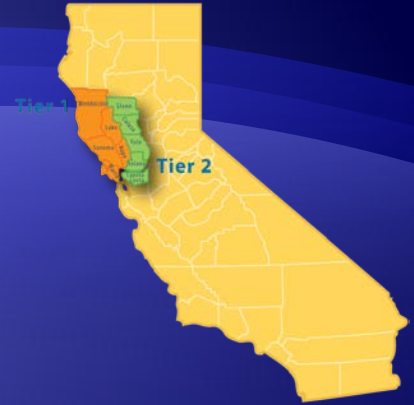


Back to the Future!



North Coast and Mountain Region of California

MEAT INDUSTRY CAPACITY AND FEASIBILITY STUDY



Economic Development & Financing Corporation



- ◆ Grant from Economic Development Administration ~\$259 K
- ◆ 4 Elements
 - ◆ Facilities and process design
 - ◆ Producer needs & meat production capacity
 - ◆ Market analysis of niche meats
 - ◆ Economic analysis and impact
- ◆ UCCE received \$38,625

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

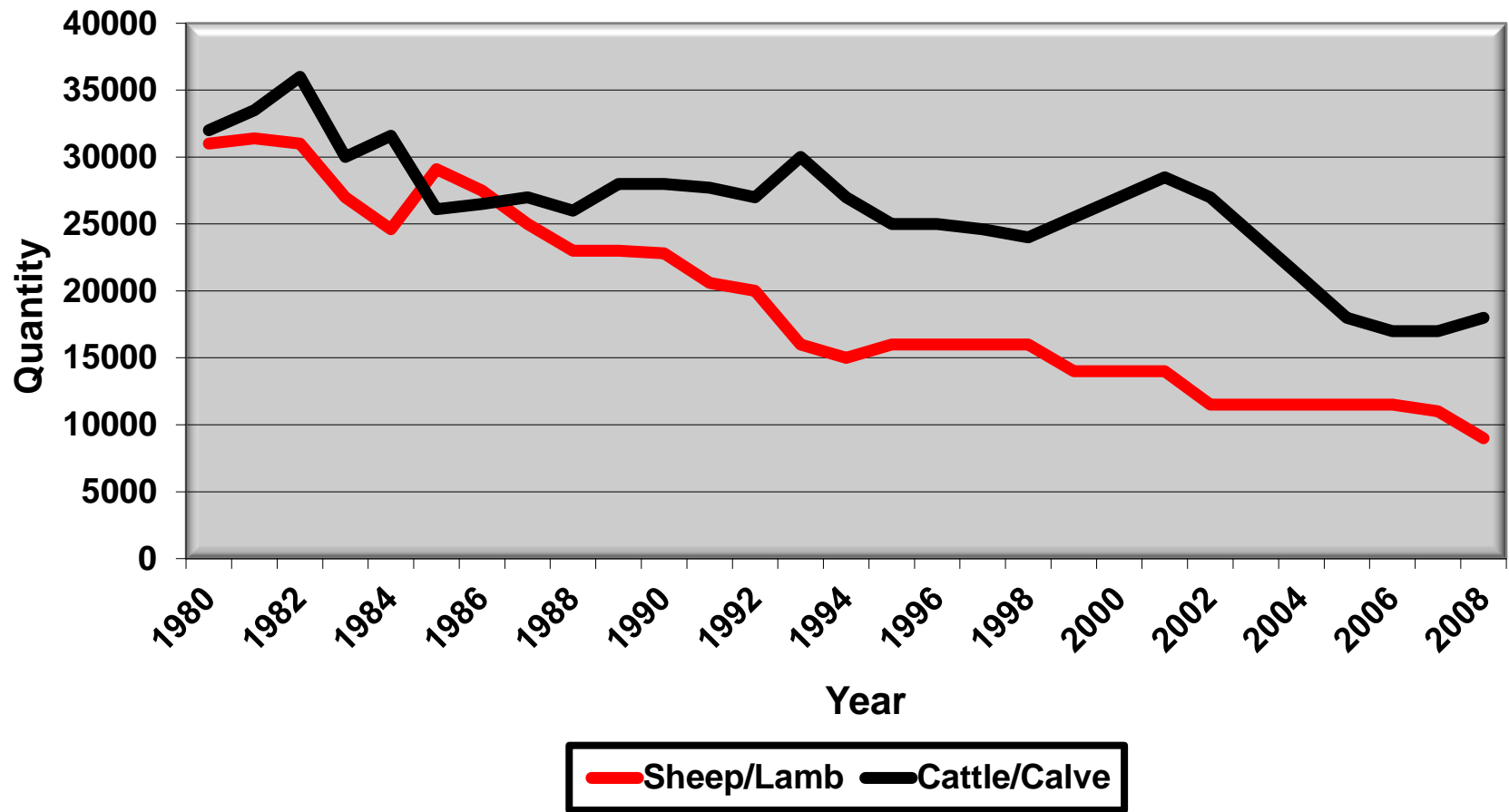
- ◆ GHD ProAnd, New Zealand
- ◆ The Facilities Group, Atlanta, Georgia
- ◆ Bob Sainz, PhD., UCD Animal Science Department
- ◆ Juliana Cisotto, student, UCD Animal Science Department
- ◆ Josh Davy, UCCE Livestock & Natural Resources Advisor- Tehama County
- ◆ Holly George, UCCE Livestock & Natural Resources 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

Study Goals

- ◆ Revitalize local and regional livestock industry
- ◆ Facilities and process design
 - ◆ Determine costs to build based on New Zealand designs
 - ◆ Size was arbitrary
 - ◆ Use for other study analysis – starting point
- ◆ Producer needs and production supply
 - ◆ Determine needs and capabilities for unique niche meat facility – value added services
- ◆ Market analysis – what consumers want
- ◆ Economic analysis and impacts
 - ◆ Value of livestock industry to area
 - ◆ Jobs, revenue , taxes and business stimulus

Mendocino Livestock Trend

Cattle and Sheep Inventories 1980 - 2008



Why do this study?

Need to revitalize the livestock industry

- ◆ Local & niche meats increased revenue to producers
- ◆ “Open space” maintained – pastoral beauty vs. concentrated development
- ◆ Range livestock is low sustainable use
- ◆ Livestock as environmental enhancers - weed control for vineyards
- ◆ Grazing minimizes wildfire effects
- ◆ Rangeland and pasture/hay potential is there

Barriers - Local meat sales extremely difficult

- ◆ Both slaughter & processing must be USDA inspected
- ◆ USDA inspected facilities in Northern California
 - ◆ Closing or at capacity
 - ◆ Travel distances are huge
 - ◆ Certified organic facilities are rare
- ◆ Public perception “Not in my backyard.”

Why do this study?

Positives

- ◆ Local food supply – both human and pet
- ◆ Livestock production is close to Bay area markets
- ◆ Supportive business - restaurants and retail meat, support services
- ◆ More marketing opportunities for local livestock producers
- ◆ Creates new jobs both in livestock and support services

Harvest & Processing Plants



Harvest & Processing Plants



Harvest & Processing Plants

USDA Inspected Goat Harvest Sites in Northern California



USDA Inspected Swine Harvest Sites in Northern California



Harvest & Processing Plants



Why look at niche meat locker?

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
- ◆ Demand for Ethical Food by consumers – 60% believe it is healthier to eat; 58% believe it is safer; 47% and 42% respectively believe food grown on small sustainable farms and locally produced is safer to eat

What many think it will be



100K feedlot
700 animals/day

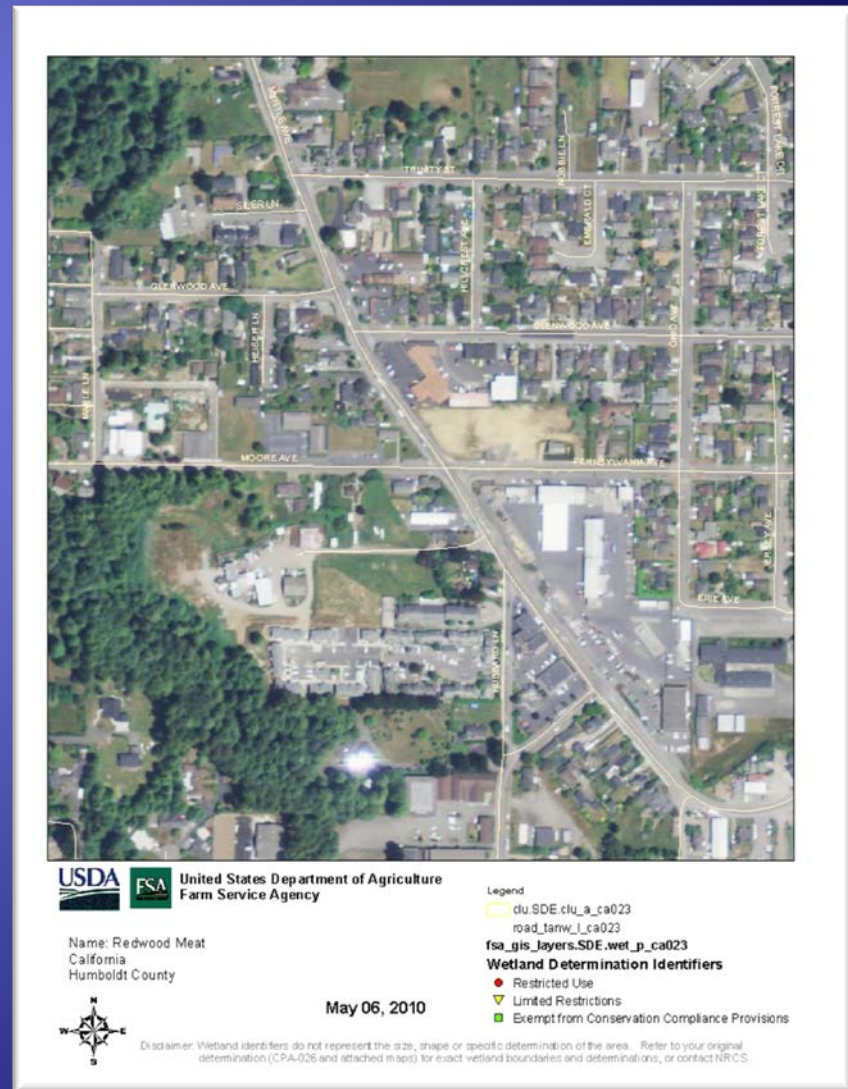
(C) Peter Menzel www.menzelphoto.com

Redwood Meats - Eureka

2440 Myrtle Ave
Eureka, CA

About half the capacity of
the study's facility.

Close to fairgrounds,
hospital, daycare,
parks, apartments and
shopping center.



Redwood Meats - Eureka



Redwood Meats - Eureka



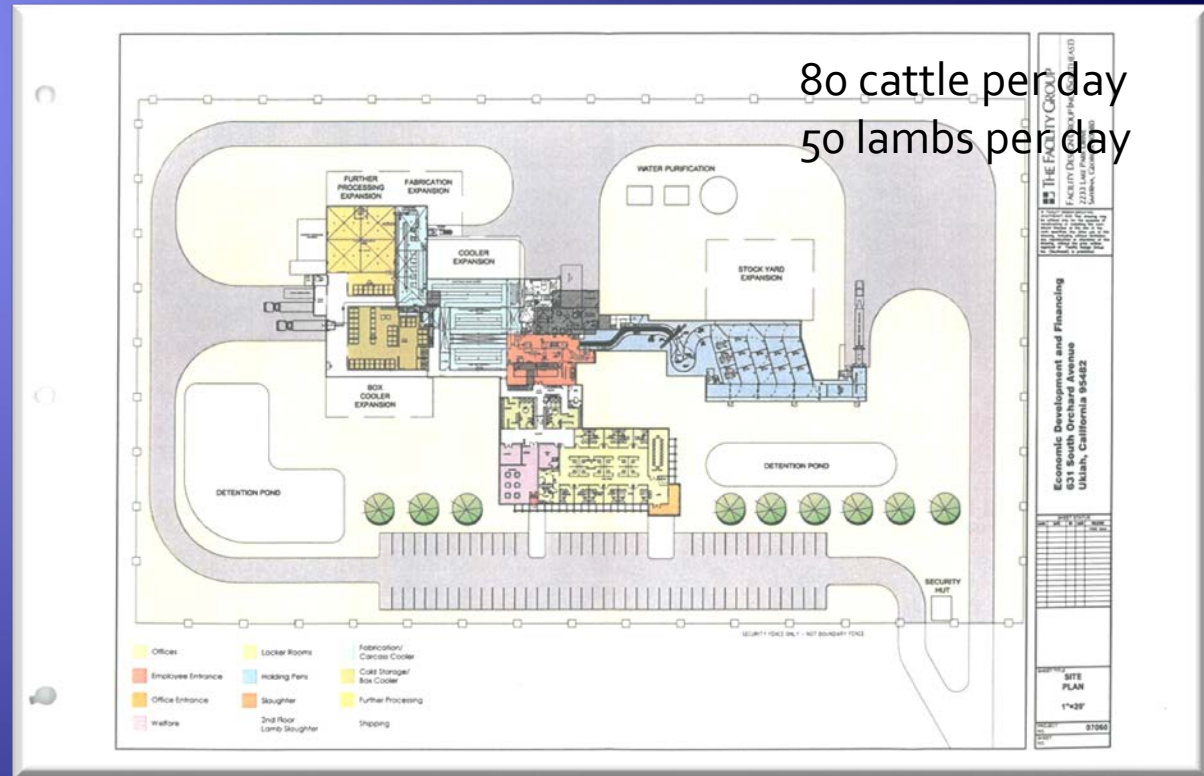
Redwood Meats - Eureka



New Zealand Design

New generation meat locker that will:

- ❖ Be a humane & environmentally friendly multi-species harvest
- ❖ 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.



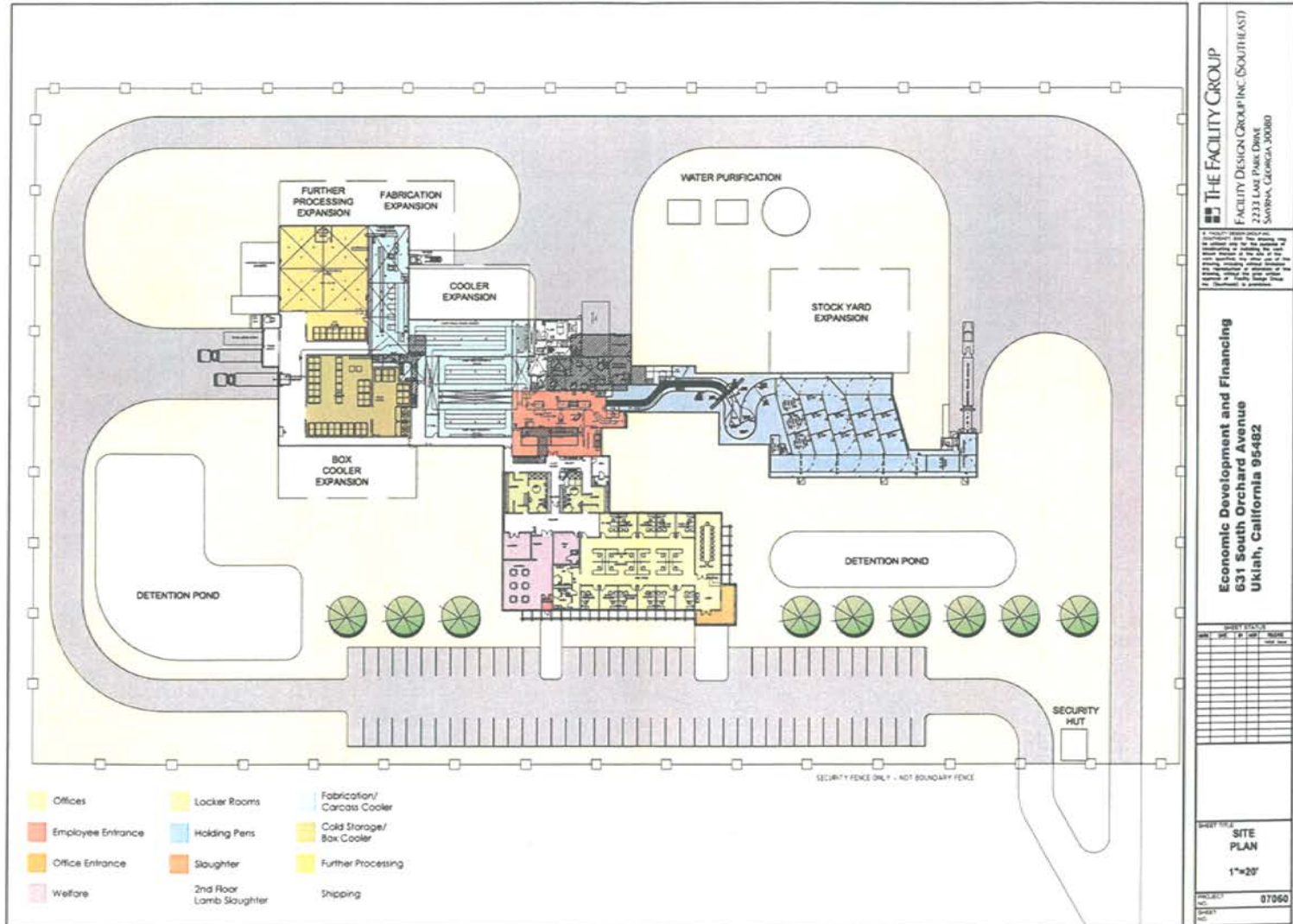
What it would look like



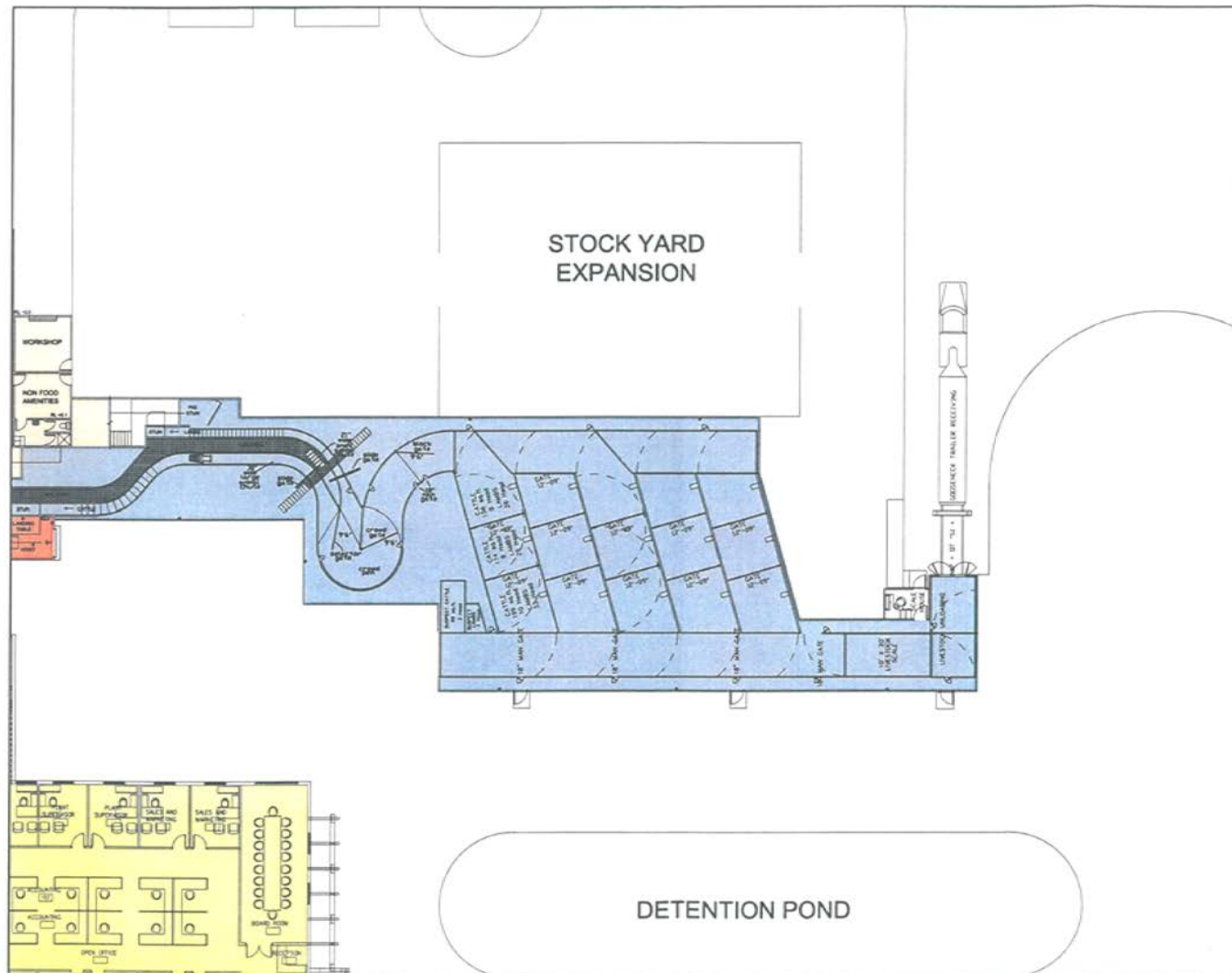
Front Entrance Concept



Complete layout



Livestock holding pens detail




THE FACILITY GROUP
 FACILITY DESIGN GROUP INC. (SOUTH-EAST)
 2333 Lutz Park Drive
 Suwanee, Georgia 30080

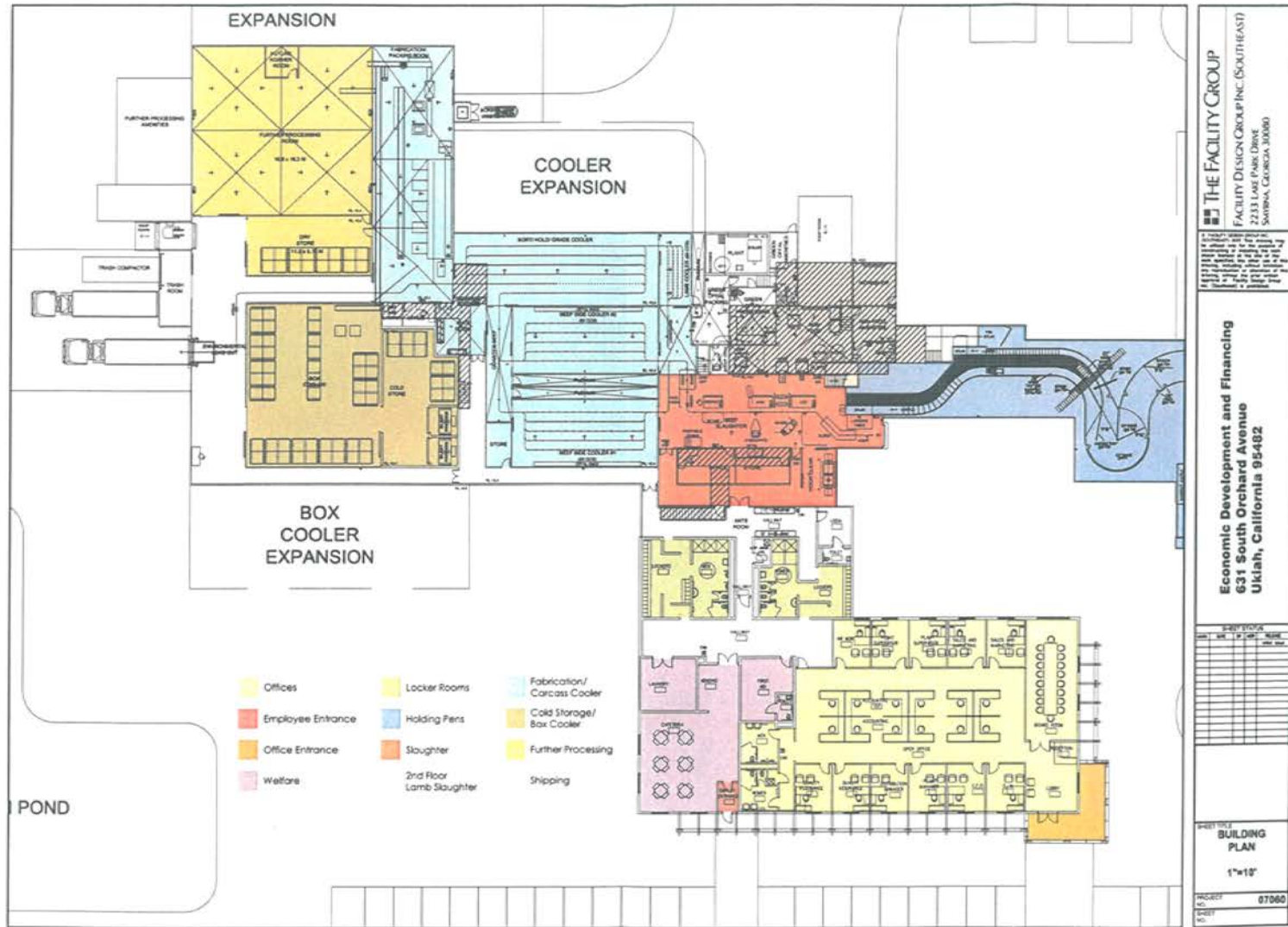
Economic Development and Financing
 631 South Orchard Avenue
 Ukiah, California 95482

SHEET INDEX			
NO.	DATE	BY	DESCRIPTION

SHEET TITLE
**LIVESTOCK
 YARDS**
 1/8" = 1' - 0"

PROJECT NO.	07560
DATE	
DRAWN BY	
CHECKED BY	

Office and processing details



Facilities & Design Details

◆ Capability & Features

- ◆ 80 cattle or Bison and 50 lambs, goats or pigs per day - **Maximum**
- ◆ 8 hours/day, 5 days/week – single shift
- ◆ Physical plant size ~ 27,500 square feet
- ◆ Occupies less than 1 acre of land
- ◆ Water use
 - ◆ Facility Group estimates ~47,370 gallons per day (80% recycled = 9,474 used)
 - ◆ New Zealand estimates ~ 23,592 gallons per day (80% recycled = 4,718.4 used)
 - ◆ 400 gallons - average water use by US family of 4 per day
 - ◆ Average winery uses about 45,000 gallons per day
 - ◆ Efficient creamery uses about 30,000 gallons per day similar to a bakery
- ◆ 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

Producer Needs and Production Supply

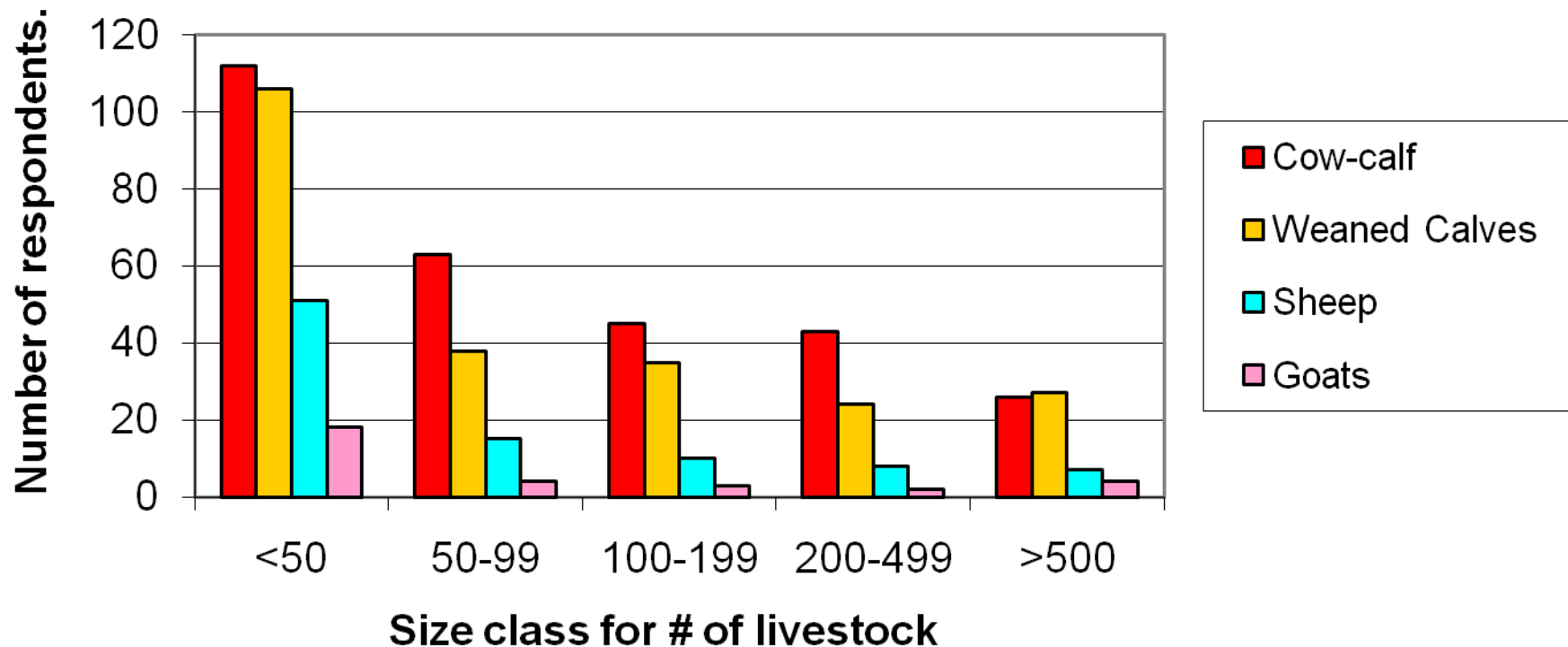
Survey Northern California ranchers to determine:

- ◆ 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.

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

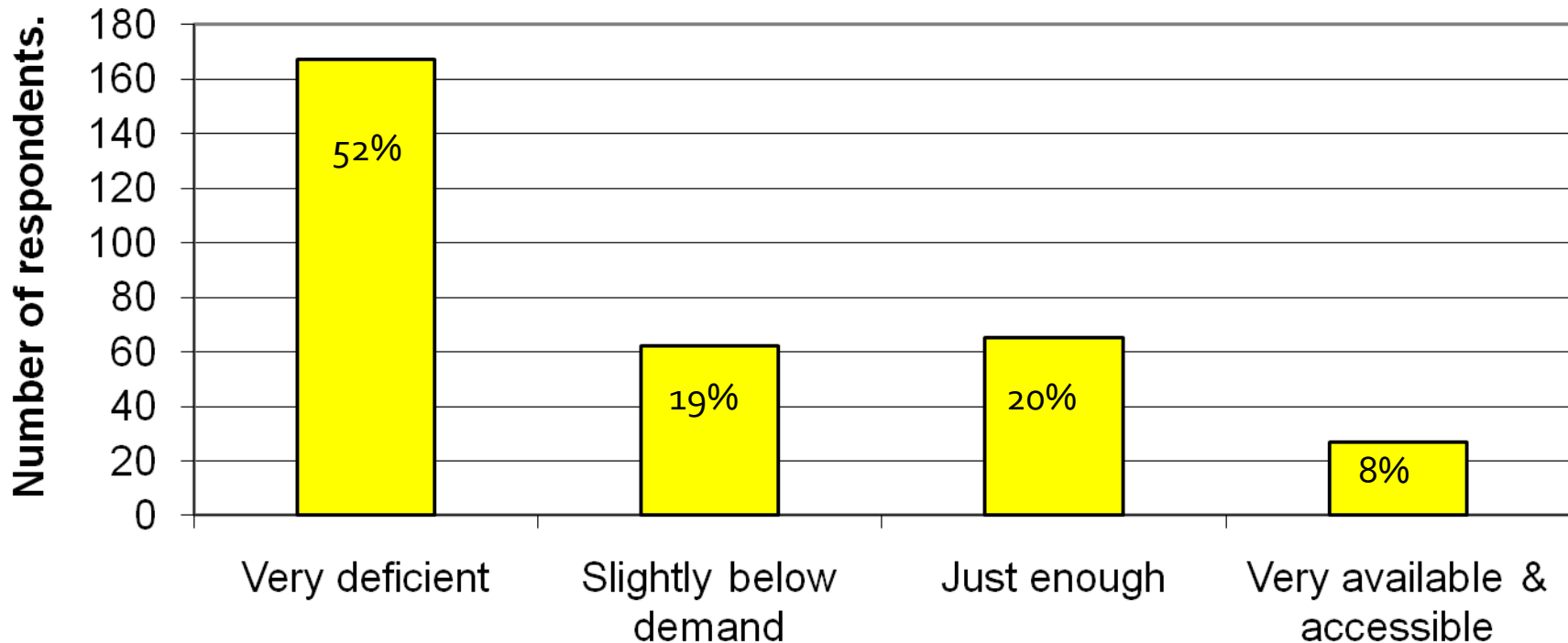
Profile of respondents

Farm size of respondents.

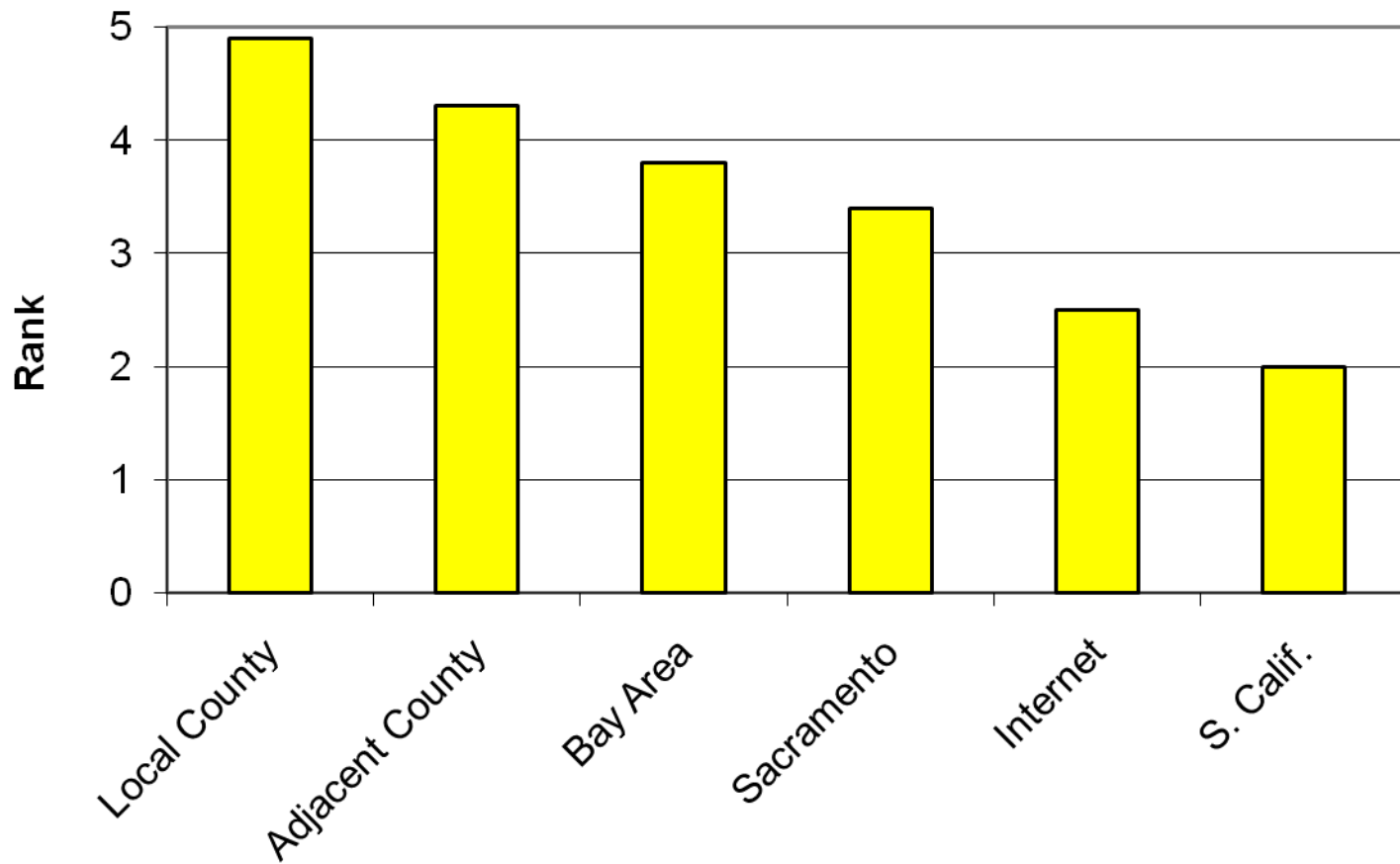


Experience with existing facilities

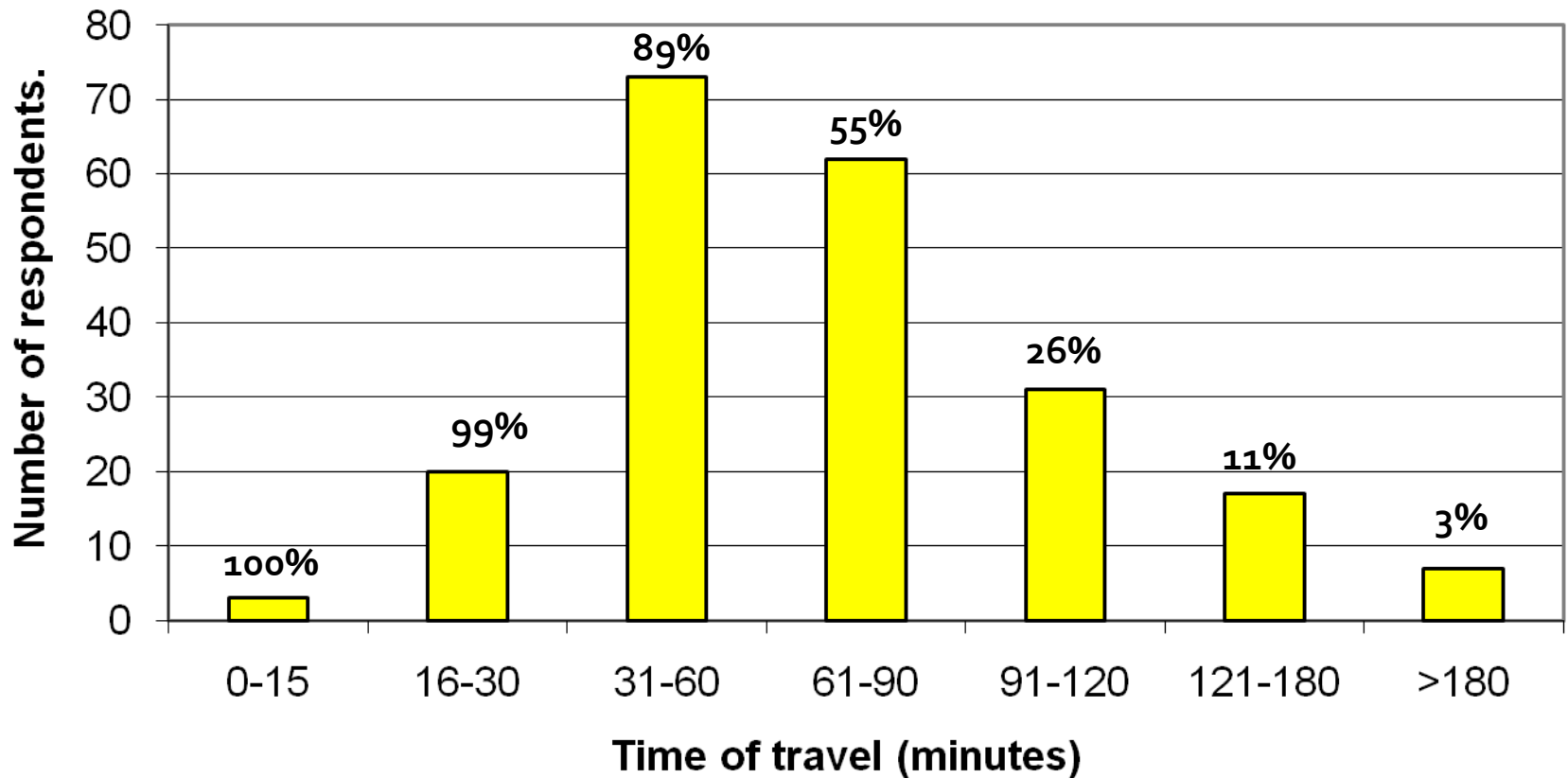
Current availability and accessibility of facilities.



Ranking of target markets (1=lowest priority, 5=highest priority).



Maximum time willing to travel for processing



Barriers (aka needs) limiting entry to niche markets (1=not a barrier, 5=very significant barrier)

Barrier	Average Score
Access to slaughter	4.0
USDA regulation/label	4.0
Access to processing	3.8
Organic cert. process and costs	3.8
Access to marketing & distribution channels	3.6
Knowledge about doing direct sales	3.5
Matching customer demand with product availability	3.5
Insurance requirements	3.4

Larger Barrier



Smaller Barrier

Barriers limiting entry to niche markets (1=not a barrier, 5=very significant barrier).

Barrier	Average Score
Customer education	3.3
Time away from ranching activities	3.3
Finding customers	3.1
Capital to get started	3.1
Sales negotiations & payment collections	3.1
Knowledge of consumer preferences	3.1
Lack of cash flow while feeding livestock	3.1
Transportation to processing facility	2.9
Lack of land/feed to hold & finish livestock	2.7

Larger Barrier



Smaller Barrier

Interest in Services Offered

	Tier 1 and 2 Counties Combined	
Service	% rating 5	Mean Rating
Meat delivery to final destination	49	3.9
Animal pick-up	41	3.4
Advertising & marketing support	40	3.6
Pasture finishing	36	3.1
Dry aging	34	3.2
Organic processing	34	3.2
Label design & approval	29	3.1
Smoking & curing	25	3.0
Sausage production	21	2.9
Feedlot grain finishing	21	2.3
Kosher slaughter	15	2.3
Jerky	14	2.6
Halal slaughter	10	2.1

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

Marketing Study Highlights

- ◆ 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

Highlights continued

- ◆ 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

Highlights continued

- ◆ 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

Highlights continued

- ◆ 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

Economic Impacts

- ◆ Expected local impact of construction and installed equipment to be less than \$7 million
- ◆ Input-Output Analysis to estimate ongoing economic impacts
- ◆ *Direct effects* represent the direct output of a particular industry (such as the gross revenues of an animal slaughter/processing facility).
- ◆ *Indirect effects* reflect the local inputs required to produce the direct effects.
 - ◆ For example, in order to operate the animal processing plant, the plant must purchase products, raw materials and services from other companies.
- ◆ *Induced effects* measure the results of local household spending on goods and services resulting from the labor income generated through the direct and indirect effects.

Economic Impacts

- ◆ IMPLAN utilizes input-output analysis to take into account the ripple effects of the economic activity in the 10-county region associated with the increased values of meat processing and livestock production attributable to the Facility
- ◆ 2 IMPLAN livestock industries
 - ◆ cattle ranching
 - ◆ other livestock (includes sheep, hogs, goats, and various minor species, but not poultry)
- ◆ Slaughter/processing industry

Economic Impacts

- ◆ Multiplier = Total Effect/Direct Effect
- ◆ Value added =
 - ◆ employee compensation
 - ◆ indirect business taxes and
 - ◆ proprietary and other property type income
- ◆ 3 critical multipliers
 - ◆ Jobs
 - ◆ Labor income
 - ◆ Total value added

Economic Impact Effects and Multipliers

Tiers 1 and 2 Combined

	Direct Effects	Indirect Effects	Induced Effects	Total Effects	Multiplier
EMPLOYMENT					
Cattle ranching and farming	17.5	4.9	1.9	24.3	1.4
Other livestock production	35.7	4.0	2.3	42.1	1.2
Animal, except poultry, slaughtering	2.7	3.7	1.5	7.9	2.9
LABOR INCOME					
Cattle ranching and farming	0.1	0.2	0.1	0.3	3.8
Other livestock production	0.2	0.1	0.1	0.4	2.2
Animal, except poultry, slaughtering	0.1	0.1	0.1	0.3	2.1
TOTAL VALUE ADDED					
Cattle ranching and farming	0.1	0.3	0.1	0.5	6.0
Other livestock production	0.2	0.3	0.2	0.6	3.3
Animal, except poultry, slaughtering	0.1	0.1	0.1	0.4	2.5

Economic Impacts

- ◆ Gross value of livestock sales in the region would increase from \$15.8 million to \$29.0 million annually
- ◆ Facility would produce \$58.2 million of slaughtered and processed meat.
- ◆ Establishment of the Facility would generate an additional 682 full-time equivalent jobs
 - ◆ 10% increase, with only 44 of the jobs directly attributable to the Facility
- ◆ Labor income would rise a net \$16 million (a 31% increase)
- ◆ Total value added to the regional economy by the industries would increase by 47% (\$23 million).

Next Steps

- ◆ Sizing
- ◆ Cash Flow Analysis of various sized facilities
 - ◆ Between \$100 (Iowa) and \$408 (CA) per square foot to build
 - ◆ Grant opportunities for further study
 - ◆ American Recovery and Reinvestment Act Fiscal Stimulus funds
- ◆ Break-even analysis
- ◆ Value-added services
- ◆ Ownership – who and type
- ◆ Location
- ◆ Public support
- ◆ Business plan

QUESTIONS?

Carefully conducted slaughter is less stressful than on-farm handling and restraint.

Temple Grandin
Department of Animal Sciences
Colorado State University

Value-added Services

Marketing & Support

- ◆ *Rancher profiles or stories*
- ◆ Histories
- ◆ Philosophies
- ◆ Heritage Ranch Tours

- ◆ *Branding & Labeling*
- ◆ Design
- ◆ *Graphic Arts*
- ◆ Registration
- ◆ *USDA*
- ◆ Humane certification
- ◆ Organic certification

Value-added Services

Specific Contracts

◆ *Ranch Based*

- ◆ *Magruder*
- ◆ *Ford*
- ◆ *Panorama*
- ◆ *Guntly Lamb*

◆ *Methods Based*

- ◆ *Grass-fed*
- ◆ *Organic*
- ◆ *Natural*

◆ *Geographic Based*

- ◆ *Local*
- ◆ *150 miles*
- ◆ *Appellations*
 - ◆ *Covelo Beef*
 - ◆ *Mendocino Grown*
 - ◆ *Lake County Grown*
 - ◆ *Mendocino Renegade*

Value-added Services

Promotion & Sales

◆ Internet-based

- ◆ *Web page*
 - ◆ *Creation*
 - ◆ *Maintenance*
- ◆ *Social networking*
 - ◆ *Examples*
 - ◆ Facebook
 - ◆ Twitter
 - ◆ Blogs
 - ◆ *Creation*
 - ◆ *Maintenance*
- ◆ *Email*

Value-added Services

Promotion & Sales

◆ Sales staff

- ◆ *Direct contact*
 - ◆ *Restaurants*
 - ◆ *Retail*

◆ Internal

- ◆ *Part of the plant*
- ◆ *Farmers Markets*
- ◆ *Meat Buying Clubs - CSA*

◆ External

- ◆ *Natural Food Co-ops*
- ◆ *Whole Foods*
- ◆ *Others?*