

# Facilitating Direct Sales of Meat Products in Tuolumne County: A Progress Report

Jay Norton, UCCE Farm Advisor, Tuolumne County, Sonora, CA  
(209) 533-5686; jbnorton@ucdavis.edu

March 9, 2006

## Summary

Livestock producers in Tuolumne County have long provided a portion of their annual production for sale directly to consumers. Consumers are increasingly interested in buying directly from ranchers. The main impediment keeping Tuolumne County producers from meeting rising demand is the lack of local USDA-certified processing. A feasibility study determined costs for constructing and operating a 1000 to 2000 head per year processing facility that would utilize existing USDA-inspected slaughter houses in Modesto, Merced, or Los Banos. The detailed cost analyses facilitated a decision by a local rancher to construct a processing facility contingent upon a business being formed to lease and operate it. A group of Tuolumne County livestock producers is currently forming such a business. It is anticipated that once the processing facility is operating, producers will need to pool resources in a marketing and distribution organization to meet demand. The marketing organization would have location and production protocols for membership and would require finish inspection for individual animals to be marketed in the program. The marketing group would consist of an umbrella label for a group of individual ranches with their own products.

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## Introduction

In 2003 a small group of Tuolumne County livestock producers began meeting to determine how they could increase direct sales of ranch-raised, grass-finished beef. The members of the original group are long-time ranchers who derive their main source of income from selling beef calves on the conventional market. They each sell up to 20 percent of their annual production directly to consumers as grass-finished beef and would

like to increase those sales. The group has since broadened its scope to include farm-raised grass- and/or grain-finished beef, lamb, pork, and goat.

The group quickly identified the main impediment to increasing direct sales to be lack of local USDA-certified processing. The nearest facility that provides those services is Johansen’s Meats in Orland, CA – a one way haul of over four hours. As the only service of this type in the region, Johansen’s Meats also has a very full schedule. Two members of the group regularly utilize this service, however, and find that direct sales are still profitable. They identified lack of marketing and distribution abilities as secondary impediments that will arise once availability of processing allows increased production potential.

Working with UCCE, the group acquired a USDA Cooperative Development grant in fall of 2003 and contracted with consultants over the following two years to determine costs estimates for processing and marketing.

## Processing Considerations & Costs

Though there are three USDA-certified slaughter facilities within two hours drive time from Jamestown, there are no suitable processing facilities closer than Johansen’s in Orland. The group agreed that a new processing facility, that could be expanded to include slaughter via a mobile or fixed structure, would need to be built in or near Tuolumne County for direct sales to expand.

In fall of 2004 we contracted with Bruce Dunlop, Lopez Island Farm, to provide estimates of capital costs and operating expenses for USDA-inspected slaughter and processing alternatives, including:

1. Contracting all services (i.e., Johansen’s Meats);
2. Contract slaughter at an existing plant;
3. On-farm mobile slaughter;
4. Dry-aging, fabrication, and packaging.

### ***Contracting all Services (status quo)***

Table 1: Estimated costs for processing Tuolumne County beef at Johansen’s, Orland.

	<b>Cost per Head of Beef</b>
Transport of beef to facility (10 head per trip)	\$30
Slaughter fee	\$50
Meat Delivery Cost	\$25
Fabrication & Packaging	550 lb avg. carcass @ \$0.60/lb \$330
<b>Total Cost</b>	<b>\$435</b>

### ***Contracting USDA Slaughter at Existing Plant***

Livestock could be transported to a USDA-inspected slaughter-only facility in Modesto (multi species), Merced (beef only, organic certified), or Los Banos (beef only). Carcasses would then be shipped to a Tuolumne County fabrication facility for aging, cutting and packaging. These facilities indicated that they could provide refrigerated transport of carcasses to the processing plant for a nominal fee to cover fuel.

Table 2: Estimated costs for USDA-inspected slaughter at an existing plant (i.e., Stagno’s Meat Co., Modesto, which is 50 miles from Jamestown, Tuolumne County).

	<b>Cost per Head of Beef</b>
Transport of beef to facility (10 head per trip)	\$15
Slaughter fee	\$30
Carcass Delivery Fee	\$5
<b>Total Cost</b>	<b>\$50</b>

### ***On-Farm Mobile Slaughter***

On-farm USDA-inspected slaughter has proven to be an excellent option for small-scale processing operations in USDA regions where they have been approved. Unfortunately, USDA offices in California have yet to approve this type of operation. Mr. Dunlop designs and manufactures mobile slaughter units and provided the following capital and operating costs for a new-generation unit that would consist of a refrigeration truck transport module that would pull a trailer processing module.

The Processing Module trailer is outfitted for slaughter, skinning and evisceration of livestock from live animal to clean inspected carcass. The Transport Module is a refrigerated truck with a customized body. It provides cold hanging storage for carcasses and is the tow vehicle for the Processing Module. During operation the Transport Module is docked to the Processing Module and they operate as one facility. The mobile unit can travel to a different site each day of operation for use as a USDA inspected multi-species slaughter facility. Processing capacity for this unit is 12 head of beef per day.

Table 3: Estimated capital cost of a mobile livestock processing unit.

	<b>All New</b>	<b>Used</b>
<b>Transport Module</b>		
Truck Chassis (new)	\$37,000	
Truck Chassis (used diesel, 26,000 lb GVW 130,000 miles)		\$27,000
Refrigerated box 20 ft (new custom made)	\$27,000	
Refrigeration unit (new)	\$14,000	
Refrigerated body 24 ft (used with modifications required) (Includes Thermoking refrigeration unit with 8,800 hrs)		\$7,900
Modifications to used body		\$4,500
rail system	\$3,000	\$3,000
Equipment per specification	\$3,500	\$3,500
<b>Processing Module</b>		
Custom Built 15 ft trailer	\$58,000	\$58,000
Outfitted per specifications		
rail system	\$900	\$900
<b>Total Hardware</b>	<b>\$143,400</b>	<b>\$104,800</b>
Project Management & Design, Taxes, Transportation, Staff Training and Startup Costs	\$35,000	\$35,000
<b>Total mobile processing unit cost</b>	<b>\$178,400</b>	<b>\$139,800</b>

Table 4: Estimated costs for operations of a mobile livestock processing unit.

Staffing Level	3
Daily Capacity (beef)	12
Operating Days per Year	180
Nominal Annual Capacity	2000
Breakeven Slaughter Cost for Beef	\$52
<b>ANNUAL INCOME</b>	
Slaughter Services	153,660
<b>TOTAL INCOME</b>	<b>\$153,660</b>
<b>ANNUAL EXPENSES</b>	
Butcher	30,132
2nd Butcher	25,110
Butcher Assistant	20,088
Unloader/cleaner	5,859
Payroll tax & Benefits	9,626
Mobile Unit Fuel & Oil	8,035
Propane	167
Equipment Repairs	4,610
Insurance (auto portion)	4,000
Consumable supplies	10,756
Vehicle Taxes & License	672
<b>Total MSU Costs</b>	<b>119,055</b>
<b>G&amp;A</b>	
Manager (25% time)	10,000
Payroll tax & Benefits	2,500
Telephone	600
Licenses & Permits	150
Office Supplies	1,080
Accounting & Legal	1,080
Postage	540
Bank Charges	192
Mobile Unit Loan Payment	18,463
<b>Total G&amp;A</b>	<b>34,605</b>
<b>Total Expenses</b>	<b>\$153,660</b>
<b>OPERATING PROFIT (LOSS)</b>	<b>\$0</b>

In reality, administration, overhead, and many other costs would be shared with the processing facility if run by the same business. Running at capacity of 2000 head per year (beef) on-farm slaughter costs (\$52 per beef) are similar to the estimated contract slaughter costs (\$50). As utilization drops, however the break even cost of on-farm slaughter increases. At 1000 head per year, the cost per head would increase to \$74.

## **Dry-Aging, Fabrication, and Packaging**

The fabrication facility described here is designed to process up to 12 head of beef per workday. The actual production is expected to vary seasonally with a nominal annual capacity of 2000 head. Activities that would be conducted in this facility include:

1. Receiving of beef carcasses as sides or quarters.
2. Dry aging of beef as sides or quarters for up to 14 days.
3. Fabrication of beef into primal cuts for wholesale sales and case ready retail cuts.
4. Packaging of cut meat products into plastic vacuum pouches and labeling.
5. Freezing and short term frozen storage of finished meat products.
6. Retail storefront for fresh and frozen product sales.
7. Shipment of finished product.

The facility is designed for construction in two stages. The base size is 48' X 100' X 16' with only the front 45' X 57' cutting room fully enclosed. The outside walls of the coolers would serve as the exterior walls for the remainder of the building. The base building size is designed to run two cutting and packaging lines for processing 12 head per day of average size (550 lb) beef carcasses. The chill cooler can handle 12 head per day and the holding (dry-aging) cooler will hold 50 beef carcasses. At full production it will be necessary to add additional holding cooler and freezer capacity. The capital cost to construct this size facility presented in Table 5 includes all the construction costs and equipment needed for operations.

Table 5: Estimated capital costs for fabrication facility.

	<b>Full Production (12 hd/day)</b>	<b>50% Capacity (6 hd/day)</b>
Base Building	288,000	288,000
Electrical	85,000	85,000
Rail System	30,750	20,500
Cutting Room Fixtures and Equipment	66,000	35,500
Refrigeration:		
Freezer	56,000	28,000
Chill Cooler	21,000	21,000
Aging Cooler	98,000	49,000
Cutting Room	7,000	7,000
Retail Counter	4,000	4,000
<b>Sub Total</b>	<b>\$655,750</b>	<b>\$538,000</b>

Table 6: Projected annual profit and loss for a Tuolumne County USDA-inspected beef fabrication facility.

<b>INCOME</b>				
<b>Number of beef Processed</b>	<b>2000</b>		<b>1000</b>	
Average Carcass weight (lb)	550		550	
Processing fee per lb	0.53		0.71	
<b>TOTAL INCOME</b>	<b>\$582,403</b>		<b>\$387,962</b>	
<b>EXPENSES</b>				
<b>Fabrication Facility</b>	<b>2000 hd.</b>	<b>Percent of Total Expenses</b>	<b>1000 hd.</b>	<b>Percent of Total Expenses</b>
Meat Cutter Labor	167,221	28.7	83,600	21.5
Cleaning Labor	5,760	1.0	5,760	1.5
Wrappers labor	88,011	15.1	44,000	11.3
Payroll tax & Benefits	65,248	11.2	33,340	8.6
Utilities				
Electricity	38,275	6.6	38,275	9.9
Water	360	0.1	360	0.1
Microbiological testing	11,648	2.0	7,759	2.0
Laundry	8,154	1.4	5,431	1.4
Equipment Repair	3,960	0.7	3,960	1.0
Equipment Calibration	200	0.0	200	0.1
Pest Control	360	0.1	360	0.1
Rendering Pickup & Disposal	9,901	1.7	6,595	1.7
Small Tools	7,571	1.3	5,044	1.3
Supplies	58,240	10.0	38,796	10.0
<b>Total Cut &amp; Wrap Costs</b>	<b>464,909</b>	<b>79.8</b>	<b>273,482</b>	<b>70.5</b>
<b>G&amp;A</b>				
General Manager	40,000	6.9	40,000	10.3
Payroll tax & Benefits	10,000	1.7	10,000	2.6
Telephone	4,077	0.7	2,716	0.7
Internet e-mail	240	0.0	240	0.1
Insurance	4,500	0.8	4,500	1.2
Licenses & Permits	150	0.0	150	0.0
Office Supplies	2,621	0.5	1,746	0.5
Accounting & Legal	2,330	0.4	1,552	0.4
Auto Expenses	492	0.1	492	0.1
Postage	540	0.1	540	0.1
Bank Charges	192	0.0	192	0.0
Facility Capital Loan Payment	52,353	9.0	52,353	13.5
Facility Rent Payment	0	0.0	0	0.0
<b>Total G&amp;A</b>	<b>117,494</b>	<b>20.2</b>	<b>114,480</b>	<b>29.5</b>
				0.0
<b>Total Expenses</b>	<b>582,403</b>	<b>100.0</b>	<b>387,962</b>	<b>100.0</b>
<b>OPERATING PROFIT</b>	<b>0</b>		<b>0</b>	

## Summary of Costs

Table 7: Processing cost summary: cost per head of beef for Tuolumne County producers using different processing options.

	Tuolumne County Mobile Slaughter & Fabrication		Contract Slaughter & Tuolumne Co. Fabrication		Johansen's Meats
Annual Capacity (hd. beef)	1000	2000	1000	2000	< 300
Transport of beef to facility			\$15	\$15	\$30
Slaughter fee	\$74	\$52	\$30	\$30	\$50
Meat Delivery Cost			\$5	\$5	\$25
Fabrication & Packaging	\$390	\$291	\$390	\$291	\$330
<b>Total Cost</b>	<b>\$464</b>	<b>\$343</b>	<b>\$440</b>	<b>\$341</b>	<b>\$435</b>
Capital Investment Required	\$723,000+	\$884,000+	\$620,000+	\$780,000+	0

### **Current Status: Gold Country Livestock Processing**

One member of the group has tentatively committed to constructing the fabrication facility if the remainder of the group commits to forming a business to lease and operate it. They are currently in the process of filing Articles of Incorporation and determining what type of business partnership would be most appropriate.

### **Marketing Considerations**

There is consensus among the group that a pooled effort for marketing and distribution will be needed once local USDA processing becomes available. Members agree that, while they want to expand direct sales, their current level of marketing, processing, and distribution is all they can handle. A marketing business would enable the group to pool resources to get these jobs done, facilitating expanded direct sales.

There are many models for livestock marketing organizations. This group believes strongly in maintaining individual farm/ranch identity and production (vs. pooling animals together on finishing pastures, for instance). Although consideration of forming a marketing organization is on hold until the processing facility is in operation, the group has agreed on the following principles for such an effort:

1. Products from individual ranches marketing under an umbrella label (e.g., Gold Country Meats);
2. Protocols for location: Must be born and/or raised in Foothill region and must support a family farming/ranching operation headquartered in the Foothill region;
3. Production protocols: No hormones or fed antibiotics, grass finished, or grain finished in open pastures;
4. Program requirements: Pre-harvest inspection by group members (either visual or ultrasound) for carcass finish quality.

The Valley Livestock Marketing Cooperative in Stanfordville, NY, (<http://www.valleyfarmers.com/>) provides a good model for this concept.

Although the group initially envisioned one processing and marketing business, it became clear that these services must be separate businesses. Membership in a processing cooperative or partnership will require only investment in and/or use of the facility. Membership in a marketing organization will require meeting stricter production and location protocols for niche marketing.

For more information contact Jay Norton, (209)533-5686; jbnorton@ucdavis.edu