

About the Survey

FoodDS tracks consumer preferences and sentiments on the safety, quality, and price of food at home and away from home with particular focus on meat demand. FoodDS is a monthly on-line survey with a sample size of at least 1,000 individuals, weighted to match the US population in terms of age, gender, education and region of residence. See the [online technical document](#) for more details.

OVERALL COMMENTS

The Food Demand Survey (FoodDS) started in May 2013 and has been delivered every month for four years. The following information is a summary from the past year (May 2016 to April 2017). The previous years' summaries can be found on-line at the following links: [Volume 1: First Year Summary](#), [Volume 2: Second Year Summary](#), and [Volume 3: Third Year Summary](#).

MEAT DEMAND

Table 1: Willingness-to-Pay

Willingness-to-Pay	Steak	Chicken Breast	Hamburger	Pork Chop	Deli Ham	Chicken Wing	Beans and Rice	Pasta
May 2015	\$7.52	\$5.36	\$4.70	\$4.19	\$2.47	\$2.23	\$2.04	\$3.49
June 2015	\$7.73	\$5.66	\$4.22	\$3.79	\$2.50	\$2.45	\$2.30	\$2.87
July 2015	\$7.12	\$5.03	\$4.23	\$3.59	\$2.20	\$2.15	\$1.72	\$2.59
August 2015	\$8.03	\$5.81	\$4.93	\$4.42	\$3.18	\$2.92	\$3.07	\$3.97
September 2015	\$7.83	\$5.70	\$4.35	\$3.74	\$2.51	\$2.32	\$1.90	\$3.30
October 2015	\$6.60	\$4.96	\$4.10	\$3.44	\$1.70	\$1.76	\$1.06	\$2.63
November 2015	\$7.06	\$5.44	\$4.15	\$3.82	\$1.98	\$2.45	\$2.04	\$2.77
December 2015	\$7.63	\$5.52	\$4.51	\$3.85	\$2.83	\$2.45	\$2.66	\$3.80
January 2016	\$7.43	\$5.34	\$4.36	\$3.94	\$2.67	\$2.43	\$2.50	\$3.59
February 2016	\$7.39	\$5.36	\$4.68	\$4.20	\$2.65	\$2.27	\$2.54	\$3.54
March 2016	\$7.76	\$5.53	\$4.52	\$4.02	\$2.45	\$2.79	\$3.10	\$3.51
April 2016	\$7.47	\$5.29	\$4.09	\$3.94	\$2.33	\$2.76	\$3.07	\$3.31
May 2016	\$7.12	\$5.16	\$4.31	\$3.79	\$2.13	\$2.18	\$2.00	\$2.93
June 2016	\$6.18	\$4.80	\$3.84	\$3.30	\$1.84	\$1.91	\$1.95	\$2.06
July 2016	\$9.05	\$5.31	\$4.52	\$3.93	\$2.45	\$2.43	\$2.17	\$3.22
August 2016	\$7.91	\$5.28	\$4.53	\$4.02	\$2.41	\$2.78	\$2.14	\$2.52
September 2016	\$7.91	\$5.43	\$4.51	\$3.90	\$2.47	\$2.38	\$2.49	\$2.94
October 2016	\$7.80	\$5.79	\$4.74	\$4.15	\$2.29	\$2.57	\$2.37	\$3.34
November 2016	\$6.77	\$5.07	\$4.21	\$3.81	\$2.10	\$2.07	\$1.49	\$2.18
December 2016	\$6.59	\$4.93	\$4.22	\$3.50	\$2.06	\$2.01	\$1.62	\$2.89
January 2017	\$7.55	\$5.32	\$4.55	\$3.79	\$2.48	\$2.56	\$2.59	\$3.54
February 2017	\$7.02	\$5.23	\$4.30	\$3.72	\$2.36	\$2.26	\$2.03	\$2.93
March 2017	\$6.89	\$5.45	\$4.62	\$3.57	\$1.75	\$2.34	\$2.10	\$3.11
April 2017	\$6.21	\$5.03	\$4.26	\$3.27	\$2.04	\$2.04	\$2.18	\$2.81

Willingness-to-pay (WTP) for two beef, chicken and pork products, in addition to two non-meat items, was calculated each month since the beginning of FooDS. WTP for each food item over the course of the past two years is shown in the first table. WTP for each product in each month is reported as an index value set relative to May 2013 in figure 1. For example, the WTP index for chicken breasts in March 2017 was 105.62, meaning WTP in March 2017 was $(105.62 - 100 = 5.62)$ 5.62% higher than in May 2013. Figures 2-4 reveal that WTPs for beef, pork, and chicken have generally been similar this year compared to last and were highest during year two of the FooDS survey.

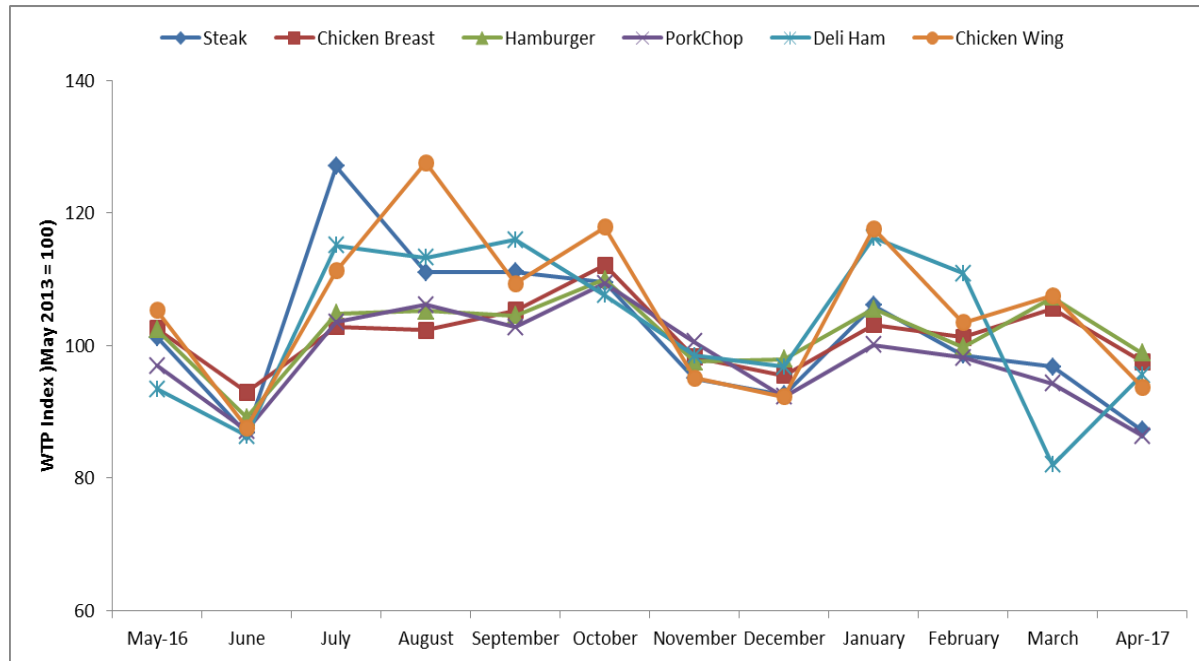


Figure 1: Demand indices for six meat products (May 2013 = 100)

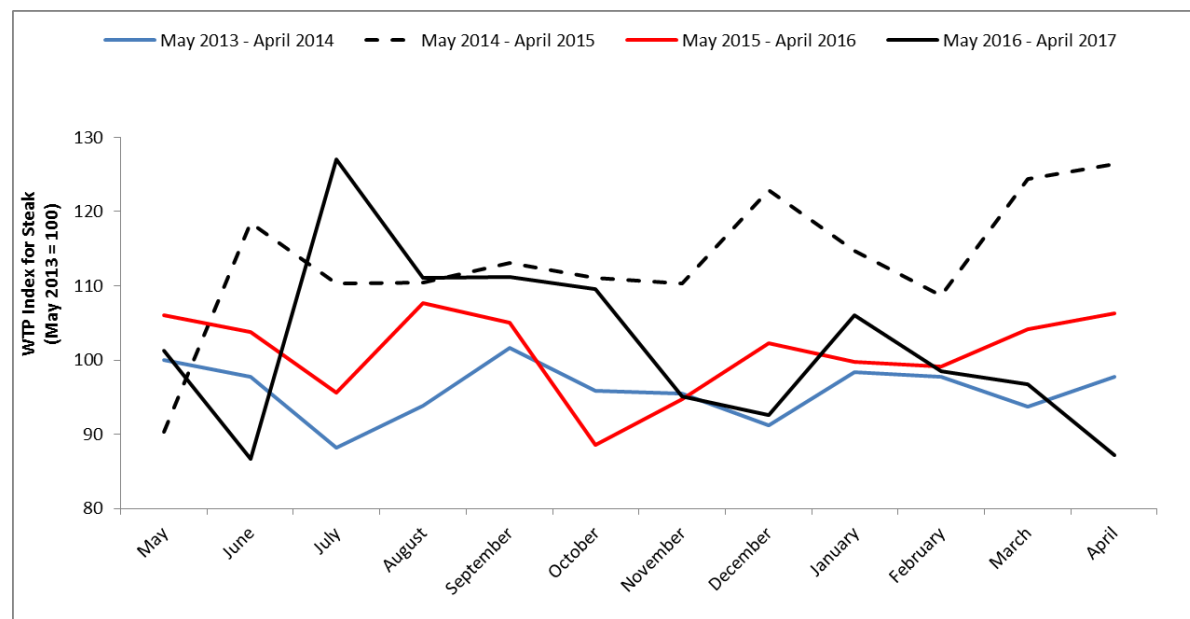


Figure 2: Demand indices for steak over the past two years (May 2013 = 100)

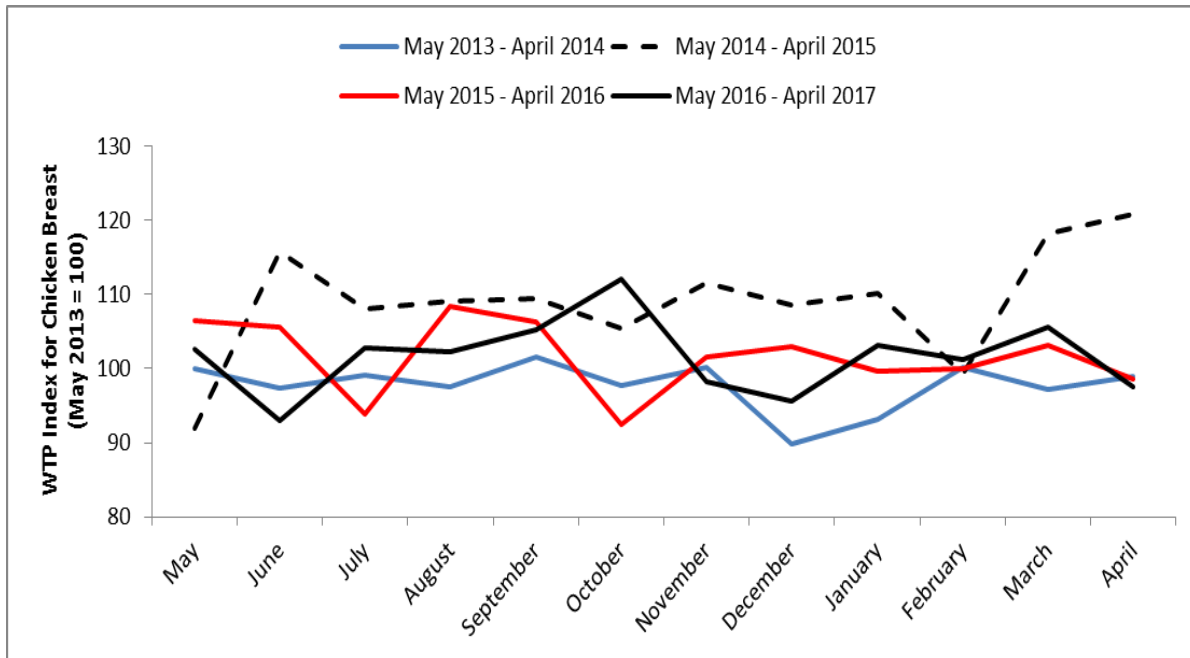


Figure 3: Demand indices for chicken breast over the past two years (May 2013 = 100)

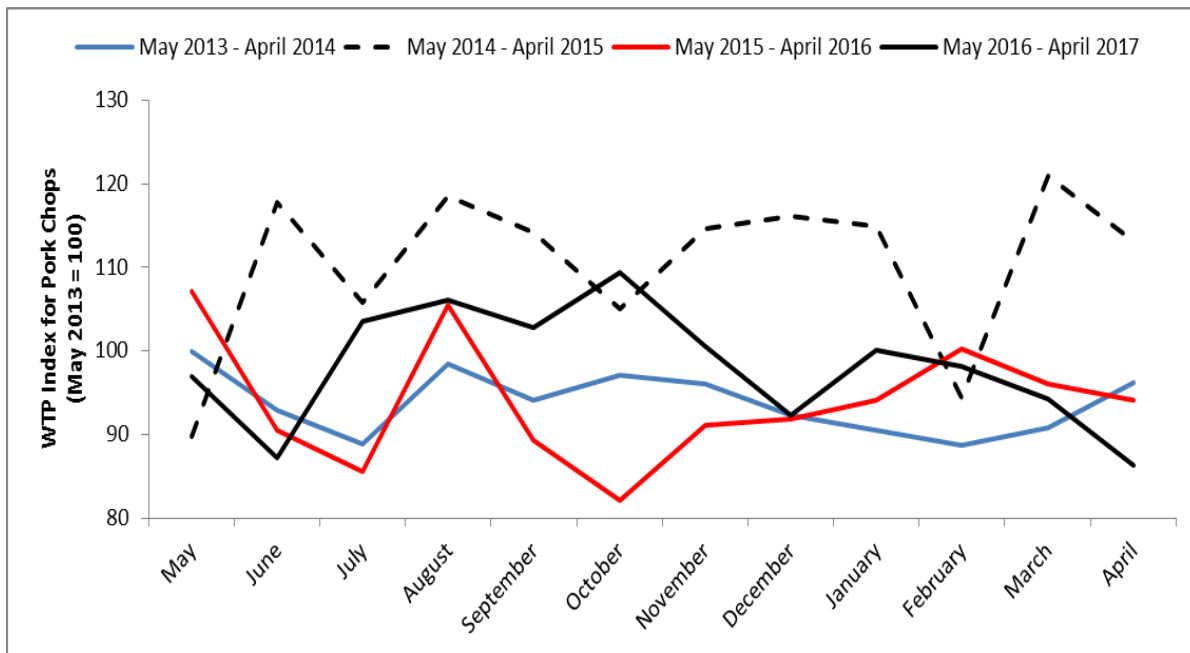


Figure 4: Demand indices for pork chops over the past two years (May 2013 = 100)

FOOD EXPENDITURES

Over the past year, expenditures for food eaten at home reached a low of \$91.93/week in April 2017 and a high of \$99.10/week in October 2016. Consumers reported spending the least on food away from home in December 2016 at \$50.89/week and the highest in September 2016 at \$60.91/week. Consumers continually reported planning to spend less money away from home throughout the course of the survey, although, as table 2 shows, they frequently do not follow through with those plans.

Table 2: Current and predicted food expenditures for at home and away from home food consumption.

	Current weekly at home	Current weekly away from home	Anticipated change in at home in next 2 weeks	Anticipated change away from home in next 2 weeks
May-16	\$98.24	\$53.74	-0.24%	-1.33%
Jun-16	\$93.33	\$53.48	-0.63%	-1.38%
Jul-16	\$94.73	\$56.87	-0.70%	-1.18%
Aug-16	\$96.49	\$56.03	0.06%	-1.20%
Sep-16	\$98.26	\$60.91	-0.28%	-1.08%
Oct-16	\$99.10	\$60.63	-0.44%	-1.63%
Nov-16	\$93.44	\$54.24	0.28%	-1.00%
Dec-16	\$96.91	\$50.89	0.91%	-0.59%
Jan-17	\$94.16	\$53.26	-0.39%	-1.47%
Feb-17	\$96.83	\$54.74	-0.86%	-0.09%
Mar-17	\$93.88	\$50.96	-0.12%	-0.77%
Apr-17	\$91.93	\$52.39	-0.42%	-1.12%



Consumers expected to see higher meat prices each month, especially for beef, although the extent of these expectations varied across months. Over the past year, expected meat prices reached a high for beef in January 2017 and a high for chicken and pork in August 2016. Generally, expectations of price increases have been lower this year than last. Consumers reported that they planned to buy more chicken and beef, but less pork in most months.

Table 3: Future Consumer Expenditures. Values reported are the differences in percent of consumers agreeing and disagreeing (%) with each statement.

	I plan to buy more chicken	I plan to buy more beef	I plan to buy more pork	I plan to eat out more	I expect higher beef prices	I expect higher chicken prices	I expect higher pork prices
May-16	30.39	1.84	-7.00	-35.67	23.07	6.18	9.50
Jun-16	32.25	-5.28	-7.96	-29.46	25.82	12.68	11.89
Jul-16	33.40	4.60	1.67	-16.62	26.47	14.02	13.70
Aug-16	40.75	11.34	-1.67	-25.52	25.08	14.64	17.04
Sep-16	38.99	8.08	-2.17	-23.58	25.31	13.25	13.63
Oct-16	43.65	10.32	1.31	-23.13	23.09	9.20	9.73
Nov-16	37.23	9.79	2.00	-25.42	17.38	7.86	11.17
Dec-16	35.47	7.81	2.38	-26.38	22.59	9.55	11.81
Jan-17	39.17	2.89	-3.46	-28.30	27.40	14.25	16.65
Feb-17	34.03	2.68	-7.97	-29.27	20.87	6.57	8.01
Mar-17	32.18	0.32	-6.67	-28.93	25.12	12.88	13.73
Apr-17	33.97	2.60	-3.54	-27.72	25.20	11.10	13.39

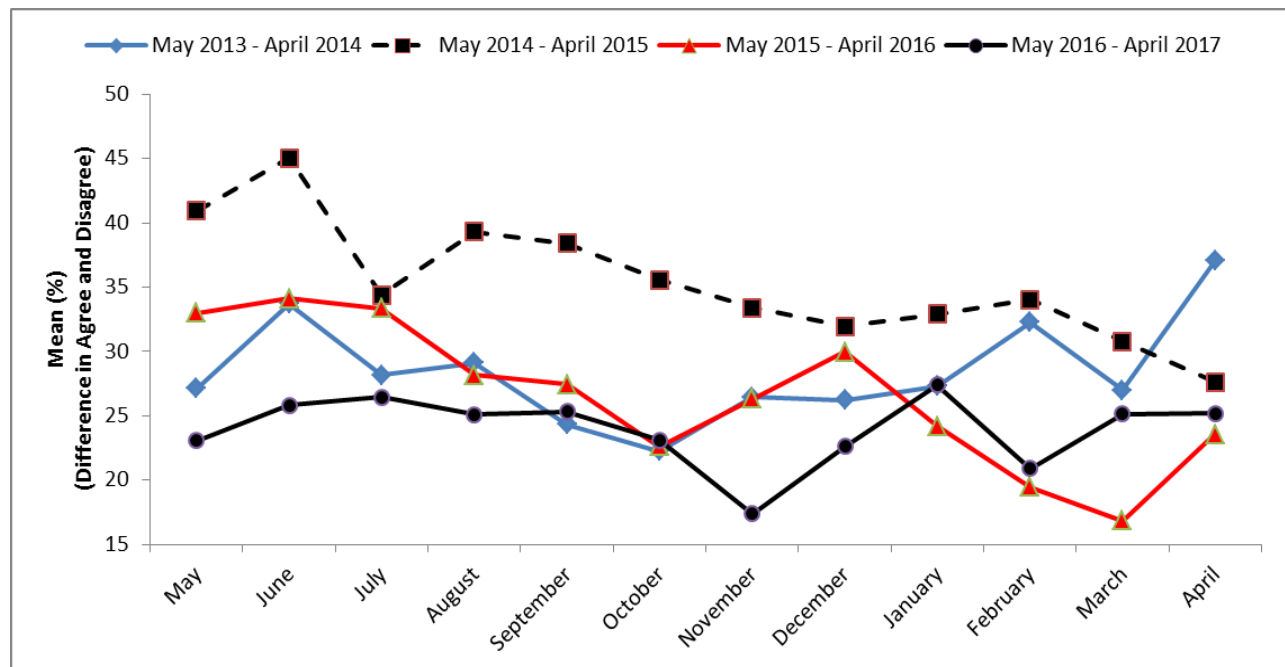


Figure 5: Future Price Expectations for Beef. Difference in percent agree and disagree that beef prices will rise.

AWARENESS & CONCERN TRACKING

Awareness and concern for 18 food issues have been tracked over the course of the survey. GMOs, Salmonella, *E. coli*, and hormones have remained the top four issues consumers report hearing most about in the news. As shown in Figure 6, a significant increase in awareness was seen for *E. coli* in November and December 2016 perhaps as a result of the news associated with Chipotle. GMOs, Salmonella, *E. coli*, and hormones also remained as the issues of most concern among consumers in the past year. Figure 6 shows concern for the same food issues. Concern fell in November 2016 and rose in April 2017, as shown in Table 5.

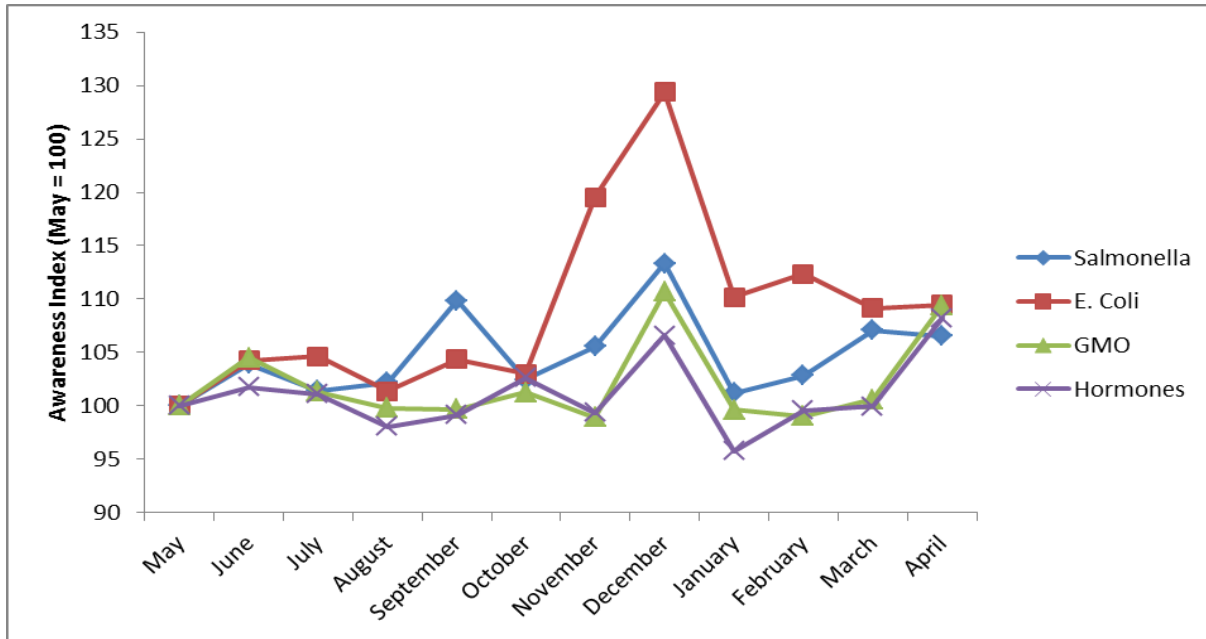


Figure 6: Awareness of four issues in the news (May 2016 = 100)

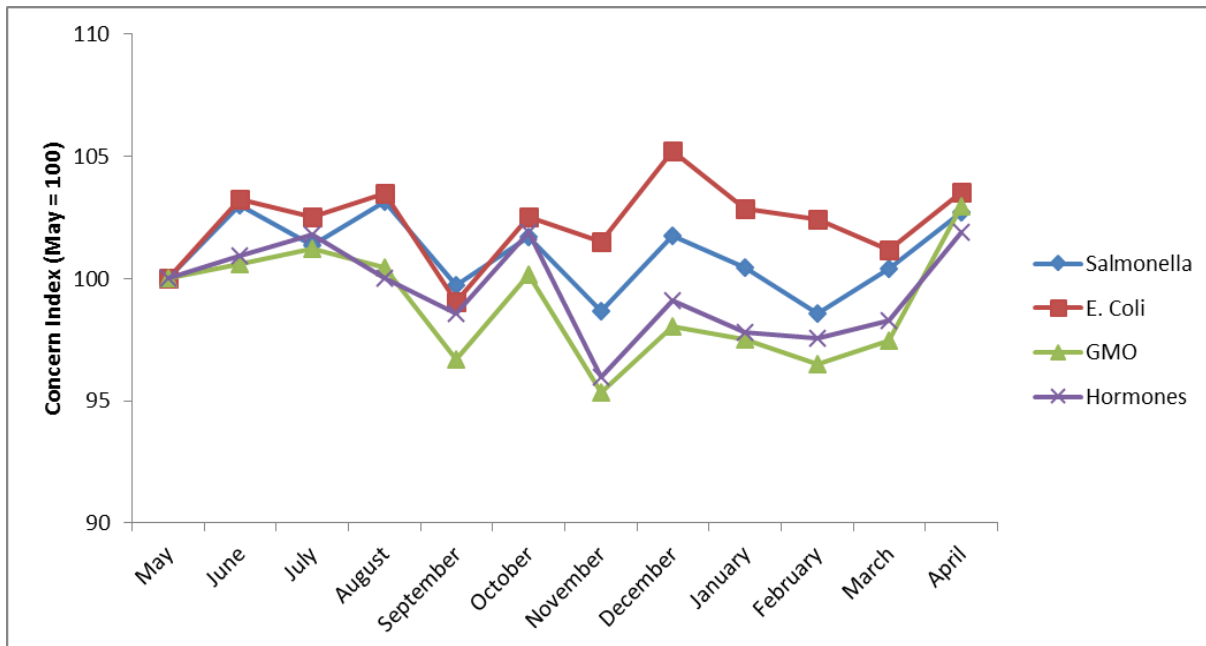


Figure 7: Concern for four issues in the news (May 2016 = 100)

Table 4: Awareness of food issues. Reported values are the mean response to the question “Overall, how much have you heard or read about each of the following topics in the past two weeks”, where 1 = nothing, 3= a moderate amount, and 5 = a great deal.

	May 2016	June 2016	July 2016	August 2016	September 2016	October 2016	November 2016	December 2016	January 2017	February 2017	March 2017	April 2017
Salmonella	2.42	2.46	2.41	2.51	2.51	2.49	2.36	2.21	2.44	2.26	2.25	2.28
E. Coli	2.40	2.49	2.41	2.55	2.50	2.46	2.35	2.22	2.41	2.23	2.23	2.28
GMO	2.40	2.53	2.46	2.62	2.49	2.60	2.40	2.29	2.41	2.32	2.27	2.28
Hormones	2.29	2.37	2.33	2.49	2.39	2.41	2.30	2.19	2.32	2.19	2.19	2.21
Farm Animal Welfare	2.24	2.32	2.27	2.39	2.30	2.33	2.28	2.12	2.29	2.13	2.10	2.22
Antibiotics	2.26	2.34	2.31	2.42	2.40	2.46	2.28	2.20	2.25	2.18	2.16	2.19
Bird Flu	2.06	2.15	2.11	2.21	2.22	2.18	2.10	1.98	2.14	1.96	2.09	2.01
Swine Flu	2.03	2.09	2.14	2.24	2.25	2.18	2.10	1.98	2.16	1.98	1.98	2.06
Mad cow	2.02	2.11	2.11	2.20	2.19	2.17	2.07	1.98	2.10	1.97	1.96	2.01
Pink Slime	2.04	2.01	2.00	2.12	1.99	2.00	1.93	1.88	1.95	1.86	1.84	1.88
Cloning	1.90	1.93	1.99	2.06	2.00	2.00	1.97	1.84	1.95	1.79	1.78	1.83
LFTB	1.99	2.03	2.01	2.13	2.09	2.07	2.02	1.93	1.99	1.86	1.81	1.87
Gestation Crates	1.70	1.79	1.85	1.88	1.88	1.88	1.82	1.75	1.85	1.72	1.67	1.72
Battery Cages	1.75	1.84	1.83	1.90	1.88	1.93	1.86	1.72	1.81	1.71	1.69	1.73
BSE	1.64	1.71	1.78	1.77	1.77	1.79	1.76	1.64	1.73	1.60	1.61	1.63
Greenhouse Gas	2.00	2.05	2.10	2.17	2.15	2.18	2.10	2.01	2.09	1.95	2.02	2.00
Cancer and Meat Consumption	1.62	1.72	1.77	1.80	1.81	1.85	1.74	1.67	1.75	1.65	1.61	1.62

Table 5: Concern for food issues. Reported values are the mean response to the question “How concerned are you that the following pose a health hazard in the food that you eat in the next two weeks”, where 1 = very unconcerned, 3= neither concerned nor unconcerned, and 5 = very concerned.

	May 2016	June 2016	July 2016	August 2016	September 2016	October 2016	November 2016	December 2016	January 2017	February 2017	March 2017	April 2017
Salmonella	3.42	3.45	3.48	3.52	3.50	3.49	3.35	3.37	3.46	3.39	3.33	3.47
E. Coli	3.46	3.44	3.51	3.53	3.47	3.47	3.38	3.39	3.43	3.37	3.32	3.49
GMO	3.25	3.26	3.33	3.35	3.33	3.42	3.31	3.26	3.26	3.24	3.18	3.34
Hormones	3.36	3.37	3.39	3.44	3.42	3.41	3.30	3.33	3.34	3.33	3.26	3.42
Farm Animal Welfare	3.28	3.34	3.43	3.44	3.39	3.42	3.28	3.32	3.40	3.34	3.25	3.44
Antibiotics	3.36	3.33	3.41	3.42	3.41	3.41	3.29	3.31	3.33	3.31	3.26	3.40
Bird Flu	3.05	3.12	3.17	3.15	3.18	3.08	2.99	3.01	3.09	3.05	3.11	3.19
Swine Flu	3.06	3.10	3.13	3.15	3.17	3.13	3.04	3.02	3.11	3.07	3.09	3.15
Mad cow	3.10	3.10	3.17	3.16	3.17	3.19	3.03	2.98	3.07	3.05	3.04	3.17
Pink Slime	3.13	3.16	3.21	3.20	3.14	3.16	3.07	3.01	3.13	3.05	3.09	3.18
Cloning	3.09	3.10	3.12	3.21	3.18	3.18	3.09	3.04	3.06	3.08	3.03	3.18
LFTB	2.96	2.97	3.04	3.04	3.01	2.99	2.94	2.91	2.92	2.91	2.95	3.01
Gestation Crates	2.94	2.95	3.10	3.08	3.04	3.04	2.96	2.97	2.98	2.92	2.92	3.05
Battery Cages	2.98	2.98	3.06	3.10	3.07	3.10	2.97	2.94	3.01	2.93	2.88	3.09
BSE	2.88	2.90	2.99	3.01	2.97	2.94	2.88	2.90	2.89	2.82	2.86	2.96
Greenhouse Gas	3.00	3.01	3.16	3.09	3.06	3.06	2.97	2.98	3.00	2.97	2.97	3.09
Cancer and Meat Consumption	2.84	2.88	3.00	2.98	2.95	2.97	2.87	2.87	2.88	2.82	2.88	2.95

GENERAL FOOD VALUES

Taste, safety, price, and nutrition have remained consumer’s top four most important values throughout the course of the FoodS survey, while fairness and novelty have remained the values of least importance. Consumers reported that finding affordable foods to fit with-in their budget was their main challenge each month. Consumers reported that finding foods their children will eat was their least difficult challenge each month. The challenge of losing weight saw the largest increase in October.

Table 6: Consumer Values. Respondents were asked to choose their four “most important” and four “least important” food-related values. A scale of importance was created by calculating the proportion of times a food value appeared most important minus the times it appeared least important. A higher number implies a greater importance to the consumer.

	Taste	Safety	Price	Nutrition	Appearance	Animal Welfare	Natural-ness	Origin	Environment	Convenience	Fairness	Novelty
May 2016	0.64	0.53	0.35	0.39	0.03	-0.10	-0.11	-0.28	-0.26	-0.22	-0.31	-0.67
June 2016	0.58	0.52	0.37	0.40	0.02	-0.12	-0.14	-0.23	-0.24	-0.25	-0.25	-0.68
July 2016	0.60	0.47	0.34	0.37	0.04	-0.08	-0.09	-0.22	-0.29	-0.23	-0.28	-0.64
August 2016	0.59	0.51	0.34	0.36	0.02	-0.10	-0.13	-0.24	-0.23	-0.26	-0.25	-0.60
September 2016	0.57	0.48	0.40	0.40	0.01	-0.11	-0.19	-0.25	-0.23	-0.24	-0.26	-0.58
October 2016	0.56	0.47	0.39	0.37	0.01	-0.08	-0.13	-0.22	-0.28	-0.22	-0.26	-0.62
November 2016	0.57	0.48	0.37	0.34	0.07	-0.14	-0.15	-0.21	-0.28	-0.22	-0.27	-0.57
December 2016	0.62	0.52	0.40	0.39	0.03	-0.08	-0.10	-0.29	-0.26	-0.29	-0.29	-0.64
January 2017	0.61	0.49	0.41	0.35	-0.01	-0.10	-0.14	-0.30	-0.22	-0.21	-0.26	-0.64
February 2017	0.65	0.50	0.42	0.38	0.06	-0.13	-0.20	-0.29	-0.29	-0.18	-0.27	-0.63
March 2017	0.63	0.51	0.46	0.36	0.03	-0.12	-0.15	-0.22	-0.29	-0.26	-0.28	-0.66
April 2017	0.61	0.52	0.39	0.38	0.01	-0.08	-0.08	-0.32	-0.24	-0.24	-0.29	-0.65

Table 7: Consumer Challenges. Food-related challenges were ranked on a scaled from 1 – 7, where 7 = most challenging and 1 = least challenging; reported values are the mean ranks.

	Finding affordable foods	Avoiding certain nutrients or ingredients	Avoiding pesticides, added hormones, antibiotics	Losing weight	Finding convenient alternatives	Finding time to cook at home	Finding foods my children will eat
May 2016	4.59	4.36	4.21	4.13	4.00	3.92	2.79
June 2016	4.76	4.27	4.18	4.03	3.96	3.84	2.96
July 2016	4.81	4.18	4.03	4.09	4.11	3.89	2.89
August 2016	4.66	4.27	4.16	4.13	4.08	3.87	2.83
September 2016	4.82	4.33	3.99	3.90	4.10	3.96	2.90
October 2016	4.72	4.24	3.99	4.11	4.10	3.92	2.90
November 2016	4.75	4.18	3.93	3.89	4.16	3.96	3.12
December 2016	4.77	4.22	4.06	3.89	4.02	4.08	2.95
January 2017	4.84	4.26	3.97	4.03	4.09	3.98	2.84
February 2017	4.85	4.23	4.03	4.07	4.16	3.95	2.71
March 2017	4.90	4.31	3.98	3.98	4.14	3.87	2.82
April 2017	4.85	4.32	4.08	3.94	4.12	4.00	2.68

OTHER CONSUMER CHARACTERISTICS

Each month, the percent of respondents who reported being on food stamps, being vegetarian or vegans, or have had food poisoning was calculated and is reported in Figure 8. September 2016 had the highest frequency of food-stamp participants. October 2016 saw the largest percent of people who reported being vegetarian or vegan at 7.9%. Reported food poisoning was highest in July 2016 at 12.7%.

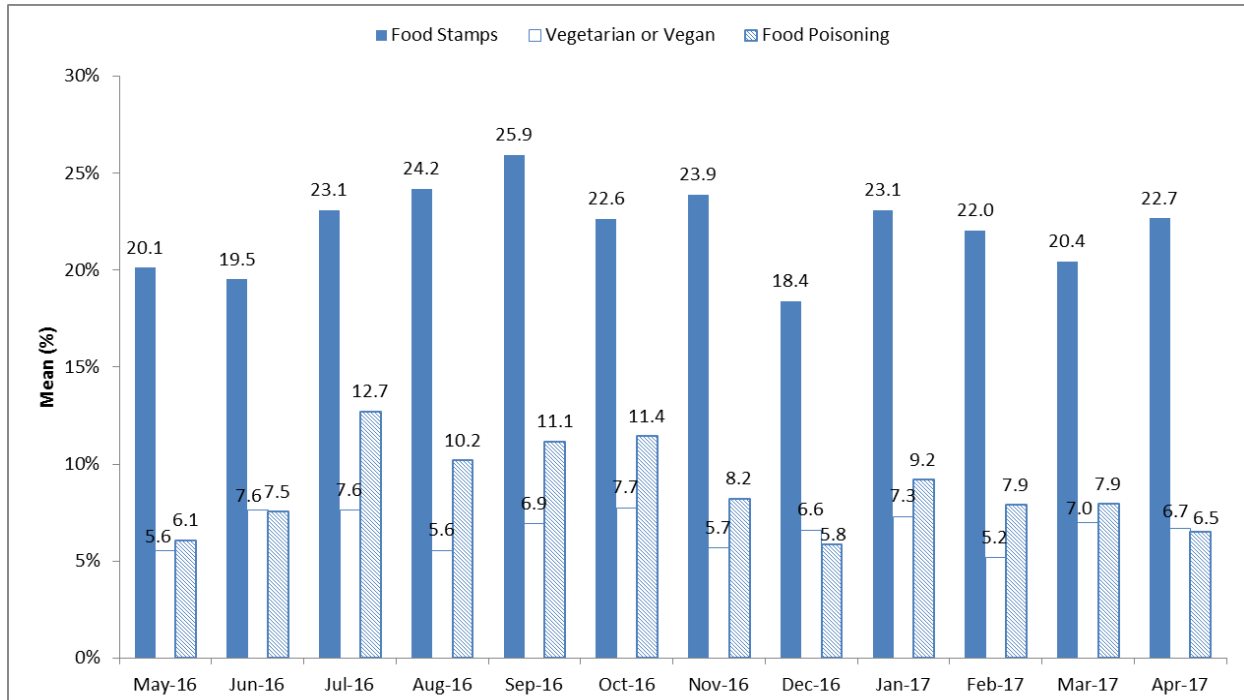


Figure 8: General consumer information covering food stamps, vegetarian or vegan preferences, or food poisoning. Calculated as a mean of the population (%)

AD HOC QUESTIONS

Each month three to five ad hoc questions were added to the survey. The following is a list of questions and topics that were covered.

- Consumer beliefs about farm animals given added growth hormones
- Consumer concern about hormones in livestock production
- Consumer WTP for meat with no added hormones
- Consumer perceptions towards expiration labels
- Food waste amongst consumers
- Helpful and accurate sources of food health and safety information
- Consumer preferences when shopping for eggs
- Consumer beliefs about healthiness, taste, and affordability of various food products
- Consumer preferences for the use of fertilizers
- Consumer knowledge on the regulations of crop breeding
- Individual’s choice of information on the herbicide glyphosate
- Work done on farms or ranches
- Consumer knowledge of the use of rBGH
- Labeling of hydroponic vegetables
- Food Security