Feeding GMO Crops to Livestock

Date: March 30, 2016

Everyone has seen the acronym GMO, whether in a press article or a piece of legislation. GMO stands for “genetically modified organism.” It’s also known as transgenic, bioengineered, biotech, and “Frankenfood.”

by Alison L. Van Eenennaam, Ph.D., and Amy E. Young, Department of Animal Science, University of California, Davis

Summary

Everyone has seen the acronym GMO, whether in a press article or a piece of legislation. GMO stands for “genetically modified organism.” It’s also known as transgenic, bioengineered, biotech, and “Frankenfood.” While these words are often used interchangeably, the term “GMO” is ill-defined, since most domesticated animals and crops are “genetically modified” to some extent due to selective breeding by humans. The term “genetically engineered” (GE), however, specifically refers to the manipulation of an organism’s genes using modern molecular biology and accurately describes the food and feed that is at the forefront of the global discussion. It is important to remember that GE is a breeding method, not a company, application or production system. It is simply one of the methods that can be used to develop improved crop varieties.

Background

Genetically engineered crops have been widely adopted since their introduction in 1996, with more than 95 percent of sugar beet, 94 percent of soy and 96 percent of cotton and corn acreage planted with GE varieties in the U.S. in 2014. As these crops are major components of feedstuffs, livestock populations have been the major consumers of GE crops, and multiple generations of food-producing animals have been consuming 70-90 percent of GE crop biomass for almost 20 years. Science has shown that GE crops do not differ from non-GE crops in terms of composition, and no significant differences in health or performance have been detected in animals that consume GE feed. Additionally, no traces of GE material (rDNA or protein) have been detected in meat, milk, or eggs from those animals.

Discussion

Performance Trends in U.S. Livestock Populations

Sensational stories have been reported in the media based on a handful of highly controversial studies that claim to show deleterious health effects in a small number of animals that have consumed GE feed. Despite the fact that these studies have been widely criticized for experimental design, small sample sizes and methodological flaws, they continue to be used by some groups to suggest that GE crops are harmful to animal health. These claims are contradicted by the hundreds of carefully-conducted animal feeding studies that have been performed by independent scientists throughout the world, a list of which is maintained and made freely accessible online by the Federation of Animal Science Societies (FASS) (http://www.fass.org/page.asp?pagelD=52).

Numerous recent studies with a variety of food-producing animals fed with the current generation of GE crops consistently show no difference in performance and health in comparison to animals fed non-GE feeds. Most of those datasets are reflective of a controlled experimental environment, but what about out in production agriculture? Keeping in mind the significant increase in GE crop adoption rates between 2000 and 2013, and the fact that a very small proportion of the commercial livestock population (< 5
percent in 2011) was raised for certified National Organic Program (NOP) markets, it can be estimated that more than 100 billion animals in the U.S. consumed some level of GE feed in their diets between 2000 and 2011. If GE feed had detrimental effects on animal health or performance, it would have been reflected as a negative trend in the health of these commercial livestock populations during the past decade.

In a 2014 review in the *Journal of Animal Science* (Van Eenennaam and Young, 2014), an analysis of publicly available data for health and production parameters across commercial poultry, dairy, beef and hogs showed no significant deleterious health or performance trends in any of these industries. Carcass condemnation rates were examined as an important production parameter in beef cattle over this time period. The data show that a total of 0.47 percent of carcasses inspected at USDA-inspected slaughter facilities from 2003 through 2007 were condemned. Cattle fed or finished in feedyards, and therefore typically fed diets rich in corn and soy (the vast majority of which are of GE varieties) before slaughter, made up the majority (82 percent) of cattle at harvest but were the minority (12 percent) of cattle condemned. The condemnation rate for non-fed cattle (typically old cows) was higher than that for fed cattle, but the 2007 rate of 2.49 percent was similar to the reported rate in 1994, before the introduction of GE crops, of 2.6 percent.

These field data, representing billions of observations, did not show any unfavorable trends across any of these animal production industries after the introduction, and during the widespread adoption, of GE feed. In fact, available health indicators actually improved over time and productivity continued to improve, due likely to improved management and genetic selection, and at similar rates as observed in 1996 before the introduction of GE crop varieties.

**GE Animal Feed in Global Trading Markets**

In a brief released by the International Service for the Acquisition of Agri-Biotech Applications (ISAAA) in January 2015, it was reported that in 2014 a record 448 million acres of biotech crops were grown globally. This is an increase of 15 million acres since 2013. The U.S. remains the leader in biotech crop production, with 181 million acres, up 7 million acres since 2013, followed by Brazil (104 million acres) and Argentina (60 million acres). Herbicide-tolerant soybean and maize events continue to have the most approvals worldwide.

Soybeans and corn, the two major components in commercial animal feed, make up two-thirds of the global grain trade. The U.S., Brazil and Argentina, the three countries with the highest levels of biotech crop production, are also the main countries that grow and export these crops. Estimates report that 4 percent of global soybean trade and 7 percent of global corn trade are required to be certified non-GE. For countries that rely on imported feed, sourcing non-GE products is becoming complicated due to the high GE adoption rate in the major feed exporting countries. Some countries that have previously committed to sourcing only non-GE feed for certain sectors have recently abandoned those plans.

Further complicating matters, worldwide grain commerce has experienced trade disruptions due to asynchronous approvals. The amount of time needed to review and approve new GE crops varies considerably across different countries; leading to a situation in which GE crops may be cultivated and marketed in some countries but remain under evaluation in others. Significant trade disruptions have already occurred, especially when countries use a “zero tolerance” policy for unapproved events, meaning that even minute traces of unapproved GE crops are illegal and must be withdrawn from the market. In the future, it is likely that trade between countries with asynchronous approvals will be increasingly problematic as countries with zero tolerance policies will be perceived as risky due to the high costs associated with finding even minute traces of unapproved GE material. Non-GE feed for animals in the U.S. is more expensive and the supply is increasingly come from other countries such as China and India.

**Genetically Engineered DNA in Animal Products and the Labeling Issue**
It has been well-established that it is not possible to detect differences in the nutritional profiles of milk, meat and eggs from animals fed GE feed versus animals that have consumed non-GE feed. No reliable traces of GE DNA or protein have been detected in products from GE-fed animals. Livestock and humans regularly digest DNA and protein without any adverse consequences, and DNA from GE crops is chemically the same as DNA from non-GE crops and broken down no differently during the process of digestion. A freely available publication from the Council for Agricultural Science and Technology (CAST, 2006) provides details on the safety of products from animals fed GE crops. Currently, only a small number of livestock producers feed non-GE diets to their animals, meaning that well over 95 percent of the milk, meat and eggs on the US market today come from animals that have consumed GE feed.

Since there are no detectable traces of GE material, labeling of such products would rely on documenting the absence of GE crops all the way through the production chain, a costly and time-consuming proposition for producers and importers. There would be no way to test finished products to guarantee the complete absence of products from GE-fed animals. A 2014 study from Cornell University estimated that the costs to implement labeling based on maintaining product identity, as well as the costs of labeling itself, for a family of four for a year are $348-401 in California, $360-490 in Washington state and $500 in New York. Consumer surveys taken in Europe show that labeled products are likely to be dropped, actually resulting in fewer options on supermarket shelves. In the United States, voluntary, process-based labels, such as Organic and the Non-GMO Project verify that GE crops were not used in the production process and are available for those consumers that choose to purchase such products.

**Conclusion**

Overall, there have been substantial benefits from the adoption of GE crops in the US and worldwide. These include economic and environmental benefits such as lower production costs, fewer pest problems, reduced use of pesticides, and better yields. The overwhelming consensus of data shows that GE feed is safe for animal consumption and does not result in animal products that are compositionally different from those produced by animals that were fed feed derived from conventional crop varieties. Field data sets representing billions of observations are in agreement with the many controlled animal feeding studies that have reported no detrimental health effects in animals fed GE feed and revealed no deleterious trends in U.S. livestock health and productivity data since the introduction of GE crops.

**Additional Resources**


Tags: Beef Issues Quarterly, Spring 2016, Trends Analyses
Investigating Beef Market Volatility

Date: March 29, 2016

If you were to ask the cattle feeder about volatile markets across history, you would get many of the same answers. Often the first response is December of 2003, “the cow that stole Christmas.” It is still staggering today to recall the devastation caused by the first U.S. case of bovine spongiform encephalopathy, or BSE, which was found in a Canadian-sourced Holstein cow.

by Marcus Brix, CattleFax

Summary

If you were to ask the cattle feeder about volatile markets across history, you would get many of the same answers. Often the first response is December of 2003, “the cow that stole Christmas.” It is still staggering today to recall the devastation caused by the first U.S. case of bovine spongiform encephalopathy, or BSE, which was found in a Canadian-sourced Holstein cow. Spot live cattle futures broke sharply from the December 23rd closing price of $92.35/cwt to what would become a multi-year low of $72.50/cwt, a loss of roughly $275/head for a fed animal. The biggest damage was inflicted from the loss of beef exports, which research from Kansas State University estimated to be between $3.2 and $4.7 billion dollars in 2004 alone. Another historically volatile time is one that most all Americans would be familiar with, the collapse of the U.S. financial system in 2008. Already nine months into a recession, the greatest financial risks occurred with the bankruptcy of the Lehman Brothers investment bank, which at the time was the 4th largest U.S. bank of its kind. Spot live cattle futures fell from a closing price of $103.75/cwt on September 2nd, 2008 to a recessionary low of $79.18/cwt on June 8th, 2009. Feedyards were forced to sell cattle into the lowest fed cattle demand level in 30 years.

Background

It is hard to believe with the magnitude of these two past events, that a more recent market could compete in scale with the degree of cattle market volatility described above, but it’s true and measurable. Volatility is a statistical measure of price risk, evaluated by calculating the standard deviation of price changes over a given period. Analyzing the 30-day volatility against the live cattle strip allows for an easily comparable measure of price risk in late 2015 versus the two previously mentioned cases. The strip is a simple average of the front six live cattle futures contracts which covers a full calendar year. Using the live cattle strip is preferred over spot futures for this analysis because it removes the additional risk of changing price spreads across futures contracts.

Thirty-day volatility reached as high as 23.8 percent in late 2003, which was the first time above the 20 percent mark since November 1987. The highest recorded volatility during the recession was 25.8 percent in October of 2008. For context, 30-day volatility has averaged 11.1 percent per day over the last 10 years of data with a variance of about 4 percent, so values above 20 percent are considered to be extreme. Volatility at year-end 2015 reached 24.4 percent, actually higher than during the BSE-driven volatility of 2003. From August to October live cattle prices declined 20 percent, then rallied 18 percent into early November. From here, prices declined another 18 percent through mid-December, and finally rallied yet again leaving prices 17 percent off the December lows entering the New Year. From close to close, the live cattle strip was moving on average 1 percent per day in this time period, compared to a 10-year average daily change of only 0.13 percent. For many producers, hedging with plain futures contracts was much too risky. Despite expensive option premiums, largely due to the immense volatility in the market, managing risk using options became the only viable strategy.

Discussion
There were a multitude of reasons for the volatile price decline. The cattle market had been trending lower already that year, dealing with a large front end supply of cattle. Volatility spiked, however, immediately after the closure of the Tyson meat packing plant in Dension, IA. The sudden loss of packing capacity hurt the cattle feeders from a leverage standpoint; leverage was accountable for $10/cwt of the rally seen in 2014. Cattle weights were also record large and had been trending higher into the fall. This compounded the situation as feedyards tried to unload the heavy cattle and accepted discounts to do so.

While fundamentals turned negative on the live cattle side, fundamentals turned negative on the beef product side as well. Total meat supplies were building much faster than anticipated as pork and poultry production pushed higher, beef exports were stifled by the strong U.S. dollar and poultry exports were drastically reduced by HPAI-related bans in China and new protectionist trade policies in Angola. As a result, per capita net meat and poultry supplies increased by an estimated 9.4 pounds per U.S. resident, about seven pounds of the increase being poultry product. As an interesting parallel, exports as a percentage of meat and poultry production fell from 17 percent in 2014 to 15 percent in 2015. This was the largest yearly drop since BSE in 2003.

Conclusion
These abrupt year over year changes explain why the market grew weaker and more volatile, but there might still be an unexplained piece of the puzzle, intraday volatility. From August to December 2015, the spot live cattle average daily range from high to low was 1.73 percent. This is compared to an average range of 1.27 percent for the same monthly range in 2014, and a 1 percent range for the 5-year average. The cattle industry has recently pointed a finger at high frequency trading as being a main source of this extra volatility. Although some of these claims are speculative at this point, many are based on sound evidence. Since the adoption of electronic trading, research has suggested higher volume of trade leads to better liquidity, but to increased volatility as well. An underlying issue with high frequency algorithmic trading, however, is that orders can be entered and bounced between different trading stations before a manual trader can act on the order, potentially causing changes to the bid-ask spread. This behavior would then not be increasing liquidity, but still increasing volatility. This scenario increases the transaction costs to manage risk not only through futures, but options as well, because increased volatility is transferred into option costs as risk premium. The CME Group is evaluating several options for reducing volatility, including shorter trading hours and a maintaining a stricter watch over trades. This is a complex problem, and the solution will have to ensure contracts trade at adequate volume, but also on an even playing field for all market participants.

Additional Resources

- www.CattleFax.com

Tags: Beef Issues Quarterly, Spring 2016, Trends Analyses
Assessing the New Consumer and the Trust Metric

Date: March 28, 2016

Consumers have instant access to a wide variety of resources including information on how cattle are raised for food. This access has created a dynamic in the purchase decision paradigm with consumers, where many are considering factors that focus on transparency in addition to price, convenience and taste.

by Shawn Darcy, Associate Director, Market Research, and Nikki Richardson, Director, Reputation Management, National Cattlemen’s Beef Association, a contractor to the Beef Checkoff

Summary

Consumers have instant access to a wide variety of resources including information on how cattle are raised for food. This access has created a dynamic in the purchase decision paradigm with consumers, where many are considering factors that focus on transparency in addition to price, convenience and taste. There is a strong interest and concern around how animals are raised for food, yet most consumers have little to no knowledge about the topic. With the proper tools, the beef community can become part of this conversation and help shape consumer perceptions with the evolving consumer.

Background

To understand the new consumer, we must first look at what has changed around them. Technology advancements have led to constant and continuous access to information. While it is true that the millennial generation drives this growth, the impact expands beyond them. More than 80 percent of consumers, ages 18-64, have access to the Internet, with that number growing to over 93 percent for those under the age of 50\(^1\). For most, this access is literally at their fingertips. In 2015, it was estimated that 70 percent of consumers have a smartphone and 40 percent of consumers own a tablet device\(^2\). Considering these advancements, it only makes sense that consumers and the information they use to make purchase decisions have also evolved.

Discussion

How have consumers evolved?

A study conducted by Deloitte revealed that consumers are using a new set of evolving factors to make their purchase decisions. These ideas include transparency factors that focus on social impact, safety, experience, and health and wellness, whereas traditional purchase decisions were based on taste, price and convenience. This is not to say the traditional drivers are ignored but that the decision process has become more complex. Over 50 percent of consumers are utilizing these additional evolving factors in their purchase decision - a dynamic that holds true across region, age and income demographics.\(^3\)

Figure 1 – The Consumer Value Driver Plate
Further, in a study on transparency in 2013, 78 percent of consumers claimed it is very important for grocers and restaurants to provide information on how food is raised. Not only do consumers want this information but they also do not currently feel they are getting the information they want at these venues because industries have something to hide (40 percent).4

How does this relate to meat and beef specifically?

Insights from the Consumer Image Index (CII), which is a tracking survey run annually that monitors consumers’ perceptions around beef production, indicate only around 1/3 of consumers claim to have knowledge about how animals are raised for food. We know from other market research studies that this number becomes more diluted when focused on specific topics (i.e. antibiotics, factory farming). Findings from the CII illustrate that consumers find it important for meat industries to openly share information with the public (78 percent), yet only 44 percent of consumers feel these industries are doing so. In addition, over 50 percent of consumers (even higher for specific topics) are concerned with how animals are raised for food.5 This concern originates from a combination of factors such as instant access to information for consumers, lack of knowledge and a strong interest in learning about this topic (90 percent).6 The dynamic creates a large gap of consumers who are interested and concerned but do not have the knowledge base to support those prior inclinations. Perhaps the gap is best expressed through the words of a consumer when asked to describe the beef production process.

“I really don't know. The cow is born, bred, and then kept in pens I guess and then killed and sold.” (Addressing Misperceptions of Factory Farms - 2014)

As the consumer continues to evolve, beef wants, and needs, to be part of these important conversations.

What types of information do consumers want?

There is clear evidence that consumers want to know more about how their food is raised. The Beef Checkoff has been and will continue conducting market research on beef production, as well as developing tools to meet the evolving consumer’s needs. Some of the learnings from research indicate the best way to proactively tell beef’s story is by leveraging the following6:

- Bring the entire beef lifecycle to life with strong visual support (e.g. video)
- Incorporate all the people involved in the process, including family and other credible parties (e.g. vets)
- Show what is happening throughout the process (e.g. space in pens for room to move)
- While respondents are looking for transparency, be mindful (e.g. slaughter process)
- Place content where consumers are (e.g. online)

This is an example of a piece of content created because of the research.

By using tools such as the pasture to plate video, concerns around beef production decreased, positive emotions increased and it made consumers more comfortable with how cattle are raised.

Here is the impact of the video in their own words:7

- “I had no idea that farmers cared so much about their animals, I was always fed information that
farmers are brutal to their animals when it comes to food processing.”
• “I had never really given thought to meat processes before... and we already eat beef, but learning things by watching the movie makes me feel even more comfortable.”
• “Before this video, I’ve only seen images and videos of horrible conditions where cows and other animals are horribly mistreated and the deplorable living conditions.”

How do we know if we are making progress?

Recognizing this new consumer, the Beef Industry Long Range Plan includes a measurement of consumer trust. This is validation that the industry knows that consumer trust is important, has taken steps toward improving that trust, and wants to see an impact over time on consumer attitudes from their actions and communications.

A benchmark has been created among consumers that highly trust the industry. That initial benchmark is 32.8 percent with a goal to improve this trust metric to 36 percent over the next five years.

![Graph showing consumer trust metrics](image)

Conclusion

Instant access to information has increased the factors that go into the decision-making process for consumers. They want more transparency about where their food comes from, especially from food companies and industries. With that in mind, research shows a high-level message that illustrates the entire beef lifecycle with strong visual support is the best approach to alleviating concerns about the industry.

Additional Resources

3. Deloitte Food Value Equation Survey 2015, Deloitte Analysis
5. Consumer Image Index, October 2015
6. Addressing Misperceptions of Factory Farms, 2014
7. Production Video Validation, 2015
How the Beef Industry Performed on its 2011-2015 Long Range Plan

Date: March 27, 2016

The beef industry’s 2011-2015 Long Range Plan (LRP) was recently completed and results show areas of strong performance as well as areas in need of further attention. These goals were established by an industry-wide task force to provide focus and guidance based on needs, market trends and indicators.

by Rick Husted, MBA, Vice President, Strategic Planning and Market Research, National Cattlemen’s Beef Association, a contractor to the Beef Checkoff

Summary

The beef industry’s 2011-2015 Long Range Plan (LRP) was recently completed and results show areas of strong performance as well as areas in need of further attention. These goals were established by an industry-wide task force to provide focus and guidance based on needs, market trends and indicators. Here is a summary of those outcomes with more detail provided in the Detailed Summary of Results section below.

<table>
<thead>
<tr>
<th>2011-2015 LRP STRATEGIC INTENT</th>
<th>GOAL OUTCOME</th>
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<tbody>
<tr>
<td>Increase Beef Demand</td>
<td>Achieved</td>
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<td></td>
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<tr>
<td>2011-2015 LRP CORE STRATEGIES</td>
<td>GOAL OUTCOMES</td>
</tr>
<tr>
<td>Improve Domestic Consumer Preference for Beef</td>
<td>Not Achieved</td>
</tr>
<tr>
<td>Capitalize on Global Growth Opportunities</td>
<td>Achieved</td>
</tr>
<tr>
<td>Strengthen the Image of Beef and the Beef Industry</td>
<td>Achieved</td>
</tr>
<tr>
<td>Position the U.S. Cow Herd for Growth</td>
<td>Partially Achieved</td>
</tr>
<tr>
<td>Protect and Enhance our Freedom to Operate</td>
<td>Not Achieved</td>
</tr>
<tr>
<td>Improve Industry Trust, Openness and Relationships</td>
<td>Achieved</td>
</tr>
</tbody>
</table>

Background

With the adoption of the industry’s new long range plan at the annual cattle industry convention in San Diego in January, it’s time to look back and see how the industry performed on its previous Long Range Plan covering the years 2011 through 2015. Overall, the industry performed well, achieving most of its goals while falling short on others. As there is still room for improvement, the new long range plan recommends focus in several of these areas over the next five years. For even more detail, an industry scorecard covering the past five years is also available ([2011-2015 LRP Scorecard](#)).

THE 2011-2015 LONG RANGE PLAN OVERALL OBJECTIVE AND OUTCOME – ACHIEVED

The Strategic Intent Statement for the plan was: To achieve a Wholesale Beef Demand index of 110+ by capitalizing on the quality, safety and taste of U.S. beef while communicating the health, nutrition and convenience benefits of beef and beef products to targeted domestic and international markets.

- Wholesale beef demand grew considerably between 2011 and 2015, ultimately reaching a demand index level of 123, exceeding the goal of 110+ set in 2011. This was one of the highest wholesale demand levels the industry has achieved since 2004 when it reached 121. This demand performance is a good indication of consumers’ continued desire to purchase beef, even in the face of the higher prices experienced over the past several years.
Improve Domestic Consumer Preference for Beef – NOT ACHIEVED

- The industry’s goal for this core strategy was to increase the percentage of consumers who believe the positives of beef strongly outweigh the negatives, a measure that correlates very strongly with beef consumption. The goal for this core strategy was to have 31 percent of all consumers believe this about beef.
- This effort came up a little short, achieving 26.5 percent against the goal of 31 percent. Despite this outcome, it is important to note that during this same period (2011-2015) consumers who said the positives of beef strongly or somewhat outweigh the negatives increased from 76 percent to 79 percent. While missing the specific goal, beef’s overall performance continues to improve as more and more consumers think positively about our product. This measure will continue to be an industry focus and goal in the new long range plan.

Capitalize on Global Growth Opportunities – ACHIEVED

- The industry’s goal for this core strategy was to increase the value of exports by 25 percent. This was calculated as total export value (less hides) divided by the number of fed cattle slaughtered. That is, export value per head. At the time the measure was put in place, the goal of increasing export value by 25 percent essentially meant reaching $252 per head.
- The industry surpassed this goal by growing export value for U.S. beef to $273 per head by the end of 2015. This translates to a percentage increase of just over 35 percent, well over the stated goal.

Strengthen the Image of Beef and the Beef Industry – ACHIEVED

- The industry’s goal for this core strategy was to increase the percentage of consumers who believe the positives of how cattle are raised for food strongly outweigh the negatives. The goal for this strategy was to achieve a percentage of 20 percent.
- The industry surpassed its goal for this core strategy by reaching 23 percent of consumers saying the positives of how cattle are raised for food strongly outweigh the negatives.

Position the U.S. Cow Herd for Growth – PARTIALLY ACHIEVED

- Because of the production challenges the industry had faced, the previous long range plan task force felt it was important to set goals that would communicate a need for the industry to focus on growth without sacrificing volume. The goals for this core strategy were two-fold.
- First, increase bred heifer retention from 16.6 percent to 18 percent. The industry succeeded in increasing bred heifer retention to 19.5 percent by year-end 2015. Exceeding this goal has helped spur recent growth in the U.S. beef cattle herd.
- Second, stabilize U.S. beef production at a minimum of 26 billion pounds. Unfortunately, the industry was unable to keep U.S. beef production from dropping below 26 billion pounds, as it fell to 23.8 billion pounds in 2015.

Protect and Enhance our Freedom to Operate – NOT ACHIEVED

- This core strategy was all about helping the industry remain free from challenging government oversight. To measure performance against this core strategy, a question was included in the Cattlemen’s Beef Board’s annual producer survey that simply asked how much producers agreed with the statement, Regulations imposed on my business make it more and more difficult to operate freely. This benchmark was 76 percent in 2011 and the goal was to reduce the percentage agreeing with the statement to 72 percent by the end of 2015; or put another way, have producers agree that challenging government oversite is being managed more effectively.
The industry came up a little short on reaching this goal but managed to reduce the percentage to 74 percent. A similar goal is included in the new long range plan and will continue to be an area of industry focus.

Improve Industry Trust, Openness and Relationships – ACHIEVED

- As the long range plan task force considered industry challenges back in 2010, one area they felt needed attention was the perceived lack of trust and openness between stakeholders across the beef supply chain. They recommended two measures to help assess progress in this area; both were included in the Cattlemen’s Beef Board’s annual producer survey.
- The first was intended to measure how much producers agree that they have open and trusting relationships with those in the beef industry they do business with. A goal of 86 percent was set on a benchmark of 84 percent.
- The industry achieved this goal with 86 percent of producers feeling positive about the individual relationships they have with others in the industry.
- The second was to measure how well producers thought the entire industry works together toward growing beef demand. A goal of 67 percent was set on a benchmark of 63 percent.
- The industry exceeded this goal and producers are more positive, with 75 percent believing that the entire industry works together, from cattle production to beef marketing.

Additional Resources

- The beef industry is poised to build on the success of the past five years and has developed a new industry-wide Long Range Plan that will provide continued focus and guidance through 2020.

Tags: Beef Issues Quarterly, Research Findings, Spring 2016
The July 2015 Consumer Beef Index – The Millennials Have Arrived

Date: March 26, 2016

Three years ago the Beef Checkoff’s communication focus shifted to the millennial generation, with a very targeted interest in millennial parents. Millennial parents are of special interest to not only the checkoff’s communication efforts, but also to the grocery and foodservice industry.

by John Lundeen, Senior Executive Director, Market Research, NCBA, a contractor to the Beef Checkoff

Summary

Three years ago the Beef Checkoff’s communication focus shifted to the millennial generation, with a very targeted interest in millennial parents. Millennial parents are of special interest to not only the checkoff’s communication efforts, but also to the grocery and foodservice industry – parents very simply spend more on food. Parents are also the gateway to the food choices for a new generation represented by their children.

This article will focus on key research insights about millennials, and how beef stacks up. Analysis will primarily be from the July, 2015 fielding of the Consumer Beef Index, but key insights from other checkoff market research will also be incorporated.

Background

The checkoff-funded Consumer Beef Index (CBI) is a semi-annual online survey begun in 2007 which is designed to identify and track key consumer perceptions of beef and to spotlight key consumption trends. One-thousand forty-seven respondents completed the July 2015 online study. The sample is national in scope, and is tested for balance with national norms, including gender, ethnicity, region of the country and age (ages 13 to 68 were included in the sample). A very small minority of consumers with absolutely no food decision making authority, either at-home or in restaurants, are excluded.

Discussion

Most importantly, millennials are strong beef consumers. They also have strong positive perceptions of beef. As they become parents, their in-home use of beef shifts to ground beef (most likely driven by busy family lives and the need to watch budgets more carefully). Even though they are budget sensitive, the price of beef does not intimidate. Additionally, although other generations have joined millennials online, the level of involvement, as indicated by the number of social media sites with which they are engaged is much higher than other generations.

Millennials are Becoming Strong Beef Consumers

<table>
<thead>
<tr>
<th>At Least Monthly Consumption</th>
<th>3 Generation Totals</th>
<th>Millennials</th>
<th>Parents (20-34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>91%</td>
<td>91%</td>
<td>94%</td>
</tr>
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Let’s start with the basics – do millennials eat beef? The Consumer Beef Index covers three generations of consumers ... Baby Boomers, Gen X and Millennials. A look at the percentage of millennials that eat beef at least monthly shows that they mimic the number for consumers overall, with 91 percent reporting at least monthly beef consumption.

Let’s take this to a higher level, and look at the percentage of millennials that eat beef at least three or
more times a week, a group classified as heavy beef users.

<table>
<thead>
<tr>
<th>Servings in</th>
<th>3 Generation</th>
<th>Millennials</th>
<th>Parents</th>
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<tbody>
<tr>
<td>Past Week</td>
<td>Totals</td>
<td>(20-34)</td>
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</tr>
<tr>
<td>Beef</td>
<td>30%</td>
<td>27%</td>
<td>37%</td>
</tr>
</tbody>
</table>

Across the entire sample, which captures three generations of consumers, 30 percent of consumers can be qualified as heavy beef users. Millennials overall are close to the norm for the percentage that qualify this way. But as millennials become parents, beef usage escalates, with 37 percent qualifying as heavy beef users.

Most likely that leads you to two questions that impact beef consumption. One, when will millennials decide to become parents, since that seems to increase beef consumption? Two, how do millennial parents compare to parents of other generations, for average weekly beef servings? Will this generation help drive beef consumption moving forward?

### Average Beef Servings Per Week

<table>
<thead>
<tr>
<th>Millennials and Millennial Parent Facts</th>
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<tbody>
<tr>
<td>• Baby Boomer Parents - 2.2</td>
</tr>
<tr>
<td>• Gen X Parents – 1.9</td>
</tr>
<tr>
<td>• Millennial Parents – 2.1</td>
</tr>
<tr>
<td>• Size of Generation – 80 Million</td>
</tr>
<tr>
<td>• % over the age of 25 with kids – 24%</td>
</tr>
<tr>
<td>• % that are thinking about becoming parents in the future – 90%</td>
</tr>
</tbody>
</table>

### Positive Perceptions of Beef

Millennials really like beef. The industry has been tracking overall perceptions about beef since 2007 using a question about whether the positives of beef outweigh the negatives in the consumer’s mind, or the negatives outweigh the positives. Millennials track quite closely to other generations in responding to this question, with 78 percent noting that the positives of beef either strongly or somewhat outweigh the negatives. The reader should note that since 2007, there has been a slow rise from 70 percent positive perceptions of beef.

Young Millennial Parents and Ground Beef

Historically we have seen a pattern, with ground beef being the beef product of choice for younger Americans, and steaks becoming a more frequent choice as you pass by the 30 year age mark. Millennial parents are following this pattern, with important implications for their interest in recipes and cooking knowledge. As millennials become new parents, knowledge of ground beef, and recipes that focus on ground beef, will be of special interest. Add to this the diversity of this generation, and you see another
Other checkoff funded studies have documented how much older millennials love the social aspects of grilling, which marries up well with future steak consumption. As millennials move towards this phase of their life, the industry will need to be ready to help with training on how to cook a great steak.

Millennial parents get information online, and recipes are one of the primary areas of interest. When presented with a list of popular music/food and fitness sites, millennials were much more likely to have accounts or be very familiar with the sites. The arrows in the chart above note a statistical difference from the population at large. What is noteworthy is how commonly you see greater use of online resources by millennial parents. The differences are notable... for example 45 percent note being very familiar with allrecipes.com versus 26 percent of the total population sampled. But that pattern is duplicated for every site noted in the chart.

**Conclusion**

Multiple benefits exist in focusing on millennials. They are the largest generation of consumers in America, ever. Their relative youth means they can be beef consumers for many decades. They are having kids, and are thus a gateway to a future generation of consumers. Family budget pressures will force more economical ground beef decisions, but if they follow historical patterns, steak will become a sought after desire as they move further into their thirties. Communication is different with this generation as evidenced by the number of online sites visited.

We once talked about millennials as the generation whose impact was “coming.” Guess what, millennials have arrived.

**Additional Resources:**
We once talked about millennials as the generation whose impact was evidenced by the number of online sites visited. The communication focus shifted to the millennial generation, with a very high percentage of online sites visited. Millennials get information online, and recipes are one of the primary areas of interest. When given a list of popular music/food and fitness sites, millennials were much more likely to have visited allrecipes.com versus 26 percent of the total population sampled. But that pattern is duplicated for every generation. Of course, communication is different with this generation as they move further into their thirties.

As millennials become new parents, knowledge of ground beef, and recipes that focus on grilling, which marries up well with future steak consumption. As millennials move towards this phase of their life, the industry will need to be ready to help with training on how to cook a great steak. Also, the baby boomer generation, Generation X, and millennials are all spending more time at home and cooking in the kitchen. Most important, millennials are strong beef consumers. They also have strong positive perceptions of beef that will likely grow as they continue to make buying decisions. As millennials become new parents, knowledge of ground beef, and recipes that focus on grilling, which marries up well with future steak consumption. As millennials move towards this phase of their life, the industry will need to be ready to help with training on how to cook a great steak.

The Baby Boomers, Generation X, and millennials. A look at the percentage of millennials that eat beef at least three or more times a week, a group classified as heavy beef users. Millennials are becoming strong beef consumers. They also have strong positive perceptions of beef that will likely grow as they continue to make buying decisions. Most likely that leads you to two questions that impact beef consumption. One, when will millennials decide to become parents, since that seems to increase beef consumption? Two, how do millennials decide to become parents, since that seems to increase beef consumption?

Historically we have seen a pattern, with ground beef being the beef product of choice for younger Americans, and steaks becoming a more frequent choice as you pass by the 30 year age mark. Millennials really like beef. The industry has been tracking overall perceptions about beef since 2007 using the checkoff-funded Consumer Beef Index (CBI) is a semi-annual online survey begun in 2007 which is designed to identify and track key consumer perceptions of beef and to spotlight key consumption trends.

The July 2015 Consumer Beef Index 

Three years ago the Beef Checkoff initiated a project to better understand all beef users. The overall goal of the project was to help drive beef consumption moving forward? How can the industry relate to consumers to help drive beef consumption moving forward? How can the industry relate to consumers to help drive beef consumption moving forward? We once talked about millennials as the generation whose impact was evidenced by the number of online sites visited. The communication focus shifted to the millennial generation, with a very high percentage of online sites visited. Millennials get information online, and recipes are one of the primary areas of interest. When given a list of popular music/food and fitness sites, millennials were much more likely to have visited allrecipes.com versus 26 percent of the total population sampled. But that pattern is duplicated for every generation. Of course, communication is different with this generation as they move further into their thirties.

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Positive Perceptions of Beef

Let’s start with the basics—four out of five consumers think beef is a healthy choice for a balanced diet. When presented with a list of popular music/food and fitness sites, millennials were much more likely to have visited allrecipes.com versus 26 percent of the total population sampled. But that pattern is duplicated for every generation. Millennials really like beef. As millennials become new parents, knowledge of ground beef, and recipes that focus on grilling, which marries up well with future steak consumption. As millennials move towards this phase of their life, the industry will need to be ready to help with training on how to cook a great steak. Also, the baby boomer generation, Generation X, and millennials are all spending more time at home and cooking in the kitchen. Most important, millennials are strong beef consumers. They also have strong positive perceptions of beef that will likely grow as they continue to make buying decisions. As millennials become new parents, knowledge of ground beef, and recipes that focus on grilling, which marries up well with future steak consumption. As millennials move towards this phase of their life, the industry will need to be ready to help with training on how to cook a great steak. Also, the baby boomer generation, Generation X, and millennials are all spending more time at home and cooking in the kitchen. Most important, millennials are strong beef consumers. They also have strong positive perceptions of beef that will likely grow as they continue to make buying decisions.
Marbling: Management of Cattle to Maximize the Deposition of Intramuscular Adipose Tissue

Date: March 25, 2016

Beef palatability is a substantial driver of consumer demand for beef, and marbling is one of the largest contributing factors to beef palatability as it affects beef tenderness, juiciness, and flavor.

by Bridget Wasser, Executive Director, Meat Science Technology, National Cattlemen’s Beef Association and Dani Shubert, Associate Director, Meat Science, National Cattlemen’s Beef Association, a contractor to the Beef Checkoff

Summary

Beef palatability is a substantial driver of consumer demand for beef, and marbling is one of the largest contributing factors to beef palatability as it affects beef tenderness, juiciness, and flavor. For many years, marbling research has focused on understanding both how marbling contributes to eating quality, as well as how to increase marbling levels in cattle through genetics and feeding. A checkoff-funded white paper titled “Marbling: Management of cattle to maximize the deposition of intramuscular adipose tissue” seeks to summarize the beef industry’s progress toward understanding marbling in beef and how the beef industry can increase marbling to create a more tender, juicy, and flavorful product.

Background

Consumers in the United States and abroad have valued highly marbled beef for nearly a century. In spite of growing interest in pasture-fed (or grass-finished) beef in the United States, most consumers still prefer beef that is reasonably marbled and juicy. Scientists have taken a two-pronged approach to understand the biology of marbling development. Biochemists, molecular biologists, and geneticists have worked to understand the intracellular and extracellular factors that regulate the development of marbling, whereas beef cattle nutritionists have created feeding regimens to provide high-quality beef carcasses without increasing carcass subcutaneous fat, or fat trimmed from steaks before they reach the consumer.

Discussion

The contribution marbling to overall palatability has been established for decades. Savell and Cross (1988) established a “Window of Acceptability” for beef (Figure 1), indicating that overall palatability of beef is optimal between 3 and 7.5 percent intramuscular fat (marbling). The relationship between percent fat and overall palatability highlights the importance of marbling in beef quality. What was not addressed in this research is that as percent fat increases, there is a dramatic change in the fatty acid composition of marbling. As intramuscular fat percentage increases, the proportion of saturated fatty acids (SFA) and trans-fatty acids decrease, and the proportion of oleic acid and other monounsaturated fatty acids (MUFA) increase. These changes in fatty acid profile have a direct effect on the palatability of beef.

![Overall Palatability—Strip Loin](#)  ![Grains of Fat in Two Servings of Meat](#)
Figure 1. Window of acceptability for fat content of meat (palatability versus grams of fat, two servings, raw [8 ounces]). The window is based on fat content range of 3.0 to 7.5 percent. This is equivalent to beef from the Longissimus muscle (12 – 13th rib) that grade USDA Select (3.0 – 4.27 percent fat content) to those that grade USDA Choice (4.28 – 8.0 percent fat content), Savell and Cross (1988).

The fatty acid profile of meat influences beef palatability in a variety of ways. Early studies demonstrated that increased oleic acid (a MUFA) in beef led to an increase in overall palatability of the beef. One theory used to explain this shift in palatability is that oleic acid is “softer” than SFA, providing a more fluid mouthfeel, which most consumers perceive as more desirable. The melting point of fat directly affects the perception of juiciness in beef, and the ratio of MUFA to SFA dictates the melting point of fat. Saturated fatty acids have higher melting points and are “harder” at refrigerated or room temperatures, whereas MUFA have melting points below room temperature and thus are perceived as “softer” fats.

More recent studies have discovered that the fatty acid profile of beef contributes to the formation of flavor through the cooking process. Fatty acids react with heat, sugars, and proteins to create different beef flavors. Oleic acid has been identified as the fatty acid that contributes most to positive, buttery beef flavor.

Marbling represents a unique fat depot, and can be distinguished from other fat depots by its location within the muscle (Figure 2a & 2b). Marbling consists of clusters of individual fat cells (adipocytes), and these fat cells increase in number and in size as the beef animal progresses from being practically devoid of marbling, to having higher marbling scores.

Figure 2a. Marbling adipocytes lying alongside muscle fibers in bovine Longissimus muscle. Moody and Cassens (1968)

Management of cattle through growth and during feeding can also influence the extent and composition of marbling development in beef. In the early stages of marbling development, glucose contributes 70 percent of the energy and carbon needed to create marbling. As cattle become fatter, the contribution of glucose decreases while the use of acetate for fat synthesis increases, especially in the creation of marbling. Thus, providing sources of dietary glucose at early ages may promote marbling development more than if glucose is fed at later stages of development. Early weaning of beef steers may result in higher marbling scores at slaughter than normal weaning of steers. Researchers hypothesize this may be caused by increased glucose availability (from grain-based rations) at the early stages of marbling.
Beef by promoting the production of oleic acid in marbling and other fat depots.

For beef cattle, the development of marbling is more complex than the development of subcutaneous fat. The results of the studies outlined in this white paper indicate that grain-based diets are necessary to promote the development of marbling. Additionally, grain-based diets increase the juiciness and flavor of beef by promoting the production of oleic acid in marbling and other fat depots.

Conclusions

For beef cattle, the development of marbling is more complex than the development of subcutaneous fat. Calf-fed steers are typically fed high-concentrate finishing diets at weaning, whereas yearling-fed steers are typically fed native pasture until approximately 12 months of age and are then transitioned to a grain-based diet. One study reviewed in this white paper explored these management strategies in greater detail. Calf-fed steers reached harvest weight at 16 months of age, whereas yearling-fed steers reached similar weights at 17.5 months of age. Although slower to reach harvest weight, yearling-fed steers at the time of harvest had the same average external fat thickness and marbling score when compared to calf-fed steers. Beef from yearling-fed steers showed a greater proportion of SFA and lower proportions of MUFA, including oleic acid, which may have influenced palatability of the beef.

Additional Resources

- For more information, please visit BeefResearch.org and read the full White Paper, titled “Marbling: Management of cattle to maximize the deposition of intramuscular adipose tissue.”
Traceability’s Impact on International Demand for U.S. Beef

Date: March 24, 2016

Traceability is often discussed as an attribute that can help open new doors for exports of U.S. beef, and one that other beef-exporting nations have used to promote and differentiate their products in the international marketplace.

by U.S. Meat Export Federation staff

Summary

Traceability is often discussed as an attribute that can help open new doors for exports of U.S. beef, and one that other beef-exporting nations have used to promote and differentiate their products in the international marketplace. It is difficult to quantify business that’s been either won or lost on the issue of traceability, because requirements vary not only from country to country, but also from customer to customer. In this article, we will cite examples of traceability programs in beef-producing countries and discuss how those programs impact global beef trade.

Background

Thousands of U.S. producers have enrolled their cattle in voluntary traceability programs – in many cases to meet the requirements of specific importing countries. Examples include the age and source verification program that was required for exporting beef to Japan between 2005 and 2013, when Japan only accepted beef from U.S. cattle 20 months of age and younger. Another example is enrollment in the non-hormone-treated cattle (NHTC) program, which is a prerequisite for exporting beef to the European Union.

Traceability increasingly also holds value in the domestic market, where a growing number of U.S. consumers are interested in knowing where the meat they purchase comes from, and other details about how it was produced. While none of the programs supporting traceability marketing claims are mandatory, producers have utilized them to differentiate their cattle and make them more attractive to buyers. Still, the United States is sometimes compared unfavorably to other exporting countries that have mandatory “national” traceability systems for slaughter cattle. This is not entirely correct because USDA implemented a national Animal Disease Traceability (ADT) program in 2013. But in its current form, the scope of the ADT program is limited to cattle and bison more than 18 months of age, all dairy cattle and cattle/bison in exhibitions. This makes the United States something of an outlier among major beef-exporting countries, which employ the following programs:

Summaries of major competitors’ traceability systems

Australia

Australia’s National Livestock Identification System (NLIS) was created in 1999 and became mandatory in 2005. The primary motivation for the NLIS was to ensure continued access to international markets, as Australia typically exports more than 65 percent of its total beef production. But the program has also been leveraged as a marketing tool for Australia’s “clean and safe” and “traceability you can trust” advertising campaigns.

New Zealand

New Zealand’s National Animal Identification and Tracing (NAIT) program was created in 2006 and became mandatory in 2011. Its creation was due in part to the need to manage bovine tuberculosis, but is
also intended to ensure international market access.

**Canada**

The Canadian Cattle Identification Agency (CCIA) was first established by producers in 1998. Canada’s traceability program was developed for the containment and eradication of animal diseases. The system identifies where the animal was born and where it was slaughtered, but does not track every movement through the life of the animal. The industry-managed Canadian Livestock Tracking System (CLTS) database can be accessed by the Canadian Food Inspection Agency (CFIA) to identify a given animal’s birth premise in the event of an animal health issue. Canada’s movement toward mandatory traceability was accelerated by the need to regain international market access following confirmation of the first Canadian-born BSE case in May 2003. By 2006, all cattle leaving their herd of origin were required to have a CCIA-approved RFID tag. As of July 2010, all cattle were required to have an approved RFID tag prior to moving from their current location or leaving their farm of origin. Mandatory traceability was a key factor in China’s decision to reopen its market to Canadian beef in 2012. Although it took several years for Canada to emerge as a significant supplier to China, shipments to China accelerated in the second half of 2015, making it the second-largest destination for Canadian beef.

**Uruguay**

The National Livestock Information System (SNIG) was originally supposed to become mandatory for all Uruguayan cattle born after 2006. But this deadline was extended a number of times, and the program did not become fully mandatory until 2013. The main motivation for developing this system was to help ensure access to international markets, especially with regard to foot-and-mouth-disease (FMD) related restrictions. Given the small scale of Uruguay’s beef plants, product can be traced back to the animal and its farm of origin. Uruguay has used this to differentiate itself from other exporters. The industry’s generic logo, showing grass blending into a barcode, emphasizes its grass-fed production system with pasture-to-plate traceability.

**Brazil**

The Brazilian System of Identification and Certification of Bovine and Buffalo (SISBOV) was launched in 2002. While it is only mandatory for live animal exports and for certain beef export markets, the system has helped the industry regain access to markets once closed to Brazilian beef due to BSE and FMD, including China and the European Union. Since Brazil is regionalized for FMD, meaning only certain states have “FMD-free” and “FMD-free-with-vaccination” status, traceability helps ensure that exported product is originating from approved states/locations.

**Argentina**

Argentina’s Animal Health Information System (SGS) was created in 2007 and is mandatory for all cattle born after 2007. It is a key component of Argentina’s efforts to maintain control over FMD and regain access to international markets that are closed or partially closed to Argentine beef due to FMD.

**European Union**

Although the European Union is not thought of as one of the world’s major beef exporters, it was sixth-largest in 2015 and its livestock traceability system is highly regarded by its trading partners. In response to the BSE crisis, the traceability program was established in 1997. Over time, this has helped some EU member states regain beef access in key international markets.

Several of these countries export large volumes of beef to China – so is traceability the issue keeping U.S. beef out of China?
Considering all of the issues that complicate U.S.-China trade relations, it would be an oversimplification to say that the lack of a national traceability system is the issue preventing U.S. beef from reentering China. However, traceability is a requirement for exporting beef to China, regardless of the supplying country. Domestically, although China lacks a national system, recent food safety scandals are incentivizing restaurants and retailers to implement food and meat traceability systems. Some local governments are implementing rules that establish basic traceability schemes and record-keeping.

Officials from China have been made aware of the traceability capabilities that exist in many U.S. cattle marketing arrangements in the United States, and have signaled that it will require imported U.S. beef to be derived from traceable cattle. A regulatory review by Chinese officials of the traceability systems available in the U.S. will hopefully take place later this year, and should provide more answers on China’s specific requirements and expectations.

Why is regaining access to China so important?

When China closed to U.S. beef in December 2003, it was not a large destination for imported beef, regardless of origin. That year China imported about 57,000 metric tons (mt) of beef, valued at $64.4 million. While U.S. beef captured about 75 percent of this total, demand was limited and China ranked as only the 15th-largest beef importer in the world. With U.S. beef locked out of the market, China’s imports dipped below $30 million for the next five years, before jumping to $53.1 million in 2009 and nearly doubling to $103.8 million in 2010. Strong growth has continued in this decade, with 2015 imports reaching a record 495,000 mt valued at nearly $2.4 billion. This makes China the world’s fourth-largest beef importer and the fastest-growing market in the world. Its leading suppliers are Australia and Uruguay, but Brazilian beef has come on strong since regaining access in mid-2015. In fact, Brazil was China’s largest beef supplier in December 2015 and January 2016, with January imports totaling more than 19,000 mt (32 percent market share).

Regaining access to China remains a top priority for the U.S. beef industry, even though it is increasingly clear that access could be limited to a specific portion of U.S. production. Lack of access to China had a tangible negative impact on certain Asian cut prices in 2015, which reduced carcass value and negatively affected the producers’ bottom lines. It is clear that at a time when the U.S. cattle herd is growing and beef production is on an upward trajectory, access to China would help restore value to the beef cutout. Every day that U.S. beef remains shut out of the Chinese market, U.S. beef exports and the value of U.S. cattle are not reaching their full potential.

**Additional Resources:**

- USMEF
- USDA-APHIS
- Argentina
- Australia
- Brazil
- Canada
- European Union
- Uruguay

**Tags:** Beef Issues Quarterly, Issues Updates, Spring 2016
**Traceability's Impact on International Demand for U.S. Beef**

Date: March 24, 2016

Traceability is often discussed as an attribute that can help open new doors for exports of U.S. beef, and how it was produced. While none of the programs supporting traceability marketing claims are mandatory, consumers are interested in knowing where the meat they purchase comes from, and other details about it. Several of these countries export large volumes of beef to China, including: Argentina, Brazil, Canada, European Union, and Uruguay. When China closed to U.S. beef in December 2003, it was not a large destination for imported beef, and China ranked as the fourth largest beef importer in the world. With U.S. beef locked out of the market, China had a tangible negative impact on certain Asian cut prices in 2015, which reduced carcass value and negatively impacted the industry. Regaining access to China remains a top priority for the U.S. beef industry, even though it is increasingly clear that access could be limited to a specific portion of U.S. production. Lack of access to China had a bottom lines. It is clear that at a time when the U.S. cattle herd is growing and beef production is on an upward trajectory, access to China would help restore value to the beef cutout.

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Why is regaining access to China so important?

Several of these countries export large volumes of beef to China, including: Argentina, Brazil, Canada, European Union, and Uruguay.

**Argentina**

- The Brazilian System of Identification and Certification of Bovine and Buffalo (SISBOV) was launched in 2002. While it is only mandatory for live animal exports and for certain beef export markets, the system is highly regarded by its trading partners.

**Brazil**

- China trade relations, it would be an oversimplification to assume that trade restrictions have been lifted. While China has signed FTA agreements with a number of countries and has become a major beef exporter, it was not a large destination for imported beef in 2003.

**Canada**

- Canada is the second largest beef exporter to China, with 97 percent of Canada exports to China and 89 percent of Canadian beef exports to China.

**European Union**

- The European Union has treated cattle (NHTC) program, which is a prerequisite for exporting beef to the European Union, is highly regarded by its trading partners.

**Uruguay**

- Uruguay is the fifth largest beef importer in the world. It has helped the industry regain access to markets once closed to Brazilian beef due to BSE and FMD, and was third in terms of volume of beef imported from all countries in 2015, making it the second largest destination for Canadian beef.

Considering all of the issues that complicate U.S. beef out of China?

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**Cowspiracy: The Film**

Date: March 23, 2016

Cowspiracy: The Sustainability Secret is a full-length feature film that alleges that animal agriculture is the number one contributor to climate change generating about 51 percent of all greenhouse gas emissions. That statistic comes from a single, non-peer-reviewed “analysis” by the Worldwatch Institute, a Washington, D.C.-based environmental advocacy group.

*by Daren Williams, Senior Executive Director, Communications, National Cattlemen’s Beef Association, a contractor to the Beef Checkoff*

**Summary**

Cowspiracy: The Sustainability Secret is a full-length feature film that alleges that animal agriculture is the number one contributor to climate change generating about 51 percent of all greenhouse gas emissions. That statistic comes from a single, non-peer-reviewed “analysis” by the Worldwatch Institute, a Washington, D.C.-based environmental advocacy group. A number of peer-reviewed and published studies fail to support their conclusion.

**Background**

In 2006, the United Nations Food and Agriculture Organization (UNFAO) published a study entitled “Livestock’s Long Shadow” which stated in the executive summary that global livestock production is “responsible for 18 percent of greenhouse gas emissions” ... “a higher share than transport.” This statement led to media headlines claiming cows generate more greenhouse gases than cars. Soon, animal advocacy groups and efforts such as Meatless Monday seized on this statement as proof that meat is bad for the environment, bolstering their longstanding argument that meat is bad for our health.

Hearing about Livestock’s Long Shadow was apparently the sentinel moment for filmmaker Kip Andersen that led him to question why Al Gore never mentioned cows in “An Inconvenient Truth,” the book that awakened Andersen to his personal environmental responsibility. “Cowspiracy” chronicles Andersen’s investigation into why Gore and environmental groups like Greenpeace and the Rainforest Action Network don’t do more to blame animal agriculture for environmental destruction. Ultimately, he concludes that animal agriculture and the environmental movement are engaged in a grand conspiracy to cover up the fact that cows, and other livestock, are destroying the planet. Hence, the title “Cowspiracy.”

The movie was originally released in 2014, and released on Netflix in 2015 with actor and environmental activist Leonardo DiCaprio lending his name as executive producer. The Netflix release captured the attention of a broader audience, including many within the beef community, prompting questions about the film.

**Discussion**

Beyond the widely discredited¹ Worldwatch article, “Cowspiracy” uses the UNFAO comparison of livestock to transportation as a primary proof point in their argument that animal agriculture is the number one contributor to greenhouse gas emissions. Unfortunately, Andersen is apparently unaware that the comparison was later recanted² by one of the report’s authors, Pierre Gerber, after Dr. Frank Mithloehner, a world-renowned air quality specialist at the University of California-Davis, pointed out that the comparison included every possible source of GHG emissions from livestock while only counting emissions from tailpipes for transportation (not drilling for and refining oil, smelting steel, building the vehicles, etc.). Here is an excerpt from the article, *Don’t Blame Cows for Climate Change* in which Gerber
backtracks on the comparison:

But Frank Mitloehner, an air quality specialist from the University of California at Davis (UCD), said the U.N. reached its conclusions for the livestock sector by adding up emissions from farm to table, including the gases produced by growing animal feed; animals' digestive emissions; and processing meat and milk into foods.

But its figures for transport did not add up emissions from well to wheel; instead, it considered only emissions from fossil fuels burned while driving.

"This lopsided 'analysis' is a classical apples-and-oranges analogy that truly confused the issue," Mitloehner said on the university's Web site.

Mitloehner also pointed to the fact that leading authorities agree raising animals for food accounts for about 3 percent of all greenhouse gas emissions in the U.S., while transportation creates an estimated 26 percent.

One of the report's authors, Pierre Gerber, told CNN he accepted the comparison with transport data was inaccurate.

Beyond the fact that the comparison is inherently flawed, of the 18 percent GHG emissions attributed to livestock in the UNFAO report, a full one-third of that (6 percent) is due to deforestation in the Amazon to make room for land to graze cattle or raise crops for livestock feed. This is not happening in the U.S., where forest acreage has remained stable since 1900. The reason is that the primary U.S. system — raising cattle on grass and finishing them on grain in a feedyard — utilizes less land (and produces less methane).

The UNFAO updated the 2006 report in 2013 which reported that GHG emissions from global livestock production had dropped to 14 percent (still much larger than the U.S. at 3 percent but improving nonetheless). The 2013 report concluded that further reductions by as much as 30 percent could be achieved through improvements in animal health and feed efficiency -- two areas in which U.S. producers excel. Unfortunately, the filmmakers did not bother to use the more recent UNFAO report or acknowledge that the carbon footprint of cattle in the U.S. is far less than the rest of the world.

Another claim in the movie, that it takes 2,500 gallons of water to produce a pound of beef, is another grossly exaggerated number. The actual number in the U.S. is between 300-800 gallons (as stated in the Beef Sustainability Fact Sheet located under Additional Resources), which sounds like a lot, but this includes water the animals drink as well as water used to irrigate pastures and crops for cattle feed. Of course, this water returns to the environment, either excreted by the animal, aspirated by plants or filtered by the soil into groundwater. It is not "used up." The question should not be how much water is used, but rather how that water is returned to the environment.

Finally, the producers of "Cowspiracy" completely ignore the environmental benefits of raising and grazing cattle. Farms and ranches in the U.S. provide habitat for 75 percent of the nation's wildlife, help prevent wildfires, reduce soil erosion and runoff and help keep open space open. Keegan and Kuhn also fail to mention that beef is a great tasting food that provides more than 10 percent of 10 essential nutrients (including zinc, iron, protein and B vitamins) for less than 10 percent of your daily calories (per 3 oz. serving based on a 2,000 calorie/day diet). The nutritional value of the food we produce is often overlooked in discussions about sustainability and carbon footprint comparisons of plant vs. animal proteins or the footprint of various species.

Conclusions

"Cowspiracy" appears to provide misinformation about the impact of beef production on the environment
and potentially, misleads viewers. However, the film’s message, which also denounces vegetarians as part of the problem -- has very little mass appeal.

**Additional Resources**

- [Beef Research Fact Sheet](http://www.cnn.com/2010/TECH/science/03/24/meat.industry.global.warming/): “Does beef really use that much water?”
- Beef Nutrition Fact Sheet: “Beef’s Big Ten”


**Tags:** Beef Issues Quarterly, Issues Updates, Spring 2016
Would Removing Beef from the Diet Actually Reduce Greenhouse Gas Emissions?

Date: March 22, 2016

Some have proposed that simply removing beef from the human diet could significantly lower greenhouse gas (GHG) emissions. However, upon examination of the scientific evidence, completely removing beef from the diet would likely not result in huge declines in GHG emissions, and would likely have negative implications for the sustainability of the U.S. food system.

by Ashley Broocks, Emily Andreini, Megan Rolf and Sara Place, Oklahoma State University

Summary

Some have proposed that simply removing beef from the human diet could significantly lower greenhouse gas (GHG) emissions. However, upon examination of the scientific evidence, completely removing beef from the diet would likely not result in huge declines in GHG emissions, and would likely have negative implications for the sustainability of the U.S. food system.

Background

One must first consider the amount of beef consumed by Americans. The current U.S. Dietary Guidelines for Americans recommends 5.5 ounces of lean protein per day for a person consuming a 2,000 calorie diet. Beef is one of the most common sources of lean protein in the United States, with 1.8 ounces of beef per day available to U.S. consumers in 2013, as reported in USDA’s Economic Research Service (ERS) Loss-Adjusted Food Availability Data Series. The ERS Loss-Adjusted Food Availability Data Series is derived from ERS’s food availability data by adjusting for food spoilage, plate waste, and other losses to closely approximate actual intake. Per capita beef availability (loss adjusted) has actually been declining in the United States over the past 35 years (Figure 1) due in part to beef production not keeping pace with U.S. population growth. Along with being a significant source of lean protein, beef provides key nutrients such as iron, zinc, and B vitamins. Removing beef from the food chain would result in consumers having to seek alternative protein and micronutrient sources.

Discussion

![Image](image-url)
According to the U.S. Environmental Protection Agency (EPA), beef cattle production was responsible for 1.9 percent of total U.S. GHG emissions in 2013. By comparison, GHG emissions in the same year (Table 1). Comparing food production (essential for human life) to transportation and electricity (non-essential for human survival, but important to our modern lifestyles) is problematic. However, the comparison is instructive because though electricity and transportation produce much of the GHG emissions in the United States, most people do not call for the elimination of electricity or transportation. Rather, efforts are made to lower the GHG emissions produced to provide the same energy and transportation services (e.g. switching to renewable energy sources for electricity generation). Using this frame for reference, another way to consider GHG emission from beef production would be, “How can the same amount of human nutritional value be produced by the beef system while producing fewer GHG emissions?” Studying the different ways inputs (feed, water, and land) can be used more efficiently throughout the beef value chain to reduce GHG emissions per pound of beef would provide the means to maintain the same level of food production while reducing GHG emissions. Over time, beef production has made impressive advances to meet the protein demands of a growing population while reducing the amount of natural resources required to produce a pound of beef. For example, due to improved genetics (of cattle and the plants they consume), animal nutrition, management, and the use of growth promoting technologies, the U.S. beef industry has decreased its GHG emissions per pound of beef 9-16 percent from the 1970s to today. Further improvements in the efficiency of beef production are being continuously evaluated and researched at universities and research institutions, in the United States and globally.

Another key component of reducing GHG emissions from the whole beef system is the role of the consumer. Over 20% of edible beef is wasted at grocery stores, restaurants, and in the home (Figure 1). As with other foods, the amount of non-renewable resources used and the environmental impacts that went into producing the portions of beef that are being sent to a landfill are often overlooked. Consumers could improve beef sustainability by 10 percent if beef waste were reduced by half.

Beef production makes may positive contributions to the sustainability of our food system that are often overlooked by analyses of GHG emissions’ impact of removing beef from the diet. Cattle have the ability to utilize forages (e.g. grass) and by-products (e.g. distillers grains) that are unfit for human consumption. Specifically cattle can utilize cellulose, one of the world’s most abundant organic (carbon containing) molecules, that is indigestible by humans. Consequently, U.S. beef producers feed their cattle feed sources that are not in direct competition with humans and/or would have gone to waste (by-products). Cattle can also convert low-quality feeds into high-quality protein from land not suited for cultivation, thereby reducing soil erosion and enhancing soil carbon storage. Furthermore, integrated crop and beef systems (e.g. using cattle to graze crop residues and cover crops) can lead to many positive environmental sustainability outcomes including increased soil water-holding capacity and enhanced nutrient cycling.

### Table 1. U.S. EPS GHG Emissions Inventory for 2013

<table>
<thead>
<tr>
<th>Item</th>
<th>CO2-eq emissions (Million Metric Tons)</th>
<th>Percent of U.S. total CO2-eq emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enteric Methane Emissions from Beef Cattle (from their digestive tracts)</td>
<td>117.1</td>
<td>1.75%</td>
</tr>
<tr>
<td>Beef Cattle Manure Nitrous Oxide Emissions</td>
<td>7.6</td>
<td>0.11%</td>
</tr>
<tr>
<td>Beef Cattle Manure Methane Emissions</td>
<td>3.0</td>
<td>0.04%</td>
</tr>
<tr>
<td>Total Direct Emissions from U.S. Beef Cattle</td>
<td>127.7</td>
<td>1.9%</td>
</tr>
<tr>
<td>Burning fossil fuels for transportation carbon dioxide emissions</td>
<td>1,718.4</td>
<td>25.8%</td>
</tr>
<tr>
<td>Burning fossil fuels for electricity generation carbon dioxide emissions</td>
<td>2,039.8</td>
<td>30.6%</td>
</tr>
<tr>
<td>All other GHG sources</td>
<td>2,787.8</td>
<td>41.7%</td>
</tr>
<tr>
<td>2013 U.S. Total CO2-eq Emissions</td>
<td>6,673</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Conclusion**

Beef is a valuable asset to the human diet; it is an affordable, nutrient-dense source of lean protein. As with the production of all foods, the production of beef results in GHG emissions; however, direct emissions from the U.S. beef industry are only estimated to be 1.9 percent of the total U.S. GHG emissions. Thus, even without consideration of the unintended consequences and impacts of alternative
protein sources, completely removing beef form the U.S. diet would likely have a minimal impact on GHG emissions. However, as historical progress has demonstrated (GHG emissions per lb. of beef have been reduced 9-16 percent since the 1970s), there are opportunities to reduce beef’s impact, chief among them being reducing consumer waste.

**Additional Resources**


**Tags:** Beef Issues Quarterly, Issues Updates, Spring 2016
The Development and Importance of the FARM/ BQA Partnership: Q&A
With Emily Meredith

Date: March 21, 2016

Emily manages the National Dairy FARM ProgramTM, which assures consumers that milk and other products from American dairy farms are the end result of responsible animal care practices. She also focuses on other education and training modules that are identified as part of the FARM program, and assists in other areas of the regulatory department such as biosecurity and residue avoidance.

by Chase DeCoite, Associate Director, Beef Quality Assurance, National Cattlemen's Beef Association, a contractor to the Beef Checkoff

Emily Meredith is the Vice President of Animal Care for the National Milk Producers Federation (NMPF) in Arlington, VA. Her primary responsibilities lie in the areas of animal welfare, dairy farm management, animal health and food chain outreach.

Emily manages the National Dairy FARM ProgramTM, which assures consumers that milk and other products from American dairy farms are the end result of responsible animal care practices. She also focuses on other education and training modules that are identified as part of the FARM program, and assists in other areas of the regulatory department such as biosecurity and residue avoidance.

**Beef Issues Quarterly (BIQ):** What is the FARM program?

**Emily Meredith (EM):** The Farmers Assuring Responsible Management (FARM) Program is the dairy industry’s comprehensive animal care program. The program began in 2009 as a way to assure our dairy customers that animal care is a top priority for dairy farmers nationwide.

**BIQ:** How is FARM implemented on dairies?

**EM:** The program encompasses three core pillars: (1) producer education and best management practices; (2) second-party evaluation and (3) third-party verification. The best management practices are contained in our Animal Care Reference Manual and those guidelines are updated every three years based on the latest research and recommendations from industry experts.

The guidelines then correspond with evaluation points. Evaluations are performed by trained, second-party evaluators and the program requires that dairies are evaluated at minimum every three years. We then ensure the integrity of the program by conducting third-party verification on a representative number of dairies each year.

I recommend watching our new animated video that describes this process in greater detail.

The video is available on our website: nationaldairylfarm.com.

**BIQ:** How has the FARM program been received by dairy farmers and the industry as a whole?

**EM:** What we work hard to communicate is the “why” behind the program. More and more consumers are hungry for information about where their food comes from and we have to provide them those answers so that they continue to trust us and give us the social license to raise animals for food.

While some farmers might not agree with every recommendation contained in the program, the vast majority understand that we need hard facts and figures to back up our strong track record of the highest animal care. We can’t just say “trust us” to consumers anymore, we have to provide concrete proof points.

**BIQ:** What benefits have you observed with the increased uptake of FARM?
**EM:** We’re seeing a very high adherence to many of the benchmarks in the program. For example, in 2015 more than 96 percent of evaluated dairies met our guideline on body condition (99 percent of dry and lactating animals score two or more on the FARM Program scale). We’re seeing farmers that are writing down protocols, performing procedures earlier and phasing out controversial practices like tail docking. There are many examples where the FARM Program is starting conversations about how we can continue to do things better in the dairy industry and that’s really positive.

**BIQ:** Describe the collaboration between the Beef Checkoff BQA program and National Milk’s FARM program?

**EM:** Well, dairy cows become beef at the end of their lives so it’s critical that we find ways to work together to ensure the highest quality beef supply possible. There are many synergies between BQA and the FARM Program and our collaboration has centered on identifying our similarities and working to maximize those. Both our programs are heavily focused around continuous improvement and producer education, and because of our collaboration dairy producers will have access to a lot more great resources over the next few years. It’s exciting!

**BIQ:** Describe the latest FARM revision process and what updates were made to the program?

**EM:** The FARM Program is updated every three years through a very comprehensive process that involves a Technical Writing Group, a subcommittee of the NMPF Board of Directors and a public comment process. It takes approximately one year to revise the program.

As we move from the current version (version 2.0) to Version 3.0, we’ll be making significant edits to our Dairy Beef components of the program, including working with BQA to include additional resources and references in Chapter 10 of our Animal Care Manual. Some of the larger changes will focus on fitness for transport, treatment of special needs cattle, and proper administration of injectables. We’re also adding in some additional accountability measures to the Program overall, based on feedback received from many of our large dairy customers.

**BIQ:** How has FARM been strengthened by incorporating Beef Quality Assurance (BQA) principles?

**EM:** Some of the strongest aspects of BQA are its commitment to stockmanship and stewardship. It’s strengthened FARM immeasurably to be able to incorporate these resources and to work together to create new training modules and reference materials for the FARM Program participants to access and use.

**BIQ:** How can BQA support extension of the FARM program?

**EM:** In version 3.0 of the FARM Program, there will be an even greater focus on employee training and education. I think this will be a great opportunity for BQA state coordinators to help provide training opportunities for dairy cooperatives and FARM participating organizations in every state where dairy is a key agricultural commodity.

**BIQ:** In what areas do you envision the FARM and BQA programs being able to collaborate further in the future?

**EM:** The sky’s the limit—I think the partnership between the two programs has a bright future. We’ll continue to make headway this year for sure—and hopefully for many years to come.
The FARM Program is the dairy industry’s comprehensive animal care program. The program began in 2009 as a way to assure our dairy farmers that milk and other dairy products from American dairy farms are the result of responsible animal care practices. Emily Meredith, National Milk Producers Federation, describes the latest FARM revision process and what updates were made to the program. She also talks about the latest FARM revision process and what updates were made to the program.Emily manages the National Dairy FARM Program, which assures consumers that milk and other dairy products from American dairy farms are the result of responsible animal care practices. She also serves on the Beef Quality Assurance (BQA) Technical Writing Group, a subcommittee of the NMPF Board of Directors and a public comment writers' group. Emily's primary responsibilities lie in the areas of animal welfare, dairy farm management, and food safety and security. Emily is the Vice President of Animal Care for the National Milk Producers Federation (NMPF) in Arlington, VA.

With Emily Meredith

Date: March 21, 2016

The Development and Importance of the FARM/BQA Partnership: Q&A

Describe the latest FARM revision process and what updates were made to the program?

In version 3.0 of the FARM Program, there will be an even greater focus on employee training and food safety for dairy farms. In addition, the program will continue to include some incentives for dairy farmers who achieve higher levels of certification.

Describe the collaboration between the Beef Checkoff BQA program and National Milk Producer Federation (NMPF) FARM program?

The collaboration between the Beef Checkoff BQA program and National Milk Producers Federation (NMPF) FARM program has been growing stronger over the years. Both programs focus on ensuring animal welfare and food safety for dairy farmers and consumers. We continue to do things better in the dairy industry and that’s exciting! We are working together on BQA’s Technical Writing Group to include additional resources and strengthen FARM immeasurably to be able to incorporate these resources and to work together to ensure the highest quality beef supply possible. There are many synergies between BQA and FARM and we continue to work on that partnership. Both our programs are heavily focused around continuous improvement and producer education.

How has the FARM program been received by dairy farmers and the industry as a whole?

We have received positive feedback from dairy farmers and the industry as a whole. We have seen a significant increase in the number of dairy farms participating in the FARM program. In addition, we have also seen a significant increase in the number of dairy farms that are achieving higher levels of certification.

What benefits have you observed with the increased uptake of FARM?

We have observed a number of benefits with the increased uptake of FARM. The most significant benefit is the increase in the number of dairy farms that are achieving higher levels of certification. In addition, we have also seen an increase in the number of dairy farms that are participating in the FARM program.

How can BQA support extension of the FARM program?

BQA can support extension of the FARM program by providing additional resources to dairy farmers. We can also provide additional training and support to dairy farmers to help them achieve higher levels of certification.

What is the FARM program?

The FARM program is a comprehensive animal care program for dairy farmers. The program is designed to ensure that dairy farms meet high standards of animal welfare, food safety, and environmental stewardship. The program is administered by the National Milk Producers Federation (NMPF) and is designed to help dairy farmers improve their operations and meet the needs of consumers.

What is the Beef Quality Assurance (BQA) program?

The Beef Quality Assurance (BQA) program is a voluntary program for beef producers. The program is designed to improve animal welfare and food safety on beef farms. BQA is administered by the National Cattlemen's Beef Association (NCBA) and is designed to help beef producers improve their operations and meet the needs of consumers.

In what areas do you envision the FARM and BQA programs being able to collaborate further in the future?

We envision the FARM and BQA programs being able to collaborate further in the future in a number of areas. We believe that there are many synergies between the two programs and that we can work together to improve animal welfare and food safety on both dairy farms and beef farms.

Emily manages the National Dairy FARM Program, which assures consumers that milk and other dairy products from American dairy farms are the result of responsible animal care practices. She also serves on the Beef Quality Assurance (BQA) Technical Writing Group, a subcommittee of the NMPF Board of Directors and a public comment writers’ group. Emily’s primary responsibilities lie in the areas of animal welfare, dairy farm management, and food safety and security. Emily is the Vice President of Animal Care for the National Milk Producers Federation (NMPF) in Arlington, VA.
Issues Media Monitoring and Response Analysis: January – March 2016

Date: March 20, 2016

On a daily basis, the Issues and Reputation Management (IRM) team, on behalf of the beef checkoff, carefully surveys the landscape across traditional media, broadcast media and social media to determine which issues warrant a response.

by Season Solorio, Executive Director, Issues & Reputation Management, and Amy Poague, Manager, Issues Analytics and Content, National Cattlemen’s Beef Association, contractors to the Beef Checkoff

Summary

On a daily basis, the Issues and Reputation Management (IRM) team, on behalf of the beef checkoff, carefully surveys the landscape across traditional media, broadcast media and social media to determine which issues warrant a response. Using a variety of tools, including Lexis Nexis for traditional and broadcast media monitoring and NUVI for social media monitoring, the team overlays the data from both applications to create a clear picture of how an issue is playing out in the external environment.

Background

Each quarter, the team reviews traditional media coverage and sampling of social media coverage to determine the level of attention that an issue receives. From January 2016 through March 2016 more than 900 traditional media stories and 2,222,323 social media mentions of the beef industry were analyzed as part of the quarterly monitoring report through Lexis Nexis and NUVI. The 2.2 million social media mentions resulted in more than 2.3 billion social media impressions during the same period.

This was a significantly higher volume of media coverage compared to past quarters. The high volume of traditional and social media coverage was due to heightened media attention on the Oregon Standoff between Ammon Bundy and state and federal law enforcement agencies. Reporting on the dispute began on January 2nd, when the armed group occupied the Malheur National Wildlife Refuge and continued through February 11th, when the final occupier surrendered. During this time, traditional as well as social media conversations were consistently spiking as a series of events played out.

While the Bundy issue dominated traditional and social media early in the year, the release of the 2015-2020 Dietary Guidelines for Americans was the leading topic that the checkoff-funded issues management team monitored in January, resulting in more than 100,000 mentions and 457 million impressions, with leading conversations about what constitutes a healthy diet and in some cases, discussion of beef’s role in a healthy diet. Additionally, the Chipotle E.coli outbreak sparked an increase in traditional and social media conversation about food safety, as well as speculation in traditional and social media about the potential source of the outbreak for a short time, with a few speculations that the culprit was beef. However, the U.S. Department of Agriculture’s Food Safety and Inspection Service was quoted in several outlets, saying “Distribution data shared by Chipotle does not establish a link between Australian beef, or any single source of beef, and the Chipotle restaurants where case patients reported consuming steak.” This statement put to bed much speculation that there was any beef connection. Therefore, this issues and media analysis article focuses on the media coverage and communications efforts on the 2015 Dietary Guidelines for Americans.

Discussion

As an issue unfolds, careful listening and analysis is required to understand how a topic is being interpreted by the consumer and portrayed by the media. Careful interpretation of both traditional and
social media can provide significant insights that are instrumental in helping effectively manage and respond to an issue.

On January 7th the much anticipated, final 2015-2020 Dietary Guidelines for Americans were released. These Dietary Guidelines reflected lean beef’s place in a healthy diet. Prior to the release of the final document, there was building speculation in traditional and social media about what would and would not be included in the final dietary guidelines. This speculation was primarily generated by food and environmental special interest groups, who believed the guidelines should suggest reduced meat consumption. Speculation was further fueled after public statements from Agriculture Secretary Tom Vilsack and Health and Human Services Secretary Sylvia Burwell in October 2015 suggested that “fruits, vegetables, low-fat dairy, whole grains and lean meats and other proteins, and limited amounts of saturated fats, added sugars and sodium remain the building blocks of a healthy lifestyle.”

Utilizing our traditional and social media monitoring and analysis tools to look at past coverage of Dietary Guidelines and similar announcements, the team determined that there would be high levels of traditional and social media surrounding the release of the 2015 Dietary Guidelines.

Recognizing that consumers may have questions about what the new Dietary Guidelines mean and how they could build healthy diets with foods, such as beef, the team proactively worked to develop content for FactsAboutBeef.com to help individuals understand the nutrition research around beef. Once the guidelines were released, the team reviewed from a scientific standpoint the guidelines and finalized web-content, such as the blog post, “Should I Eat Less Red Meat for a Healthy Diet?,” hosted on the FactsAboutBeef.com website. This post helped consumers understand about the recommended levels of meat consumption as put forth in the dietary guidelines document. Additionally, consumers were provided with information as to how lean beef could fit in a healthy diet with a blog post, “4 BOLD Reasons Lean Beef Supports Your New Year’s Resolutions.” Both pieces of content were shared actively through social media to reinforce to those individuals talking about the Dietary Guidelines that beef can be part of a healthy diet and lifestyle.

As expected, traditional and social media levels sharply increased the day that the 2015 Dietary Guidelines were released. National media outlets such as, TIME, Forbes and the New York Times began to cover the story providing consumers with information about the recommendations.

Chart 1: Below, you can see the sharp increase of social media and traditional media, on Thursday, January 7th, at the time of the release of the final report.

Utilizing traditional and social media monitoring tools, the team observed that media coverage was balanced and for the most part, did not focus on recommendations around beef, but instead focused on the dietary recommendations for sugar, coffee and cholesterol, which were recommendations that differed from the 2010 Dietary Guidelines. The media stories that did cover meat were neutral, simply reporting on lean meat’s inclusion in the Dietary Guidelines. The articles focused on sugar received larger volumes of negative attention. The low volumes of negative discussion about lean meat led the team to believe that the current FactsAboutBeef.com resources that were made available properly informed the consumer on the recommendations for lean beef in a dietary pattern, and that no further action would be necessary at that time. As you can see from the chart above, within a few days of publication, traditional and social media conversations around this subject quickly declined.
Chart 2: Below you can see the amount of social media attention that the recommendations for sugar received, as opposed to conversation around meat’s inclusion in a healthy dietary pattern, the morning the dietary guidelines were released.

Conclusion

Issues and Reputation Management is equal parts art and science and the beef checkoff has the tools and the team in place to protect consumer confidence, and therefore consumer demand, in beef. The ability to understand how an issue is being perceived and interpreted by consumers and the media, provide perspective or shift a strategy during an issue at the right time, is critical. The team uses all of the tools – traditional and social media monitoring, to advise on response efforts on a daily basis.

Additional Resources

- [FactsAboutBeef.com](http://FactsAboutBeef.com) post providing scientific evidence on lean meat in a healthy diet
- [FactsAboutBeef.com](http://FactsAboutBeef.com) post about the 2015 Dietary Guidelines on meat consumption
- [FactsAboutBeef.com](http://FactsAboutBeef.com) post about meat consumption and health