

From the Farm to the Table: An In-Depth Look into Information Passage between the Agriculture Sector and Consumers

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Agriculture in the US Economy

- 1.2% of GDP
- 1% of working population (2% of people)
- 9.4% of exports
- 4.9% of imports



The Facts on Farms

- 2.1 million farms (AG Census Demographics, 2007)
 - 1 million report positive net income
- 62% owned by primary operators
- 125,000 produced 75% of value (AG Census Farm Numbers, 2007)
 - 9% of farms in nation considered large or very large family farms

USDA Budget

- \$145 billion
 - 74% nutrition
 - 13% farm commodity
 - 7% forestry and conservation
 - 6% other
- Agencies overseen:
 - Forest Service
 - Animal and Plant Health Inspection Service (APHIS)
 - Food Safety Inspection Service (FSIS)
 - Nutrition programs (schools, WIC, etc)
 - Natural Resource Conservation Service (NRCS)
 - National Agricultural Statistics Service (NASS)
 - Economic Research Service (ERS)
 - United States Agency for International Development (USAID)



(USDA Budget, 2012)

Inputs	Price	Amount	(Price of bags)
Acreage	\$3-5,000/ac	400ac	
Tractors	\$115,000	1	
Tillage	\$80,000		
Planter	\$1-20,000		
Combine	\$175,000 +heads	1	
Fertilizer	\$700/ton	Varies	
Corn	\$400/bag	40 bags	\$16,000
Soybeans	\$80/bag	300 bags	\$24,000
Spraying	\$9/ac		
TOTAL			~\$2 million

Farming is a
HUGE
Investment

Acres	Bushels /acre	Yield (bushels)	Price	Earned
100 of corn	190	19,000	\$6.30	\$119,700
300 of soybeans	55	16,500	\$14	\$231,000
				\$350,700

(Cody Chesney, 2012)

Expenses & Products: Broken Down

- \$297 billion in products
- \$241 billion in expenses
- \$8 billion in farm payments

- Sales increased 48%, Inputs increased 39%
- Every \$1=\$1.31 in other economic benefits

(Nebraska, 2011)

Animal Production

Animals	1980		2010	
	Number (Millions)	Production (billion lbs)	Number (millions)	Production (billion lbs)
Cattle	111.2	40.3	92.6	41.6
Hogs	67.3	23.4	64.6	30.4
Sheep	12.7	746	5.6	405 (million lbs)

Animals	1970		2010	
	Number	Weight	Number	Weight
Broilers	2,987 (million)	10.8 (billion lbs)	8,625 (million)	49.2 (billion lbs)
Turkeys	116 (million)	2.2 (billion lbs)	244 (million)	7.1 (billion lbs)
Eggs	68.2 (billion)		91.4 (billion)	
Layers			339,961 (thousand)	269 eggs/layer

Dairy Cows	2006	2010
Number of Cows	9, 137 (thousands)	9,117 (thousands)
Milk Production (lbs)	181, 782 (million)	192,819 (million)
Milk Production/cow (lbs)	20,395	21, 149

The Problem

- Three generations removed from AG
- The Agriculture Sector Has Not Helped
- Survey (Roots of Change, 2011)
 - 42% food system is headed in wrong direction
 - 39% believe in right direction
 - 19% have no clue

Consumers Want to Know

- GM crops
- Use of Hormones & Antibiotics
- Food Safety
- Animal Welfare
- Organic vs Conventional
- Environmental Impact
 - Pesticides
 - Greenhouse Gases
 - Fertilizers
 - Public Lands for Grazing



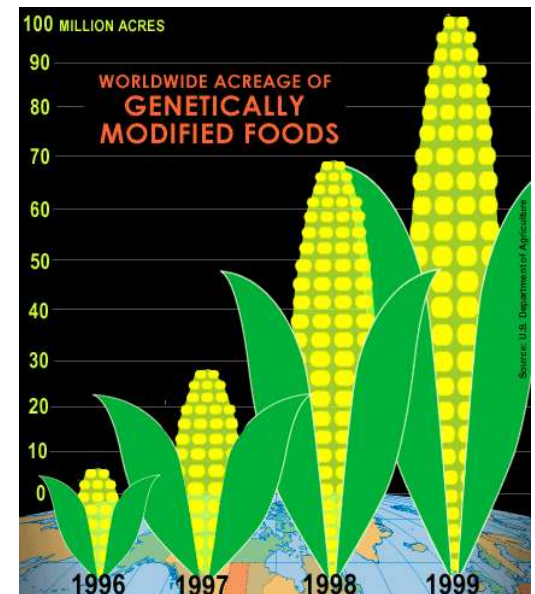
GM Foods

- GM crops
 - Risk factors: gender, age, education, income, profession, culture

FOOD for THOUGHT



It's perfectly natural



Hormones in Livestock

- “Hormone-free”
 - No such thing!
 - “Estrogens are in many foods - specifically phyto or plant estrogens. Soy flower has 755,000,000 (ng/500g), Tofu 113,500,000 (ng/500g), Milk 32 (ng/500g) and Beef from implanted steer 7 versus non implanted steer 5 (ng/500g). A pregnant woman produces 19,600,000 ng/day, non-pregnant woman 513,000 ng/day, adult man 136,000 ng/day, pre-puberal children 41,000 ng/day and 500 g of beef from implanted cattle 7ng” (Fox News, 2012)
- rBST (rBGH) in cattle
- 5 hormones used (FDA, 2011)
 - testosterone, estrogen, progesterone, trenbolone, zeranol
 - None used in Pork or Poultry
- EU (WTO Dispute, 1998)

Antibiotics in Livestock

- Antibiotics
 - Fed to keep animals healthy
 - FSIS monitors residues
 - “Not surprisingly, US Meat is banned worldwide” (Healthy Child Blog, 2010)
 - Antibiotic resistance
 - Human abuse of drugs?



Food Safety

- Decreased salmonella & E.coli
- The FSIS (American Agri-Women, 2009)
 - 2876 food inspectors
 - 1862 consumer safety officers
 - 1801 compliance officers
 - 1382 food technologists
 - 701 veterinarians
 - 9397 people with 6200 plants
- FDA (food safety and recalls)
 - 210,000 FDA inspected plants (\$538 million)
- CDC-Vital Signs



Organic

- Raised without use of hormones or antibiotics (USDA, 2010)



- Revert to small, backyard farms (American Agri-Women, 2009)
 - 165 million more acres need in production

- Healthier? Safer?

- No proof
- Same amount of e.coli (use manure as fertilizer...)



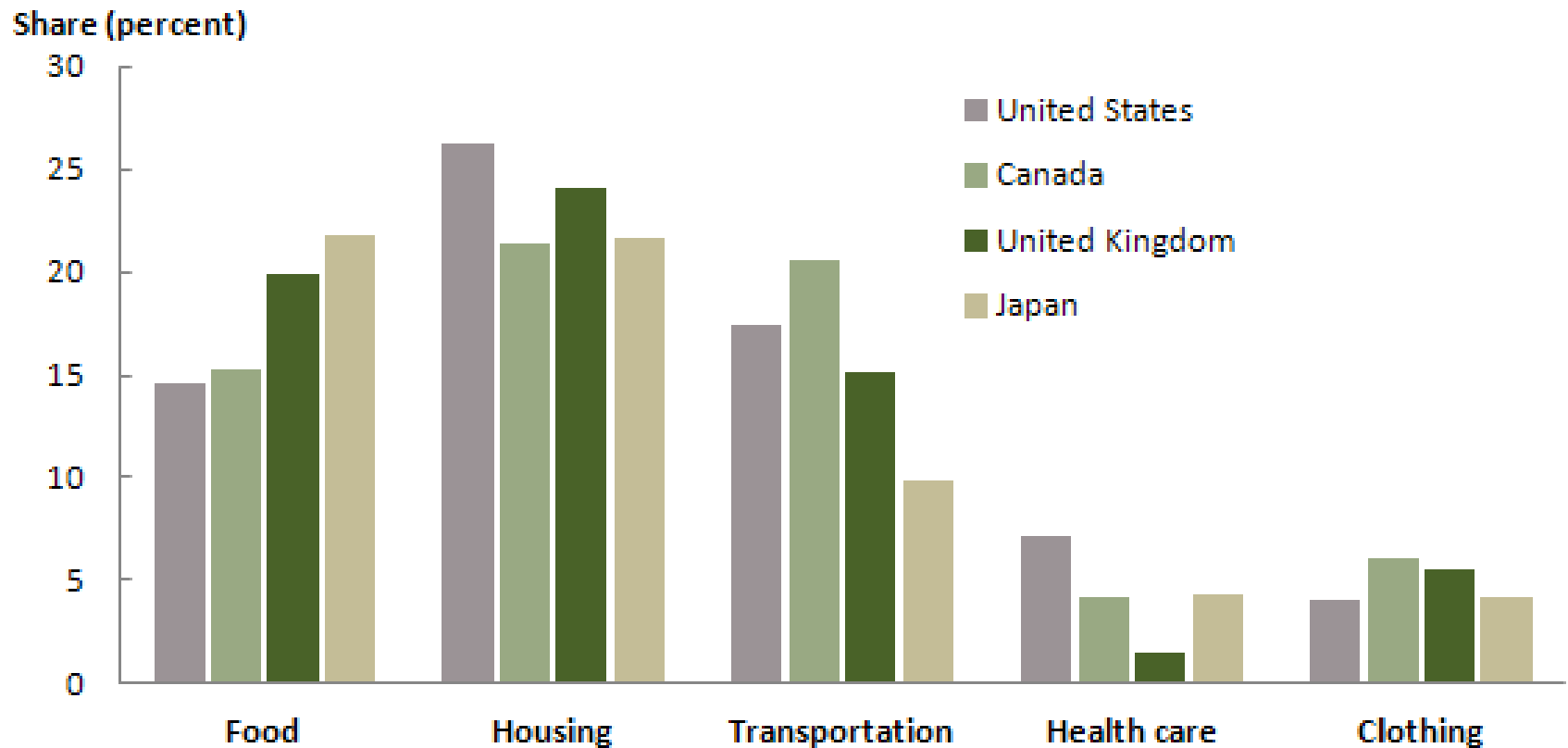
Environmental Impact

- Pesticides (EPA, 2012)
 - Federal and State
- Fertilizers (TFI, 2012)
 - Federal & State
 - 4Rs
- Manure management/Greenhouse Gases
 - 6.5% of US gas emission in 2010 (EPA, 2012)
 - Innovation?
- Public Grazing



Disposable Income

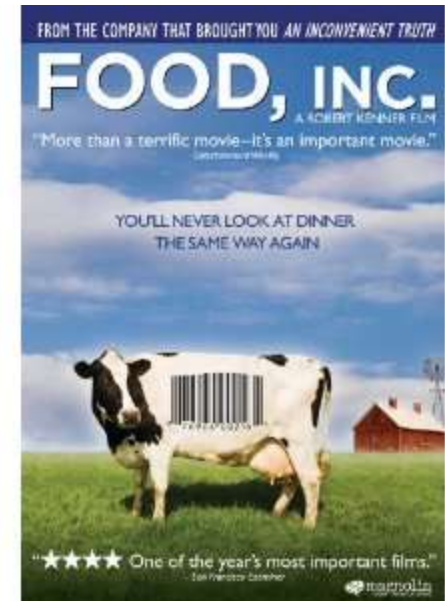
Chart 1. Shares of expenditures for selected categories, United States, Canada, United Kingdom, and Japan, 2009



SOURCE: U.S. Bureau of Labor Statistics

Defensive NOT Offensive

- Food, Inc. See: safefoodinc.com
- Agriculture a Waste of a Degree (Clemson, 2012)
- Need to (and are starting to):
 - Use Social Medias
 - Tours
 - Public Relations



The Responses

- Corn Farmer's Coalition
- NCBA
- NPB
- Canadian Quality Milk
- CTIC
- Wyoming CRM
- Agritourism
- USFRA
 - Food Dialogues



The advertisement features a family of four (a man, a woman, and two children) standing in a lush green cornfield. The man is holding a large white sign with the number "44" written on it. Text on the left side of the image reads: "America's corn farmers have cut soil erosion 44% by using innovative conservation methods." At the top left, it says "Carroll Family | Morris, Nebraska". At the bottom left, it says "There is more you should know about America's biggest crop." At the bottom right, it says "CORN FARMERS COALITION INNOVATION IS GROWING" with a small corn icon. Below that is the website "www.CornFarmersCoalition.org". At the very bottom, in small text, it says "The Corn Farmers Coalition is an affiliate of the National Corn Growers Association and 14 state corn associations representing some of thousands of farmers."

US Farmers and Ranchers Alliance (USFRA)

- [Alabama Farmers Federation](#)
- [American Egg Board](#)
- [American Farm Bureau Federation*](#)
- [American Farm Bureau Women's Leadership Committee](#)
- [American Farm Bureau Young Farmers & Ranchers](#)
- [American Farmers for the Advancement and Conservation of Technology](#)
- [American National CattleWomen](#)
- [American Sheep Industry](#)
- [American Soybean Association](#)
- [American Sugar Alliance](#)
- [Arkansas Farm Bureau Federation](#)
- [Association of Agriculture Production Executives](#)
- [California Farm Bureau Federation](#)
- [California Pork Producers Association](#)
- [Cattlemen's Beef Board/Beef Checkoff*](#)
- [Dairy Farmers of America](#)
- [Federation of State Beef Councils*](#)
- [Georgia Farm Bureau](#)
- [Illinois Farm Bureau](#)
- [Illinois Soybean Association*](#)
- [Indiana Farm Bureau Federation](#)
- [Indiana Soybean Alliance*](#)
- [Kansas Farm Bureau Federation](#)
- [Kansas Soybean Commission](#)
- [Kentucky Farm Bureau Federation](#)
- [Michigan Farm Bureau Family of Companies](#)
- [Minnesota Farm Bureau](#)
- [Minnesota Soybean Research & Promotion Council*](#)
- [Mississippi Farm Bureau Federation*](#)
- [Missouri Farmers Care](#)
- [National Association of Wheat Growers](#)
- [National Cattlemen's Beef Association*](#)
- [National Corn Growers Association*](#)
- [National Cotton Council](#)
- [National Milk Producers Federation*](#)
- [National Pork Board*](#)
- [National Pork Producers Council*](#)
- [Nebraska Farm Bureau Federation](#)
- [Nebraska Soybean Board*](#)
- [New York Farm Bureau Federation](#)
- [North Carolina Animal Agriculture Coalition](#)
- [North Carolina Farm Bureau Federation](#)
- [North Dakota Soybean Council](#)
- [Ohio Farm Bureau](#)
- [Ohio Soybean Council](#)
- [Pennsylvania Farm Bureau](#)
- [South Carolina Farm Bureau Federation](#)
- [Southern Peanut Farmers Federation](#)
- [Tennessee Farm Bureau Federation](#)
- [Tennessee Soybean Promotion Council](#)
- [Texas Farm Bureau](#)
- [United Egg Producers*](#)
- [United Fresh Produce Association](#)
- [United Sorghum Checkoff Program](#)
- [United Soybean Board*](#)
- [USA Rice Federation](#)
- [U.S. Grains Council](#)
- [U.S. Poultry & Egg Association*](#)
- [U.S. Soybean Federation](#)
- [Virginia Farm Bureau Federation](#)
- [West Virginia Farm Bureau](#)
- **Board Participants*

Solutions to Industry Issues

- COMMUNICATE with the public
 - Explain skills required in each field
 - Show Social Responsibility
- Target consumers correctly
 - High Price “Natural” does not appeal to income-constrained consumers
- Don't Hold Back Information
 - Allows Extremists to Exploit
(Croney & Reynnells et al., 2008)



FUTURE IS VEGAN

“It ain’t what you don’t know that is a problem-it is what you know that just ain’t so, that is the problem.” –Will Rogers

Walt Bones, SD Secretary of AG



Field to Market

- http://www.youtube.com/watch?v=Y3vkXV4P1lY&context=C4f12489ADvjVQa1PpcFOGo7oAgZMrIDhAGJoeYkt_RD1txN3Pydw=

References

- Bones, W. (2012, March 28). Do you believe the science? *The Cattle Business Weekly*, pp.9B.
- BLS. (March 2012). *Current Spending Topics: How do US expenditures compare with those of other countries?* Bureau of Labor Statistics. Retrieved from http://www.bls.gov/opub/focus/volume2_number16/cex_2_16.htm
- CIA. (April 11 2012). *The World Factbook:United States*. Central Intelligence Agency. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/us.html>
- Cody Chesney, personal communication, Mar 3 2012.
- Condon, L. (June 1998). *The WTO Dispute between the United States and the European Union Involving Growth-Promoting Hormones: An Abbreviated History*. American Meat Institute. Retrieved from <http://www.meatami.com/ht/d/sp/i/1485/pid/1485>
- Dimock, M. (Sep 2011). *US Farmers and Ranchers Begin with a Monologue While Consumers Want a Dialogue*. Roots of Change. Retrieved from <http://rootsofchange.org/content/us-farmers-and-ranchers-begin-monologue-while-consumers-want-dialogue>
- FDA. (Feb 2011). *Steroid Hormone Implants Used for Growth in Food-Producing Animals*. FDA. Retrieved from <http://www.fda.gov/AnimalVeterinary/SafetyHealth/ProductSafetyInformation/ucm055436.htm>
- Field to Market. (2012). Field to Market. Retrieved from <http://www.fieldtomarket.org/>
- NASS. (2012). NASS. Retrieved from <http://www.nass.usda.gov/index.asp>
- Nebraska Department of Agriculture. (Feb 2012). *Nebraska Agriculture Fact Card*. USDA-NASS. Retrieved from <http://www.agr.state.ne.us/facts.pdf>
- Stoler, F. (Mar 2012). *Hormones in cows and what it means for your health*. Fox News. Retrieved from <http://www.foxnews.com/health/2012/03/30/hormones-in-cows-and-what-it-means-for-your-health/>
- USDA (2007). *2007 Census of Agriculture: Demographics*. USDA-NASS. Retrieved from http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Fact_Sheets/Demographics/demographics.pdf
- USDA. (2007). *2007 Census of Agriculture: Economics*. USDA-NASS. Retrieved from http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Fact_Sheets/Economics/economics.pdf
- USDA. (2007). *2007 Census of Agriculture: Farm Numbers*. USDA-NASS. Retrieved from http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Fact_Sheets/Farm_Numbers/farm_numbers.pdf
- U.S. Farmers & Ranchers Alliance. (2012). *Share Materials To Get Involved*. U.S. Farmers & Ranchers Alliance. Retrieved from <http://usfraonline.org/materials-to-share/>
- Wilson, C. (2009). *Agriculture responses to Food, Inc*. American Agri-Women. Retrieved from <http://americanagriwomen.org/files/response%20to%20food%20inc.pdf>