Organic Beef: Analysis of Its Costs, Benefits, Local Supply and Demand

Lisa Sexton
Outline:

• **Background:**
  - What is conventional beef?
  - What is organic beef?

• **Benefits:**
  - Health benefits of conventional beef
  - Issues with antibiotics and hormones
  - Additional health benefits of organic beef

• **Costs:**
  - Production of conventional beef vs. organic beef

• **Supply:**
  - Local supply

• **Demand:**
  - Beef demand in U.S.
  - Who buys organic
  - Albany County demand for organic beef

• **Recommendations:**
Conventional Beef:

- Found in most grocery stores
- Spend most of their life on pasture or range
- After 12-18 months put into feedlots to finish on grain
- “Natural” Beef
Organic Beef:

- Follows USDA regulations
- Organic Foods Production Act 1990
  - Prohibited to use:
    - Plastic pellets for Roughage
    - Re-feed Manure
    - Feed formulas with urea
    - No use of growth hormones or promoters
    - No use of antibiotics
    - No synthetic trace elements
    - No vaccinations
  - Must keep records
    - Feed bought and fed
    - Trace animals back to farm or ranch
Organic Beef:

• Handled and Processed:
  - Can not come in contact with conventional beef

• USDA Organic Seal:
  - Ensures it has meet all USDA Organic Standards

• “Natural” does not mean organic!
Conventional Beef Health Benefits:

- Health Benefits of Conventional Beef:
  - Major Source of:
    - Zinc
    - Iron
    - B Vitamins
    - Protein
    - Conjugated Linoleic Acid
  - Only 1/3 of fatty acids in beef are cholesterol-raising
  - Beef contains small about of trans-fatty acids

![Important Vitamins and Minerals](chart)
Antibiotics and Hormones:

- **Hormones:**
  - Approved by Food and Drug Administration
  - Low amounts
  - Improve growth
  - Treat and control diseases
  - Raise cattle on smaller amount of feed

- **Concerns with Hormones:**
  - Minimal risk
  - Residue low compared to amount of hormones produced in human body
Antibiotics and Hormones:

- **Antibiotics:**
  - Cattle and Human use same
  - Used to treat and prevent bacterial diseases
  - Enhance growth and feed efficiency
  - Antibiotics given during high stress periods
  - Help prevent the spread of disease to other animals and humans
  - Antibiotics play major role in modern agriculture

- **Concerns with Antibiotics:**
  - Minimal Risk
  - “Withdrawal Period”
  - Antibiotics could potentially promote antibiotic resistant bacteria
Organic Beef Health Benefits:

- **Organic Beef:**
  - No additional health or safety benefits
  - Prestige of buying organic

- **Grassfed Beef:**
  - Grassfed Exclusively
  - Lower in fat
  - Fewer calories
  - Higher in Omega-3
Study conducted by M.I. Fernandez and B.W. Woodward

Process:
• Conventional Steers:
  - 24 conventional steers
  - Vaccinated, Wormed, implanted, creep fed with lasalocid

• Organic Steers:
  - 30 steers
  - Wormed before weaning

• Both feeds had same amount of energy content and crude protein

• Steers were weighed at beginning of study and every 28 days

• After 235 days the study was terminated
Results: Most calves did not make weight, but surpasses the fat requirement.

Conventional Steers:
- Associated Costs: Feed, yardage, veterinary
- If steers got sick, treated and back on feed

Organic Steers:
- Associated Costs: Feed, yardage, labor
- If steers got sick, calves fought disease on their own or were treated and removed from organic study

Conclusion:
Raising conventional calves is most efficient to reach target weight and fat content. Production of conventional calves is more cost efficient.
## Local Supply:

### Conventional Beef

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Phone</th>
<th>Available</th>
<th>Price</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crow Creek Meat Processing</td>
<td>2502 Ridge Road Cheyenne, Wyoming</td>
<td>(307) 635-1150</td>
<td>Thanksgiving</td>
<td>$2.45 per pound</td>
<td>~400 lbs (Hanging weight)</td>
</tr>
<tr>
<td>Butcher Block</td>
<td>1968 Snowy Range Road, Laramie, Wyoming</td>
<td>(307) 745-4534</td>
<td>Whenever (After hunting season)</td>
<td>$2.25 per pound</td>
<td>~400 lbs (Hanging weight)</td>
</tr>
<tr>
<td>Rainbow Meats</td>
<td>310 S. 17th Street, Laramie, Wyoming</td>
<td>(307) 745-4613</td>
<td>Whenever (After hunting season)</td>
<td>$2.09 per pound</td>
<td>~400 lbs (Hanging weight)</td>
</tr>
</tbody>
</table>
# Local Supply:

<table>
<thead>
<tr>
<th>Organic Beef</th>
<th>Name</th>
<th>Address</th>
<th>Phone</th>
<th>Available</th>
<th>Price</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Colorado’s Best Beef Company</td>
<td>Littleton, Colorado</td>
<td>(303) 449-8632</td>
<td>1st of December</td>
<td>$3.40 per pound + traveling costs</td>
<td>~350-400 lbs (Hanging weight)</td>
</tr>
<tr>
<td></td>
<td>Front Range Natural Beef</td>
<td>3744 W. Cleveland Ave. Wellington Colorado</td>
<td>(970) 568-9008</td>
<td>February</td>
<td>$3.45 per pound + traveling costs</td>
<td>~340-400 lbs (Hanging weight)</td>
</tr>
<tr>
<td></td>
<td>Mosher Products</td>
<td>P.O. Box 20549 Cheyenne Wyoming</td>
<td>(307) 632-1492</td>
<td>October 22</td>
<td>$3.05 per pound + traveling costs</td>
<td>~400 lbs (Hanging weight)</td>
</tr>
</tbody>
</table>
• Conventional Beef:
  - Can also purchase at Albertsons, Safeway, and Walmart
  - Average price for side of beef: $2.26 per pound
  - Side of beef would cost: $905

• Organic Beef:
  - Can purchase organic ground beef and specialty cuts at Albertsons
  - Average price for side of organic beef: $2.96 per pound
  - Side of organic beef would cost: $1186
  - Additional transportation costs
Beef Demand in U.S.:

- Beef is largest cash receipts in U.S.
- Consumers have several options for meat products in the U.S.
- Chicken is the highest consumed meat in the U.S.
Beef Demand in U.S.:

- Fresh Beef:
  - Ground Beef
  - Steaks
  - Stew Beef
  - Beef Dishes
  - Other Cuts

- Processed Beef:
  - Smoked Sausage
  - Corned Beef
  - Beef Jerky

- 87% of Beef consumed is fresh
- 58 lbs of beef consumed is fresh
- Average American eats 28 lbs of ground beef each year
Beef Demand in U.S.:

• Gender and Age Comparison:
  - Males eat more beef than women
  - Males 20-39 years old consume the largest amount of beef each year
  - Females over 60 years consume the least amount of beef each year
Who Buys Organic:

• Age:
  - 40-65 years old
  - More aware of diet, health, agriculture and environment
  - Age of head of household

• Income:
  - $70,000 per year per household

• Education:
  - 80% of organic consumers have attended some college
  - 51% of organic consumers have attended some graduate schooling
  - Education helps to understand benefits to health and environment

• Children Present in Household:
Who Buys Organic:

3 Reasons why people buy organic:

- Consumers believe there are extra health benefits
- Consumers believe organic products taste better
- Consumers believe they are safer
  - Do not contain antibiotics
  - Do not contain hormones
Albany County Demand for Organic Beef:

- Albany County Profile:
  - Albany County Population in 2005: 30,890
  - Average income in Albany County in 2005: $28,858
  - Average household income in Albany County in 2005: $38,517
  - In Wyoming, 21.3% of household incomes are between $50,000 and $70,000
  - Average American spends 0.525% of income on beef each year
Albany County Demand for Organic Beef:

- Albany County Profile:
  - Largest group of Albany County Residents: 20-34 years old
  - Second Largest group of Albany County Residents: 35-54 years old
  - 64.9% of Households in Wyoming have children
  - 89% of Albany County residents have graduated high school
  - 38.5% of Albany County residents have attended some college

![Population Distribution Chart]

- Population Distribution:
  - 75+
  - 55-74
  - 35-54
  - 20-34
  - <19

Population Distribution: [Chart showing population distribution]
Albany County Demand for Organic Beef:

- Organic Consumer Profile vs. Albany County Profile:

  - Age:
    - 8000 consumers between 40-65 years old
    - 11,301 consumers between 20-39 years old, which consume largest amount of beef each year

- Income:
  - Average Income: $38,517
  - University of Wyoming Employees, doctors, lawyers, entrepreneur etc who make exceptional incomes

- Education:
  - Of Albany County population of 30,890, 11,893 have attended some college

Children:
  - 64.9% of Household have children
Organic Beef Recommendations:

• Additional research:
  - Health Benefits
  - Residue of antibiotics and hormones

• Reduce Production Costs:
  - Increase rate of gain
  - Decrease days of feed
  - Lower costs for consumers
  - Increase producers
  - Lower prices on organic feed
Albany County Recommendations:

- More abundance of organic beef available
- Different organic beef cuts available
- Increase marketing for organic beef in Albany County
Questions: