SLAUGHTERHOUSE FEASIBILITY REPORT

Prepared for

PRIDE OF VERMONT

Prepared by

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EXECUTIVE SUMMARY

In January 2003, when the owner of Brault's Slaughterhouse in Troy informed his customers that the business was for sale, livestock producers in northern Vermont were concerned that this could impair their ability to slaughter, fabricate and sell their livestock. These producers wanted to evaluate their options for controlling the availability, quality and cost of slaughtering and processing services. In early 2004, Pride of Vermont was able to secure funding on behalf of these producers for a feasibility study of a cooperatively owned slaughterhouse. A Steering Committee was formed to oversee this study.

One of the Steering Committee's major initial findings was the realization that Vermont had more than enough slaughtering capacity but insufficient processing and fabrication capacity. This fabrication capacity is severely limited during the August to January period when small-scale custom producers preempt commercial accounts at many of the State's slaughterhouses. Substantial concerns were also raised about the quality of fabrication and packaging. Livestock producers who raise high-quality lamb, beef, pork and goat meat need attractive cuts and packaging in order to command premium prices for their top-quality cuts. Poorly cut carcasses, unattractive packaging and sloppy labeling all eat into their profits. The demands of this end-market are often unfamiliar to slaughterhouses, which are used to packaging cuts in freezer wrap. Since processing services are in such high demand, commercial livestock producers have been stymied in their ability to encourage greater attention to packaging and presentation.

Early in the process, the Steering Committee identified key criteria for the undertaking. Various options were assessed based on their ability to meet these criteria while minimizing potential risk faced by the producer/ members. An initial financial analysis of Brault's indicated a price and capacity that exceeded the group's requirements. As the process unfolded, it became clear that acquisition and management of a slaughterhouse by this group of producers was not readily feasible. This was due to changes in the market, the volume of livestock represented by this group, the management and financial realities of operating a slaughterhouse or processing facility and clear identification of the group's own criteria.

Changes in the availability of slaughtering and processing services during the study period include:

- significant expansion of Royal Butcher slaughterhouse and meat market in Braintree;
- purchase of Swanton Packing by local consortium including St. Albans Cooperative. (This venture shut down in August of 2004);
- announcement by Farmer's Diner that it is adding a meat processing facility which will have capacity to serve producers who want to market meat products directly to consumers;
- announcement by VQM that it plans to open a processing plant in the near future;
- sale of Moore Beef in St. Johnsbury;
- announcement by Green Mountain Smokehouse that it intends to secure federal licensing; and;
- Vermont Food Venture Center's exploration of the feasibility of expanding their services to include USDA licensed meat processing.

Despite these changes, there was substantial information gleaned through this feasibility study. Information compiled includes:

- Description of the regulatory issues faced by slaughter or processing facility operating in Vermont;
- An assessment of the market for a potential slaughter or processing facility in Vermont;
- Competition analysis of the existing slaughterhouses in Vermont;
- Recommended options for this group including estimated costs;
- Capital Budget;
- Operating Budget.

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The report is available electronically at:
www.

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BACKGROUND

In January 2003, the owner of Brault's Slaughterhouse in Troy informed his customers that the business was for sale. Livestock producers in northern Vermont who relied on Brault's for slaughtering and processing were concerned that this could impair their ability to slaughter, fabricate and sell their livestock. These producers wanted to evaluate their options for controlling the availability, quality and cost of slaughtering and processing services with a feasibility study for a cooperatively-owned slaughterhouse. Pride of Vermont Farms, LLC, a marketing group for sheep and goat livestock producers sought and received financial assistance to conduct a feasibility study and, if warranted, produce a business plan. Funding for the project was received through a Vermont Community Development Program grant (#0160/03PG(14)) provided to the Town of Troy and administered by Northern Vermont Development Association, and grants from the Vermont Community Loan Fund and Vermont Agency of Agriculture.

In February of 2004, an organizing meeting of interested farmers was held in Westfield A Steering Committee was formed to oversee the development of any new cooperative initiative. In addition, a Coordinator was hired to keep the process on track and keep potential members informed. In March of 2004, Sleeping Lion Associates, Inc. was contracted to conduct a feasibility study for a cooperatively owned slaughterhouse in Northern Vermont. The Steering Committee has met eleven times since February to review information and provide input and guidance for its consultants. The Steering Committee members and/or its consultants visited six slaughterhouses and a commercial processing facility/smokehouse to view and discuss operations with the owners/managers. Two membership meetings were held in May and December to update prospective members. In addition, two meetings were held with the Vermont House Agriculture Committee, at the Legislators' request, to discuss the project. In addition, a presentation on findings from the study was offered as a workshop at the February 2005 NOFA conference.

The original scope of work called for development of 1) a slaughterhouse business plan and 2) a cooperative organization. As the process unfolded, it became clear that ownership of a slaughterhouse was not consistent with the group's criteria or readily feasible given the market and operational realities. The project was therefore revised to assess the feasibility of various alternative approaches. This included contracting as a group for slaughtering and/or processing services as well as potential ownership or contracting with either a mobile unit and/or stand-alone processing/fabrication facility.

PROJECT PARAMETERS

CRITERIA

At the beginning of the feasibility study, the Steering Committee identified key criteria for the undertaking. As a cooperative, farmers would theoretically have three relationships with the business – as users, as owners and in its governance and oversight. Key information about each of these constituencies and the identified criteria are detailed in the table below.

TABLE 1 - Criteria for Slaughterhouse Cooperative

Relationship to Co-op or Company	**USERS**	**OWNERS**	**OVERSEERS aka Control & Governance**
Who are they?	Farmers - both US and Canadian, Hobbyists & Hunters	At least 51% are producers Producer/owners	Primarily Co-op Members
CRITERIA			
- Avoid	Sudden price changes Loss of slaughterhouse services	Loss of investment	Loss of service Changes in service, pricing, etc. without input
- Preserve	Availability of services Quality of services Accurate labeling	Value of investment	Access to slaughtering, processing and packaging services in Northern Vt. (defined as N of Rte 2, S of Canada)
- Achieve	Quality and professional cutting and presentation Consistency in packaging, appearance and sizing Availability re: scheduling Additional capacity and facilities Cost-effective slaughtering for kids Value-added services e.g.. brand for lower quality cuts; non-meat products	Profits Sufficient capitalization Ability to reinvest in the business	Cost Control Input into scheduling Quality management Stable, competent workforce
Key Values	Access to services Commitment to specific amt. of use. No one member responsible for more than 20% of total business. Livestock must be treated humanely and delivered in "clean" condition to the slaughterhouse. Brand will require quality standards.	Limited Return on Equity Capital Profits returned on patronage basis Equity Contribution of $1,000-$2,000/member (exact amount to be determined) Equity Contribution can be paid over time. OK to have non-voting members.	One member – one vote Voting Members - producers who use at least $1500 worth of services per year. Good to have some outside expertise on Board.
Documents that Define this relationship	Use Agreement Marketing Agreement Quality Standards	Articles of Association Share/Stock Certificate Preferred Stock	Articles of Association By-Laws

REGULATORY ISSUES

Food Safety and Labeling

The Federal Meat Inspection[1] and Poultry Products Inspection[2] Acts as well as State laws[3] govern the slaughtering and processing of meat[4]and poultry for human consumption. USDA's Food Safety and Inspection Services (FSIS) is responsible for ensuring that meat and poultry are safe, wholesome, not adulterated and properly marked, labeled, and packaged. These federal acts define the process for pre- and post-mortem inspection as well as specific marking, labelling and packaging requirements.

Generally, federal inspectors oversee facilities that slaughter and process meat and poultry. FSIS has cooperative agreements with many states, including Vermont, that allow state inspectors to enforce requirements "at least equal to" those imposed under the federal acts for state-inspected facilities. Regardless of how a facility chooses to operate, federal and Vermont law require it to be licensed if it is engaged "in the business of buying, selling, preparing, processing, packing, storing, transporting or otherwise handling meat, meat food products or poultry products…" Since the federal acts prohibit product produced under State inspection from being sold outside the State, slaughterhouses processing product for commercial consumption or sale out-of-state must secure a USDA license. This limitation on out-of-state sales, as dictated by federal law, irks many farmers operating in smaller states as well as food safety professionals since the FSIS pays these same state inspectors to enforce the federal regulations.

Exemption from federal inspection requirements (i.e. an inspector does not need to be present when animals are slaughtered or processed) are provided for "custom" slaughtering for "personal, household, guest and employee use." Federal law dictates that these custom facilities be licensed and examined by state inspectors on a periodic basis. Meat packed as "custom" must be marked "not for sale." Operators of commercial slaughtering facilities often do custom work after hours since inspectors require overtime pay for days longer than eight-hour shifts. Since the timing and packaging requirements of custom slaughtering and processing are more flexible and less-labor intensive, many slaughtering facilities charge less for custom processing than commercial processing. Meat customers who purchase live animals prior to slaughter effectively take advantage of this exemption.

In addition, the federal regulations provide exemptions for small-scale poultry producers. Producers slaughtering no more than 1,000 birds annually are exempt from the federal act as long as:

1. All of the poultry was raised, slaughtered and sold on the producer's own farm;
2. The poultry producer is not in the business of buying or selling poultry products other than those produced from their own birds;
3. None of the poultry is distributed or sold outside of the State in which it is produced.

Vermont now allows these producers to sell whole poultry carcasses at farmer's market *if* the producer registers for and meets the requirements for being a Vermont Exempt Poultry Processor. Most of the requirements are similar to those detailed below. No producers have yet taken formal advantage of this exemption.[5]

Poultry producers raising and slaughtering no more than 20,000 birds are exempt from federal inspection if:

1. They meet conditions 2 and 3 detailed above.

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[1] http://www.fsis.usda.gov/regulations_&_policies/Federal_Meat_Inspection_Act/index.asp
[2] http://www.fsis.usda.gov/regulations_&_policies/Poultry_Products_Inspection_Act/index.asp
[3] 6 V.S.A. Part 8 § 3131-3318.
[4] Meat includes the products of cattle, sheep, swine, goats, horses and mules.
[5] Communication with Carl Cushing, Director of Food Safety & Consumer Assurance, Vermont Agency of Agriculture.

2. They do not slaughter or process poultry products at a facility used for slaughtering or processing poultry by any other person.[6]
3. Poultry are sound and healthy before slaughter and "sound, clean and fit for human food when distributed…" Vermont inspectors require initial inspection of the facility and approval of sanitation and HACCP plans.
4. The poultry products have a label that identifies the name and address of the producer and a statement that the product is exempt from Public Law 90-493. Vermont inspectors have interpreted this to mean that the label must state that the poultry "was not slaughtered under inspection and is to be used for home consumption only," even though Vermont regulations only require that the label state "Exempted – 6 V.S.A., Chapter 203(sic)"[7] State inspectors also require the label to name the vendor if a mobile slaughter facility was used.

State inspectors also require the producer to keep records on the number of animals slaughtered and processed. Federal and State regulations clearly allow the farmer to sell these birds on or off the farm. Nonetheless, Vermont inspectors have been reluctant to allow off-farm sales with the exception of registered Exempt Poultry Producer being "allowed" to sell at farmer's markets.

Although federal regulations permit the sale of uninspected poultry meeting these exemptions to "household consumers, restaurants, hotels, and boardinghouses, for use in their own dining rooms, or in the preparation of meals for sales direct to consumers," the Vermont Department of Health regulations preclude sales to restaurants, hotels, and boardinghouses. Vermont Health regulations require all food service establishments to use only inspected poultry.[8]

Water Supply

In order for commercial slaughtering and processing facilities to provide meat or poultry that is clean and fit for human consumption, they must have access to potable hot and cold water including "conveniently located" sanitary facilities (i.e. toilet and washing facilities) for the inspector. Commercial facilities require permits as a "non-public" water system. In Vermont, the sanitary facilities requirement has been interpreted to mean that these facilities need to be accessed on-site. Inspectors in other states have allowed the use of farmhouse facilities for the inspector assigned to mobile slaughtering facilities.

Environmental Considerations

Slaughtering and processing facilities need to meet Vermont environmental regulations. Expansion of an existing facility or building a new facility usually will require permits related to the appropriate disposal of wastewater and solid waste. The project may also be subject to local community regulations and Act 250 (although the facility may qualify for an agricultural exemption if it is located on a farm and engaged in an "on-farm activity.")

Solid waste regulations seek to prevent or mitigate the disposal of materials that emit noxious odors and/or compromise the waters of the State. With a slaughtering facility, solid waste regulators are concerned about the proper disposal of rendered material and other residuals including hides, bones, feathers, blood, and animal fat. Much of this material may be composted on-site if the property has sufficient available land, appropriate soils and good setbacks from waterways and neighbors. When looking at the land availability,

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[6] The Poultry Products Inspection Act allows the USDA Secretary to grant an exemption to this requirement if "granting such exemption will not impair effectuating the purposes of this chapter" See §464(c)(3)(B). The mobile processing unit in Kentucky secured this exemption.

[7] Requirements as interpreted by inspectors are detailed in "Handbook for Exempt Poultry Processors" published by the Agriculture Department. The actual regulations are at Section 181.10 of Vermont State Agriculture Regulations. Reference should be to 6 V.S.A. Chapter 204 not Chapter 203.

[8] Vermont Health Regulations for Food Service Establishment, Section 5-204 X state "All meat and meat products shall have been inspected and approved by the Vermont Agency of Agriculture or the USDA." available at http://www.healthyvermonters.info/rules/03FoodServiceEstablishments.pdf.

regulators want to be certain that the footprint is large enough to accommodate the composting matter as well as any needed stockpiles of carbon materials and bulking agents and the machinery required to manage the piles.

Vermont's Solid Waste Management Rules define when certification is required. New rules that were adopted as of October 15, 2004 provide exemptions from certification[9] for on-site composting of slaughter waste in certain situations. These exemptions include:

- Farms of ten acres or more can compost up to 5 dry tons *per week* of site-generated compostable animal offal and carcasses in addition to any necessary amount of approved high carbon bulking agent up to a limit of 50 dry tons.
- Other sites that compost up to one ton *per year* of site-generated compostable animal offal and carcasses in addition to necessary bulking agents.

Operators disposing larger amounts of slaughtering waste need to file for certification of the facility and comply with the Solid Waste Management Rules.

The disposal of wastewater presents some additional considerations. If the wastewater was to drain into a municipal sewage treatment plant, it is highly probable that the treatment plant would need to request an amendment to its operating permit. Said amendment would detail the conditions or management approach required to accommodate the high nutrient value in blood waste. An alternative approach would be to compost as much blood as possible by designing appropriate drains and collection systems.

If an on-site system were to be used, an indirect discharge permit would be required unless the waste is less than 6500 gallons per day or the wastewater is afforded an agriculture exemption. This agricultural exemption is allowed for wastes generated *solely* from products or processing of materials produced on the same property.

Mobile Facilities

A mobile slaughtering or processing facility raises a number of questions in regards to required safety and environmental permits. If the facility were designed for poultry, it would need to secure an exemption from the federal requirement that the facility not be used for slaughtering or processing poultry raised by more than one person. Vermont inspectors have researched and expressed interest in the development of mobile facilities. They could provide critical guidance and support in designing the facility and securing this waiver. If farmers want the mobile facility to meet state or USDA certification, they should meet with inspectors to get clear guidance regarding the parameters for providing washroom facilities for the inspector.[10] In addition, testing of all water supplies could be required.

From an environmental permitting perspective, the facility could secure agricultural exemptions from wastewater and Act 250 permitting *IF* the facility is limited to slaughtering product produced on the farm where it is parked. As long as the amount of composted waste meets the exemption criteria listed above, the facility would also be exempt from solid waste certification. Discussions with officials at the Vermont Agency of Natural Resources (ANR) make it clear that the processing of livestock from other farms would remove the agricultural exemption. The facility would then probably require Act 250, wastewater and potable water supply permits. Permitting would then dictate the terms under which the facility could operate including waste disposal that would be trucked to an appropriate sewage treatment facility, composted and/or incinerated. If a mobile facility is contemplated, further discussions should be held with ANR in order to determine the optimum operating parameters.

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[9] See section 6-1103 of Solid Waste Management Rules at http://www.anr.state.vt.us/dec/wastediv/solid/pubs/RULESOCT1504.pdf

[10] i.e. does the facility need to incorporate a washroom or can it be provided in barn or farmhouse?

BUSINESS FEASIBILITY

MISSION

After reviewing the criteria, the Steering Committee identified their mission as follows:

> *The goal of this cooperative is to enhance the economic viability and sustainability of member farms by ensuring access to affordable, reliable and high-quality slaughtering and processing services.*

BUSINESS DESCRIPTION

The proposed corporation will be operated as a member cooperative. This means that it is designed to act on behalf of and be controlled by the livestock producers who use its services. The actual corporate organization may be a cooperative or a limited liability company.

The company will contract as a single entity on behalf of all of its customer/members for slaughtering with one or more existing slaughterhouses and either own, co-own or be actively involved in creating a new commercial fabrication facility that meets the criteria outlined by the steering committee.

PRODUCTS AND SERVICES

The Steering Committee identified the following potential products and/or services of the cooperative, in priority order:

1. Slaughterhouse services – i.e. slaughtering, processing and wrapping
2. Marketing Venue/Brand for lower quality cuts of meat - *this will require quality standards*
3. Slaughterhouse Branded Products for non-meat products e.g. smoked pig's ears/bones, blood, compost, organic lard, etc.

MARKET

The size of the market for any slaughtering facility is generally dictated by the distance farmers are willing to have their animals travel prior to slaughtering. This is impacted by the ease, duration and cost of transport as well as how the stress from travel affects the quality of the meat. Most farmers in the group preferred a distance of an hour or less although many already travel further in order to obtain the professional quality services they are seeking from their processing facility. **If the transportation issues can be resolved, the market for a quality processing and fabrication facility might be substantially larger.**

The size of the market was quantified by using 2002 Census of Agriculture data for animals sold by county. Total sales for various livestock in the region are shown in the tables below.

TABLE 2 - Livestock Sold by County

	Hogs & Pigs sold	Sheep & Lamb Sold	Milk Goats Sold	Meat & other Goats sold	Red Deer	Broilers & meat chickens sold	Turkeys sold
Addison	278	1,322	220				
Caledonia	150	405				405	90
Chittenden	873	386					
Essex		27				300	

	Hogs & Pigs sold	Sheep & Lamb Sold	Milk Goats Sold	Meat & other Goats sold	Red Deer	Broilers & meat chickens sold	Turkeys sold
Franklin	88	395				45	316
Grand Isle	16	87					
Lamoille		527					379
Orange	843	901					194
Orleans	68	389				675	137
Washington	472	226					884
Best Guess - total from 'D's'[11]	1,799	-	9	290	283	1,200	750
TOTAL SOLD IN REGION	**4,587**	**4,665**	**229**	**290**	**283**	**2,625**	**2,750**

Sales include animals sold for slaughter and consumption as well as those sold between farmers. Sales data for hogs, ruminants and poultry is likely to correlate relatively well with the number of animals slaughtered. Simple correlations are not as easy with cattle and calves, which take longer to reach maturity and are compounded by the number of dairy cattle sent to slaughter. The Vermont Department of Agriculture reported that approximately 11,000 cattle were slaughtered in inspected facilities in calendar year 2003. We have assumed that 70% of those animals were slaughtered in the 10 counties in the market area. If 25% of the *beef* cattle inventory are slaughtered each year, it becomes quite clear that the vast majority of cattle slaughtered in state are cull cows from dairy herds.

TABLE 3 - Beef Cattle Data by County

County	Beef Cattle Inventory	Est. annual slaughter - beef cattle – 30%	Estimated annual slaughter - cull cows
Addison	1,209	302	
Caledonia	530	133	
Chittenden	663	166	
Essex	169	42	
Franklin	998	250	
Grand Isle	239	60	
Lamoille	424	106	
Orange	1,247	312	
Orleans	634	159	
Washington	786	197	
TOTAL IN REGION	**6,899**	**1,725**	**5,975**

[11] Data marked as "D" in the Census tables is withheld to avoid disclosing data for individual farms. This row is estimated at 40% of the statewide total of undisclosed data.

We then estimated the percentage of the county that was in the market area if the slaughterhouse were to be locates in either Orleans (e.g. Troy) or Lamoille (e.g. Morrisville) counties. These estimates are as follows:

TABLE 4 – Percent of County in Market Area

County	Orleans County location	Lamoille County location
Addison	5%	15%
Caledonia	50%	50%
Chittenden	50%	50%
Essex	30%	10%
Franklin	70%	70%
Grand Isle	20%	40%
Lamoille	80%	100%
Orange	15%	35%
Orleans	100%	80%
Washington	60%	75%
Best Guess - total from 'D's'	40%	40%

Farmers who had already expressed an interest in the cooperative were then surveyed to ascertain the numbers of livestock they expected to slaughter and process in 2005 and thereafter. These estimates provide a way to quantify the start-up demand for a slaughterhouse in either location. These estimates also provided a way to measure the percentage of the available market that was represented by these self-identified potential members. This "start-up" customer base is shown in the following table:

TABLE 5 – Self-identified Customers for Slaughterhouse Services

Livestock	**Est. #'s for 2005**	**Orleans location**		**Lamoille location**	
		Potential # in Market	**Members as % of total**	**Potential # in Market**	**Members as % of total**
Beef	143	771	19%	887	16%
Cull Cows		2,390		2,390	
Hogs & Pigs	161	1,787	9%	2,044	8%
Sheep & Lamb	1,010	1,845	55%	2,231	45%
Milk Goats	5	15	33%	37	14%
Meat & Other Goats		116		116	
Red Deer/Beefalo	12	113		223	
BEEF Equivalents	**421**	**~1,700** w/o culls		**~2,180** w/o culls	
Chickens	2,310	1,479	156%	1,284	180%
Turkeys	171	1,566	11%	1,786	10%

Table 5 indicates that self-identified customers (i.e. potential co-op members) expect to raise about 400-425 beef equivalents (in terms of annual slaughtering and processing demand) in calendar year 2005.[12] The table also shows that potential members raise a substantial portion of the lamb and poultry that is sold in the

[12] Calculated as follows: 1 beef = 5 lambs = 2.5 hogs

region but only a nominal portion of other animals sold (and slaughtered.) This may indicate relative satisfaction with existing slaughterhouse services among beef and hog farmers or it may indicate the potential for a much larger demand for services *IF* a cooperative venture provides the service, quality and value needed by these farmers. Obviously, potential slaughterhouse revenues from lamb and poultry are substantially lower per animal than the revenues per hog or beef.

Multiplying the total numbers of each type of livestock by typical slaughter and processing fees yields a potential gross sales figure for potential members and the market in either location. Using a typical processing fee of $350 for beef, $130 for hogs (without smoking) and $60 for the small ruminants, the membership represents about $131,000 worth of business.[13] Using the same methodology, the total potential business in the region is in the range of $620,000-720,000 exclusive of cull cows. If the volume of likely cull cows is included, this amount increases by over $835,000.

EXISTING FACILITIES AND COMPETITION

General Environment

Over the time period since the group of farmers first met to consider purchasing Brault's, there have been significant changes in the meat processing industry. Reported incidents of BSE in other parts of the country led the USDA to ban the slaughter of all downer cows and added additional slaughtering protocols for beef animals older than 30 months. As a result of these changes, the market for Swanton Packing, a slaughterhouse with a capacity of about 36 cattle/day changed dramatically. Swanton's primary market had been downers and cull cows from dairy operations. The business was sold in May 2004 to new owners who operated it as Green Mountain Packing. The new owners sought to attract additional customers and identify new markets. In August 2004, the Board of Green Mountain Packing decided to terminate operations. This decision was due to ongoing management challenges including an increasingly monopolized market for cull cows that made it extremely difficult for Green Mountain Packing to source and sell product competitively.

Existing Facilities

Currently, Vermont has eight operating licensed commercial slaughterhouses and two additional licensed facilities that are idle. None provide the complete array of services – slaughter, processing, smoking, sausage links, patties and organic and USDA certification – desired by farmers. The two idle facilities are Green Mountain Packing and Bushway's in Grand Isle. Brault's Market in Troy is for sale; Moore's in St. Johnsbury was sold this past December. Other facilities in the state include Clark's in Vergennes, Fresh Farms in Rutland, Over the Hill in Benson, Royal Butcher in Braintree, Sharon Beef in Sharon and Williston Packing in St. George. All of the operating facilities except Brault's and the Royal Butcher currently have a federal license. Both expect to obtain federal certification by next year. Williston Packing is closed to new commercial accounts in the peak August-January season. Farmers in the group felt that Fresh Farms and Clark's are located too far away. Producers' experiences with some of the other operations have resulted in varied quality in terms of the appearance and presentation of the finished product and the willingness to provide specialty cuts.

Of the eight operating facilities, two are newer, smaller-scale slaughterhouses that have been constructed or significantly expanded over the past two years. Over the Hill Farm, LLC operated by John and Nancy Wing in Benson is a USDA-inspected facility with organic certification. The Wings are experienced at raising and slaughtering beef. Ryan Larocque, a former butcher and chef, operates the Royal Butcher in Braintree. Both facilities were developed with the intent of providing better quality slaughter and processing services for the beef raised by their own families as well as other customers. The auctions following the closure of Green

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[13] When one considers these numbers, it is easier to understand why lamb producers are often victims of lower-quality service and rescheduling by slaughterhouse operators.

Mountain Meats and Middlebury Packing provided some of the start-up equipment needed by these new operations.

Vermont has an additional 14 licensed commercial packing plants and 21 custom packing plants. Many of the commercial packing facilities are actually specialty food processors, (e.g. Dakin's, Harrington's, Cottage St. Pasta) smokehouses or jerky makers. The custom cutters are generally butchers who process game and livestock for household use. For example, Randy Locke, a former meat inspector and freelance butcher, recently built a processing facility and smoker in Waterville. Although the facility was built to meet USDA requirements, Locke has found enough demand from non-commercial customers to operate it exclusively as a custom facility. This allows him to operate whenever he wants without worrying about needing to meet an inspector's schedule or overtime pay requirements.

Considerations for potential users include the range of services including animal pick-up and meat delivery, the quality of holding pens, the quality and appearance of the finished product, the cost of services and the distance from the farm. The following two tables detail the services, features, facilities and current costs for slaughtering and processing at each of the existing operations.

TABLE 6 – Existing Slaughterhouse Characteristics

Name	Location	Vt. Lic Commercial SH	USDA inspected	Throughput Capacity	Holding Area	Daily Kill - Beef/Pigs	Coolers	Freezer space	Pick-up animals	Slaughter	Cry-o-vac	Smoker	Retail meat counter	Sausage -making
Braults	Troy	X		40 - 60/wk	30 beef	40-60 /wk	1 hot; 1 cold	24 x 20	X	X	X	X	X	X
Clarks	Ferris-burgh	X	X	8-10 beef +20 pigs/week	30 beef	Slaughter 2 days/ week	1 hot; 1 cold	12 x 30	X	X	X			
Fresh Farms	Rutland	X	X							X				
Moore Beef	St. Johnsbury	X	X	5 beef/ day	10 beef	5 beef/day			X	X	X			
Over the Hill - Wings	Benson	X	X	20 beef/day	40 beef	20 beef or 60-80 hogs or lambs	1-12 x 24 1-24 x 24		X	X	X		X	X
Sharon Beef	Sharon	X	X							X		X		Tubes only
The Royal Butcher[14]	Braintree	X		15-20/wk	15 beef					X			X	Tubes only
Williston Packing[15]	Williston		X							X	X			Tubes only

[14] Royal Butcher is implementing plans to grow their facilities to accommodate up to 40 - 60 beef/week

TABLE 7 – Fall 2004 Slaughterhouse Prices

Name	Beef	Pork	Lamb - slaughter	Lamb - Kill, Process & Freezer Wrap	Custom - Freeze wrap/lb	Commercial/lb.	Cry-o-vac C&W /lb.	Smoking/lb. - commercial	Machine burger patties/lb	Sausage-making
Braults	$40	$35		$63[16]	.35-.45	.47	.50	.75		1.15/lb plus cry-o-vac
Clarks	$30	$25-30		$45 + $5 to bone	.35		.60			
Fresh Farms		NA	$20							
Moore Beef	$40	$30	$30	$55, if < 60#, $65 if larger		.38	.53	1.15		varies
Over the Hill - Wings	$50	$40		$60	.50		.65	.85		
Sharon Beef	$50	$40	$25+	$50	beef .50 pork .35	.55-.60		1.35		3.50/pig
The Royal Butcher	$50	$30		$65		.55				
Williston Packing	$40	$40	$30	$60	.40		.50			3.50/pig

Operational Challenges

All of the slaughterhouses visited by the steering committee experience seasonal variations in the demand for their services. The busiest months are generally from mid-August through January with significant slowdowns in May and June. Having sufficiently skilled staff in the busy months and keeping full-time staff occupied through the slower months can prove challenging for these facilities. As a result, slaughterhouses welcome arrangements that better spread the demand for services over the year.

The operation of the kill floor is highly dependent on the skill and speed of the people staffing and managing the process. In most cases, the owner of the facility is actively managing this process. Finding qualified staff remains a challenge for these operations.

Most of the facilities only slaughter animals one or two days each week. In other words, the factor that limits increased activity and sales is often the hanging and processing capacity NOT the availability of slaughtering facilities.

Although many of the State's slaughterhouses offer a meat counter, few have focused on aggressive marketing or selling their product into niche markets. If this were to change, it could create significant competition for farmers who are direct selling into these markets.

POTENTIAL OPTIONS

The group realized that purchase of an existing slaughterhouse was one of a number of options that could be considered in order to achieve their goals. Other options included building a new state of the art facility,

[15] No new commercial customers during busy season
[16] Plus 60 ¢/pound if lamb is over 60 pounds dressed

building and operating a mobile facility, building and operating a commercial processing facility, contracting as a group for services or joining with Vermont Quality Meats Cooperative (VQM) as it seeks to expand and increase its membership and supply of livestock. Each of these options is further detailed below and compared in Tables 8 and 9 beginning on page 16.

Purchasing Brault's or another slaughterhouse

Brault's is located on along Route 100 in Troy. The sale includes the 6,600 square foot building containing the slaughterhouse, meat market, smoker and all equipment as well as an adjacent 4-bedroom home and a 2-apartment building and storage garage. The asking price is $795,000. Owner Tony Brault was not prepared to release financials without some commitment of purchasing interest. Nonetheless we were able to gauge some sense of the business included a gross annual sales figure. Tony indicated that approximately 60% of his revenues are from custom work, 25% is from retail and roaster pigs and the remaining 15% is from commercial work. If these numbers are accurate, the potential membership of the cooperative represents more than 100% of Brault's commercial business but a substantially smaller percentage of his total sales.

Moore's was sold this past December to Pete and Tara Roy of North Haverhill, NH. The asking price was $235,000, for the building, processing equipment and 4 acres of land just south of downtown St. Johnsbury. Business operations at Moore's were not assessed as part of this feasibility study.

If the group was to purchase a slaughterhouse, it would need to establish a transition plan with the owner, hire new or contract with existing management, secure sufficient customers and develop new products. At Brault's the additional buildings could either be an asset (manager housing and rental income) or a liability (tenant problems.)

A cursory review of the RMA financial ratios for slaughterhouses suggests that sales are generally 2 ½ to 7 times assets. This would indicate that Brault's has the capacity to generate additional sales from its assets. A very cursory review of asking prices indicates that slaughterhouses are priced at 80-150% of gross sales.

Build a new facility

The construction of a new slaughtering and processing facility would require at least $600,000 in capital costs. This cost is based upon estimates included in a recent feasibility study conducted for the Hudson Valley and corroborated by John Wing of Over the Hill, LLC. In addition, the operation would need to secure all environmental and zoning permits and deal with all of the challenges faced by any start-up including the need to identify and secure its market and engage qualified management and staff. We question whether the potential market in the region north of Route 2 is large enough, especially in light of the existing facilities in the region, to support the construction of a new slaughter and processing facility. We would also note that the permitting process could become fairly onerous if neighbors were opposed to the idea.

Build a mobile facility

A mobile facility provides slaughtering and/or processing within the confines of a truck trailer that can be transported between farms. USDA-inspected mobile slaughtering units currently operate in Washington and central California. State-inspected poultry processing facilities are operating in Kentucky and New York. The advantage of these operations are reduced stress on the animals, reduction in transport time or cost for the farmer, the ability to dispose of wastes as part of normal "on-farm activities," and a minimal impact on neighbors.

The operation in Washington State provides slaughtering services to 36 different farms within about a 100-mile radius in four northwestern counties including the San Juan Islands. It is owned by a farmer-cooperative that also operates a stationary fabrication facility. The capital cost of just the mobile unit is approximated $120,000. Prior to the development of this facility, farmers in this region needed to drive over 200 miles through Seattle to a slaughtering plant and then transport the carcasses or primals to another facility for fabrication followed by a return trip with the wrapped product. Fall 2004 prices for slaughter were $70 for beef, $40 for hogs and $30 for lamb. Beef fees are higher than those typically charged in Vermont, while the fee for hogs and lamb compare favorably with local prices. Break-even for the facility is about 500-1,000 beef equivalents per year, depending on the particular circumstances. Designer Bruce Dunlop notes that a mobile facility makes sense if there are no other options available, noting "If there is something that is reasonably priced within two hours drive time, don't even bother with a mobile unit."[17] He also notes that it needs to be allied with a cutting facility and does not work financially as a stand-alone operation. See Appendix B – Washington Mobile Slaughtering Unit Info for more details.

The operation in Kentucky was designed to address the fact that the State had no federally inspected processing facilities that would accept poultry. As a result, farmers were unable to sell their birds commercially. This unit, which cost about $70,000, travels to about six community-docking stations around the state. Each of the stations, which cost about $20,000, provides access to water, electricity and waste disposal. Funding came from Heifer International, who still owns the units and grants. USDA provided a waiver to allow the unit to accept multiple users. The actual slaughtering and processing is handled by each farmer in collaboration with the mobile unit manager who oversees scheduling, transport, training and overall operation. The facility is also designed to accommodate processing of farm-raised shrimp.

In central New York, the Resource Conservation District helped develop a mobile unit for assisting start-up producers with processing poultry. This transportable 25' long unit was created at a cost of $3,000 plus about 70 hours of labor. It is designed to be used in an open air or tarp-covered setting. Two people can process about 20-40 birds per hour with the unit. First-year users are charged $25 for the first 100 birds and .25¢ for each additional bird plus roundtrip mileage. The fees increase by $10 and 10¢ respectively with each year of use. While this type of unit may be of value in helping a small-scale (i.e. less than 1,000 birds/year) producer initiate processing, it does not provide a long-term solution for producers seeking to grow and expand their operations. In addition, Vermont inspectors have indicated their discomfort with the open-air (aka high-fly potential) approach.

Mobile units remain a viable, albeit potentially expensive, option if existing facilities are unable to address the slaughter and processing requirements of commercial customers.

Develop commercial fabrication facility

Some of the biggest concerns facing potential members are the need for firm slaughtering dates and the desire to obtain finished product with the professional and consistent cutting, packaging and presentation that is required in specialty and niche markets. This is particularly challenging during the busy fall and winter months when a facility might bump a lamb producer in favor of a custom customer with four or five head of beef. The consensus opinion is that Vermont needs additional USDA-licensed fabrication capacity. Such a facility would only be able to assure USDA-certification if the slaughtering occurred under federal inspection. Challenges include chilled transport of carcasses, finding slaughterhouses willing to provide slaughtering without processing, finding butchers willing to staff such an operation and making certain than the final pricing is competitive. Ideally, the facility would be managed by someone with experience in food service and meat processing. This experience could potentially help farmers maximize the value of their animals by optimizing the cutting, developing value-added products such as sausages, marinated meats and products that were pre-seasoned and ready for cooking.

If space for such a facility could be leased, the major capital costs would include processing equipment and the costs associated with installing the requisite refrigeration, freezer and fabrication space as well as any needed overhead storage rails. Most slaughterhouses have a chill room (aka the "hot cooler") for reducing

[17] Phone conversation, October 5, 2004.

the body heat from freshly-slaughtered animals and a hold or sales cooler for storage of the carcasses. In order to enhance tenderness, most beef is aged at 33º for five to fifteen days, while lamb and goats should be aged for two days. Hogs are generally held for one day.

The space required for this type of facility including refrigeration and office space would be approximately 2,500 to 3,000 square feet. A USDA-prepared sample layout for a small facility is included as Appendix C. The facility would include about 1,000 square feet of chilled space (cooler, cure room and fabrication room) and another 450 square feet of freezer space including a quick freezer. A sample Capital Equipment Budget is included in Appendix D. These figures are roughly estimated – the exact requirements and costs should be recalculated for any specific situation. Total fit-up cost including refrigeration is estimated at $145,000. Total equipment costs are estimated at $75,000. Other start-up expenses are estimated at $15,000. Total estimated capital costs including a 10% contingency are estimated at about $255,000. If the site of the facility is purchased rather than leased, this would add an additional $125,000 to $200,000. Total capital costs would therefore be in the range of $380,000 to $455,000.

Operating costs would depend on staffing needs and the source of financing. A sample operating budget is provided in Appendix E. This budget assumes that the facility would capture the processing needs of all of the self-identified customers in its first year and then grow its annual capacity. The budget assumes the facility would need to borrow $200,000 for 5 years at 9%. Sources of equity are not identified. Given the identified market for its services, the facility is neither profitable nor does it cash flow in its first three years. Increased sales definitely help to improve profitability.

Co-location with a food preparation facility such as the Food Venture Center, the Farmer's Diner planned commissary or a training facility such as UVM or the New England Culinary Institute (NECI) could offer the potential for sharing some of the costs and expertise related to refrigeration, management and market and product development. Initial discussions with NECI, the Food Venture Center and the proponents of a farmer-owned milk processing facility indicated an interest in continued exploration of this idea. NECI is planning to relocate its existing meat fabrication facility on its Montpelier campus within the next year. However, the targeted new location is not large enough to accommodate co-location..

The Farmer's Diner is moving ahead with operating a food commissary/fabrication facility by the fall of 2005. Their plan is to have this facility do all of the food preparation required by their restaurants. The facility will be designed and permitted for slaughtering although they expect to limit their activities to cutting and food preparation. The facility will be modular design so that it can be expanded as needed. The Farmer's Diner is very interesting in processing for private labels and has built the offering of this service into their business plan.

Contract for services

This option meets the Steering Committee's criteria with the least amount of risk. It entails the formation of a cooperative to purchase slaughter and processing services. The underlying assumption is that larger customers get better service and prices than smaller customers. Individual farms represent from $1,500 to $40,000 worth of business per year. Pooled together, the interested farmers supporting this study represents $135,000 worth of business. Discussions with Brault's, Farmer's Diner , Moore's, Over the Hill and The Royal Butcher indicate some interest in this approach but not much concession in terms of price breaks. The slaughterhouses indicated a greater desire to work with the group if:

- It could offer a relatively steady amount of year-round business;
- Services were needed during the less busy times of year i.e. February to August;
- Producers could develop and follow a yearlong schedule;
- The slaughterhouse could deal with one person rather than each farm in terms of scheduling;

- Payment for services was promptly provided. There was a desire to be able to bill only one entity with some willingness to offer a 30-day term once the group had proved its payment ability;
- The group adopted similar labeling protocols and cutting instructions.

The idea of a partnership was generally less appealing than entering into a contract although some of the facilities were willing to look at both. The Royal Butcher was willing to consider either slaughtering or processing services. Moore's, Brault's and Over the Hill were interested in providing both slaughter and processing services. The Farmer's Diner is interested in processing, packaging and possibly, distribution.

If the group is interested in pursuing this option, further negotiations should occur with the preferred provider in order to develop specific terms for a contract.

Join with Vermont Quality Meats

Vermont Quality Meats is a farmer-owned marketing cooperative that sells pork, lamb & goat carcasses as well as sides of veal and game birds at premium prices to restaurants in New York and Boston. VQM has been operating out of the Rutland area since 1999. They currently own two high-quality refrigerated trucks that travel to Clark's slaughterhouse in Vergennes each week and to Brault's occasionally.

Some of the members of the Steering Committee have shipped to VQM and one still does so regularly. The biggest challenge to working with VQM for farmers in the northern part of the State has been transporting live animals to Rutland for slaughter. At the meeting with farmers in December 2004, VQM was present to talk about their need for additional supply. The idea of arranging for animals to be killed at a slaughterhouse in northern Vermont and then transported to Rutland for delivery to VQM's markets became increasingly attractive. Tony Brault indicated a potential interest in working with this type of scenario. Since the meeting, VQM has disclosed their intent to acquire additional storage and processing facilities, which would allow them to better accommodate this type of arrangement. Over time, they expect to develop a line of cuts with the VQM label. They would also be interested in processing for private labels.

The cost of trucking carcasses is estimated to be $10-$25/head for lambs and goats. The exact cost would be based on actual mileage, size of the animal and the number of carcasses/truckload. VQM has negotiated a $15 kill fee with Fresh Farms in Rutland. It remains to be seen if a similarly discounted fee could be negotiated at other slaughterhouses. Even with a higher slaughtering fee, the net to non-member farmers for lamb that meets VQM's quality standards would be in the range of $2.20-$2.40/pound for small lambs (dress out at under 30 pounds) and approximately $1.70-$1.90/pound for large lambs (dress out at 55 pounds or more) Mid-range sized lambs would yield about 15¢ less per pound than these amounts. These prices may be attractive to lamb farmers from northern Vermont without existing labels. This group may wish to join VQM as members or provide product as nonmembers. Regardless, negotiations should be undertaken with Brault's (and others) to make certain they are indeed willing to work with VQM and local farmers.

As part of this study, we reviewed VQM's Business Plan for its proposed expansion. In order to secure the financing that will be needed for this expansion, VQM will need to further elaborate upon its proposed new services, how it will grow its markets and detail the sources and uses of any financing.

TABLE 8 - Options for Farmers

OPTIONS	Buy Braults or other slaughterhouse	Build a state of the art slaughterhouse & processing facility	Build mobile slaughtering unit (MPU)	Build commercial fabrication shop	Contract as a group for slaughtering and processing services	Join with Vt. Quality Meats
Potential variations	buy just the business; buy another slaughterhouse		Combine with fabrication shop	Convince existing custom cut shop; Co-locate with food venture center or NECI		
Certification	Brault's has State – working to USDA, Moore's has USDA	USDA	USDA - may require exemptions	USDA	find USDA-certified	Would access USDA
Services/products offered						
Animal Transport	yes	maybe	NA	maybe	maybe	yes
Slaughter	yes	yes	yes	no	yes	yes
High end cut & wrap	maybe	maybe	maybe	yes	maybe	Promise of…
Sausage making	yes	yes	maybe	yes	yes	Promise of…
Smoking	yes	maybe	no	maybe	maybe	maybe
Delivery of finished product	maybe	maybe	maybe	maybe	maybe	yes
Considerations/Parameters						
Capital Cost	asking $795,000	600K - based on Hudson Valley estimates, confirmed @ Wings	125K - based on conversations w/ KY, WA, Ag Dept, etc.	Roughly estimated at 200-300K if space could be rented	10K to form legal structure	undetermined
Permits Required	assume none unless changes are proposed	local, Act 250, Wastewater, Composting, Labor & Industry, USDA	USDA Possibly water, wastewater, Act 250 & composting	local, wastewater, Act 250 if not in industrial park, Labor & Industry, USDA	none	
Oversight & Control	Need to determine	Need to determine	Need to determine	Need to determine	Need to determine	Members elect Board

OPTIONS	Buy Braults or other slaughterhouse	Build a state of the art slaughterhouse & processing facility	Build mobile slaughtering unit (MPU)	Build commercial fabrication shop	Contract as a group for slaughtering and processing services	Join with Vt. Quality Meats
Potential role of volunteer members or staff	Scheduling, HACCP coordination, Billing	Scheduling, HACCP coordination, Billing	Scheduling, HACCP coordination, Billing	Scheduling. HACCP coordination, Billing	Scheduling. billing	
Management	Establish transition plan, find new management	Starting from scratch - Need to hire manager who can slaughter, manage people, work with Board and build business	Starting from scratch - Need to hire manager who can slaughter, process, schedule and work with farmers, Board & temporary? staff	Starting from scratch - Need to find manager who can process meat, manage people, work with Board and build business	none	Would need to be comfortable with existing management
Personnel	will they stay or go?	Starting from scratch - can Management find the people needed?	Starting from scratch - is it the farmers or hired folks? Can you get what you need?	Starting from scratch - can Management find the people needed?	Do you need to pay someone to coordinate?	Would need to feel comfortable about existing personnel
Market for services	Existing customer base - would they stay?	Owners would probably not be enough of a market. Can you attract others?	Owners may be enough of a market.	Owners would probably not be enough of a market. Can you attract others?	not Co-op's concern	VQM is a market-driven cooperative
Product sales - aka meat counter	Existing customer base - could it be expanded?	Would need to develop the market	none	Would need to develop the market	could be competition for members	maybe
Energy Costs		Ideally, state of the art efficient equipment	Although it could be state of the art, would be hard to determine rates, etc. Would need careful consideration	Ideally, state of the art efficient equipment	not Co-op's concern	Could be an issue

OPTIONS	Buy Braults or other slaughterhouse	Build a state of the art slaughterhouse & processing facility	Build mobile slaughtering unit (MPU)	Build commercial fabrication shop	Contract as a group for slaughtering and processing services	Join with Vt. Quality Meats
Financing	not worth the asking price. If priced properly, then what?	Most expensive option	Who owns it? Grant funding? May take a LONG time to implement	Who owns it? Grant funding?	not Co-op's concern	Could be an issue but farmers will own whatever is purchased
Other benefits	Existing customer base	Creating an asset, but only has value if good management	Innovative approach may entice demo financing	Likely to be most responsive to developing new products	Minimal management required, may fit best with farmer's lives	Owned , managed and operated for and by farmers. Should be responsive to developing new products & services
Other concerns	HACCP, hidden liabilities?, competition from Green Mountain Packing, Developing appropriate incentives to attract the management you need	HACCP, Developing appropriate incentives to attract the management you need	New approach - will take a long time to permit; Wastewater issue is not insignificant, may require legislative change; Will farmers want to work in this operation? Will costs be comparable to existing slaughter/process? Cost of product liability insurance could become prohibitive	Transport of carcasses could be a hassle, HACCP, Developing appropriate incentives to attract the management you need	If selected provider opts out, raises prices or sells, are you left high and dry? If you get a bad reputation as a customer, are you left high and dry?	Transport of carcasses could be a hassle, HACCP, Highly dependent on management and how they interact with farmers and end buyers. Farmer/owners could face additional liability if company goes belly-up

TABLE 9 – Ability to Meet Criteria - measured as High, Medium & Low (high is best)

OPTIONS	Buy Braults or other slaughterhouse	Build a state of the art slaughterhouse & processing facility	Build mobile slaughtering unit (MPU)	Build commercial fabrication shop	Contract as a group for slaughtering and processing services	Join with Vt. Quality Meats
Avoid price changes	to be determined (tbd)	tbd	tbd	tbd	tbd	tbd
Avoid loss of slaughterhouse services	High	High	High	Medium	Medium	Could still lose slaughter-capacity, but gives most options to farmers
Quality professional cutting and presentation?	depends on Management	depends on Management	depends on Management	High	depends on Management	depends on Management
Consistency in packaging, appearance and sizing	High	High	tbd	High	High	High
Availability re: scheduling - Commercial customers have priority over custom customers	High	High	High	na	Medium	High
Additional capacity and facilities	Low				Low	High
Cost-effective slaughtering services for goat kids	tbd	tbd	tbd	na	tbd	Has market for goat kids – likely to consider alternative approaches
Value-added services e.g.. brand for lower quality cuts; non-meat products	High	High	Medium	High	Medium	High

OPTIONS	**Buy Braults or other slaughterhouse**	**Build a state of the art slaughterhouse & processing facility**	**Build mobile slaughtering unit (MPU)**	**Build commercial fabrication shop**	**Contract as a group for slaughtering and processing services**	**Join with Vt. Quality Meats**
Accurate labeling	High	High	High	High	Medium	High
Preserve access to slaughtering, processing and packaging services in Northern Vt. (defined as N of Re 2, S of Canada)	High	High	High	High	Medium	Medium BUT alternative approach…

RECOMMENDATIONS

Based on the information ascertained as of early March 2005, we would suggest that the following options offer the best chance for meeting the group's criteria. The options are listed in priority order. Options are not necessarily mutually exclusive. We firmly believe that additional market volume beyond the members of this group is needed in order to assure the success for any of these options. In addition, the issue of transporting livestock to slaughter and packaged product from the processing facility to customers must be addressed. Finally, some degree of grant funding or other subsidy will undoubtedly be required for these ventures to achieve financial stability.

1) Work with Vermont Quality Meats to transport and market roaster pigs, lamb and goat carcasses as well as beef and pork cuts from northern Vermont to VQM's existing and proposed customers. Achieving this will require the following:
   a) Collaboration among northern Vermont farmers to arrange for delivery of live animals to specified slaughterhouses at pre-determined times.
   b) Negotiating with Brault's and/or other slaughterhouses to make certain that:
      i) They are USDA-certified;
      ii) They are willing to provide slaughtering services without associated processing;
      iii) Pricing is competitive;
      iv) Services will be available at the proscribed times.
   c) Consider using VQM trucks to back-haul processed products from slaughterhouses to northern farmers.

2) Join Vermont Quality Meats and encourage them to develop, contract for and/or manage farmer-owned processing services for their members.

3) Contract for transport, slaughtering and processing as a group – this provides greater purchasing power but does not guarantee access to services or long-term viability. Costs might be reduced if the group can develop online scheduling arrangements and/or consistency in package labeling. The anticipated permanent rise in fuel costs will require more collaborative and creative solutions to address the challenges of transporting livestock and finished product.

4) Contract individually with existing slaughterhouses and/or Farmer's Diner. Continue to support and encourage those facilities that provide high-quality cutting and packaging services.

5) Partner with another entity to develop and operate a commercial fabrication facility. We have assumed that this approach would bring additional market volume and expertise.

6) Once processing services have been addressed, farmers may want to revisit the idea of owning a mobile slaughter facility.

7) Support education, demonstration and technical assistance efforts that help to mitigate the seasonal nature of Vermont's livestock industry. This includes developing niche markets such as spring lambs and summer roaster pigs that make use of excess processing capacity in the slower seasons and the development of feasible business plans for operations that utilize year-round processing and marketing.

8) Continue to monitor emerging developments resulting from the RBEG-funded AAFM program providing technical assistance to Vermont's meat processors, the Organic Meat Company's efforts to process cull cows from organic dairies and the Food Venture Center's activities to address the shortage of USDA-licensed meat processing capacity in northern Vermont.

APPENDIX A – RESOURCES CONSULTED

VERMONT AGENCY OF AGRICULTURE, FOOD & MARKETS,

Food Safety & Consumer Assurance, Meat Inspection Service, 116 State Street, Drawer 20, Montpelier, VT 05620-2901, 828-3410

Carl Cushing, Director, carl@agr.state.vt.us
Curt Stasheski, Section Chief, curt@agr.state.vt.us
Randy Quesnelle, Compliance Officer

Agricultural Development Division, 828-2416

Dave Lane, Deputy Secretary
Ed Jackson, Marketing Specialist
Steve Justis, Marketing Specialist

VERMONT AGENCY OF NATURAL RESOURCES

John Akielaszek, Section Chief, Indirect Discharge Permits, Wastewater Management Division, 241-3824, john.akielaszek@anr.state.vt.us
John Brabant, Environmental Analyst, Vermont Solid Waste Management Program, 241-3463
Elizabeth Hunt, Chief, Support and Planning Section, Water Supply Division, 241-3409

SLAUGHTERHOUSES

Tony and Lynn Brault, Brault's Market & Slaughterhouse, Troy, VT 744-2271
Randy Locke, Locke's Wild Game and Custom Processing, Waterville, 644-5686
Lisa Bradley, Moore Beef, St. Johnsbury, 748-8323
Pete Roy, Moore Beef, St. Johnsbury, 748-8323
John Wing, Over the Hill, Benson, VT 537-2811
Ryan Larocque, Royal Butcher, Braintree, VT 728-9901

Barney Blood, Blood's, Groton, MA
Paul Lemay, LeMay and Sons, Goffstown, NH
Lorenzo Meats, Cannon Falls, MN

MOBILE PROCESSING UNITS

Bruce Dunlop, Lopez Island Farm, bruce@lopezislandfarm.com, 360-468-4620
Sue Meant, Partners for Family Farms, P.O. Box 22259, Lexington, Kentucky 40522 859-233-3056, msdweant@aol.com

OTHER INDIVIDUALS

Roger Allison, Patchwork Family Farms, Columbia, MO
Dwight Barney, UNH
Dr. Bill Henning, Penn State
Arthur Meade, Winding Brook Farm, Morrisville
Anthony Pollina, Dairy Farmers of Vermont
Bryan Severance, Chef, Meat Fabrication Kitchen, NECI
Thomas Shepstone
Ridge Shinn, Bakewell Reproductive Center
Dean Tote, SUNY - Cobleskill

PRINTED RESOURCES

Development of a Company to Increase Livestock Processing and Assist Producer's Marketing Efforts in the Hudson-Mohawk Region of New York prepared April 2004 by Food & Livestock Planning, Inc. 1600 Genessee, Suite 533, Kansas City, MO 64102. www.foodandlivestock.com

Feasibility Study for Energy Efficient On-Farm Poultry and Small Ruminant Processing Plants, prepared by The Center for Agricultural Development and Entrepreneurship, 250 Main Street, Oneonta, NY 13820, 607-431-6034, available at http://www.cadefarms.org/pdf/Feasibility%20Study.pdf

Handbook for Exempt Poultry Processors, Vermont Agency of Agriculture.

Hudson Valley Livestock Marketing Task Force Meat Processing Facility Feasibility Study prepared January 2000 by Shepstone Management Company, 100 Fourth St., Honesdale, PA 18431 570 251-9550 www.shpestone.net – key findings available at http://www.sheepgoatmarketing.org/sgm/education/projects/hudsonfeas.htm

Layout Guide for Small Meat Plants published by USDA http://www.ncagr.com/vet/meat_poultry/pdf/Layout%20Guide.pdf

New Hampshire Livestock Inventory and Slaughter Facility Feasibility Study http://www.nhfarmbureau.org/publication/LivestockReportWriteup.pdf

Northeast Livestock Collaborative Business Plan prepared June 2000 by Keith DeHaan, Ph.D., Food and Livestock Planning, Inc. funded by Cooperative Development Institute

Stafford Springs Meat Processing Plant Assessment & Business Plan, prepared February 2000 by Food & Livestock Planning Inc and ProAnd Associates, Ltd.

APPENDIX B – WASHINGTON MOBILE SLAUGHTERING UNIT INFO

USDA INSPECTED MOBILE PROCESSING OF LARGE ANIMALS FOR SMALL SCALE PRODUCERS

The meat processing industry has become more consolidated in recent years, resulting in the closure of many small processing plants across the country. Small family farmers who wish to market their livestock directly to consumers, restaurants and local stores often do not have USDA inspected processing facilities available within a practical distance. A group of farmers in San Juan County, WA set out to address this problem. The solution was the first mobile USDA Inspected field slaughter unit.

UNIT SPECIFICATIONS

Gooseneck trailer 33 ft long
8.5 ft wide
13 ft tall

Processing area 8.5' x 11'
Holding cooler 8.5' x 11'
Mechanical room 8.5' x 10'

Cooler Capacity 6000 lb

Tow Vehicle F450 Ford Truck

Unit is equipped with a diesel generator, water storage, hot water heater, refrigeration and tools to allow for fully self-contained operation.

Processing Capability

5 beef, 12 hogs, or 20 sheep per day with one butcher, with a second butcher assisting it has been possible to increase this to 9 beef in one day. The unit can operate for two days before returning to its base to unload carcasses and re-supply. Alternate configurations with two vehicles can be used to provide more flexibility and increased production capacity.

Cost

Total project cost for design, construction and testing of the unit was $150,000. A second similar unit has been constructed at a cost of $110,000 without the tow vehicle.

For additional information and assistance in determining if a mobile processing system would meet your needs please contact Bruce Dunlop at bruce@lopezislandfarm.com or 360-468-4620

APPENDIX C – SAMPLE LAYOUT OF CUT SHOP[18]

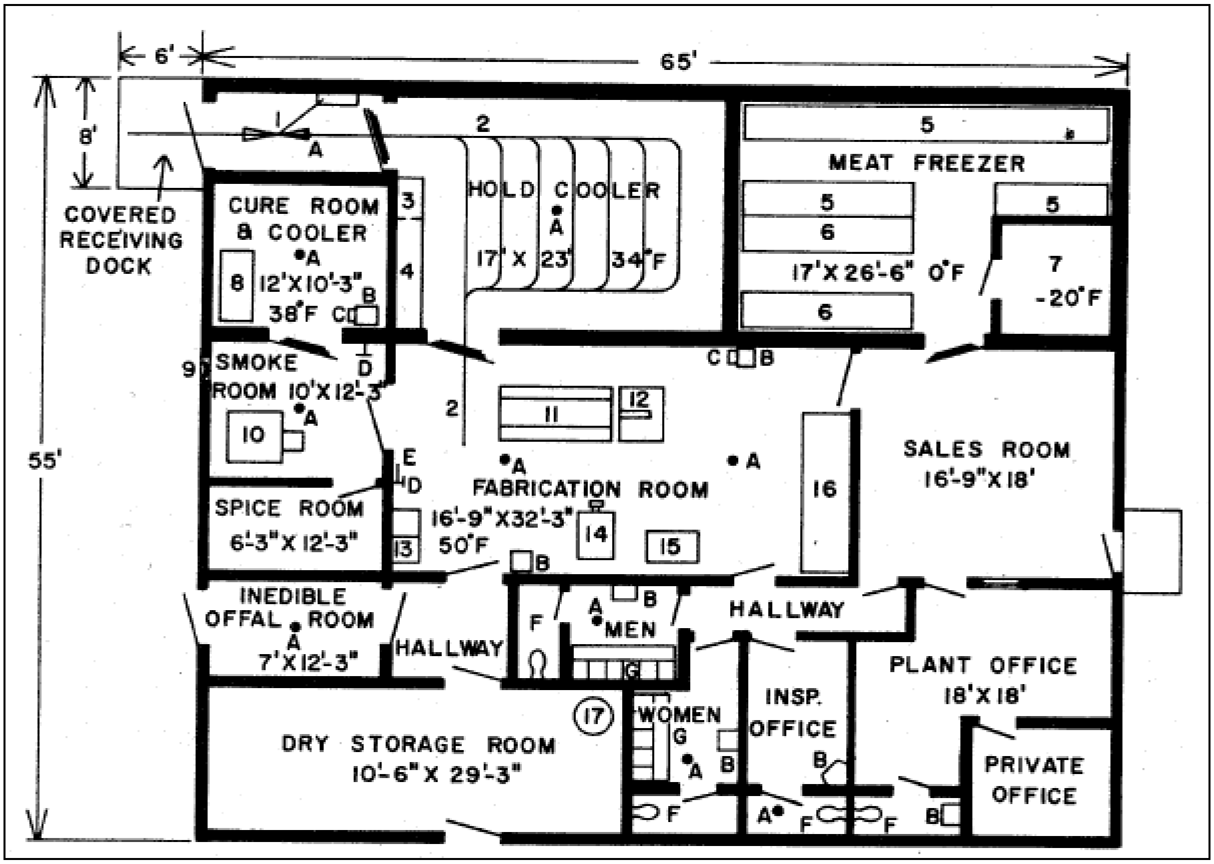

FIGURE 6.—Layout for a nonslaughter plant. (1) Track scale, (2) 7'6" high rail, (3) return product, (4) meat shelves, (5) meat baskets, (6) meat lockers, (7) quick freezer 8'x8', (8) ham-pump table, (9) exhaust fan, (10) smokehouse, (11) boning table, (12) bandsaw, (13) sink, (14) meat grinder, (15) patty machine, (16) packing table, (17) water heater 140° F, (A) floor drain, (B,) lavatory, (C) sterilizer, (D) hot and cold water, (E) thermometer in waterline, (F) toilet, and (G) clothing locker.

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[18] from "Layout Guide for Small Meat Plants" Marketing Research Report No. 1057, Agricultural Research Service, USDA available at

APPENDIX D – PROCESSING FACILITY CAPITAL BUDGET[19]

Anything in a shaded box is an assumption

Equipment - Processing	Cost/unit	Unit size	Cost	Sub-Totals
Leasehold Improvements		sq. ft		
Floor/ Wall resurfacing	1.0	5,000	5,000	
Ventilation	1	5,000	5,000	
Sub-Total				10,000
General Equipment				
1 Meat Saw/Grinder	500	300rpm	500	
1 Grinder/mixer	1,250	1 hp	1,250	
1 Hand Cuber	400		400	
1 Sausage Stuffer & Adapter	950	25#	950	
1 Meat Mixer	300	50#	300	
1 Patty machine	100		100	
1 Platform scale	1,600		1,600	
1 Scales, hanging carcasses	250		250	
1 Scales, Pricing digital	450		450	
1 Smoker	25,000	600#	25,000	
1 Feed Slicer	2,800	12', 1/2 hp	2,800	
1 Bacon slicer	1,375		1,375	
1 Ham Pumper	1,300		1,300	
1 Pumping table	600		600	
1 Sterilizer - knife	70		70	
1 Sharpening Stone	200		200	
3 Stainless Steel Tables	370		1,110	
1 Double sink & faucet	800		800	
1 Hand sink	200		200	
1 Rollers & rails	200		200	
1 Steam Kettle	7,700	40 gallon	7,700	
1 Heater, Ht water	900		900	
1 Knee-pedal andwashing	300		300	
1 Pressure Washer	840		840	
1 High-temp dishwasher	5,200		5,200	
1 Racks & shelving	1,000		1,000	
1 Lugs & Tubs	100		100	
1 Shelving	200		200	
1 Trays & Racks	1,000		1,000	
1 Misc. & Utensils	5,000		5,000	
Sub-Total				61,695

[19] This budget is a rough estimate – a more refined assessment of requirements and updating of costs should be completed once a particular site or situation is contemplated.

Refrigeration Equipment		sq. ft.		
Walk-in Cooler, chiller, etc	100	900	90,000	
Freezer	100	450	45,000	
Sub-Total				135,000
Packaging	**Cost/unit**	**Unit size**	**Cost**	**Sub-Totals**
1 Vacuum packing equipment	5,000		5,000	
1 Digital Label Maker/Scale	1,650		1,650	
Sub-Total				6,650
Equipment - Office				
2 Computers & software	1,250		2,500	
1 Phone system	400		400	
3 Desks, etc	140		420	
Sub-Total				3,320
Other Start-up				
Training	7,500			
Market development	2,500			
Professional fees	5,000			
Sub-Total				15,000
TOTAL				**231,015**
Contingency	10%			23,102
TOTAL CAPITAL NEEDED				**254,117**

This budget assumes that the property will be leased not purchased.

APPENDIX E – SAMPLE OPERATING BUDGET

Anything in a shaded box is an assumption

Assumptions	Hours/animal	Source	Year 1	Year 2	Year 3
Beef Processed	8.75	Shepstone	150	250	400
Pigs Processed	3	Shepstone	160	300	400
Lamb Processed	2.5	Shepstone	1,000	1,200	1,500
lbs sausage produced	8#/lamb; 15#/pig		10,400	14,100	18,000
Work hours/year	2,000	50 weeks, 40 hrs	4,293	6,088	8,450
Inflation	103%				

Revenues	Ave. Dressed weight	Price/#	Year 1	Year 2	Year 3
Beef Processed	564	$ 0.60	50,760	84,600	135,360
Pigs Processed	210	$ 0.60	20,160	37,800	50,400
Lamb Processed	42.5	$ 0.60	25,500	30,600	38,250
Smoking	36	$ 0.65	3,744	7,020	9,360
Sausage	See above	$ 0.35	3,640	4,935	6,300
TOTAL INCOME			**103,804**	**164,955**	**239,670**

	Assumptions				
Expenses	time	rate	Year 1	Year 2	Year 3
Manager	40%	50,000	20,000	20,600	21,218
Lead Cutter	full-time/hour	$16.00	32,000	32,960	33,949
Assistants		$10.00	22,925	40,875	64,500
Trucking	10 hrs/week	$10.00	5,000	5,150	5,305
Scheduler/Bookkeeper	40%	$ 30,000	12,000	12,360	12,731
Benefits	% of total salary	30%	27,578	33,584	41,311
Supplies	per animal	$ 5.50	7,205	9,625	12,650
Utilities	monthly	$ 700	8,400	8,652	8,912
Rent	monthly	$ 1,000	12,000	12,360	12,731
Telephone	monthly	$ 125	1,500	1,545	1,591
Insurance	annual	$ 8,000	8,000	8,240	8,487
Professional Fees	monthly	$ 200	2,400	2,472	2,546
Depreciation		$ 4,000	48,000	48,000	48,000
Maintenance		$ 125	1,500	1,545	1,591
Total Expenses			**$ 208,508**	**$ 237,968**	**$ 275,521**
NET INCOME			(104,704)	(73,013)	(35,851)

SIMPLIFIED CASH FLOW	Year 1	Year 2	Year 3
Loans In	200,000		
Grants or Equity In	200,000		
Capital Expenses	400,000		
Debt Payment	$49,820	$49,820	$49,820
Net CASH FLOW	(106,524)	(74,833)	(37,671)