U.S. Beef Industry Journey: The destination is up to us

Dan Thomson
Kansas State University
96% of Americans include beef in their diet.
Ground beef is a staple food

<table>
<thead>
<tr>
<th>Food</th>
<th>Rank</th>
<th>$, million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft drinks</td>
<td>1</td>
<td>357.7</td>
</tr>
<tr>
<td>Fluid milk</td>
<td>2</td>
<td>253.7</td>
</tr>
<tr>
<td><strong>Ground beef</strong></td>
<td>3</td>
<td><strong>201.0</strong></td>
</tr>
<tr>
<td>Bag snacks</td>
<td>4</td>
<td>199.3</td>
</tr>
<tr>
<td>Cheese</td>
<td>5</td>
<td>186.4</td>
</tr>
<tr>
<td>Baked bread</td>
<td>6</td>
<td>163.7</td>
</tr>
<tr>
<td>Cold cereal</td>
<td>7</td>
<td>139.2</td>
</tr>
<tr>
<td>Fresh chicken</td>
<td>8</td>
<td>121.4</td>
</tr>
<tr>
<td>Frozen snacks</td>
<td>9</td>
<td>101.5</td>
</tr>
<tr>
<td>Lunchmeat</td>
<td>10</td>
<td>99.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Food</th>
<th>Rank</th>
<th>$, million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid milk</td>
<td>1</td>
<td>1270.3</td>
</tr>
<tr>
<td>Soft drinks</td>
<td>2</td>
<td>1263.3</td>
</tr>
<tr>
<td>Cheese</td>
<td>3</td>
<td>948.9</td>
</tr>
<tr>
<td>Baked bread</td>
<td>4</td>
<td>874.8</td>
</tr>
<tr>
<td>Bag snacks</td>
<td>5</td>
<td>793.9</td>
</tr>
<tr>
<td><strong>Ground beef</strong></td>
<td>6</td>
<td><strong>621.1</strong></td>
</tr>
<tr>
<td>Cold cereal</td>
<td>7</td>
<td>583.9</td>
</tr>
<tr>
<td>Candy - packaged</td>
<td>8</td>
<td>527.7</td>
</tr>
<tr>
<td>Coffee and creamers</td>
<td>9</td>
<td>519.4</td>
</tr>
<tr>
<td>Ice cream</td>
<td>10</td>
<td>481.8</td>
</tr>
</tbody>
</table>

Nutrition assistance program report; USDA, November 2016
Why do we have some of our issues?

- Fear of the uninformed and unknown
- Human-animal bond, human safety
- Lack of consumer attachment
- We live in a 1st world country
Percent of per capita disposable income spent on food in the United States, 1960-2014

One Beef Concept

Cow-Calf

Stocker/Backgrounder

Feedyard

Weaning

Retail/Foodservice

Harvest/Fabrication
Healthy Cattle

External inputs

Healthy Planet

Sustainability = profitability

Income

Healthy People
Sustainability

- Humankind, country, business, family, yourself
- Do you practice sustainability – always?
- Sustainability modeling – where and how to farm
- Sustainability regulation/taxes – conservation
  - Global change verses corporate taxes
- Global climate change will have more impact on agriculture than agriculture will on global climate change.
- The globes climate, water availability, disease, population centers, tastes…..therefore food production will change
Animal Welfare

Summary of Global Consumer Attitudes

December 2011
Animal rights activists use animal abuse cases to drive animal welfare policy
Loss of trust - Audits
Creating culture verses checking a box
Preconditioning!!!!
Kindergarten Roundup

IOWA'S GREEN/GOLD TAG PRECONDITIONING PROGRAMS
DO YOU KNOW THE DIFFERENCE?

[Infographic showing different stages of conditioning for cattle]
ABR from cattle to humans

All companies along the way go above and beyond what is regulated

VCPR
FDA
Juris prudence

USDA
Testing

USDA
FSIS

Inspections
State DA

All companies along the way go above and beyond what is regulated.
Nutritional Composition

“Organic foods differ from conventional foods only in the way in which they are grown and processed.”

Source: American Dietetic Association

“On the basis of a systematic review of studies of satisfactory quality, there is no evidence of a difference in nutrient quality between organically and conventionally produced foodstuffs.”

Source: American Journal of Clinical Nutrition July 2009

“No distinctions should be made between organically and non-organically produced products in terms of quality, appearance or safety.”

Source: USDA
### Estrogenic activity of common foods (ng / 8 ounce serving)

- Soy flour defatted: 342,468,000
- Tofu: 51,483,600
- Pinto beans: 408,240
- White bread: 136,080
- Peanuts: 45,360
- Eggs: 252
- Butter: 141
- Milk: 15
- Beef from implanted steer: 3
- Beef from non-implanted steer: 2

Loy, 2011
<table>
<thead>
<tr>
<th></th>
<th>Estrogen production in humans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnant woman</td>
<td>19,600,000 ng/day</td>
</tr>
<tr>
<td>Non-pregnant woman</td>
<td>513,000 ng/day</td>
</tr>
<tr>
<td>Adult man</td>
<td>136,000 ng/day</td>
</tr>
<tr>
<td>Pre-puberal children</td>
<td>41,000 ng/day</td>
</tr>
</tbody>
</table>
“From these preliminary results, Caucasians that are well educated with higher incomes are the most likely market sector to focus marketing organic vegetables to.”
Bigger than natural and organic

- Where did my hamburger come from?
- Local micro-brew verses national brands
- Traceability
- Marketing not safety
People are needed
During the course of this presentation...
60 babies will be born in the U.S.

244 babies will be born in China

351 babies will be born in India
Poverty

“Enough is as good as a feast.”

“To feed our growing global population, we will have to produce the same amount of food in the next 40 years that we previously produced in the last 10,000 years”

Quote: Norman Borlaug (father of the modern Green Revolution)
Percent of US Households - Income level
mybudget360.com

Median household income $50,500
Prevalence of food insecurity, 2014

Explain this to single mom with two children to feed

Year : 1957
Time to market: 120 days
Average Weight: 1.4 kgs
Average Conversion : >3

Year : 2009
Time to market: 42 days
Average Weight: 2.6 kgs
Average Conversion : 1.7
Free range?

- Housing
  - Thermal neutral zone
  - Animal protection – behavior
  - Environmental protection
    - Land mass needed
    - Placing animals where the feed comes from
    - Amazon

- Transportation – more to do

CONVENTIONAL  320 acres
<1% of San Francisco
Wrap up

- Sustainability depends on continued improvement and consumers picking beef:
  - Treat animals well
  - Produce safe, nutritious beef
  - Provide traceability

- Beef must remain affordable
- Beef industry businesses must be profitable

- Care about others as much as we care about ourselves - share
We need strong, humane leadership in our country to not undo all the good we have done for our people.