FOR PUBLIC RELEASE

US BEEF MARKET: RAISING CLAIMS

PRODUCT SCAN AND CONSUMER SURVEY AUGUST 2017

Ministry for Primary Industries Manatū Ahu Matua



ECONOMIC INTELLIGENCE UNIT

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ABOUT THIS REPORT

OBJECTIVES

This report aims to identify the relative price premiums, consumer ratings, and consumer preferences for different raising claims made on US beef products. The scope of the report encompasses the following raising claims:

- · Grass-Fed
- Grain-Fed
- Organic
- Antibiotic-Free
- Hormone-Free
- GMO-Free

In developing the insights for this report, two primary methods of data collection are employed:

- 1. A Product Data Scan to collect product level information (price, consumer ratings, weight, description) about specific product offers.
- 2. A Survey of US consumers to collect information on their preferences and attitudes toward raising claims, as well as supplementary data on their preferred cuts of beef and purchasing behaviour.

The data collection and survey included was focused on the following cuts of beef:

- Ribeye
- Tenderloin
- New York Strip
- Sirloin
- T-Bone/Porterhouse

PRODUCT DATA COLLECTION

Product data was collected from a range of US retail chains (Walmart, Target, Costco etc.) and online stores (Amazon, Fresh-Direct etc.). The raw data includes product descriptions, pricing, customer reviews, ratings, weights, and other product-level information.

Raising Claims for each product were identified from the title and/or product description fields. The data for this report focuses only on products which make a specific raising claim within the product description or title, as this information is most visible to the consumer.

SURVEY DATA COLLECTION

The survey included a set of five questions targeted at a statistically representative sample of 3000 US consumers.

The survey was deployed using Google 360 in order to access a sample of consumers with relevant demographic information. In total, 3,000 respondents were targeted in the survey during August 2 - 6, 2017.

More information about the survey can be found in the relevant section of the report.

KEY FINDINGS

PRICE PREMIUMS AND CUSTOMER RATINGS

- There are well-defined premiums available for raising claims which are associated with certain cuts of beef, and which align well with consumer preferences.
- The strongest raising claim is Grass-Fed, achieving premiums of around 10% to 20%, and up to 58%.
- Other raising claims such as GMO-free, Antibiotic-free achieve higher premiums among lower-priced cuts such as sirloin.
- Among higher-priced cuts such as Tenderloin, raising claims achieve smaller premiums and customer ratings are less varied.
- Although raising claims are associated with premium value and high customer ratings, there are other attributes which are linked to higher prices and ratings:
 - The highest premiums in the US Beef market are achieved for imported Wagyu beef, and for so-called Wagyu-Style beef from the US.
 - Higher premiums can also be achieved by product which is dry-aged, or specially handled in some way.
 - Customer ratings can vary widely across raising claims and product types. In order to achieve consistently high ratings stores must provide a full customer experience. This in itself can justify significant premiums, and some brands, such as Omaha Steaks or the Chicago Beef Company, have proven this.

CONSUMER PREFERENCES

- In general most groups of consumers perceive Grass-Fed to be the raising claim most closely linked to high-quality beef production. Other raising claims have differing levels of importance to different demographic groups. For instance:
- Younger consumers place a higher importance on GMO-free (under 35)
- Women place a higher importance on Hormone-free, while men place higher importance on grain-fed
- Grain-fed is more likely to be important to older consumers (over 45)
- Organic production is more important to consumers aged between 25 and 45

CONCLUSIONS

- The results show a consistent alignment between the premiums/ratings data and consumer survey data.
- Clearly grass-fed is the most valued raising claim across all consumer groups, and accordingly it achieves the highest premiums across all beef cuts.
- While other raising claims are important to consumers, their premiums vary considerably by different cuts of beef. For example, there is a large volume of Australian beef under the "Great Southern Beef" brand which is marketed as antibiotic-free. Unfortunately, this product is priced very low compared to domestic US beef, and so naturally consumers perceive it as inferior product.
- The most successful products take into account how consumers perceive the relative value of different cuts of beef - i.e. their preferred cut versus their most purchased cut –against the raising claims which are most important to them, as well as other product attributes such as heritage breeds or dry aging. For example, Omaha Steaks targets male, middle-aged consumers and so provides relatively little information on the raising claims, but uses a lot of terms such as premium grade, King Cut[™], to attract attention to highvalue products.
- The diagram shows the factors that our data highlights as being important in capturing premiums in the US beef market.
- Finally, certain cuts of beef that are less popular now may become more popular in future as consumer demand for 'old-school' authenticity comes back. Following the BBQ trend, the T-Bone steak may see a surge in popularity in the coming years while tenderloin and other 'premium' cuts may decline. Restaurant menus and online activity monitoring data will provide good insights into these trends.



HIGH PREMIUMS & STRONG RATINGS

CALIBRATING BASELINE

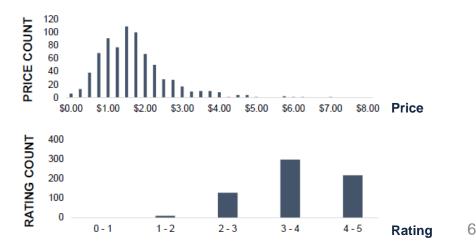


- The above chart shows the relative price premium and consumer rating of each cut of beef. The values are derived from the average price per ounce and customer rating for all beef products (excluding Japanese Wagyu beef).
- Products in the top right quadrant achieve a premium relative to other products, and have a higher-than-average customer rating. The chart indicates that Tenderloin is the highest priced cut, while sirloin is the lowest. Interestingly, Porterhouse shows a slight premium while not achieving very strong customer ratings.

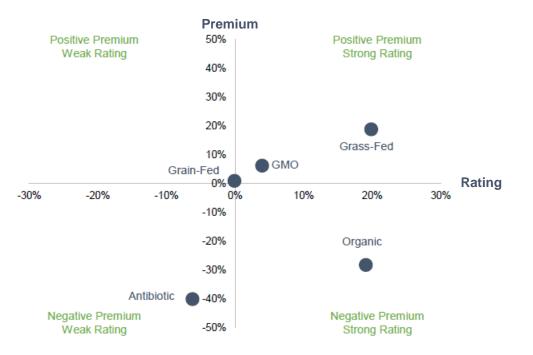
BASELINE PRICE AND RATINGS

- The figures below provide the average price per ounce and consumer rating score (out of five) for all beef products collected.
- 1,630 individual products captured, representing 4,183 offers.
- Analysis excludes products without required information such as weight, and specialist products such as Japanese Wagyu beef which skew average pricing.

	Price per ounce	Average Rating
Baseline (All Cuts)	US \$1.90	3.71 / 5



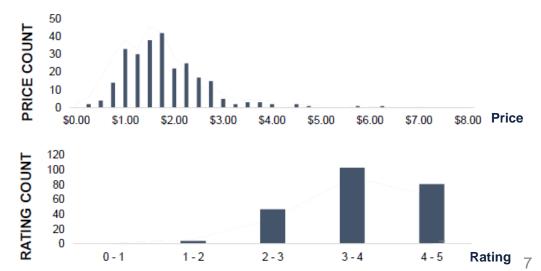
RIBEYE



- Grass-Fed Ribeye achieves the strongest premium (19%) and consumer ratings (20%) overall, followed by GMO-free product.
- Organic product shows strong consumer ratings, but doesn't achieve a premium over the baseline Ribeye products (-28%).
- Antibiotic-free product has a very negative premium. This data point represents only a few products and mainly consists of very cheap Australian imported Ribeye steaks. It should be treated as an outlier.
- No data was available for Hormone-free products.

COMPARATIVE PRICE AND RATINGS

	Price per ounce	Average Rating
Baseline (All Claims)	US \$1.99	3.84 / 5
Grass-Fed	US \$2.11	3.99 / 5
Organic	US \$1.43	4.57 / 5
Grain-Fed	US \$2.01	3.83 / 5
Hormone free	-	-
Antibiotic Free	US \$1.19	3.60 / 5
GMO free	US \$2.36	4.60 / 5



RIBEYE High Performing Products

Grass-Fed



Omaha Steaks – Grass-Fed Ribeye \$2.07 / ounce 3.88 / 5

Antibiotic-free



Never Ever Grass-Fed Ribeye Steak \$1.03 / ounce 3.4 / 5

GMO-Free



Never Ever Grass-Fed Ribeye Steak \$1.03 / ounce 3.4 / 5

Grass-Fed / Organic



Greensbury Market Grass-fed Organic Ribeye Steaks \$1.62 / ounce 4.5 / 5 Organic



Rocky Mountain Organic Ribeye \$1.49 / ounce 4.65 / 5 Grain-Fed



Chicago Steak Company – Premium Angus Ribeye \$2.75 / ounce 3.9 / 5

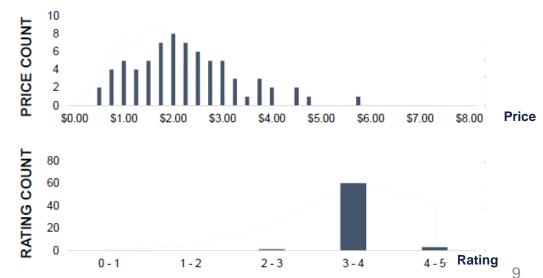
TENDERLOIN



- Grass-Fed Tenderloin achieves the highest premium (13%) against other tenderloin products.
- Organic achieves a slightly lower premium (7%) but still greater than the tenderloin baseline.
- Across all products there is very little distribution of customer ratings. Ratings for tenderloin product are consistently high, and there is very little variation in rating across different raising claims.
- No reliable data was available for Hormone-free, Antibiotic-free or GMO-free tenderloin products.

COMPARATIVE PRICE AND RATINGS

	Price per ounce	Average Rating
Baseline (All Claims)	US \$2.39	3.77 / 5
Grass-Fed	US \$2.70 3.84 / 5	
Organic	US \$2.56	3.80 / 5
Grain-Fed	US \$2.31	3.75 / 5
Hormone free	_	-
Antibiotic Free	-	-
GMO free	-	-



TENDERLOIN

High Performing Products

Grass-Fed



Beetnik Grass-Fed Tenderloin \$2.40 / ounce 4.6 / 5

Grass-Fed



Australian Grass Fed Beef Tenderloin Steaks

\$3.43 / ounce 3.7 / 5

Grass-Fed/Organic



Meadow Organics Grass-Fed Organic Tenderloin Steak \$2.19 / ounce 3.67 / 5

Organic



Rocky Mountain Organic Tenderloin Steak \$4.88 / ounce 4.6 / 5 Grain-Fed



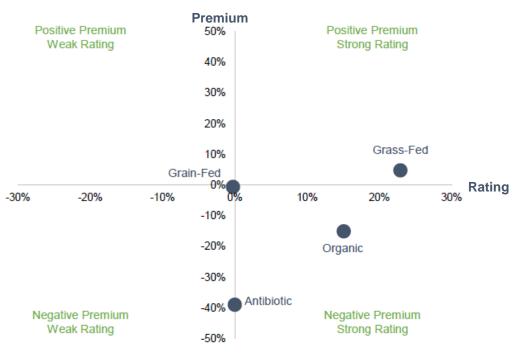
StockYards USDA Tenderloin \$3.45 / ounce 4.4 / 5

Grain-Fed



Kansas City Steaks Tenderloin \$2.03 / ounce 3.7 / 5

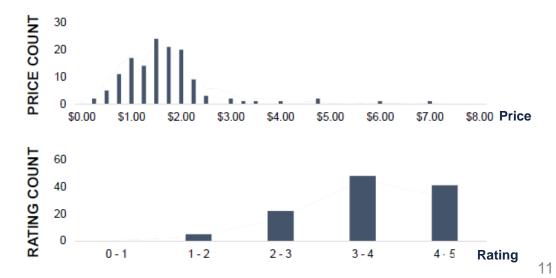
NEW YORK STRIP



- Grass-Fed New York Strip achieves a slight premium over the baseline, but has a very strong customer rating score at 23% above baseline.
- Organic has a strong customer rating (15%) but does not achieve a premium over the baseline.
- Again, Antibiotic-free product is dominated by very low-priced Australian imported product. This data point should be treated as an outlier.
- No data was available for GMO-or Hormone-free product.

COMPARATIVE PRICE AND RATINGS

	Price per ounce	Average Rating
Baseline (All Claims)	US \$1.80	3.82 / 5
Grass-Fed	US \$1.89 4.70	
Organic	US \$1.53	4.40 / 5
Grain-Fed	US \$1.79	3.81 / 5
Hormone free	-	-
Antibiotic Free	US \$1.10	3.82 / 5
GMO free	-	-



NEW YORK STRIP

High Performing Products

Grass-Fed



Thousand Hills Grass-Fed New York Strip \$1.87 / ounce 3.8 / 5

Grass-Fed



Huntington Meats 100% Grass-Fed New York Strip \$1.96 / ounce 4.4 / 5

Grass-Fed/Organic



Dakota 100% Grass Fed Organic NY Strip Steak \$1.29 / ounce 4.4 / 5

Grain-Fed



Omaha Steaks NY Strip \$1.67 / ounce 3.8 / 5

Grain-Fed



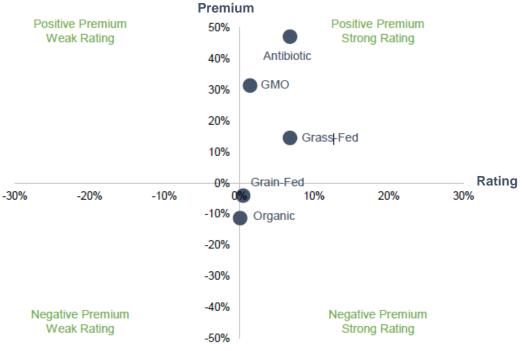
USDA Prime New York Strip Steaks \$1.98 / ounce 3.2 / 5

Organic



Greensbury Organic NY Strip Steak \$1.25 / ounce 4.9 / 5

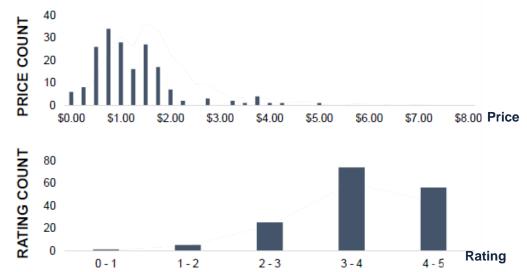
SIRLOIN



- Sirloin cuts show a strong premium achieved by Antibiotic-free, GMO-free, and Grass-Fed products. The strongest ratings are achieved by Antibiotic-free and Grass-Fed products.
- Antibiotic-free and GMO-free product is most heavily marketed in this cut, and these data points are not outliers.
- Organic product is slightly lower priced than the baseline.

COMPARATIVE PRICE AND RATINGS

	Price per ounce	Average Rating
Baseline (All Claims)	US \$1.36	3.75 / 5
Grass-Fed	US \$1.55	3.80 / 5
Organic	US \$1.20	3.75 / 5
Grain-Fed	US \$1.30	3.77 / 5
Hormone free	-	-
Antibiotic Free	US \$2.00	4.00 / 5
GMO free	US \$1.78	3.80 / 5



SIRLOIN High Performing Products

Grass-Fed



PRE Sirloin Steak – 100% Grass Fed \$1.65 / ounce 3.9 / 5

Organic/Grass Fed



Dakota Grass Fed Organic Sirloin Steak \$1.17 / ounce 3.5 / 5 Antibiotic-Free



Local Angus Sirloin Steaks \$3.99 / ounce 4.1 / 5

Grass-Fed



Fresh Direct Sirloin Steak – Grass Fed \$1.56 / ounce 3.75 / 5





Thousand Hills GMO-Free Sirloin \$1.73 / ounce 3.75 / 5 Grain-Fed



Omaha Steaks Top Sirloins \$1.38 / ounce 3.67 / 5

T-BONE / PORTERHOUSE

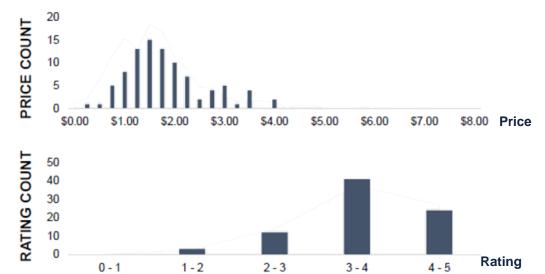


- T-Bone / Porterhouse cuts are predominantly marketed as grain-fed, or without any raising claims.
- However the product with Grass-Fed labelling shows a significant premium (58%) over the baseline.

COMPARATIVE PRICE AND RATINGS

	Price per ounce	Average Rating
Baseline (All Claims)	US \$1.95	3.38 / 5
Grass-Fed	US \$3.09 3.40 / 5	
Organic	-	-
Grain-Fed	US \$1.96	3.37 / 5
Hormone free	-	-
Antibiotic Free	-	-
GMO free	-	-





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T-BONE / PORTERHOUSE

High Performing Products

Grass-Fed



Anderson Reserve Grass Fed Angus Porterhouses \$1.75 / ounce 3.4 / 5

Grass-Fed



Anderson Reserve Grass Fed T-Bones \$1.42 / ounce 3.4 / 5 Grass Fed



HF's Outstanding Grass-Fed Porterhouse Steak \$4.73 / ounce 4.8 / 5

Grain-Fed



Ottomanelli Certified Black Angus Porterhouse Steak \$1.27 / ounce 3.38 / 5 Grain-Fed



Omaha Steaks T-Bone \$2.06 / ounce 3.33 / 5

Grain-Fed



Omaha King Cut T-Bone 48oz \$2.25 / ounce 3.5 / 5

SURVEY DESIGN AND QUESTIONS

ABOUT THE SURVEY

- The survey comprises a statistically representative sample of 3000 US consumers taken across all regions of the US.
- The survey was specifically designed to elucidate which types of beef US consumers prefer and purchase, and what raising claims they know of and/or take into consideration during purchasing.
- Sampling information for the survey is provided in the table below.
- The Root Mean Square Error (RMSE) of the survey is 5.4%.

	Target Population	Sample
Total Responses	-	3000
Males	47.9%	1701
Females	52.1%	1299
Midwest	22%	993
Northeast	18%	492
South	36.4%	1092
West	23.6%	633

SURVEY QUESTIONS

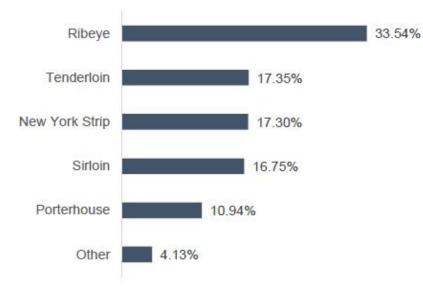
- 1. Which of the following cuts of beef do you most prefer?
- TenderloinNY StripT-Bone / PorterhouseRibeyeSirloin2. Which of the following cuts of beef do you buy most frequently?
- Tenderloin | NY Strip | T-Bone / Porterhouse | Ribeye | Sirloin
- 3. Which type of beef production do you think produces the best quality beef?
- Grass-fed | Grain-fed | GMO-free | Hormone-free | Antibiotic-free | Organic | Other (please specify)
- 4. When you buy beef which of the following product characteristics is most important to you?
- Grass-fed | Grain-fed | GMO-free | Hormone-free | Antibiotic-free | Organic | Other (please specify)
- 5. When you buy beef how important is the way it is produced?

1 (not important) | 2 | 3 | 4 | 5 (very important)

SURVEY - TOPLINE RESULTS

QUESTION 1

Which of the following cuts of beef do you most prefer?



- 2,915 valid respondents
- Responses show a clear distinction between the most-and least-popular cuts:
 - Most popular cut: Ribeye
 - Least popular cut: Porterhouse / T-Bone
 - The other cuts (Tenderloin, NY Strip, Sirloin) are all approximately equal in terms of popularity.
 - The Other category predominantly captured individuals identifying as vegetarian or non-meat eaters.

RESPONSES BY AGE GROUP

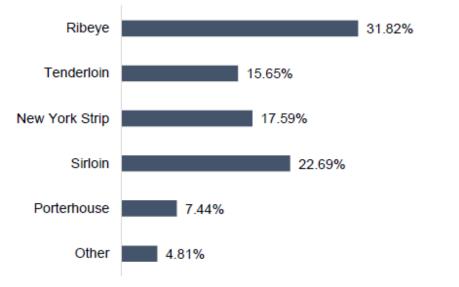


- Preferred cuts naturally form three clusters when viewed by age group:
 - 18 34 prefers NY Strip and Sirloin (Group 1)
 - 45 –64 prefers Ribeye and Tenderloin (Group 2)
 - 65+ prefers T-Bone/Porterhouse (Group 3)
 - Group 1 tends to prefer the lower priced cuts, and have been exposed to more marketing of NY Strip as a high quality cut.
 - Group 2 tends to prefer the higher priced cuts. They have more developed tastes and higher disposable income.
 - Group 3 also prefers higher-priced cuts, but strongly prefers the T-Bone/Porterhouse cut which once had the reputation of the "king of steaks".

SURVEY – TOPLINE RESULTS

QUESTION 2

Which of the following cuts of beef do you buy most frequently?



Which of the following cuts of beef do

QUESTION 1 & 2 CROSS-TABLE

you buy most frequently?	Ribeye	72.0%	11.5%	12.2%	12.3%	18.1%
	Tenderloin	4.5%	54.6%	7.6%	9.9%	11.0%
	New York Strip	7.4%	11.1%	53.5%	9.4%	16.5%
	Sirloin	11.6%	16.6%	21.7%	60.8%	17.4%
~	Porterhouse	3.3%	4.3%	3.9%	5.1%	32.4%

Ribeve Tenderloin

Which of the following cuts of beef do you most prefer?

New York

Strip

Sirloin

Porterhous

е

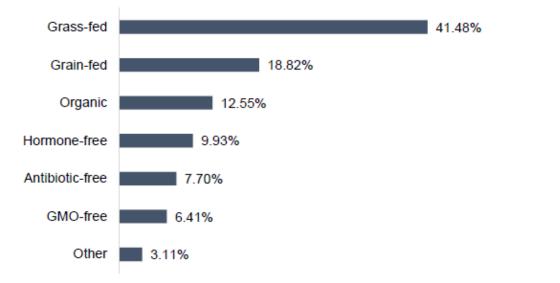
- 2,915 valid respondents
- Responses show a clear distinction between the most-and least-popular cuts:
 - Most popular cut: Ribeye ٠
 - Least popular cut: Porterhouse / T-Bone ٠
 - The other cuts (Tenderloin, NY Strip, Sirloin) are all approximately equal in ٠ terms of popularity.
 - The Other category predominantly captured individuals identifying as ٠ vegetarian or non-meat eaters.

- The table shows the response rates for question 2 based on the response to question 1. E.g. Of ٠ the respondents who answered 'Ribeye' for Question 1, 72% also answered 'Ribeye' for Question 2.
- Of all the cuts, Sirloin picks up the majority of consumers who give a different response to ٠ Question 2, while T-Bone/Porterhouse picks up the least.
- Almost half of respondents who answered Tenderloin or NY Strip in Question 1 provided a different answer to Question 2.
- Around two thirds of respondents who answered T-Bone/Porterhouse in Question 1 provided a different answer to Question 2.

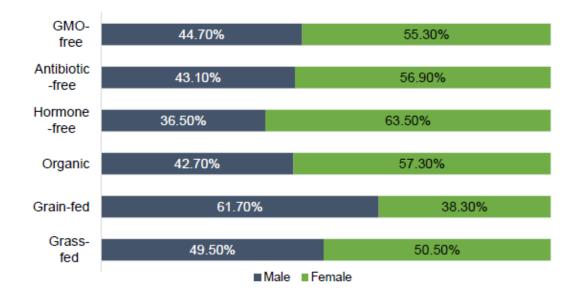
SURVEY – TOPLINE RESULTS

QUESTION 3

Which type of beef production do you think produces the best quality beef?



RESPONSES BY GENDER



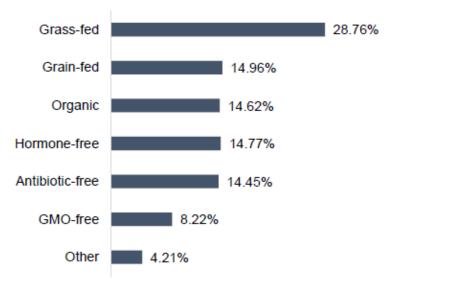
- 2,523 valid respondents
- Grass-fed is seen as the highest-quality raising claim by more than 40% of consumers.
- Organic is viewed as contributing most to quality improvement by around 1 in 8 consumers.
- Collectively around a quarter of respondents believe that Hormone/ Antibiotic GMO-free production contributes most to production quality.

- Response rates for this question are roughly equal for each gender, with two exceptions:
 - Women have a higher response rate for hormone-free (7.4% of males versus 12.3% of females).
 - Men have a higher response rate for grain-fed (18.8% of males versus 14.3% of females).

SURVEY - TOPLINE RESULTS

QUESTION 4

When you buy beef which of the following product characteristics is most important to you?



- 2,435 valid respondents
- This question shows any discrepancy between raising claims which consumers view as leading to quality improvement versus what is important to them personally.
- While 40% of consumers view grass-fed as producing higher quality beef, only 29% rate grass-fed as the raising claim of most importance to them personally.
- Other raising claims (grain fed, organic, hormone-free, and antibiotic-free) are important in roughly equal proportions.
- GMO-free is most important to the lowest proportion of consumers.

RESPONSES BY AGE GROUP

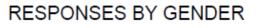
				Age G	Group		
		18-24	25-34	35-44	45-54	55-64	65+
owing tant to	Grass-fed	13.4%	19.8%	18.5%	18.0%	15.1%	15.1%
h of the following most important to	Grain-fed	11.1%	12.8%	12.9%	22.6%	21.4%	19.1%
s is mos	organic 2 Si	15.7%	20.5%	17.7%	14.8%	16.7%	14.5%
V/hen you buy beef which of the following product characteristics is most important to vou?	Hormone-free	11.7%	22.2%	20.1%	20.9%	14.7%	10.5%
r you bu ct chara	Antibiotic-free	16.9%	17.7%	20.0%	20.8%	15.0%	9.7%
Wher	GMO-free	18.3%	26.0%	18.7%	10.4%	14.7%	11.8%

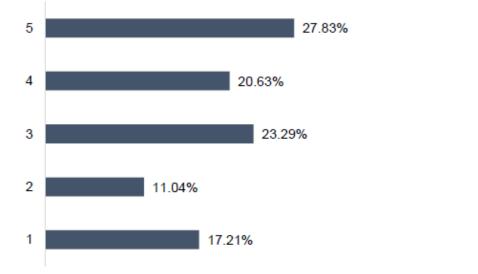
- There are definite differences in the importance different age groups attach to raising claims:
- Grass-fed is most important to consumers between 25 and 54, and is relatively important for other age groups.
- Grain-fed is most important to consumers over 45.
- Organic is most important to consumers under 45.
- Hormone-and Antibiotic-free is most important among consumers between 25 and 55.
- GMO-Free is most important to consumers between 18 and 35.

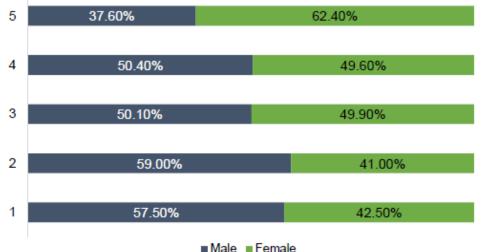
SURVEY - TOPLINE RESULTS

QUESTION 5

When you buy beef how important is the way it is produced?









- 2,707 valid respondents
- Organic achieves a slightly lower premium (7%) but still greater than the tenderloin baseline.
- Across all products there is very little distribution of customer ratings. Ratings for tenderloin product are consistently high, and there is very little variation in rating across different raising claims.
- No reliable data was available for Hormone-free, Antibiotic-free or GMO-free tenderloin products.

- The importance placed on the way beef is produced differs by gender at each end of the spectrum.
- 27.8% of women answered 5 (very important), versus 21.5% of men.
- 33.9% of men answered 1 (not important) or 2 versus 28.2% of women.

APPENDICES Survey Crosstabs

SURVEY CROSSTABS

When you buy beef how important is the way

QUESTION 1 AND QUESTION 2

		Ribeye	Tenderloin	New York Strip	Sirloin	Porterhouse
f do you	Ribeye	72.0%	11.5%	12.2%	12.3%	18.1%
s of beef ently?	Tenderloin	4.5%	54.6%	7.6%	9.9%	11.0%
Which of the following cuts of beef do you buy most frequently?	New York Strip	7.4%	11.1%	53.5%	9.4%	16.5%
	Sirloin	11.6%	16.6%	21.7%	60.8%	17.4%
Which (Porterhouse	3.3%	4.3%	3.9%	5.1%	32.4%

Which of the following cuts of beef do you most prefer?

QUESTION 2 AND QUESTION 5

Which of the following cuts of beef do you buy most frequently?

		Ribeye	Tenderloin	New York Strip	Sirloin	Porterhouse
O, grass-	Not Important 1	16.2%	16.1%	14.7%	14.8%	19.6%
non-GM	2	10.5%	12.0%	10.2%	10.4%	13.3%
it is produced (for example, non-GMO, grass- fed etc)?	3	22.3%	23.3%	24.6%	24.9%	24.6%
rced (for	4	20.7%	19.8%	24.0%	23.1%	15.9%
it is prod	Very Important 5	30.2%	28.7%	26.5%	26.9%	26.6%

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SURVEY CROSSTABS

QUESTION 2 AND QUESTION 4

Which of the following cuts of beef do you buy most frequently?

	Ribeye	Tenderloin	New York Strip	Sirloin	Porterhouse
Grass-fed	31.4%	27.5%	25.3%	29.2%	31.8%
Grain-fed	15.2%	15.5%	18.3%	12.2%	17.9%
Organic	14.2%	15.0%	17.3%	14.0%	15.9%
Hormone-free	15.3%	15.3%	11.9%	15.8%	13.8%
Antibiotic-free	12.5%	14.0%	18.0%	17.6%	8.2%
GMO-free	8.9%	10.1%	7.4%	7.5%	9.8%

When you buy beef which of the following product characteristics is most important to you?

QUESTION 5 AND QUESTION 4

Which type of beef production do you think produces the best quality beef?

	Grass-fed	Grain-fed	Organic	Hormone- free	Antibiotic- free	GMO-free
Grass-fed	51.3%	13.7%	12.0%	15.7%	11.2%	11.4%
Grain-fed	6.4%	52.8%	4.9%	7.0%	7.3%	6.1%
Organic	8.6%	6.9%	51.7%	11.7%	13.3%	13.6%
Hormone- free	12.7%	8.8%	12.0%	38.6%	17.7%	14.4%
Antibiotic- free	12.4%	8.6%	10.6%	18.6%	42.9%	17.1%
GMO-free	6.4%	4.5%	8.1%	7.1%	7.4%	36.9%