical integrity of our facilities, upgrading cleaning and sanitation systems, and installing new product and environmental testing equipment.

Going Whole Hog

American consumers typically eat just half of the meat that comes from one market hog. So what happens to the rest? Our facilities make sure that the remaining 50 percent doesn't go to waste. In fact, nearly 100 percent of the pigs we process will eventually become some type of product, from human food to pet products to medicines.

Certain parts of the animal, including organ meats, are exported to countries where they are considered delicacies. Hog pituitary and pancreas glands, meanwhile, are among our most valuable products, used to make pharmaceuticals such as heparin and insulin. Our rendering plants take unused animal byproducts (including skin, fat, blood, and bone) from the processing plants and break them down further. Much of that becomes food for pets and livestock. Other uses include fertilizer, biodiesel, and gelatin.



Our Processing Plants

Food safety is a complex undertaking that combines detailed procedures, protocols, and science. But behind all of that, food safety is all about our people—and is something that we live and breathe every day at our company.

There are no “magic bullets” when it comes to food safety, according to Warren Dorsa, one of Smithfield’s vice presidents of food safety and quality. It’s a daily exercise of blocking and tackling. “You can have the best technology at a plant, but if your employees fail to do the basics, you’re not going to succeed,” he says.



Like all food companies, we have a set of detailed policies and carefully outlined systems for day-to-day operating procedures. But even more important, we have instilled in our people a culture that puts food safety as their highest priority. This concept comes from the very top of the company—from leaders who insist that food safety is non-negotiable.

For example, an individual plant worker has the authority to shut down production if, for any reason, he or she believes that the safety or quality of the food might be compromised. We tell all production employees that food safety is up to them, and they take that responsibility seriously.

An individual plant worker has the authority to shut down production if, for any reason, he or she believes that the safety or quality of the food might be compromised.

“Our rule of thumb is this: If they see something that would make them not want to eat the product or feed it to their families, then we’re not going to feed it to anybody else. So we tell them to shut the lines down,” says Katie Hanigan, one of Smithfield’s vice presidents of food safety and quality.

No matter how professionally it is done, meat production always entails some food safety risk. Our job is to manage those inherent risks, using science as our guide. From good personal hygiene to good manufacturing practices, there are, quite literally, thousands of procedures we must follow every

day to be sure that the meats we produce are safe. We can, and we do, automate much of this process.

In 2015, for example, we introduced cutting-edge robotics technology on the slaughter floor in two of our facilities. This technology provides the latest in hygiene and safety requirements while improving accuracy and increasing product yields during the cutting and deboning process. We have ordered the technology for two more facilities and plan to add it in other locations in the coming years.

But automation can only improve conditions to a point. We also must rely on our people to manually clean equipment and diligently inspect machinery during and after each production shift to be sure that we're following our own strict guidelines.

For example, every night, at the end of a production shift, our most critical manufacturing equipment gets disassembled, scrubbed cleaned, sanitized, and put back together for the next day's production run. We always remain vigilant to guard against bacterial contamination.

Standards and Targets

We follow a comprehensive approach that addresses each phase of production, from farms to processing plants. We have a food safety management system that applies to facility, equipment, and process design; operating and sanitation procedures; employee training; and auditing of our facilities. We work to anticipate points in the production process where challenges might exist and then develop programs to solve potential problems.

Food Safety Certification

The **Global Food Safety Initiative (GFSI)** certifies a plant's compliance with an internationally recognized set of food safety standards, making food safety and quality assessments more consistent and efficient while ensuring compliance in foreign markets. Many of our customers rely on the GFSI certifications, knowing that these certifications represent the gold standard in the industry.

One hundred percent of applicable Smithfield facilities—33 in total—are GFSI certified and subject to GFSI's annual third-party audits. We have an annual target of maintaining that certification at all facilities.

Training

We expect every employee working on farms and in plants to follow our strict food safety requirements and to have a strong familiarity with best practices. Our Food Safety and Quality Training Policy outlines required food safety and quality training topics, trainer qualifications, and the frequency of training at all of our subsidiary processing facilities. The GFSI verifies employee-training programs as part of its auditing processes.

Plants spend thousands of man-hours training employees in food safety procedures. Every plant holds a daily pre-shift meeting that often includes food safety or worker safety topics.

Each worker is trained upon hiring and is retrained on an ongoing basis, depending on his or her job requirements. Plants spend thousands of man-hours training employees in food safety procedures. Every plant holds a daily pre-shift meeting that often includes food safety or worker safety topics. We document all trainings at each facility and test employees to assess how well each individual has absorbed the training and to determine the training program's effectiveness. Employees who fail their tests may be reassigned to less critical positions.

Our food safety professionals remain on the cutting edge of food safety by attending and speaking at educational seminars, professional conferences, and regulatory meetings.

Training sessions also take into account the diversity of our employee base. At many plants, workers are non-native English speakers, so training manuals and hands-on sessions are offered in multiple languages.



A number of employees have gone through advanced training sessions—known as Brown Belt and Black Belt training—that cover a range of food safety and food science topics, including presentations from our Executive Food Safety Council members. The one-week sessions, which are held in conjunction with Iowa State University, are unique in our industry, providing the training and tools necessary for employees to have a better understanding of products and processes. These, in turn, will help them to be more successful in their careers overall. A select group of employees from all areas of our company, including operations, sales, marketing, logistics, maintenance, engineering, and product safety/quality, participate in these training sessions.

Auditing, Inspections & Testing

We developed Smithfield's first-generation, comprehensive auditing protocols more than three decades ago to improve our ability to effectively control food safety hazards. Since then, we have updated and enhanced these protocols to satisfy changing customer and consumer demands and to ensure continuous improvement. Our ongoing, internal auditing program is designed so that our products maintain the highest quality and safety and meet all internal and government standards. We are constantly assessing the programs, and we incorporate any new regulatory standards or requirements and/or best practices in our industry. Each facility is subject to a variety of inspections and audits:

- All applicable facilities—33 in total—are GFSI certified and subject to annual third-party audits.
- Government officials regularly inspect our facilities and products on both announced and unannounced bases.
- Each of our facilities regularly conducts mock product recalls that are supervised by food safety professionals. In these exercises, facility staff must locate 99.9 percent of affected food products within two hours, emphasizing the importance we place on traceability.
- Plant personnel conduct self-audits and mock product recall scenarios throughout the year.

Most of our customers rely on the GFSI auditing process, although some of our larger customers send their own food safety officials to perform audits at our plants, ensuring an additional degree of transparency that we welcome and from which we also benefit.

Any nonconformance discovered by an audit is addressed swiftly at each facility. We conduct a follow-up audit after the initial audit to make certain that any corrective actions have been accomplished and then share our findings with other Smithfield facilities. Corporate food safety employees randomly audit several facilities a year to validate the plants' ability to address any nonconformances identified during GFSI audits.

Our rigorous microbiological testing programs constitute a significant part of our ready-to-eat food safety programs. We conduct in-house research, for example, to test the accuracy of "sell-by" dates. All laboratories operate under stringent quality control programs with proficiency testing and accreditation by state and federal agencies where relevant.

We conduct tests across all of our operations, from environmental metrics (such as plant structure, air quality, and water quality) and equipment to raw materials and the finished ready-to-eat products. The data from these tests are used to validate the efficacy of existing programs and/or to make adjustments as needed.

Testing Product Quality

Every day, a plant management team reviews a sample of the many products we produce at each of our facilities. Before a product is sent to a customer for the first time, a detailed review—called a First Production Report—is conducted to ensure that packaging, labeling, product appearance, and flavor are exactly what have been specified. These procedures are in addition to the continuous product monitoring conducted by our operations and quality assurance personnel.

We believe our food safety responsibilities continue well after our products leave our facilities. Our brands provide food safety and pork handling tips on their websites to educate consumers on proper food handling, storage, and preparation.

Nutrition and Innovation

Smithfield offers affordable, high-protein products that can be part of a healthy diet. Our fresh pork products, in particular, are leaner and healthier than the pork that consumers ate generations ago.

Some of our most popular products, such as bacon and ham, are considered more indulgent foods because of their higher fat and sodium contents. Nonetheless, we have worked hard in recent years to reduce the fat, sodium, and sugar wherever possible and still provide a product with the great taste that consumers expect from us. In all product categories, we have lower-salt lines, and we are constantly innovating to develop new techniques to improve the nutrition profiles of our foods.

Inside the Smithfield Innovation Center

How can we take a great product and find ways to make it even better? That's something the teams at our Virginia-based Innovation Center spend their days cooking up.

The Innovation Center—one of two such centers at our company—is a technologically advanced facility that is part research and development center, part pilot plant, and part test kitchen. Staffed by food scientists, chefs, and product development specialists, its primary aim is to create new products that will excite customers.



We collaborate with individual retailers and restaurants to brainstorm ideas for new products and to think of ways to bring those products quickly to the marketplace. Together, we explore consumer insights and behaviors and test recipe ideas that we hope will become the next hot seller. A team of Innovation Center developers will typically work on five or six projects at a time, testing adaptations for everything from lower-salt or gluten-free products to new hams that capitalize on the latest food flavoring trends.

The 37,000-square-foot Innovation Center's pilot plant allows us to run trials of new products on a small and manageable scale. Before we built the Innovation Center, prototypes for products would be made on one of the regular lines at the neighboring processing facility (or one of the 19 other processing facilities), requiring us to produce much larger amounts than necessary—and to take time out of the lines from regular production. The pilot plant is faster, more efficient, and more cost-effective, too.

When it's time to test the product, representatives from our customers travel to the Innovation Center to participate in blind tastings and to observe focus groups. Our facility includes a gleaming test kitchen with all the latest culinary bells and whistles. It also boasts a smaller test space that we call "Grandma's Kitchen," a replica of a folksy kitchen (complete with gingham curtains and old-school appliances), meant to evoke memories of eating at grandma's house.

In addition, the Innovation Center provides many of the recipes for our company's Taste of Smithfield restaurant in Smithfield, Virginia, which has become a tourist destination for the town where Genuine Smithfield Hams were first made 300 years ago.

In 2015, we created two new senior leadership roles to enhance our ongoing commitments around innovation: chief innovation officer and vice president of innovation. Under their leadership, our research and development teams of chefs, food scientists, and nutritionists look for ways to respond to the evolving tastes and needs of consumers. In prior years, we tended to be more reactive on product development, coming up with new flavors and varieties when we were asked to by large grocery chains and foodservice providers. Today, however, it's a very different story, and we are proactively working across our product lines to make improvements based upon the demands of consumers.

We have many examples we can point to, including dozens of products across three brands—Healthy Ones, Krakus, and Kretschmar—that meet the American Heart Association's certification criteria for foods that are low in saturated fat and sodium content. In addition, we have more than 290 products that offer health and wellness benefits, such as lower sodium, reduced fat, no added sugar, gluten free, no artificial ingredients, and no nitrites or nitrates. These span across our deli, retail, and foodservice channels.

We are proud to offer products with enhanced nutrition or flavor profiles or portion-sized packages that satisfy hunger. Some of our latest offerings include the following:



- In 2015, we launched Nathan's® Famous 50% Reduced Fat Beef Franks with all the flavor and half the fat.
- Our new Ready, Snack, Go!™ slices of Smithfield lunchmeat and cheese provide low-fat, portion-controlled protein (8 grams) for people on the move.
- In 2015, we introduced a no-salt added product line of bacon, ham, and sausage for the foodservice industry. These foods contain only natural sodium and have just 140 milligrams or less of sodium per serving.
- In 2015, we introduced Smithfield PRIME, a premium, all-natural line of fresh pork that is 20 percent more tender than other leading brands. This line of fresh pork has no growth promotants.
- In response to consumers' interest in cleaner labels, the Smithfield Marinated Fresh Pork portfolio was recently reformulated to remove artificial ingredients and highlight that fact on packaging.

The Facts About Pork Nutrition

Pork is an excellent source of protein, zinc, vitamins B12 and B5, thiamine, and iron.

Less than 50% of the fat in pork is saturated.



On average, the fat and cholesterol content of lean, trimmed pork is 31% lower today than 20 years ago.

A 3-ounce serving of cooked lean pork has 78 milligrams of cholesterol compared with 76 milligrams in a 3-ounce serving of cooked, skinless chicken.

Sodium

We have been evaluating the sodium levels in all of our products to ensure that we can offer the right choices to accommodate a large number of different diets and lifestyles. At the end of 2015, we offered more than 100 reduced-sodium products in the marketplace.

Sodium is a life-essential nutrient and important for food preservation and food safety. Curing meats with salt, for example, blocks the growth of bacteria and prevents spoilage. Salt is also a key ingredient in many of our products and helps us meet customer and consumer demands for quality, authenticity, flavor, and convenience.



Our Smithfield Lower Sodium bacon has the lowest sodium content among the top three competitors—160 milligrams per 17 grams (or two fried slices). That's 25 percent lower than the next lowest competitor and 43 percent lower than the third.

We recognize that there are concerns about too much sodium, which can lead to high blood pressure in some individuals. Most U.S. estimates show Americans eat more sodium than they should each day. We believe in the importance of balance and moderation.

Our [sodium policy](#), which is based on our commitment to producing wholesome food products for our customers, is consistent with the view that a healthy lifestyle is based on a range of factors, including dietary patterns and exercise. Our policy calls for the following:

- A broad spectrum of products to meet different needs and tastes to ensure that consumers can make choices that suit their individual lifestyles;
- Sodium-reduced products for the benefit of consumers who opt for these choices or who are on restricted diets;
- Adhere strictly to all health and disclosure regulations issued by the U.S. Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA); and
- Continuously analyze and improve our product portfolio.

All our brands offer a variety of products that are lower in sodium than their traditional counterparts.

Case Study: Just Six Ingredients

Consumers are paying closer attention than ever to labels and are more inclined to buy products that have ingredients they can understand (and pronounce). Mindful of this trend, we took a close look at our line of hams and developed a Smithfield Smokehouse Reserve ham that has only six ingredients: water, sugar, sea salt, vinegar, sodium phosphate, and sodium nitrite.

To start, we swapped out corn syrup and other sweeteners, replacing them with real cane sugar. “The taste was amazing,” says Will Brunt, Smithfield’s new chief innovation officer. “And once we put in real sugar, we worked to eliminate preservatives, such as potassium lactate, potassium acetate, and sodium diacetate.” (See [Ingredient Definitions](#) below.)



Without the preservatives, the shelf life for the product decreases approximately 50 percent, from 120 days to 60 days, which can create problems because of the way our nation’s food distribution system operates. Most of the large retail supermarkets we sell to can’t accommodate a ham that has only a 60-day shelf life. For that reason, we’re marketing this ham as a holiday specialty item, for Christmas or for Easter.

We’ll continue to explore ways to reduce the ingredients—and the preservatives—while still working within the constraints of our food distribution system. Label simplification will be a big focus of our work looking ahead.

“We can make anything,” Brunt says. “The question is really whether our food system can handle it and are people willing to pay more for it.”

Ingredient Definitions

Ingredient	Explanation
Sodium Nitrite	A salt and antioxidant used in curing meats to block growth of botulism, <i>Listeria monocytogenes</i> , and other spoilage organisms. Approximately 93 percent of sodium nitrite consumed stems from leafy vegetables and tubers as naturally occurring. Sodium nitrate in these vegetables is converted to sodium nitrite by saliva in the mouth.
Sodium Phosphate	A type of phosphorus, naturally occurring in the body's cells, it is used in foods to control texture, pH, and leavening of baked goods.
Potassium Lactate	Potassium lactate improves meat color, juiciness, and tenderness; enhances positive flavor retention during storage; and decreases microbial growth, as well as growth of some major meat pathogens.
Potassium Acetate	Potassium salt of acetic acid, a natural acid, is present in most fruits. Produced by bacterial fermentation and thus present in all fermented products, it is often used in foods to control pH and as a preservative.
Sodium Diacetate	Sodium diacetate is added to inhibit microbial growth and the growth of some major food-borne pathogens, such as <i>Listeria monocytogenes</i> . The addition of sodium diacetate, which is used at low levels, does not affect meat color, juiciness, tenderness, or flavor attributes.

Learn more about the ingredients used in many other Smithfield products. Our new [Ingredient Glossary](#), which debuted with this report, was designed to shed further light on our products and what the ingredients within them are used for. We launched the glossary with more than 100 ingredients and expect to add to it over time.

Sodium Policy

Salt (sodium) is a life-essential nutrient and a critical component for food preservation and food safety. At Smithfield¹, salt is also a key ingredient in many of our products and helps us meet customer and consumer demands for quality, authenticity, flavor, and convenience.

Smithfield's policy is based on our commitment to producing wholesome food products for our customers and calls for the following:

- Provide a broad spectrum of products to meet different needs and tastes, and which ensure that consumers can make choices that suit their individual lifestyles.
- Offer sodium-reduced products for the benefit of consumers who opt for these choices or who are on restricted diets.
- Strict adherence to all health and disclosure regulations issued by the FDA and USDA.
- Continuous analysis and improvements to our product portfolio.

Our policy is consistent with the view that a healthy lifestyle is based on a range of factors, including dietary patterns and exercise, and not on just one nutrient.

¹ All references to "Smithfield," "we," "us," and "our" are terms of convenience used to refer collectively to Smithfield Foods and all of its subsidiaries. Similarly, the terms "division" and "business unit" may be used to refer to one or more subsidiaries, which are independent operating companies.



Our Commitment to Helping Communities

Smithfield greatly values our connection to the communities where our people work and live. We strive to maintain a relationship of mutual support, and we take seriously our responsibility to keep those communities strong.

Our Community Goal

- Support our communities

Our Community Targets

- Each facility/farm division to participate in four community events per year for charities/nonprofits
- At least one event per year must include a stakeholder presentation
- Each U.S. division to sponsor at least two Learners to Leaders® programs each year
- Maintain our Helping Hungry Homes® program donations of product to those in need

Our position as a leading food producer makes hunger relief a natural focus of our philanthropic outreach. But our efforts go far beyond food donations. We also support educational opportunities, environmental stewardship initiatives, disaster relief efforts, and health and wellness programs. And, we are proud to provide assistance to military families and first responders. In 2015, Smithfield contributed \$8.3 million in cash donations to a variety of programs and organizations. We also develop specific programs that address the unique needs of communities at each of our locations, including donations to schools, beautification efforts, and local fundraisers.

Value Creation

Smithfield creates value in the communities where we work in a number of ways. We provide jobs, pay taxes, and, in many places, underpin the economic vitality of the regions where facilities and farm divisions are located. We also create value through our initiatives related to hunger relief, education, and health and wellness.

Through our **cause marketing** efforts in partnership with retailers, we generate funds for charities and raise awareness of issues such as food insecurity and the struggles of military families.

The strength of our business depends in large part on the strength of the communities where we work. Strong communities support our ability to recruit and retain good workers, enabling us to become a stronger, more vital company. Stable and prosperous communities provide a good place for our employees to live.

Moreover, the economic vitality of our local communities—and agricultural communities more broadly—provides the basis for a reliable supply of the goods and services we need to operate.

By the Numbers	2015
Cash donations	\$8.3 million
Food donations (cash value)	\$8.5 million
Food donations (servings)	10.2 million
Total amount of donations	\$16.8 million

After publication of our 2015 report, we restated the amount of food donations for the year to correct a miscalculation. We have centralized our tracking to more accurately reflect food donations for the entire company. We also adjusted the cash value we assign to our food donations, basing it on an average retail price that may vary from year to year.

Shopping for a Cause

We are always seeking ways to create the most positive impact, whether through our business or through charitable activities. In order to maximize our giving, we work regularly with a range of both nonprofit and retail partners to create unique donation opportunities, often linked to Smithfield product sales, to people in need around the country. These collaborations add value to the charities and retail partners involved, while also adding value to Smithfield brands. And consumers buying Smithfield products can feel good knowing that their purchases lead to a donation to nonprofits doing great work.

Through our partnerships with retailers, we also have the opportunity to expand our giving capabilities. For example, in 2015, we made several kinds of donations, including a year's worth of free groceries, a new car, and a honeymoon trip to Alaska to a select number of military families. We also expanded our partnerships with retailers to nearly 50 and held about 100 cause marketing events around the country, up from 20 events the previous year. In sum, we donated more than 2.7 million servings of protein to local and national nonprofit partners through these events.

We work with charities whose goals are aligned with Smithfield and that resonate with consumers. These partnerships offer a responsible way for us to give back while also engaging Smithfield consumers by linking their purchases to donations at specific charities. Often, we partner with celebrities

and musicians who are able to draw further attention to a cause, generate excitement at events, and boost product sales (which, in turn, results in bigger donations for the charity). Country star Randy Houser, sports analyst Kirk Herbstreit, and racing icons Richard Petty and Aric Almirola are just some of the public figures who helped spread the messages of our nonprofit partners at Smithfield events throughout 2015.

Some of our most successful brand campaigns include the following:

- **Our Smithfield Brand and Helping Hungry Homes®.** We team up with large grocery retailers to increase the impact of our food donations through our [Helping Hungry Homes](#) initiative. We also run dedicated food donation events and leverage the power of popular sporting contests, such as NASCAR races, to raise awareness of the issue of hunger in the United States.
- **Our Eckrich Brand and Operation Homefront.** In addition to ongoing financial support to Operation Homefront, a nonprofit focused on building strong and stable military families, the Eckrich brand worked with retail partners to bring support to military families. Working with retail partners like Kroger and Albertsons, Smithfield contributed about \$630,000 worth of free groceries, donated a new Ford Fusion, and provided a backyard makeover to Operation Homefront families in need. Learn more about our work with [Operation Homefront](#).
- **Our Nathan's® Famous Brand and KaBOOM!.** Nathan's Famous has partnered with KaBOOM!, a national nonprofit that builds playgrounds in low-income communities, since 2014. As part of their "Ready. Set. PLAY." initiative, Nathan's executed "play days" for children, made an annual donation of \$25,000, and provided free groceries to KaBOOM! partners.
- **Our Farmland Brand and "Bacon for Santa."** In the weeks leading up to Christmas, Farmland partnered with former professional athletes to help fight hunger. In partnership with Farmland, these athletes helped spread the word that Santa really wanted bacon for Christmas instead of milk and cookies. For every person who vowed on social media to leave bacon for Santa, Farmland pledged to donate one pound of protein to food banks. Across three different regions—in Milwaukee with Heisman Trophy winner Ron Dayne; in Denver with three-time NFL Super Bowl champion and ESPN analyst, Mark Schlereth; and in Kansas City with former Kansas City Royals first baseman, Mike Sweeney—we donated more than 75,000 pounds (300,000 servings) in total.
- **Our Armour Brand and public schools.** For the second year in a row, Armour made a donation to a local public school. In August, Armour teamed up with Kroger, NASCAR star Aric Almirola, and the No. 43 Richard Petty Motorsports team to present Holmes Elementary School in Ypsilanti, Michigan, with a \$10,000 donation. The money will be used to help fund facility improvements and educational resources at the school, which is a designated Michigan Department of Education Priority School.
- **Our John Morrell Brand and Share Our Strength.** The John Morrell brand has partnered with Share Our Strength, a national nonprofit focused on eradicating child hunger in the United States, since 2013. In July 2015, we teamed up with Homeland grocery stores to donate \$18,000 to further the nonprofit's work on its "No Kid Hungry" campaign. We also coordinated a 500-pound food donation to the Regional Food Bank of Oklahoma, part of the Feeding America food bank network.
- **Our Kretschmar Brand and Make-A-Wish.** Our Kretschmar brand began working with the Make-A-Wish Foundation, which seeks to grant the wishes of children with a terminal illness, in 2012. Since that time we have donated over \$315,000 to the national arm of the organization and sponsored more than 10 wishes through local chapters of the foundation. In 2015, we worked with retail partners to help grant the wishes of three terminally ill children, providing trips to the Country Music Association (CMA) awards show, the CMA Music Festival, and Walt Disney World in Orlando, Florida.
- **Carando Cares.** Our Carando brand has been working to enhance the lives of communities in the New England area through the Carando Cares initiative since 2013. In 2015, Carando hosted several events, including an Easter lunch for the Springfield, Massachusetts, police department, and made donations to Partners of Hope in Hartford, Connecticut, and the Biddeford Food Pantry in Maine.
- **Our Healthy Ones Brand and the Breast Cancer Research Foundation (BCRF).** In 2015, Healthy Ones continued its partnership with the BCRF for the fifth consecutive year and has donated over \$200,000 to the organization to date. This past year, Healthy Ones also expanded its reach to other charities, such as the Roswell Cancer Institute and Live Like Bella, while also partnering with retailers on cause marketing initiatives.

NASCAR Events



Our brands frequently tie our donation efforts to NASCAR, arranging large donations to food banks and hosting trackside events that help raise awareness around the challenge of food insecurity in America. In July, for example, Smithfield partnered with the NASCAR Diversity Internship Program and Richard Petty Motorsports to donate 43,000 pounds of protein to the Second Harvest Food Bank in Daytona Beach, Florida, leading into the July 4th race weekend.

Hunger Relief

Unfortunately, hunger and food insecurity continue to be a serious problem in the United States. In recent years, this issue has been compounded by rising income inequality and ongoing ripple effects from the economic downturn in the mid-2000s.

2015 Donation Total¹

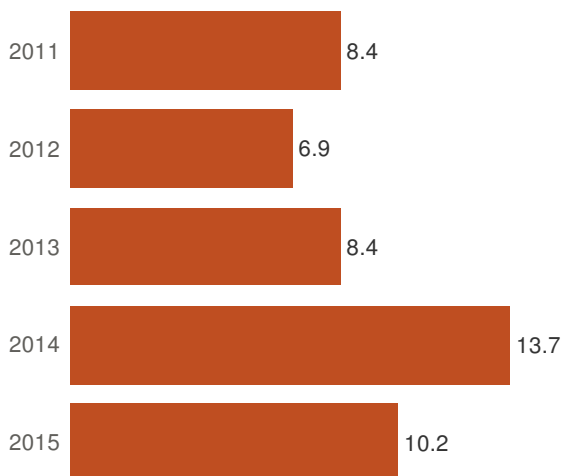
- Donated 10.2 million servings of protein to food banks nationwide

The national hunger relief nonprofit Feeding America[®] estimates that in 2014, 48.1 million Americans lived in food-insecure households. That means one in seven households nationwide does not always know where the next meal will come from. As a leader in the food industry, we believe we have a responsibility to help families in need, and we are well-placed to make a unique impact on this issue.

We have made hunger relief the cornerstone of our community efforts through our support for food banks, donations following natural disasters, and partnerships that help us raise both funding and public awareness of food insecurity across the country.

Total Food Donations

(servings in millions)



¹ A serving is equal to a quarter pound. In 2014, we began reporting donations by calendar year; previous years remain reported by fiscal year.

Addressing Hunger Across the Nation

Helping Hungry Homes[®] is Smithfield's corporate initiative to help address the ongoing problem of food insecurity in the United States. Those working on the front lines of hunger relief often struggle to find enough protein-rich food sources to give to those in need. We can help fill that shortfall through our pork product donations.

Since 2011 through Helping Hungry Homes, we have donated more than 47.6 million servings of protein to food banks and other organizations that provide food for people in need.

Since 2011 through Helping Hungry Homes, we have donated more than 47.6 million servings of protein to food banks and other organizations that provide food for people in need. In 2015, we contributed approximately 10.2 million servings of protein to those in need. Smithfield's retail partners in the Helping Hungry Homes initiative have also made generous donations to local and regional food banks in tandem with Smithfield to help support this important effort.



Some of our biggest donations through the Helping Hungry Homes program in 2015 included 26,000 pounds of protein to two food banks in Versailles, Kentucky; 25,000 pounds to the Food Bank of Southeastern Virginia and Virginia Peninsula Food Bank; 43,000 pounds to the Second Harvest Food Bank of Central Florida; and 40,000 pounds to the St. Louis Area Food Bank. For each of these donations, we also arranged a high-profile media event to help spread the word about hunger in these communities.

For more information, visit the [Helping Hungry Homes](#) section of this site.

In our headquarters state of Virginia, meanwhile, we're actively involved with policy efforts to address at a high level the challenges associated with food insecurity. In early 2015, Virginia Governor Terry McAuliffe named our senior vice president of corporate affairs, Keira Lombardo, to the Commonwealth Council on Bridging the Nutritional Divide. The council, which is chaired by Virginia First Lady Dorothy McAuliffe, has the ambitious goal of eliminating food insecurity while growing the state's agricultural industry by increasing participation in nutrition assistance programs; expanding access to affordable, healthy, and local foods; and supporting the growth of local and regional initiatives that provide food to those in need.

¹ After publication of our 2015 report, we restated the amount of food donations for the year to correct a miscalculation. We have centralized our tracking to more accurately reflect food donations for the entire company.

Case Study: Helping Food Banks in a Time of Need

As part of our efforts to fight hunger, we make regular donations to food banks around the country. But some needs are more time-sensitive than others.

Smithfield has been working with the Feeding America Southwest Virginia (FASWVA) food bank for more than five years, partnering on local hunger-related media events, as well as providing annual donations. The FASWVA serves an important role in the region, acting as a central distribution point for some 250 partner agencies across 26 counties, covering an area the size of Connecticut and Massachusetts combined. All told, over 40,000 households receive food aid every month through this network.

The region that FASWVA covers includes many economically depressed communities that were hard-hit by widespread closures of local manufacturing and textile factories following the 2007 recession. Economic troubles have been compounded in the last year by layoffs in the coal industry, which has increased the demand for local food aid. The unemployment rate in this area is as high as 10.2 percent, and 22 of the 26 counties covered by FASWVA have an unemployment rate higher than the state average of 4.2 percent.

Smithfield's support has been critical as FASWVA works to fulfill its mission of fighting hunger.

"We had good friends in the coal mining companies—they were financial donors," says Pamela Irvine, president and CEO of FASWVA. The latest waves of coal layoffs, says Irvine, "were a double-edged sword. We now have an increase of people who need food aid and a decrease in support services."

With no food manufacturers in the area, FASWVA depends on donations from local retailers and restaurants, but finding sources of fresh protein is a continual problem. "We are protein-challenged," says Irvine. She estimates that of the 22 million pounds of food donations they received last year, only 8 percent was meat.

The holiday season, when cold weather forces heating bills up and medical expenses tend to increase as people get sick, is typically a time of even greater need. In addition, school holidays mean that food-insecure children miss out on the breakfasts and lunches they usually receive when class is in session.

In December, Irvine spoke to Dennis Pittman, our senior director of corporate communications and public affairs, and explained that they were in a time of particularly high need, with tight supplies. Pittman's team arranged for a donation of 20,000 pounds of ham to FASWVA, which was then distributed to 15 other agencies across 10 counties. Part of the donation also went directly to 96 families at the Highland View Elementary School, where 99 percent of students are on the free lunch program.

"The timing of this was extremely important because the children were about to go on a break," says Irvine. The donation ensured that the students' families would be able to supplement meals normally received at school.

According to Irvine, Smithfield's support has been critical as FASWVA works to fulfill its mission of fighting hunger. "Dennis has a food banker's heart. He understands our community—how rural it is and how challenging things are in this area."

Education

At Smithfield, we believe that education has the power to dramatically strengthen communities over the long run. We support existing education programs in areas where we live and work and also seek to create unique and new learning opportunities.

Our **Smithfield Foundation** helps to provide an educational foundation for those who need it through educational scholarships for our employees' children and grandchildren at select universities.

Our **Learners to Leaders®** program, meanwhile, focuses on students from disadvantaged backgrounds who have the desire to succeed but don't yet have the skills to overcome their challenges—whether academic, social, or economic. We funded six different Learners to Leaders programs, providing nearly \$400,000 in funding in 2015.

Smithfield Foundation

The Smithfield Foundation, a nonprofit organization that acts as our company's philanthropic wing, was founded in 2002 to provide educational scholarships for our employees' children and grandchildren at select universities. Over the years, the Smithfield Foundation has grown to fund educational partnerships in the communities where our employees live and work.

In 2015, the Smithfield Foundation awarded 65 scholarships totaling over \$300,000. To be eligible, a student must be a dependent of a Smithfield employee, demonstrate financial need, and be accepted by one of eight schools we have named as partners. Since the inception of this program, we have awarded 458 annual scholarships worth more than \$3 million.

The Smithfield Foundation has also supported student scholarships at Christopher Newport University (CNU) in Newport News, Virginia. The program, which began in 2005, has provided over \$900,000 in grant money for CNU's scholarships. In addition to funding those scholarships, Smithfield's donations help support the university's Leadership Program, the Luter School of Business, and other programs.

Learners to Leaders®

Launched in 2006, Learners to Leaders is a national education alliance funded by the Smithfield Foundation. With support and expertise from local educational partners, the program works to close the education gap for underprivileged students in our employees' communities. Often these are a family's first generation of college-bound students, or low-income, or minority individuals. In 2015, we provided nearly \$400,000 in contributions to the six Learners to Leaders programs.

The first Learners to Leaders program began in Sioux Falls, South Dakota. Today, we also sponsor programs in the following communities: Cicero, Illinois; Lumberton, North Carolina; Newport News, Virginia; Denison, Iowa; and Crete, Nebraska.



One program we have supported extensively is An Achievable Dream (AAD), a Virginia-based organization with the mission to provide economically disadvantaged students with the tools and resources they need to succeed in life and become successful, productive citizens. Smithfield has sponsored the college scholarships of two classes of AAD's graduates in 2006 and in 2015. In addition to sponsoring these college scholarships, we contribute to AAD's Annual Fund, which ensures that the K–12 students AAD serves receive a high-quality education through the organization's social, academic, and values-based curriculum. In addition to its financial support, our employees regularly volunteer at AAD's middle school and high school in Newport News to share with students real-world and work lessons—such as teamwork, punctuality, work ethic, and other big-picture topics—that teach them skills to help them become productive employees in the future. The Smithfield team of employees is dedicated to sharing their work and life experiences to prepare AAD students to be college-, career-, and citizen-ready while also exposing students to career opportunities that they may otherwise not know exist.

Additional Education Support

Smithfield offers broad support of educational programs across all of our areas of operation, particularly for programs that champion student achievement amidst difficult circumstances.

In 2014, we started working with educators in Duplin County, North Carolina, to get “Producers, Pigs & Pork: A Teacher's Resource Guide” accepted as part of the county's fourth-grade curriculum. The guide, a set of five lessons that address America's food supply system, uses the pork production process as an engaging and relevant way to sharpen students' skills. In 2015, we are working to expand the curriculum to two other school districts in the state—Jones County and Wayne County.

We also made a grant to the North Carolina Association of Soil & Water Conservation Districts to purchase a mobile soils classroom. This mobile classroom will allow students across the area to get an up-close demonstration of soil science without having to leave campus. The mobile classroom can be deployed at schools around the region, as well as county fairs, teacher workshops, and education competitions.

Encouraging the Next Generation of Farmers

We are proud to support the development of the next generation of farmers. We partner with Future Farmers of America (FFA) and 4-H to create a future where students of agriculture will discover their passion in life and build on that insight to chart the course for their educations, careers, and personal futures.

In 2015, we participated in a total of 68 FFA and 4-H events, including a donation of \$5,000 to the Nevada Livestock Judging Team to pay for travel expenses to an international competition in Scotland and \$5,000 to help build a new FFA building and greenhouse at Harrell's Christian Academy in North Carolina. Smithfield companies contributed more than \$57,000 in total to FFA and 4-H programs in 2015.

In addition to this support, Smithfield companies also regularly host student tours and other hands-on learning events for 4-H and FFA groups. In Utah, 27 FFA and 4-H youth attended the second annual Youth Pork Academy, where Smithfield staff discussed pork production processes and opportunities at the company. Smithfield also sponsored the Beaver County 4-H camp and provided food for camp attendees.

Support for Military Families

Smithfield values greatly the men and women who serve our country and seeks ways to honor and support our veterans and their families. One of the main ways we support military families is through our ongoing partnership with Operation Homefront, a national nonprofit focused on building strong and stable military families.

The organization provides assistance for veterans and their families—in the form of financial, healthcare, and other types of aid—in times of need and places a special emphasis on supporting the recovery of wounded warriors. The organization also works to make sure that military members and their families receive the recognition that they deserve.

Smithfield has maintained a partnership with Operation Homefront for the past four years through our Eckrich brand. We have donated a cumulative total of over \$1 million over that time, including a gift of \$250,000 in 2015. Working in conjunction with our retailer partners, Smithfield also has provided selected military families with additional support, including free groceries; unique NASCAR, college football and country music-themed experiences; backyard make-overs; and new cars.

Our Smithfield offices also organize local events to help military families living in their area. For example, in 2015, the Warsaw, North Carolina, farming facility hosted several military events, including two Wounded Warrior Project Soldier Rides, which use adaptive bicycling events to raise money and boost morale for injured veterans. The North Carolina office also hosted a Military Fun Day event and Military Appreciation Day, where volunteers take active duty troops out for a full day of offshore fishing, followed by a huge southern-style cookout.

Supporting Operation Homefront

When retired Army Sergeant Michael Rindorf arrived at his local Kroger in Roanoke, Virginia, in September, he didn't know what to expect. His wife, who was involved with Operation Homefront through its Hearts of Valor caregiver support program, had convinced him to go to the store to meet an Operation Homefront representative there to discuss program details.

Instead, to his surprise, Rindorf and his family were presented with a gift of \$5,000 in free groceries at Kroger, courtesy of Eckrich. "Eckrich and Kroger put us on a pedestal, and it was definitely something we weren't expecting," he says. "There are thousands of military families more deserving, and we were so honored to be selected."

Rindorf, who served in the Army from 1991 to 2006, including a 13-month stint in Iraq, and his family live on a limited budget. He has four children, and his wife, also a veteran, is currently pursuing a Master's degree in microbiology. After being medically discharged in 2006, he worked as the regional director for the state of Virginia's wounded warrior program but is currently out of work on disability.

"We were living paycheck to paycheck, and it's not cheap to eat," says Rindorf. Of his four sons, two of whom are still living at home, he says: "They are bottomless pits."

"As with any family, if you can't address the central needs, you can't focus on the more important things." Receiving \$5,000 in free groceries, he says, "is just one less stressor."

Operation Homefront works tirelessly to create programs that meet the real, everyday needs of military families, a mission that Smithfield is proud to support. "Operation Homefront has an amazing partnership with Smithfield that goes well beyond their financial commitment," says retired Brig. Gen. John I. Pray, Jr., president and CEO of Operation Homefront. "Together, over the past five years, we've been able to build strong, stable, and secure military families so that they can thrive, not just get by, in the communities they have worked so hard to protect."

Health & Wellness

Smithfield works to support health and wellness among all of our employees for the many positive business benefits it offers, including greater productivity, improved job satisfaction, and higher quality of life.

In recent years, we have also increased our support for health and wellness initiatives in the communities where we work. Among them is a partnership with the American Heart Association (AHA) to help improve the cardiovascular health of our communities. In May 2015, we were a main sponsor of the AHA's Richmond Heart Ball, which raised a record-breaking \$1 million for heart disease education and research.

We also partnered with the AHA to place CPR kits in schools in three counties in North Carolina. CPR education is a requirement for graduation, but many schools lack the funds for these expensive kits. We are also sending Smithfield employee volunteers to run CPR education classes for students, as well as teacher training sessions in local schools.

Read more about our [employee health programs](#).

Environmental Stewardship & Community Beautification

Smithfield's approach to environmental sustainability covers not only our own operations, but also extends to preserving and protecting the ecosystems upon which we all depend.

Across our company, we work to raise awareness about critical environmental issues among our employees and our communities through on-the-job and community service activities. Smithfield employees also regularly volunteer in local cleanups and beautification projects to encourage responsible stewardship of the land.

Community Improvement and Beautification Projects

Employees across the country donate their time every year to help clean up local communities. In 2015, our employees volunteered in a total of 66 community beautification projects around the world.

Some of our efforts over the last year included the following projects:

- **Toano Cleanup.** In November, employees at our Toano, Virginia, facility performed a trash cleanup near the facility. In total, these employee volunteers collected five bags of trash, totaling an estimated 50 pounds.
- **Mill Creek Stream Cleanup.** In October, employees at our Springdale, Ohio, office participated in the annual Mill Creek cleanup event, along with employees from the local county offices and other businesses. Volunteers walked and canoed along the creek to clear trash and other items from the water and creek bank areas. Smithfield employees also provided a hot dog lunch for cleanup volunteers.
- **InasMuch Project Community Cleanup.** In May, our North Carolina employees helped with a community project organized by a local church at the James Kenan High School in Warsaw, North Carolina. Known as the InasMuch Project, the church performs community service at various locations every year. Smithfield provided funding, and volunteers contributed their time to help with landscape improvement work.

Envirothon

In 2015, we partnered with the National Conservation Foundation (NCF) to sponsor NCF-Envirothon, an educational program that engages 50,000 high school students in environmental problem-solving competitions. NCF-Envirothon organizers work with local conservation, forestry, and education experts to create curriculum and field experiences that train student teams in five categories: soils and land use, aquatic ecology, forestry, wildlife, and current environmental issues. Teams from across the United States and Canada participate in state and provincial competitions to advance to the NCF-Envirothon finals.

As part of the partnership, Smithfield employees serve as program volunteers, helping student teams in their communities learn about environmental conservation. For example, in October, members of our Kansas City corporate office volunteered at a local elementary school to assist in a presentation on the importance of conservation to 100 fourth graders. In addition, a few of our employees in Missouri served as volunteer guides for the Northwest Regional Envirothon Competition, held in Squaw Creek National Wildlife Refuge in November.

Charitable Giving & Volunteerism

We have long been firm believers that financial and in-person support of critical community organizations and programs is a key part of our company's mission to be the most-trusted food company.

We help create strong communities, in part, through charitable giving and employee volunteer efforts. In 2015, we continued our companywide employee-matching charitable giving program.

In addition to financial support, each year our employees dedicate their time to projects in their communities. In 2015, employees volunteered a collective 5,182 hours of time to these important causes, including hunger relief, disaster preparedness, bullying prevention, toys collection for children in need, and much more.

Disaster Assistance

In 2013, we formed a partnership with the American Red Cross to take part in that organization's "Ready When the Time Comes" program. After completing the Red Cross-led training, our volunteers serve as an extension of the Red Cross in the community, learning how best to respond in the event of a disaster. In 2015, we played a small part in disaster relief efforts in two weather-related events in the South. In June, we donated 25,000 pounds of food to the Capital Area Food Bank in Austin, Texas, after massive floods swept through the area. In October, we gave 41,000 pounds of food to the Harvest Hope Food Bank in Charleston, South Carolina, following historic rainfall and widespread flooding.



Our Commitment to Employees

At Smithfield, we are committed to being a people-oriented company. We recognize that only when we unleash the full potential of our employees can we reach our full potential as a company.

In 2015, we made several important organizational changes to better serve our employees. First and foremost, we created a new executive position of chief people officer (CPO) to lead our strategy on employee retention and engagement and to build a more cohesive company culture. By focusing on making Smithfield a great place to work, our new CPO, Mark Garrett, has already overseen some exciting changes.

Our People Vision

To create an exceptional employee engagement culture that nurtures and rewards companywide loyalty and focuses behavior on the customer at all interactions.

For one, we created a centralized talent development function to manage training and employee development activities—an idea that grew out of Garrett’s “listening tour” of open forum events with Smithfield employees across the country. Another idea that came out of the listening tour was the creation of a new leadership position focused on diversity and inclusion. As director of employee engagement, diversity, and inclusion, Emanuel McCraaney is leading our efforts to make Smithfield a more desirable place to work for women and people of color and to promote more opportunities for advancement.

Chief People Officer Mark Garrett on Employee Engagement

Mark Garrett joined Smithfield in 2005 and has worked in a variety of operational and human resources positions. But his passion is clearly people.

“It’s my job to go out and talk to people, learn about what interests them, and find out what we can do as an organization to engage them both personally and professionally,” says Garrett. In 2015 he stepped into his current role as our company’s first chief people officer.



He says that one of the biggest challenges that the company—and many others in the meat industry face—is bringing in a new generation of employees, especially as baby boomers retire. One of the keys to overcoming this challenge is lowering turnover through better employee engagement and benefits.

“As our employees retire, we have to make sure we are building the pipeline with strong talent,” he says. “We’re looking at different ways to engage our employees—what motivates them, what inspires a sense of ownership? How do we reward them and make them want to be a part of the organization over the long term?”

Ultimately, says Garrett, people are at the core of Smithfield. “I think there will continue to be shifts in the industry, but it will always come down to how you are leveraging your human capital to drive improvement for your organization.”

We know that our 50,000 employees are our greatest asset, and we strive to create a fair, ethical, and rewarding work environment. We want employees to spend their careers at Smithfield, and we are working to find new ways to make the experience of working at Smithfield a more enriching and fulfilling one. We place a priority on promoting employees internally and support education opportunities, including internal training, scholarships, and tuition reimbursements that can advance employees’ careers.

Employees at a Glance

More than 50,000 strong across the globe

Turnover 21.9%

Approximately \$800,000 in education programs

Value Creation

We create value through the employment of 50,000 people, many of them in rural areas where there are limited job opportunities. Our operations also contribute to the economic stability and development of local communities, where we purchase goods and services and where employees reside.

By the Numbers

2015

Total salaries and wages (including bonuses and stock options)	\$1.9 billion
Total benefits (including pension)	\$286 million
Total compensation expense (excluding payroll taxes)	\$2.2 billion



To develop and maintain a skilled workforce, we invest in employee training, workplace safety, and health and wellness activities. These programs can have an impact on our bottom line, particularly around the following issues:

- Workplace safety;
- Workers' compensation costs;
- Absenteeism;
- Employee satisfaction and engagement; and

- Turnover rates.

Employee Relations

Our commitment to our employees is at the core of our company. We realize that Smithfield management has a responsibility to make sure our employees are treated with respect and are given good opportunities for advancement and fulfilling employment.

Employees at every level work hard to achieve our successes, so we are committed to meeting their needs, addressing their concerns, and helping them enjoy long careers with our company.

We engage with employees through management safety committees and have taken steps across operations to evaluate—and enhance—employee satisfaction. We offer competitive wages and benefits, educational scholarships, and a variety of continuing education and personal enrichment programs.

Our Workforce by Segment		2015
Fresh Pork and Packaged Meats		33,709
International		11,252
Hog Production		5,065
Corporate		210
Total		50,236

Workforce totals as of January 3, 2016. Approximately half of our U.S. workforce is unionized, and substantially all of our employees are full time. About 86 percent of our workforce is compensated based on hourly rates.

Our U.S. Workforce by Age and Gender	Female	Male	Under 30	30-50	Over 50	Total
Governance bodies (leadership)	3	25	0	9	19	28
Number of full-time employees	13,408	24,483	7,828	18,990	11,073	37,891
Percentage of employees	35.4%	64.6%	20.7%	50.1%	29.2%	

We do not have a substantial number of part-time or seasonal employees. Therefore, we do not report them separately. Smithfield's work is not substantially performed by workers who are legally recognized as self-employed, or by individuals other than employees, including employees and supervised employees of contractors. Our workforce did not experience any significant variations in employment numbers in 2015. All figures represent the domestic workforce from the end of the first quarter of 2016.

Employee Engagement, Recruiting, and Retention

Because of the demanding nature of work in the meat industry, employee turnover rates tend to be quite high, averaging around 50 percent industrywide. We are proud that our average turnover rate of around 22 percent is significantly lower than the industry average. While our rate has been decreasing over recent years, we are committed to even further reductions, aiming to have an average turnover rate below 20 percent¹. We have achieved our relatively low turnover rate through a strong focus on employee engagement, workplace safety, and health and wellness activities. Our ultimate goal is to make Smithfield a place where employees can find satisfying careers, not just temporary work, and gain the knowledge and expertise needed to continually advance within the company.

Employee Engagement Surveys

Our operations use employee engagement surveys and more informal, face-to-face meetings to identify, measure, and prioritize the issues that affect employees and impact our business success. Through these activities, we aim to evaluate how well employees are connected to the vision and future of the company, how well they trust their immediate supervisors, and how satisfied employees are with their opportunities for advancement. By answering these questions, employees directly impact action plans that contribute to an improved work environment. Our surveys are also available in a mobile phone format to make them more accessible to employees who don't have regular access to computers.

Improving Communication: From Field to Office

As we have made the transition to One Smithfield, we recognized a need for more cohesive and effective communication practices across all segments of the business. We also felt that we had to answer a key question: If our people are our greatest asset, how do we communicate authentically with them?

“It’s a great feeling to work for a company that knows the importance of employee engagement. To sit across from a chief officer and be able to state my thoughts and concerns was a rewarding experience. Smithfield knows the importance of winning in the workplace so that they can be successful in the marketplace.”

—LaTasha J.

Our CEO's Town Hall events have become an important way to gather feedback from employees. And in 2015 our new chief people officer, Mark Garrett, embarked on a “listening tour” in facilities across the country to meet directly with employees and hear their ideas and concerns. Over the course of the year, Garrett reached 10 percent of the company population through these meetings, and we have developed several new initiatives, such as the creation of a centralized talent development function, based on the feedback collected during the tour.

In order to sustain stronger communication practices over the long term, we are also looking at mobile communications solutions to better engage with our employees. Many of our employees work on farms and in processing plants, where they don't have regular access to computers and email. We also operate in several countries, all with different cultures and languages. We are thinking innovatively about how best to reach our employees where they are. We are exploring how we can use mobile smartphones—which almost all employees have—to communicate with our people no matter where they work, and we have implemented a mobile employee engagement survey. We are also looking at how we can use other common points of interaction, such as break room televisions, to keep everyone up to date on Smithfield news and company opportunities.

“The listening tour was a great opportunity for employees throughout the company to share ideas and provide feedback in an open forum. It was a very enthusiastic group and lots of ideas were shared on how to be more ‘people oriented.’ And now to see some of those ideas come to fruition is awesome!”

—Jeanne S.

Building Our Brand from the Inside

As we strengthen our company under One Smithfield, we are eager to also build a more cohesive presence in the communities where we live and work. While many people recognize the individual brands under the Smithfield umbrella, they aren't necessarily familiar with Smithfield as a whole.

We believe our employees—the people who know our products and our company the best—are one of our best resources as we develop greater brand familiarity with consumers and the public. We are developing “employee ambassador” programs that not only build our presence in the community, but also provide a meaningful way for our people to give back locally.

Rethinking Recruiting

Finding the right people for the right jobs is a perennial challenge for most industries, and this is especially true of the meat industry. More and more baby boomers are heading toward retirement and there are fewer people entering the industry to replace them. We are keenly focused on not only retaining our current talent, but also on attracting the next generation into a career at Smithfield, where they can have the opportunity to help feed people around the world.

We regularly recruit at colleges and universities across the United States, as well as internationally, and we post open positions to an employment network serving veterans and active-duty military personnel. As part of our move to One Smithfield, we are finding greater synergies between recruiting activities across different locations and operations, and we have expanded our internship program.

Pork with a Purpose

As the world's largest pork producer, Smithfield plays a vital role in providing nutritious, cost-effective protein sources to consumers around the globe. Every one of our employees contributes to this mission.

Facilitating opportunities to give back to the local community is an important part of employee engagement, and our people give generously. In December, for example, employees at our Virginia headquarters ran a local food awareness campaign that ultimately raised 18,000 pounds of food to fill holiday food baskets for those in need. And in our Kansas City office, our employees raised money for a local charity for Veteran's Day.

¹ We do not currently track employee turnover by age group or gender, although we do track turnover regionally at each of our segments except International.

Talent Development

Retaining the best talent requires constant support and training so that each individual can continue to grow—and so that we can grow even stronger as a company.

At the supervisory level, we encourage managers and supervisors to be equipped with the right skills to excel at their jobs, while also helping others become better at theirs. Across our operations, we conduct a number of supervisory trainings to continue to ensure strong leadership across the company.

Our Smithfield Leadership Institute and Emerging Leaders programs target employees with management potential, helping to prepare them for new roles with greater levels of responsibility. Every year, we also conduct our Top Gun Leadership Program, a 12-month commitment to strengthen and develop high-performance leaders through formal classroom training with case studies, executive briefings, and team projects.

A number of locations also offer Spanish classes for English speakers who want to improve channels of communication with their Spanish-speaking colleagues.

We offer our Manufacturing Excellence: Understanding Yields, Labor, and Quality Program to help frontline managers understand the business operations of the company, including hands-on instruction about yields, margins, and cost efficiencies, as well as meat science and meat processing techniques.

A number of locations also offer Spanish classes for English speakers who want to improve channels of communication with their Spanish-speaking colleagues.

Mentors and Mentees

We recently rolled out our first formal, companywide mentorship program. The ACHIEVEmentorship Program kicked off in January of 2016, drawing over 350 people for the first six-month program. Our second session kicked off in June 2016. The program matches mentees with a more experienced mentor based on their interests and expertise. Initial feedback has been highly supportive.

ACHIEVEmentorship Program

During our chief people officer's "listening tour," one issue that repeatedly came up was a need for a formal mentorship program so that employees could expand their personal and professional network. As a company of tens of thousands of people, employees found it difficult to meet individuals from other teams or facilities.

In response, we launched the ACHIEVEmentorship Program, attracting more than 350 applicants who spanned a wide range of specializations, ages, and seniority levels—including several top executives. Our employee engagement team hand-matched those applicants based on interest and expertise to create the most fulfilling experiences for mentors and mentees.

"It helps from an assimilation process," says Catherine P., a 28-year old talent acquisition specialist and mentee in the program. "You really feel welcome to the company with open arms. I don't come from an agricultural background or food processing background, and this mentorship program has really opened my eyes to all that the company has to offer."

Her mentor, Thomas D., a sales director who has been at the company for nearly 10 years, says he has also benefitted from the experience. "I want us to learn from each other," he says. "It's an opportunity to meet someone that you might not have met otherwise." Thomas is also participating in the program as a mentee as he tries to move into a more senior position.

The two have bonded on a personal level, too. "I just want to be a positive role model for Catherine. If something comes up in her professional life, or even her personal life, I want her to be able to call me up and ask my thoughts," adds Thomas.

For Taylor D., a 23-year old who joined the company in 2015 and works as a foodservice demand planner, the mentorship program was a chance to learn more about how the company works. "I wanted to figure out what the inner workings of Smithfield are," he says. "I joined Smithfield because I wanted to be in a company where I could get in on the ground floor and then build my way up and hopefully grow personally and professionally."

But it's not all about business. Taylor and his mentor, Justin H., say it's about having fun too. "The biggest thing for this department is teamwork," says Justin, a senior business development manager. "We live around the people we work with, and if you don't enjoy coming to work or enjoy the people you work with, it's not going to last long. Hopefully we can build on that not just with our mentee group but with other groups as well."

Educational Opportunities

Education is an important part of our employee engagement strategy, and our employees often need to learn skills in order to gain a promotion within the company.

In addition to our many on-the-job training programs, we offer support for employees who are going back to school to earn college or graduate degrees. To help employees pursue their educational goals, we offer a tuition reimbursement program for eligible employees. In 2015, this program provided nearly \$800,000 to 256 employees who were continuing their education.

Our company's philanthropic arm—the Smithfield Foundation—also provides scholarships for the children and grandchildren of employees, among other initiatives. In 2015, we provided scholarships for 65 students, totaling around \$300,000.

In addition, we offer online training geared toward workers in our office locations as part of the Smithfield University program. Available through our company intranet, Smithfield University courses can be self-led or instructor-led and offer a range of topics, including computer skills, leadership trainings, sales knowledge, and public speaking and communications.

We are continuing to grow the Career Foundation Program, which was launched in 2014. This program brings in 25 recent college graduates as new employees and enrolls them in a two-year rotation in their areas of interest throughout the company. Whether they're focused on engineering, operations, or business management, these employees spend six months each in four positions at our company, giving them a valuable and holistic understanding of the company's work. This helps to not only strengthen their skill set and identify future career paths, but also helps to build a well-

rounded talent base within the company.

Zamorano Recruiting Program

Smithfield is committed to finding the best talent in the industry, both in the United States and abroad and we run an extensive recruiting program with leading educational institutions. This includes Zamorano Pan-American Agricultural School in Honduras, the region's most prestigious agricultural university. Every year, we recruit several dozen Zamorano graduates as part of our Manager Trainee Program and bring them to Smithfield locations across the country on H1-B visas.

"As a foreigner, I sacrificed a lot of things that I left behind where I came from," says Daniel S., a Zamorano graduate from Honduras who came to Smithfield 10 years ago. "But Smithfield is like my second family. There are a lot of things I like about my job, and one of them is the stability it offers."

Daniel manages a sow farm and is based in North Carolina, where he lives with his wife and child.

Yolanda C., another Zamorano graduate, joined Smithfield as a manager trainee after completing her master's degree in agronomy at the University of Florida. She was initially attracted to Smithfield because of its training and education opportunities and has been at the company for a total of 13 years.

"When you start as a manager trainee you don't know much about the business but they are going to train you and give you all the tools to make you successful," Yolanda says. She took advantage of Smithfield's tuition reimbursement program to earn her MBA while working. "Smithfield invests in you as an employee," she says. "You get a chance to grow with the company."

Originally from Ecuador, Yolanda says that Smithfield's internationally diverse workforce has always made her feel at home, even in North Carolina, where she is now based. "It's very welcoming," she says. "We have 10 different countries represented in our region."

Benefits

Properly trained employees create value at every level of our company. The regular, high-quality training provided to team members enables them to work more safely, create a better work environment, and continue company successes. (For more on safety training, see [Injury Prevention Management](#)).

In 2015, the average hourly wage for all business segments was around \$15—more than double the current federal minimum wage of \$7.25 an hour.

Competitive wages and benefit programs vary according to facility, location, and position. In 2015, the average hourly wage for all business segments was around \$15—more than double the current federal minimum wage of \$7.25 an hour. Hourly positions are hired locally whenever possible.

Comprehensive health insurance and benefits packages are offered to employees in recognition of the value employees bring to the company. These include 401(k) and pension plans, life insurance, and vision and dental care. Many locations provide on-site medical care and preventive health screenings. Smithfield has made more than \$400 million in voluntary pension contributions over the last three years, including \$125 million in early 2016. With these contributions, the pension plan is more than 90 percent funded.

Diversity & Inclusion

Workforce demographics are changing in significant ways across all industries, including the meat industry. As baby boomers begin to retire in large numbers, Smithfield and many other companies face a challenge in attracting new talent.

We understand that our success depends in large part on fully leveraging the unique strengths of everyone who comes through our doors with a desire to build a career with us. We also understand that our consumer base is very diverse, and we strive to make our workforce more reflective of the people who buy our products.

On the whole, the meat industry tends to employ large numbers of minorities and women in lower levels of employment, like production and processing. But there is far less diversity in the higher rungs of management. At Smithfield, we are trying to correct this trend by taking a more deliberate approach to recruiting under-represented groups at all levels of the organization.

Expanding the Pipeline

In 2015, we created a new position to oversee our efforts around diversity and inclusion. As the director of employee engagement, diversity and inclusion, Emanuel McCrainey is leading both internal and external strategies to increase diversity across the company. McCrainey's team is partnering with the training department to create internal trainings for high-potential candidates of diverse backgrounds, as well as their supervisors to improve communication and employee engagement.

We have targeted our hiring outreach at women's colleges and universities and historically black colleges and universities in addition to the many animal science programs from which we have traditionally recruited employees.

Employee Resource Groups (ERGs)

We are also running two new ERGs—one aimed at female employees and the other at millennials—to help facilitate a network for talent development and learning opportunities across the company.

The Women's Connect Employee Resource Group was started in 2013, but was reinitiated in 2015 after a pause in activity following the transition to One Smithfield. Membership in the group has steadily expanded over the past few years to reach almost 400 people in 2015. The group organizes lectures, panels, networking events, and other enrichment opportunities that help support their four "core competencies": Leading Business, Leading Culture, Leading People, and Leading Self.

Women Connecting with Women

Schwanzetta Aikens and Traci Mangiapane became fast friends when they first met while both were enrolled in Smithfield's Top Gun Leadership Program in 2013. At the time, they were the two highest-ranking females in their group and they both recognized a need to develop more women leaders.

"We saw a lot of entry-level females coming into the company," explains Aikens. "And the Top Gun program was such a rich and fulfilling leadership experience that it was important to both of us to give back to a company that had invested so much time in us."

And so, the Women's Connect ERG was born in May of 2013.

Today, the group has grown to around 400 members and hosts a regular schedule of panels and speakers focused on improving the leadership skills of its members.

"It's refreshing to see that people want to continue to grow," says Mangiapane. But, while the group's mission is ultimately to cultivate more female leaders, the events aren't limited to just women in Smithfield, and group leaders welcome all employees to network and learn. "We try to make sure that all our event topics are relevant to the Smithfield community."

In 2015, Women's Connect expanded to include two new business segments and attendance at the group's events continues to grow. It also reflects Smithfield's widening focus on employee engagement and development.

As we dive deeper into this area, we have expanded our definition of what "diversity" means, covering not just race and gender, but age and thought processes. In 2015, the Smithfield Next Group was launched to help connect employees of the millennial generation to learning, networking, and development opportunities. The group's leadership team includes representatives from our plants, farms, and offices across the country.

Both of these groups were employee-initiated and have received great feedback so far. We are exploring the needs of other groups in the company, such as African-Americans and Hispanics, with an eye toward expanding the ERG program.

We do not discriminate against any employee or any applicant because of race, color, religion, ethnic or national origin, gender, sexual orientation, age, disability, veteran status, or any other status protected by federal law. The company works hard to provide employees of all backgrounds with opportunities for training and advancement at all levels. All facilities adhere to our Equal Employment Opportunity (EEO) policies and programs.

We are proud of the progress on diversity that we have made in the last year and are continually aiming to be the best in our industry, but we also acknowledge that there remains room for improvement.

2015 Employee Diversity	Executives	Hourly employees	Salaried employees	Companywide
American Indian or Alaskan Native	0%	1.6%	0.9%	1.5%
Asian	7%	8.1%	2.6%	7.2%
Black or African American	4%	32.6%	11.6%	29.0%
Hispanic	0%	31.3%	8.5%	27.4%
Native Hawaiian or Other Pacific Islander	0%	0.2%	0.1%	0.2%
Two or More Races	0%	0.6%	0.5%	0.6%
White	89%	25.5%	75.8%	34.1%

Employee Wellness

The ability to live a healthy life that includes work-life balance is an important part of our commitment to our employees. We believe that investing in employees' health and well-being pays dividends in the long term. Healthy employees feel better, perform better, contribute to a more positive work environment, and drive down overall company health care costs.

Work in the meat industry can be extremely demanding, and our employees often work long hours. Finding ways to emphasize a healthier work-life balance is a top priority for Smithfield. In 2015, we created a new position focused on diversity, inclusion and employee engagement activities, which includes a focus on improving work-life balance within the company. We are looking for new ways to provide greater support to our employees, including newly-created Employee Resource Groups (ERGs) and mentorship programs.

Technology-Fueled Healthy Habits

In October of 2015, we launched our first incentive wellness plan as part of a pilot program. The program, which was limited to around 500 corporate employees during the pilot phase, distributed a Fitbit™ fitness tracking device to participants after they completed a biometric screening and an initial health assessment, and joined at least two of several health activities offered by Smithfield. Over the course of the year-long program, the Fitbit tracks everyday activity levels, and participants earn points based on Fitbit data. Participating employees who earn a total of 100 points over the year receive a \$600 wellness bonus. This program provides direct incentives to form healthy habits and serves as a fun way to engage with employees. Based on the initial success of the pilot, we are looking at expanding the program.

We are continuing to offer more traditional health and wellness programs, which vary from location to location across the company. Some examples include hiring a full-time personal trainer for employees, professional counseling services, blood pressure and cholesterol screenings, free mammograms, massages, intra-office weight-loss competitions, flu shots, and much more.

Promoting Healthy Behaviors

Our "fit" wellness program, which is offered to employees at several locations, represents our commitment and responsibility to support good health for employees and their families. It offers enhanced benefits, such as diabetes management, smoking cessation programs, and maternity management for a healthy pregnancy—including a \$200 gift card for new parents. Several corporate offices offer annual health fairs that include blood pressure screening, cholesterol checks, massages, mammogram screenings, and more. We also host regular "lunch-and-learn" events to discuss healthy living topics such as stress management, weight control, and employee assistance program services.

Weight Loss and Exercise

Many locations are involved with Weight Watchers®. At some locations, we have supported friendly competitions among employees to see who can lose the most weight. Interested employees pay the Weight Watchers' membership fee at the start of the challenge, and if they lose 5 percent or more of their weight during a 12-week time period, we will reimburse them for the cost of their sign-up fee. We have found that many employees lose much more than 5 percent, thanks in part to the support and encouragement they received from their colleagues during the challenge. To date, employees have collectively lost more than 3,000 pounds through our Weight Watchers program. Some office locations host on-site gyms for employee use, and several of our employees are certified yoga instructors who lead regular classes for their colleagues.



Going Casual for a Cause

At our corporate offices, we offer employees a Jeans Day or a Good Cause Friday program. People who want to dress down once a month can contribute \$5 to a collection that we then donate to local charities. In 2015, we raised over \$40,000 that we distributed to 48 charities—compared to 20 last year—some of which serve the regions around our offices and some national organizations.

Health & Safety

Many people often associate the meat industry with dangerous or hazardous work. However, our facilities boast injury rates that are typically better than our industry average—and often better than the national average for all industries combined.

Smithfield is constantly working to improve our safety performance at all of our facilities and locations. We have greatly improved our Total Incident Frequency Rate (TIFR), which went from 6.58 in 2008 to 3.99 in 2015. Although the 2015 TIFR rate increased slightly over 2014, we are proud of the fact that we continue to outperform industry averages on safety.

At Smithfield, injury rates across all locations—including farms and meat processing facilities—are near historically low levels. Over the past five years, Smithfield has achieved a TIFR below 4.0; and, for four of the past five years, the rate has been lower than the national average for all industries.

Our Health & Safety Goal

- Reduce employee injury rates

Our Health & Safety Targets

- Continue to reduce Total Incident Frequency Rate (TIFR). Maintain levels below general industry average.
- Achieve annual Days Away, Restricted, or Transferred (DART) results better than the general industry average
- Increase safety engagement level to 30% of employees

Our long-term improvement in workplace safety stems from our ambitious targets to meet or beat industry averages for the three performance metrics we report to the U.S. Occupational Safety and Health Administration (OSHA): Total Incident Frequency Rate (TIFR); Days Away, Restricted, or Transferred (DART); and Days Away from Work Injury and Illness (DAFWII). In 2015, these metrics showed relatively minor fluctuations, but stayed within the range of our performance over the past several years. DART increased to 2.8 from 2.48 in 2014, while DAFWII rose slightly from 0.64 to 0.76. As noted above, Smithfield's TIFR in 2015 was 3.99, compared to 3.45 the previous year.

Some of these fluctuations were expected. As part of the move to One Smithfield, we have standardized health and safety policies across our plant locations, a process that has required facility managers and employees to make some adjustments to the ways in which they work. Overall, we believe these latest OSHA statistics reflect the strength of our health and safety systems, while also reminding us that there is always room for improvement and continued vigilance.



In recent years, we have advanced our health and safety systems by updating our Employee Injury Prevention Management System (EIPMS) audit process and conducting further EIPMS and auditor-certification trainings. In 2015, we continued to expand the number of facilities that use our **behavioral risk improvement** process, adding two new locations. At the time of this report, nine Smithfield locations had been trained in and implemented the BRI process.

Our successes in achieving world-leading levels of worker safety performance are in part a result of the rigorous safety training programs that we require for all employees. We also have made great improvements in getting employees at all levels of the company to take ownership of safety practices. Workers are identifying possible problem areas and creating solutions, and our annual **safety awards** recognize innovations that can better protect employees.

Workers in production facilities have access to regularly scheduled, comprehensive training that focuses on providing the knowledge they need to perform their jobs safely and well. For managers and supervisors in those facilities, we have created our Defining Safety Leadership program to give them clear guidance on how to connect our safety and performance processes to every employee in the facility.

Standardizing International Operations

As one of the world's leading food manufacturers, we have facilities and employees in a variety of global locations. Our commitment to building a safe and healthy workplace crosses all borders. But cultural and regulatory differences still exist, and we are working on building a more cohesive safety environment across our global operations.

Safety regulations often vary across national borders, but Smithfield is committed to bringing all of our facilities to the same safety standards as we have in the United States. In 2015, our corporate Health and Safety team visited our offices, farms, and plants in Poland, Romania, and joint ventures in Mexico to conduct assessments and refresher training on the company's health and safety management system and policies, with an emphasis on strengthening the safety culture and aligning our international operations with Smithfield's overall vision and initiatives.

One example of international inconsistencies is the "lockout/tag-out" practices for safeguarding employees around potentially dangerous machinery. Smithfield intentionally builds redundancies into our safety policies in order to ensure the highest level of safety for our employees. Some of these redundancies, including lockout/tagout, are not necessarily mandated by law in every country in which we operate. So we are working with our international managers to standardize and reinforce Smithfield's safety protocols while building a culture that teaches our employees to go above and beyond what may be required of them by local law.

We are also continuing to implement a monthly "safety scorecard" for our international locations. In the past, our scorecard has been largely focused on the United States. While different legal reporting requirements exist in the countries where we operate, we are working to identify areas where we can harmonize safety reporting. We are looking forward to implementing the new scorecard, so we can better compare results between our international operations.

Injury Prevention Management

The foundation of our company’s ongoing safety success is Smithfield’s Employee Injury Prevention Management System (EIPMS), which was initially developed from Occupational Health and Safety Assessment System (OHSAS) 18001 and supplemented by the Z10 standard of American National Standards Institute (ANSI) and U.S. Occupational Safety and Health Administration (OSHA) Voluntary Protection Program (VPP) guidelines. We regularly update and revise the EIPMS, resulting in continually improved health and safety management guidelines.

Employee Injury Prevention Management System



Required of all operations, EIPMS is designed to minimize potential risks to employees and others, improve business performance, and enhance relationships within the marketplace. With a strong focus on the well-being of employees, the program opens communications and facilitates the sharing of best practices.

Hard Work Behind Smithfield's Safety System

While we are constantly working to make our facilities as safe as possible, there are still unique risks for workers in the meat industry. Our relatively low incident rates are a testament to both the skill of our employees and the effectiveness of our safety culture. Every day, Smithfield employees in processing facilities make an astonishing 3,000 precision cuts every shift.

"Our facilities are designed to cut, grind, shred, and pull apart flesh and bone," says John Tignor, corporate director of health, safety, and security. "And we need to make sure that it only happens with product and not with people. The fact that we're able to do all of that, and at such a high level of safety, is pretty incredible."

Because each animal is a slightly different size and shape, our processes do not lend themselves to automation. Humans need to gauge where to make the cuts that will create the perfectly shaped pork loin or rack of ribs that will ultimately feed our consumers.

"When I started in this business 28 years ago, the meat industry had the highest injury rates of any industry in the country," Tignor says. "Today, our worker injury rates can compare to those of retail stores and fast-food outlets."

Employees on farms also face various types of risks. Live animals can be unpredictable, and farm employees must manage the movement of more than 16 million animals each year, multiple times each year for each animal.

Farm employees are also exposed to a range of seemingly small hazards that can have significant impacts. For example, they must perform animal inoculations, running the risk of accidentally sticking themselves while using an injection device. They must also be on the lookout for a range of other common hazards, such as machinery with moving parts, confined spaces, large mobile equipment, and vehicles. We have customized our safety processes to address the specific hazards that each workplace presents, and our results show that we are building a culture where safety is everyone's job.

Safety Engagement

We encourage employee engagement in safety processes at all levels of the organization as we continually seek to improve our safety performance. In 2015, we formally increased our target of employee safety engagement to 30 percent, up from 25 percent the prior year. In 2015, our safety engagement level was 45 percent.

We work to increase employee engagement in safety activities, encouraging worker participation in safety program reviews and development of new systems. Many locations maintain employee safety teams, which can bring fresh perspectives on safety challenges and successes. As part of our efforts to standardize safety processes under One Smithfield, we are also working to increase safety engagement among our international teams.

In 2015, behavioral risk improvement (BRI) training was conducted at two Smithfield locations, both large fresh meat plants. The BRI program encourages hourly employees to observe each other and prevent at-risk behavior to reduce the potential for injuries and illnesses. At these two locations, we conducted general BRI awareness training for approximately 2,100 employees, along with 650 newly trained BRI observers.

Each year, we host a Safety Conference, bringing together leaders from across our company. Approximately 135 participants from across the organization attended the 2015 Safety Conference, including safety professionals, as well as management personnel from operations, engineering, and maintenance. Also in attendance were Smithfield executive leadership, along with personnel representing our international businesses in Romania, Poland, and joint ventures in Mexico. The conference covered a range of focus areas, including updates on company health and safety performance, discussion of ongoing initiatives from each segment of our operations, and reviews and rollouts of new operational controls. Notable industry topics like regulatory updates, process safety management, lockout/tagout, emergency procedures, and contractor management were discussed.

Voluntary Protection Program (VPP) Status

Our Employee Injury Prevention Management System (EIPMS) has also positioned our company to begin working toward achievement of U.S. Occupational Safety and Health Administration (OSHA) VPP status. VPP is considered the gold standard of employee health and safety, recognizing employers for implementing effective safety and health management systems and for maintaining injury and illness rates below national averages. To apply to the program, an individual facility must achieve injury and illness rates below industry averages for three consecutive years and must also be in compliance with all local, state, and federal safety standards.

Smithfield has set an ambitious goal: All of our facilities must have a plan in place to apply for and achieve VPP status or the state equivalent. We are continuing to move toward this goal. However, there is a large backlog in applications at OSHA. OSHA offices in several states where we operate have requested that Smithfield submit our applications at later dates. We intend to continue to pursue VPP status across our facilities and to work closely with OSHA to accommodate its schedule and advance the application process to the best of our ability. As of early 2016, we were awaiting approval from OSHA on two applications—one in Utah and one in Illinois—that were submitted over the previous two years. An application from one of our locations, if approved, would be the first all-encompassing farm business in the United States to achieve VPP status.

Despite the OSHA backlog, in 2015, three more Smithfield locations submitted applications for VPP assessments.

Auditing and Inspections

Consistent inspections and auditing of each facility is a key element of our success in reducing injury and illness rates. Each month, every Smithfield facility is required to go through a complete inspection, performed by safety and management teams. The inspection covers specific items and areas of each worksite and is reported monthly as part of the Smithfield safety scorecard process.

In addition to monthly inspections at each location, each segment of the business has an audit program that evaluates whether our Employee Injury Prevention Management System (EIPMS) is effective. The EIPMS audit focuses on hazard identification and injury prevention, supplemented with an overview of regulatory compliance. These efforts help us identify hazards and risks, as well as help us develop injury prevention solutions before employees are subjected to unnecessary risks.

The primary purpose of the EIPMS audit is to ensure that, even if there are personnel changes, a sustainable management system will remain in place. We complement site-specific inspections with annual corporate audits conducted by teams trained and led by company-certified lead auditors. The results of these audits are addressed by the location's EIPMS core team through its required management review process of the system.

Smithfield also undergoes external audits of compliance and hazard control programs at U.S. worksites on a revolving schedule. These audits, led by independent, third-party personnel with experience in the meatpacking industry, complement the management systems audits through in-depth examination of injury and illness hazards control at a particular worksite.

During these third-party audits, we review operational controls, such as training, machine and tool safety, personal protective equipment, chemical safety, hearing conservation, and emergency planning and response, as well as employee engagement. We highlight the success stories from facilities that perform well and share their best practices with other sites. Facilities that score poorly on the audits not only must correct their practices, but they are also subject to more frequent audits. Failure to improve audit scores results in increased involvement from the director of health and safety and higher-level corporate leaders, if necessary, to facilitate improvement.

Workers' Compensation Claims Management and Return to Work

Although we are very proud of our achievements in reducing employee injuries to unprecedented levels for our industry and all industries, on-the-job injuries still occur. We have established a comprehensive workers' compensation claims management program that includes a dedicated Return to Work (RTW) element that seeks to return every injured employee, wherever possible, to full and regular work once it is medically feasible to do so.

We are also working to better manage the costs associated with workers' compensation claims. This process includes the creation of a computer-based workers' compensation dashboard to help plant managers better understand compensation-related costs, the implementation of a fleet safety program with transportation operations, and the launch of an organization-wide fraud awareness and prevention program to bring attention to the issue of workers' compensation fraud.

To ensure that we appropriately implement all of these elements of the program, we regularly monitor and report outcomes in a separate scorecard that is reviewed during our internal audit process.

Safe Chemical Management

Safe storage and handling of ammonia and chlorine gas used at our facilities are essential to the safety of our workforce and our surrounding communities. We report to the U.S. Environmental Protection Agency's (EPA) Toxics Release Inventory (TRI) database each calendar year for these chemicals.

In recent years, Smithfield has created defined roles for the management of ammonia refrigeration and chlorine gas injection systems for our engineering, environmental, and safety staff. Today, we manage these systems through stringent corporate safety guidelines. Our facilities have implemented Smithfield guidelines that are based on the U.S. Occupational Safety and Health Administration's (OSHA) rigorous Process Safety Management of Highly Hazardous Chemicals (PSM) standard.

As with other operational controls, several elements of our guidelines are more stringent than what is required by OSHA. In addition to management of the systems, we have also assigned responsibility for the physical security of chemicals at our facilities. We also began a new auditing program in 2015, which is similar to the other external auditing systems for locations where we use chemicals considered highly hazardous, such as ammonia and chlorine gas; these locations now receive PSM audits on a rotating basis by selected third-party auditors.

OSHA-mandated compliance with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) system took effect in 2015 in order to bring hazard communication standards in line internationally. This represents a shift for companies around the world, and Smithfield has worked to make sure our employees are up-to-date on the latest chemical management standards.

Our safety professionals at locations containing certain hazardous chemicals have also received chemical safety and security training facilitated by the U.S. Department of Homeland Security (DHS) Chemical Anti-Terrorism Division. These sessions provide background information and recommendations to safety and security professionals for safeguarding workplace chemicals that could be used in manufacturing controlled substances, improvised explosive devices, or other chemical weapons.

Ammonia is the primary refrigerant used in processing plants. Although we have reduced ammonia use through improved efficiency, Smithfield remains diligent in the handling, use, and storage of this chemical. The amounts used in processing facilities have increased recently due to higher production volumes of ready-to-eat products and an increased need for refrigeration.

Chlorine gas is used in several on-site wastewater treatment facilities. We have worked to reduce chlorine gas and have nearly eliminated its use.

For each of these substances, OSHA has established threshold quantities that only require a PSM plan for facilities with over 10,000 pounds of ammonia and/or 1,500 pounds of chlorine gas. We at Smithfield are going above and beyond regulations, requiring each facility to have a PSM plan in place regardless of ammonia or chlorine quantities.

Case Study: BladeStop™ Technology

For years, Smithfield has been working to minimize as many risks as possible to our meat processing workers, mainly through the introduction of belt-fed or robotic saws. While we have been able to automate much of our operations, there are still some processes that require a human touch. Because hogs vary in shape and size, we need our employees to oversee certain cuts.

Thankfully, leading-edge technology has been developed to help reduce the risks inherent in hand-fed band saw work. Over the last few years, we have looked extensively at the latest technology and even invested in our own research and development initiatives to develop solutions that could help protect our workers from accidental saw injuries.

In 2015, we started introducing BladeStop, a proprietary technology made by an Australian company that we believe to be one of the most innovative safety saw solutions available today. The BladeStop technology uses a sophisticated sensor system to quickly identify when the operator has come into contact with the saw. The saw is then mechanically shut down within 15 milliseconds of operator contact—a timeframe that can mean the difference between a minor cut and a potentially life-changing injury requiring stitches or even amputation. Smithfield worked extensively with the manufacturer to customize the saws to the particular needs of our facilities.

“Bandsaws have always been a big deal to me,” says John Tignor, corporate director of health, safety, and security. “We are constantly trying to figure out new solutions within our industry.” For Tignor, who has been in the industry for nearly 30 years and has overseen several of the saw safety and research and development initiatives at Smithfield, bandsaw injuries hit particularly close to home. “My dad lost his thumb in a saw injury in 1971, and every time I see him I think of that.”

For our implementation of BladeStop™, Smithfield won a \$10,000 Safety First Grant, a matching grant program funding innovative safety solution, from the Safety National Casualty Corporation in 2015.

After testing one BladeStop™ saw in our Smithfield, Virginia, location, we ordered five additional saws for that facility. At a cost roughly twice that of traditional band saws, BladeStop saws can be cost-prohibitive on a large scale, but we intend to further expand the use of this technology in other Smithfield locations.

“The effective BladeStop™ technology used in our band saws has dramatically reduced safety risks and incidents,” says Parul Stevens, Smithfield’s vice president of risk management.

“I really like BladeStop™,” says Derrick H., a saw operator. “The saw requires a glove check and self-test, which reassures the operator that it is operating correctly. It’s a very good safety improvement.”

For our implementation of BladeStop™, Smithfield won a \$10,000 Safety First Grant, a matching grant program funding innovative safety solution, from the Safety National Casualty Corporation in 2015.

“We were impressed with the innovative and impactful solution that was created by Smithfield to reduce risk of employee injury and subsequent workers’ compensation losses in its organization,” says David Snodgrass, assistant vice president of risk control services at Safety National. “We believe that this technology has application beyond Smithfield and look forward to seeing how this can serve as a model for other businesses who face similar risks.”

Case Study: Sioux Falls Gets High Marks for Safety

It's rare to find a facility in the meat industry that has been continuously operating for over 100 years yet embodies the most modern health and safety protocols. But our Sioux Falls facility, established in 1909 as part of John Morrell, checks both of those boxes.

The South Dakota plant, which has around 3,400 employees, harvested 5.1 million hogs and produced 300 million pounds of packaged meats in 2015. And, based on its dramatic safety improvements in recent years, the plant was chosen for Smithfield's President's Award for outstanding performance in Health & Safety Management, an honor given each year to one facility. Between 2008 and 2015, the Total Incident Frequency Rate (TIFR) of this facility dropped from 10.3 to just 2.6

Between 2008 and 2015, the Total Incident Frequency Rate (TIFR) of this facility dropped from 10.3 to just 2.6.

Unlike more modern meat facilities that are two stories or less, the Sioux Falls location, the oldest and largest pork processing plant in operation in the United States today, includes a nine-story central building and covers over 2 million square feet. In the absence of industrial machinery like forklifts, the building was originally designed more than a century ago around gravity-fed processes, such as chutes that can pass cuts of product from one floor to another for processing. Operating in older facilities, such as Sioux Falls, presents a number of challenges that safety managers must work to overcome through new equipment and processes.

"A lot of times you see management teams in buildings that are old using the age of the building and infrastructure as an excuse for poor safety performance," says John Tignor, Smithfield's corporate director of health, safety, and security. But the Sioux Falls team has made safety a priority, finding ways to adapt modern technology and work safety methods to this unique facility.

"You can go anywhere in this facility and any level of management here in Sioux Falls truly makes safety part of their daily routine," says Tom Young, one of our senior directors of health and safety. Young visits Smithfield facilities around the country and says that strong leadership is the closest you will get to a "silver bullet" in safety.

While some of Sioux Falls' safety protocols, like the critical five safety rules or the top 10 safety work order list, can be found at other Smithfield facilities, management here has spearheaded some unique initiatives.

For example, management has a robust orientation process for new employees and also uses an online-based medical e-consult service that connects injured employees to their doctors via a video link to improve care, reduce travel time, and reduce time away from work. They've also partnered with the local United Food and Commercial Workers (UFCW) to implement the Courage to Care Program, which encourages employees to intervene with co-workers when they observe any unsafe behavior—before an injury occurs. There is no disciplinary action involved; and if there is a disagreement, employees can work through the issue with a manager or union steward.

"Our goal is to be proactive, instead of reactive," says Ken Winter, director of health, safety, and environment for the Sioux Falls plant.

The health services department has also taken a more proactive approach in the prevention of injuries versus the traditional method of treating injuries after they occur. In addition, facility nurses regularly perform informal safety visits with employees on the floor to look for any actions and habits that could potentially lead to future injuries or ergonomic issues. Sioux Falls nurses are also part of the plant's Ergonomic Task team, which meets bi-weekly to conduct ergonomic job assessments, develop new ergonomic training, and address the health and safety needs of new plant projects.

Our goal is to be proactive, instead of reactive," says Ken Winter, director of health, safety, and environment for the Sioux Falls plant.

Winter noted that the facility follows a simple four-step process to create a vibrant safety culture: demonstrated leadership; 100 percent compliance, 100 percent of the time; establishment of the Employee Injury Prevention System (EIPMS); and cultural change through behavioral improvements and positive reinforcement. The plant strives for continuous improvement through the identification and removal of hazards through our systematic approach and employee participation.

The plant's success in injury reduction is particularly impressive, given its wide range of employee demographics and number of non-native English speakers. Translating health and safety requirements is a foremost concern to ensure that all employees truly understand the safety protocols and procedures.

Health & Safety Performance

We are extremely proud of the dramatic worker safety improvements we have achieved across our company in recent years.

While the average rate of injury among beef and pork producers in 2014 was 5.5 injuries per 100 employees, according to the U.S. Department of Labor's Bureau of Labor Statistics (BLS) most recently available data, Smithfield's injury rate for 2015 was 3.99 injuries per 100 employees.

In 2015, Smithfield continued to show a strong safety performance in our U.S. Occupational Safety & Health Administration (OSHA) Total Incident Frequency Rate (TIFR); Days Away, Restricted, Transferred (DART); and Days Away From Work Injury and Illness (DAFWII) rates. Although we saw slight increases in these rates compared to 2014, our 2015 performance still stands out in the context of dramatic, long-term improvements in safety metrics.

OSHA Total Incident Frequency Rate (TIFR)

The number of work-related injuries and illnesses per 100 employees that result in medical treatment has fallen substantially since 2008. In 2015, we saw an increase of 16 percent in the TIFR compared to the previous year. However, this is still a nearly 40 percent decrease compared to 2008 when we first developed our Employee Injury Prevention Management System (EIPMS).

OSHA Days Away, Restricted, Transferred (DART) Rate

The number of work-related injuries and illnesses per 100 employees that result in an employee missing work, having restricted duty, or being transferred from his or her regular duty work assignment rose by 13 percent over last year, which is a 36 percent decrease from 2008.

OSHA Days Away From Work Injury and Illness (DAFWII) Rate

The number of work-related injuries and illnesses that result in one or more days away from work per 100 employees has fallen 41 percent since 2008. For 2015, we posted a 19 percent increase over the previous year.

TIFR, DART, and DAFWII Rates Compared with National Averages

YEAR	TIFR			DART			DAFWII		
	Smithfield	A&P	AI	Smithfield	A&P	AI	Smithfield	A&P	AI
2008	6.58	7.5	4.2	4.4	5.0	2.1	1.29	1.1	1.2
2011	3.93	6.4	3.8	2.8	4.3	1.9	0.74	1.2	1.2
2012	3.42	6.3	3.7	2.22	4.3	1.8	0.65	1.0	1.1
2013	3.47	5.7	3.5	2.53	3.9	1.8	0.73	1.0	1.1
2014	3.45	5.5	3.4	2.48	3.7	1.8	0.64	1.0	1.1
2015	3.99	N/A	N/A	2.8	N/A	N/A	0.76	N/A	N/A
08-15 Change	-39.4%	N/A	N/A	-36.4%	N/A	N/A	-41.1%	N/A	N/A

A&P = National averages for animal slaughtering and processing industry

AI = National averages for all industries, including state and federal government

All values are calculated per 100 employees for a calendar year. National averages for meat industry and all industries are based on 2014 data from the U.S. Department of Labor's Bureau of Labor Statistics (BLS). Data were not yet available for 2015 at the time of this report's publication.

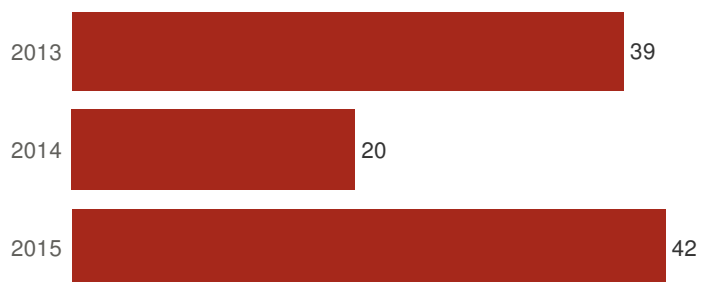
These rates illustrate how effective our safety management program has been over the long term. Although the rates increased slightly in 2015, we have had a dramatic drop since 2008 and we continue to strive for improvement. Some year-to-year fluctuations may continue to occur.

OSHA Notices of Violation (NOVs)

In 2015, Smithfield had 42 regulatory inspections conducted at locations across the country, receiving 11 citations with penalties totaling \$49,095. This marks a decrease from 45 violations totaling nearly \$245,000 in 2014, which was mostly attributed to in-depth inspections at two of our facilities.

OSHA Inspections, Notices of Violation (NOVs), and Penalties

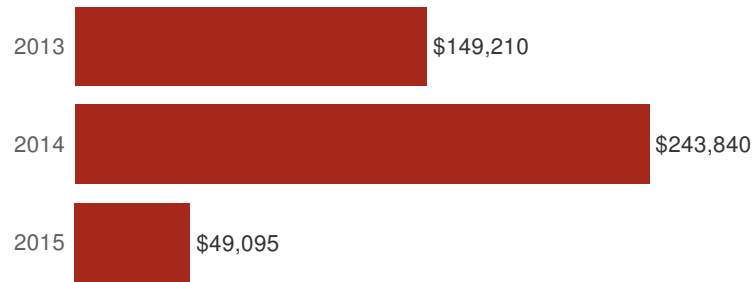
Inspections



Notices of Violation



Penalties



Human Rights

Our formal [Human Rights Policy](#) ensures the fair treatment of employees throughout the company.

The policy spells out the expectations we have in the areas of equal opportunity; health, environment, and safety; harassment and violence; the rights of employees; and other key topics.

We provide copies of the policy to all employees, including new hires, and encourage workers to call a toll-free hotline number to report any violations. We also communicate our Human Rights Policy to all major suppliers and expect them to comply. In addition, our [Supplier Code of Conduct](#) promotes adherence to all relevant laws and regulations, including those addressing slavery and human trafficking.

Our long-standing [Code of Business Conduct and Ethics](#) is also part of our governance framework and is designed to help create a safe and fair work environment. The Code is communicated to all employees and sets forth our expectations for appropriate employee behavior, as well as corporate hiring and disciplinary policies. For more information on ethics, see the [Governance & Management](#) section.

Recognition & Awards

External Recognitions

Our significant safety efforts continue to be recognized by our industry. In 2015, the North American Meat Institute (NAMI) recognized 42 of our facilities with worker safety awards.

Ten Smithfield locations received the Worker Safety Award of Honor, the highest award bestowed by the organization. The awards program is administered by the National Safety Council (NSC) and based on evaluation of each eligible facility's safety record, as well as its implementation of various key components of an effective safety and health program.

These locations received the Award of Honor:

- Bolingbrook, Illinois
- Clinton, North Carolina
- Crete, Nebraska
- Denison, Iowa
- Milan, Missouri
- Omaha, Nebraska
- Salt Lake City, Utah
- Sioux Center, Iowa
- Sioux Falls, South Dakota
- Smithfield, Virginia

In addition to the locations highlighted above, 32 other facilities received Worker Safety Awards for outstanding achievements in workplace safety.

Internal Recognitions

Smithfield also has its internal Health & Safety and Workers Compensation Awards program as part of the annual Safety and Workers Compensation Claims Conferences. On the safety side, we presented seven awards to recognize outstanding performance. Five of the awards are performance-based awards, for which the winning facilities are selected through a scoring system that reviews their efforts against our vision of being an industry leader for worker safety and health. During the review process, facilities are scored on a number of categories including effective implementation of a health and safety management system that meets the requirements of Smithfield's Employee Injury Prevention Management System (EIPMS), monthly safety scorecard measurements, regulatory compliance and audit results, injury and illness rates, and implementation and developments toward other key initiatives such as U.S. Occupational Safety and Health Administration (OSHA) performance, Voluntary Protection Program (VPP) status, and Behavioral Risk Improvement (BRI).

The five performance-based awards are the Organizational Excellence Award, given to an entire operating segment; the International Award, given to locations outside of the United States; the coveted President's Award, given to an individual location with the highest level of performance; and the Award of Commendation given to the first and second runners-up to the President's Award.

Our 2015 performance-based award winners:

- President's Award—Sioux Falls, South Dakota
- Award of Commendation—Clinton, North Carolina
- Award of Commendation—Salt Lake City, Utah
- International Award—Hermosillo, Mexico
- Organizational Excellence Award—Packaged Meats Division

Two additional health and safety awards presented at the safety conference are the Safety Professional of the Year and the Innovation Award. Winners of these awards are chosen based on nominations from people and organizations across Smithfield. A panel of judges, consisting of internal personnel from each operating segment and our corporate headquarters, as well as several external partners that work closely with Smithfield in our worker safety efforts, reviews each nominee before deciding the winners.

Our 2015 Safety Professional of the Year and Innovation Award winners:

- Safety Professional of the Year—Matt Spencer, Crete, Nebraska
- Innovation Award—BladeStop Project, Smithfield, Virginia

Our Workers' Compensation (WC) Claims Management Awards program includes four individual award categories:

- **Service Excellence Award** recognizes that individual who has shown unequalled commitment to his or her claims management role within the organization and whose efforts have had a profound and measurable impact to injured workers, location, operating segment and/or the organization as a whole.
- **Workers' Compensation Innovation Award** is given to an individual or location whose creativity and innovation have generated measurable and meaningful financial savings or process improvement for the company.
- **Organizational Excellence Award** is intended to reward an individual location for its ongoing performance and sustained positive results in the area of claims management. This award measures results from the prior performance year in combination with historical performance.
- **Champions Award** goes to the operating segment with the best overall Workers' Compensation Claim Results for the prior performance year, using metrics from the WC Report and quarterly WC Scorecard.

Our 2015 Workers' Compensation Award winners:

- WC Service Excellence Award—Bianca Collins, Tar Heel, North Carolina
- WC Innovation Award—Danette Nickell, Milan, Missouri
- Organizational Excellence Award—Clinton, North Carolina
- Champions Award—Hog Production Division

Policies & Statements

Human Rights Policy

Smithfield¹ is committed to the protection and advancement of human rights, as enshrined in the Universal Declaration of Human Rights (UDHR) issued by the General Assembly of the United Nations on December 10, 1948.

The Smithfield Human Rights Policy is grounded in the [Smithfield Code of Business Conduct and Ethics \(PDF\)](#) (the “Code”), and operates in conjunction with the Code. The Code, in conjunction with the Human Rights Policy, sets forth Smithfield’s policies and practices relating to conducting our business in an ethical and responsible manner that supports and respects the protection of human rights. It reflects the company’s core values and high ethical standards.

As used in this Policy and the Code, the term “Smithfield” means Smithfield Foods, Inc., and all foreign or domestic operations and joint ventures in which Smithfield has a majority interest and/or management responsibility, the terms “employees” or “representatives” mean and include all Smithfield employees, officers, and directors, and the term “supervisor” refers to the person to whom an employee reports. Smithfield will communicate this policy to its direct supply chain partners.

The Compliance Committee is responsible for the oversight and implementation of this policy, and shall define the company’s implementation and monitoring efforts to conform to this policy and advance our commitment to continuous improvement.

1. Equal Opportunity

Smithfield does not discriminate against any employee or applicant for employment because of race, color, religion, ethnic or national origin, gender, sexual preference, age, disability, or veteran status. This applies to recruitment, hiring, training, promotion, disciplinary practices, and other terms and conditions of employment. Discrimination against any employee or applicant for employment is a serious violation of equal employment opportunity law and of Smithfield’s corporate policies. It is the responsibility of every supervisory employee to ensure that discrimination does not occur and for every employee to report violations to our policy or the law.

Smithfield will take action to ensure that qualified applicants are given equal opportunity to be employed and promoted. All personnel actions and company-sponsored programs shall continue to be administered on a nondiscriminatory basis. Violations of policy will be reviewed, investigated, and appropriate action taken based on the facts.

2. Health, Environment, and Safety

Smithfield is committed to ensuring the health, safety, and well-being of our employees, the people living and working in communities near our facilities, and the environment and will provide the human, physical, and financial resources necessary to meet this commitment. These resources will be used to enable employees and contractors to work safely and comply with company policies and the law, to prevent pollution, and to protect the environment. Our employees are expected to comply fully with company policies and to adhere, at a minimum, to the applicable health, environmental, and safety legal requirements of their host country. Training will be provided to our employees on these company policies and legal requirements.

3. Harassment and Violence

Smithfield is committed to providing our employees with a non-discriminatory work environment free of any type of harassment per company policy and the law. Supervisory employees must investigate all complaints of harassment and employees are advised on their responsibility to report violations. The company will take appropriate disciplinary actions for violation of policy or law.

All verbal and physical threats of violent behavior are unacceptable and should be reported as outlined in the Smithfield Code of Conduct. Every report of violence or threats of violence will be investigated. Employees who engage in violence or threats of violence will be subject to disciplinary action, up to and including termination of employment as well as criminal prosecution.

4. Rights of Employees

Smithfield does not use forced or compulsory labor. Workers are recruited and receive competitive wages and benefit packages. Smithfield will not use child labor and respects the rights of children to be protected from economic exploitation. Smithfield recognizes and respects employees' rights and freedom to choose whether to join or not join third-party organizations or to associate freely and bargain collectively. Where applicable, Smithfield supports the rights of its employees to make these choices through fairly conducted secret ballot elections. Smithfield recognizes that in some countries workers are not free to organize and join unions, and in such circumstances the company is open to other forms of worker representation.

5. Implementation

This Human Rights Policy will be implemented by Smithfield through communication and training programs for staff on human rights issues generally, and on the requirements of Smithfield's Human Rights Policy specifically.

Health & Safety Policy

Smithfield¹ is 100 percent committed to the safety, health, and well-being of our employees. The safety of our employees is more important than our most valued customer. We strive to lead the industry in occupational safety and health just as we strive to be the industry leader in producing wholesome food products, animal welfare practices, and protecting the environment.

All operations are expected to implement an Employee Injury Prevention Management Systems and maintain improvements in the management of workplace injury and illness risks.

We further demonstrate this commitment to health and safety through:

- Identifying hazards, conducting risk assessments, and identifying control measures as well as development of processes and procedures for timely abatement and control of the hazards and risks associated;
- Maintaining compliance with all federal, state, and local regulatory requirements;
- Appointing safety coordinators at each location;
- Providing appropriate training to ensure awareness of potential hazards and competence in performing specific duties or job tasks in a safe manner;
- Promoting active participation in safety efforts by all hourly and management employees;
- Developing measurements and auditing systems to ensure that standards of performance are met and opportunities for improvement are identified; and
- Defining roles and responsibilities of all members of management toward health and safety to include review of goals and objectives during all annual and subsequent performance evaluations.

Maintaining a safe and healthful working environment is the responsibility of all employees. We expect all locations to maintain compliance with company and regulatory health and safety guidelines as well as implementation of other recognized good engineering and safe work practices. Smithfield Foods will manage worker health and safety as one of its core values to conducting business. It is with this in mind that the leadership at Smithfield Foods announces an expectation for each of our individual locations to establish and document formal objectives and management plans to achieve OSHA VPP status at the federal level or state-plan-state equivalent. This policy shall be reviewed and communicated to every employee as well as other interested parties involved in our operations.

Reviewed and accepted on this date: December 1, 2015

Diversity Statement

Smithfield¹ understands that its customers, employees, and suppliers are critical to its success as a global food company.

"Good food. Responsibly.®" Means a Commitment to Diversity

Smithfield understands that its customers, employees, and suppliers are critical to its success as a global food company. Smithfield is committed to partnering with customers, employees, and suppliers of diverse backgrounds and geographic locations, and to conduct our business in an ethical and inclusive way. Our global perspective and commitment to inclusion are central to our mission to produce good food, responsibly, and ultimately maximize shareholder value.

Therefore, Smithfield has established a Diversity Advisory Committee to help the company identify opportunities to strengthen relationships with our customers, our employees, our suppliers, and in the communities where we have operations.

Customers

Smithfield Foods is always seeking new markets for its products. We continually strive to reach out to a diverse customer base and produce good food that will be enjoyed by families across the globe. Our new initiatives include product development, marketing and advertising with diverse media outlets, sponsorships, and forming successful partnerships with key influencers.

Employees

Smithfield is committed to attracting, training, and maintaining a diverse workforce that is reflective of the marketplace. We strive to implement a company culture that is inclusive, positive, and performance-oriented. Having a diverse workforce allows us to benefit from a variety of perspectives and strengthens our global competitiveness.

Explore the many opportunities available across our family of companies. Visit our [Careers](#) page for our most recent employment information. Apply today!

Community

We believe that being an active and sustaining partner in the communities in which we operate is not only good business, but also our role as a responsible corporate citizen. Some examples of our activities include:

- Our Learners to Leaders® educational alliance, which provides learning opportunities to young people from disadvantaged backgrounds.
- College scholarships for the children and grandchildren of our employees, in partnership with numerous colleges and universities in the United States, including several historically black colleges and universities (HBCUs).
- Our Helping Hungry Homes® initiative, through which we partner with America's Second Harvest and local food banks to feed families in need.
- Our partnership with FFA to support young students in the educational quest for careers in the agriculture industry.

¹ All references to "Smithfield," "we," "us," and "our" are terms of convenience used to refer collectively to Smithfield Foods and all of its subsidiaries. Similarly, the terms "division" and "business unit" may be used to refer to one or more subsidiaries, which are independent operating companies.



Governance Overview

Our mission at Smithfield is simple: to be an ethical food industry leader that excels at bringing delicious and nutritious meat products to millions of people every day—all while setting industry benchmarks for sustainability.

We do this in part through sound governance and management principles and practices, which provide the foundations for trust, transparency, and progress at our company. Our systems for ethical conduct, the way we engage with stakeholders, our approach to public policy, and our management of supply chain issues are all important elements of our sustainability strategy, cutting across our key pillars and creating value for our company and for our stakeholders.

Smithfield Foods is a wholly owned subsidiary of WH Group Limited, a publicly traded company in Hong Kong. Operationally, we are part of an enterprise that shares our belief in global opportunities and our commitment to the highest standards of product safety and quality.

Our corporate-level Public Affairs and Sustainability Committee, comprised of our chief executive officer, our senior vice president of corporate affairs, and other senior Smithfield leadership, approves any new sustainability goals and targets and guides our strategy. Our chief sustainability officer reports directly to this committee. Our CEO reviews the sustainability performance of our company on at least an annual basis.

Smithfield does not currently tie executive pay to sustainability performance. Our executive compensation philosophy is to motivate our executive officers continually to improve operating performance.

In this section of our report, we discuss ethics and compliance, our governance and sustainability management structures, our sustainability targets, our stakeholder engagement efforts, and public policy issues of interest to our company. This section also discusses the results of our most recent materiality analysis that we used to better understand—and better report on—the issues that are of greatest importance to our company and to our stakeholders.

Materiality Analysis

Smithfield conducted our first materiality analysis in 2010 to gain a better understanding of the key sustainability issues for our company and our stakeholders and to guide our reporting and strategy. The analysis was updated in 2012.

In 2015, we conducted a substantial update to our materiality analysis. We developed our process for this analysis and for determining the content for this report using the Global Reporting Initiative (GRI) G4 Guidelines, including GRI's principles for defining report content, sustainability context, materiality, completeness, and stakeholder inclusiveness.

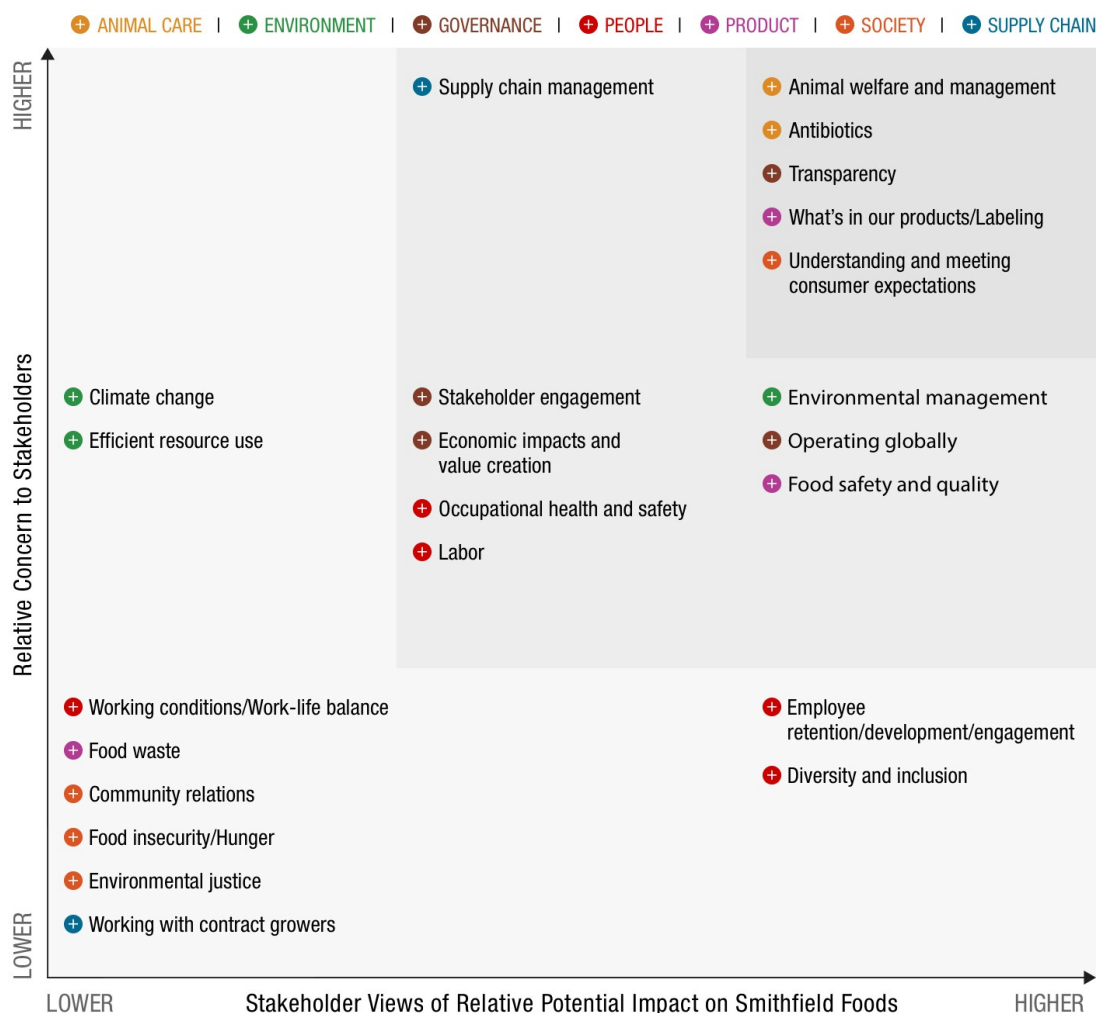
To conduct the analysis, we identified a list of potential material issues through interviews with internal and external stakeholders and by reviewing internal and external documents reflecting key stakeholders' points of view. Overall, we reviewed more than 75 inputs representing the perspectives of the company, employees, suppliers, regulators, local community members, industry organizations, animal welfare organizations, sustainability think tanks, customers, and consumers. This included nearly two dozen interviews with internal and external stakeholders. We then condensed and prioritized our issues based on stakeholders' level of concern and potential impact to the company. We validated and finalized the analysis with a group of internal stakeholders and external sustainability experts. We believe the material issues illustrated below are the most critical to our company's ability to create and sustain value today and in the future.

We use the results of our analysis to guide our sustainability strategy and to manage the issues of concern to our stakeholders and to our company. This informed decision-making demonstrates our commitment to leadership in responsible food production.

We also used the materiality analysis to shape content for this report, including the selection of the GRI aspects and indicators required to be "in accordance" with GRI G4 Guidelines reporting standards. As much as is practical, we have weighted discussion around the topics that have been identified as most material to our business and to our stakeholders. We plan to review and update this analysis on a regular basis.

Materiality Matrix

This matrix illustrates the results of our materiality analysis. Issues in the upper right box are most important to both stakeholders and the company. Issues are color-coded based on the broad categories used to organize this report.



What's included in our material issues?

Below we provide additional insight into how we define our material issues, including the boundaries of where the primary impacts associated with each issue occur. Internally, all of our material issues are relevant for all parts of Smithfield's business. Outside of our own operations, we assessed the importance and impact of issues across our value chain, from upstream in the supply chain to downstream product consumption and disposal. We also analyzed the stakeholders affected at each value chain stage. While recognizing that material issues may have indirect impacts on multiple stakeholders, we define the external boundaries based on external stakeholders who are directly impacted by each issue. The relevant Global Reporting Initiative (GRI) aspects associated with each of our material issues are also grouped together below for convenience.

Animal Care

Animal welfare and management

- Issue definition: Our policies and performance as they relate to the health, safety, and comfort of our animals
- External issue boundaries: Relevant to contract growers, customers, consumers, regulatory entities
- Related GRI aspects: Animal welfare

Antibiotics

- Issue definition: Our policies, practices, and administration of antibiotics; this issue includes stakeholder concerns about overuse and antibiotics resistance
- External issue boundaries: Relevant to contract growers, customers, consumers, regulatory entities
- Related GRI aspects: Animal welfare

Environment

Environmental management

- Issue definition: Our policies, performance, and systems for reducing our footprint and going beyond compliance
- External issue boundaries: Relevant to local communities, contract growers, suppliers, regulatory entities, nongovernmental organizations
- Related GRI aspects: Compliance, environment overall, emissions, effluents and waste, water

Climate change

- Issue definition: Addressing global climate change by reducing our carbon footprint
- External issue boundaries: Relevant to local communities, regulatory entities, nongovernmental organizations
- Related GRI aspects: Energy, emissions

Efficient resource use

- Issue definition: Producing more while using less water, energy, and materials and generating fewer emissions and solid waste
- External issue boundaries: Relevant to local communities, regulatory entities, nongovernmental organizations
- Related GRI aspects: Water, energy, materials

Governance

Transparency

- Issue definition: Explaining what we do and how we do it through proactive and clear communications
- External issue boundaries: Relevant to contract growers, suppliers, customers, consumers, regulatory entities, nongovernmental organizations

Operating globally

- Issue definition: Addressing challenges related to diverse export markets, free trade, and risk management
- External issue boundaries: Relevant to customers, regulatory entities
- Related GRI aspects: Procurement/sourcing practices, market presence, anti-competitive behavior

Stakeholder engagement

- Issue definition: Working with our customers, regulators, competitors, investors, and others to understand their concerns and needs and to share our efforts to address them
- External issue boundaries: Relevant to local communities, contract growers, suppliers, customers, nongovernmental organizations
- Related GRI aspects: Local communities

Economic Impacts and value creation

- Issue definition: Creating value for our own business and for our customers, employees, investors, and society
- External issue boundaries: Relevant to local communities, contract growers, suppliers, customers
- Related GRI aspects: Economic performance, local communities, market presence, indirect economic impacts

People

Occupational health and safety

- Issue definition: Policies, practices, and performance related to keeping our people healthy and safe
- External issue boundaries: Relevant to regulatory entities
- Related GRI aspects: Occupational health and safety

Labor

- Issue definition: Creating jobs and career opportunities while being mindful of immigration issues and the financial uncertainty faced by American farmers
- External issue boundaries: Relevant to local communities, regulatory entities, contract growers, suppliers
- Related GRI aspects: Market presence

Employee retention/development/engagement

- Issue definition: Creating a workplace where employees want to stay and grow with us throughout their careers
- External issue boundaries: Relevant to local communities
- Related GRI aspects: Employment, training and education, labor/management relations

Diversity and inclusion

- Issue definition: Being an equal opportunity employer that values all our people and fosters an environment of diversity and tolerance
- External issue boundaries: Relevant to local communities, nongovernmental organizations
- Related GRI aspects: Diversity and equal opportunity

Working conditions/Work-life balance

- Issue definition: Creating a work environment that allows for balance in employees' professional and personal lives
- External issue boundaries: Relevant to local communities
- Related GRI aspects: Employment, labor/management relations

Products

What's in our products/Labeling

- Issue definition: Clearly communicating how we make our products healthier and more nutritious and how we help our consumers make informed dietary choices; this issue also includes concerns about artificial ingredients and antibiotics residues
- External issue boundaries: Relevant to customers, consumers, contract growers, suppliers, regulatory entities
- Related GRI aspects: Customer health and safety, product and service labeling, compliance, marketing communications

Food safety and quality

- Issue definition: Producing safe, high-quality meat products for our consumers
- External issue boundaries: Relevant to customers, consumers, contract growers, suppliers, regulatory entities
- Related GRI aspects: Customer health and safety, product and service labeling, compliance

Food waste

- Issue definition: Reducing food waste through innovations in packaging and optimized logistics
- External issue boundaries: Relevant to suppliers, customers, consumers
- Related GRI aspects: Effluents and waste

Society

Understanding and meeting consumer expectations

- Issue definition: Predicting and responding to our consumers' evolving needs and preferences
- External issue boundaries: Relevant to customers, consumers, contract growers, suppliers
- Related GRI aspects: Healthy and affordable food

Community relations

- Issue definition: How Smithfield supports local communities through social outreach and engagement
- External issue boundaries: Relevant to local communities, nongovernmental organizations
- Related GRI aspects: Indirect economic impacts, local communities

Food insecurity/Hunger

- Issue definition: Providing food to those in need
- External issue boundaries: Relevant to local communities, nongovernmental organizations, consumers
- Related GRI aspects: Indirect economic impacts, local communities

Environmental justice

- Issue definition: Understanding and addressing the potential for inequitable distribution of our impacts and benefits
- External issue boundaries: Relevant to local communities, nongovernmental organizations
- Related GRI aspects: Emissions, local communities

Supply Chain

Supply chain management

- Issue definition: Leveraging relationships throughout our supply chain to optimize performance
- External issue boundaries: Relevant to contract growers, suppliers, customers
- Related GRI aspects: Procurement/sourcing practices, indirect economic impacts

Working with contract growers

- Issue definition: Engaging with independent farmers who grow hogs for Smithfield
- External issue boundaries: Relevant to contract growers, suppliers
- Related GRI aspects: Procurement/sourcing practices

Ethics & Compliance

Safeguarding integrity remains a critical business priority. Ethical and lawful conduct is an essential part of our company's culture, and we are committed to conducting our business with the highest standards.

Smithfield maintains a **Code of Business Conduct and Ethics** for all employees and corporate officers. We publish the Code in the five major languages of the countries in which we have operations. It conveys policies and practices for conducting business in accordance with applicable laws and the highest ethical standards.

Our executive-level Ethics and Compliance Committee (ECC), chaired by our chief legal officer, oversees the full range of compliance issues for Smithfield and administers the Code.

All executive officers are required to complete an annual certification relating to ethics and compliance, the Code, and other company policies. The chair of the ECC is required to report promptly any violation of the Code by an executive officer or director to the Public Affairs and Sustainability Committee.

We also provide employees with opportunities to report ethics violations or similar concerns through an anonymous telephone hotline. The company reviews and responds to all hotline complaints.

Our email Code of Conduct certification process promotes awareness of our code and the values that we expect our employees to demonstrate in their day-to-day work. Each year, we send emails to all employees with email accounts, and they must acknowledge compliance. Certain supervisory/managerial personnel who do not have active email accounts certify compliance by paper-based methods.

Sustainability Management

Overall management of Smithfield's sustainability program rests with the chief sustainability officer (CSO) and a core team of senior managers and subject matter experts from business units and facilities.

This cross-functional team facilitates decision-making, recommends sustainability goals and promotes sustainability, reviews best practices, and coordinates and disseminates key sustainability data.

In Smithfield's business segments, coordinators are charged with communicating sustainability goals and targets through our operations. Each segment/location tracks individual progress to the goals, providing data through a centralized information gathering system.



We developed our sustainability management strategy more than a decade ago. At that time, we identified several sustainability areas that merited a more consistent management approach across the company to meet our goal of leading the industry with our practices. The first such area was environmental management. We implemented and certified environmental management systems at all farms and processing facilities. Over the years, we expanded that approach to other areas such as animal care and employee health and safety. We formed corporate committees to develop and implement consistent approaches, including committees focusing on environmental compliance, animal care, and food safety. Common elements of the management systems developed in each of these areas include policies, employee training, goal setting, corrective action, third-party auditing, and executive review.

International Operations & Acquisitions

While our sustainability program initially focused on operations in the United States, the program also applies to our operations in Europe. Of course, regulatory frameworks vary from country to country. Therefore, we, like many other companies, are working hard to align our goals and approaches to important issues, such as environmental management, with international operations.

When we acquire a new company, we conduct various reviews, including an assessment of the company's practices related to key sustainability

areas such as employees, safety, and the environment. We also try to address the current relationship with local regulators and the communities in which they are based. Following an acquisition, we promptly implement our environmental and health and safety management systems (described in the respective areas of our sustainability program on this site) and identify practices already in place, as well as gaps. We then use our corporate-level training programs and intranet sites to communicate best practices.

We also make available our environmental management expertise and safety expertise to the companies in which we hold a minority interest, and we encourage them to utilize environmental and safety compliance practices that are consistent with our own.

Supply Chain Management

Suppliers are integral to our commitment to produce Good food. Responsibly.®

Our [Supplier Code of Conduct](#) helps ensure that suppliers continue to meet or exceed our high standards. The Code, which is incorporated into all new and renewed contracts with our largest suppliers, sets forth the business conduct requirements for all suppliers who do business with Smithfield.

The degree to which suppliers comply with the requirements—and the extent of their sustainability efforts—will be a consideration for future business with Smithfield. The code outlines expectations around legal compliance, environmental sustainability, and business integrity, as well as labor and human rights issues. We monitor our suppliers' performance, although we do not conduct formal audits.

We maintain standardized vendor requirements, which include food safety, equal employment opportunity, and animal welfare guidelines, for all ingredient and packaging suppliers. (See the [Animal Care](#) section for a detailed discussion of management policies and practices around hog supply.)

We also have surveyed our largest suppliers to understand what they are doing in areas such as energy reduction, natural resource use, employee safety, and community giving. We plan to conduct another survey of major suppliers in 2016.

Sustainability Goals & Targets

In 2010, we first adopted a series of ambitious goals and corresponding targets in our domestic operations for our primary sustainability focus areas.

We reached several of our targets ahead of schedule and, in early 2015, refined all of our goals and targets to better align them with our performance and with a new, more unified company structure. The new goals and targets coincided with the realignment of our corporate structure.

Going forward, we anticipate setting new goals and targets, particularly in the areas of environment, employees, and product innovation.

Our latest set of goals and targets includes an updated suite of environmental resource reduction targets that use calendar 2014 as a new baseline. These goals build upon lessons learned and best practices that we have developed over the last few years. We intend to continue to push for improvements across our company, reaffirming our role as a leader in our industry.

Each of these is discussed in greater detail in the relevant sections of this website, including the [Transparency Scorecard](#).

Stakeholder Engagement

We define stakeholders as all persons or organizations that are affected by the operations or practices of the company.

We routinely conduct internal analyses to identify stakeholders and have identified and defined the following stakeholders as groups we engage with regularly:

- **Internal stakeholders**, including employees, facility management, and corporate management, among others.
- **External stakeholders**, including the customers and suppliers with whom we do business; the end consumers of our products; federal, state, and local governments and regulatory entities; nongovernmental organizations; industry groups and trade organizations; and the communities in which our employees live and work.

Since the hiring of our first chief people officer in 2015, we have put particular emphasis on engaging with employees to acquire more input from them. In recent years, we have also increased our efforts around proactive stakeholder engagement, reaching out to a variety of groups to talk about who we are, what we do, and how we might be more responsive to each other's needs. These groups include members of the media, opinion leaders on issues of food production, religious organizations, and student groups. One area we've focused on is sustainable food production, an increasingly urgent issue as the world's population continues to grow. You can watch our video below: We engage with stakeholders in a number of ways and forums, and our communications vary depending on their respective needs. We engage with other stakeholders on an as-needed basis in response to particular issues that arise.

In addition, our sustainability targets will continue to encourage our segments and facilities to meet with community stakeholders to highlight our programs and obtain input.

Other examples of engagement include the following:

- A partnership with the Environmental Defense Fund (EDF) aims to help farmers optimize how much fertilizer they use on grains grown for animal feed. The project came about after Walmart challenged suppliers to find ways to reduce fertilizer loss on farms.
- The government is an important stakeholder, and Smithfield continues to explore innovative initiatives with elected officials. For example, Smithfield is partnering with the U.S. Environmental Protection Agency's (EPA's) **Nutrient Recycling Challenge**. This effort is designed to discover and promote innovative technologies that transform manure into cost-effective products that can be used by farmers.
- Our sales teams regularly engage with our customers (e.g., the supermarkets and retail chains that buy our products) to highlight for them the work we are doing in animal care, particularly around our industry-leading use of, and transparency around, **antibiotics**, as well as our commitments to **sow housing**.
- We're also engaging with our contract growers to provide guidance and advice on how they can convert sow housing on their farms.
- Feed additives are a concern among some stakeholders, so we responded by removing ractopamine from feed for all company-owned animals supplied to our facilities.
- Over the years, we have increased our reporting on water use after stakeholders told us that they wanted to learn more about how we are managing water at Smithfield.
- Increasingly, our customers are hearing from their customers—the ultimate consumers—about issues of concern to them. We participate in supplier surveys and communicate directly with customers, including working with our customers to develop approaches to issues ranging from animal care to nutrition to environmental and health and safety practices. We are responding in numerous ways, including offering more low-fat and low-sodium products. The sales force, which provides the primary customer point of contact, communicates our approach to sustainability, so various team members can interact knowledgeably with customers on these issues.

See the Animal Care section for information on how we're **engaging with growers of alternative grains in the Southeast**.

Smithfield Association Membership

Our engagement with diverse stakeholders is reflected in the list of organizations in which we hold memberships.

National Organizations

- American Meat Science Association (AMSA)
- American-Romanian Business Council
- American Polish Business Council
- American Society for Microbiology (ASM)
- Animal Agriculture Alliance
- Center for Food Integrity
- Corporate Environmental Enforcement Council
- Democratic Attorneys General Association
- Democratic Governors Association
- Environmental Law Institute
- EPA (U.S. Environmental Protection Agency) Office Water Stakeholder Meeting Agriculture/Manufacturing
- Food Marketing Institute
- Global Environmental Management Initiative
- Institute of Food Technologists
- International Association for Food Protection (IAFP)
- McDonald's Corp. Sustainability Council
- National Academy of Sciences Roundtable on Science and Technology for Sustainability
- National Agriculture in the Classroom (NAITCO)
- National Association of Manufacturers
- National Farm Ranch & Rural Communities Committee (U.S. Environmental Protection Agency Federal Advisory Committee)
- National Pork Board (NPB)
- National Pork Producers Council (NPPC)
- National Restaurant Association Education Foundation
- North American Meat Institute (NAMI)

State and Regional Organizations

- Alliance for the Chesapeake Bay
- Bladen County Committee of 100 (North Carolina)
- Bladen County Livestock Association (North Carolina)
- Cape Fear River Assembly (North Carolina)
- Chesapeake Business Forum
- Clinton 100 Committee (North Carolina)
- Duplin Agribusiness Council (North Carolina)
- Missouri Agribusiness Association (MO-AG)
- North Carolina Chamber of Commerce
- North Carolina Farm Families
- North Carolina Foundation for Soil and Water Conservation
- North Carolina Meat Processors Association
- Palmetto Agribusiness Council (South Carolina)
- Sampson County Friends of Agriculture (North Carolina)
- Various state pork associations
- Virginia21
- Virginia Agribusiness Council
- Virginia Chamber of Commerce
- Virginia FREE
- VIRGINIAforever
- Virginia Foundation for the Humanities
- The Virginia Public Access Project (VPAP)
- Virginia Oyster Reef Heritage Foundation
- Wallace Committee of 100 (North Carolina)

- Organization for International Investment
- Republican Attorneys General Association
- Republican Governors Association
- U.S.–China Agriculture and Food Partnership
- U.S.–China Business Council
- U.S. Meat Export Federation (USMEF)

These lists are not meant to be exhaustive and may not include every association of which we are members.

Public Policy

We participate in legislative and regulatory processes both as an individual company and through industry associations.

We believe that engagement in the political process is important in making our views heard on issues of significance to the business. Smithfield has participated in many cross-industry boards and commissions at the national and state levels.

Issues of Interest

The following are among the most significant current public policy issues for our company:

- **Free Trade.** Smithfield and the pork industry depend on free and open export markets to support our growing business. The Trans-Pacific Partnership (TPP), a trade pact between the United States and 11 Pacific nations, must be approved by the U.S. Congress to be brought into force. The market access benefits of this agreement are substantial, particularly with respect to Japan, our most valuable export market. Additionally, the United States continues to negotiate the Transatlantic Trade and Investment Partnership (TTIP) with the European Union (EU). Each of these agreements would eliminate tariffs and other barriers to export of the goods that we produce to growing and emerging marketplaces around the globe. Smithfield supports these agreements and urges swift adoption of TPP by Congress.
- **Renewable Fuel Standard (RFS) Reform.** The Renewable Fuel Standard (RFS), which requires huge volumes of corn to be processed into ethanol at ever-increasing volumes irrespective of market conditions, is a law we have worked for years to reform. The RFS diverts 40 percent of the nation's corn supply into fuel, artificially driving up demand, reducing supply, and increasing the cost of food. Our work has resulted in growing awareness of the drawbacks of the RFS and the steady erosion of public support. 2014 marked the first time that a majority of the U.S. House of Representatives (218 members) was on the record in support of reforming the RFS. Smithfield supports the passage of H.R. 704, the "RFS Reform Act of 2015," in the U.S. House of Representatives and S. 577, the "Corn Ethanol Mandate Elimination Act of 2015" in the U.S. Senate. These bills would eliminate the federal mandate for corn ethanol while keeping in place incentives for the development and commercialization of advanced ethanol.
- **Immigration.** Since many valued employees are legal immigrants, we pay close attention to debates on immigration reform. This immigrant workforce brings a rich diversity to our operations and the communities in which we live. We support comprehensive U.S. immigration reform that ensures we can maintain an adequate and stable workforce and provide opportunities for legitimate workers who seek employment at companies like ours. We believe the United States should protect legal immigrants and their employers.

Policies & Disclosures

California Slavery and Human Trafficking Disclosure

Smithfield¹ is committed to the protection and advancement of human rights, as enshrined in the Universal Declaration of Human Rights (UDHR) issued by the General Assembly of the United Nations on December 10, 1948. Smithfield and its employees adhere to the Smithfield Human Rights Policy (our "Policy"), which is grounded in the [Smithfield Code of Business Conduct and Ethics \(PDF\)](#) (our "Code of Conduct"). A primary tenet of our Policy is "Smithfield does not use forced or compulsory labor."

Effective January 1, 2012, the California Transparency in Supply Chains Act of 2010 requires Smithfield to make the following disclosure as to our efforts to eradicate slavery and human trafficking from our direct supply chain:

- **Verification of Supply Chain.** Smithfield has been preparing a code of conduct for our suppliers (our "Supplier Code"). A primary tenet of that code will be adherence to all relevant laws and regulations, including those addressing slavery and human trafficking. We will update this disclosure once our supplier code of conduct is in effect.
- **Audit.** Smithfield does not currently conduct audits of suppliers to evaluate supplier compliance with company standards against trafficking and slavery in supply chains.
- **Supplier Certification.** Once our Supplier Code is in effect, our suppliers will be required to certify compliance with our Supplier Code.
- **Accountability.** Smithfield is committed to ethical and socially responsible conduct in the workplace. Upon hire, Smithfield requires all employees to read and acknowledge receipt and understanding of our Code of Conduct. Employees recertify this acknowledgment annually. Our Code of Conduct includes, among other things, certification that the employee will comply with all applicable laws and regulations. Human trafficking and slavery is a violation of such laws, and would constitute a violation of our Code of Conduct. Such a violation could result in disciplinary action against the employee, including termination.
- **Training.** As noted above, Smithfield requires annual certification from our employees that they understand and will adhere to our Code of Conduct. We do not conduct specific training at this time on our Code of Conduct or on our Policy.

Supplier Code of Conduct

Smithfield¹ continues to focus on its vision of being the most trusted, respected, and ethical food industry leader. This vision supports our promise to customers that we will produce "Good food. Responsibly.®" Our suppliers are integral to maintaining and improving on these goals by providing sustainable products and services. This Supplier Code of Conduct has been implemented to help ensure that our suppliers continue to meet and exceed these high standards.

It sets forth the business conduct requirements for all suppliers (suppliers, vendors, contractors, and consultants) who do business with Smithfield as well as strategies to support a sustainable future. These requirements are in addition to other contract terms and conditions that apply. The degree to which suppliers comply with these applicable requirements and the extent of their sustainability efforts will be considerations for future business with Smithfield.

Legal Compliance

Suppliers must comply with all applicable laws, regulations, and rules for the products and services they manufacture, distribute, or otherwise provide. This includes compliance with federal, state, local, and international requirements. Examples include, but are not limited to, the following areas:

- Environmental
- Health and Safety
- Labor/Employment

- Labeling/Packaging
- Transportation
- Record Keeping and Accounting
- Securities/Insider Trading
- Import/Export
- Antitrust/Fair Competition
- Foreign Corrupt Practices
- Data/Copyright
- Immigration

Labor and Human Rights

Suppliers shall treat all employees with respect and dignity at all times. Adherence to laws and regulations governing labor and human rights is a prerequisite for this to occur. Smithfield recommends suppliers go beyond the legal requirements and implement policies and procedures that help foster improved employee relations.

Forced Labor

All labor used by suppliers must be voluntary. The use of forced labor of any kind is prohibited, including indentured service, involuntary prison labor, bonded labor, and labor performed due to physical threat.

Child Labor

Suppliers and their subcontractors shall not use child labor as defined by federal and state regulations and international standards. Smithfield prefers suppliers do not employ anyone under the age of 16.

Working Hours

Suppliers shall not schedule employees to work more hours or days than allowed by applicable laws. Voluntary alternative schedules and overtime are acceptable if conducted in compliance with legal requirements and collective bargaining agreements.

Compensation

Employees shall be fairly compensated for their work, which must meet minimum wage requirements where applicable. Wages should be comparable to those of similar companies in the local area. Overtime shall be paid as required by law or at least the same as the hourly wage.

Freedom of Association/Collective Bargaining

Suppliers must respect the rights of employees to freely associate, organize, and bargain collectively.

Harassment and Abuse

Suppliers must ensure that their facilities are free from employee harassment, threats, punishment, or other forms of abuse.

Product Safety and Quality

Smithfield is dedicated to providing the highest-quality meats and packaged foods to our customers. Suppliers of meat products and ingredients have a direct impact on our ability to meet this commitment and, therefore, must have in place policies and procedures to manage the safety and quality of products delivered to us. Smithfield reserves the right to inspect supplier facilities and request documentation to verify that these

systems are in place and are being fully implemented.

Animal Well-Being

Smithfield is committed to being the industry leader in animal care practices to assure respectful and humane treatment of animals that we own or process, to produce wholesome food products for our customers, and to analyze our operations and practices, including internal and third-party audits, to ensure continual improvement. Suppliers that provide animal products to our facilities are expected to have similar operating policies and procedures in place to ensure the humane treatment of their animals during all stages of production, transportation, and processing. We invite our suppliers to review our Animal Care Policy and Antibiotics Policy for further guidance.

Environment and Sustainability

At Smithfield, we are constantly striving to improve our environmental performance and we aim for leadership in our industry. Our suppliers must be an extension of these environmental stewardship efforts by adhering to applicable environmental regulations as a minimum. In addition, Smithfield expects its suppliers to pursue environmentally responsible leadership roles by proactively reducing its environmental impact and assisting our facilities in meeting their environmental objectives and targets whenever possible. Suppliers should consider the following environmental management best practices and sustainability goals:

- Smithfield prefers that suppliers adopt an Environmental Policy and implement an environmental management system;
- Obtain all permits and develop all applicable environmental plans required for your facilities and fully comply with their monitoring, reporting, and renewal requirements;
- Minimize waste generation and manage all wastes as required by law and in a responsible manner. Source minimization practices are preferred followed by direct reuse and recycling of wastes where feasible;
- Minimize water use and wastewater generation through conservation practices and reuse options;
- Minimize air emissions that affect human health and the environment, and effectively operate installed air emission control processes;
- Reduce energy consumption and the generation of greenhouse gases;
- Reduce packaging materials for supplied products and assist Smithfield in reducing the environmental impact of the packaging used for our food products. A life-cycle approach to packaging design is preferred; and
- Reduce the use of hazardous materials in manufacturing operations and inform Smithfield of any formulation changes that could adversely impact our environmental performance or food quality.

Health and Safety

At Smithfield, the safety, health, and well-being of our employees is more important than our most valued customer. Our suppliers must also give the health and safety of their employees the same priority. Again, compliance with health and safety legal requirements is mandatory. The minimum program requirements include:

- Provide employees with clean, safe, and healthy working conditions;
- Provide potable drinking water, adequate sanitation facilities, resources to respond to fire and medical emergencies, and personal protective equipment;
- Implement policies and procedures that help ensure equipment is maintained in a safe condition, identify and correct workplace hazards, monitor and report on workplace illness and injury, require health and safety education and training for employees, and encourage employee participation; and
- Minimize employee exposure to health hazards including hazardous chemicals, biological agents, and air pollutants.

Business Integrity

Smithfield expects its suppliers to always conduct business with high ethical, legal, and socially responsible standards. The Smithfield Code of Business Conduct may be referenced for a more detailed discussion of our expectations.

Ethical Behavior

Suppliers must not tolerate any form of corruption within their company or from their subcontractors such as fraud, bribery, extortion, or embezzlement. The improper use of insider information and price fixing are prohibited.

Conflicts of Interest

Suppliers shall notify Smithfield of any potential conflict of interest relating to financial interests or other arrangements with our employees that may be considered inappropriate. Gifts and entertainment offered to employees must not be excessive or construed as an attempt to influence business decisions.

Protecting Company Assets

Suppliers often have access to company assets and sensitive information that must be safeguarded. This includes trade secrets, intellectual property, production methods and equipment, and financial information. Disclosure of confidential information or use of trademarks and copyrighted information requires written approval. Smithfield reserves the right to have executed nondisclosure agreements on file with distributors and manufacturers although this shall not prevent Smithfield from conducting general business transactions.

Verification of Supplier Compliance

Smithfield will verify compliance with this Code of Conduct through the following:

- Smithfield reserves the right to audit supplier facilities following a reasonable request, with the expectation that suppliers will correct identified deficiencies.
- Suppliers shall inform Smithfield of any significant regulatory noncompliances or significant news events that may negatively impact public or governmental views of our company or jeopardize our legal compliance.

Suppliers shall complete an annual sustainability assessment survey, if requested, to develop a baseline of sustainability performance and identify improvement trends.

Code of Business Conduct and Ethics

The Smithfield¹ Code of Business Conduct and Ethics embodies our commitment to doing the right thing in all aspects of our business. Doing the right thing means acting in the best interests of those who count on us to do our jobs: our customers, our co-workers, and the public.

All employees are asked to sign a statement that they have read and understand the Smithfield Code of Business Conduct and Ethics, and that they will act in full compliance.

The Code of Business Conduct and Ethics is available in the following languages:

[English PDF](#)

[Polish PDF](#)

[Romanian PDF](#)

[Spanish PDF](#)

¹ All references to "Smithfield," "we," "us," and "our" are terms of convenience used to refer collectively to Smithfield Foods and all of its subsidiaries. Similarly, the terms "division" and "business unit" may be used to refer to one or more subsidiaries, which are independent operating companies.



Our Commitment to International Sustainability

Smithfield's wholly owned international investments are predominantly located in Poland and Romania. The Polish operations rank among the country's largest processors of pork and poultry.

Some highlights from 2015 include the following:

- The Polish operations raised 1.8 million market hogs (average weight 266 pounds).
- The European operations spent a combined \$119 million on 675,000 tons of locally raised grains.
- The European operations sent 18 percent less waste to landfill than in 2014.

Nearly all poultry is sourced from 540 independent growers throughout Poland. The segment also operates three poultry-growing farms and four hatcheries to supply chicks to independent poultry producers. In Romania, the pork processing plant is the country's largest and receives all of its market hogs from the segment's Romanian farms.

Polish and Romanian operations raised approximately 2.8 million market hogs and produced more than 1.5 billion pounds of fresh pork, fresh poultry, and packaged meat products in 2015.

The international operations¹ follow Smithfield's corporate animal care, environmental management, and food safety protocols, and they have been implementing our corporate employee health and safety standards. The European operations are in the process of designing a new set of performance goals and targets for advancing animal welfare, safeguarding employees, reducing environmental impacts, helping those in need, and maintaining the highest standards of food safety and quality.

Supporting Growth and Development in Europe

Smithfield has supported growth and development in Europe in several vital ways:

- Smithfield's vertically integrated business model provides opportunities in grain and feed production, livestock farming, meat production, and product marketing that other companies don't have.
- The sizeable investments our company made in infrastructure, coupled with Smithfield's vast industry knowledge, has helped modernize and optimize the European operations.
- Smithfield facilitated the acquisition of respected and recognizable brands in Poland, expanding our market presence.

Celebrating 16 Years in Poland

- 1951: Animex founded by the Polish government.
- 1960: Animex buys the KRAKUS trademark.
- 1990: Animex becomes a private company, purchasing several meat and poultry plants, agricultural companies, and feed factories.
- 1994: Animex listed on the Warsaw Stock Exchange.
- 1999: Smithfield Foods becomes Animex's majority shareholder.
- 2000: Smithfield Foods expands Animex's hog production and feed factories in Poland to create the Agri Plus group of companies.
- 2002: Smithfield Foods becomes owner of 99 percent of Animex's shares and discontinues public trading.
- 2004: Animex acquires leading brands Zakłady, Mięsne, Morliny, and Berlinki.
- 2007: The Animex Foundation (now part of the Smithfield Foundation) is created.
- 2013: The WH Group purchases Smithfield Foods.

Celebrating 12 Years in Romania

- 1967: Comtim Company is founded and will soon become the largest pork producer in Romania.
- 1980: Comtin begins shipping products throughout Europe.
- 1998: Comtim Company reorganizes and, in 2002, becomes the Comtim Group.
- 2004: Smithfield Foods buys Comtim Group.
- 2007–08: Smithfield begins to modernize and expand production facilities. First contract grower farms become operational.
- 2010: Smithfield builds new sow farms and modernizes 31 existing farms.
- 2012: Smithfield Romania becomes the first European Union (EU) Meat Export Authorized Romanian meat producer.
- 2013: The WH Group purchases Smithfield Foods.
- 2015: Smithfield Romania becomes the first Romanian producer to export to China.

¹ "International operations" refer to wholly owned Polish and Romanian operations specified in this section.

Value Creation

As one of the largest U.S. agricultural and food processing companies in Poland and Romania, the international segment is demonstrating that cooperation between Eastern European and U.S. professionals can bring substantial value to local agricultural, animal husbandry, and food production industries.

One good example of this is that we only purchase locally grown grains to feed our pigs. Buying locally reduces transportation costs and infuses millions of dollars into small businesses and the regional economy each year. In 2015 alone, we paid local farmers nearly \$119 million.

Supporting Local Grain Farmers	Romania	Poland
Number of suppliers	105+	1,786+
Local spending	\$49.2 million	\$69.5 million
Annual crop purchases (tons)	308,300	366,700

All values for 2015.

Our International Segment Wins Awards for Delivering Value

In November 2015, the Romanian Chamber of Commerce named Smithfield Romania's hog production and processing segment among the Top Companies in Romania. Our strong economic performance earned three regional and two national Chamber of Commerce Awards for Outstanding Economic Results among large animal production and meat processing companies.

In 2015, *Rynek Spozywczy (Food Market)* magazine recognized Animex as the largest Polish food producing company. Animex earned this distinction by employing over 8,000 full-time workers and reaching \$1 billion in annual sales. The company has doubled in size since 1999, thanks to Smithfield's \$1 billion investment in Polish agriculture and food production sectors.

Animex was also officially recognized as one of the top agricultural companies in Eastern Europe for its contributions to Poland's agricultural industries.

But it isn't just about the money we spend on raw materials. We also put significant resources into helping local hog and grain farmers develop their facilities and improve production. We provide useful advice to our suppliers, helping them design crop production schedules, diversify their earnings, modernize their farms, and secure loans to expand vital infrastructure. This helps our partners grow their businesses, which, in turn, benefits our own business. The greater volume and improved quality of the raw resources we buy enables our hog production and meat processing operations to grow even stronger.

We worked with more than 1,000 Polish contract farmers that operate nurseries and finishing farms to supply about 99 percent of the hogs sold by our hog production operations in 2015. These agreements—totaling \$45 million—provide multiple economic benefits to rural communities, including employment, steady income, and modernized agriculture. Our processing operations also purchased \$208.3 million of hogs on the open market from independent farmers. In total, the Polish operations contribute \$253.3 million into the Polish economy each year in hog purchases alone.

We have also encouraged farmers to build new hog production facilities. In Poland, our local suppliers have invested over \$35 million to build 73

buildings and modernize an additional 64 buildings since 2013. In Romania, we have created seven contract wean-to-finish farms, which produce market hogs for processing operations.

New Investment and Business Growth in our Polish Plants

In 2015, our Polish meat production segment has been aggressive in its investments—to the tune of \$47.5 million—in new growth opportunities. The following are just a few examples of the capital investments we have made that are expected to increase productivity, reduce injuries, and allow us to sell a more diverse array of products:

- The segment invested \$9 million in a new hot dog machine, which allows continuous, high-volume production, making us the largest hot dog maker in Poland.
- It spent \$8 million expanding its factory, adding specialized equipment to produce pre-cooked and ready-to-eat products (i.e., “convenience foods”).
- It introduced a \$5 million automated chicken portioning and filleting line, which will reduce manual deboning and slicing.

Animal Care

We focus on keeping our pigs healthy, safe, and comfortable. Neglect or abuse of animals in any form is not tolerated and is grounds for employee or contract grower termination. Offenders may also be subject to criminal prosecution under applicable local laws.

The European Union (EU) has adopted specific rules and regulations for the welfare of pigs and poultry on farms, during transport, and at processing facilities. European operations are regularly audited to ensure compliance.

Animal Care Policy

All European operations maintain a formal Animal Care Policy that is consistent with Smithfield's U.S. operations.

Our Animal Care Goal

- Keep animals safe, comfortable, and healthy

Our Animal Care Targets

- Provide group housing for pregnant sows and housing for laying hens per European Union (EU) requirements
- Provide pigs and poultry with the floor area and surface required by the EU
- Train relevant farm and plant employees in animal handling procedures
- Implement a written program for animal welfare at plants

Animal Production Certification Program

In Romania, the animal production department recently developed an internal certification program for its animal caretakers, veterinarians, and technicians.

The career development program helps employees gain important skills and knowledge while gaining invaluable work experience. It also offers opportunities for advancement within the company. The intended outcomes are well-prepared employees, improved farm performance, and the ability to identify potential department managers.

The curriculum consists of several three-month classes covering theoretical and practical elements for each area of hog production, from gestation through finishing. Employees must pass one certification level to advance to the next. In 2015, 107 animal care professionals completed our program.

Developing Animal Care Professionals in Poland

In Poland, the veterinary group employs 90 veterinarians and animal care technicians. We provide professional development guidance and financial support to the most promising among them as they pursue post-graduate specialist studies. Each year, we send up to 20 animal care professionals to conferences or training sessions to learn the best practices in pig production.

Animal Handling

Every new employee receives animal care training upon hire. All processing plant employees who work with live animals are also trained and supervised by state veterinarians. Each fresh pork plant has a designated person responsible for animal care. These individuals undergo specialized training and report directly to the facility's managing director. Government veterinary authorities provide ongoing training and support.

European pork operations use a slaughter procedure known as carbon dioxide (CO₂) anesthetizing, which stuns animals. Poultry slaughter operations use an electrical water- stunning process.

Audits

Government veterinarians work with local animal care and food safety authorities to regularly inspect farms and plants. These external audits verify compliance with national animal care laws and biosecurity measures to reduce the risk of diseases. Further random inspections also take place throughout the year.

Specially trained internal auditors conduct twice-yearly audits of farming operations to verify compliance with animal care procedures, biosecurity and traceability, employee training programs, and transportation systems. Nonconformance is addressed with swift corrective action, and we give support and technical assistance to help each facility with compliance.

In 2015, there were no penalties for animal welfare noncompliance at European farms or processing plants.

Animal Housing

Housing Pregnant Sows

Fifteen years ago, the European Union (EU) Agriculture Council issued a directive on the health of pregnant sows in gestation stalls designed to achieve these aims:

- Ban individual stalls for pregnant sows during most of the gestation period;
- Improve the quality of the flooring surfaces;
- Increase the living space available for sows; and
- Introduce higher levels of training for personnel in charge of the animals.

Our company-owned farms and contract sow farms in Europe meet these requirements and all applicable local regulations. Processing facilities only source pigs from farms that meet the sow housing requirements. We communicate this to suppliers and regularly monitor their performance.

Housing Poultry

In recent years, several new projects were implemented to improve the facilities for the animals. For example, Poland operates egg-laying farms and hatcheries to supply chicks to independent poultry producers. The poultry-growing farms use non-cage housing according to EU and Polish animal welfare requirements.

Antibiotics Use

For nearly a decade, the European Union (EU) has banned feeding antibiotics and related drugs to livestock for growth promotion purposes. Farms in the international segment follow these strict guidelines and comply with all antibiotic withdrawal timelines.

Antibiotics are only given when animals are sick, injured, vulnerable, or exposed to illnesses. Our international operations only use water-based and injected antibiotics to treat individual hogs or poultry. Authorized veterinarians supervise antibiotics usage on company-owned and contract farms, monitoring them weekly. The antibiotics administration process is overseen and controlled by each country's respective regulatory agencies.

In 2013, Smithfield refined the way it tracks and reports antibiotics administration to provide a more meaningful, accurate measurement based on the total active ingredient given to the pigs via water-soluble and injected products. Our international operations followed suit in 2014. During 2015, the total was 175 milligrams per pound.

Polish Pilot Program for Antibiotic-free Hogs

In late 2015, the Polish hog production group launched an antibiotic-free hog raising pilot project in response to new European animal health legislation designed to minimize antibiotics use, as well as to increased consumer demand for meats raised without antibiotics.

Each piglet in the pilot program receives a green ear tag to inform workers that it is part of the program and, therefore, should not receive any water-based or injected antibiotics. However, if the pig becomes ill, we administer injectable antibiotics under the supervision of a veterinarian. That pig then loses its "antibiotic-free" status (along with its green ear tag) and rejoins the general population.

Hogs that complete growth at the finishing farms with their "antibiotic-free" status intact are sold to processing plants separately and are identified prior to slaughter. To date, we have raised nearly 2,000 antibiotic-free hogs.

Safe Transportation

Our operations devote substantial resources to making our live-haul accident-response procedures consistent with our domestic operations and also conduct extensive training for all employees who work in processing, security, and transportation. In 2015, our European operations did not have any accidents involving hogs carried from company-owned and contract farms.

Market Hog Transportation Accidents	2011	2012	2013	2014	2015
Number of accidents	3	1	0	6	0
Market hogs involved	2,290	460	0	874	0
Market hog transportation fatalities	180	87	0	76	0

Data for 2011–2013 are reported by fiscal year (May 1–April 30). Data for 2014 and after are reported by calendar year.

Environment

Our European farms and processing plants have produced more fresh and packaged meats while minimizing the use of resources and creating less waste. We are very proud of the impressive efficiency improvements we realized in 2015 across our Polish and Romanian operations. In fact, we have already exceeded our 2020 GHG emissions and waste to landfill targets.

Water use increased in 2015 due to enhanced food safety efforts, which require additional equipment sanitation, and production of new products that are more water intensive. Reported volumes may have also been affected by improved data recording at our Romanian hog production operations.

For more information, please view our [Environmental Performance](#).

Our Environmental Goals

- Reduce natural resource demand
- Eliminate notices of violation (NOVs)
- 100% compliance, 100% of the time

Our Environmental Targets and Progress	2020 Reduction Target (based on 2014 baseline)	Progress (as of December 31, 2015)
Water Use	↓ 10%	↑ 4.5%
Energy Use	↓ 5%	↓ 4.4%
Greenhouse Gas (GHG) Emissions	↓ 5%	↓ 5.3%
Solid Waste to Landfill	↓ 10%	↓ 18%

All targets and reduction figures are normalized by production levels.

All hog farms, feed mills, and processing plants in Europe are ISO 14001 certified. European facilities seek to reduce the environmental impacts identified by our environmental management systems (EMS) through innovative programs. At processing plants, managers track each project and keep senior management informed of progress. Most European facilities enter these projects for Smithfield's [Environmental Excellence Awards](#).

Some recent efforts include the following:

- The food processing plant in Morliny, Poland, replaced a condenser in the cooling unit that controls the temperature in the packaging room. This upgrade saves the plant nearly 1.4 million gallons of water and 90,000 kilowatt hours of electricity per year.
- A plant in Opole, Poland, automated its chicken cooling process, installed more efficient water nozzles, and placed LED lights in its cooling rooms. The upgrades reduce annual utility costs by \$67,200 and save nearly 7 million gallons of water per year.

- The processing plant in Iława, Poland, installed thermal insulation on the steam valves. This saves 32,000 cubic meters of natural gas annually.
- Several plants in Poland began sending solid waste to a company that converts it into energy. This reduces the waste these processing plants send to landfill by 72 percent.
- One of our biggest farms in Romania began using a marine algae activator to make the wastewater treatment process more efficient, saving \$29,000 over two years.
- Our plant in Romania began making its own boxes, saving the plant \$60,000 and reducing cardboard waste by 221 tons per year.
- Our Romanian hog production operations now send medicine packaging to a specialized waste treatment facility. This keeps 20.3 tons of waste out of incinerators and saves \$16,640 per year.
- One of our Polish facilities hired a new waste management and recycling firm to accept a greater range of wastes. The plant's waste packaging is now converted into alternative fuels and keeps 150,000 pounds of waste out of landfills. The effort also saves \$40,650 annually.
- Our Polish operations greatly reduced their GHG emissions by switching from heating oil to natural gas and by sending nearly 20 percent of their wastewater sludge to biogas generators.

Projects like these, combined with effective use of our EMS, have helped us improve our resource efficiencies and reduce our environmental footprint.

Smithfield Romania's "Eco Day"

Every spring, our Romanian operations take time to revitalize the green space near our facilities. Because we encourage volunteers to spend time at one farm and one processing plant, it fosters interaction among employees who might not otherwise get to know one another. Each daylong event culminates with a family barbecue, complete with face painting, games, and other activities for children. In 2015, over 200 volunteers—including our employees and their families and friends—participated.

Modern Manure and Nutrient Management

Our hog production operations handle and treat manure in ways designed to protect local water sources and effectively utilize a potentially valuable resource. Farms have dedicated environmental and manure management staff at the supervisory and field technician levels. The former coordinate permitting and compliance activities; the latter develop and implement nutrient management plans.

Most facilities either use storage tanks or combine manure with straw bedding before fertilizing crops, while the remaining farms use storage lagoons. Treatments and storage processes vary, depending on the facility.

Every year, we fertilize tens of thousands of hectares with organic fertilizer, using the safest and most modern technologies. Manure as an organic fertilizer provides nutrients and promotes soil health while also providing financial benefits to local farmers. Each European farm uses a comprehensive nutrient management plan when applying manure as organic fertilizer to local farmland. In Poland, each plan is approved by local authorities. In Romania, the local authorities prepare detailed plans, which include crop descriptions and projected yields, soil and manure test information, and rates of application to balance with the crops' fertilization needs.

Producing Renewable Energy

Polish farming operations have manure supply agreements with biogas project developers who designed, financed, and constructed three biogas plants located in villages near our locations. These plants produce approximately 9.2 megawatts of electricity and heat energy annually.

Environmental Performance

Data Collection and Management

The data in this section account for operations in Romania and Poland. We collect and report these data the same way as we do for domestic operations. This enables comparisons among facilities and helps our international operations meet our companywide sustainability goals.

Water Intensity

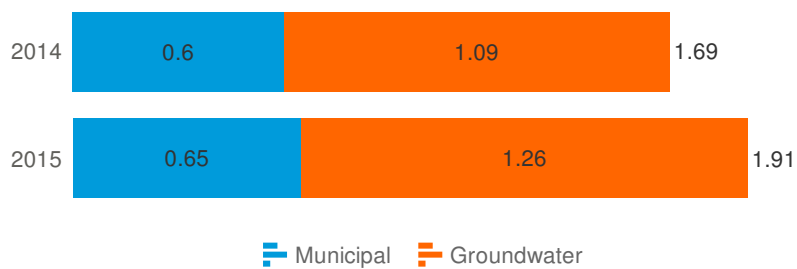
(gallons/cwt)
14–15 Change: 4.5%



CWT equals 100 pounds of product.

Water Use by Source

(billions of gallons)
14–15 Municipal Change: 15.5%; 14–15 Groundwater Change: 8.6%; 14–15 Total Change: 13.0%



Energy Intensity

(gigajoules/cwt)
14–15 Change: -4.4%



CWT equals 100 pounds of product.

Direct and Indirect Energy Use by Fuel Type (gigajoules in millions)	2014	2015	14-15 Change
Natural Gas	0.87	0.91	
Propane	0.23	0.25	
No. 2 Oil (includes transportation diesel)	0.09	0.10	
Coal	0.58	0.55	
Total Direct Energy Use	1.77	1.81	2.2%
Electricity	0.85	0.90	
Steam	0.01	0.01	
Total Indirect Energy Use	0.86	0.92	6.6%
Total Energy Use	2.63	2.73	3.7%

GHG Intensity

(metric tons CO₂e/cwt)
14–15 Change: -5.3%



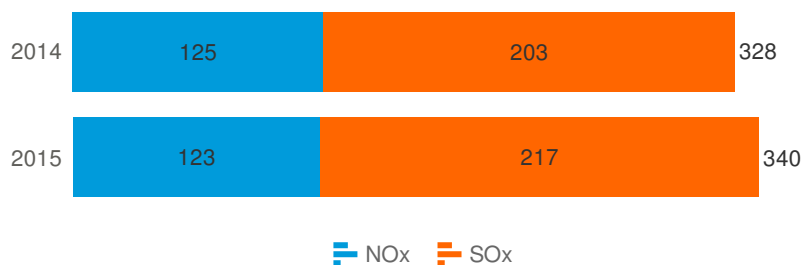
CWT equals 100 pounds of product.

Direct and Indirect Greenhouse Gas (GHG) Emissions	2014	2015	14-15 Change
Carbon dioxide (CO ₂) emissions (metric tons)	227,067	234,110	
Methane (CH ₄) emissions (metric tons CO ₂ e)	192	184	
Nitrous oxide (N ₂ O) emissions (metric tons CO ₂ e)	334	319	
Total GHG Emissions (metric tons CO₂e)	227,600	234,620	3.1%

CO₂e stands for carbon dioxide equivalent. CWT equals 100 pounds of product. GHG emissions do not include farming operations. Smithfield reports GHG emissions using [The Greenhouse Gas Protocol Initiative](#) developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). Publicly available emissions figures are used where no reliable data are available from energy providers. We report on scope 1 emissions (direct) and scope 2 emissions, which include indirect emissions associated with the use of purchased electricity and steam.

Nitrogen Oxides (NO_x) and Sulfur Oxides (SO_x) Emissions

(metric tons)
NO_x 14–15 Change: -2.0%; SO_x 14–15 Change: 6.8%



Only Polish processing facilities report nitrogen oxides (NO_x) and sulfur oxides (SO_x) emissions. Our Romanian operations meet all emissions requirements.

Normalized Solid Waste to Landfill

(pounds/cwt)
14–15 Change: -18.0%



CWT equals 100 pounds of product.

Solid Waste to Landfill

(pounds in millions)
14–15 Change: -11.2%



Environmental Compliance

In 2015, our Romanian operations received one environmental notice of violation (NOV) and \$498 in penalties. Our Polish operations had five NOVs and \$250 in penalties. The decrease in NOVs and penalties in the last three years can be attributed primarily to improved internal auditing and employee training.

Compliance	2012	2013	2014	2015
Notices of violation (NOVs)	8	8	5	6
Fines (\$U.S.)	\$0	\$2,030	\$6,155	\$750

We take any NOV or fine seriously and work quickly to determine how our management systems can be improved while we are making corrective actions. We also work with regulators to resolve all environmental issues as they arise.

Food Safety & Quality

Our international operations work with industry, government, and independent experts to provide safe and delicious foods that meet increasingly strict regulatory requirements and customers' evolving expectations. We focus on innovation and empower employees to contribute to process improvements so we can deliver the highest quality products for our customers.

Our Food Safety & Quality Goals

- Deliver safe, high-quality meat products
- 100% compliance, 100% of the time

Our Food Safety & Quality Targets

- Obtain 100% Global Food Safety Initiative (GFSI) certification for all relevant facilities (those producing meat for human consumption)
- Assure a wide variety for different diets and needs, and include products designed to address health and wellness in accordance with accepted standards

We have rigorous food safety practices in all facilities, manufacturing processes, and distribution networks. We also inform consumers about nutrition and safe food handling through our product labels and additional outreach efforts.

Smithfield's international food safety systems are reviewed and validated annually by qualified third parties.

We use several food safety processes and programs throughout our supply chain to meet a variety of requirements, including Hazard Analysis and Critical Control Points (HACCP), ISO 22000, British Retail Consortium, International Featured Standards (IFS), and the Global Food Safety Initiative (GFSI). Our operations also have cross-functional food safety teams to develop and implement food safety goals and evaluate the efficacy of our food safety practices. Team members regularly discuss current scientific and technical food safety information and consult with each other on specific efforts. We also closely monitor all relevant European Union (EU) food regulatory changes, which allows us to adapt to the changing legal landscape and effectively communicate with suppliers.

To ensure quality control throughout the supply chain, all European hog production, food processing, and distribution facilities maintain a food safety policy based on HACCP—a comprehensive food safety control system required in all EU countries that addresses all reasonably occurring physical, chemical, and biological hazards. Our food safety systems are reviewed and validated annually by qualified third parties.

Training

Our employees undergo extensive training in food safety policies and procedures—tailored to each location—to keep food safe. Each worker is trained upon hiring and is retrained on a regular basis, depending on his or her job requirements.

In order to foster continuous improvement in food safety and quality, the food safety teams constantly look for new ways to incorporate emerging food safety innovations into products and processes. The teams also regularly present scientific papers at national conferences and attend educational seminars, professional meetings, and regulatory meetings. They use the latest techniques they've learned to train other employees.

Nutrition

Our European operations offer fresh meats and packaged foods that satisfy a wide variety of consumer needs and tastes while meeting all European Union (EU) nutrition and labeling standards.

Our Romanian operations have historically only produced fresh meat, which is not processed with sodium or other additives. They recently started to produce a range of semi-processed products (such as fresh sausages and minced meat). The Polish operations offer a variety of low-sodium products.

Compliance and Certification

In 2015, the Polish processing operations were assessed 12 violations worth \$26,300 due to labeling issues. No other significant penalties or fines associated with food safety were assessed.

GLOBALG.A.P. Livestock Certification

Our hog production operations in Poland are pursuing certification to the [GLOBALG.A.P. Integrated Farm Assurance \(IFA\) Standard](#). This integrated approach ensures that food safety is implemented and maintained throughout the production process, from hog inception to production.

Helping Communities

Our European operations are committed to being a good neighbor in places where large agricultural companies are often misunderstood. As part of our efforts to form better relationships with our stakeholders, we work closely with local authorities and community leaders to provide a wide range of programs that are important to the people who live near our operations and that contribute to local economic development.

We have a long history of organizing events and making sizeable donations that benefit our neighbors, friends, and families. We are proud of the impact we can make in peoples' lives. But employees are the real driving force. In 2015, European employees volunteered 2,374 hours of their time to host local ecological festivals, help schoolchildren test water for the World Water Monitoring Challenge, gather trash at our annual cleanups, and raise money to help underprivileged students attend school.

Our Community Goal

- Provide food to those in need and enhance education in our communities

Our Community Targets

- Provide food-related assistance (food or funding) to those in need
- Interact with schools or students to provide help with supplies, facilities, or scholarship assistance
- Each facility/farm division to participate in two events involving agricultural education for local students
- Each facility/farm division to participate in at least one community cleanup day

We prioritize funding for hunger relief efforts, environmental outreach, and education for local students. We also support cultural awareness programs that honor the rich heritages of the communities in which we operate.

Donations	2015
Cash	\$130,405
Food (cash value)	\$120,010
Food (servings)	404,523
Total value (\$U.S.)	\$250,415

Food donations are valued at production cost of the donated meat and finished product. Other donations (e.g., school supplies) are valued at cost.

Together Against Leukemia

Every 90 minutes, a person in Poland learns that he or she has blood cancer—nearly 6,700 new cases every year. Roughly 25 percent of new patients are lucky enough to find a matching donor in their family. For the rest, the only hope for survival is blood or bone marrow donated by unrelated individuals.

Sadly, roughly half of all patients never find compatible donors and do not receive a transplant; someone in Poland dies from blood cancers, such as leukemia, every 10 hours. Therefore, it is critical to register as many potential donors as possible. Since 2009, the DKMS Polska Foundation has registered 740,000 potential donors, roughly 83 percent of all donors in Poland. About 80 percent of eligible donors give stem cells. The remainder donate bone marrow.

Over a two-week period in the fall of 2015, our Polish food processing operations in Elk organized an event that offered free health screenings and registered potential blood marrow donors. Through this campaign, we helped the DKMS Polska Foundation conduct over 200 health checks and register 400 new donors. These efforts increase the likelihood that patients—including our own employees—with blood diseases, such as leukemia, will receive the transfusions necessary to fight the disease.

Hunger Relief

As a food company, we believe it's important to provide much-needed sources of protein to individuals in need. Some of the hunger relief highlights from 2015 include the following:

- Romanian operations' "Food for Souls" program provides fresh meats and hot meals to disadvantaged citizens of Timisoara and the surrounding area through more than 30 local partner organizations. In 2015, the Romanian operations provided roughly 14,350 pounds (57,400 servings) of meat and protein products to daycare centers, hospitals, orphanages, and other locations.
- In Poland, we support school lunch campaigns in a number of districts and donate meat products to help our communities. In 2015, processing plants delivered roughly 86,775 pounds (347,100 servings) of food products, worth \$82,200, to local people in need.
- Polish operations donated over \$68,800 to provide food to children in need through local schools.

Environmental Outreach

Some of the environmental outreach highlights from 2015 include the following:

- The Romanian farming operations held their second "Adopt a River" day in 2015 to support Lunca Muresului Natural Park. More than 60 volunteers, children, and teachers from local schools cleaned up over a mile of habitat in one day.
- In 2015, the Polish hog production operations held their third annual environmental cleanup day in three towns where it has sow farms and crop production offices. Local employees cleaned up 4,000 kilograms (8,820 pounds) of trash.
- In 2015, employees planted more than 4,050 trees near our facilities.

Education

Our European operations focus on supporting early education: helping students attend school, funding rural libraries, providing school supplies, and celebrating academic achievements in our local communities.

Some of the highlights from 2015 include the following:

- Over the past nine years, Romanian operations have supported several thousand students in local villages through the “Back to School” program, which supplies essential supplies to preschool and primary school children. In 2015, about 90 volunteers spent more than 400 hours providing 6,600 students in 63 villages with backpacks, school supplies, and sports equipment for the school year.
- Polish operations gave about \$210,000 for 344 scholarships for children of employees and farmers from rural areas. Our hope is that some of them will work with us after finishing their studies. In 2015, the employees’ Christmas party raised almost \$9,600 that will go into scholarships for the 2016/17 school year.
- Polish operations provided more than \$20,000 to help rural schools organize holiday trips and cultural events for students. The schools were also able to purchase much-needed supplies. In addition, we gave significant assistance to local sports clubs and sporting events.
- To celebrate International Food Day and highlight the importance of childhood nutrition, Smithfield Romania employees hosted a cooking and nutrition workshop for 3rd and 4th grade students at the Utvin School. Our volunteers taught the children about the positive impacts of a balanced diet in healthy development. The students prepared healthy food and received certificates and books on nutrition.
- Our hog production operations in Poland and Romania collaborate with local universities and veterinarian institutes to organize dozens of seminars and conferences, host visiting students, and provide internships to students training in agriculture, livestock operations, and veterinary science. Over 50 students held internships at our locations in 2015.

The Zygmunt Piwoński Smithfield Polska Foundation

Created in memory of our former longtime colleague, the [Zygmunt Piwoński Smithfield Polska Foundation](#) supports the education of young people in the regions where we operate by awarding academic scholarships. Each fall, we encourage the children of our employees, suppliers, and contractors to apply by posting applications online. Since its inception, the foundation has granted 1,255 scholarships worth \$707,150.

Other Community Outreach

We also participate in several programs that help local families in need, improve children’s health services, and honor the rich heritages of the communities in which we operate.

Some of the highlights from 2015 include the following:

- Romania is culturally diverse, with traditions observed by communities originating from Romania, Bulgaria, Germany, Hungary, and Serbia. Smithfield is proud to support a variety of traditional festivals, including concerts, dance contests, craftsmanship fairs, and sporting events, such as horse cart racing. The “Be one of us!” community program supported the unique local traditions of more than 22 rural villages in Romania in 2015.
- We regularly fund organizations that support local community health, including voluntary fire brigades and medical rescue units. We also support local cultural festivals for several small communities. In 2015, we gave more than \$2,300.
- Over the course of four days in late December 2015, Romanian volunteers visited the Timis Child Protection Agency, the Bocsig Children’s Center, and the Ineu Children’s Center, where they gave toys, clothes, and food to more than 80 children.
- In August 2015, 20 volunteers from Smithfield Romania spent a day with children from an orphanage in Buzias. The children held a “Master Chef” contest judged by our volunteers. At the end of the visit, the children received school supplies, clothing, and toys donated by the company and our volunteers.

People

Our international segment offers good jobs in rural areas with high unemployment rates and is one of the largest employers in many regions. We are successful because our people work as a team and come up with innovative solutions to any challenges that we face.

In 2015, European employees were almost uniformly nationals. Of approximately 11,120 employees, 48 percent were women.

European Workforce by Age and Gender	Female	Male	Under 30	30-50	Over 50	Total
Number of full-time employees	5,365	5,734	2,354	5,755	3,013	11,122
Percentage of employees	48.3%	51.7%	21.2%	51.7%	27.1%	

Employee Development

We want to give our employees every opportunity to grow professionally. To this end, our European operations focus on recruitment, training, and succession planning to develop the workforce and to increase employee retention.

For example, our Romanian operations recently began offering professional development opportunities to feed production department employees through an internal certification program that included 30 hours of theoretical training and 50 hours of practical training. To date, four employees have completed the program.

Also in Romania, we're using friendly competition to keep veterinarians up-to-date with the latest in animal care training. We came up with an innovative, fun way to incentivize engagement and encourage individual growth. We now give a multiple-choice test to our veterinarians at our monthly meetings. Those with the top three scores receive prizes. After the test, participants discuss recent advancements in veterinary procedures and other veterinarian topics. We will expand this program to include all animal care professionals in 2016.

In Poland, meanwhile, our operations recently created a six-month career development program to cultivate skills in leadership, time management, public speaking, and financial management. To date, 40 managers have completed the program.

European Employees Earn "Brown Belts" at Iowa State University

Smithfield holds a three-week training program in Ames, Iowa, each year. A series of classroom courses, laboratory trainings, and visits to farms and processing facilities aims to help a select few managers from our international operations develop a global vision of Smithfield's business and to deepen the knowledge of specific processes and technologies. Each participant's training concludes with a written exam and a project presentation specific to their business unit. To date, 12 Romanian employees have achieved "brown belt" status, and four more are expected to get theirs by 2017. Our Polish operations earned 51 "brown belts" between 2008 and 2015.

All farming operations in Europe now run centralized job posting programs like we have in the United States, giving mid-level managers the ability to apply for positions of interest in any location.

We also develop long-term educational projects with local agricultural universities to help promising students who may be interested in careers both in our European and U.S. facilities. For nearly a decade, the Romanian farming group has worked with Banat University of Agricultural Sciences and

Veterinary Medicine to offer a six-week internship program to help students gain knowledge and real-world experience related to large-scale animal agriculture. Through this program, we send several veterinary students to our farms in the United States to learn more about modern production practices. Our Polish operations have a longstanding relationship with the Warsaw University of Life Sciences. The wide-ranging agreement advances research in meat production and improves our operations through improved food safety and quality controls. Several students from the program have been hired upon graduation.

The Polish hog production operations work in cooperation with three agricultural universities to enhance students' academic experience and to provide employment opportunities. Not only do our farms hire well-trained employees, but they also benefit from access to the universities' laboratories and scientific expertise.

Health & Safety

Our Health & Safety Goal

- Reduce employee injury rates

Our Health & Safety Targets

- Meet or beat general manufacturing industry national average for injuries
- All safety leadership trained to 10-hour food industry training programs
- Increase formal employee engagement to 25% by 2015
- Score average of "B" on monthly safety scorecard

All of our safety policies align with national regulations and European Union (EU) directives, including those of the European Agency for Safety and Health at Work. In 2013, we implemented our U.S. [Employee Injury Prevention Management System \(EIPMS\)](#) at all of our Polish and Romanian operations while giving them the flexibility to adapt the program to their specific locations. We believe such flexibility fosters better program management and will yield measurable results in the future.

All international operations can access the EIPMS website to review safety standards, study compliance policies and procedures, and upload safety metrics and program details into our companywide database. The consistent reporting framework allows us to make comparisons among facilities and will be critical in encouraging continuous improvement as the program matures.

Safety Engagement

Our international operations implement health and safety programs designed to encourage employee engagement at all levels of the organization. We find that active engagement in formal safety processes improves health and safety program effectiveness. We work to increase employee engagement in safety activities, encouraging employee participation in safety program reviews and development of new systems. One of our health and safety targets is 25 percent engagement companywide. Many locations maintain employee safety teams, which can bring fresh perspectives on safety challenges and successes.

In 2015, our Polish hog production group began holding monthly team meetings to review occupational risk, confined space work, and corporate policy. Select locations also undergo monthly audits to reinforce these trainings.

Our employees in Romania participate in monthly safety prevention team meetings designed to train and develop skills in areas such as safety inspections, hazard identification and risk assessment, accident and incident investigation, emergency response, and the P.O.R.C. Program.

New Scorecard Designed for International Operations

Our international operations have been using Smithfield's monthly Safety Scorecard for three years. While Poland and Romania consistently scored well on indicators related to safety management (e.g., completion of safety work orders by maintenance or employee engagement in safety activities), they lagged in several indicators related to injury recovery (e.g., days away from work).

Over time, we began to realize that the original scorecard, which was based on domestic U.S. regulatory standards, did not match European practices. We have been adapting our health and safety policies so we can ensure effective implementation in our European operations.

First, we created targets and metrics tailored to the international operations. This will not only mean greater accuracy in measuring performance around workplace injuries, but it will also allow for better comparisons over time. This, in turn, will help safety professionals discover opportunities to improve work practices and drive performance.

Second, we created a new training module designed to teach our international locations how the EIPMS is implemented and familiarize them with required operational controls. Every month, each business will audit itself to a new element of the EIPMS.

These new metrics and applied learning techniques should deepen our employees' understanding of the EIPMS, assure implementation of the operational controls, improve future compliance, and ensure data integrity.

Empowering Our People to Manage Risk

For the past three years, our Romanian operations have invested significant resources to increase employee involvement in identifying risks in several areas, including health and safety, biosecurity, animal welfare, environment, and food safety and quality. Our P.O.R.C. Program aims to leverage this increased vigilance in risk management into other aspects as well, such as finding new business opportunities or process improvements. This greater level of engagement will empower employees to share valuable insights, and, as a result, improve compliance, facilitate certification and standardization, optimize internal management procedures, and grow profits.

P.O.R.C. stands for the following:

- "Prevenire" (Preventing accidents)
- "Observare" (Observing risks in all areas)
- "Reportare" (Reporting by all employees)
- "Corectare" (Correcting by the management system)

Since 2012, the program has improved health and safety performance through 2,290 reported observations from employees, helping us to earn third place in the Employees category at the 2014 Romanian Corporate Social Responsibility (CSR) Awards.

Smithfield Poland recently launched a project to identify significant enterprise risks that could inhibit strategic, operational, financial, and compliance objectives. The effort's stated goals are as follows:

- Ensure assets and data are safeguarded through internal programs and third-party services;
- Institute internal controls over financial reporting;

- Improve efficiency and cost effectiveness of all business units; and
- Establish effective Enterprise Risk Management (ERM) and Ethics & Compliance programs.



Driving Value Across Our Company

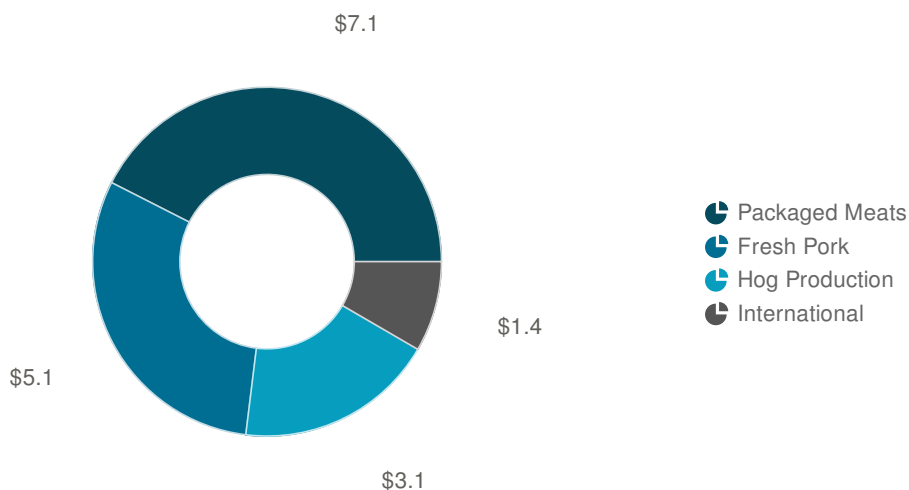
At Smithfield, the concept of value creation underpins all that we do. We believe that financial stability and sustainability go hand in hand. Our sustainability strategies help us improve our company's performance.

We have systematically embedded sustainable practices and principles throughout our operations. Our sustainability management program includes corporate-level oversight committees, an executive-level position to lead our efforts, and a core team to drive further progress. We also have specific goals and targets that drive our sustainability program: animal care, environment, food safety and quality, helping communities, and people.

We seek to create value for our stakeholders, for our employees, and for our company as a whole. We work to better understand and identify the connections between the costs and benefits of our sustainability program and how they relate to our bottom line. We believe we can create greater value for each of our stakeholders by recognizing the intrinsic interconnections between our business objectives and our sustainability objectives.

2015 Sales

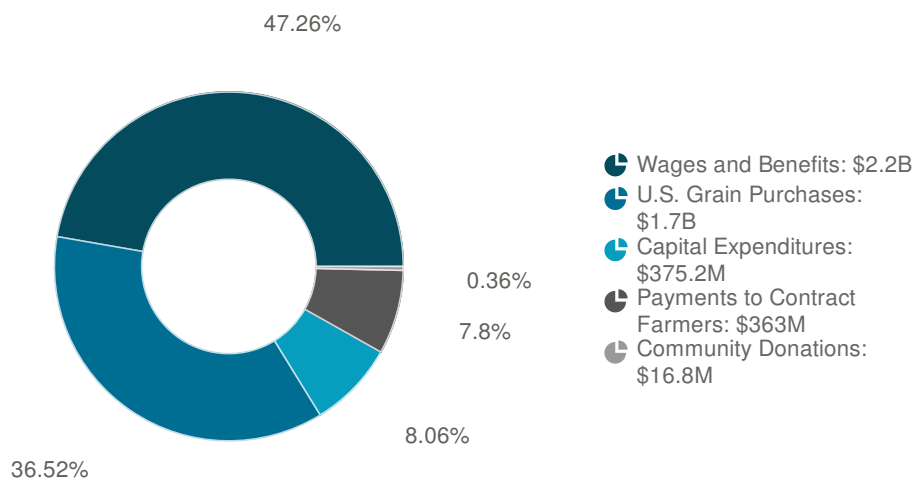
(in billions)



Intercompany sales are included.

2015 Expenditures to Communities

(\$4.64 billion)



After publication of our 2015 report, we restated the amount of food donations for the year to correct a miscalculation. We also adjusted the cash value we assign to our food donations, basing it on an average retail price that may vary from year to year.

Value Creation Across Our Operations

We create value for our company and for our stakeholders through sound governance and management principles and practices, which provide the foundations for our sustainability programs. These programs not only reflect our core values; they also help improve our company's performance.

This table illustrates some of the ways in which our sustainability programs create value for a wide range of stakeholders while simultaneously improving Smithfield's own financial performance. We use the term "value creation" broadly and think of it in ways that go beyond just our own company's value.

Animal Care

The importance of sound animal care practices to the success of our business cannot be overstated. Healthier animals mean a healthier company. Treating animals with care isn't just the right thing to do; it's the right thing to do for our business. Our animal care management systems, policies, and procedures are designed to ensure the proper treatment of our hogs. Our animal care performance can influence our reputation and the relationships we have with customers and consumers. It can also influence production levels: Healthy animals are more resistant to disease and gain weight faster, and healthy sows have larger and stronger litters.

FOR EXAMPLE:

- Compliant with national standards and guidelines for animal care.
- Continued to convert housing for pregnant sows on company-owned farms in response to customer demand.
- Made payments of \$363 million to contract growers in the U.S. and purchased \$1.7 billion in U.S. grain.
- Worked with growers in North Carolina to encourage production of sorghum, which requires less water to grow than corn and helps insulate our operations from commodity price swings.

[Learn more about Value Creation in Animal Care](#)

Environment

Each day, farm and facility employees do their parts to improve resource efficiency in countless ways, whether it is finding new projects that increase recycling, eliminate leaks, or reduce packaging.

FOR EXAMPLE:

- Saved an estimated \$581.8 million in operating costs through environmental improvement awards projects since 2004.
- More than 98% of company-owned locations worldwide are ISO 14001 certified.
- Six facilities have been certified as zero-waste-to-landfill by sending no solid waste to landfill for a 12-month period. Two more are expected to be certified in the second half of 2016.
- Our partnership with the Environmental Defense Fund (EDF), which helps farmers optimize fertilizer use when growing grains for animal feed, aims to reduce water pollution and GHG emissions and protect soil health.
- Our partnership with the Environmental Protection Agency in its Nutrient Recycling Challenge hopes to find cost-effective technologies that extract nutrients (nitrogen and/or phosphorus) from livestock manure and generate a marketable product.
- Began development of new logistics strategy under “One Smithfield” that should dramatically improve efficiency while reducing our carbon footprint

[Learn more about Value Creation in Environment](#)

Food Safety & Quality

Maintaining the highest food safety standards is essential for Smithfield’s business, building value for our own company and for the retailers and vendors that sell our products in supermarkets and restaurants.

FOR EXAMPLE:

- Invested \$5.5 million in capital projects to improve food safety.
- 100% of relevant facilities certified to Global Food Safety Initiative.
- Responding to customer interest, we had more than 100 reduced-sodium products in the marketplace at the end of 2015.
- Created two new senior leadership roles to enhance our ongoing commitments around innovation in 2015.

[Learn more about Value Creation in Food Safety & Quality](#)

Helping Communities

Smithfield creates value in the communities where we work in a number of ways. We provide jobs, pay taxes, and, in many places, underpin the economic vitality of the regions where facilities and farms are located. We also add value to our communities through our initiatives related to hunger relief, education, and health and wellness. Through our cause marketing efforts in partnership with retailers, we generate funds for charities and raise awareness of issues such as food insecurity and the struggles of military families.

FOR EXAMPLE:

- Donated 18.8 million servings of food across the U.S. and made \$8.3 million in overall cash donations in 2015.
- Expanded our cause marketing partnerships with retailers to nearly 50, holding about 100 events and donating 2.7 million servings of food to local and national non-profit partners through these events.
- Provided \$400,000 in funding for six Learners to Leaders® programs, which aim to close the education gap for students in our communities.
- Continued a multi-year, integrated partnership with NASCAR that broadens our consumer reach and supports hunger relief efforts.
- Provided more than \$210,000 for 344 scholarships to Polish students.

[Learn more about Value Creation in Helping Communities](#)

People

We create value through the employment of 50,000 people, many of them in rural areas where there are limited job opportunities. Our operations also contribute to the economic stability and development of local communities, where we purchase goods and services and where employees reside.

FOR EXAMPLE:

- Reduced employee injury rate by about 40% since 2008.
- Contributed about \$800,000 in education programs to benefit employees and their offspring.
- Paid \$2.2 billion in wages, salaries, and benefits in 2015.
- Sent approximately 50 high-potential Smithfield employees through leadership development training.
- Launched a new companywide mentorship program, drawing 350 employees in the first six months.

[Learn more about Value Creation in People](#)

Adhering to Industry-Leading Standards

Below is a high-level mapping of this report to the content elements recommended in the Integrated Reporting Council's (IIRC) integrated reporting framework.

IIRC Content Elements	Major Report Sections Addressing
Organizational Overview and External Environment	<ul style="list-style-type: none"> CEO Letter About Smithfield Foods Value Chain Infographic Materiality Analysis
Governance	<ul style="list-style-type: none"> Governance & Management Leadership GRI Index (G4 17-27)
Business Model	<ul style="list-style-type: none"> CEO Letter Governance & Management Value Chain Infographic
Risks and Opportunities	<ul style="list-style-type: none"> CEO Letter Governance & Management Value Creation
Strategy and Resource Allocation	<ul style="list-style-type: none"> Transparency Scorecard CEO Letter Value Creation
Performance	<ul style="list-style-type: none"> Key Data Summary Transparency Scorecard Animal Care Environment Food Safety & Quality Helping Communities People International Value Creation
Future Outlook	<ul style="list-style-type: none"> CEO Letter Exit Interview with Larry Pope
Basis of Preparation and Presentation	<ul style="list-style-type: none"> Governance & Management Materiality Analysis Introduction