

CHAIN REACTION IV:

BURGER EDITION



How Top Restaurants Rate on Reducing
Antibiotic Use in Their Meat Supply Chains

OCTOBER 2018



Table of Contents

| | |
|--|-----------|
| Acknowledgments | 1 |
| Executive Summary | 2 |
| Introduction | 4 |
| Key Findings | 4 |
| Consumers Favor Ending Routine Antibiotic Use | 7 |
| Discussion: Burger Chains Should Push for Responsible Antibiotic Use in the Beef Industry | 8 |
| Antibiotic Resistance and Antibiotic Misuse in Livestock | 9 |
| The Beef Industry Lags Behind | 11 |
| The Federal Government Has Failed to Act | 13 |
| State and Local Policies Can Create a Blueprint for Future Federal Action | 14 |
| Company Shareholders Are Supportive of Strong Antibiotics Policies | 15 |
| Progress Update: 2018 Top 25 Fast Food and Fast Casual Restaurant Chain Survey and Scorecard | 17 |
| Recommendations | 20 |
| Appendices | |
| Appendix 1: Survey Methodology and Questions | 21 |
| Appendix 2: Scoring Criteria for Burger Chain Scorecard | 24 |
| Appendix 3: Summary of Burger Chains’ Policies and Survey Responses | 27 |
| Appendix 4: Scoring Criteria for Fast Food and Fast Casual Chain Scorecard | 37 |
| Appendix 5: Summary of Fast Food and Fast Casual Chains’ Policies and Survey Responses | 40 |
| Appendix 6: WHO Guidelines on Use of Medically Important Antimicrobials in Food-Producing Animals | 53 |
| Endnotes | 54 |
| About Us | 61 |



Acknowledgments

Several public interest organizations working to eliminate the routine use of antibiotics in animal agriculture co-authored this report. Matthew Wellington and Shelby Luce of U.S. PIRG Education Fund are lead authors, with significant contributions from Jean Halloran and Meg Bohne of Consumer Reports, Lena Brook and Allison Johnson of the Natural Resources Defense Council, Kari Hamerschlag of Friends of the Earth, Cameron Harsh of Center for Food Safety, and Steve Roach of Food Animal Concerns Trust and Keep Antibiotics Working.

The authors would like to thank Gideon Weissman from Frontier Group, Michael Hansen, Ph.D., from Consumer Reports and David Wallinga, M.D., from the Natural Resources Defense Council for their valuable review of this report. Thanks as well to Katherine Kelley, U.S. PIRG summer intern, for her research assistance.

The opinions expressed in this report do not necessarily reflect those of our organizations' supporters or reviewers.

This report is dedicated to the late Rep. Louise Slaughter for her unwavering dedication to protecting public health and stopping the overuse of antibiotics on industrial farms.

Executive Summary



The growth and spread of antibiotic-resistant bacteria is a global health crisis, threatening to create a future in which common infections could once again become life-threatening on a large scale. The World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) consider antibiotic-resistant bacteria among the top threats to global public health, and the CDC estimates that each year, at least 23,000 Americans die from resistant infections.¹

The overuse of antibiotics in livestock production significantly contributes to the spread of antibiotic resistance.² The more antibiotics are used, the more bacteria become immune to them. More than 70 percent of the medically important antibiotics sold in the U.S. go to food animals.^{3,4} Many meat producers routinely give the drugs to animals that are not sick either to promote faster growth or to prevent disease caused by factory farm production practices.⁵ Despite the threat posed to public health, the U.S. lacks effective laws and policies to prevent the overuse of antibiotics in agriculture.

Fast food restaurants, as some of America's largest meat buyers, can play an instrumental role in pushing meat producers to use antibiotics responsibly. In fact, previous editions of *Chain Reaction* have documented how the nation's top restaurant chains have stepped up their commitments to source chicken from producers that raise animals without the routine use of antibiotics.⁶ These corporate actions have helped move the chicken industry toward more responsible antibiotic use practices.

Consumers continue to want restaurants to serve meat raised without the routine use of antibiotics. For instance, in a nationally representative 2018 survey of 1,014 adults conducted by Consumer Reports, 59 percent of those polled indicated that they'd be more likely to eat at a restaurant that served meat raised without antibiotics – and more than half agreed that restaurants should stop serving meat and poultry raised with antibiotics.⁷

Although there is some progress in the chicken industry in response to such consumer demand, many fast food restaurants have failed to make meaningful commitments to address antibiotic overuse in their beef supply chains. This is concerning because in 2016, the beef sector accounted for 43 percent of the medically important antibiotics sold to the meat industry – more than any other meat category.⁸ By contrast, six percent of medically important antibiotics sales went to the chicken industry.

This year's *Chain Reaction* report and scorecard therefore focuses on antibiotic use policies and practices for beef sold in the top 25 U.S. burger chains. Though not our primary focus, *Chain Reaction* authors also surveyed and reported on progress related to antibiotic use across all meat and poultry supply chains of the nation's top 25 fast food and fast casual restaurants (some companies overlap between the two scorecards).

Burger chains have a crucial role to play in reducing antibiotic use. McDonald's, for example, is the single largest purchaser of beef in the United States.⁹ To protect public health and push the beef industry to eliminate the overuse of antibiotics, restaurants — especially burger chains — should commit to sourcing beef from producers that use antibiotics under the guidance of a licensed veterinarian, and only to treat animals diagnosed with an illness or, in limited circumstances, to control a verified disease outbreak. So far, however, few have done so.

Our survey shows that only two chains, Shake Shack and BurgerFi, source beef raised without the routine use of antibiotics. Most other chains have no public antibiotic use policy.

Two smaller burger chains, BurgerFi and Shake Shack, earned the only “A” grades for sourcing beef raised without any antibiotics. Both chains are rapidly expanding, with Shake Shack among the nation’s fastest growing restaurant chains.

Wendy’s currently sources 15 percent of its beef from producers that have cut the use of one medically important antibiotic – tylosin – by 20 percent. This modest step earned Wendy’s a “D-” in this scorecard.

Aside from these three, the other 22 burger chains surveyed received failing grades for lacking any announced policy to source beef raised without the routine use of antibiotics.

While restaurants and major meat producers have critical roles to play in stopping the overuse of antibiotics, the government must also act to achieve the kind of lasting, industry-wide change needed to fully protect public health.

Policymakers should only allow beef producers to use medically important antibiotics under the guidance of a licensed veterinarian, and to treat animals diagnosed with an illness or to control a verified disease outbreak. Policymakers should also set national goals for reduction of antibiotic use in food animals, and dramatically improve collection and disclosure of antibiotic use data. Comprehensive policy reforms will ensure that all meat producers across the U.S. meet the same responsible antibiotic use standards. These reforms are vital to preserving life-saving medicines for the future health of both animals and people.

| Chain Reaction IV Burger Chain Scorecard | |
|---|--|
| A | SHAKE SHACK  SHACK  |
| A- | |
| B+ | |
| B | |
| B- | |
| C+ | |
| C | |
| D | |
| D- |  |
| F |                       |

Introduction

What is a Meaningful Antibiotic Use Policy?

The authors of this report are calling on fast food companies and meat producers to adopt corporate policies that align with the 2017 WHO *Guidelines on Use of Medically Important Antimicrobials in Food-Producing Animals* which can be summarized as follows (see Appendix 6 for further information):¹⁰

Medically important antibiotics should not be used unless animals are sick.¹¹ *Medically important antibiotics may not be used for growth promotion, and/or routine disease prevention purposes. Use must be under the direct oversight of a veterinarian and be limited to treatment of animals diagnosed with an illness, medical or surgical procedures, or to control a disease outbreak verified by a veterinarian.*

The overuse of antibiotics in food animal production contributes to the spread of antibiotic-resistant bacteria, and poses a critical threat to public health. Fast food and fast casual restaurant chains, which are some of the largest meat buyers in the U.S., can help encourage meat producers to change their practices by only sourcing meat raised with responsible antibiotic use.

The first three *Chain Reaction* reports surveyed the top 25 U.S. fast food and fast casual dining restaurants on their antibiotics policies and practices for all meat served. Those surveys found that while many top restaurants pledged and implemented antibiotic use policies, most were limited to chicken. *Chain Reaction III* noted that, with a few exceptions, “companies have made little progress in reducing the use of antibiotics in their pork and beef supplies.”¹² According to the latest FDA drug sales data, the beef industry accounts for 43 percent of the total livestock sales of medically important antibiotics, more than any other sector.¹³

In light of the need to improve antibiotic stewardship in the beef industry, this year’s report evaluates antibiotic use policies in the top 25 U.S. burger chain restaurants.¹⁴ We shifted focus to this sector in 2018 because burgers are one of America’s most beloved and iconic foods, and burger chains can have an outsized impact on the beef industry’s practices.

Chain Reaction IV grades the top 25 burger chains in the U.S. on their antibiotic use policies for beef sourcing, on implementation of these policies as reflected in current beef purchasing, and on transparency around antibiotic use in their beef supply chains. We also graded the top 25 fast food and fast casual restaurant chains based on antibiotic

use policies for all meat and poultry served, implementation of these policies, and transparency around antibiotic use in their meat and poultry supply chains (See Appendix 4 for scoring criteria).¹⁵

To evaluate restaurant policies and practices, the authors directly surveyed companies and reviewed companies’ public statements. To be considered a meaningful antibiotic use policy, a company commitment must, at a minimum, prohibit all use of medically important antibiotics for growth promotion and routine disease prevention purposes. Policies that only prohibit growth promotion are not sufficient and did not receive policy points. If a company’s public information did not match internal communications with the report authors, then the authors graded the company on what was publicly available. Appendix 1 contains our survey methodology and questionnaire. Our burger chain scorecard criteria are fully described in Appendix 2. Appendix 3 provides a summary of burger chains’ policies and survey responses. Appendix 5 summarizes policies and survey responses for fast food and fast casual chains.

Key Findings

Policies

Two burger chains lead the way:

- » BurgerFi and Shake Shack received the only two “A” grades in this scorecard. Both companies currently serve only beef raised without antibiotics.
- » Both chains are also expanding, which suggests that their responsible sourcing practices — including serving beef raised without antibiotics — are paying off. Shake Shack’s sales grew 32.5 percent over last year and BurgerFi plans to open 15 to 20 more locations in the second half of 2018.¹⁶

The vast majority of top burger chains have no publicly available policy governing antibiotic use in their beef supply chains:

- » 22 of the 25 burger chains surveyed received a failing “F” grade, including McDonald’s, the largest purchaser of beef in the U.S, and In-N-Out Burger, a highly popular West Coast chain. In 2017, McDonald’s announced an updated vision for antibiotic stewardship across its meat supply chain but has yet to commit to a timeline for implementation beyond chicken.¹⁷ In-N-Out Burger publicly announced in 2016 that it intended to source beef raised without medically important antibiotics. Despite requests to do so, the company has yet to follow

through with a time-bound commitment or provide any updates on its progress.¹⁸

- » Steak 'n Shake, Farmer Boys, and Fuddrucker's also have no antibiotics policy, and therefore earned an "F;" however, each offers a burger option for consumers that is made using beef raised without antibiotics. These are important first steps, but the companies should expand this approach to their entire menu.

Among the large national burger chains, only Wendy's received a passing grade. Wendy's received a "D-" grade for a policy that, while far from comprehensive, is a positive step forward. In 2018, Wendy's began to purchase 15 percent of its beef supply from producers that have reduced the use of one medically important antibiotic, tylosin, by 20 percent.¹⁹

Auditing and Transparency

Restaurant chains should use meat suppliers with audited antibiotic use practices:

A company's published antibiotic use policy or press statements are meaningful only if the company can demonstrate real-world progress in sourcing meat raised without the routine use of antibiotics. This requires that suppliers are regularly audited by a third party with trained inspectors who verify that the standards and requirements are being met.

- » Only Wendy's, and Shake Shack for a portion of its supply, use independent third-party supplier auditors to verify compliance with their antibiotic use commitments. Wendy's and Shake Shack (for a portion of its supply) make auditing standards available to the public.
- » Only seven of the 25 burger chains returned this year's survey. The rest are leaving their customers in the dark regarding antibiotic use practices.



2018 Chain Reaction IV Burger Chain Detailed Scorecard

| Company | Beef Policy | Implementation | Transparency | Total Points | Total Possible Points | %-age Total | Grade* |
|--|-------------|----------------|--------------|--------------|-----------------------|-------------|-----------|
| SHAKE  SHACK | 40 | 32 | 23 | 95 | 100 | 95 | A |
|  | 40 | 32 | 19 | 91 | 100 | 91 | A |
|  | 4.2 | 4.8 | 28 | 37 | 100 | 37 | D- |
|  | 0 | 0 | 6 | 6 | 100 | 6 | F |
|  | 0 | 0 | 6 | 6 | 100 | 6 | F |
|  | 0 | 0 | 6 | 6 | 100 | 6 | F |
|  | 0 | 0 | 6 | 6 | 100 | 6 | F |
|                   | 0 | 0 | 0 | 0 | 100 | 0 | F |

* A comprehensive description of scoring methodology and criteria is provided in Appendices 1 and 2.

In-N-Out Burger: A Promise, but No Progress

In February 2016, a number of groups including Friends of the Earth, CALPIRG, and Center for Food Safety launched a campaign calling on In-N-Out Burger, California's iconic hamburger chain, with locations in five states in the western U.S., to stop selling beef produced with the routine use of antibiotics and other drugs. In response, In-N-Out Burger announced in the media that it would work to eliminate the routine use of antibiotics in its beef supply.²⁰ As one of the first major burger chains to announce such a policy, this move earned the company positive media coverage in the Los Angeles Times, The Guardian, and other outlets.

However, more than two years later, In-N-Out Burger has not publicly reported progress on formalizing an antibiotics policy, establishing a timeframe for ending routine uses, or identifying third-party auditors. In-N-Out Burger has also failed to answer thousands of consumer letters pressing the company for more information on its antibiotics policies and/or respond to requests for information by this report's authors. In-N-Out Burger should follow through on its promises and be transparent with its customers about its antibiotics policies.

Consumers Favor Ending Routine Antibiotic Use

Burgers are a cornerstone of the American diet. According to a 2017 Technomic survey, 56 percent of consumers say that they eat hamburgers at least once a week,²¹ and burgers comprise 71 percent of beef served in commercial restaurants.²²

Surveys show that consumers want to know more about the quality and sustainability of their food and consider these attributes – including whether or not it was raised with the routine use of antibiotics – when making decisions about the restaurants they frequent and the meat they eat.²³

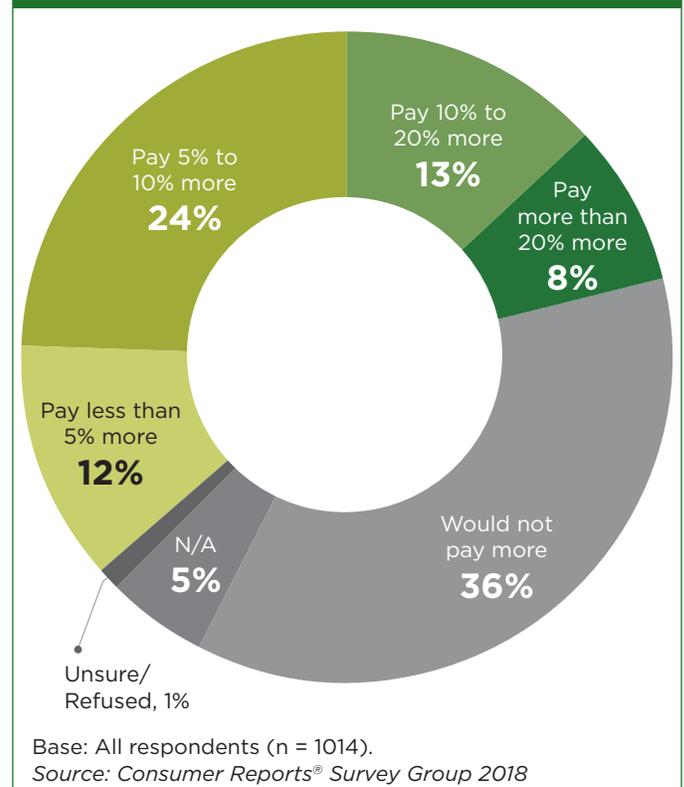
A new 2018 nationally representative survey conducted by Consumer Reports found that consumers are concerned about antibiotic use in the beef used for their burgers:²⁴

- » Almost 60 percent of respondents would be willing to pay more at a restaurant for a burger made from meat raised without antibiotics.

- » 54 percent of those polled were aware that the common practice of feeding antibiotics to farm animals may diminish the effectiveness of these drugs in humans, and 43 percent found this practice highly concerning.
- » The vast majority of those polled agreed on two approaches that could help curb the issue of antibiotic overuse in meat production: 86 percent say that meat producers should publicly disclose the amount and type of antibiotics used in production; and 78 percent agree that meat producers should stop giving antibiotics to animals that aren't sick.

These findings are consistent with earlier consumer research on attitudes related to antibiotic use in the meat industry. A survey conducted by the National Marketing Institute found that 66 percent of consumers said that it was important that their grocery store carry meat and poultry products raised without antibiotics.²⁵ According to the Nielsen Company, sales of meat products labeled “antibiotic free” grew 28.7 percent from 2011-2015, compared to 4.6 percent sales growth of conventionally-raised meat during the same period.²⁶

CONSUMER WILLINGNESS TO PAY MORE FOR BURGERS RAISED WITHOUT ANTIBIOTICS



Discussion: Burger Chains Should Push for Responsible Antibiotic Use in the Beef Industry

Consumers want beef from cattle raised without the routine use of antibiotics. A beef industry that uses less antibiotics is important for public health as well. Burger chains are in position to effect such a change. According to the latest FDA data, from 2015 to 2016 sales of medically important antibiotics to the meat and poultry industry decreased by 14 percent – the first drop in year-to-year sales since recording began.²⁷ Corporate antibiotic use policies for chicken supplies likely played a role in this decline, and consumers continue to be supportive of companies that end routine antibiotic use.

As some of America's largest beef buyers, burger chains that commit to only sourcing from beef producers with responsible antibiotic use practices can help accelerate change in the beef industry. Today, in the absence of effective government policy, beef producers face little incentive to change. Yet if major restaurant chains commit to purchase beef raised with responsible antibiotic use, producers will benefit from some additional assurance that new production practices and any additional resource investments will pay off.

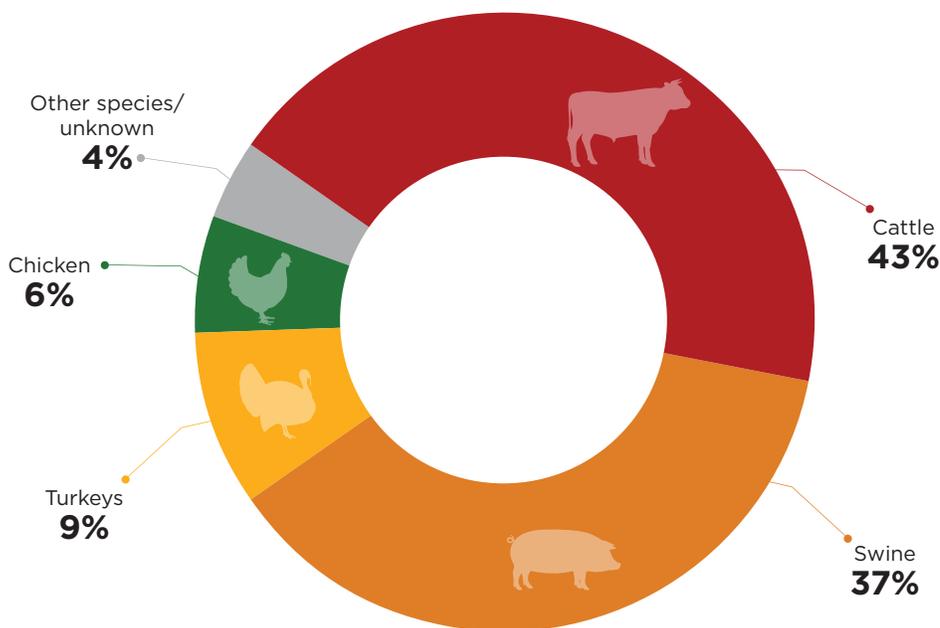
While it may be challenging to adopt responsible antibiotic use practices, major beef producers can

find plenty of examples to follow from across the U.S. Companies such as Niman Ranch, Meyer Natural Foods, Applegate, and Country Natural Beef are already sourcing or producing beef raised without the routine use of antibiotics. The American Grassfed Association lists more than 100 U.S. beef producers that raise beef without antibiotics.²⁸ These and other producers employ a variety of management strategies to keep cattle healthy without antibiotics. According to Applegate, which treats animals with antibiotics only in the case of illness under the care of a veterinarian, providing animals with “clean barns, fresh air, and more space” reduces the need for treatment.²⁹

In recent years, restaurant chains all over the country have made dramatic progress in setting and implementing antibiotic use policies for their supply chains. While progress has been slow when it comes to beef, burger chains like Shake Shack and BurgerFi, and fast casual restaurants like Chipotle and Panera Bread, have already implemented successful policies to sell beef raised without the routine use of antibiotics. Now it is time for more restaurant chains to adopt similar policies of their own and spark the next wave of change.

PERCENTAGE OF MEDICALLY IMPORTANT ANTIBIOTICS SOLD TO EACH MEAT SECTOR*

In 2016, it is estimated that out of the total U.S. livestock sales and distribution of **medically important antimicrobials**, 43% was intended for use in cattle, 37% intended for use in swine, 9% intended for use in turkeys, 6% intended for use in chickens, and 4% intended for use in other species/unknown.



* Source: FDA, Center for Veterinary Medicine, 2016 Summary Report on Antimicrobials Sold or Distributed for Use in Food-Producing Animals, December 2017, <https://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm588086.htm>.

Hold the Antibiotics, McDonald's

“As one of the world’s largest food companies, we will seize the opportunity to use its scale for good, to influence industry change on the issue of Responsible Use of Antibiotics.”

—McDonald’s Global Vision for Antibiotic Stewardship in Food Animals, August 2017

There is one burger chain that towers above the rest in popular culture and in beef purchasing — McDonald’s. The company’s size and cultural influence give it immense power to effect change, and McDonald’s has pledged in recent years to use its “scale for good.”³⁰ When it comes to stopping antibiotic overuse in beef production, McDonald’s — the largest single buyer of beef in the U.S. — is in a unique position to do just that. In August 2017, McDonald’s announced an updated “Global Vision for Antibiotic Stewardship” that includes important objectives, such as prohibiting routine prevention use of medically important antibiotics in the entire meat supply chain.³¹ To date, however, McDonald’s has not set a timeline for sourcing beef raised without routine use of antibiotics. In response, in February 2018, more than 80 stakeholder groups, including health and environmental advocates, consumer watchdogs, and food safety organizations, sent an open letter to McDonald’s CEO Steve Easterbrook urging the company to establish a concrete timeline for phasing out the routine use of antibiotics in its beef supply.³² Since then, more than 200,000 consumers have called on the company to fulfill its promise.

Antibiotic Resistance and Antibiotic Misuse in Livestock

The World Health Organization considers antibiotic-resistant bacteria a top threat to global public health.³³ Already, resistant infections are resulting in harder-to-treat illnesses and even death. At least 23,000 Americans die from antibiotic-resistant infections every year, and at least two million get sick.³⁴ According to a 2018 survey conducted by Consumer Reports, about a third of Americans know someone (including themselves) who had a bacterial infection where antibiotics were ineffective at curing the illness.³⁵

54%

Over half of Americans are aware that the practice of feeding antibiotics to farm animals may diminish the effectiveness of antibiotics in humans.

Source: *Consumer Reports*, Natural and Antibiotics Labels Survey Report, 1 May 2018, <https://consumersunion.org/wp-content/uploads/2018/10/2018-Natural-and-Antibiotics-Labels-Survey-Public-Report.pdf>.



Experts predict that without extensive action to stem bacterial resistance to antibiotics, common infections are likely to become a leading cause of death once again. A 2016 report commissioned by the United Kingdom estimates that unless steps are taken to control antibiotic resistance, global deaths from drug resistant infections could reach 10 million per year by 2050, more than current deaths from cancer.³⁶ In response to the gravity of the situation, the United Nations convened a special session of the General Assembly in September 2016. It unanimously adopted a resolution in which all nations committed themselves to taking action on the problem.³⁷

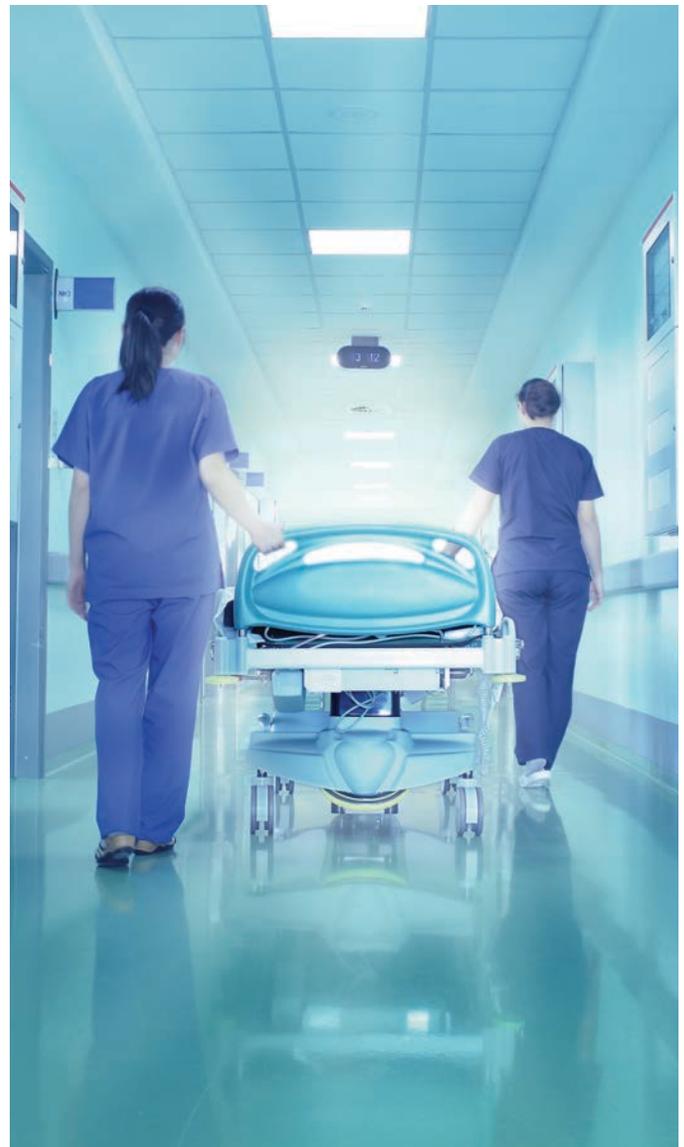
The use and misuse of antibiotics, both in human medicine and in livestock production, is widespread.³⁸ A 2016 study published in the leading medical journal, the Journal of the American Medical Association (JAMA), indicates that nearly one-third of antibiotics prescriptions in human medicine are not needed.³⁹ The CDC, the WHO and other leading scientific bodies agree that the use and misuse of antibiotics in food animals contributes to antibiotic resistance.⁴⁰

“Scientific evidence demonstrates that overuse of antibiotics in animals can contribute to the emergence of antibiotic resistance.”

—Dr. Kazuaki Miyagishima, Director of the Department of Food Safety and Zoonoses at the World Health Organization

The amount of medically important antibiotics sold for use in animals in the U.S. rose steadily between 2009 and 2015, and then decreased by 14 percent in 2016.⁴¹ Despite this drop in 2016, the amount of use and overuse on farms is still enormous and continues to help drive the spread of resistance.

Antibiotics have historically been given to animals that are not sick to accelerate weight gain and prevent disease in crowded, stressful, and unsanitary industrial farming conditions.⁴² Approximately 95 percent of the antibiotics sold for animal use are added to feed and water, the preferred way to deliver antibiotics to large flocks or herds of animals at once, rather than to individual sick animals.⁴³ This practice is a key contributor to the development of antibiotic-resistant bacteria. Resistant bacteria can escape farms and spread into communities through air,⁴⁴ water,⁴⁵ soil,⁴⁶ meat,⁴⁷ and even workers.⁴⁸ Resistant bacteria can make us sick, or pass on resistance to other bacteria, which can make us sick.⁴⁹



In December 2015, the American Academy of Pediatrics reviewed the evidence and concluded that antibiotics should be used “only to treat and control infectious diseases in livestock and not to promote growth or to prevent disease routinely.”⁵⁰ In November 2017, the World Health Organization concurred with that idea when it called for a complete restriction in the use of medically important antibiotics on healthy animals to promote growth and prevent disease.⁵¹ Yet the U.S. FDA prohibits the sale of medically important antibiotics only for growth promotion, while allowing routine use for disease prevention to continue unabated as long as it is overseen by a veterinarian.⁵² We therefore urge restaurant chains to require their suppliers to go beyond FDA’s minimum requirements in order to make significant progress in curbing antibiotic resistance.

The Beef Industry Lags Behind

The beef industry has made only limited efforts to reduce antibiotics use, and as of 2016, sales of medically important antibiotics for use in cattle are higher than for any other food animal species.⁵³ In a recent news story, *New York Times* journalist Danny Hakim recounted his experience looking into the American cattle industry's attitudes toward antibiotic use.⁵⁴ His research found that despite FDA efforts to reduce antibiotic use (see "The Federal Government Has Failed to Act" section for more details), and warnings from health experts like the World Health Organization, the beef industry continues to dose animals routinely with medically important antibiotics regardless of whether animals are sick.

Cattle are adapted to graze grass on pastures, but in the current industrial production model, cattle are often moved off the home farm, mixed together, shipped long distances, and then fed grain-based diets in crowded feedlots.⁵⁵ Antibiotics are then used to avert problems that arise from these stresses – or at least avert them for enough time to get that animal to slaughter. Improving how cattle are raised can reduce producers' reliance on antibiotics.⁵⁶

Conventional Beef Production Practices Lead to Routine Antibiotic Use

The intensive and complex beef production system in the U.S. is highly reliant on routine antibiotic use. Cattle raised in feedlots typically live about eighteen months (compared to roughly two months for chickens).⁵⁷ Dairy and beef breeding cows live even longer.⁵⁸ The longer life span increases investment in the animals and the risk that they may become sick and require treatment with antibiotics. There may also be multiple changes of ownership throughout an animal's life span, which can make it difficult to implement a uniform antibiotic use protocol.⁵⁹ In comparison, in the chicken industry – which has been more proactive about antibiotic stewardship – it is typical for a single company to own the birds from hatchery to slaughter, and in some cases, the whole farm produces chicken for a single buyer.

About 80 percent of cattle slaughtered in the United States come from feedlots, with cull cattle (dairy cows that are no longer producing milk or beef breeding cows that are no longer producing calves) making up most of the rest, and grassfed cattle accounting for a small portion. Feedlot cattle are raised specifically for meat.⁶⁰ Most feedlot cattle are born on farms where the cows graze on pasture for a period of time.⁶¹ After weaning, most calves quickly begin the journey to a feedlot, where they are kept in large uncovered pens and fattened on a grain-based diet without access to grass.

“We need the tool [antibiotics] when we need the tool, but the fact is we’ve overused the tool to offset the negatives of industrial production.”

—Mike Callicrate, Ranch Foods Direct

For feedlot cattle, the problems start when the calves leave the home farm. Moving animals causes stress and exposure to new animals, which increases the risk of illness such as bovine respiratory disease.⁶² A 2011 USDA survey of feedlot cattle producers found that more than 20 percent of cattle entering feedlots were injected with antibiotics at entry to prevent disease because they were considered high risk.⁶³ For cattle entering the feedlot at lower weights, meaning they spent less time on pasture, the number was much higher, with 39 percent of cattle receiving routine preventative antibiotics.⁶⁴ Despite this routine preventative antibiotic use, many cattle still become ill with respiratory disease and require additional antibiotics.⁶⁵

Inappropriate diets also lead to significant health problems, including liver abscesses.⁶⁶ The aforementioned USDA study found that 70 percent of feedlot cattle receive the antibiotic tylosin, an antibiotic that is marketed for its ability to “reduce the severity of liver abscesses in beef cattle.”⁶⁷ Tylosin is considered to be critically important by the WHO because it is used to treat serious infections in humans, including *Campylobacteriosis*, a foodborne infection that can be passed from animals to people through direct contact, environmental contamination, or food.⁶⁸

59%

of Americans would be more likely to eat at a restaurant that serves meat raised without antibiotics.

Source: *Consumer Reports*, Natural and Antibiotics Labels Survey Report, 1 May 2018, <https://consumersunion.org/wp-content/uploads/2018/10/2018-Natural-and-Antibiotics-Labels-Survey-Public-Report.pdf>.

Opportunities for Change

Antibiotic use in the beef industry is related to how cattle are raised. Although there are challenges to reducing antibiotic use, it is entirely possible – and many U.S. beef producers already raise cattle without using antibiotics routinely.

Grassfed: A Better Approach

There is a simple solution that can help drastically reduce antibiotic use in cattle production — keeping them foraging on pasture for longer portions of their lives. Cows are ruminants, and their natural behavior consists of grazing on grasses.⁶⁹ Allowing beef cattle to graze on well-managed pastures from birth to slaughter (often referred to as 100 percent grassfed) prevents many of the health problems that result from feedlot cattle production.

Because grassfed cattle eat only forage, poor health that can arise from grain-intensive diets in feedlots is avoided. In addition, cows raised in a properly managed pasture avoid the crowding and other stressful, disease-promoting conditions of the feedlot. Finally, keeping cattle on pasture allows producers to minimize transporting the animals, which reduces stress and exposure to new animals. Healthier, less stressed animals will manifest fewer of the problems that become the rationale for the routine use of antibiotics in the first place.

More beef suppliers are making the switch to grassfed beef and its popularity continues to grow. Certifications including USDA Organic,⁷⁰ American Grassfed Association (AGA),⁷¹ Animal Welfare Approved,⁷² Certified Grassfed by A Greener World

(AGW),⁷³ Global Animal Partnership (step 4-5+),⁷⁴ and Food Alliance do not allow for the routine use of antibiotics in their beef supply chains. Sales of grassfed beef soared from \$17 million in 2012 to \$272 million in 2016.⁷⁵ Industry analysts say grassfed beef could make up 30 percent of the market within 10 years.⁷⁶

Changes to Conventional Production

There are management practices to reduce reliance on the routine use of antibiotics in conventional beef production, as well, including:

- » Younger cattle are at much higher risk of disease and more likely to receive antibiotic treatment when arriving at the feedlot,⁷⁷ so keeping cattle on pasture as long as possible reduces the risk of poor health that is otherwise managed by antibiotics.
- » Vaccinating cattle and utilizing approved non-antibiotic veterinary treatments to prevent disease.⁷⁸
- » Avoiding mixing groups of cattle on the way to the feedlot can reduce illness and the need for antibiotics.⁷⁹
- » Increasing the level of roughage in feedlot diets and better managing feed can greatly reduce incidence of liver abscesses in cattle, a problem that feedlots typically manage with routine antibiotic use.⁸⁰
- » Purchasing cattle from programs that certify health protocols can reduce disease and lower risk of antibiotic use.⁸¹



U.S. Roundtable for Sustainable Beef Falls Short on Antibiotic Stewardship

In May 2018, the U.S. Roundtable for Sustainable Beef (USRSB) — whose members include prominent burger chains surveyed in this report — released a draft “sustainability” framework for beef production that fails to include the reduction or elimination of the routine use of medically-important antibiotics as a priority. Over 100 members from the retail, civil society, producer, processor and allied industry sectors make up the USRSB, including some of the very same companies that for years have opposed regulations that would curb the overuse of antibiotics in beef production. Over 50 organizations submitted a letter to the USRSB in June 2018 highlighting how these companies “are falsely portraying themselves as promoting a ‘U.S. beef value chain’ that is environmentally sound, socially responsible and economically viable.”⁸²

While the USRSB’s framework does mention antimicrobial stewardship, it is not among the framework’s top-level high-priority indicators and metrics of sustainability and there is no requirement for producers to reduce antibiotic overuse. Rather, it relies exclusively on the industry’s Beef Quality Assurance Program and FDA’s “judicious use” principles, both of which allow routine use of medically important antibiotics for disease prevention to continue unabated. The authors of this report do not consider the criteria points of the USRSB to adequately address antibiotic overuse in the beef industry. We therefore urge member companies like McDonald’s, Wendy’s and others to adopt antibiotic use policies that go beyond USRSB’s framework, and encourage the USRSB to strengthen its antibiotics standards.

The Federal Government Has Failed to Act

Despite decades of public pressure and the clear threat to public health, the U.S. government has failed to take the necessary actions to combat antibiotic overuse in the livestock industry. Legislation to phase out the routine use of antibiotics in livestock production has been stalled in Congress for years. White House and agency leadership has also been sorely lacking.⁸³

In 2015, the Obama Administration released a National Action Plan for Combating Antibiotic

Resistant Bacteria. On the human side of the equation, the Administration set a goal of reducing inappropriate antibiotic use in outpatient settings by half, and in inpatient settings by 20 percent. But the Obama Administration set no national targets for reducing antibiotic use where the overwhelming majority of U.S. antibiotic sales occur—in the livestock industry. Instead, the Obama Administration relied on existing efforts of the Food and Drug Administration (FDA), embodied in the agency’s Guidance 209 and 213, to end the marketing of medically important antibiotics for growth promotion and to require producers to have a veterinarian’s order to continue putting these antibiotics into feed or water.⁸⁴

“The rise of antibiotic-resistant bacteria poses a growing danger to the health and safety of patients.”

—Senator Susan Collins, March 2017

FDA implemented its new antibiotic use guidelines at the end of 2016.⁸⁵ But it continues to allow medically important antibiotics to be routinely used in animal feed or water to prevent disease – even in healthy animals – so long as a veterinarian approves that use. FDA also allows such orders by veterinarians to be written so that all animals on a farm can be given antibiotics for up to six months duration.⁸⁶ The same veterinary order can be used for multiple farms and multiple groups of animals moving through the same farm.⁸⁷ Because antibiotic use for disease prevention can be virtually identical in dose and duration to the previous use of identical drugs for growth promotion, this represents a giant loophole in FDA guidelines.⁸⁸ We fear those guidelines will therefore do little to stop continued overuse of antibiotics in livestock and poultry production.

78%

of Americans agree that meat producers should stop giving antibiotics to animals that aren’t sick.

Source: *Consumer Reports*, Natural and Antibiotics Labels Survey Report, 1 May 2018, <https://consumersunion.org/wp-content/uploads/2018/10/2018-Natural-and-Antibiotics-Labels-Survey-Public-Report.pdf>.

Further, FDA is not collecting the data needed to demonstrate that its efforts to reduce antibiotic use in livestock production are effective. While information on sales of antibiotics for use in livestock are collected from drug companies, neither the USDA nor the FDA collects comprehensive data on the type and amount of antibiotics actually administered to animals, which may vary greatly from one producer to another. There are no concrete proposals to collect such data. The U.S. Government Accountability Office recently concluded that “the agencies’ [FDA and USDA] actions do not address oversight gaps such as long-term and open-ended use of medically important antibiotics for disease prevention or collection of farm-specific data, and FDA and Animal and Plant Health Inspection Service do not have measures to assess the impact of their actions.”⁸⁹

The FDA does have some agreements with university researchers to collect on-farm use data, but these agreements are based on voluntary participation by a limited number of farms.⁹⁰ In addition, the USDA’s Animal and Plant Health Inspection Service (APHIS) conducts voluntary farm surveys periodically that include questions on antibiotic use, including in beef feedlots, but does not ask sufficiently specific questions to determine the amount of antibiotic used; the last such feedlot surveys are from 2011.⁹¹

More recently, under the Trump administration, the U.S. government has actively compromised antibiotic stewardship efforts by the global health community. In November 2017, the World Health Organization issued guidelines calling for a complete restriction of the use of medically important antibiotics on healthy animals for growth promotion and routine disease prevention (see Appendix 6). The USDA publicly opposed these recommendations.⁹² Bloomberg subsequently reported that U.S. representatives

are attempting instead to shape antibiotics recommendations for the United Nations and WHO’s Codex Alimentarius, or “Food Code,” a collection of standards that are likely to impact international production practices.⁹³ The draft recommendations obtained by Bloomberg were weaker than WHO Guidance and would allow the use of antibiotics for disease prevention. In other words, the Trump Administration is fighting to entrench business-as-usual practices for the U.S. livestock industry, rather than much needed restrictions on antibiotic use.

State and Local Policies Can Create a Blueprint for Future Federal Action

In the absence of effective federal regulation, state policymakers in California and Maryland have passed laws in recent years to limit antibiotic misuse in agriculture. California’s S.B. 27 and the Keep Antibiotics Effective Act in Maryland are both designed to go beyond federal law by greatly restricting preventative use of antibiotics in livestock production.⁹⁴

The key component of both laws is a ban on routine use of medically important antibiotics (i.e., any use except when animals are either sick or faced with a specific risk of contracting an illness.) But as of September 2018, the regulatory agencies in both states charged with enforcement have refused to give the new laws teeth. The Maryland Department of Agriculture has proposed draft regulations for implementing the law that would align with existing federal laws that continue to allow almost all uses of antibiotics in livestock.⁹⁵ And while the California Department of Food and Agriculture has published voluntary antibiotic stewardship and judicious use guidelines, these do not clearly identify antibiotic use practices prohibited by the new law.⁹⁶ As implementation of these laws continues, and other states strive to go further, consumers and lawmakers will need to remain vigilant to ensure strong controls on antibiotic use are actually put into practice.

In the meantime, there are ways that local governments can act to make sure consumers have the information they need to seek out meat raised without the routine use of antibiotics. San Francisco passed a first-of-its-kind ordinance in October 2017 that requires large grocery chains to report on the antibiotics used to raise the meat they sell.⁹⁷ This ordinance is focused on increasing transparency in the livestock industry. Each year, grocery chains covered by the law will be required to notify San Francisco’s Department of the Environment of which





antibiotics are used in their meat supply chain, for what purposes, how much, and on how many animals.⁹⁸ With limited national data on food animal antibiotic use practices, laws like San Francisco's can provide important information to consumers and policymakers.

Company Shareholders Are Supportive of Strong Antibiotics Policies

Shareholders in major food companies have taken action over the past year to support resolutions that call on companies to set policies on antibiotic use in meat and poultry supply chains.

Investor members of the Interfaith Center on Corporate Responsibility (ICCR) have urged restaurants, retailers and meat producers to stop sourcing meat raised with routine antibiotics, to protect public health and as an essential step to mitigate financial risks for the companies and their investors.

Shareholder proposals to Darden Restaurants, the parent company of Olive Garden, and Denny's have

called for responsible antibiotic use in sourced meat. Darden's shareholders recently voted 40 percent in favor of a proposal that would require the company to conduct a feasibility study for eliminating the routine use of medically important antibiotics in its meat supply chain.⁹⁹ Denny's shareholders voted 15.5 percent in favor of the proposal led by the Benedictine Sisters of Mount St. Scholastica, which called on the company to eliminate the routine use of medically important antibiotics in its meat supply chain.¹⁰⁰ After ongoing dialogue with ICCR members, McDonald's also reiterated its commitment to release details of a policy for reducing antibiotic use in its beef supply chain soon.¹⁰¹

A shareholder resolution filed by As You Sow, a member of ICCR, called on Sanderson Farms to phase out medically important antibiotic use in its supply chain. Sanderson is the third-largest chicken company in the United States and one of the few remaining chicken producers of that size that has not begun reducing antibiotic use.¹⁰² The company has also run a publicity campaign minimizing the risks of overusing antibiotics.¹⁰³ In February 2018, 43 percent of Sanderson's shareholders cast a favorable vote for the proposal, a significant percentage considering the company's public stance on antibiotic use.¹⁰⁴

Honorable Mentions

Although most of the largest U.S. burger chains have yet to restrict antibiotic use in the beef they source, many smaller burger companies have done so already, including the following:¹⁰⁵

*The information for Honorable Mentions is based solely on publicly available information regarding the companies' antibiotic use practices. These companies were not surveyed.

Burger Lounge

- » Serves beef sourced by Grass Run Farms, which uses no antibiotics ever¹⁰⁶
- » With 23 locations, most in California

Epic Burger

- » Serves beef raised without antibiotics¹⁰⁷
- » 8 locations in the Chicago area¹⁰⁸

Tasty Burger

- » Serves beef raised without antibiotics; verified through HFAC third party review standards at all stages¹⁰⁹
- » Locations in Massachusetts and Washington D.C.

Elevation Burger

- » Serves beef raised without antibiotics¹¹⁰
- » 50 locations in the U.S. and abroad

B.Good

- » Serves beef raised without antibiotics¹¹¹
- » Locations in 12 U.S. states as well as Canada, Germany, and Switzerland

Burgerville

- » Serves beef raised without antibiotics¹¹²
- » Based in Vancouver, WA, with locations across the Northwest.

Good Times

- » Serves beef raised without antibiotics¹¹³
- » Based in Lakewood, CO with locations across CO.



Progress Update: 2018 Top 25 Fast Food and Fast Casual Restaurant Chain Survey and Scorecard

While the federal government has failed to effectively tackle antibiotic overuse in livestock production to date, consumers have been voting with their dollars to bring about that change. As previous *Chain Reaction* reports have shown, fast food restaurants and producers have responded.

In 2014 Chick-fil-A stepped forward as one of the first major restaurants to commit to end the use of all antibiotics in its chicken supply.¹¹⁴ Since then, consumer advocates have urged other major restaurants to shift their meat suppliers away from overusing the drugs. McDonald's responded in 2015 by committing to eliminate the use of all medically important antibiotics in its chicken supply. This and other marketplace pressures accelerated changes by major chicken producers, including Perdue Farms and Tyson Foods, both of which phased medically important antibiotics out of their chicken production.

The first *Chain Reaction* report, issued in 2015, surveyed the 25 largest fast food and fast casual restaurant chains on policies to restrict the use of medically important antibiotics in their meat supply chains. Only five reported having any such policy. Armed with this information, consumer advocates urged more restaurants to act. KFC, Subway, and others responded by taking meaningful steps to eliminate routine use of medically important antibiotics in the meat they source.

In subsequent *Chain Reaction* reports, the number of restaurants reporting meaningful antibiotic use policies grew, with nine companies reporting having such antibiotic use policies in 2016, and fourteen in 2017.

Key Findings

Our fourth annual *Chain Reaction* report shows that America's top fast food and fast casual restaurant companies more than ever are responding to consumer demand for meat raised without the overuse of antibiotics, albeit still primarily in chicken. These companies are important drivers of the change we want to see, where better stewardship of antibiotics means they are more likely to remain effective when absolutely needed to treat sick people and animals.

As in prior years, report authors directly surveyed companies and reviewed public statements in order to evaluate corporate antibiotic use policies and practices. A copy of our survey is available in Appendix 1. Our scoring methodology and criteria for the top 25 fast food and fast casual chains can be found in Appendix 4; company responses are summarized in Appendix 5. Report authors made minor adjustments to point allocations within existing

categories compared to *Chain Reaction III*.

Some companies evaluated in this scorecard overlap with the burger chain scorecard presented earlier in this report. Unlike the burger chain scorecard, which only evaluates antibiotic use policies and practices for beef sold by those companies, the nation's top 25 fast food and fast casual restaurants were graded on progress related to antibiotic use across their entire meat and poultry supply chains.

The survey of this year's top 25 restaurants reveals that more companies than ever are making meaningful efforts to restrict antibiotic use in at least some of their meat supply chains.

Policy Progress

- » Of the nation's top 25 restaurant chains, 18 have adopted policies to limit the routine use of antibiotics in at least one meat category, primarily chicken.
- » Three chains – Panera Bread, Chipotle, and Chick-fil-A – received an “A” grade for their policies to source meat raised without the routine use of antibiotics. Chick-fil-A, the newest recipient of an “A” grade, reports that it is on track to have 100 percent of its chicken meet its “No Antibiotics Ever” standard by the end of 2019.¹¹⁵
- » Eleven chains improved their grades compared to last year. Chick-fil-A, KFC, Jack in the Box, and Papa John's gained points for progress on implementing their commitments. Pizza Hut and Wendy's gained points for making further commitments to reduce antibiotic use in their meat supply chains (for more info on Wendy's, see the Burger Chain Scorecard). Domino's received points for making a new commitment to reduce antibiotic use in its chicken supply chain. Applebee's and IHOP (both owned by Dine Brands Global) released a new antibiotics policy in August 2018 which states that it is now working with suppliers to end the routine use of medically important antibiotics in its chicken and pork supplies.¹¹⁶ Dunkin' Donuts moved up to a “D+,” though not due to improved practices, but rather because its sales of beef dropped, so we did not consider beef in calculating its score.
- » Cracker Barrel earned an improved “D+” grade. Although the antibiotics claim on their website uses the ambiguous term “human grade,” the company confirmed via email that it only sells meat raised without the routine use of medically important antibiotics; antibiotics are only administered in cases of illness or to

control an outbreak. However, Cracker Barrel does not require a third-party auditor to verify those claims. Given the inconsistencies between what Cracker Barrel states on its website and what the company told us, as well as the lack of availability of pork and beef that would meet the company's claims, we are skeptical that the company's claims are accurate.

- » Seven companies received a failing grade for taking no meaningful, publicly transparent actions to reduce antibiotic use in any of their meat supply chains: Sonic, Dairy Queen, Olive Garden, Chili's, Arby's, Little Caesars, and Buffalo Wild Wings.

Implementation Progress

- » Chick fil-A joins Chipotle and Panera Bread at the lead with an "A" grade in this year's scorecard. The chicken-centric company has nearly finished implementing its commitment to only source chicken raised without antibiotics by the end of 2019.¹¹⁷
- » IHOP and Applebee's each improved from an "F" to a "C" grade for sourcing portions of their chicken and pork supply from producers raising animals without the routine use of medically important antibiotics. IHOP and Applebee's require annual third-party auditing of their suppliers to ensure antibiotics standards are met, and plan to publicize that progress.¹¹⁸

Transparency Progress

- » *Record high number of responses:* 17 of the top restaurant chains responded to our survey, the most in *Chain Reaction's* four-year history. Increased transparency allows consumers to make more educated purchasing decisions and signals that the restaurants are taking antibiotic use in their supply chains seriously.
- » Starbucks dropped down to a "D" in this year's report due to a lack of transparency. The company committed to no longer source poultry raised with routine antibiotic use in 2017,¹¹⁹ but has failed to report on progress toward implementing that goal and did not return this year's survey. Burger King dropped to an "F" this year because it did not return the survey and has not publicly reported progress on its commitment to source chicken raised without medically important antibiotics by the end of 2018.



2018 Chain Reaction IV Fast Food and Fast Casual Chain Detailed Scorecard

| Company | Policy | Implementation | Transparency | Total Points | Total Possible Points | %-age Total | Grade* |
|---|--------|----------------|--------------|--------------|-----------------------|-------------|-----------|
|  | 30 | 24 | 16.5 | 70.5 | 75 | 94 | A |
|  | 37 | 30 | 25 | 92 | 100 | 92 | A |
|  | 10 | 6 | 7 | 23 | 25 | 92 | A |
|  | 10 | 2 | 7 | 19 | 25 | 76 | B |
|  | 40 | 8 | 28 | 76 | 100 | 76 | B |
|  | 10 | 8 | 14 | 32 | 50 | 64 | B- |
|  | 11.5 | 9.2 | 21 | 41.7 | 75 | 56 | C+ |
|  | 10 | 8 | 21 | 39 | 75 | 52 | C+ |
|  | 14 | 2 | 21 | 37 | 75 | 49 | C |
|  | 14 | 2 | 21 | 37 | 75 | 49 | C |
|  | 10 | 2 | 21 | 33 | 75 | 44 | C |
|  | 28 | 0 | 6 | 34 | 100 | 34 | D+ |
|  | 9 | 4 | 12 | 25 | 75 | 33 | D+ |
|  | 10 | 2 | 12 | 24 | 75 | 32 | D+ |
|  | 10 | 0 | 13.5 | 23.5 | 75 | 31 | D+ |
|  | 10 | 0 | 7.5 | 17.5 | 75 | 23 | D |
|  | 20 | 2 | 0 | 22 | 100 | 22 | D |
|  | 10 | 0 | 0 | 10 | 75 | 13 | F |
|  | 0 | 0 | 4.5 | 4.5 | 75 | 6 | F |
|  | 0 | 0 | 4.5 | 4.5 | 75 | 6 | F |
|      | 0 | 0 | 0 | 0 | 0 | 0 | F |

* A comprehensive description of scoring and grading methodology is provided in Appendix 4.

“Policymakers and the food industry need to respond to this public health threat.”

—Marty Makary, MD MPH surgeon,
Johns Hopkins Hospital¹²⁰

Recommendations

Restaurants and meat producers, along with state and federal policymakers, have taken small but important first steps to promote more responsible use of antibiotics in meat production and supply chains. However, significant work remains to be done.

For Restaurant Chains

- » Make firm, timebound commitments to phase out the use of antibiotics in their entire meat and poultry supply chains, except for the treatment of sick animals that have been diagnosed by a veterinarian or to control a verified disease outbreak. Work closely with beef producers to require the gradual phase out of routine antibiotic use in the beef supply (except for those situations listed above).
- » Improve data collection and transparency about which antibiotics are actually being used by supplying farms, in what quantities, and for what species and purposes.
- » Provide regular progress reports and updates for customers and investors and use third-party certifiers and/or auditors to verify progress.

For Consumers

- » When purchasing meat, seek options raised without the routine use of antibiotics.
- » Ask restaurant managers wherever you eat about their meat sourcing policies and practices and make sure they know that you're looking for options that are better for public health, for animals and the environment—including meat produced without the routine use of antibiotics.
- » Visit the websites and social media pages of your favorite restaurant chains and leave comments asking them to switch to meat raised without the routine use of antibiotics, i.e., no use except for treatment of sick animals or a verified disease outbreak.
- » Join our campaigns calling on top restaurant chains to commit to better meat and poultry sourcing policies. Visit the websites of the report authors for more information.

For Federal Regulators and Policymakers

- » Prohibit routine antibiotic use in food animals for all purposes, including disease prevention.
- » Establish a limit of 21 days on the use of any medically important antibiotics in food animals.
- » Put in place a comprehensive system to require farm-level data reporting on how antibiotics are used, including information on amounts used, reason for use, and livestock species receiving antibiotics; and improve monitoring of resistant bacteria in food. Much of this critical information is currently missing.

For State and Local Regulators and Policymakers

- » Adopt and implement strong laws that build on the example set by California and Maryland, incorporating clear language that prohibits the use of antibiotics for growth promotion and disease prevention, and establishes data collection and monitoring provisions.
- » Implement state policies that have been passed. The California Department of Food and Agriculture and the Maryland Department of Agriculture should clearly and effectively implement S.B. 27 and the Keep Antibiotics Effective Act.
- » Replicate in other cities the ordinance passed in San Francisco requiring large grocery chains to report on the antibiotics use practices behind the meat they sell.

For Investors

- » Consider company policies on antibiotic use when making investment decisions in restaurant – and especially burger – chains.
- » Submit and support shareholder resolutions requiring major buyers and producers to adopt the responsible antibiotic use policies and practices defined throughout this report.

For Public and Private Institutional Meat Buyers, including Schools, Universities, and Hospitals

- » Insist on meat from animals raised by suppliers that do not use medically important antibiotics for routine purposes, and who limit antibiotic use only to treat sick animals and, in temporary circumstances, to control a verified disease outbreak.

Appendix 1: Survey Methodology and Questions

The authors of this report surveyed (via email and traditional mail) the top 25 U.S. burger chains and the top 25 U.S. fast food and fast casual restaurant chains, as ranked by total U.S. sales, asking a series of questions about their 1) antibiotic use policy; 2) policy implementation; and 3) transparency, including verification of policy compliance via third-party audits and reporting on progress of policy implementation. The survey(s) in their entirety can be found below. Restaurants on both the burger chain and fast food and fast casual chain top 25 lists, like McDonald's, received an overall grade for antibiotics policies for their entire meat supply chain, and a separate grade solely for their beef supply.

In addition to reviewing survey responses, the authors examined company websites, annual reports, and other publicly available information on company policies. We sent at least two follow up emails in cases where a company did not respond to the survey. In cases where survey responses or website statements were not clear, we followed up with clarification questions via email and phone. In instances where there was a discrepancy between information provided on the survey and in publicly available sources, we made every effort to clarify the gaps and asked companies to align public information with internal communications. In cases where this wasn't possible to do, we based our analyses on publicly available information. Appendices 3 and 5 contain a summary of surveyed company policies and survey responses.

Survey on Restaurant Meat/Poultry Procurement Policies and Antibiotics April 2018

NAME OF COMPANY[1] _____

ANTIBIOTICS POLICY AND IMPLEMENTATION

- 1. Does your company have a publicly-available, written policy regarding the use of antibiotics by your meat and poultry suppliers?** Yes _____ No _____

If yes, please complete the table below to describe your policy; indicate what percentage of your meat and poultry is currently sourced under this policy; and when you expect full policy implementation.

If the policy is published please provide the URL:

If unpublished, please include a copy with your survey responses:

For each meat category, please mark which of the four options best describes your company's policy. (Note: we do not consider FDA's Guidance 213 to be a meaningful antibiotics policy.)

| | No antibiotics policy for this type of meat | No antibiotics ever | No medically important* antibiotics ever | No use of medically important antibiotics unless animals are sick** | % of product currently compliant with company policy | Company commits to fully implement policy by (YEAR) |
|---------|---|---------------------|--|---|--|---|
| Beef | | | | | | |
| Pork | | | | | | |
| Turkey | | | | | | |
| Chicken | | | | | | |

*Medically important includes all those antibiotics that the World Health Organization (WHO) classifies as important, highly important, or critically important.

**Defined as no use for growth promotion and/or disease prevention purposes. This is consistent with the November 2017 WHO Guidelines. Use is limited to treatment of animals diagnosed with an illness, medical or surgical procedures, or to control an identified disease outbreak.

2. What percentage of your total meat/poultry purchases by volume does each of the following represent?

Beef _____

Pork _____

Turkey _____

Chicken _____

ANTIBIOTICS POLICIES REPORTING AND VERIFICATION

3. Describe supplier auditing practices for your company’s antibiotics policies:

| | We require independent third party supplier audits to verify compliance with our antibiotics policy (Yes/No) | Name of third party auditor (i.e. USDA PVP, GAP, organic certifier, etc.) | Our auditing standards are publicly available (Yes/No) | # of on-site visits to supplier farms annually as part of audit requirements |
|---------|--|---|--|--|
| Beef | | | | |
| Pork | | | | |
| Turkey | | | | |
| Chicken | | | | |

4. If your company does its own auditing of suppliers, please describe:

5. If your auditing standards are publicly available, please provide the URL or indicate that the standards are attached:

6. What is your policy regarding suppliers who are found to be non-compliant?

7. Do you require your suppliers to track and report the type and amount of antibiotics used to produce the meat and poultry you serve?

Yes _____ No _____

If yes, what metric is used for these data? _____

Are these data publicly reported? Yes _____ No _____

If yes, provide URL: _____

If no, please send a copy of the information.

8. Are you currently publicly reporting on your progress, on your website or elsewhere, at least on an annual basis, on the implementation of your policy?

Yes _____ No _____

If yes, provide URL for progress report: _____

If no, and your policy is less than one year old, have you committed to issue a public progress report on the one-year anniversary of your antibiotics policy?

Yes _____ No _____

9. Do you have a published policy prohibiting the use of the medicated feed additive carbadox in your pork supply?

Yes _____ No _____

If yes, please provide the policy or the URL: _____

^[1] All inquiries in this survey apply to your company's US locations, either company or franchise owned.



Appendix 2: Scoring Criteria for Burger Chain Scorecard

The policy section of the burger chain scoring rubric is slightly different than the scorecard metric used for the top 25 fast food and fast casual restaurant chains. Scoring for burger chains takes into account gradual reductions in medically important antibiotic use, and as a result the grading metric shifted, see chart below. Chains were awarded a total of 100 potential points in three key categories: 1) Policy; 2) Implementation; and 3) Transparency. The rubric accounts for the percentage of beef supply the policy applies to and the amount of reductions in the use of medically important antibiotics, according to the policy.

Category #1: Policy

Total number of potential points available: 40

The authors defined a “meaningful” policy as follows:

No antibiotics were used for growth promotion and/or disease prevention purposes. Use is limited to treatment of animals diagnosed with an illness, medical or surgical procedures, or to control a verified disease outbreak. This is consistent with the 2017 WHO Guidelines.

The policy score reflects whether the policy applies to the full beef supply, and the percent reduction in the use of medically important antibiotics. There are three sections to the policy criteria. Companies can receive ten points for having a meaningful policy as defined above, ten points for a time-bound commitment to implement the policy quickly, and twenty points for reducing all medically important antibiotic use by 90 percent or more.

Scores were adjusted based on the percentage of the beef supply covered. For example, if a policy applies to 15% of the company’s beef supply, that company will receive 15% of all points available. Similarly, if the policy has gradual reductions in medically important antibiotic use, then the company received points based on the percent reduction, multiplied by the percent of the supply chain covered under those reductions.

| | | |
|--|--------|----|
| GRADE SCALE: 2018 BURGER CHAIN SCORECARD | 91-100 | A |
| | 84-90 | A- |
| | 77-83 | B+ |
| | 67-76 | B |
| | 60-66 | B- |
| | 52-59 | C+ |
| | 43-51 | C |
| | 38-42 | D |
| | 33-37 | D- |
| <32 | F | |

| Category #1: Policy | |
|---|-------------------|
| Meaningful policy (see definition above) | 10 points maximum |
| Time bound commitment | 10 points maximum |
| Completing within 10 years | 3 points |
| Completing within 5 years | 10 points |
| Reductions in medically important antibiotic use | 20 points maximum |
| 2.5-5% | 2 points |
| 5-10% | 4 points |
| 10-25% | 8 points |
| 25-40% | 10 points |
| 40-60% | 14 points |
| 60-90% | 16 points |
| 90% or higher | 20 points |

Category #2: Implementation

Total points available: 32

Companies received points based on the percent of the supply chain covered by the policy, and the progress toward implementing the policy for that portion of the supply chain. The formula the authors used to calculate implementation scores is: % of supply under policy x 32 (total point) x % implemented.

| Category #2: Implementation | Percent of Supply Subject to Antibiotics Policy |
|------------------------------------|--|
| 15-40% of beef currently served | 6 points |
| 41-60% | 12 points |
| 61-75% | 18 points |
| 76-90% | 24 points |
| 91-100% | 32 points |

Category 3: Transparency

Total number of potential points available: 28

Companies were scored on a number of transparency criteria: company response to the survey; whether a company works with third-party auditors or purchases from beef suppliers that have third-party audits for their entire supply chains; and whether a company publishes (or plans to publish) a regular, publicly available progress update on implementation of its policy.

Companies were given half credit for what we considered only partial responses to our survey (answering some but not all questions). Full credit went to companies that either utilized independent third-party audits to verify compliance with their antibiotics use policy or purchased from suppliers that conducted third-party audits of their own for their entire supply chains. Half credit was given to companies that showed evidence of auditing suppliers using internal resources. Additional points were awarded if audit standards are public, and if the audit includes at least one on-site visit annually.

Full credit also went to companies that provided regular progress updates on implementation of their policies. To receive full credit, companies must publish updates online, at least annually. We gave full credit for various forms of updates including dedicated websites, press releases, and corporate social responsibility reports. If a policy was less than a year old, and a company made a commitment to issue a progress report in the future, they received half credit.

| Category #3: Transparency | |
|--|--------------------------|
| Responded to survey | 6 points maximum |
| Partial response to survey | 3 |
| Complete response to survey | 6 |
| Third party audits | 12 points maximum |
| Company works with independent third-party auditors; or suppliers that have third party audits for beef supply chain | 6 |
| Internal audit only (in place of third-party audit above) | 3 |
| Audit standards are public/PVP qualifies | 3 |
| Production sites inspected at least annually | 3 |
| Progress report | 10 points maximum |
| Progress update is public and available online | 10 |
| If policy less than a year old, commitment to progress report | 5 |

Appendix 3: Summary of Burger Chains' Policies and Survey Responses

Information in this Appendix concerning company ownership, number of restaurant locations and sales of fast food restaurant companies comes from the Restaurant Business list "2018 Top 500: Burger,"¹²¹ or company websites. Companies are listed in order of total 2017 sales, in dollars.

Information concerning companies' antibiotics policies and other policies comes from companies' responses to the survey, follow up emails, public statements made by the companies, and/or efforts by the report's authors to locate such policies online. The report's authors encourage restaurant chains to contact them directly with additional information concerning antibiotics and/or meat sourcing policies, and to make such information publicly available.

1. McDonald's

Owned by: McDonald's Corporation (NYSE: MCD)

Corporate headquarters: 1045 W Randolph St, Chicago, IL 60607

CEO: Steve Easterbrook

Number of U.S. Locations: 14,036

2017 U.S. Sales: \$37.64 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

Vision for Antimicrobial Stewardship for Food Animals: <http://corporate.mcdonalds.com/content/dam/gwscorp/scale-for-good/McDonalds-Global-Vision-for-Antimicrobial-Stewardship-in-Food.pdf>.

"McDonald's 'Vision for Antimicrobial Stewardship' outlines our vision and goals for antimicrobial stewardship in food animals. However, no beef specific antibiotic commitments have been made at this time."¹²²

Third Party Audits for Beef:

No¹²³

2. Burger King

Owned by: Restaurant Brands International (NYSE: QSR)

Corporate headquarters: 5505 Blue Lagoon Drive, Miami, FL 33126

CEO: Daniel Schwartz

Number of U.S. Locations: 7,226

2017 U.S. Sales: \$9.645 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

"We have begun by addressing those practices that contravene the Five Freedoms where we feel we can have an impact, such as: Routine use of antibiotics and other growth promotants sub therapeutically to speed growth and mitigate poor conditions."¹²⁴

Authors' note: Burger King's antibiotic use standard for beef reiterates current FDA guidelines that eliminated growth promotion uses of antibiotics, but it does not prohibit the use of antibiotics for disease prevention in its beef supply chain. The authors of this report do not consider this to be a meaningful

antibiotics policy.

Third Party Audits for Beef:

None found

3. **Wendy's**

Owned by: The Wendy's Company (NASDAQ: WEN)

Corporate headquarters: 1 Dave Thomas Blvd, Dublin, OH 43017

CEO: Todd Penegor

Number of U.S. Locations: 5,769

2017 U.S. Sales: \$9.31 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

Animal Antibiotic Use Policy: <https://www.wendys.com/animal-antibiotic-use-policy>.

"In 2016 we updated our antibiotic use policy to enhance our commitments for responsible antibiotic use, which maintain our belief that sick animals should be treated but also include more specific requirements for our beef, chicken and pork suppliers to replace, reduce and refine antibiotic use to decrease or eliminate over time the use of medically important antibiotics."¹²⁵

"Beginning in 2018, Wendy's will source about 15 percent of its beef from a progressive group of producers that have each committed to a 20 percent reduction of the only medically important antibiotic routinely fed to their cattle. Importantly, these producers will ensure that this antibiotic use in their cattle can be tracked and reduced."¹²⁶

Third Party Audits for Beef:

Approved independent auditing bodies are IMI Global and TCFA¹²⁷

4. **Sonic**

Owned by: Sonic Corporation (NASDAQ: SONC)

Corporate headquarters: 300 Johnny Bench Dr, Oklahoma City, OK 73104

CEO: J. Clifford Hudson

Number of U.S. Locations: 3,593

2017 U.S. Sales: \$4.408 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

No¹²⁸

5. **Jack in the Box**

Owned by: Jack in the Box Inc. (NASDAQ: JACK)

Corporate headquarters: 9330 Balboa Ave, San Diego, CA 92123

CEO: Leonard A. Comma

Number of U.S. Locations: 2,251

2017 U.S. Sales: \$3.469 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

No¹²⁹

6. **Hardee's**

Owned by: CKE Restaurant Holdings, Inc.

Corporate headquarters: 6700 Tower Cir, Franklin, TN

CEO: Jason Marker

Number of U.S. Locations: 1,874

2017 U.S. Sales: \$2.29 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

None found

7. **Whataburger**

Owned by: Dobson Family

Corporate headquarters: 300 Concord Plaza Dr, San Antonio, TX 78216

CEO: Preston Atkinson

Number of U.S. Locations: 821

2017 U.S. Sales: \$2.278 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

None found

8. Carl's Jr.

Owned by: CKE Restaurant Holdings, Inc.

Corporate headquarters: 6700 Tower Cir, Franklin, TN

CEO: Jason Marker

Number of U.S. Locations: 1,157

2017 U.S. Sales: \$1.527 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

None found

9. Five Guys

Owned by: Five Guys Holdings Inc.

Corporate headquarters: 10718 Richmond Hwy, Lorton, VA 22079

CEO: Jerry Murrell

Number of U.S. Locations: 1,321

2017 U.S. Sales: \$1.436 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

Not found

10. Culver's

Owned by: Culver Franchising System, Inc.

Corporate headquarters: 1240 Water St., Prarie du Sac, WI 53578

CEO: Craig Culver

Number of U.S. Locations: 641

2017 U.S. Sales: \$1.426 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

None found

11. **Steak 'n Shake**

Owned by: Biglari Holdings (NYSE: BH)

Corporate headquarters: 17802 Frontage Rd #400, San Antonio, TX 78257

CEO: Sardar Bilgari

Number of U.S. Locations: 1,027

2017 U.S. Sales: \$1.087 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef. However, in 2017, Steak 'n Shake began offering the Prime Steakburger on its menu, which claims to be "all-natural and antibiotic-free."¹³⁰

Third Party Audits for Beef:

None Found

12. **In-N-Out Burger**

Owned by: The Snyder Family

Corporate headquarters: 4199 Campus Dr Ste 900, Irvine, CA 92612

CEO: Lynsi Snyder

Number of U.S. Locations: 331

2017 U.S. Sales: \$908 million

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

None Found

13. Checkers

Owned by: Checkers Drive-in Restaurants, Inc.

Corporate headquarters: 4300 W Cypress St #600, Tampa, FL 33607

CEO: Enrique Silva

Number of U.S. Locations: 572

2017 U.S. Sales: \$552 million

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

None found

14. White Castle

Owned by: The Ingram Family

Corporate headquarters: 555 W Goodale St, Columbus, OH 43215

CEO: E.W. Ingram III

Number of U.S. Locations: 381

2017 U.S. Sales: \$547 million

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

White Castle's beef suppliers adhere to current FDA guidelines that continue to allow the use of medically important antibiotics for disease prevention, which the report authors do not consider to be a meaningful antibiotics policy.¹³¹

Third Party Audits for Beef:

No¹³²

15. Freddy's Frozen Custard and Steakburgers

Owned by: Simon Bros. and Scott Redler

Corporate headquarters: 260 N Rock Road, Wichita, KS 67206

CEO: Randy Simon

Number of U.S. Locations: 281

2017 U.S. Sales: \$411 million

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef

None found

16. Krystal

Owned by: The Krystal Company

Corporate headquarters: 1455 Lincoln Pkwy Suite 600, Dunwoody, GA 30346

CEO: Paul Macalusco

Number of U.S. Locations: 363

2017 U.S. Sales: \$394 million

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

None found

17. Shake Shack

Owned by: Shake Shack Inc. (NYSE: SHAK)

Corporate headquarters: 24 Union Square East, 5th Floor, New York NY 10003

CEO: Randy Garutti

Number of U.S. Locations: 100

2017 U.S. Sales: \$358 million

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

Antibiotic Use and Animal Welfare Policy: <https://www.shakeshack.com/stand-for-something-good/>
“100% Angus beef, made from premium whole muscle cuts—no hormones or antibiotics, EVER—is the founding DNA of our menu.”¹³³

Third Party Audits for Beef:

Yes, for two out of its three suppliers.¹³⁴

18. The Habit Burger Grill

Owned by: KarpReilly, Habit Burger LLC. (NASDAQ: HABT)

Corporate headquarters: 17320 Red Hill Ave Suite 140, Irvine, CA 92614

CEO: Russell Bendel

Number of U.S. Locations: 209

2017 U.S. Sales: \$354 million

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

None found

19. **Smashburger**

Owned by: Jollibee Foods Corp.

Corporate headquarters: 3900 E Mexico Ave Suite 1100, Denver, CO 80210

CEO: Tom Ryan

Number of U.S. Locations: 332

2017 U.S. Sales: \$333 million

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

None found

20. **Rally's**

Owned by: Checkers Drive-in Restaurants, Inc.

Corporate headquarters: 4300 W Cypress St #600, Tampa, FL 33607

CEO: Enrique Silva

Number of U.S. Locations: 304

2017 U.S. Sales: \$292 million

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

None found

21. **A&W**

Owned by: A Great American Brand, LLC.

Corporate headquarters: 1648 McGrathiana Pkwy, Lexington, KY 40511

CEO: Kevin Baxner

Number of U.S. Locations: 629

2017 U.S. Sales: \$226 million

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

A&W's website states: "Our ranchers only use antibiotics when medically necessary to ensure the health of the animal, in the same way that most doctors recommend the use of antibiotics for people."¹³⁵

Author's note: A&W did not respond to our survey to clarify which uses of antibiotics are allowed or how this policy is implemented with its suppliers. Without any additional information, this could not be considered a meaningful policy.

Third Party Audits for Beef:

Yes, according to its website.

22. **Fuddruckers**

Owned by: Luby's (NYSE: LUB)

Corporate headquarters: 13111 NW Freeway Suite 600, Houston, TX 77040

CEO: Peter Large

Number of U.S. Locations: 170

2017 U.S. Sales: \$212 million

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef. However, Fuddruckers offers a line of burgers called Fudds Exotics, which includes an American Kobe beef option, and claims to be "antibiotic free, hormone free and pasture raised."¹³⁶

Third Party Audits for Beef:

None found

23. **Farmer Boys**

Owned by: Farmer Boys Food, Inc.

Corporate headquarters: 3452 University Ave, Riverside, CA 92501

CEO: Karen Eadon

Number of U.S. Locations: 89

2017 U.S. Sales: \$158 million

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef. However, the Farmer Boys menu offers several variations of “The Natural” burger, which is made with “hormone-free and antibiotic-free” beef according to its website.¹³⁷

Third Party Audits for Beef:

None found

24. **Jack’s**

Owned by: Jack’s Family Restaurants, LP.

Corporate headquarters: 124 W Oxmoor Rd, Birmingham, AL

CEO: Todd Bartmess

Number of U.S. Locations: 149

2017 U.S. Sales: \$152 million

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

No published policy available for beef.

Third Party Audits for Beef:

None found

25. **BurgerFi**

Owned by: John Rosatti

Corporate headquarters: 105 US-1, North Palm Beach, FL 33408

CEO: Corey Winograd

Number of U.S. Locations: 92

2017 U.S. Sales: \$150 million

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy for Beef:

In its survey response, Burger Fi states that it sources beef raised without any antibiotics. On its website, BurgerFi says: “Our beef is Never exposed to steroids, antibiotics, growth hormones, chemicals, or additives – Ever”¹³⁸

Third Party Audits for Beef:

No, although BurgerFi conducts an internal audit.

Appendix 4: Scoring Criteria for Fast Food and Fast Casual Chain Scorecard

Though not the primary focus of this year's Chain Reaction report, the authors also surveyed and graded the overall top 25 fast food and fast casual restaurant chains in the United States, as we have in prior years. For the *Chain Reaction IV* Fast Food and Fast Casual Chain Scorecard, the score and letter grade for each restaurant chain was based on points awarded in three key categories: 1) Policy; 2) Implementation; and 3) Transparency. For restaurants offering chicken, beef, turkey and pork, the maximum number of points possible was 100 points. For restaurants that offer only three kinds of meat or poultry, the maximum number of points was 75 points; for restaurants that offer only two meats, the maximum number of points was 50 points; and for restaurants that offer only one meat, the maximum number of points was 25 points. If a company disclosed that a particular category of meat and/or poultry amounted to less than 5 percent of its total purchases, we did not include that meat type in our evaluation. The score and associated letter grade were based on the company's points as a percentage of the maximum total points possible for that company. Scoring criteria for each category, as well as the total number of potential points awarded for each, are detailed below. The authors made minor adjustments to points allocations within existing categories compared to *Chain Reaction III*.

| | | |
|---|--------|----|
| GRADE SCALE: 2018 FAST FOOD AND FAST CASUAL CHAIN SCORECARD | 91-100 | A |
| | 84-90 | A- |
| | 77-83 | B+ |
| | 67-76 | B |
| | 60-66 | B- |
| | 52-59 | C+ |
| | 43-51 | C |
| | 36-42 | C- |
| | 29-35 | D+ |
| | 19-28 | D |
| <19 | F | |

Category #1: Policy

Total number of potential points available: 40 (for chains serving all four meats)

The authors defined a “good” antibiotic use policy as follows:

No antibiotics were used for growth promotion and/or disease prevention purposes. Use is limited to treatment of animals diagnosed with an illness, medical or surgical procedures, or to control verified disease outbreak. This is consistent with the 2017 WHO Guidelines.

We awarded 7 points for each category of meat (chicken, turkey, pork, and beef) to which the good policy applied. We then awarded 3 points for each category of meat for which a company had announced a time-bound commitment for policy implementation. Companies that had already implemented a policy were given full credit for commitments. A company that made a partial commitment for a category (i.e. a certain subset of its chicken or beef) received half credit.

| Criteria #1: Policy | |
|--|--|
| Good Policy | Good policy, applying to 1-4 meat categories |
| Chicken | 7 |
| Turkey | 7 |
| Pork | 7 |
| Beef | 7 |
| Timebound commitment for policy implementation | |
| Chicken | 3 |
| Turkey | 3 |
| Pork | 3 |
| Beef | 3 |

Category #2: Implementation

Total number of potential points available: 32 (for chains serving all four meats)

The authors assessed the current availability of meat and/or poultry raised without routine antibiotics use at surveyed company restaurants. We awarded an increasing number of points, per category of meat and/or poultry (chicken, turkey, pork, beef), based on the percentage of a company’s purchases that already comply with a good antibiotic use policy. We offered 1 point per category if a company was purchasing at least 15 percent of the meat or poultry it currently serves according to a good antibiotic use policy. The greatest number of points (32 points total, 8 per category) was available for companies reporting that meat and/or poultry raised without routine antibiotics use accounts for more than 90 percent of their purchases. We offer one bonus point per category for companies that have achieved 100 percent policy implementation in at least one meat category since last year.¹³⁹

| Category #2: Implementation | Estimated availability of meat and/or poultry produced according to policy |
|--|--|
| 15-40% of meat and/or poultry currently served | 1 point per category |
| 41-60% | 2 points per category |
| 61-75% | 4 points per category |
| 76-90% | 6 points per category |
| 91-100% | 8 points per category |

Category #3: Transparency

Total number of potential points available: 28 (for chains serving all four meats)

The *Chain Reaction IV Fast Food and Fast Casual Scorecard* assigns points related to a number of transparency concerns: company response to the survey; whether a company works with third-party auditors or purchases from meat and poultry suppliers that have third-party audits for their entire supply chains; and whether a company publishes (or plans to publish) a regular, publicly available progress update on implementation of its policy.

Half credit was offered for what we considered only partial responses to our survey (answering some but not all questions). Full credit went to companies that either utilized independent third-party audits to verify compliance with their antibiotics use policy or purchased from suppliers that conducted third-party audits of their own for their entire supply chains. Half credit was given to companies that showed evidence of auditing suppliers using internal resources. Additional points were awarded if audit standards are public, and if the audit includes at least one on-site visit annually.

Full credit also went to companies that provided regular progress updates on implementation of their policies. To receive full credit, companies must publish updates online, at least annually. Full credit was given for various forms of updates including dedicated websites, press releases, and corporate social responsibility reports. If a policy was less than a year old, and a company made a commitment to issue a progress report in the future, they received half credit.

If a company offered only one, two or three types of meat and poultry, its transparency score was adjusted to reflect this—i.e. if the company earned the maximum of 28 points but sold two types of meat, its final transparency score would be 14 points. However, a company’s overall letter grade was based on points earned out of the calculated maximum points possible for that company.

| Category #3: Transparency | |
|--|-------------------|
| Responded to survey | 6 points maximum |
| Partial response to survey | 3 |
| Complete response to survey | 6 |
| Third party audits | 12 points maximum |
| Company works with independent third party auditors; or suppliers that have third party audits for entire supply chain | 6 |
| Internal audit only (in place of third party audit above) | 3 |
| Audit standards are public | 3 |
| Production sites inspected at least annually | 3 |
| Progress report | 10 points maximum |
| Progress update is public and available online | 10 |
| If policy less than a year old, commitment to progress report | 5 |

Appendix 5: Summary of Top 25 Fast Food and Fast Casual Company Policies and Survey Responses

Information in this Appendix concerning company ownership, number of restaurant locations and sales of fast food restaurant companies comes from Nation's Restaurant News "2017 Top 100 Countdown: No. 50-No. 1,"¹⁴⁰ or company websites. Companies are listed in order of total 2016 sales, in dollars.

Information concerning companies' antibiotics policies and other policies comes from companies' responses to the survey, follow up emails, public statements made by the companies, and/or efforts by the report's authors to locate such policies online. The report's authors encourage restaurant chains to contact them directly with additional information concerning antibiotics and/or meat sourcing policies, and to make such information publicly available.

1. **McDonald's**

Owned by: McDonald's Corporation (NYSE: MCD)

Corporate headquarters: 110 N Carpenter St, Chicago, IL 60607

CEO: Steve Easterbrook

Number of U.S. Locations: 14,027

2016 U.S. Sales: \$36.4 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

Statement on Antibiotics Use – Revised 8/23/2017

<http://mcdonalds.mwnewsroom.com/US/Media-Statements/Response-to-Antibiotics-in-Chicken>.

"In 2016, we were proud to reach our commitment to serve broiler chicken not treated with antibiotics important to human medicine as defined by the World Health Organization ("WHO"), in all U.S. McDonald's restaurants nearly a year ahead of schedule."

Global Vision for Antibiotic Stewardship in Food Animals ("VAS")

<https://corporate.mcdonalds.com/content/dam/AboutMcDonalds/2.0/pdfs/sustainability/McDonalds-Global-Vision-for-Antimicrobial-Stewardship-in-Food.pdf>.

"In 2017, we announced a global policy requiring the elimination of antibiotics defined by the WHO as Highest Priority Critically Important to human medicine in several markets around the world beginning in 2018 and implemented across the majority of our global chicken supply by 2027."¹⁴¹

Authors' note: *Although global commitments are an important next step, Chain Reaction grades companies on the antibiotics policies that apply only to their U.S. restaurants.*

Third Party Audits:

Chicken: audits conducted by the USDA Process Verified Program (PVP).¹⁴²

2. Starbucks

Owned by: Starbucks Corporation (NASDAQ: SBUX)

Corporate headquarters: 2401 Utah Ave S, Seattle, WA 98134

CEO: Kevin Johnson

Number of U.S. Locations: 13,930

2016 U.S. Sales: \$17.9 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

Animal Welfare and Antibiotics: <https://news.starbucks.com/views/animal-welfare-friendly-practices>.

“We are engaging our suppliers to make progress toward our goal to serve only poultry raised without the routine use of medically important antibiotics in all company operated U.S. stores by 2020.”¹⁴³

Third Party Audits: None found

3. Subway

Owned by: Doctor’s Associates Inc.

Corporate headquarters: 325 Sub Way, Millford, CT 06461

CEO: Trevor Haynes is interim CEO.

Number of U.S. Locations: 25,278

2016 U.S. Sales: \$11.3 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

“Transitioned all US chicken products used in subs, wraps, salads and soups to be made with chicken raised without antibiotics. Began transition of US turkey products to turkey raised without antibiotics with a target completion of 2019.”¹⁴⁴

Chicken: Fully implemented “no antibiotics ever” policy in 2016

Turkey: Company commits to full implementation of no antibiotics ever by 2019

Pork: Company commits to full implementation of no antibiotics ever by 2025

Beef: Company commits to full implementation of no antibiotics ever by 2025¹⁴⁵

Third Party Audits:

Turkey and Chicken: audits conducted by the USDA Process Verified Program (PVP). For chicken producers, site visits occur 2 times per year. For turkey producers, site visits occur 1-2 times per year.¹⁴⁶

4. **Taco Bell**

Owned by: Yum! Brands, Inc. (NYSE: YUM)

Corporate headquarters: 1 Glen Bell Way, Irvine, CA 92618

CEO: Steve Ells (temporary)

Number of U.S. Locations: 6,254

2016 U.S. Sales: \$9.4 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<https://www.tacobell.com/news/statement-regarding-antibiotics?selectedTag=&selectYear=2016>.

100% of chicken served is raised with no medically important antibiotics ever as of Q1 2017.¹⁴⁷

Third Party Audits:

Chicken: audits conducted by the USDA Process Verified Program (PVP), with annual site visits.¹⁴⁸

5. **Burger King**

Owned by: Restaurant Brands International (NYSE: QSR)

Corporate headquarters: 5505 Blue Lagoon Drive, Miami, FL 33126

CEO: Daniel Schwartz

Number of U.S. Locations: 7,210

2016 U.S. Sales: \$9.3 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

Sustainability Report: <http://www.rbi.com/interactive/newlookandfeel/4591210/2016sustainabilityreport.pdf>.

Restaurant Brands International (parent company of Burger King, Popeyes and Tim Hortons) states in its 2016 Sustainability Report, "... we are committed to using chicken that is raised without the use of antibiotics important to human medicine as defined by the World Health Organization in Critically Important Antimicrobials for Human Medicine 5th Revision 2016 and we intend to meet this commitment in U.S. and Canada by the end of 2018."¹⁴⁹

Third Party Audits:

None found

6. **Wendy's**

Owned by: The Wendy's Company (NASDAQ: WEN)

Corporate headquarters: 1 Dave Thomas Blvd, Dublin, OH 43017

CEO: Todd Penegor

Number of U.S. Locations: 6,130

2016 U.S. Sales: \$9.1 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<https://www.wendys.com/animal-antibiotic-use-policy>.

Progress update via the Square Deal blog: <http://www.squaredealblog.com/homewendys/2017/12/13/investing-in-quality-and-making-progress-on-animal-antibiotics>.

"In 2017 Wendy's completed the process of eliminating all antibiotics important to human medicine from chicken production. All chicken served in Wendy's restaurants meets this requirement and is process verified by the U.S. Department of Agriculture (USDA) to ensure compliance."

"Beginning in 2018, Wendy's will source about 15 percent of its beef from a progressive group of producers that have each committed to a 20 percent reduction of the only medically important antibiotic routinely fed to their cattle. Importantly, these producers will ensure that this antibiotic use in their cattle can be tracked and reduced."¹⁵⁰

Third Party Audits:

Chicken: audits conducted by the USDA Process Verified Program (PVP)¹⁵¹

Beef: Approved independent auditing bodies are IMI Global and TCFA¹⁵²

7. **Dunkin Donuts**

Owned by: Dunkin' Brands (NYSE: DNKN)

Corporate headquarters: 130 Royall Street, Canton, MA 02021

CEO: Nigel Travis

Number of U.S. Locations: 8,300

2016 U.S. Sales: \$8.2 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<https://www.dunkinbrands.com/community/corporate-social-responsibility/policies-and-statements>.

"Broiler Chickens: By the end of 2018, any chicken offered in Dunkin' Donuts restaurants will be sourced from chickens raised with no antibiotics ever. Following the USDA guidelines for No Antibiotics Ever, there will be no antibiotics used from conception to consumption. Any sick animal treated will be redirected to another customer and not used in the Dunkin' Donuts supply chain."¹⁵³

Third Party Audits:

Chicken: audits conducted by the USDA Process Verified Program (PVP)¹⁵⁴

8. **Chick-Fil-A**

Owned by: Cathy Family

Corporate headquarters: 5200 Buffington Road, Atlanta, GA 30349

CEO: Dan Cathy

Number of U.S. Locations: 2,188

2016 U.S. Sales: \$7.9 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<https://www.chick-fil-a.com/About/Great-Food/Our-Animal-Wellbeing-Standards>.

“By December 31, 2019, all Chick-fil-A suppliers will be required to source chicken raised with No Antibiotics Ever – this means that our suppliers use NO antibiotics of any kind – as defined by the US Food and Drug Administration (FDA) – starting from the egg.”¹⁵⁵ Currently, 80% of chicken served by Chick-fil-A meets this policy.¹⁵⁶

Third Party Audits:

Chicken: audits conducted by the USDA Process Verified Program (PVP); sites visited 2x per year by third-party.¹⁵⁷

9. **Pizza Hut**

Owned by: Yum! Brands (NYSE: YUM)

Corporate headquarters: 7100 Corporate Dr, Plano, TX

CEO: David Gibbs

Number of U.S. Locations: 9,941

2016 U.S. Sales: \$5.8 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<http://blog.pizzahut.com/pizza-hut-continues-movement-on-food-commitments-pledges-all-chicken-raised-without-antibiotics-by-2022/>.

In March 2017, Pizza Hut completed its transition to source chicken raised without medically important antibiotics for the chicken used as pizza toppings.¹⁵⁸ In June 2018, the company announced that all chicken served, including its WingStreet brand wings, will be raised without medically important antibiotics by 2022.¹⁵⁹

Third Party Audits:

Chicken: audits conducted by the USDA Process Verified Program (PVP) with annual site visits.¹⁶⁰

10. **Domino's**

Owned by: Domino's Pizza, Inc. (NASDAQ: DPZ)

Corporate headquarters: 30 Frank Lloyd Wright Dr, Ann Arbor, MI 48105

CEO: J. Patrick Doyle

Number of U.S. Locations: 5,650

2017 U.S. Sales: \$5.3 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Published Policy:

2018 Corporate Stewardship Report: <http://phx.corporate-ir.net/phoenix.zhtml?c=135383&p=irol-socialcommitment>.

Antibiotics Policy:

"We are pleased to say that we now serve chicken in the U.S. that is free of antibiotics that are important for human health... there is much more work to be done before the amount of available supply is of an adequate size for us to consider antibiotic restrictions in the pork and beef we purchase."¹⁶¹

Third Party Audits:

None found

11. **Panera Bread**

Owned by: Panera Bread Company (NASDAQ: PNRA)

Corporate headquarters: 3630 S Geyer Rd Ste #100, St Louis, MO 63127

CEO: Blaine E Hearst

Number of U.S. Locations: 2,000+

2016 U.S. Sales: \$4.9 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Published Policy:

<https://www.panerabread.com/foundation/documents/press/2017/animal-welfare-press-release-december-2017.pdf>.

Panera reports that 100% of its chicken and turkey are raised without antibiotics, as is 90% of its pork. For its beef, Panera states: "Our beef comes from Australia where it is grass-fed and finished. Our supplier has confirmed that they only use antibiotics for disease treatment, not prevention or growth promotion."¹⁶²

Third Party Audits:

SAI Global serves as third party auditor for Panera's chicken, turkey and pork suppliers. "The auditing firm selects a random sample of farms from each supplier equal to the square root of the total farms rounded up to the nearest five. Farm operators are not told the audit date in advance."¹⁶³

12. **Sonic**

Owned by: Sonic Corporation (NASDAQ: SONC)

Corporate headquarters: 300 Johnny Bench Dr, Oklahoma City, OK 73104

CEO: J. Clifford Hudson

Number of U.S. Locations: 3,588

2016 U.S. Sales: \$4.5 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<https://corporate.sonicdrivein.com/animal-welfare/>.

“Effective January 2017, poultry suppliers should only administer antimicrobial drugs to animals for the prevention, control and treatment of disease. Animals will be treated when necessary for animal welfare. Use of antibiotics that are medically important to humans, for the sole purpose of growth promotion is strictly prohibited.”¹⁶⁴

***Author’s note:** Sonic’s current antibiotic use standard essentially reiterates current FDA guidelines, and is not considered to be a meaningful antibiotic use policy.*

Third Party Audits:

No¹⁶⁵

13. **KFC**

Owned by: Yum! Brands, Inc. (NYSE: YUM)

Corporate headquarters: 1441 Gardiner Lane, Louisville, KY 40213

CEO: Roger Eaton

Number of U.S. Locations: 4850

2016 U.S. Sales: \$4.5 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<http://chickenchattin.kfc.com/kfc-chickens-free-of-human-antibiotics/>.

“By the end of 2018, all chicken purchased by KFC in the U.S. will be raised without antibiotics important to human medicine.”¹⁶⁶ KFC reports that currently 54% of their chicken is in compliance with its antibiotics policy.¹⁶⁷

Third Party Audits:

Chicken: audits conducted by the USDA Process Verified Program (PVP).¹⁶⁸

14. **Applebee's**

Owned by: Dine Brands Global (NYSE: DIN)

Corporate headquarters: 450 N Brand Blvd, Glendale, CA 91203

CEO: Steve Joyce

Number of U.S. Locations: 1,782

2016 U.S. Sales: \$4.4 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<https://www.dinebrands.com/en/social-responsibility/animal-welfare>.

“We recognize that antibiotic resistance in humans and animals is a serious health concern and we fully support the action the FDA is taking to reduce the routine use of medically important antibiotics.

We are asking our chicken and pork suppliers to begin to prohibit routine use of medically important antibiotics as defined by the World Health Organization (WHO), including prohibiting the use of these antibiotics for disease prevention.”

“We support animal production practices that reduce, and, where possible, eliminate the need for antibiotic therapies in food animals by adoption of best practices and /or new practices. Treating sick and injured animals and controlling an identified disease outbreak under veterinary supervision is important and are the only reasons for use of medically important antibiotics. We continue to work with our suppliers so that antibiotics are used judiciously, and their effectiveness maintained.”¹⁶⁹

Dine Brands reports that 17% of pork and 18% of chicken served currently meet this policy at its Applebee's and IHOP restaurants.¹⁷⁰

Third Party Audits:

Applebee's requires annual third-party auditing and is asking their chicken and pork suppliers to track and report their antibiotic use for meat supplied to the company. Applebee's has begun annually surveying suppliers in order to report summary information and progress towards the goal in future reporting.¹⁷¹

15. **Olive Garden**

Owned by: Darden Restaurants, Inc. (NASDAQ: DRI)

Corporate headquarters: 1000 Darden Center Dr, Orlando, FL 32837

CEO: Gene Lee

Number of U.S. Locations: 840

2016 U.S. Sales: \$3.9 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<https://darden.com/citizenship/plate/sourcing>.

“Darden supports the FDA guidelines which recommend that by the end of 2016, antibiotics that are medically important in human medicine be phased out from use with farm animals for growth purposes, and shared-class antibiotics (i.e., those used for both humans and animals) only be used for the treatment of disease in farm animals under the supervision of a veterinarian. All of our land-based protein supply will meet these guidelines by December 2016.”¹⁷²

Author's note: Olive Garden's current antibiotic use standard reiterates current FDA guidelines, and is not considered to be a meaningful antibiotic use policy.

Third Party Audits:

Not found

16. **Chipotle**

Owned by: Chipotle Mexican Grill, Inc. (NYSE: CMG)

Corporate headquarters: 1401 Wynkoop St #500 Denver, CO 80202

CEO: Brian Niccol

Number of U.S. Locations: 2,397

2016 U.S. Sales: \$3.8 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<https://www.chipotle.com/food-with-integrity#saying-no-to-drugs>.

Chipotle's website states: "Antibiotics and hormones are given to a majority of livestock to increase production and combat the effects of overcrowding. We buy meat from farmers and ranchers who raise their animals without subtherapeutic antibiotics and added hormones. If an animal falls sick, our protocols require that farmers bring them back to health in the most responsible manner possible."¹⁷³

Chipotle reports that 100% of its beef and chicken are raised with no antibiotics ever. Half of its pork is from U.S. suppliers and is raised without antibiotics; the other half comes from UK suppliers which do not use medically important antibiotics except to treat sick animals.¹⁷⁴

Third Party Audits:

"Team of expert livestock auditors, performing annual on-site audits of all meats and dairy suppliers. Audits are scheduled in advance and farm selection is performed by Chipotle for approximately 350 audits per year."¹⁷⁵

17. **Buffalo Wild Wings**

Owned by: Inspire Brands

Corporate headquarters: 1155 Perimeter Center West, 12th Floor, Atlanta, GA

CEO: Lyle Tick

Number of U.S. Locations: 1,238

2016 U.S. Sales: \$3.7 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

No published policy available.

Third Party Audits:

None found

18. **Arby's**

Owned by: Inspire Brands

Corporate headquarters: 1155 Perimeter Center West, 12th Floor, Atlanta, GA

CEO: Rob Lynch

Number of U.S. Locations: 3,131

2016 U.S. Sales: \$3.7 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

Corporate Responsibility: https://arbys.com/images/corporate_responsibility/Arbys_CSR.pdf.

"In 2017, we will begin transitioning to serving only chicken raised without antibiotics important to human health."¹⁷⁶

***Author's note:** As Arby's did not return the Chain Reaction survey, we were unable to determine if Arby's has begun to implement this policy.*

Third Party Audits:

None found

19. **Little Caesars Pizza**

Owned by: Ilitch Holdings, Inc.

Corporate headquarters: 2211 Woodward Ave, Detroit, MI 48201

CEO: David Scrivano

Number of U.S. Locations: 4,221

2016 U.S. Sales: \$3.5 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

No published policy available.

Third Party Audits:

None found

20. **Dairy Queen**

Owned by: International Dairy Queen, Inc. (owned by Berkshire Hathaway, Inc., NYSE: BRK)

Corporate headquarters: 7505 Metro Blvd, Edina, MN

CEO: Troy Bader

Number of U.S. Locations: 5,883

2016 U.S. Sales: \$3.6 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Published Policy:

No published policy available.

Third Party Audits:

None found

21. **Jack in the Box**

Owned by: Jack in the Box Inc. (NASDAQ: JACK)

Corporate headquarters: 9330 Balboa Ave, San Diego, CA 92123

CEO: Leonard A. Comma

Number of U.S. Locations: 2,267

2016 U.S. Sales: \$3.5 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<http://www.jackintheboxinc.com/assets/AW-041118.pdf>.

“By 2020, our poultry suppliers may use medically important antibiotics only if prescribed by a veterinarian to treat sick animals or to protect the flock from a disease outbreak. Currently, more than 40 percent of poultry produced for Jack in the Box is raised in accordance with this policy, and audits will continue to track our suppliers’ progress towards our goal.”¹⁷⁷

Third Party Audits:

No¹⁷⁸

22. **Chili’s**

Owned by: Brinker International, Inc. (NYSE: EAT)

Corporate headquarters: 6820 Lyndon B Johnson Fwy, Dallas, TX 7520

CEO: Wyman Roberts

Number of U.S. Locations: 1,703

2016 U.S. Sales: \$3.5 billion

Returned the Survey: No

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

No published policy available.

Third Party Audits:

None found

23. IHOP

Owned by: Dine Brands Global, Inc (NYSE: DIN)

Corporate headquarters: 450 N Brand Blvd, 7th Floor, Glendale, CA 91203

CEO: Steve Joyce

Number of U.S. Locations: 1,671

2016 U.S. Sales: \$3.1 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<https://www.dinebrands.com/en/social-responsibility/animal-welfare>.

“We recognize that antibiotic resistance in humans and animals is a serious health concern and we fully support the action the FDA is taking to reduce the routine use of medically important antibiotics.”

“We are asking our chicken and pork suppliers to begin to prohibit routine use of medically important antibiotics as defined by the World Health Organization (WHO), including prohibiting the use of these antibiotics for disease prevention.”

“We support animal production practices that reduce, and, where possible, eliminate the need for antibiotic therapies in food animals by adoption of best practices and /or new practices. Treating sick and injured animals and controlling an identified disease outbreak under veterinary supervision is important and are the only reasons for use of medically important antibiotics. We continue to work with our suppliers so that antibiotics are used judiciously, and their effectiveness maintained.”¹⁷⁹

Dine Brands reports that 17% of pork and 18% of chicken served currently meet this policy at its Applebee’s and IHOP restaurants.¹⁸⁰

Third Party Audits:

IHOP requires annual third-party auditing and is asking their chicken and pork suppliers to track and report their antibiotic use for meat supplied to the company. IHOP has begun annually surveying suppliers in order to report summary information and progress towards the goal in future reporting.¹⁸¹

24. Papa John’s Pizza

Owned by: Papa John’s International, Inc. (NASDAQ: PZZA)

Corporate headquarters: 2002 Papa John’s Blvd, Louisville, KY

CEO: Steve Ritchie

Number of U.S. Locations: 3,314

2016 U.S. Sales: \$2.9 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

<https://ir.papajohns.com/news-releases/news-release-details/papa-johns-announces-completion-transition-antibiotic-free>.

“Papa John’s grilled chicken topping and chicken poppers consist of poultry that is raised without human and animal antibiotics as well as fed a 100% vegetarian diet. Additionally, we are actively moving toward a conversion of our chicken wing supply to antibiotic free. *Currently*, almost half our chicken wings are raised without human and animal antibiotics as well as fed a 100% vegetarian diet. We are committed to move to

100% antibiotic free chicken wings as soon as we have enough available supply.”¹⁸²

Third Party Audits:

No¹⁸³

25. **Cracker Barrel**

Owned by: Cracker Barrel Old Country Store, Inc. (NASDAQ: CBRL)

Corporate headquarters: 305 (or 311) Hartmann Dr, Lebanon, TN 37087

CEO: Sandra B Cochran

Number of U.S. Locations: 653

2016 U.S. Sales: \$2.9 billion

Returned the Survey: Yes

Information concerning meat sourcing as reported in disclosed policies, public statements, publicly available information or correspondence with the authors:

Antibiotics Policy:

Food with Care: <https://www.crackerbarrel.com/about/food-with-care>.

According to Cracker Barrel’s website, the company only uses “beef, pork and poultry raised without human-grade, medically important antibiotics.”¹⁸⁴

Author’s note: *We found inconsistencies in Cracker Barrel’s public statements and its internal communications with us. First, the term “human-grade” implies that the antibiotics are specifically produced for humans, whereas “medically important antibiotics” refers to shared classes of antibiotics that are important for both animal and human medicine. The two terms mean different things in practice. Secondly, Cracker Barrel does not verify its claims through a third-party auditor.*

Third Party Audits: No¹⁸⁵

Appendix 6: WHO Guidelines on Use of Medically Important Antimicrobials in Food-Producing Animals¹⁸⁶

In November 2017, the World Health Organization formally adopted a set of guidelines on use of medically important antibiotics in livestock and poultry production. The guidelines focus on on-farm practices that can best help to preserve the future efficacy of antibiotics for treating people and animals. Approved WHO guidelines are developed under a strict and fully transparent process; to ensure a strong scientific basis, these guidelines drew upon two separate, peer-reviewed summaries of the scientific literature.¹⁸⁷

Key recommendations from the guidelines include:

- » Overall reduction in use of all classes of medically important antimicrobials in food-producing animals.
- » Complete restriction of use of all classes of medically important antimicrobials in food-producing animals for growth promotion.
- » Complete restriction of use of all classes of medically important antimicrobials in food-producing animals for prevention of infectious diseases that have not yet been clinically diagnosed.

Endnotes

- 1 U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC from here on), *Antibiotic Resistance Threats in the United States*, 2013, <https://www.cdc.gov/drugresistance/threat-report-2013/pdf/ar-threats-2013-508.pdf>.
- 2 World Health Organization, *World Health Organization (WHO) Guidelines on Use of Medically Important Antimicrobials in Food-producing Animals*, 17 January 2018, <https://aricjournal.biomedcentral.com/articles/10.1186/s13756-017-0294-9>; CDC, *Antibiotic Resistance from the Farm to the Table (infographic)*, 2013, <https://www.cdc.gov/foodsafety/pdfs/ar-infographic-508c.pdf>.
- 3 U.S. Food and Drug Administration (hereinafter FDA), Center for Veterinary Medicine, *2016 Summary Report on Antimicrobials Sold or Distributed for Use in Food-Producing Animals*, December 2017, <https://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm588086.htm>. Data on 2015 sales of antibiotics for human medicine in the United States were obtained from Eili Klein of the Center for Disease Dynamics, Economics & Policy (CCDEP). Klein also provided data for years prior to 2015 in Kar, A., and Klein, E. “Animal Antibiotic Sales Finally Drop, but Much Work Remains,” Natural Resources Defense Council (hereinafter NRDC), December 2017, <https://www.nrdc.org/experts/avinash-kar/animal-antibiotic-sales-finally-drop-much-work-remains>. CCDEP also provided those figures for years preceding 2015; 2016 data are not yet available.
- 4 “Medically-important antibiotics” or “antibiotics important to human medicine” refers to antibiotics that are the same as, or similar to, classes of drugs used in human medicine. For example, the antibiotic tylosin, used in livestock, is a member of the medically-important macrolide class of antibiotics. Throughout this report, we will use the term “antibiotics” and “medically-important” antibiotics interchangeably, unless otherwise noted.
- 5 Timothy F. Landers et al. “A Review of Antibiotic Use in Food Animals: Perspective, Policy, and Potential,” *U.S. National Library of Medicine National Institutes of Health*, 127(1): 4–22, Jan-Feb 2012, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3234384/>; “prevent disease caused by factory farm production practices” refers to routine antibiotic use ostensibly to prevent disease in healthy animals, rather than safer, non-antibiotic animal management alternatives.
- 6 Antibiotics Off the Menu, *Scorecards*, accessed at <https://www.antibioticsoffthemenue.org/score-cards/>, 30 September 2018; Here and throughout, “meat raised without the routine use of antibiotics” refers both to meat raised entirely without antibiotics and meat raised without routine uses of antibiotics on animals that are not sick. Report authors support the use of antibiotics to treat sick animals.
- 7 Consumer Reports, *Natural and Antibiotics Labels Survey Report*, 1 May 2018. <https://consumersunion.org/wp-content/uploads/2018/10/2018-Natural-and-Antibiotics-Labels-Survey-Public-Report.pdf>.
- 8 FDA, Center for Veterinary Medicine, *2016 Summary Report on Antimicrobials Sold or Distributed for Use in Food-Producing Animals*, December 2017, <https://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm588086.htm>.
- 9 Samantha Bomkamp, “McDonald’s vows to serve more antibiotic-free meat, targeting beef and pork,” *Los Angeles Times*, 23 August 2017, <http://www.chicagotribune.com/business/ct-mcdonalds-antibiotics-0824-biz-20170823-story.html>.
- 10 WHO, *WHO Guidelines on Use of Medically Important Antimicrobials in Food-Producing Animals*. November 2017, <http://apps.who.int/iris/bitstream/handle/10665/258970/9789241550130-eng.pdf?sequence=1>.
- 11 See note 4 for definition of “medically-important antibiotics.”
- 12 NRDC, Friends of the Earth, Consumers Union, Food Animal Concerns Trust, Center for Food Safety and U.S. PIRG, *Chain Reaction III*, September 2017.
- 13 See note 8.
- 14 Restaurant Business, *2018 Top 500: Burger*, 22 June 2018, <https://www.restaurantbusinessonline.com/financing/2018-top-500-burger>.
- 15 Nation’s Restaurant News, *2017 Top 100 countdown: No. 50-No. 1*, 29 June 2017, <https://www.nrn.com/top-100-restaurants/2017-top-100-countdown-no-50-no-1>.
- 16 Kate Taylor, “These 5 restaurant chains are taking over America,” *Business Insider*, 1 July 2018, <http://www.businessinsider.com/fastest-growing-restaurant-chains-in-america-2018-6#4-first-watch-2>; Danny Klein, “Innovation Inspires a New Era of Growth at BurgerFi,” *QSR Magazine*, 25 June 2018, <https://www.qsrmagazine.com/exclusives/innovation-inspires-new-era-growth-burgerfi>.
- 17 McDonald’s, *McDonald’s Global Vision for Antibiotic Stewardship in Food Animals (“VAS”)*, 23 August 2017, <https://corporate.mcdonalds.com/content/dam/AboutMcDonalds/2.0/pdfs/sustainability/McDonalds-Global-Vision-for-Antimicrobial-Stewardship-in-Food.pdf>.
- 18 Twilight Greenaway, “In-N-Out Burger beefs up its promise of antibiotic-free meat,” *The Guardian*, 5 March 2016.
- 19 Wendy’s, *The Wendy’s Company Reports on 2017 Corporate Social Responsibility Progress*, 15 December 2017, <http://ir.wendys.com/phoenix.zhtml?c=67548&p=irol-newsArticle&ID=2322950>.
- 20 See note 18.
- 21 Technomic, “Consumers Say They’re Eating Burgers Less Often as Menu Prices Rise,” 11 July 2017, <https://www.technomic.com/consumers-say-theyre-eating-burgers-less-often-menu-prices-rise>.
- 22 The Daily Meal, “11 Burger Stats That Will Blow Your Mind (Slideshow),” 20 June 2018, <https://www.thedailymeal.com/eat/11-burger-stats-will-blow-your-mind-slideshow/slide-3>.
- 23 Consumers are most likely to see “meat raised without antibiotics” on labels when they buy meat in grocery stores. However, the authors of *Chain Reaction* maintain that meat producers should be able to use antibiotics to treat sick animals and control a verified disease outbreak.
- 24 Consumer Reports, *Natural and Antibiotics Labels Survey Report*, 1 May 2018. <https://consumersunion.org/wp-content/uploads/2018/10/2018-Natural-and-Antibiotics-Labels-Survey-Public-Report.pdf>.

- 25 Sam Gazdziak, "2017 Consumer Trends Report: Knowing What They Don't Want," *The National Provisioner*, 22 November 2016, <https://www.provisioneronline.com/articles/104042-consumer-trends-report-knowing-what-they-dont-want>.
- 26 Nielsen, *Weighing Consumers' Growing Appetite for 'Clean' Meat Labeling (blog)*, 24 October 2016, <https://www.nielsen.com/us/en/insights/news/2016/weighing-consumers-growing-appetite-for-clean-meat-labeling.html>.
- 27 See note 8.
- 28 American Grassfed Association, *Producer Member by Species: Beef*, accessed at <https://www.americangrassfed.org/producer-profiles/producer-members-by-species/>, 29 August 2018.
- 29 Applegate, *Mission*, accessed at <https://applegate.com/mission/animal-welfare>, 30 August 2018.
- 30 McDonald's, *Scale for Good*, accessed at: <http://news.mcdonalds.com/stories/using-our-scale-for-good>, 29 August 2018.
- 31 See note 17.
- 32 U.S. PIRG, *More than 80 Stakeholder Groups Call on McDonald's to Cut Routine Antibiotic Use*, 14 February 2018, <https://uspirg.org/resources/usp/more-80-stakeholder-groups-call-mcdonalds-cut-routine-antibiotic-use>.
- 33 World Health Organization, *Antibiotic resistance* (fact sheet), 5 February 2018, <http://www.who.int/news-room/fact-sheets/detail/antibiotic-resistance>.
- 34 See note 1.
- 35 See note 7.
- 36 O'Neill, J Chair, *Tackling Drug-Resistant Infections Globally: Final Report and Recommendations*, 19 May 2016, https://amr-review.org/sites/default/files/160518_Final%20paper_with%20cover.pdf.
- 37 United Nations, *Press Release: High Level Meeting on Antimicrobial Resistance*, 21 September 2016, <https://www.un.org/pga/71/2016/09/21/press-release-hl-meeting-on-antimicrobial-resistance/>.
- 38 Antibiotics misuse in animals refers to the routine use of antibiotics for growth promotion or disease prevention rather than when animals are sick.
- 39 Katherine E. Fleming-Dutra, MD, "Prevalence of Inappropriate Antibiotic Prescriptions Among U.S. Ambulatory Care Visits, 2010-2011," *The Journal of the American Medical Association*, 315(17):1864-1873. doi:10.1001/jama.2016.415, 3 May 2016, At: <http://jama.jamanetwork.com/article.aspx?articleid=2518263>.
- 40 NRDC, *Positions of Medical & Scientific Organizations on Antibiotic Use in Livestock Operations* (Fact Sheet), February 2014, <https://www.nrdc.org/resources/positions-medical-scientific-organizations-antibiotic-use-livestock-operations>
- 41 Food and Drug Administration, *2015 Summary Report on Antimicrobials Sold or Distributed for Use in Food-Producing Animals*, see table 11a, p. 44 December 2016, <https://www.fda.gov/downloads/ForIndustry/UserFees/AnimalDrugUserFeeActADUFA/UCM534243.pdf>; Food and Drug Administration Department of Health and Human Services, *2016 Summary Report on Antimicrobials Sold or Distributed for Use in Food Producing Animals*, December 2017, <https://www.fda.gov/downloads/forindustry/userfees/animaldruguserfeeactadufa/ucm588085.pdf>.
- 42 Timothy F. Landers et al. "A Review of Antibiotic Use in Food Animals: Perspective, Policy, and Potential" *U.S. National Library of Medicine National Institutes of Health* 127(1): 4-22 Jan-Feb 2012, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3234384/>.
- 43 Food and Drug Administration Department of Health and Human Services, *2016 Summary Report on Antimicrobials Sold or Distributed for Use in Food Producing Animals*, see table 11a, p. 53, December 2017, <https://www.fda.gov/downloads/forindustry/userfees/animaldruguserfeeactadufa/ucm588085.pdf>.
- 44 Brooks, J. et al., "Microbial and antibiotic-resistant constituents associated with biological aerosols and poultry litter within a commercial poultry house," *Science of the Total Environment*, vol. 408, 2010, pp. 4770-4777. At: <https://pubag.nal.usda.gov/pubag/downloadPDF.xhtml?id=45600&content=PDF>; Gibbs, S. et al., "Isolation of antibiotic-resistant bacteria from the air plume downwind of a swine confined or concentrated animal feeding operation," *Environmental Health Perspectives*, vol. 114, 2006, pp. 1032-1037 At: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1513331/pdf/ehp0114-001032.pdf>; Zhong, Z. et al., "REP-PCR tracking of the origin and spread of airborne *Staphylococcus aureus* in and around chicken house," *Indoor Air*, vol. 19, 2009, pp. 511-516 At: https://www.researchgate.net/publication/38021253_REP-PCR_tracking_of_the_origin_and_spread_of_airborne_Staphylococcus_aureus_in_and_around_chicken_house; Rule, A., Evans, S., and Silbergeld, E., "Food animal transport: A potential source of community exposures to health hazards from industrial farming (CAFOs)," *Journal of Infection and Public Health*, vol. 1, 2008, pp. 33-39 At: http://ac.els-cdn.com/S1876034108000026/1-s2.0-S1876034108000026-main.pdf?_tid=53f4e8f0-7bb5-11e7-a1e4-00000aacb361&acdnat=1502140618_4d9bb2dc88e51307d14864a23602735a; McEachran, A., "Antibiotics, bacteria, and antibiotic resistance genes: Aerial transport from cattle feedyards via particulate matter," *Environmental Health Perspectives*, Vol. 123, 2015, pp. 337-343 in <https://www.ncbi.nlm.nih.gov/pubmed/25633846>; Letourneau, V., et al., "Human pathogens and tetracycline-resistant bacteria in bioaerosols of swine confinement buildings and in nasal flora of hog producers," *International Journal of Hygiene and Environmental Health*, vol. 213, 2010, 444-449. At: http://www.academia.edu/14173516/Human_pathogens_and_tetracycline-resistant_bacteria_in_bioaerosols_of_swine_confinement_buildings_and_in_nasal_flora_of_hog_producers.
- 45 Sanford, J. et al., "Occurrence and diversity of tetracycline resistance genes in lagoons and groundwater underlying two swine production facilities," *Applied and Environmental Microbiology*, vol. 67, 2001, pp. 1494-1502 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC92760/pdf/am001494.pdf>; Campagnolo, E., et al., "Antimicrobial residues in animal waste and water resources proximal to large-scale swine and poultry feeding operations," *The Science of the Total Environment*, vol. 299, 2002, pp. 89-95; Li, X. et al., "Antibiotic-resistant *E. coli* in surface water and groundwater in dairy operations in Northern California," *Environmental Monitoring and Assessment*, vol. 186, 2014, pp. 1253-1260 <https://link.springer.com/article/10.1007/s10661-013-3454-2>.

- 46 Wichmann, F. et al., "Diverse antibiotic resistance genes in dairy cow manure," *MBio*, vol. 2, 2014, pp. 1-35, At: <http://mbio.asm.org/content/5/2/e01017-13.full.pdf>; Marti, R., et al., "Safely coupling livestock and crop production systems: how rapidly do antibiotic resistance genes dissipate in soil following a commercial application of swine or dairy manure?" *Applied and Environmental Microbiology*, vol. 10, 2014, pp. 3258-3265. At: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4018915/pdf/zam3258.pdf>.
- 47 Consumer Reports, *Making the World Safe from Superbugs*, January 2016 At: <https://www.consumerreports.org/cro/health/making-the-world-safe-from-superbugs/index.htm>.
- 48 Price, L. et al., "Elevated risk of carrying gentamicin-resistant *Escherichia coli* among U.S. poultry workers," *Environmental Health Perspectives*, vol. 115, 2007, pp. 1738-1742. At: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2137113/pdf/ehp0115-001738.pdf>; Rinsky, J. et al., "Livestock-associated methicillin and multidrug resistant *Staphylococcus aureus* is present among industrial, not antibiotic-free livestock operation workers in North Carolina," *PLOS One*, vol. 8, 2013, pp. e67641, doi:10.1371/journal.pone.0067641. At: <http://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0067641&type=printable>; Huijsdens, X., et al., "Community-acquired MRSA and pig-farming," *Annals of Clinical Microbiology and Antimicrobials*, vol. 5, 2006, pp. 1-4. At: <https://ann-clinmicrob.biomedcentral.com/articles/10.1186/1476-0711-5-26>; Voss, A., et al., "Methicillin-resistant *Staphylococcus aureus* in pig farming," *Emerging Infectious Diseases*, vol. 11, 2005, pp. 1965-1966. At: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3367632/pdf/05-0428.pdf>; Denis, O., et al., "Methicillin resistant *Staphylococcus aureus* ST398 in swine farm personnel, Belgium" *Emerging Infectious Diseases*, vol 15.7, 2009, 1098-1101 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2744256/pdf/08-0652_finalD.pdf; Gomez E. et al., "Streptococcus suis Related Prosthetic Joint Infection and Streptococcal Toxic Shock-Like Syndrome in a Pig Farmer in the United States," *Journal of Clinical Microbiology*, vol. 52, 2014, pp. 2254-2258 <http://jcm.asm.org/content/52/6/2254.full.pdf>; Wertheim, H. F., et al., "Streptococcus suis: An Emerging Human Pathogen," *Clinical Infectious Diseases*, vol. 48, 2009, pp. 617-625, At: <https://academic.oup.com/cid/article/48/5/617/388486>.
- 49 Chang, Q., et al., "Antibiotics in agriculture and the risk to human health: how worried should we be?" *Evolutionary Applications*, 2014, pp. 1-8, At: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4380918/pdf/eva0008-0240.pdf>.
- 50 Jerome A. Paulson, Theoklis E. Zaoutis, "Nontherapeutic Use of Antimicrobial Agents in Animal Agriculture: Implications for Pediatrics", *The Council on Environmental Health, the Committee on Infectious Diseases, Pediatrics* Dec 2015, 136 (6) e1670-e1677; DOI: 10.1542/peds.2015-3630, At: <http://pediatrics.aappublications.org/content/pediatrics/early/2015/11/11/peds.2015-3630.full.pdf>.
- 51 WHO, *WHO Guidelines on Use of Medically Important Antimicrobials in Food-Producing Animals*, November 2017, <http://apps.who.int/iris/bitstream/handle/10665/258970/9789241550130-eng.pdf?sequence=1>.
- 52 FDA, *Guidance for Industry #213*, December 2013, <https://www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/UCM299624.pdf>.
- 53 See note 8.
- 54 Danny Hakim, "At Hamburger Central, Antibiotics for Cattle That Aren't Sick," *New York Times*, 23 March 2018, <https://www.nytimes.com/2018/03/23/business/cattle-antibiotics.html>.
- 55 Barry Estabrook, "Feedlots vs. Pastures: Two Very Different Ways to Fatten Beef Cattle," *The Atlantic*, December 28, 2011, <https://www.theatlantic.com/health/archive/2011/12/feedlots-vs-pastures-two-very-different-ways-to-fatten-beef-cattle/250543/>.
- 56 Maday, "BRD: Back to Basics," *Drovers*, 24 October 2017, Available from <https://www.drovers.com/article/brd-back-basics>; Nagaraja and Lechtenberg, "Liver Abscesses in Feedlot Cattle," *Vet Clin North Am Food Anim Pract.* July 2007: 23(2):351-69, ix; <http://feedlotmagazine.com/keep-cattle-healthy-without-antibiotics/>.
- 57 Beef Board, *Beef Lifecycle*, accessed at <https://www.beefboard.org/pocket-guide/beef-lifecycle.html>; National Chicken Council, *U.S. Broiler Performance*, accessed at <https://www.nationalchickencouncil.org/about-the-industry/statistics/u-s-broiler-performance/>.
- 58 U.S. Environmental Protection Agency, *Ag 101*, accessed at https://www.epa.gov/sites/production/files/2015-07/documents/ag_101_agriculture_us_epa_0.pdf.
- 59 McDonald and McBride, "The Transformation of U.S. Livestock Agriculture Scale, Efficiency, and Risks" *USDA/ERS Economic Information Bulletin*, 43. 2009, <https://naldc.nal.usda.gov/download/28012/PDF>.
- 60 USDA, *Livestock Slaughter 2017 Summary April 2018*, April 2018, Available from: <http://usda.mannlib.cornell.edu/usda/current/LiveSlauSu/LiveSlauSu-04-18-2018.pdf>.
- 61 Stone Barns Center for Food and Agriculture, *Back to Grass: The Market Potential For U.S. Grassfed Beef*, April 2017, https://www.stonebarnscenter.org/wp-content/uploads/2017/10/Grassfed_Full_v2.pdf.
- 62 Taylor et al. "The epidemiology of bovine respiratory disease: What is the evidence for predisposing factors?" *Canadian Veterinarian Journal*, Oct 2010; 51(10):1095-102, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2942046/>.
- 63 USDA, *Feedlot 2011 Part IV: Health and Health Management on U.S. Feedlots with a Capacity of 1,000 or More Head*, September 2013, https://www.aphis.usda.gov/animal_health/nahms/feedlot/downloads/feedlot2011/Feed11_dr_PartIV.pdf.
- 64 Ibid.
- 65 Ibid.
- 66 Aschenbach et al. Ruminant Nutrition Symposium, "Role of fermentation acid absorption in the regulation of ruminal pH," *J Anim Sci*, April 2011; 89(4):1092-107, doi: 10.2527/jas.2010-3301. Epub 15 Oct 2010.
- 67 Elanco, *Products and Services: Beef*, accessed at <https://www.elanco.us/products-services/beef/tylan-premix> 30 August 2018.
- 68 WHO, *Critically Important Antimicrobials for Human Medicine 5th Revision*, 2016, <http://apps.who.int/iris/bitstream/handle/10665/255027/9789241512220-eng.pdf;jsessionid=076C1F2469A262FD23AAABE96D3B14CA?sequence=1>.

- 69 Van Soest, *Nutritional Ecology of the Ruminant*, Cornell University Press, 1982.
- 70 USDA, *Organic 101: What the USDA Organic Label Means (Blog)*, 22 March 2012. <https://www.usda.gov/media/blog/2012/03/22/organic-101-what-usda-organic-label-means>.
- 71 American Grassfed Association, *Our Standards*, accessed at: <https://www.americangrassfed.org/about-us/our-standards/>, 29 August 2018.
- 72 Animal Welfare Institute, *History of AWI's Leadership on Establishing and Upholding Farm Animal Standards*, accessed at: <https://awionline.org/content/history-awis-leadership-establishing-and-upholding-farm-animal-standards>, 29 August 2018.
- 73 A Greener World, *Certified Grassfed by AGW*, accessed at <https://agreenerworld.org/certifications/certified-grass-fed/>, 29 August 2018.
- 74 The Global Animal Partnership, *The 5-Step Animal Welfare Program*, accessed at <http://www.globalanimalpartnership.org/5-step-animal-welfare-rating-program/standards>, August 29 2018.
- 75 Alex Smith, "Soaring Popularity Of Grass-Fed Beef May Hit Roadblock: Less Nutritious Grass," *NPR*, 8 January 2018, <https://www.npr.org/sections/thesalt/2018/01/08/575413910/soaring-popularity-of-grass-fed-beef-may-hit-roadblock-less-nutritious-grass>.
- 76 Ibid.
- 77 USDA, *Feedlot 2011 Part IV: Health and Health Management on U.S. Feedlots with a Capacity of 1,000 or More Head*, September 2013.
- 78 Lhermie et al. "Addressing Antimicrobial Resistance: An Overview of Priority Actions to Prevent Suboptimal Antimicrobial Use in Food-Animal Production," *Front Microbiol.* 6 January 2017; 7:2114. doi: 10.3389/fmicb.2016.02114, eCollection 2016.
- 79 Wilson et al. "Beef Species Symposium: Best management practices for newly weaned calves for improved health and well-being," *J. Anim. Sci.*, 2017.95:2170-2182; Consumer Reports, *Beef Report*, August 2015. https://www.consumerreports.org/content/dam/cro/magazine-articles/2015/October/Consumer%20Reports%20Food%20%26%20Sustainability%20Center%20Beef%20Report_8-15.pdf; USDA, *Antimicrobial Drug Use and Antimicrobial Resistance on U.S. Cow-calf Operations, 2007-08*, February 2012.
- 80 Reinhardt and Hubbert, "Control of liver abscesses in feedlot cattle: A review," *The Professional Animal Scientist*, Volume 31, Issue 2, 101 - 108, April 2015.
- 81 Crespi, J.M. and Saitone, T.L., "Are Cattle Markets the Last Frontier? Vertical Coordination in Animal-Based Procurement Markets," *Annual Review of Resource Economics*, June 2018.
- 82 Friends of the Earth, *Letter to US Roundtable on Sustainable Beef*, 27 June 2018, <http://foe.org/wp-content/uploads/2018/06/USRSB-Sign-On-Letter.pdf>.
- 83 Starting in 2007, the Preserving Antibiotics for Medical Treatment Act (PAMTA) has been introduced in the U.S. House of Representatives in each successive Congress. PAMTA would require FDA to phase out the routine use of medically-important antibiotics in food animals unless the drug maker could show a specific use was safe with respect to resistance. Similar legislation has been introduced in the Senate as well. Expert Commission on Addressing the Contribution of Livestock to the Antibiotic Resistance Crisis, Antibiotic Resistance Action Center and Natural Resources Defense Council, *Combating Antibiotic Resistance: A Policy Roadmap to Reduce Use of Medically Important Antibiotics in Livestock*, August 2017, <http://battlesuperbugs.com/PolicyRoadmap>; Government Accounting Office, *ANTIBIOTIC RESISTANCE: More Information Needed to Oversee Use of Medically Important Drugs in Food Animals*, 2 March 2017.
- 84 FDA, *Guidance for Industry #209*, 13 April 2012, <https://www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/UCM216936.pdf>; FDA, *Guidance for Industry #213*, December 2013, <https://www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/UCM299624.pdf>.
- 85 FDA, *FDA Announces Implementation of GFI #213, Outlines Continuing Efforts to Address Antimicrobial Resistance*, 3 January 2017, <https://www.fda.gov/animalveterinary/newsevents/cvmupdates/ucm535154.htm>.
- 86 See note 84.
- 87 Poultry Health Today, "Get to know the ins and outs of the new veterinary feed directive," <https://poultryhealthtoday.com/get-to-know-the-ins-and-outs-of-the-new-veterinary-feed-directive/>.
- 88 Natural Resources Defense Council, *FDA's Efforts Fail to End Misuse of Livestock Antibiotics*, website (Table, page 4), <https://www.nrdc.org/resources/fdas-efforts-fail-end-misuse-livestock-antibiotics>, Accessed 1 Oct 2018; GAO, *Antibiotic Resistance: Agencies Have Made Limited Progress Addressing Antibiotic Use in Animals*, GAO-11-801, Washington, D.C.: 7 Sept 2011, <http://www.gao.gov/new.items/d11801.pdf>, Accessed September 28, 2018.
- 89 United States Government Accountability Office, *Antibiotic Resistance: More Information Needed to Oversee Use of Medically Important Drugs in Food Animals*, March 2017, <https://www.gao.gov/assets/690/683130.pdf>.
- 90 Veterinary Practice News, "Kansas State gets FDA OK for pilot project on antibiotic use," 21 September 2016, <https://www.veterinarypracticenews.com/kansas-state-gets-fda-ok-for-pilot-project-on-antibiotic-use/>.
- 91 USDA, *Antimicrobial Resistance Action Plan* (Appendix 5), June 2014, See: <https://www.usda.gov/sites/default/files/documents/usda-antimicrobialresistance-action-plan.pdf>.
- 92 USDA, *USDA Chief Scientist Statement on WHO Guidelines on Antibiotics*, 7 November 2017, <https://www.usda.gov/media/press-releases/2017/11/07/usda-chief-scientist-statement-who-guidelines-antibiotics>.
- 93 Martins, Andrew and Hopkins, Jared S., "Trump's USDA Fights Global Guidelines on Livestock Antibiotics," *Bloomberg*, 23 July 2018, <https://www.bloomberg.com/news/articles/2018-07-23/trump-s-usda-fights-global-guidelines-on-livestock-antibiotics>.

- 94 California Legislative Information, *SB-27 Livestock: use of antimicrobial drugs*, 10 October 2015 https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB27; General Assembly of Maryland, *Keep Antibiotics Effective Act of 2017*, 28 November 2017, <http://mgaleg.maryland.gov/webmga/frmMain.aspx?pid=billpage&tab=subject3&stab=01&id=sb0422&ys=2017RS>.
- 95 Maryland PIRG, *MDA's Proposed Regulations for 2017 Law Allow for Continued Routine Antibiotic Use, Which Fuels Global Antibiotic Resistance Crisis*, 16 August 2018, <https://marylandpirg.org/news/mdp/mda%E2%80%99s-proposed-regulations-2017-law-allow-continued-routine-antibiotic-use-which-fuels>.
- 96 California Department of Food and Agriculture, Antimicrobial Stewardship, <https://www.cdffa.ca.gov/ahfss/AUS/stewardship.html> (last accessed Sept. 4, 2018); Benjamin Barsky, "Regulating the Antibiotic Resistance Crisis", *The Regulatory Review*, 12 June 2018, <https://www.theregreview.org/2018/06/12/barsky-regulating-antibiotic-resistance/>.
- 97 Jonathan Kauffman, "San Francisco votes to require records on antibiotics used in meat," *San Francisco Chronicle*, 26 October 2017, <https://www.sfchronicle.com/business/article/San-Francisco-votes-to-require-records-on-12306316.php>; San Francisco Ordinance 204-17; see <https://sfenvironment.org/antibiotics-ordinance>.
- 98 San Francisco Ordinance 204-17; <https://sfgov.legistar.com/View.ashx?M=F&ID=5527122&GUID=416E70B6-7805-4869-8784-B5D8BA8A043B>; see <https://sfenvironment.org/antibiotics-ordinance>.
- 99 Green Century Capital Management, Shareholders of Darden Restaurants* Express Increasing Support for Green Century's Antibiotic Use Shareholder Proposal, 24 September 2018, <https://www.greencentury.com/shareholders-of-darden-restaurants-express-increasing-support-for-green-centurys-antibiotic-use-shareholder-proposal/>.
- 100 As You Sow, *Denny's: Request for Report on End Use of Medically Important Antibiotics in Healthy Animals*, 31 December 2017. <https://www.asyousow.org/resolutions/2017/12/31/dennys-diner-company-request-for-report-on-end-use-of-medically-important-antibiotics-in-healthy-animals>.
- 101 See note 9.
- 102 Gary Thornton, "Top 10 US chicken producers grow in new directions," *WATT PoultryUSA*, 7 March 2016, <https://www.wattagnet.com/articles/25893-top---us-chicken-producers-grow-in-new-directions>.
- 103 As You Sow, *Investor Proposal Challenges Major Chicken Company to Stop Denying Science and Misusing Antibiotics (press release)*, 21 February 2018, <https://www.asyousow.org/press-releases/2018/2/21/investor-proposal-challenges-major-chicken-company-to-stop-denying-science-and-misusing-antibiotics>; ad campaign: Strom, Stephanie "Poultry Producer Sanderson Farms Stands Its Ground: It's Proud to Use Antibiotics," *New York Times*, 1 August 2016, <https://www.nytimes.com/2016/08/02/business/poultry-producer-sanderson-farms-stands-its-ground-its-proud-to-use-antibiotics.html>.
- 104 Reuters Health News, "More Sanderson Farms investors support end of antibiotic use," 21 February 2018, <https://www.reuters.com/article/us-sanderson-farms-antibiotics/more-sanderson-farms-investors-support-end-of-antibiotic-use-idUSKCN1G52H4>.
- 105 This list is not intended to be comprehensive and there may be other good actors.
- 106 Grass Run Farms, *Our Mission*, accessed at: <https://grassrunfarms.com/our-story/>, 30 August 2018.
- 107 Epic Burger, *Epic Rules*, accessed at <http://epicburger.com/epic-rules/humanely-raised-no-hormones-no-antibiotics/>, 30 August 2018.
- 108 Epic Burger, *Locations+Menus*, accessed at <http://epicburger.com/locations-menus/> on 30 August 2018.
- 109 Tasty Burger, *Our food*, accessed at <https://www.tastyburger.com/our-story/>, 30 August 2018.
- 110 Elevation Burger, *Philosophy*, <http://elevationburger.com/philosophy/>, accessed 30 August 2018.
- 111 B. Good, *Source Sustainability*, accessed at <http://www.bgood.com/our-food/>, 30 August 2018.
- 112 Burgerville, *About*, accessed at: <http://www.burgerville.com/about/> 6 September 2018.
- 113 Good Times, *All Naturalness*, accessed at: <https://goodtimesburgers.com/all-naturalness/>, 6 September 2018.
- 114 Chick-fil-A, *No Antibiotics Ever*, accessed at <https://www.chick-fil-a.com/About/Great-Food/No-Antibiotics-Ever>, 30 August 2018.
- 115 See Appendix 5.
- 116 Dine Brands, *Animal Welfare*, accessed at <https://www.dinebrands.com/en/social-responsibility/animal-welfare>, 19 September 2018.
- 117 From survey response.
- 118 Dine Brands, *Animal Welfare*, accessed at <https://www.dinebrands.com/en/social-responsibility/animal-welfare>, 19 September 2018.
- 119 Starbucks, *Views*, accessed at <https://news.starbucks.com/views/animal-welfare-friendly-practices>, 30 August 2018.
- 120 Video interview with Dr. Makary produced by U.S. PIRG.
- 121 See note 14.
- 122 From survey response.
- 123 From survey response.
- 124 Burger King, *2016 Sustainability Report*, <http://www.rbi.com/interactive/newlookandfeel/4591210/2016sustainabilityreport.pdf>.
- 125 From survey response.
- 126 Wendy's, *The Wendy's Company Reports on 2017 Corporate Social Responsibility Progress*, 15 December 2017, <http://ir.wendys.com/phoenix.zhtml?c=67548&p=irol-newsArticle&ID=2322950>.
- 127 From survey response.
- 128 From survey response.

129 From survey response.

130 Steak 'n Shake, *Steak 'n Shake Launches New Prime Steakburger™*, 23 August 2017, <https://www.prnewswire.com/news-releases/steak-n-shake-launches-new-prime-steakburger-300508262.html>

131 From survey response.

132 From survey response.

133 Shake Shack, *Stand for something good*, accessed here: <https://www.shakeshack.com/stand-for-something-good/> 1 October 2018.

134 From survey response and internal communications.

135 A&W, *FAQ*, accessed here <https://awguarantee.ca/en/faq/>, 1 October 2018.

136 Fuddruckers, *Exotics*, accessed here <http://www.fuddruckers.com/exotics> 1 October 2018.

137 Farmer Boys, *Nutrition*, accessed here: <https://www.farmerboys.com/menu-nutrition/> 1 October 2018.

138 BurgerFi, *1 percent*, accessed here: <https://burgerfi.com/1percent/> 1 October 2018.

139 In cases where a company has only adopted a good antibiotic use policy for a subset of a meat and/or poultry category (e.g. chicken on pizza), we did not award any bonus implementation points in the absence of additional information regarding the overall share of purchasing in that category that this commitment represents.

140 See note 15.

141 From survey response.

142 From survey response.

143 Starbucks, *Views*, accessed here: <https://news.starbucks.com/views/animal-welfare-friendly-practices>.

144 Subway, *Social Responsibility*, accessed here <https://www.subway.com/en-US/AboutUs/SocialResponsibility/NutritionalLeadership>

145 From survey response.

146 From survey response.

147 From survey response.

148 From survey response.

149 Restaurant Brands International, *2016 Sustainability Report*, <http://www.rbi.com/interactive/newlookandfeel/4591210/2016sustainabilityreport.pdf>.

150 From survey response.

151 From survey response.

152 From survey response.

153 Dunkin Donuts, *Dunkin Brands Animal Welfare Policy*, July 2017, https://www.dunkinbrands.com/internal_redirect/cms.ipressroom.com.s3.amazonaws.com/226/files/20150/Animal%20Welfare%20Policy%20for%20website.pdf.

154 From survey response.

155 Chick-fil-A, *About*, accessed here <https://www.chick-fil-a.com/About/Great-Food/Our-Animal-Wellbeing-Standards>.

156 From survey response.

157 From survey response.

158 From survey response.

159 Pizza Hut, *Pizza Hut Pledges All Chicken To Be Raised Without Antibiotics By 2022 (blog)*, 19 June 2018, <http://blog.pizzahut.com/pizza-hut-continues-movement-on-food-commitments-pledges-all-chicken-raised-without-antibiotics-by-2022/>.

160 From survey response.

161 Dominos, *2018 Corporate Stewardship Report*, <http://phx.corporate-ir.net/phoenix.zhtml?c=135383&p=irol-socialcommitment>.

162 From survey response.

163 From survey response.

164 Sonic, *Animal Welfare*, accessed here <https://corporate.sonicdrivein.com/animal-welfare/>.

165 From survey response.

166 KFC, *Our Next Step In KFC's Re-Colonization*, <https://kfc-blog-assets.s3.amazonaws.com/wp-content/uploads/OurNextStepInKFCRe-Colonization.pdf>.

167 From survey response.

168 From survey response.

169 Dine Brands, *Animal Welfare*, accessed here <https://www.dinebrands.com/en/social-responsibility/animal-welfare>.

170 From survey response.

171 Dine Brands, *Animal Welfare*, accessed at <https://www.dinebrands.com/en/social-responsibility/animal-welfare>, 19 September 2018.

172 Darden, *Sourcing*, accessed here <https://www.darden.com/citizenship/plate/sourcing>.

173 Chipotle, *Food With Integrity*, accessed here <https://www.chipotle.com/food-with-integrity#saying-no-to-drugs>.

174 From survey response.

- 175 From survey response.
- 176 Arby's, *Corporate Responsibility Report 2016*, https://arbys.com/images/corporate_responsibility/Arbys_CSR.pdf.
- 177 Jack in the Box, *Animal Welfare at Jack in the Box*, April 11, 2018, <http://www.jackintheboxinc.com/assets/AW-041118.pdf>.
- 178 From survey response.
- 179 Dine Brands, *Animal Welfare*, accessed here <https://www.dinebrands.com/en/social-responsibility/animal-welfare>.
- 180 From survey response.
- 181 From survey response.
- 182 From survey response.
- 183 From survey response.
- 184 Cracker Barrel, *Food with Care*, accessed here <https://crackerbarrel.com/about/food-with-care>
- 185 From survey response.
- 186 See note 10.
- 187 Karen L. Tang, MD et al. "Restricting the Use of Antibiotics in Food-producing Animals and Its Associations with Antibiotic Resistance in Food-producing Animals and Human Beings: a Systematic Review and Meta-analysis," *The Lancet Planetary Health*, 1(8): PE316-E327, DOI:[https://doi.org/10.1016/S2542-5196\(17\)30141-9](https://doi.org/10.1016/S2542-5196(17)30141-9), 01 November 2017; Anna Mae Scott (PhD), "Is Antimicrobial Administration to Food Animals a Direct Threat to Human Health? A Rapid Systematic Review," *International Journal of Antimicrobial Agents*, 52(3): 316-323, DOI: <https://doi.org/10.1016/j.ijantimicag.2018.04.005>, September 2018.

About Us



Center for Food Safety's mission is to empower people, support farmers, and protect the earth from the harmful impacts of industrial agriculture. Through groundbreaking legal, scientific, and grassroots action, we protect and promote your right to safe food and the environment. Please join our more than 900,000 advocates across the country at www.centerforfoodsafety.org. Twitter: @CFSTrueFood, @CFS_Press



Consumer Reports is a nonprofit membership organization that works side by side with consumers to create a fairer, safer, and healthier world. For 80 years, CR has provided evidence-based product testing and ratings, rigorous research, hard-hitting investigative journalism, public education, and steadfast policy action on behalf of consumers' interests. Unconstrained by advertising or other commercial influences, CR has exposed landmark public health and safety issues and strives to be a catalyst for pro-consumer changes in the marketplace.



Food Animal Concerns Trust expands safe and humanely raised food options by supporting humane farmers and advocating against antibiotic overuse and harmful drugs in farm animals. Our Humane Farming Program invests in family farmers seeking to raise their animals humanely by providing them with grants, scholarships, and webinars. Our Food Safety Program advocates for stronger corporate and federal policies that eliminate the overuse of antibiotics and veterinary drugs known to be harmful to consumers. Together they expand safe and humane practices on farms across the country.



Friends of the Earth fights to create a more healthy and just world. Our current campaigns focus on promoting clean energy and solutions to climate change, ensuring the food we eat and products we use are safe and sustainable, and protecting marine ecosystems and the people who live and work near them.



The Natural Resources Defense Council (NRDC) is an international nonprofit environmental organization with more than 3 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Bozeman, MT, and Beijing. Visit us at www.nrdc.org and follow us on Twitter @NRDC.



U.S. PIRG Education Fund is an independent, non-partisan group that works for consumers and the public interest. Through research, public education and outreach, we serve as counterweights to the influence of powerful special interests that threaten our health, safety or well-being.