

CASE STUDY

Going Mainstream: Meat and Poultry Raised Without Routine Antibiotics Use



Consumer demand for chicken, turkey, pork, and beef raised without the routine use of antibiotics is growing fast.¹ While these meat products still account for only around 5 percent of meat sold in the United States,² their growth trajectory is transforming the broader marketplace. In particular, production of chicken raised without the routine use of antibiotics has become part of the mainstream. Motivated by personal health, environmental concerns, animal welfare, taste, and quality concerns, many consumers are seeking alternatives to conventional meat products, which are typically produced with routine use of antibiotics.

NRDC has identified companies at the forefront of this market change. These consumer brands, restaurants, and grocery retailers now report sourcing meat from farmers who raise livestock and poultry without relying on routine antibiotics use and are leading the way in making it more readily available to American consumers. Today, these companies successfully and profitably market and sell hundreds of millions of pounds of meat and poultry raised without the routine use of antibiotics each year.

Consider the following:

THE MARKET FOR MEAT AND POULTRY RAISED WITHOUT ROUTINE USE OF ANTIBIOTICS IS BOOMING

- Sales were up 25 percent, according to reporting published in 2012, over the three prior years.³ The increase occurred despite an overall decline in U.S. per capita meat consumption across the four major categories (beef, pork, chicken and turkey) over those same years. This trend continues today.
- USDA certified organic meats—just one part of the market for meat raised without routine use of antibiotics—were the fastest growing segment of the \$31 billion organic foods industry in 2011.⁴ In 2013, sales of organic meat, poultry, and fish were up 11 percent over the prior year to \$675 million.⁵

CHICKEN, IN PARTICULAR, APPEARS TO BE AT A TIPPING POINT

- Consumer demand for either poultry raised without routine use of antibiotics or organic poultry products is driving market change.⁶ In 2014, the *Wall Street Journal* reported that sales of antibiotic-free chicken in the United States rose 34 percent by value and that consumer spending on it topped \$1 billion in 2013, not including restaurant and other commercial purchasing.⁷
- A growing share of broiler chicken production is organic or otherwise does not rely on the routine use of antibiotics. Brands already marketing these products in supermarkets include Fieldale Farms, Springer Mountain Farms, Mary's Chicken, Murray's, Bell and Evans, Miller Amish, and Perdue's Coleman Natural and Harvestland brands.⁸ This chicken sometimes is sold at a price point competitive with conventional chicken—i.e. chicken that is raised with routine antibiotics use.⁹

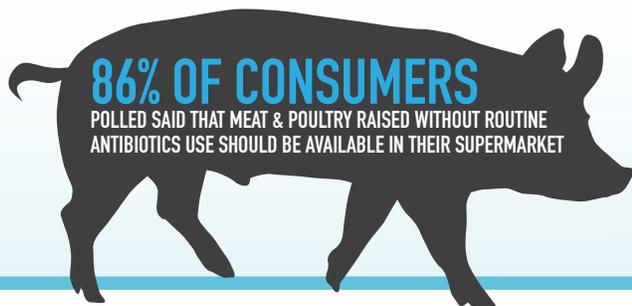
THE LARGEST CHICKEN BUYERS IN THE COUNTRY ARE RESPONDING

- In early 2015, McDonald's, the largest and most iconic fast food chain in the United States, announced that within two years it would only serve chicken raised without use of medically important antibiotics across its approximately 14,000 domestic restaurants.¹⁰ Following their announcement, Keystone Foods, a McDonald's supplier, said that it "fully supports McDonald's decision and direction regarding poultry antibiotic usage... Keystone is positioned to support and grow our business with both McDonald's and our existing customers with minimal impact to our operations."¹¹
- Chick-fil-A, which reports that it is the largest U.S. chicken chain by domestic sales volume,¹² has committed to serve only 100 percent antibiotic-free chicken by 2019. The company announced that as of March 2015, it had already converted 20 percent of its chicken supply.¹³

EVEN THE LARGEST CHICKEN PRODUCERS ARE REDUCING THEIR RELIANCE ON ANTIBIOTICS

- In April 2015, Tyson Foods, by far the country's largest processor of chicken and another major supplier to McDonald's, announced it will no longer use human antibiotics to raise chickens in its U.S. operations by September 2017.¹⁴
- Pilgrim's Pride, the second largest chicken producer in the country, also reported that it will raise 25 percent of its birds without routine use of antibiotics by the end of 2018. A representative of the company told the *Wall Street Journal*, "We're seeing quite a big growth in antibiotic-free product. As consumers and as the population is looking more for that, the industry needs to follow."¹⁵
- In June 2015, Foster Farms Co., which processes more than 5 million chickens a week, announced efforts to eliminate antibiotics that are important for human medicine.¹⁶

NRDC has not independently verified the practices of profiled companies. The case studies included here are not meant to be an endorsement of any company. NRDC's goal is to document that large, mainstream companies have reduced reliance on antibiotics in their operations and supply chains and are reporting that they are doing so. The companies profiled here are just some of the brands, restaurants, and food retailers that have demonstrated leadership in the market for meat raised without routine use of antibiotics. A large and growing number of food companies across the country are joining their ranks and offering these meat products to their customers.



- In 2014, Perdue Farms, the fourth largest chicken producer in the United States,¹⁷ announced that it is already raising 95 percent of its birds without antibiotics important to human medicine, with the remaining antibiotics use limited to treating chickens that are sick.¹⁸ In July 2015, Perdue announced that more than half of their birds are raised completely without antibiotics.¹⁹
- NRDC estimates that more one-third of the entire U.S. chicken industry has now eliminated or pledged to eliminate routine use of medically important antibiotics. Industry insiders agree we're seeing a tipping point. Earlier this year, at a global industry conference of food producers and processors, an industry consultant declared that chicken raised without routine use of antibiotics was no longer a niche business. He stated, "I think in a few years, one-third of chicken and turkey will be antibiotic-free. The problem then is the other 66 percent of consumers will be resenting the fact that their chicken isn't antibiotic-free."²⁰



USING ANTIBIOTICS ON LIVESTOCK THAT DON'T NEED THEM THREATENS THE HEALTH OF PEOPLE WHO DO

Today, according to the Food and Drug Administration, a stunning 80 percent of all antibiotics sold in the United States are given to farm animals—not humans.²¹ Often these antibiotics are used not to cure sick animals, but to accelerate growth in cattle, swine, and poultry as well as to compensate for dirty, crowded conditions common in factory farms. Fed to animals at low levels day after day, they kill the weak germs, leaving behind the ones that are hardest to destroy. Over time, these drug-resistant bacteria, or "superbugs," multiply and spread.

Superbugs can spread from farms through air, soil, water, and people in contact with the animals. They also end up in meat at the grocery store, putting millions of people at risk of infections that are harder to treat or completely untreatable. At the same time, few new antibiotics are being developed. Leading health experts agree that the intensive use of antibiotics in animal agriculture is a key culprit in the rise of antibiotic-resistant infections in humans, posing a serious threat to human health.²²

CONSUMERS CARE—AND WOULD PAY MORE

American consumers now regularly point to the misuse and overuse of antibiotics in livestock production as a top sustainability concern. A *Consumer Reports* survey found that 86 percent of consumers polled said that meat and poultry raised without routine use of antibiotics should be available in their local supermarket and more than 60 percent of respondents said they would be willing to pay at least \$0.05 cents per pound more for it. Nearly 40 percent said they would pay \$1 or more per pound.²³ Large meat producers and buyers switching to production systems and supply chains that don't rely on the routine use of antibiotics regularly cite consumer demand as a major driver of their decision.

EXPERTS PREDICT LOW TRANSITION COSTS

Transitioning away from the routine use of antibiotics in meat production would not have to greatly increase costs for consumers and producers, the evidence suggests. Several studies indicate that raising chickens while eliminating antibiotics in chicken feed and water would cost mere pennies more per pound.²⁴ Current retail prices for chicken raised without routine use of antibiotics are higher than this estimated cost, but some of this difference may have to do with other attributes of the chicken brands (e.g. "free range" or "vegetarian-fed"), as well as other factors affecting poultry markets and consumer demand.²⁵ After Denmark phased out the routine use of antibiotics in animal feed, a World Health Organization analysis of pre- and post-ban poultry prices there found no net cost changes because money saved by not purchasing these drugs offset any costs associated with animals growing fatter on less feed.²⁶

In 1999 the National Research Council estimated that if U.S. producers eliminated *all* non-therapeutic use of antibiotics in meat production, it would cost the average grocery shopper less than \$10 annually.²⁷ In today's dollars, that would be \$13.50 per year—a mere dollar per month per person. While USDA economists continue to find a slight positive effect on productivity of using non-therapeutic antibiotics in pork production, they note that wholesale price increases are likely to be small if these uses were eliminated, and consumers will likely see even smaller price increases.²⁸ New research from the Economic Research Service of the USDA suggests that if producers eliminated all non-therapeutic antibiotic uses, wholesale prices of pork and poultry would increase by less than 5 percent, and retail prices would increase by even less.²⁹



APPLEGATE: CREATING A MULTI-MILLION DOLLAR MARKET FOR MEAT RAISED WITHOUT ANTIBIOTICS

Applegate is an organic and natural meats company whose products are sold in nearly 25,000 stores across the United States. The company entered the specialty meat business in 1987 with nitrate-free bacon, seeking to differentiate itself from the conventional market at a time when the market for antibiotic-free meat did not exist. Applegate began offering antibiotic-free meat and poultry in the 1990s and soon added organic meat products. Today, Applegate reports that it works with roughly 1,500 farms in 8 states and 4 countries and sees nearly \$300 million in annual sales from its multi-species line of branded antibiotic-free and organic beef, pork, and poultry products.¹

BUILDING AN ANTIBIOTIC-FREE SUPPLY CHAIN AND BRAND

According to Applegate CEO Stephen McDonnell, it is the Applegate brand that links the company with its customer and the customer with the farmer. Unlike the conventional meat industry, which remains largely a commodity market, McDonnell suggests that it is through cooked and branded products that Applegate is able to create a retail market for its antibiotic-free meats, adding sufficient value for consumers to justify higher prices.²

Applegate says it ensures a stable supply of antibiotic-free poultry by ordering large amounts of whole chickens and constantly working on utilizing the whole animal. This brings down the company's costs and reduces losses for its suppliers, who would otherwise have to find buyers for unwanted parts of their animals or sell less valuable cuts in the conventional market at a loss. According to McDonnell, full utilization generates more revenues per carcass for the producer and processor, lowers the price of primal cuts, and makes meat raised without antibiotics more affordable. Though more challenging for pork and beef, Applegate reports that it is working to build product lines around the "utilization" model to more easily set production standards and reduce risks for producers who adopt an antibiotic-free business model.³



CHIPOTLE: TAKING MEAT RAISED WITHOUT ANTIBIOTICS MAINSTREAM

Chipotle is one of the fastest growing fast-casual restaurant chains in the United States, operating approximately 1,700 restaurants and opening about three new locations each week. The company's annual revenues top \$3 billion. Chipotle restaurants began serving antibiotic-free pork in 2000, antibiotic-free chicken in 2002, and antibiotic-free beef in 2003.¹ Today, Chipotle's goal is to serve such meats exclusively in their offerings of burritos, burrito bowls, tacos, quesadillas, and salads. In 2013, the company reported purchasing 140 million pounds of antibiotic-free pork, chicken, and beef, making it one of the largest buyers of antibiotic-free meat products in the country.²

BUILDING CUSTOMER LOYALTY WITH A BETTER PRODUCT

According to Chipotle, the company first considered pork raised without antibiotics because its pork carnitas were selling poorly. Seeking improved sales, Chipotle launched a process to create a better tasting recipe. After cooking with Niman Ranch's pork, Chipotle CEO Steve Ells reported finding that pigs raised outdoors and without reliance on antibiotics developed more back fat, leading to more moist and flavorful pork. The company began sourcing Niman Ranch pork for its updated carnitas and saw sales double, despite raising the menu price by \$1.00. Switching to poultry and beef raised without antibiotics was even more affordable, translating into price increases of just \$0.20 to \$0.30 per meal item.³

Chipotle accompanied these price increases with in-store communications materials that spoke to what the company was doing and why. This included posters of hog farmers reading, "We know exactly where our pork comes from: Duane." The company believes that publicly communicating its food purchasing policies—including its sourcing of antibiotic-free meats—has helped make customers comfortable with slightly higher prices. Chipotle posted 10 years of double-digit, same-store sales growth before the 2008 recession and claims to have some of the highest margins among restaurants, regardless of category.⁴ In the second quarter of 2014, the company regained double-digit growth, posting a 17.3 percent increase in same-store sales.⁵



CHICK-FIL-A: NOT PLAYING CHICKEN WITH ANTIBIOTICS

Chick-fil-A is the largest U.S. chicken chain by domestic sales volume, with more than 1,900 locations in 42 states and Washington, D.C. and \$6 billion in annual sales. The company opens nearly 90 new restaurants per year and has seen 47 consecutive years of sales growth. Chick-fil-A is a significant buyer of chicken for its chicken sandwiches, wraps, and salads. In 2014, it committed to serving only 100 percent “antibiotic-free”¹ chicken by the end of 2019, making it one of the largest chicken purchasers in the country to commit to antibiotic stewardship in its meat or poultry supply chains. Chick-fil-A reports that as of June 2015, 21 percent of its chicken supply is already raised without antibiotics.²

A CONSUMER-DRIVEN CHANGE, PHASED IN OVER TIME

According to Rob Dugas, vice president of supply chain at Chick-fil-A, the company regularly surveys its customers on a variety of issues in an effort to understand expectations. Dugas reports that in 2013, Chick-fil-A reviewed survey information and saw that antibiotics use in chicken production was amongst the top issues for its customers. “We started to look at adopting a policy on antibiotics use and honestly our first reaction was ‘that’s probably in the too hard pile’ for a company of our size and growth rate.” However, Dugas says Chick-fil-A decided the idea was worth pursuing, and made a commitment to talk to the company’s suppliers and explore their concerns. The company found that some suppliers were already close to meeting an “antibiotic-free” standard in raising their chickens, while others were new to this type of production.³

Dugas says Chick-fil-A recognized that at its current volume and growth rate, it could be challenging to immediately secure sufficient supply to meet a commitment to serve only meat from birds raised without any antibiotics. Chick-fil-A decided on a five-year transition period, with approximately 20 percent of its total supply converted each year.⁴ By the end of 2016, the company expects that 40 percent of its chicken will be sourced from birds not receiving any antibiotics.⁵

CHOOSING A “NEVER EVER” STANDARD AND PUBLIC TRANSPARENCY

According to Chick-fil-A, the company’s standard prohibits the use of any antibiotic at any point in raising the chicken served in its restaurants, including in chicken hatcheries, where in-ovo injection of antibiotics has been a common practice. Under Chick-fil-A’s standard, if a flock of chickens gets sick, they can be treated with antibiotics, but then must be removed from the company’s supply chain into another stream of supply.⁶ According to the company, all of its “antibiotic-free” chicken purchasing is third-party verified by the U.S. Department of Agriculture’s “Process-Verified” program.⁷

Dugas reports that the company chose a path of zero antibiotics in its chicken supply chain, as this was the most unambiguous standard to communicate to its customers. “We didn’t want to create an environment where customers were trying to discern what our policy means,” he says. According to Chick-fil-A, the response both internally and externally has been very positive.⁸

PAYING A PREMIUM FOR BIRDS BUT KEEPING MENU PRICES STEADY

While Chick-fil-A sources and serves only breast meat, the company pays its suppliers a premium for the entire chicken. Dugas explains that the decision to pay the full premium is linked to Chick-fil-A’s phased-in commitment, as it allows the company and its suppliers to learn about and adopt best practices over time, as well as to mitigate costs. “The premiums we anticipated haven’t been as severe as we thought,” Dugas says. “Suppliers have been very diligent in applying lessons.” Dugas reports that at this point, with 21 percent of its chicken raised without antibiotics, Chick-fil-A has not had to increase menu prices as a result of increased production costs, but instead have been able to offset costs with savings in other areas of their supply chain.⁹



ABOVE AND BEYOND GOOD™

ELEVATION BURGER: SOURCING HEALTHIER, MORE RESPONSIBLY-RAISED MEAT FROM THE START

Elevation Burger opened its first restaurant in 2005 in Falls Church, Virginia. Ten years later, it is a quickly expanding chain with a health-conscious ethos based in and around Washington, D.C. The company currently has 52 restaurants and plans to add 15 new restaurants in 2015, with expansion expected in the D.C. metro area, Texas, Pennsylvania, Maine, and Michigan, as well as the Middle East and Mexico. Elevation Burger reports that in 2015, it will purchase 2.5 million pounds of Certified Organic beef and 250,000 to 300,000 pounds of chicken, all raised without antibiotics.¹ All of the company's bacon is also raised organically and without reliance on antibiotics. Today, the company sources from over 100 farms in three countries and sees more than \$60 million in annual revenues.

BUILDING A 100 PERCENT GRASS-FINISHED AND CERTIFIED ORGANIC BEEF SUPPLY CHAIN

According to Michael Berger, Managing Partner at Elevation Burger, the idea behind the company was to use only Certified Organic beef, raised with no hormones or antibiotics ever and fed exclusively on grass. In 2005, Berger notes, this was ambitious, as the National Organic Program² had only recently been formed. At first, Elevation Burger sourced beef from local, small-scale farms that its founders could easily access. However, with growth, Berger reports suppliers became unsure about their ability to make delivery, pushing the company to turn to beef cooperatives to ensure a more steady supply.³ The company went from purchasing beef from 30 farms to more than 100 farms in seven years.

As Elevation Burger grew, it helped grow the organic beef industry around it. Berger reports that the company has helped farms get organic certification and become a dedicated source of demand for these farms. Depending on animal weight (which varies significantly by region), pasture conditions, and cattle rotations, Elevation Burger purchases 200 to 300 pounds of trim product from each cow. Large retail grocers purchase the premium cuts, allowing for synergistic growth. According to Berger, inventory management has been a critical challenge, as Certified Organic beef is not nearly as widely available as conventional beef. "If for some reason a distribution house runs out of beef," he says, "you can't find a substitute." Elevation Burger has set up a third-party company that now manages logistics and inventory for its beef purchases, which Berger describes as a key development in the company's success. Berger laments that the majority of organic grass-fed beef is not available in the United States, but says he hopes Elevation Burger can start to source more product domestically.⁴

FINDING A LOYAL CUSTOMER BASE, ESPECIALLY AMONG WOMEN

According to Elevation Burger, the price of its burger is typically no more than 5 to 6 percent—and never more than 10 percent—higher than its primary competitor. The company reports that it tries to keep its menu pricing in line with other fast-casual chains. However, Berger sometimes receives consumer comments indicating that Elevation Burger is more expensive. "People are so used to the fact that if it has the organic label, it's typically more expensive," he says, "often we don't get the benefit of guests comparing prices side-by-side where they would see how competitive our prices are, even while going organic." According to the company, this has not negatively impacted sales. "We've now moved into the territory that people just appreciate the quality and self-select into Elevation Burger," says Berger.⁵

The company recently did a study of the demographics that frequent its restaurants and sees a target market emerging. According to Elevation Burger, while similar chains primarily target the "young hungry male," its survey indicates that approximately 60 percent of its customers are female. The company cites its healthier, more responsibly sourced offerings, including meat raised without antibiotics, as a major driver. "As the fast casual restaurant sector has grown," suggests Berger, "you've reestablished options for parents—in particular mothers—for places to take their kids to eat." According to Berger, for the past three to four consecutive years, roughly 30 percent of Elevation Burger's business has come from families.⁶

RESPONDING TO CUSTOMER DEMAND BY ADDING ORGANIC CHICKEN RAISED WITHOUT ANTIBIOTICS

Elevation Burger reports that adding chicken to its menu was a direct response to consumer survey data, with female customers tending to prefer chicken menu options. It now works with the world's largest organic sous-vide⁷ processor to process the raw organic chicken. Since the processor was not already certified organic for production, Elevation Burger acted in an advisory role in driving their organic certification. The company now serves Certified Organic chicken, raised without antibiotics, in its sandwiches, grilled chicken tenders, salads, and kid meal options.⁸ Berger notes that while even the largest producer of organic chicken in the world is still tiny compared to the largest producers of conventional chicken, there's reason to be optimistic about the industry's prospects. "Large buyers and producers are embracing antibiotic-free chicken, even though some may have been fighting the change in production practices just 10 years ago."⁹



FRESHDIRECT: OFFERING UNIQUE INSIGHT INTO CONSUMER DEMAND FOR ANTIBIOTIC-FREE MEAT BY INTERACTING WITH CUSTOMERS ONLINE

FreshDirect is a leading online fresh food grocer in the United States, focused on delivering premium, fresh-from-the-farm foods and brand-name groceries directly to customer homes in the greater New York, New Jersey, Connecticut metro areas and greater Philadelphia area. The company sells a wide selection of fresh, antibiotic-free meat and poultry cut to order. FreshDirect's research, development, and production facility also creates more than 1,000 unique meals and baked goods produced in-house daily by a team of chefs. The company leverages close relationships with suppliers and farmers around the world to provide customers with top quality foods. Today, FreshDirect reports that it works with roughly 280 independent farms to deliver 2.5 million pounds of antibiotic-free and organic meat and poultry per year.

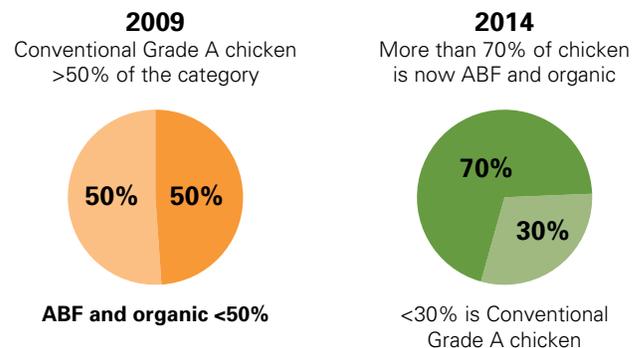
LEVERAGING A DIRECT RELATIONSHIP WITH CONSUMERS AND FARMERS TO SUPPORT THE TREND TOWARDS ANTIBIOTIC-FREE MEAT

FreshDirect describes itself as a “consumer centric” company, using its online platform both to answer consumer demand and to lead it by offering more sustainable products. According to the company's Senior Meat Buyer Stefan Oellinger, by interacting with its customers online, FreshDirect has deep insights into their purchasing behaviors, and needs, and can spot trends and react quickly to increased demand for more responsibly produced meats.¹ At the same time, FreshDirect's merchants spend significant time in the field establishing new relationships with farmers, ranchers, and processors and sourcing new products.

Oellinger reports that he is able to bring information about consumer wants and needs directly to his suppliers. He describes how he has used FreshDirect's critical mass of customers to motivate some farmers and ranchers to change their production practices and respond to consumer demand for more sustainably raised meats in real time. As an example, FreshDirect reports that it is now working with a farmer to produce and process pasture-raised and certified organic turkeys for Thanksgiving this year in response to customer demand. Other successful programs include FreshDirect's locally sourced, premium, antibiotic-free beef and locally sourced antibiotic-free, grass-fed lamb and beef, as well as direct-sourced, heritage breed, antibiotic-free chicken.²

SALES OF ANTIBIOTIC-FREE MEAT AND POULTRY OUTSHINE THE CONVENTIONAL MARKET

FreshDirect says that while domestic sale volumes in the meat industry as a whole are either declining or flat, it is seeing overall meat sales continue to grow, driven in large part by a shift in customer demand from conventional meat to antibiotic-free and organic meats. For example, the company reports chicken sales moving steadily from conventional options to antibiotic-free and organic options over the last five years. While in 2009 conventional Grade A chicken made up a full 50 percent of FreshDirect's chicken sales, more than 70 percent of the chicken sold in 2014 to date is antibiotic-free and organic. The company attributes the shift in part to their efforts to reposition their website layout to spotlight antibiotic-free and organic options, as well as enhanced communication around the benefits of these products.³





PANERA BREAD: ONE OF THE LARGEST U.S. RESTAURANT BUYERS OF CHICKEN RAISED WITHOUT ANTIBIOTICS

Panera, LLC—under the names Panera Bread,[®] Saint Louis Bread Co.,[®] and Paradise Bakery & Cafe[®]—operates more than 1,800 company-owned and franchise-operated bakery-cafes in the United States and Canada. The company sells freshly baked breads, sandwiches, salads, and soups, and saw annual revenues of \$2.4 billion in 2013. The company began sourcing its antibiotic-free chicken in 2004, eventually expanding its offerings of animal proteins raised without antibiotics to include roasted turkey and select pork products. Though not all of its meat and poultry is raised without antibiotics, Panera has quietly become one of the largest U.S. purchasers of antibiotic-free chicken in the restaurant sector. Today, system-wide, the company reports buying more than 28 million pounds of meat and poultry raised without antibiotics each year.¹

THE PURSUIT OF A GREAT-TASTING CHICKEN

According to Panera, its leadership discovered chicken raised without antibiotics when the company wanted to improve the chicken in its salads, which were sold as side items on cafe menus at the time. Chickens raised without antibiotics were “by far and away a better tasting product,” according to Scott Davis, Panera’s executive vice president and chief concept officer. Panera says that the success of this chicken has sparked an ongoing “evolution” at the company. It has expanded its offerings to include antibiotic-free chicken not only on salads but also on sandwiches; antibiotic-free roasted turkey on sandwiches and salads; and antibiotic-free ham, sausage, and bacon on select breakfast sandwiches, soufflés, panini, and cafe and kids’ sandwiches.²

BUILDING A SUPPLY CHAIN AND TRIPLING SALES

Panera’s expansion of antibiotic-free meat and poultry offerings has not been without its challenges. The company reports that there were not many suppliers raising chicken without antibiotics at the start, requiring it to actively assist in building a reliable supplier network. Though a scarcity of supply at the outset meant higher costs (leading Panera restaurants to increase prices between \$1 and \$1.50 for salads that featured the chicken), the company reports that price increases did not drive away customers. Instead, Panera says that when it started adding chicken raised without antibiotics to its salads, sales increased dramatically. According to the company, this addition made it possible for Panera cafes to promote salads as “chicken entrées,” transforming these salads into something for which customers now come to Panera.³

ENDNOTES

Executive Summary

- 1 Here and throughout, "meat raised without the routine use of antibiotics" refers both to meat raised entirely without antibiotics, as well as meat raised without routine, non-therapeutic uses of antibiotics. NRDC supports the use of antibiotics to treat sick animals. In common usage, the following phrases are often used to refer to products raised without any antibiotics, but are also sometimes used to refer to products raised largely without antibiotics: "raised without antibiotics," "no antibiotics," and "antibiotic-free." The USDA prohibits use of the phrase "antibiotic-free" on meat products, but it is colloquially used as short-hand.
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Chick-fil-A

- 1 Chick-fil-A's standard defines "antibiotic-free" accordingly:
 - Administration of antibiotics to the diet (feed/water) is prohibited.
 - Ionophore use is prohibited.
 - Administration of antibiotics to commercial vaccines is prohibited.
 - If antibiotics, including ionophores, are administered for any reason, those flocks must be removed from the Chick-fil-A supply chain.
 - Chick-fil-A, "Chickens Raised with No Antibiotics Ever," Chick-fil-A Newsroom, 2014, <http://www.chick-fil-a.com/Antibiotic-Free>.
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- 7 Rob Dugas, June 23, 2015.
- 8 Ibid.
- 9 Ibid.

Elevation Burger

- 1 In addition to prohibiting the use of antibiotics, the National Organic Program includes other requirements for organic livestock. Details of the standard can be found at: www.ams.usda.gov/AMSv1.0/nop.
- 2 See the U.S. Department of Agriculture's website on organic agriculture: www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=organic-agriculture.html.
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FreshDirect

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- 3 Kate Antonacci McConnell, Panera Director, Societal Impact Initiatives, personal communication with the author via email, August 4, 2014.