Back to the Future!

North Coast and Mountain Region of California

MEAT INDUSTRY CAPACITY AND FEASIBILITY STUDY
Investigators & Cooperators

**Investigators**
- John Harper, UCCE Livestock & Natural Resources Advisor – Mendocino & Lake Counties
- Shermain Hardesty, PhD., Extension Specialist – UCD Ag. Economics Department
- Stephanie Larson, UCCE Livestock & Natural Resources Advisor – Sonoma & Marin Counties
- Morgan Doran, UCCE Livestock & Natural Resources Advisor – Yolo, Solano, & Napa Counties
- Roger Ingram, UCCE Livestock & Natural Resources Advisor – Placer & Nevada Counties
- Theresa Becchetti, UCCE Livestock & Natural Resources Advisor – Stanislaus County

**Cooperators**
- GHD ProAnd, New Zealand
- The Facilities Group, Atlanta, Georgia
- Sam Goldberger, North Coast Meats
- Bob Sainz, PhD., UCD Animal Science Department
- Juliana Cisotto, student, UCD Animal Science Department
- Josh Davy, UCCE Livestock & Natural Resources Program Representative - Tehama County
- Holly George, UCCE Livestock & Natural Resources Advisor - Plumas County
- Glenn Nader, UCCE Livestock & Natural Resources Advisor - Sutter-Yuba Counties
- Sheila Barry, UCCE Livestock & Natural Resources Advisor - Santa Clara, Alameda, & Contra Costa Counties
Grant from Economic Development Administration ~$259 K

4 Elements

- Meat production capacity
- Facilities and process design
- Market analysis
- Economic analysis

UCCE received $38,625
Post WW II, U.S. meat industry
  • Intense consolidation, especially in processing sector

USDA inspected facilities in Northern California
  • Closing or at capacity
  • Sale of Rancho in 2008 for housing
  • Certified organic facilities are rare

Local meat sales extremely difficult
  • Both slaughter & processing must be USDA inspected

“Open space” maintained
  • Range livestock is low sustainable use

Livestock production is close to Bay area markets
  • Makes sense with high cost of fuel

Supportive business
  • More marketing opportunities for local livestock producers
  • Creates new jobs
Harvest & Processing Plants

USDA Inspected Harvest Sites in Northern California

USDA Inspected Processors in Northern California
Harvest & Processing Plants

USDA Inspected Beef Harvest Sites in Northern California

USDA Inspected Sheep Harvest Sites in Northern California
Harvest & Processing Plants

USDA Inspected Goat Harvest Sites in Northern California

USDA Inspected Swine Harvest Sites in Northern California
Harvest & Processing Plants

USDA Inspected Organic Harvest Sites in Northern California
Why?

- **Niche meats growth potential**
  - Organic fastest growth segment of organic food business
  - 140% from 2004 to 2006
  - Grass-fed meats on the rise
    - 65K head in 2006; 100K in 2007; projected to rise to 250-400K by 2010
  - Brand-name beef with a “natural” claim totaled $69.8 million for 52-week period in 2006
    - 51% increase from previous year
  - 2007 – A national study found 69% respondents believe “local” is better for personal health than food that traveled cross-country
  - Price premiums of 10-30% for niche meats are common, though certified organic meats were higher

- **San Francisco Bay Area & Northern California market research**
  - Region has highest potential demand for grass-fed, natural, and/or organic beef products.

- New Zealand reverted successfully to smaller, locally based harvest and processing plants
- New technology for “green” or environmentally design fits smaller facilities
What many think it will be

100K feedlot
700 animals/day
New Zealand Design

New generation processing plant that will:

- Be a humane & environmentally friendly multi-species harvest plant
- Conform to the most rigorous USDA, organic and Humane Society standards
- Integrate a meat cutting and packing plant to breakdown carcasses and package cuts suited to needs of different market segments
- Use “green” techniques with regard to pollution, waste emissions and natural resource utilization
- Be employee friendly and humane, in terms of pay scale, benefits, job longevity, and work safety
- Be aesthetically friendly so that it minimizes the impact on the environment and the community
- Provide local meat products for local retailers, restaurants, schools and institutions.

80 cattle per day
50 lambs per day
New Zealand Holding Yard
New Zealand Style Layout
Facilities & Design Details

- **Capability & Features**
  - 80 cattle and 50 lambs per day
  - 8 hours/day, 5 days/week – single shift
  - Carcass weights
    - Cattle live weight – 200 to 1,300 lbs
    - Cattle dead weight – 100 to 715 lbs
    - Lambs live weight – 100 to 120 lbs
    - Lambs dead weight – 50 to 60 lbs
  - May process pigs in future
  - Target markets are domestic and export
  - Process most waste on site using new generation bio-digesters
  - Stringent energy conservation measures – active & passive solar heating and cooling, lighting and HAVAC design
  - Carcass tracking provision – point of entry up to and including individual cuts

- **Work Force**
  - Process Staff – 35
  - Administration – 9
## Facility Cost Estimates

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost ($1,000’s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef Slaughter</td>
<td>$370.5</td>
</tr>
<tr>
<td>Lamb Slaughter</td>
<td>$475.5</td>
</tr>
<tr>
<td>Processing Rooms</td>
<td>$996.0</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$1,842</strong></td>
</tr>
<tr>
<td>Pig Slaughter</td>
<td>$85.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,927</strong></td>
</tr>
</tbody>
</table>

Excludes stockyards, refrigeration, reticulation of services, electrical and controls, effluent treatment and disposal, offices and amenities, ventilation and air conditioning. All work is envisioned to be done by local contractors and so the Facility Group will provide those estimates.
Niche Meat Market Demand Study

- Assessed market prospects for “niche” red meats
  - Certified organic, Grass-fed, naturally-raised, local, Kosher, and Halal
  - San Francisco & Sacramento regions
- 42 interviews with individuals in meat purchasing
  - Restaurants and institutional food service providers (IFSP)
  - Retail grocers – primarily regional chains but also one-store operations and national chains
  - Distributors
- Review of recent literature on U.S. niche meat market
  - Academic articles
  - Trade journals
  - Mass-media publications
Demand for niche meat is growing
- U.S. sales of natural & organic increased
  - 28.4% in dollar value
  - 24.5% in pound value from 2005 to 2006
- Three-fourths of respondents expected
  - Volume to increase over the next year and over the next three years

Most popular niche meats
- Red meats – beef, pork and lamb
- Naturally-raised (no hormones or antibiotics)
- Grass-fed
- Locally grown

Price Premiums for niche meats (over conventional)
- Depend on cut, niche attribute, brand and shifts in conventional pricing
- Premiums of 10 – 30% were common
- Certified organic meats were typically much higher
Fresh meats were preferred to frozen
Whole carcass purchases limited to hogs and lambs
Restaurants, IFSP and distributors more willing to work with seasonally available meats than are retailers
59% of restaurant/IFSP wanted high-end cuts
Rest use more burger and lower end cuts
Nearly half of the retailers sell mostly middle meats
Distributors found a market for everything
Various attribute importance

1-5 scale
- Taste (4.9)
- “No hormones/antibiotics” (4.0) & “Consistent cut size/shape” (4.0)
- “Health benefits” (3.9)
- “Humanely-raised” (3.7)
- Local (3.5), “family farmed” (3.5) & “personal connection with producer” (3.4) were similar
- Grass-fed (2.7) & Organic (2.6)

Interest in 3 younger grass-fed beef products

- Vitello (3-4 mo.), vitellone (6-8 mo.), and manzo or “baby beef” (11-13 mo.)
- Less than half of the respondents were interested
- Listed in order of declining popularity
- Restaurants were most interested
Local meats
  - Producers were most common source
  - Challenges
    - Volume – having enough and regularly available
    - Quality – taste, texture, size of cuts, fat content, and variability among cuts

Demand
  - Disclaimers
    - sample size, accurate volume data and terminology confusion
    - Based on average volumes of niche beef bought & sold
      - Ten distributors account for more than 14 million pounds of beef per year

Capacity
  - 20,000 beef cattle; 700 lbs yield = 14 million pounds of beef
Time to fill out the

PRODUCER CAPACITY SURVEY
A first glance at survey returns

NEED ASSESSMENT FOR SMALL-SCALE LIVESTOCK HARVESTING AND PROCESSING FACILITIES IN NORTHERN CALIFORNIA
Survey Objectives

1. Survey Northern California ranchers to determine:
   - their current niche marketing efforts and success.
   - their interest in entering and expanding niche market sales.
   - the species and number of livestock they would like to process.
   - the time of year they would seek processing services.
   - the type of processing they need (USDA and non-USDA inspection).
   - the type of product they produce (organic, grass-fed, natural, etc.).
   - which special value-added products they would offer.
   - the types and locations of their target markets.
   - their geographical preferences for processing facilities.

2. Survey current livestock harvesting and processing facilities in Northern California to determine the current processing capacity.

3. Extend project conclusions to target audiences through publications, newsletters, workshops and conferences.
Counties Surveyed
# Overall Survey Returns

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total surveys sent</td>
<td>5967</td>
</tr>
<tr>
<td>Bad addresses, etc.</td>
<td>655</td>
</tr>
<tr>
<td>Sub-total</td>
<td>5312</td>
</tr>
<tr>
<td>Completed surveys returned</td>
<td>443</td>
</tr>
<tr>
<td>Percent returned</td>
<td>8.3%</td>
</tr>
</tbody>
</table>

\[
\frac{443}{5312} = 0.083 = 8.3\%
\]
Number and percentage of returned surveys by county.
Profile of respondents

Farm size of respondents.

Size class for # of livestock:
- <50
- 50-99
- 100-199
- 200-499
- >500

Number of respondents:
- Cow-calf
- Weaned Calves
- Sheep
- Goats
Experience with existing facilities

Current availability and accessibility of facilities.

- Very deficient: 52%
- Slightly below demand: 19%
- Just enough: 20%
- Very available & accessible: 8%
<table>
<thead>
<tr>
<th>Barrier</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to slaughter</td>
<td>4.0</td>
</tr>
<tr>
<td>USDA regulation/label</td>
<td>4.0</td>
</tr>
<tr>
<td>Access to processing</td>
<td>3.8</td>
</tr>
<tr>
<td>Organic cert. process and costs</td>
<td>3.8</td>
</tr>
<tr>
<td>Access to marketing &amp; distribution channels</td>
<td>3.6</td>
</tr>
<tr>
<td>Knowledge about doing direct sales</td>
<td>3.5</td>
</tr>
<tr>
<td>Matching customer demand with product availability</td>
<td>3.5</td>
</tr>
<tr>
<td>Insurance requirements</td>
<td>3.4</td>
</tr>
</tbody>
</table>
### Barriers limiting entry to niche markets (1=not a barrier, 5=very significant barrier).

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer education</td>
<td>3.3</td>
</tr>
<tr>
<td>Time away from ranching activities</td>
<td>3.3</td>
</tr>
<tr>
<td>Finding customers</td>
<td>3.1</td>
</tr>
<tr>
<td>Capital to get started</td>
<td>3.1</td>
</tr>
<tr>
<td>Sales negotiations &amp; payment collections</td>
<td>3.1</td>
</tr>
<tr>
<td>Knowledge of consumer preferences</td>
<td>3.1</td>
</tr>
<tr>
<td>Lack of cash flow while feeding livestock</td>
<td>3.1</td>
</tr>
<tr>
<td>Transportation to processing facility</td>
<td>2.9</td>
</tr>
<tr>
<td>Lack of land/feed to hold &amp; finish livestock</td>
<td>2.7</td>
</tr>
</tbody>
</table>
Ranking of target markets (1=lowest priority, 5=highest priority).
Maximum time willing to travel for processing

**Chart Description:**
- **Y-axis:** Number of respondents.
- **X-axis:** Time of travel (minutes)
- Bars represent the percentage of respondents within each time interval:
  - 0-15 minutes: 100%
  - 16-30 minutes: 99%
  - 31-60 minutes: 89%
  - 61-90 minutes: 55%
  - 91-120 minutes: 26%
  - 121-180 minutes: 11%
  - >180 minutes: 3%