



*Beef Demand Insight:
Concepts Update,
Sustainability Related Issues,
& Alt-Meat Discussion*

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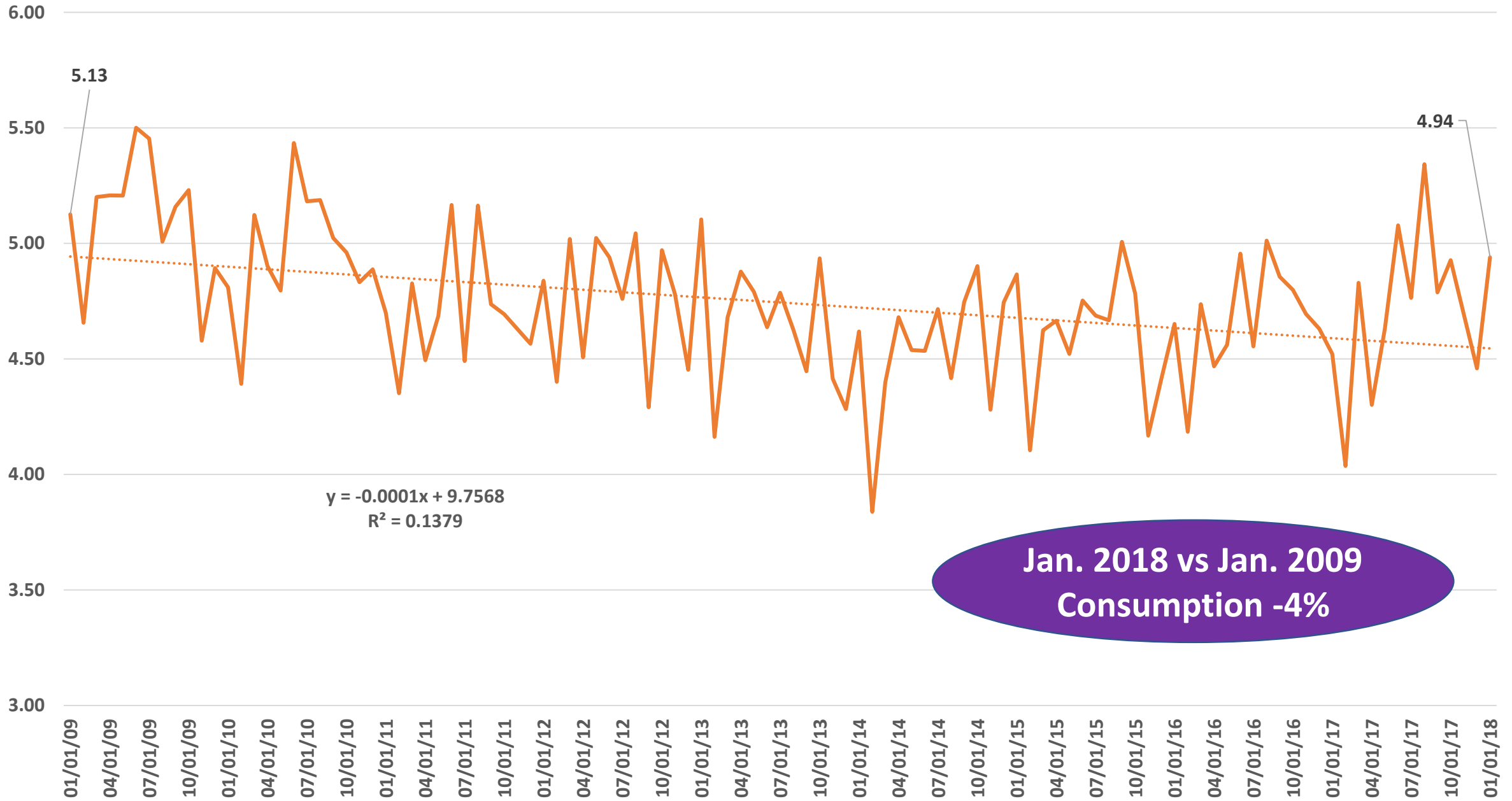
October 22, 2018

**NCBA Hosted *Producer Communications* –
Sustainability Research Meeting Centennial, CO**

Glynn's Plan

- Overview beef demand concepts and strength status
- Summarize knowledge of demand impacts of sustainability related issues
- Note econ knowledge around alt/plant-based protein alternatives
- Highlight demand resources for the media

Per Capita Disappearance, Jan. 2009 - Jan. 2018



$y = -0.0001x + 9.7568$
 $R^2 = 0.1379$

**Jan. 2018 vs Jan. 2009
Consumption -4%**

Demand is **NOT** Per Capita Consumption

2013 Beef Demand Determinants Study



[http://www.beefboard.org/evaluation/
130612demanddeterminantstudy.asp](http://www.beefboard.org/evaluation/130612demanddeterminantstudy.asp)



MARKETING > OUTLOOK

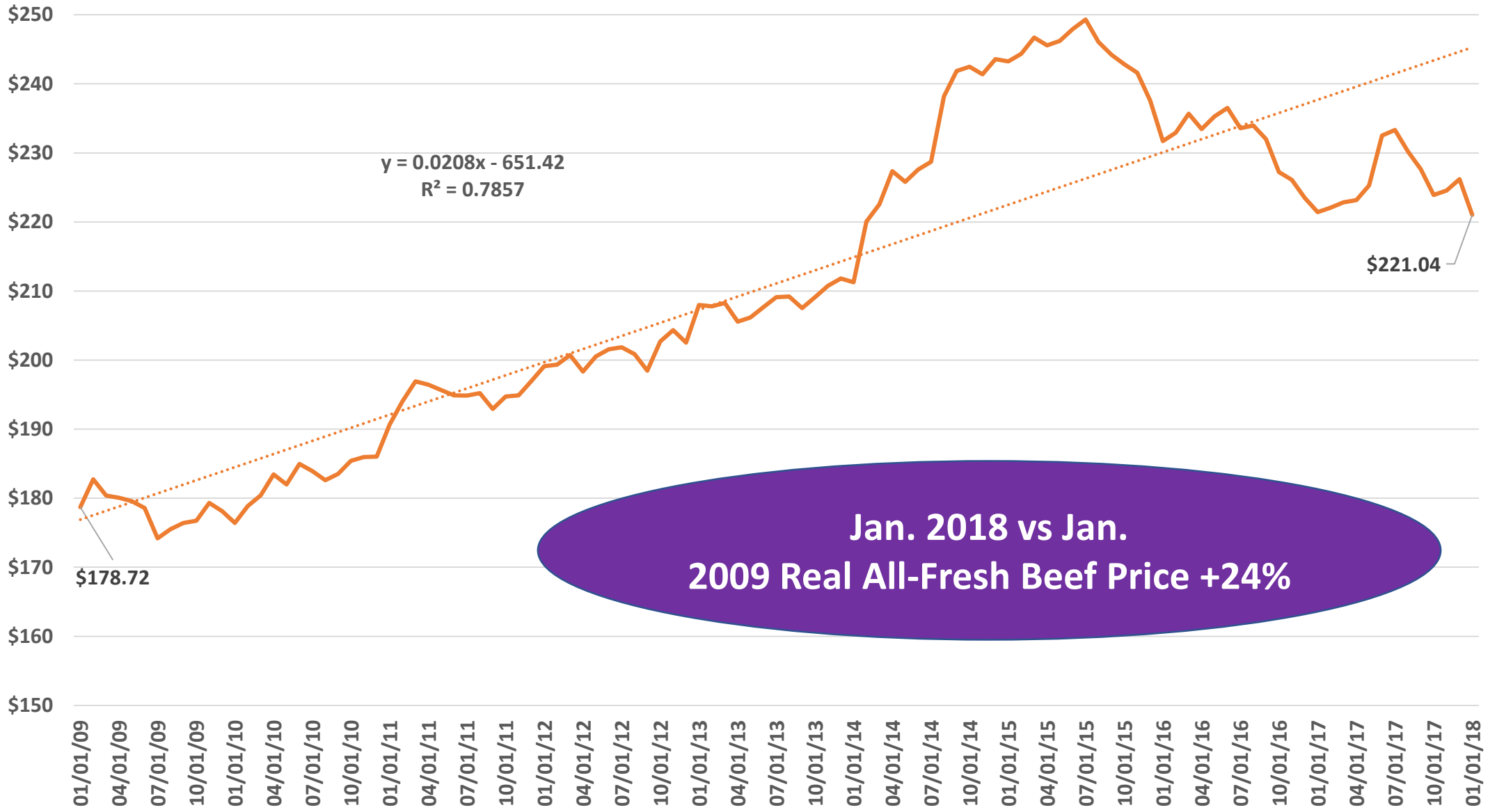
What's The Similarity Between Blue Jeans and Beef Demand?

Beef consumption and beef demand isn't the same thing. Here's an explanation.

Burt Rutherford | Sep 19, 2013

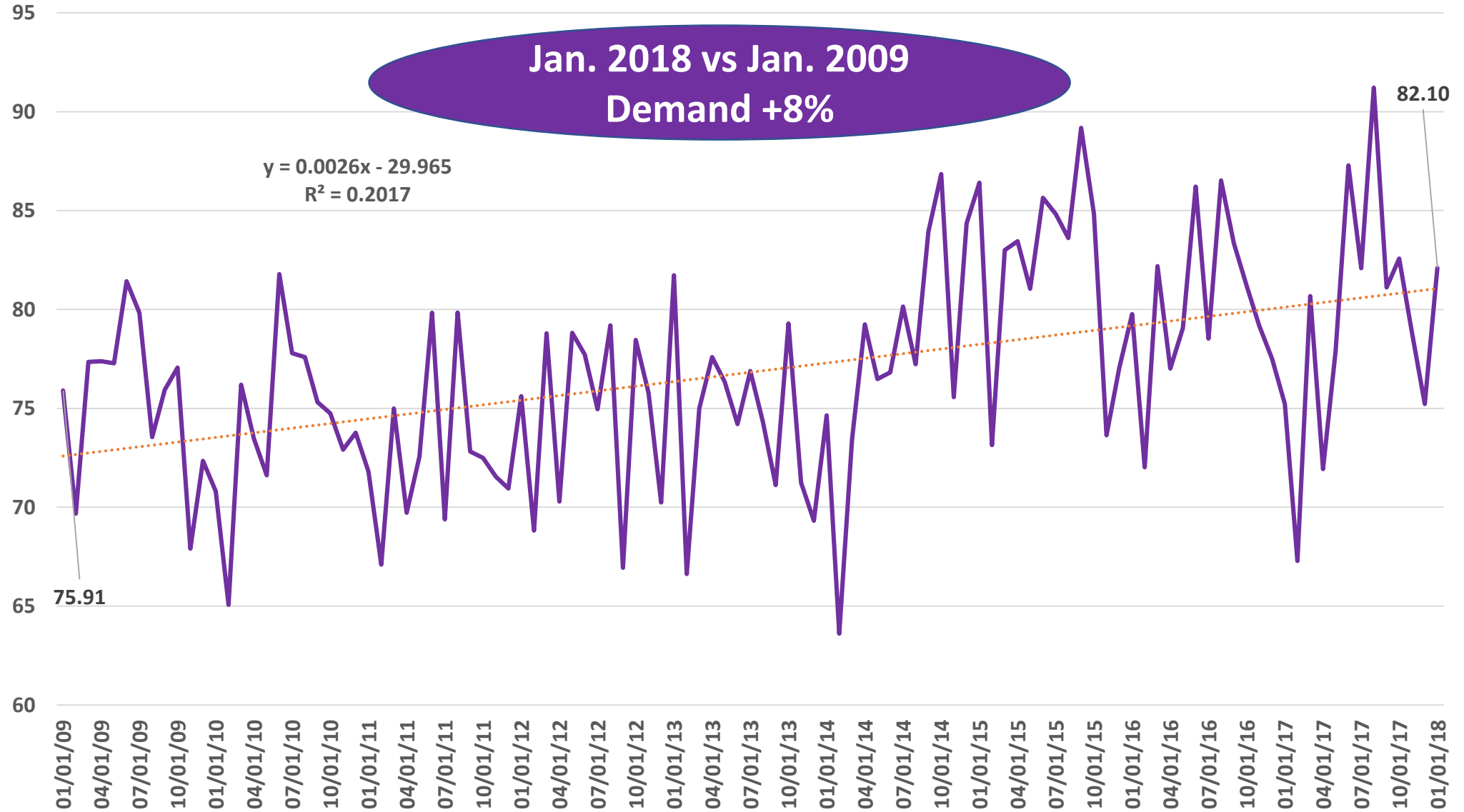
<http://www.beefmagazine.com/beef-demand/what-s-similarity-between-blue-jeans-and-beef-demand>

Real All-Fresh Price (\$/cwt), Jan. 2009 - Jan. 2018

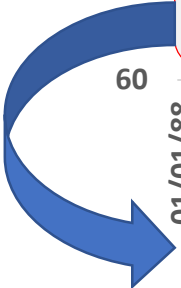
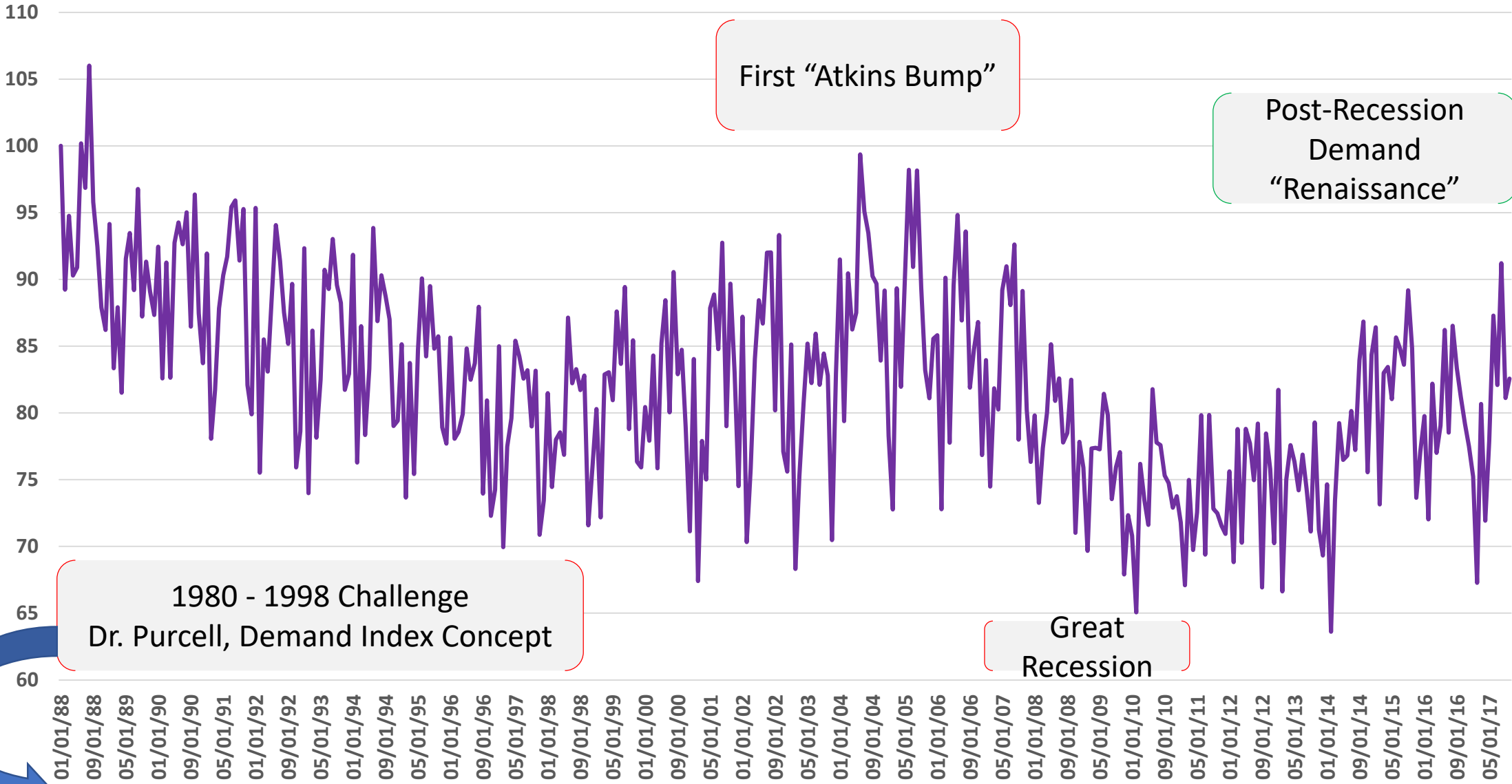


**Jan. 2018 vs Jan.
2009 Real All-Fresh Beef Price +24%**

All-Fresh Beef Demand Index
(Jan. 1988=100, Quantity-Based), Jan. 2009 - Jan. 2018



All-Fresh Beef Demand Index
(Jan. 1988=100, Quantity-Based), Jan. 1988 - Jan. 2018



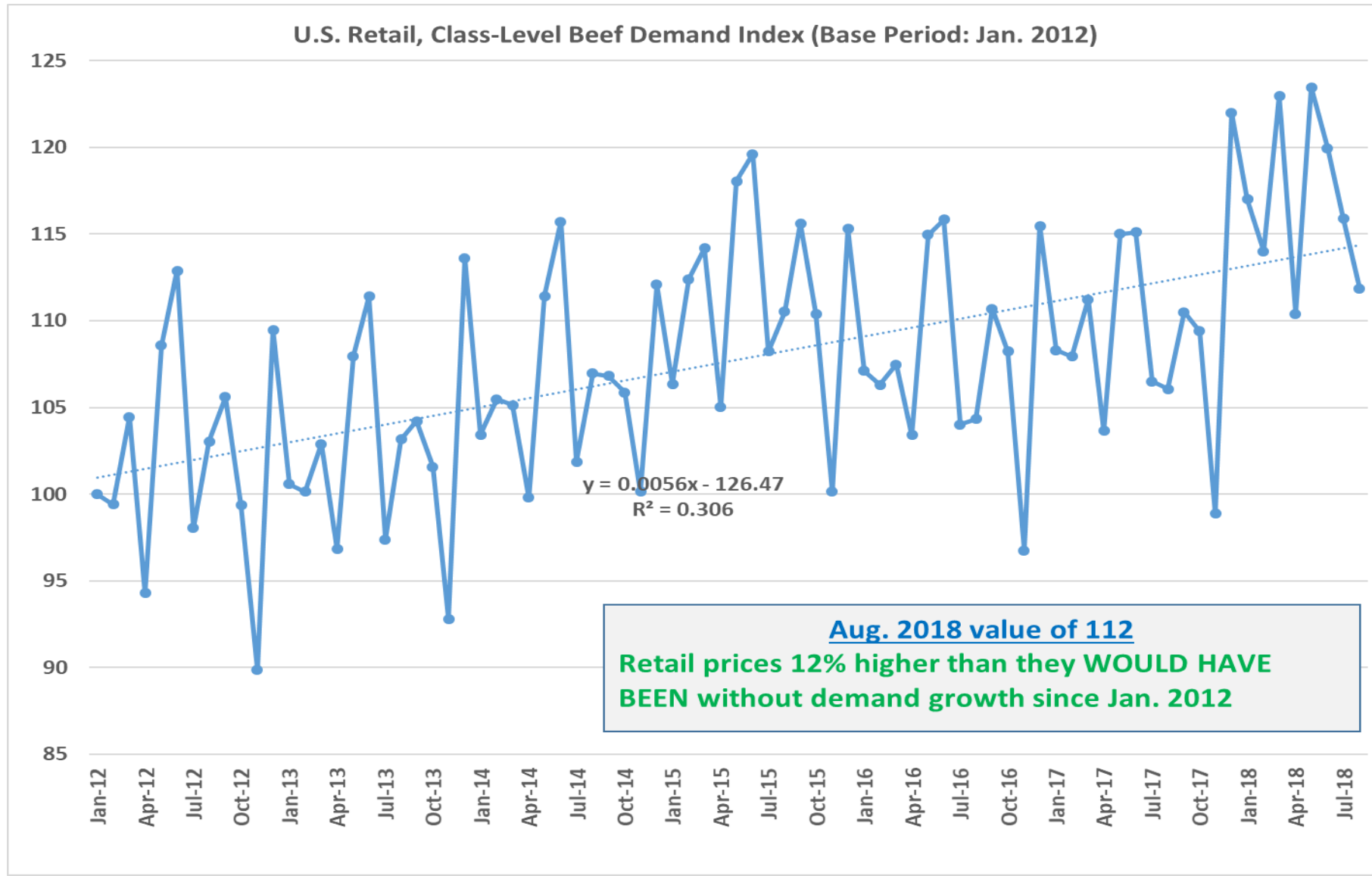
1980 - 1998 Challenge
Dr. Purcell, Demand Index Concept

First "Atkins Bump"

Post-Recession
Demand
"Renaissance"

Great
Recession

NCBA Maintained Retail Demand #s: Jan. 2012 – Aug. 2018 (thanks to Alison Krebs)



All-Fresh Beef Retail Demand Index

(Quarterly, Price-Index Approach, 1990=100)

Q3.2018: -3.9%

vs. Q3.2017

<http://agmanager.info/livestock-meat/meat-demand>

Creating and Assessing Candidate Food Service and Retail Beef Demand Indices

Glynn T. Tonsor & Ted C. Schroeder

Joint Evaluation Advisory Committee Meeting

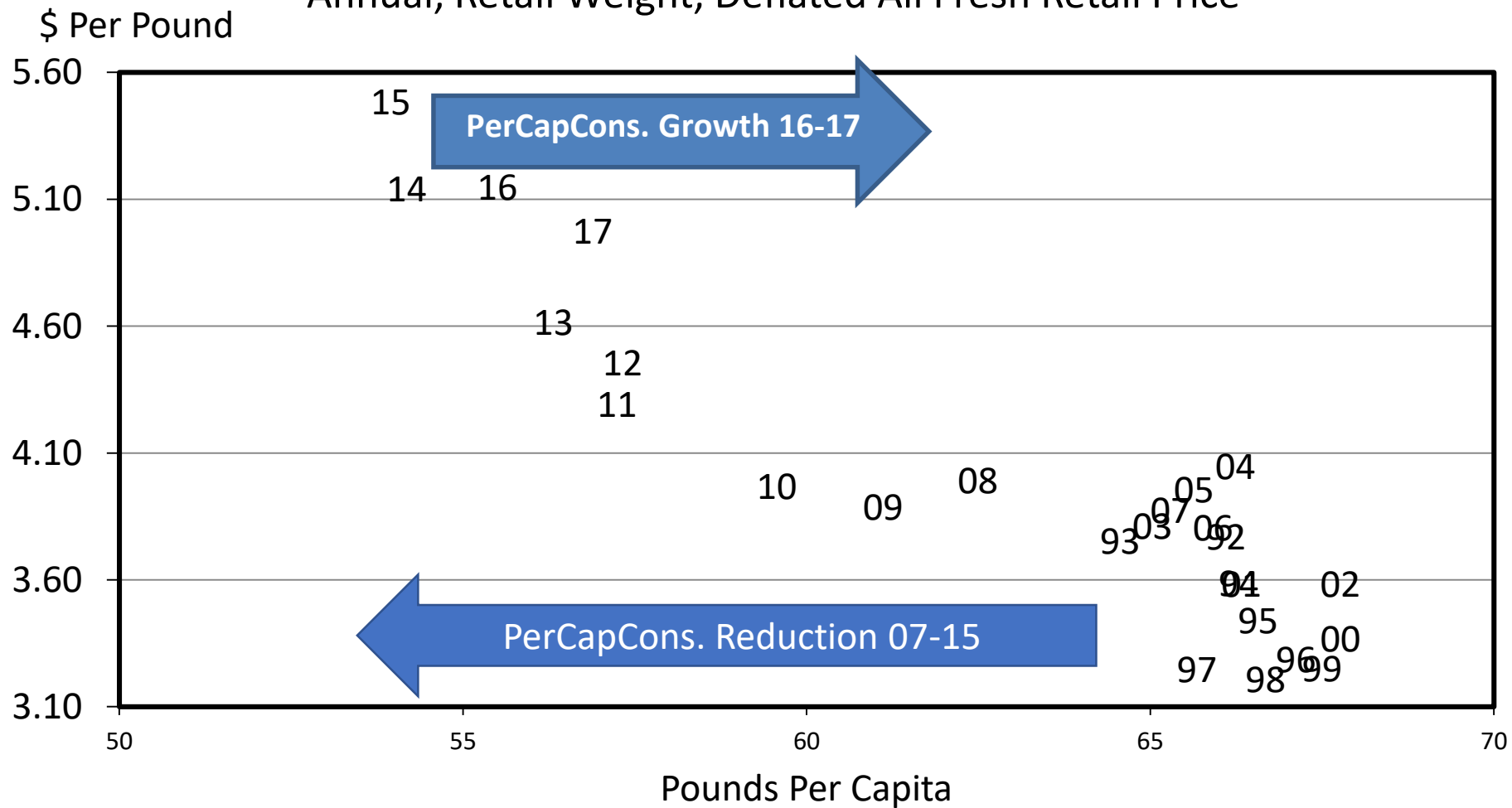
February 1, 2017

Presentation at 2017 National Cattlemen's Beef Association Annual Meeting Nashville, TN



BEEF PRICE-QUANTITY RELATIONSHIP

Annual, Retail Weight, Deflated All Fresh Retail Price



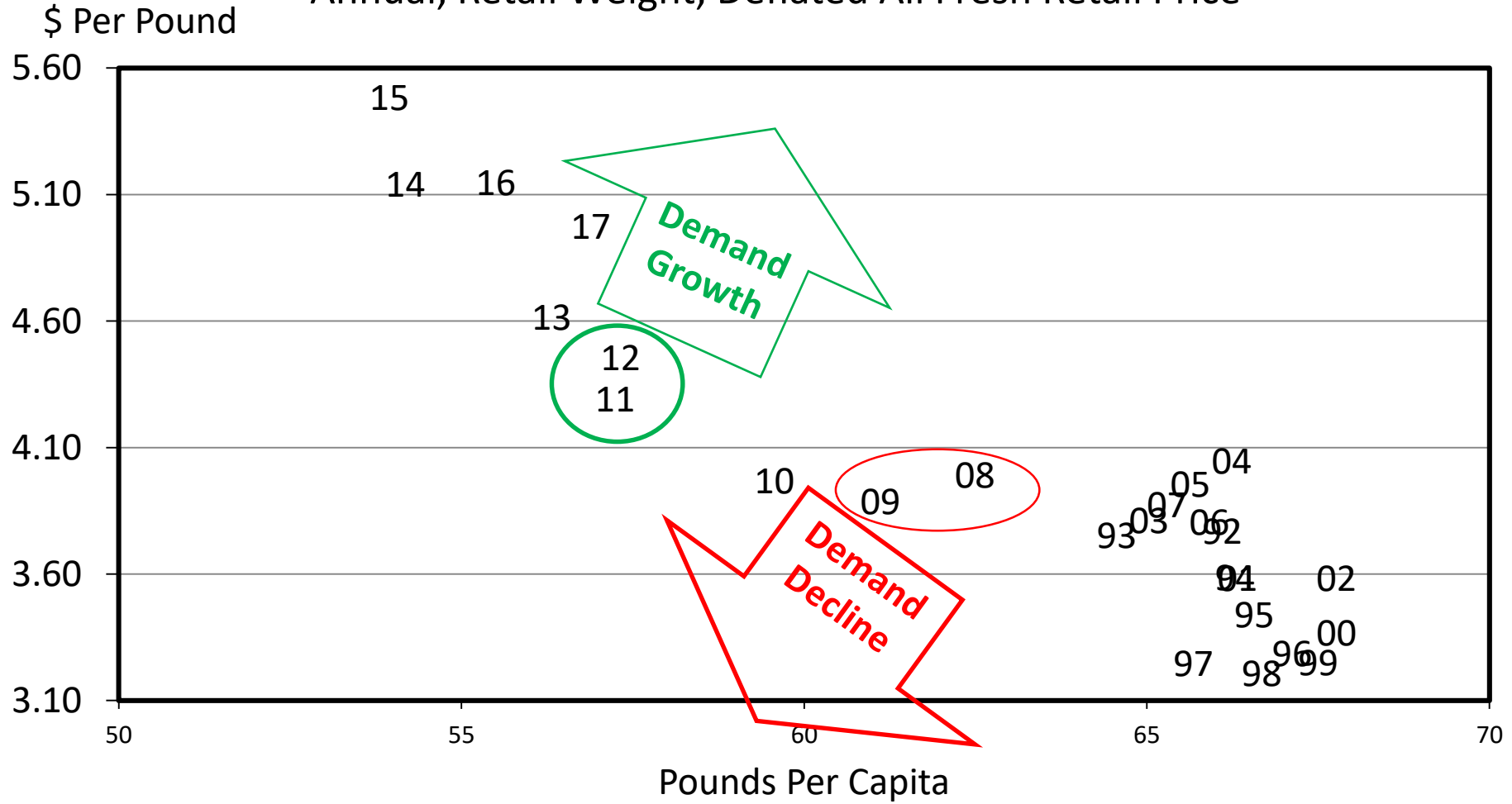
Data Source: Bureau of Economic Analysis & USDA-ERS, Compiled by LMIC

Livestock Marketing Information Center

C-P-65A
07/25/18

BEEF PRICE-QUANTITY RELATIONSHIP

Annual, Retail Weight, Deflated All Fresh Retail Price



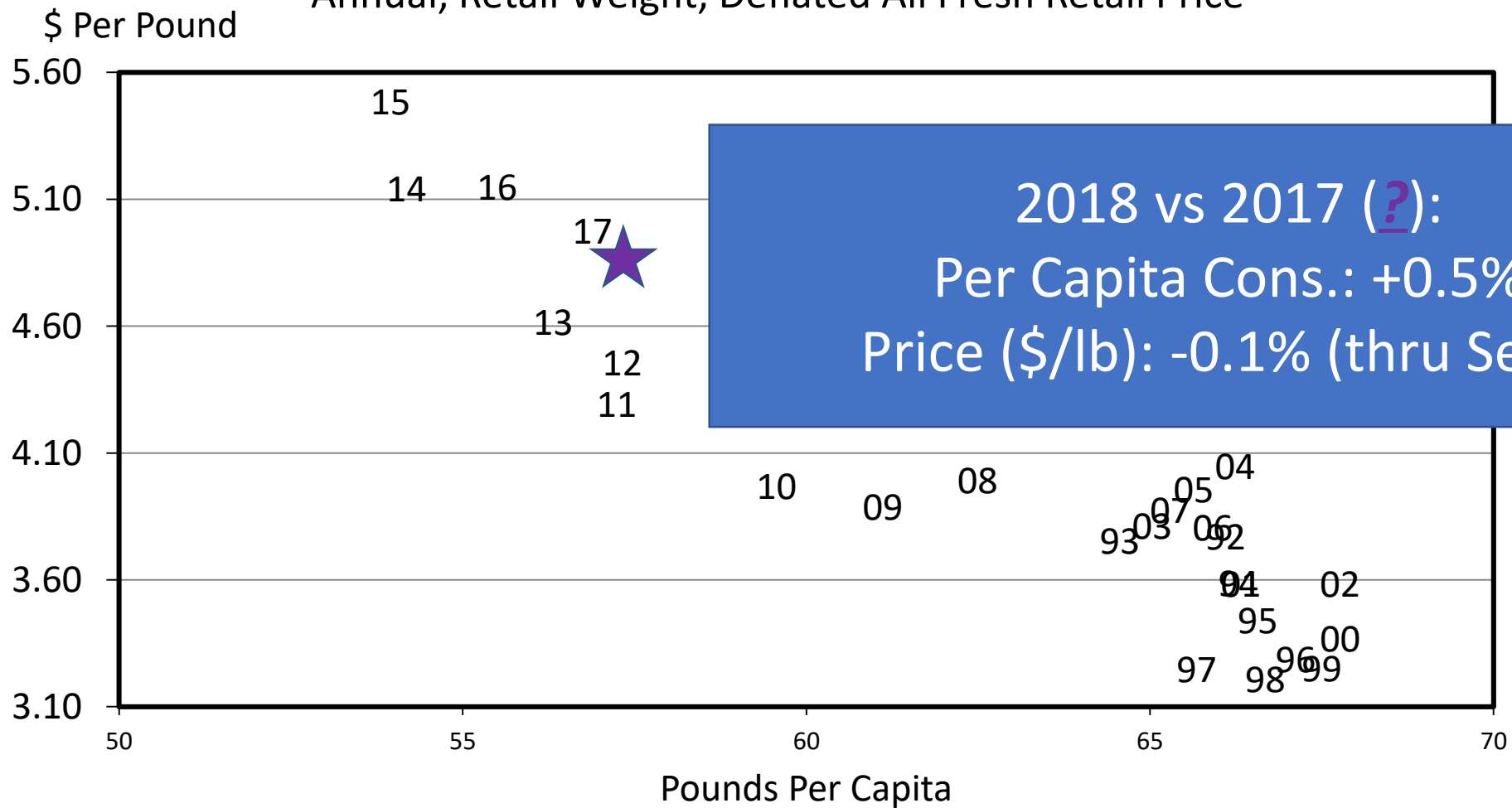
Data Source: Bureau of Economic Analysis & USDA-ERS, Compiled by LMIC

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Annual, Retail Weight, Deflated All Fresh Retail Price



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Assessing Beef Demand Determinants

Glynn T. Tonsor, Jayson L. Lusk, and Ted C. Schroeder

Joint Evaluation Advisory Committee Meeting

January 31, 2018



Funded by the Beef Checkoff.

Presentation at 2018 Cattle Industry Convention

Phoenix, AZ

Project Purpose

Main Goal

Provide a multi-faceted assessment of current factors impacting domestic beef demand.

Project Process

Process

- Conducted 4 separate analyses varying in time periods, levels of product aggregation, and socio-economic factors considered:
 1. Aggregate Demand Elasticities Update
 2. Media and Medical Journal Information Effects
 3. Food Demand Survey Insights
 4. Consumer Beef Index Insights

- Summarize findings and provide main recommendations

- Widely disseminate results and implications

2. Media and Medical Information Effects

- ❖ 12 keyword based Lexis-Nexis & Medline searches
 - ❖ Animal Welfare, Well-Being, Care
 - ❖ Atkins, High Protein, Low Carbohydrate
 - ❖ Cancer
 - ❖ Climate, Environment
 - ❖ Convenience
 - ❖ Fat
 - ❖ Fat, Cholesterol, Heart Disease, Arteriosclerosis
 - ❖ Safety
 - ❖ Sustainability
 - ❖ Taste, Tender, Flavor
 - ❖ Vegan, Vegetarian, Meatless
 - ❖ Zinc, Iron, Protein

- ❖ Regression based assessment of impacts on beef demand

2. Media and Medical Information Effects

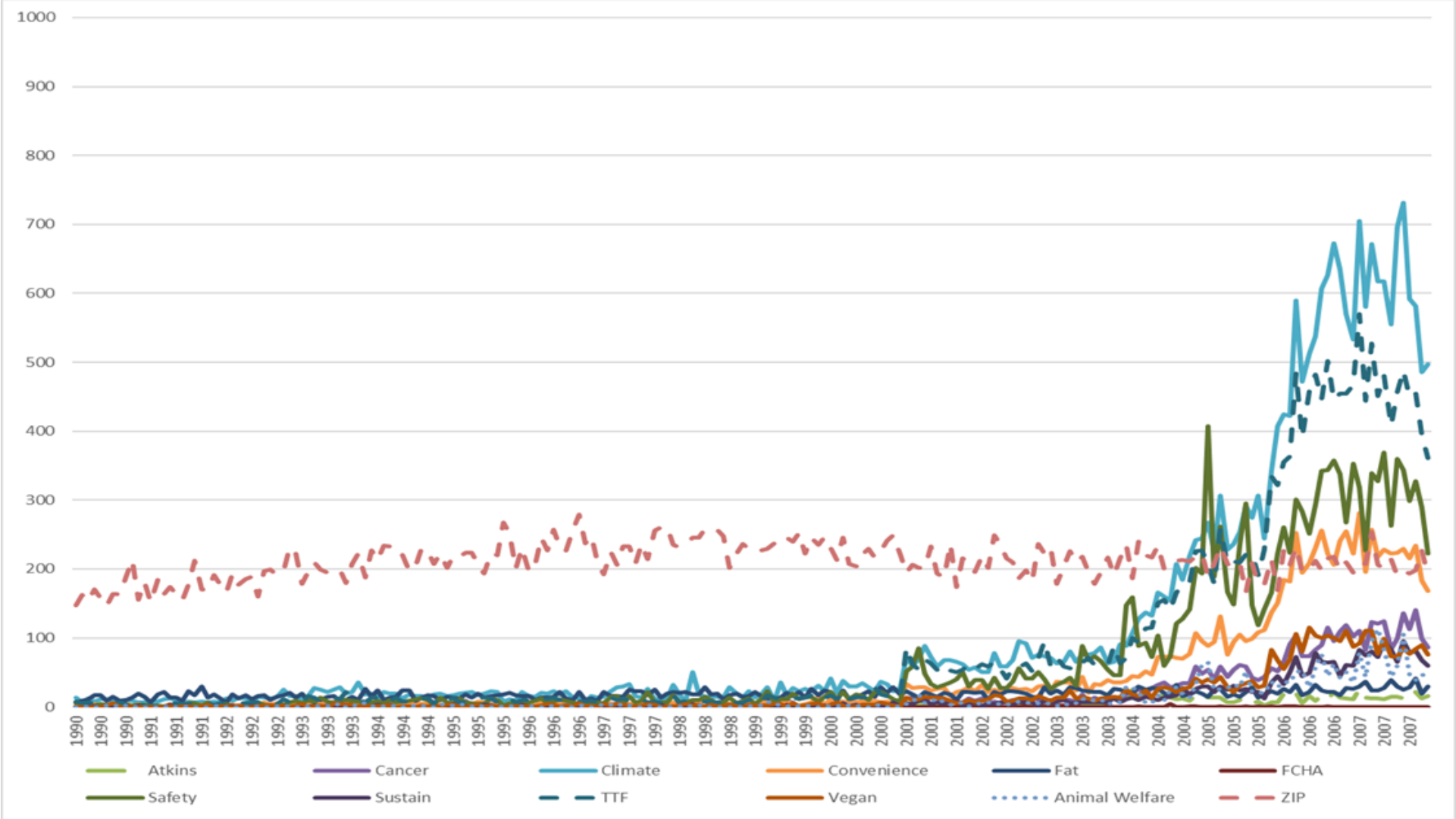
Table 3.1. Definition of Media and Medical Information Counts

<i>Abbreviated Name</i>	<i>Expanded Name</i>	<i>Keywords</i>
<i>Animal Welfare</i>	<i>Animal Welfare, Well-Being, Care</i>	<i>((animal welfare) or (animal well-being) or (animal friendly) or (animal care) or (animal handling) or (animal transportation))</i>
<i>Atkins</i>	<i>Atkins, High Protein, Low Carbohydrate</i>	<i>(Atkins or high protein or low carbohydrate)</i>
<i>Cancer</i>	<i>Cancer</i>	<i>(cancer)</i>
<i>Climate</i>	<i>Climate, Environment</i>	<i>(climate change or greenhouse gas or global warming or water or environment)</i>
<i>Convenience</i>	<i>Convenience</i>	<i>(preparation or prepare or cook or bake or grill) and (ease or easy or short or quick or fast)</i>
<i>Fat</i>	<i>Fat</i>	<i>(fat)</i>
<i>FCHA</i>	<i>Fat, Cholesterol, Heart Disease, Arteriosclerosis</i>	<i>(fat or cholesterol) and (heart disease or arteriosclerosis)</i>
<i>Safety</i>	<i>Safety</i>	<i>(safety or recall)</i>
<i>Sustain</i>	<i>Sustainability</i>	<i>(sustainable or sustainability or sustain)</i>
<i>TTF</i>	<i>Taste, Tender, Flavor</i>	<i>(taste or tasty or tender or juicy or flavor or savor)</i>
<i>Vegan</i>	<i>Vegan, Vegetarian, Meatless</i>	<i>(vegan or vegetarian or meatless)</i>
<i>ZIP</i>	<i>Zinc, Iron, Protein</i>	<i>(zinc or iron or protein)</i>

Note: Each search was conducted with keywords also including "and (beef or cattle)" to derive measures specific to the beef-cattle industry.

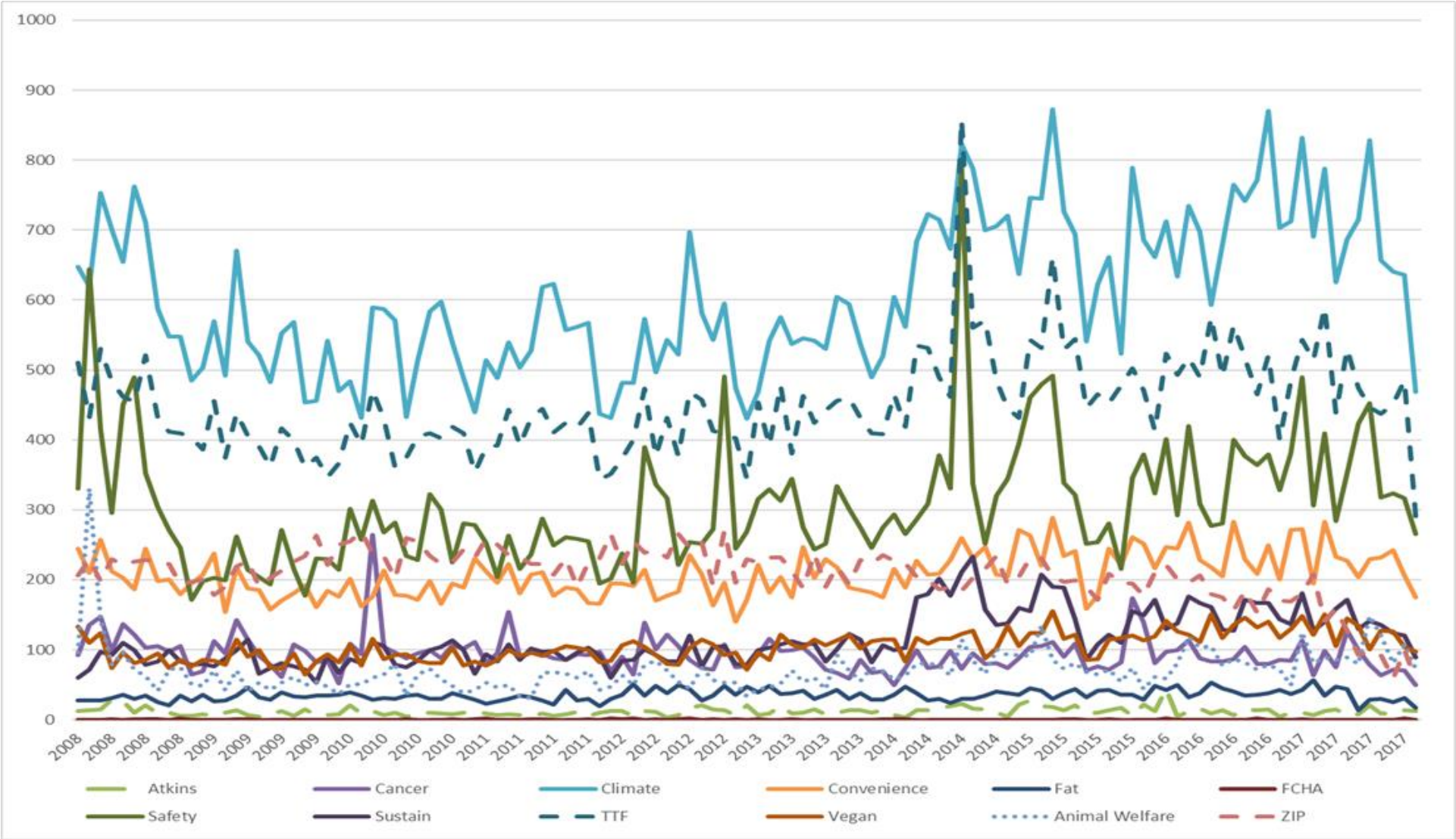
2. Media and Medical Information Effects

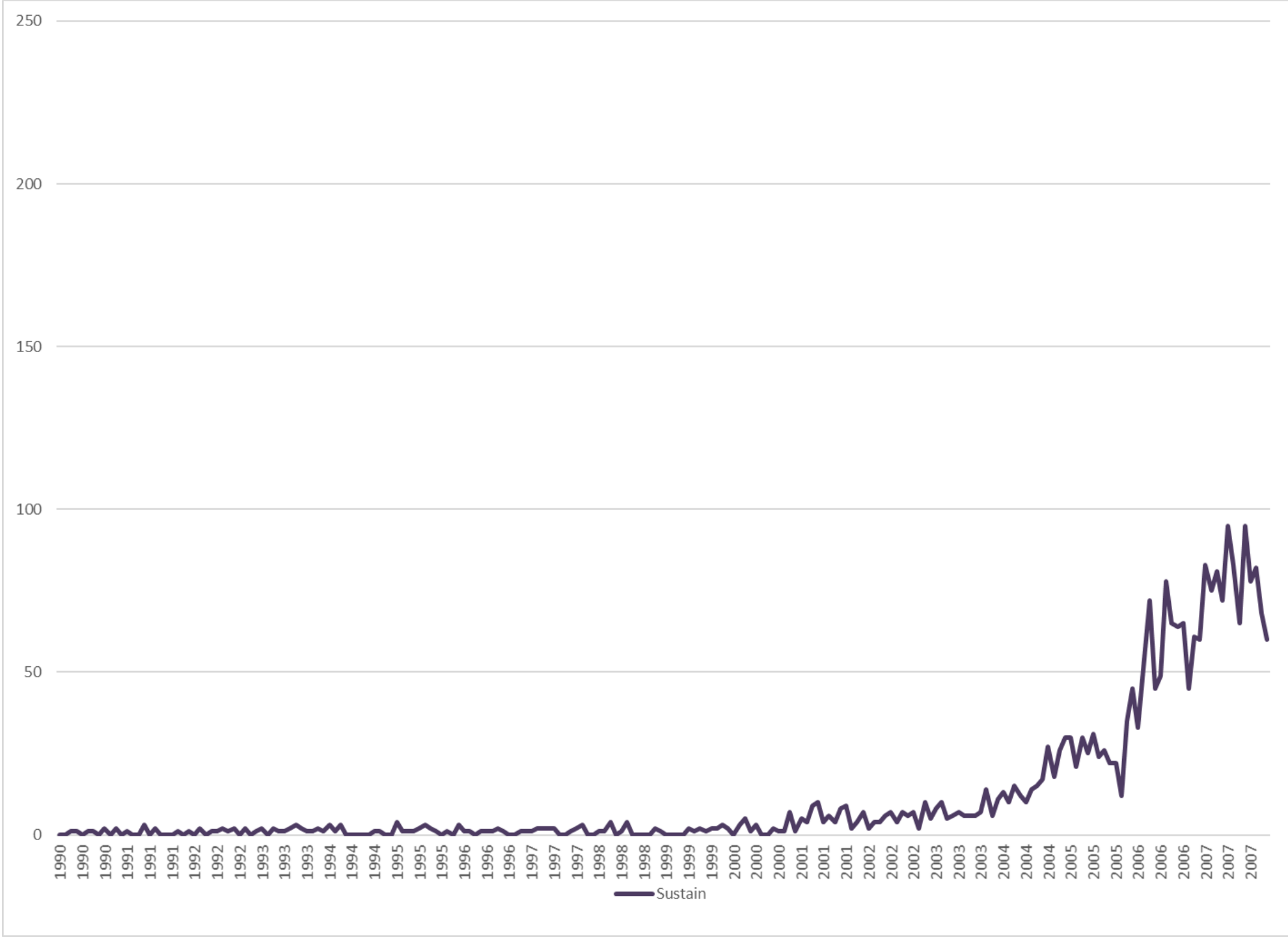
Figure 3.2. Beef Industry, Monthly Media and Medical Counts: Jan. 1990 – Dec. 2007

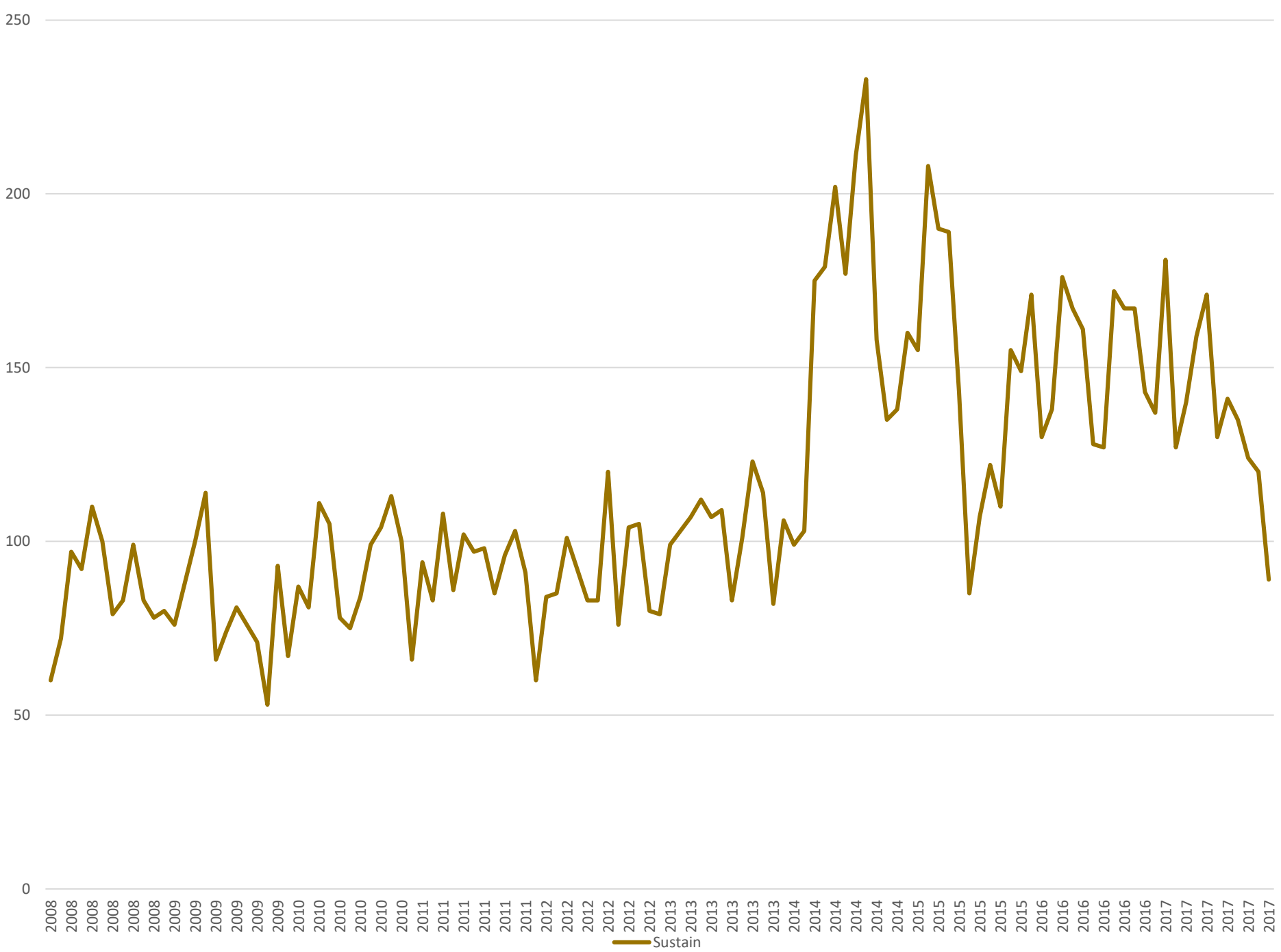


2. Media and Medical Information Effects

Figure 3.3. Beef Industry, Monthly Media and Medical Counts: Jan. 2008 – Nov. 2017

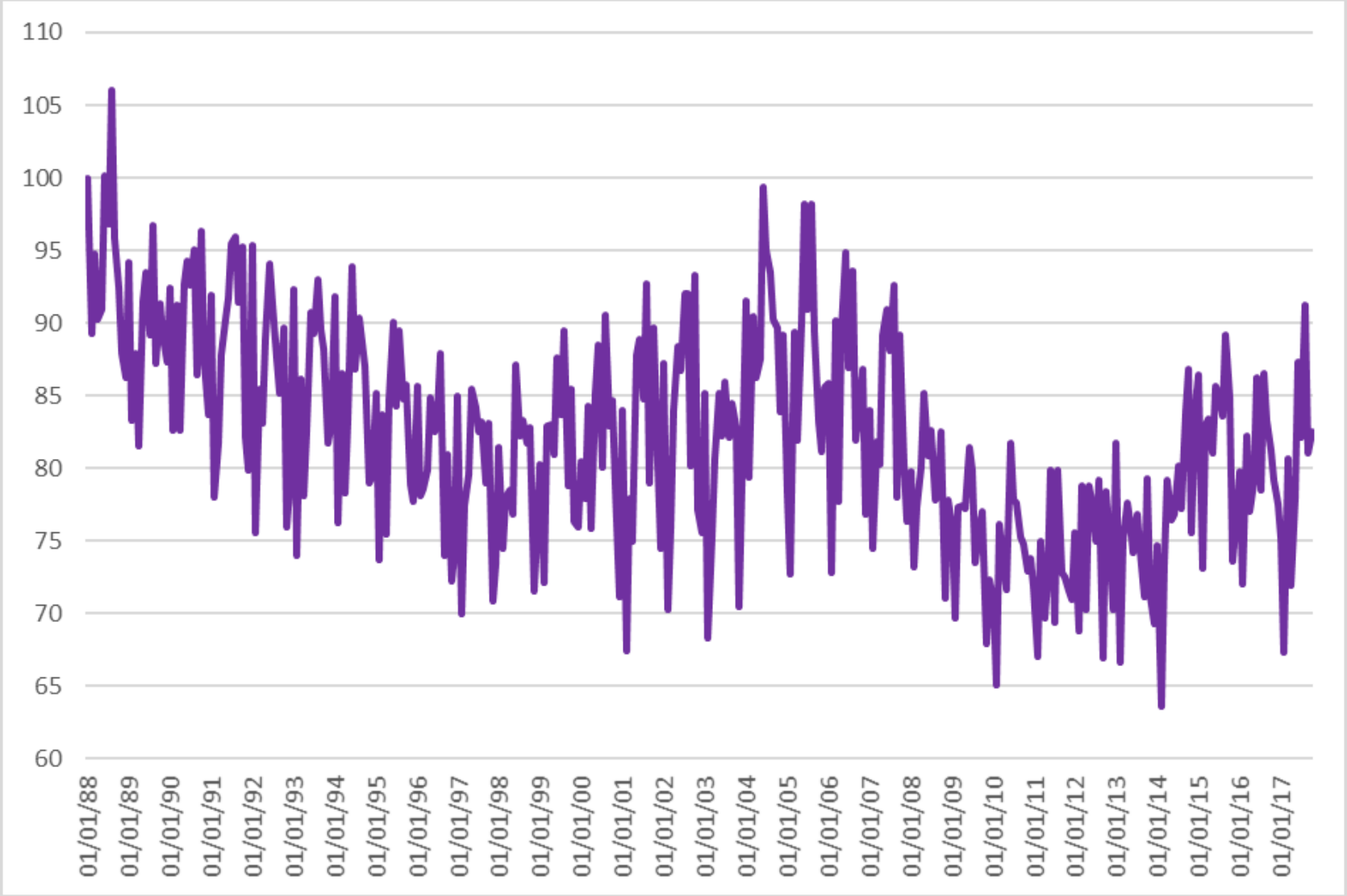






2. Media and Medical Information Effects

Figure 3.4. Monthly Beef Demand Index, Jan. 1988 – Oct. 2017.



2. Media and Medical Information Effects

Key Findings: 2008-2017 Period

Demand Catalysts: 1% Increase in Coverage:

- ❑ Atkins = +0.014% in beef demand
- ❑ Cancer = +0.197% in beef demand
- ❑ Fat = +0.031% in beef demand
- ❑ Sustain = +0.058% in beef demand
- ❑ Taste, Tender, Flavor = +0.479% in beef demand
- ❑ Welfare = +0.098% in beef demand

Doubling of “Sustain”
Media Coverage =
+5.8% Beef Demand

Demand Detriments: 1% Increase in Coverage:

- ❑ Climate = -0.209% in beef demand
- ❑ Convenience = -0.054% in beef demand
- ❑ Safety = -0.072% in beef demand
- ❑ Vegan = -0.240% in beef demand
- ❑ Zinc, Iron, Protein = -0.198% in beef demand

2. Media and Medical Information Effects

2008-2017 Differences from 1990-2007:

- Atkins positive effect reduced
- Fat (Sustainability) effects were negative (not sig), now positive
- 6 “new topics” now significant
- Seasonality effects reduced

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New, Alternative, Plant-Based Protein

Tonsor's two main points:

- World needs & wants more protein = new sources will continue to arise
 - ✓ There is “room” for BOTH conventional & new protein items
- MUCH MORE economic research is needed
 - ✓ Largely “working blind” currently

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Why people in rich countries are eating more vegan food

The further they go, the better



Print edition | Briefing

Oct 13th 2018 | WARSAW

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Why people in rich countries are eating more vegan food

The further they go, the better



Print edition | Briefing
Oct 13th 2018 | WARSAW

- **Article:** “60% of Poles (Poland residents) say they plan to cut back on meat this year.”
 - **GT:** Public often says they will change behavior more than actually occurs
 - “I Will Give You My Vote but Not My Money: Preferences for Public versus Private Action in Addressing Social Issues” AEPP, 2018 Norwood, Tonsor, & Lusk:
<https://academic.oup.com/aep/advance-article/doi/10.1093/aep/ppy002/4931105>

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Why people in rich countries are eating more vegan food

The further they go, the better



Print edition | Briefing
Oct 13th 2018 | WARSAW

- **Article:** “In America, Nielsen found in 2017 that 3% ... called themselves vegans and 6% vegetarians...”
 - **GT:** Estimates are consistent with work by Lusk & now ceased-FoodS effort (<http://jaysonlusk.com/blog/2014/9/30/who-are-the-vegetarians>)

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Why people in rich countries are eating more vegan food

The further they go, the better



Print edition | Briefing
Oct 13th 2018 | WARSAW

- **Article:** Confounds environmental impacts, animal welfare, and human health/nutrition in several ways
 - **GT:** Example of multiple social topics with mixed scientific evidence & wide social media “discussion” = leads to notable confusion & a high-cost to the industry if not being fully engaged...

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Why people in rich countries are eating more vegan food

The further they go, the better



Print edition | Briefing
Oct 13th 2018 | WARSAW

- **Article:** Overall implicitly points to likely decline in meat consumption
 - **GT:** I disagree. This is at odds with global meat demand growth & reflects in part article's omission of key role taste/flavor have in meat demand

New, Alternative, Plant-Based Protein

Key Economic Unknowns:

1. What demographics describe new product buyers?
2. What latent perceptions underlie purchase decision?
3. What proportion become repeated (vs. one-time novel) buyers?
4. How own- & cross-price sensitive are buyers?

Stated differently: *we need research based answers to understand current and future conventional meat substitution effects!*

Food Values Matter!

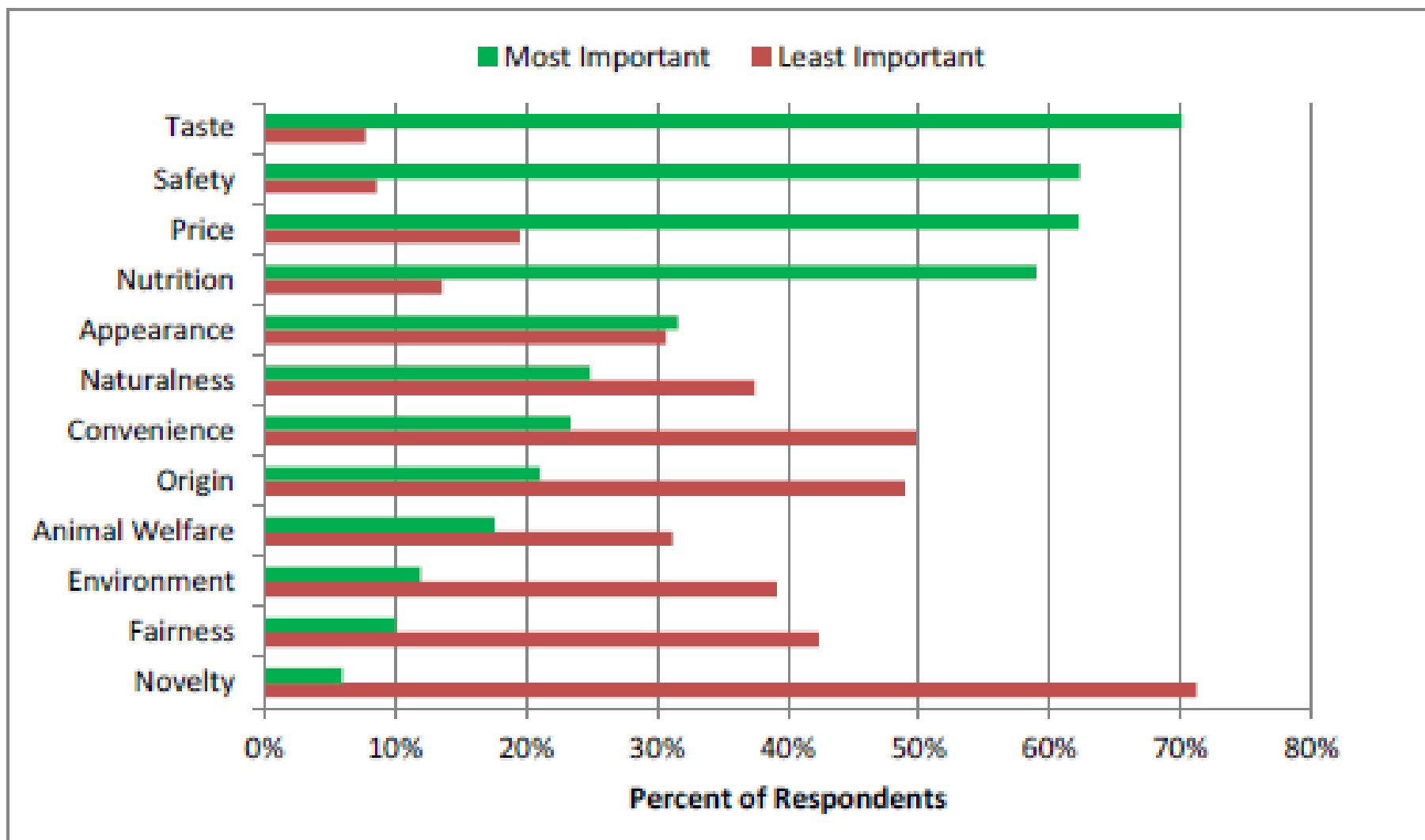


Figure 4.3. Food Values Considered Most and Least Important

Media Resources: Beef Demand

Livestock & Meat Marketing

[Home \(/\)](#) / [Livestock & Meat \(/livestock-meat\)](#) / [Meat Demand](#)

[Livestock & Meat \(/livestock-meat\)](#)

[Meat Demand](#)

Add to Favorites (<https://www.agmanager.info/flag/flag/favorites/11709?destination=node/11709&token=78f9d12b3b67c0e7707e215922c737f>)

Meat Demand

Title	Author	Date
Quarterly Choice Beef Demand Index (1990=100) (/livestock-meat/meat-demand/quarterly-choice-beef-demand-index-1990100)	Tonsor (/contributors/tonsor)	August 13, 2018
Quarterly All Fresh Beef Demand Index (1990=100) (/livestock-meat/meat-demand/quarterly-all-fresh-beef-demand-index-1990100)	Tonsor (/contributors/tonsor)	August 13, 2018

<https://www.agmanager.info/livestock-meat/meat-demand>

Assessing Beef Demand Determinants (/livestock-meat/meat-demand/assessing-beef-demand-determinants)

Presented at: Checkoff Update Session. 2018 Cattle Industry Convention. Phoenix, AZ.

Tonsor (/contributors/tonsor)
Schroeder (/contributors/schroeder)
Lusk (/contributors/lusk)
February 1, 2018

Assessing Beef Demand Determinants (/livestock-meat/meat-demand/assessing-beef-demand-determinants-0)

Presented at: Joint Evaluation Advisory Committee Meeting. 2018 Cattle Industry Convention. Phoenix, AZ.

Tonsor (/contributors/tonsor)
Schroeder (/contributors/schroeder)
Lusk (/contributors/lusk)
January 31, 2018

Assessing Beef Demand Determinants (/livestock-meat/meat-demand/assessing-beef-demand-determinants-1)

Prepared for the Cattlemen's Beef Board. Full report, available [HERE](https://www.beefboard.org/news/files/FY2018/Assessing%20Beef%20Demand%20Determinants_FullReport.pdf) (https://www.beefboard.org/news/files/FY2018/Assessing%20Beef%20Demand%20Determinants_FullReport.pdf).

Tonsor (/contributors/tonsor)
Schroeder (/contributors/schroeder)
Lusk (/contributors/lusk)
January 18, 2018

Search - beef demand

About 1,450 results (0.49 seconds)

New Beef Demand Indices

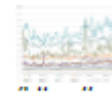
<https://www.beefboard.org/.../170221Beef-Demand-Landing-Page.asp>



Beef demand is critical to understand and monitor as it directly influences overall beef industry prosperity.

Assessing Beef Demand Determinants

https://www.beefboard.org/.../Assessing%20Beef%20Demand%20Determinants_FullReport.pdf



File Format: PDF/Adobe Acrobat

Jan 18, 2018 ... Assessing **Beef Demand** Determinants. Prepared for the Cattlemen's Beef Board. Glynn T. Tonsor, Kansas State University (gtonsor@ksu.edu).

New Study: Many Factors Impacting Domestic Beef Demand

<https://www.beefboard.org/.../180131Tonsor-beef-demand-print.asp>



Jan 31, 2018 ... **Beef demand** Beef quality, consumer incomes, attention to beef in health articles in medical journals and the general media, and shifts in race ...

(<https://www.beefboard.org/news/180131Tonsor-beef-demand-print.asp>)

Market Research to Build Beef Demand

<https://www.beefboard.org/.../150702-Market-Research-Landing-Page.asp>



Beef checkoff uses market-research efforts to guide investment of checkoff dollars into promotion and information programs to increase **beef demand**.

2013 Beef Demand Determinant Study

<https://www.beefboard.org/.../130612demanddeterminantstudy.asp>



Links to results of the 2013 **Beef Demand** Determinant Study commissioned by the Beef Checkoff Program.

beef demand in the Northeast region

<https://www.beefboard.org/.../NE%20Beef%20Demand%20Tonsor-2.20.17.pdf>

<https://www.beefboard.org/evaluation/180131beef-demand-determinant.asp>

<https://www.beefboard.org/producer/170221Beef-Demand-Landing-Page.asp>

<https://www.beefboard.org/search.asp?cof=FORID%3A11&cx=000951561340430319383%3Aosws6nacbuw&ie=UTF-8&q=beef+demand>

More information available at:



This presentation will be available in PDF format at:

<http://www.agmanager.info/contributors/tonson>

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