Southern Maryland Livestock Producers

Meat Processing Feasibility Study

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1.0 Background Brief

Southern Maryland Livestock Producers is an organization of livestock producers from Anne Arundel, Calvert, Charles, Prince George's and St. Mary's Counties, within the Chesapeake Bay region of Maryland. This group, composed largely, but not exclusively, of beef farmers, desires to create a niche market for locally raised meat products under the prospective trade name of "*Southern Maryland Meats*." Most of the producers are now cow-calf operations, but there is strong interest among these farmers in finishing some or all animals and securing a larger share of the income derived from them.

Such an endeavor will require dedicated processing capacity for both slaughter and fabrication. Accordingly, Southern Maryland Livestock Producers seeks to evaluate the market and financial feasibility of developing dedicated local meat processing capacity for its members. The objectives include lowering transportation costs, ensuring high quality and having a reliable supplier of services on a year-round basis that can grow with the enterprise. The organization hopes, through such measures, to significantly improve profits and allow for diverse enterprises and steadier year-round sources of income.

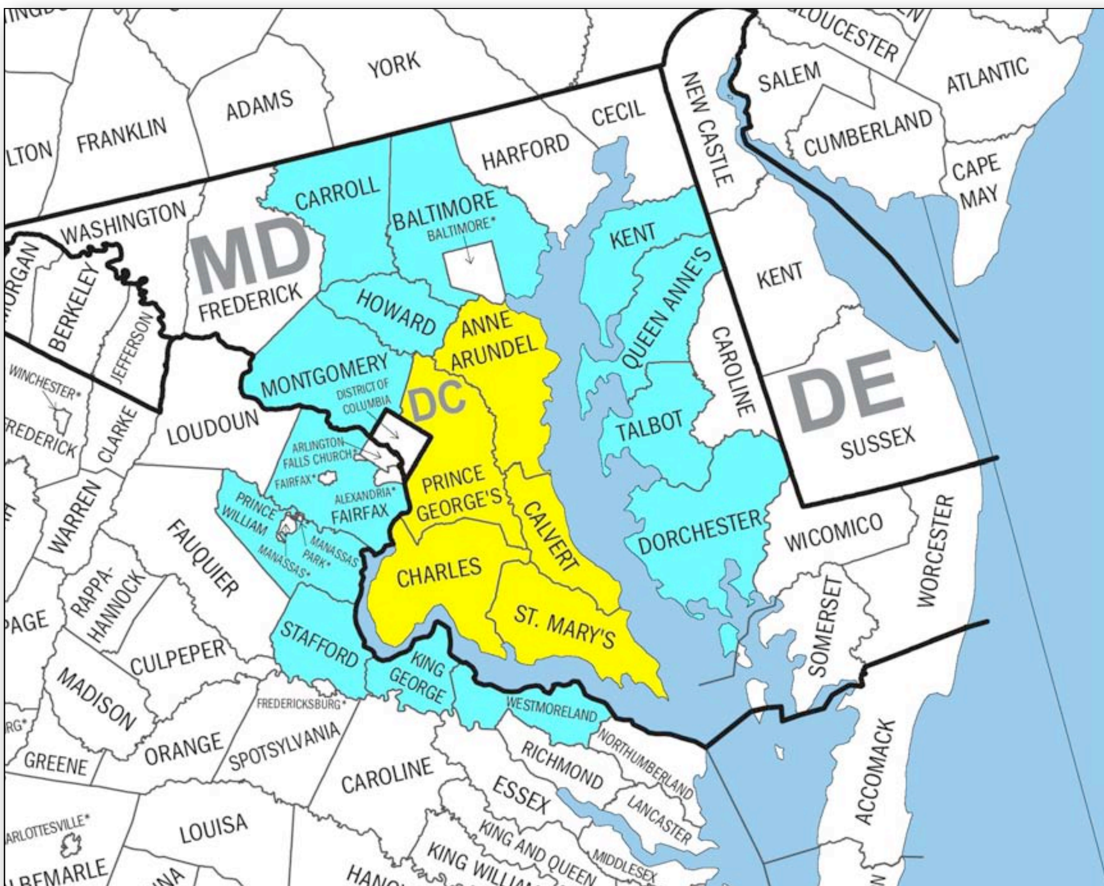
Shepstone Management Company has been contracted to assist Southern Maryland Livestock Producers in studying the feasibility of creating additional processing facility and, pending the results of the study, to develop an appropriate Business Plan for such a project. The Feasibility Study, which follows, includes a detailed inventory of existing facilities and capacities, identifies prospective new sites, analyzes supply and demand with respect to both growing and processing and thoroughly assesses the market for a regional operation, taking into account the required financial investments and projected cash flows associated with different models.

Data was gathered from several sources, including on-farm visits, the Census of Agriculture, industry contacts and farm service agencies. These data indicate the region includes a significant livestock industry that offers opportunities to create a distinctive line of locally-raised meat products under the *Southern Maryland Meats* name. The area, as part of the Baltimore-Washington metropolitan region, enjoys access to one of the wealthiest markets in the nation, suggesting numerous possibilities to sell niche meat products to discriminating consumers. The challenges include; a) defining a marketable niche based upon common production and quality characteristics, b) transitioning to the types of farm operations required to support such a marketing effort, c) developing both short and long-term meat processing capacity, and d) creating an organizational structure to support the initiative. These are the purposes of this study.

2.0 Market Area and Livestock Inventory

The starting point for defining the supply side market area is, of course, the Southern Maryland region of Anne Arundel, Calvert, Charles, Prince George's and St. Mary's Counties. Nevertheless, while this is a relatively large geographic region, the relatively low overall volume of slaughter within Delaware and Maryland (treated as one state for purposes of USDA data gathering on this issue) ensures that any meat processing facility would almost certainly have to draw livestock from surrounding counties to be feasible. Non-farm facilities slaughtered some 37,400 cattle, 1,000 calves, 18,500 hogs and 33,700 sheep and lambs within the two states combined in 2005. How much of this volume comes from Southern Maryland is not clear, but livestock inventories reviewed below suggest it is a relatively small share and livestock processing demand generated will be very small in the big picture. It is very likely any fixed facility will have to draw from surrounding counties to generate the necessary volumes. Absent such volume there will not be an adequate foundation to consider investing in a facility or other arrangement to process and market livestock.

Given this reality, it was determined the region should, for purposes of feasibility analysis be expanded to encompass immediately adjacent and easily accessible secondary market counties, including several on the Delmarva peninsula and in northern Virginia. A map of the selected market area (18 counties in all, chosen based upon proximity and volumes of animals) follows:



Primary Market   Secondary Market

The U.S. Census of Agriculture, although based on incomplete farm estimates and somewhat generalized in nature, nonetheless offers some threshold level data regarding livestock inventories in the supply-side market area. The following tables provide the basics.

Figure 2-1: Inventory of Cattle and Calves Sold, 2002

	Anne Arundel	Calvert	Charles	Prince George's	St. Mary's	Total Southern Maryland	Adjoining & Nearby Counties
Cattle Farms							
2002	57	52	87	63	125	**384**	1,149
1997	72	79	120	86	176	**533**	1,654
Cattle/Calves Sold							
2002	1,103	416	1,320	854	2,205	**5,898**	34,278
1997	1,170	755	1,488	1,326	2,613	**7,352**	49,285
Cattle/Calves Sales							
2002	$648,000	N/A	$774,000	$439,000	$1,496,000	**$3,357,000**	$15,499,000
1997	$513,000	$291,000	$708,000	$557,000	$1,444,000	**$3,513,000**	$20,985,000
Cattle on Feed Farms							
2002	16	4	18	12	52	**102**	186
1997	6	12	21	16	59	**114**	186
Cattle on Feed Sold							
2002	388	34	415	163	N/A	**1,000**	2,681
1997	83	70	288	155	816	**1,412**	3,577

Source: U.S. Census of Agriculture

Note: Adjoining and nearby counties include Baltimore, Carroll, Dorchester, Howard, Kent, Montgomery, Queen Anne's and Talbot in Maryland plus Fairfax, King George, Prince William, Stafford and Westmoreland in Virginia

Figure 2-2: Inventory of Hogs Sold, 2002

	Anne Arundel	Calvert	Charles	Prince George's	St. Mary's	Total Southern Maryland	Adjoining & Nearby Counties
Hog Farms							
2002	6	-	13	3	44	**66**	139
1997	7	6	29	10	61	**113**	155
Hogs Sold							
2002	50	-	734	N/A	19,012	**19,796**	23,109
1997	232	154	1,862	1,016	13,083	**16,347**	38,531
Hog Sales							
2002	$4,000	N/A	$0	N/A	$739,000	**$743,000**	$1,945,000
1997	$27,000	$15,000	$191,000	N/A	$1,310,000	**$1,543,000**	$2,798,000

Source: U.S. Census of Agriculture

Note: Adjoining and nearby counties include Baltimore, Carroll, Dorchester, Howard, Kent, Montgomery, Queen Anne's and Talbot in Maryland plus Fairfax, King George, Prince William, Stafford and Westmoreland in Virginia

Figure 2-3: Inventory of Sheep and Goats Sold, 2002

	Anne Arundel	Calvert	Charles	Prince George's	St. Mary's	Total Southern Maryland	Adjoining & Nearby Counties
Sheep Farms							
2002	4	6	8	7	15	**40**	154
1997	13	14	20	12	19	**78**	218
Sheep Sold				116			
2002	N/A	76	138	623	211	**1,048**	5,797
1997	152	158	256	1,016	154	**1,736**	8,374
Meat & Other Goats							
Farms (2002)	2	5	4	6	9	**26**	85
Goats Sold (2002)	N/A	N/A	N/A	N/A	165	**165**	453

Source: U.S. Census of Agriculture

Note: Adjoining and nearby counties include Baltimore, Carroll, Dorchester, Howard, Kent, Montgomery, Queen Anne's and Talbot in Maryland plus Fairfax, King George, Prince William, Stafford and Westmoreland in Virginia

There are obvious limitations with the Census of Agriculture data. It is gathered in five year increments with the data always being a minimum of two years old and sometimes as much as seven years old when used. It is also dependent upon farmers' own subjective estimates. Many back-yard "farmers" who may only be in the business for hobby purposes are included in the data.

Moreover, because the statistics are derived from surveys returned by farmers, members of the plain community (Amish and Mennonite sects) are often not included in the numbers because many have philosophical objections to participating in government programs. Finally, the data is not necessarily organized so as to be directly useful in measuring the number of animals sent to slaughter. Agricultural Census questions asked are not focused on the end uses of the livestock.

Notwithstanding these limitations, the Census of Agriculture is the most comprehensive and consistent data set available. It provides the best overview regarding the nature of the opportunities available for meat processing industries. It indicates the following:

- The five Southern Maryland counties accounted for sales of 5,898 cattle, which is significant. However, the numbers are down 19.8% from five years earlier. The pattern within adjoining and nearby counties is somewhat similar, but the numbers are much larger and the decline steeper. There were another 34,278 of cattle sales in these 13 counties, down 30.4% from 1997. Interestingly, these combined numbers (40,176 animals) are close to the total cattle slaughtered for Maryland and Delaware combined, suggesting the Census figures do provide a reasonably accurate picture of total volumes of livestock available.

- Hog sales, although down generally throughout the region, were actually up by 21.1% within the five Southern Maryland counties. There were 19,796 hogs sold in this area in 2002. However, 88% of the regional total is accounted for by four large hog farms that existed in St. Mary's County in 2002. These contract growing operations have since disappeared. The actual volume available is probably less than 2,000 hogs according Cooperative Extension personnel. However, representatives of the St. Mary's County Amish/Mennonite community suggest it would, with a steady market and reasonable price, produce as many as 50 hogs per week, reusing a number of the growing facilities still existing in the region. The volume within adjoining and nearby counties totaled 23,109, down 40.0% from 1997 figures. Once again, however, most of the volume was found among larger contract growing operations. The bulk of it (17,408 animals) was from Carroll County, where only 427 of the hogs sold were from farms selling less than 50 hogs per year.

- Sheep and lamb sales are very modest, with the Southern Maryland region accounting for 1,048 sales, down 39.6% from 1997. There were another 5,797 sales in the adjoining and nearby counties, down 30.8% from five years earlier. There were also, in 2002, some 165 meat and other goat sales recorded, with another 453 in surrounding counties.

- The volume of cattle being fed out for sale represents 17% of the total, or 1,000 animals in 2002, reflecting the predominance of cow-calf operations within the Southern Maryland region. These fed out cattle came from 102 farms. The numbers five years earlier were 1,412 cattle from 114 farms, so volume is down 29.2%. There were another 186 such farms in adjoining and nearby counties in 2002, accounting for sales of 2,681 fed out cattle, down from 3,577 cattle from an identical number of farms (186) in 1997.

Because the Census data is limited, contacts were made with several specific producers and other industry representatives to gather additional perspectives and such other data as might be available. Not every producer can be contacted nor are all willing to reveal information. Therefore, a mail survey of all identifiable livestock producers within the five counties of Southern Maryland was also conducted to help evaluate Census and other sources of data. Much of the data collected is privileged in nature and can only be used in total, but it does provide further insights into the nature of the supply-side market. A summary of the survey results may be found in the Appendices to this study.

Altogether, some 35 livestock producers, a little over 15% of the total producers identifiable by name from agricultural agency mail lists, responded. They currently account for an estimated 184 feeder calves and 150 fed cattle sold per year, suggesting total regional (5-county) volumes of about 1,225 to 1,250 calves and 1,000 fed cattle, if survey results are extrapolated to the total number of producers. Assuming producers of feeder calves will also have an interest in feeding out cattle for slaughter, given adequate processing capacity and profit margins, there is a potential total market of 2,250 beef cattle.

This "identifiable volume" is the same number that was generated pre-survey through contacts with individual producers and agricultural agencies and, therefore, provides a sound basis for further analysis. Significantly, the survey indicated the producers responding were willing to commit a total 290 beef per year to a Southern Maryland livestock marketing and processing program, which extrapolates to a total volume of approximately 1,930 beef per year, suggesting most of the available production capacity can be captured by an effective marketing program.

The following table summarizes the identifiable producers and cattle volume (cattle and calves produced per year) by county that might well be available to a *Southern Maryland Meats* project. It includes, also, estimated sheep and goat volumes available and some prospective volumes of hogs from the Amish/Mennonite community in St. Mary's County, based on discussions with representatives and the presence of existing growing facilities. Survey results support both the sheep and goat and hog numbers.

Figure 2-4: Producers and Cattle Volume, 2006

	Anne Arundel	Calvert	Charles	Prince George's	St. Mary's	Total Southern Maryland
Cattle Producers	17	43	51	16	26	**153**
Hog Producers	0	3	3	1	20	**27**
Sheep & Goat Producers	1	6	6	6	4	**23**
Total Producers	**18**	**52**	**60**	**23**	**50**	**203**
Identifiable Cattle/Calf Production	**700**	**210**	**300**	**240**	**800**	**2,250**

There is an easily identifiable volume of over 2,250 cattle and calves per year produced within the Southern Maryland region that could translate into volume for a slaughter and processing facility. Many of these operations are now focused on feeder calf production. **However, producers inventoried in this case consist of those either already feeding out some cattle or likely to be prospects for converting a part of the operation out to finishing beef.**

These numbers track well with the Census data suggesting there are a little less than 6,000 beef sold per year, with about 1,000 being on feed. The difference is a factor of the many very small producers within the Southern Maryland region. Indeed, 208 of 384 farms where cattle and calves were sold in 2002 (some 54%) had less than 10 animals. Another 89, or 23%, sold no more than 10-19 animals.

Also noteworthy is an identifiable sheep and goat volume of some 655 animals per year (based on consultant interviews, information provided by committee members and the survey). A significant hog volume should also be available if Amish/Mennonite farmers can be re-engaged in growing for this industry. The presence of existing unused hog growing facilities suggests there would be such interest and the survey results confirm an interest.

How much volume now in feeder calves can be converted to finished beef? How much of the total volume can be expected to be attracted to a meat processing operation established to market *Southern Maryland Meats*? These are the key questions. Traditional market analysis and the start-up experiences of other small slaughter facilities in the East (e.g., the now closed Stafford facility in Hartford, CN) suggests extreme caution is warranted. Producers are reluctant to change habits. While the prospect of additional profits is enticing, there is significant risk in any new venture and producers will not want to jeopardize relationships with existing buyers and processors unless they have reasonable assurances of good performance from a yet unproven entity.

The professional experience of the consultants on this project, with other similar projects, suggests it is prudent to count on no more than 10% of the total volume available at the outset and no more than 50% of that volume which is easily identifiable at the outset. Likewise, one should not expect to attract more than 3-5% of potential volume from adjoining counties which are more accessible to slaughter facilities located elsewhere (e.g. Ruppersberger and Treuth's in Baltimore) and less likely to change. Applying these criteria to the data analyzed above suggests the following volumes are realistic for purposes of further feasibility analysis.

Figure 2-5: Projected Slaughter Volume Available at Startup

	Southern Maryland Volume	Adjoining County Volume	Total Volume Available	Volume Available Monthly
Cattle Volume	590	1,028	1,618	**135**
Hog Volume	480	183	663	**55**
Sheep & Goat Volume	121	188	309	**26**

Note: Southern Maryland volume based upon 10% of sold volume per 2002 Ag Census volume. Adjoining counties volume based upon 3% of 2002 Ag Census volume. Adjustments also made for potential hog volume from plain community.

A secondary issue, of course, is the rate of growth in volumes with a quality meat processing facility in place. Although volumes have declined in recent years, experience suggests the presence of a quality processing facility, combined with good marketing of a niche product based upon added value to the consumer, can grow volume being lost to the commodity-based programs at the moment.

This issue is further studied later, but professional experience suggests it is reasonable to assume volumes should reach 50% of identifiable volume or 15% of total volume (per Census data) in the second year, increase by 10-30% per year during each of the next three years and grow by 2-5% per year the next five years. The following table projects volume based upon these assumptions.

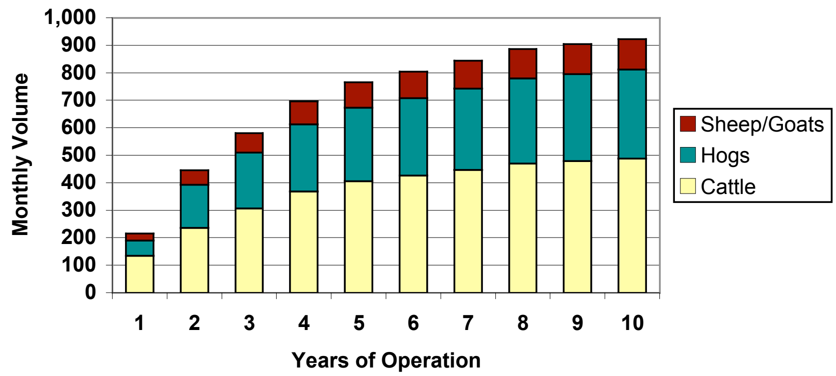
Figure 2-6: Projected Slaughter Volume Next 10 Years

	Year 1 Monthly Volume	Year 2 Monthly Volume	Year 3 Monthly Volume	Year 4 Monthly Volume	Year 5 Monthly Volume	Year 6 Monthly Volume	Year 7 Monthly Volume	Year 8 Monthly Volume	Year 9 Monthly Volume	Year 10 Monthly Volume
Cattle	135	237	308	369	406	426	448	470	479	489
Hogs	55	156	203	244	268	282	296	310	317	323
Sheep & Goats	26	54	70	84	92	97	102	107	109	111

Note: First year volume based upon 10% of sold volume per 2002 Ag Census for Southern Maryland and 3% for adjoining counties. Second year Southern Maryland volume based upon 50% of identifiable volume or 15% of 2002 Ag Census volume, whichever is less. Adjoining counties second year volume based upon 5% of 2002 Ag Census. Years 3-5 volume increase 30%, 20% and 10% per year, respectively. Years 6-8 volume increase 5% per year and years 9-10 at 2% per year.

These projections are based upon the experience of other start-up agri-businesses of a similar nature (e.g., Catskill Family Farms, which, with the help of consulting team members, launched a line of niche farm products for New York City restaurants) and assume certain favorable marketing conditions going forward. They will have to be adjusted if marketing does not proceed accordingly. Those favorable marketing conditions include a nearby metro area market of rapidly accelerating incomes, increased demand for natural food lines, the existence of an organization in Southern Maryland Livestock Producers that could oversee the launch of a niche product line and the availability of some professional marketing assistance from affiliated or similar entities such as Roseda Farms. It is also fair to say hog volumes could be considerably higher. Several contract producers and others selling to auctions and other commodity markets left this business when prices declined severely during the 1990's. Many would like to re-enter the business on a smaller scale if they could be assured of fairer prices.

Figure 2-7: Projected Slaughter Volume



3.0 Existing and Proposed Processing Facilities

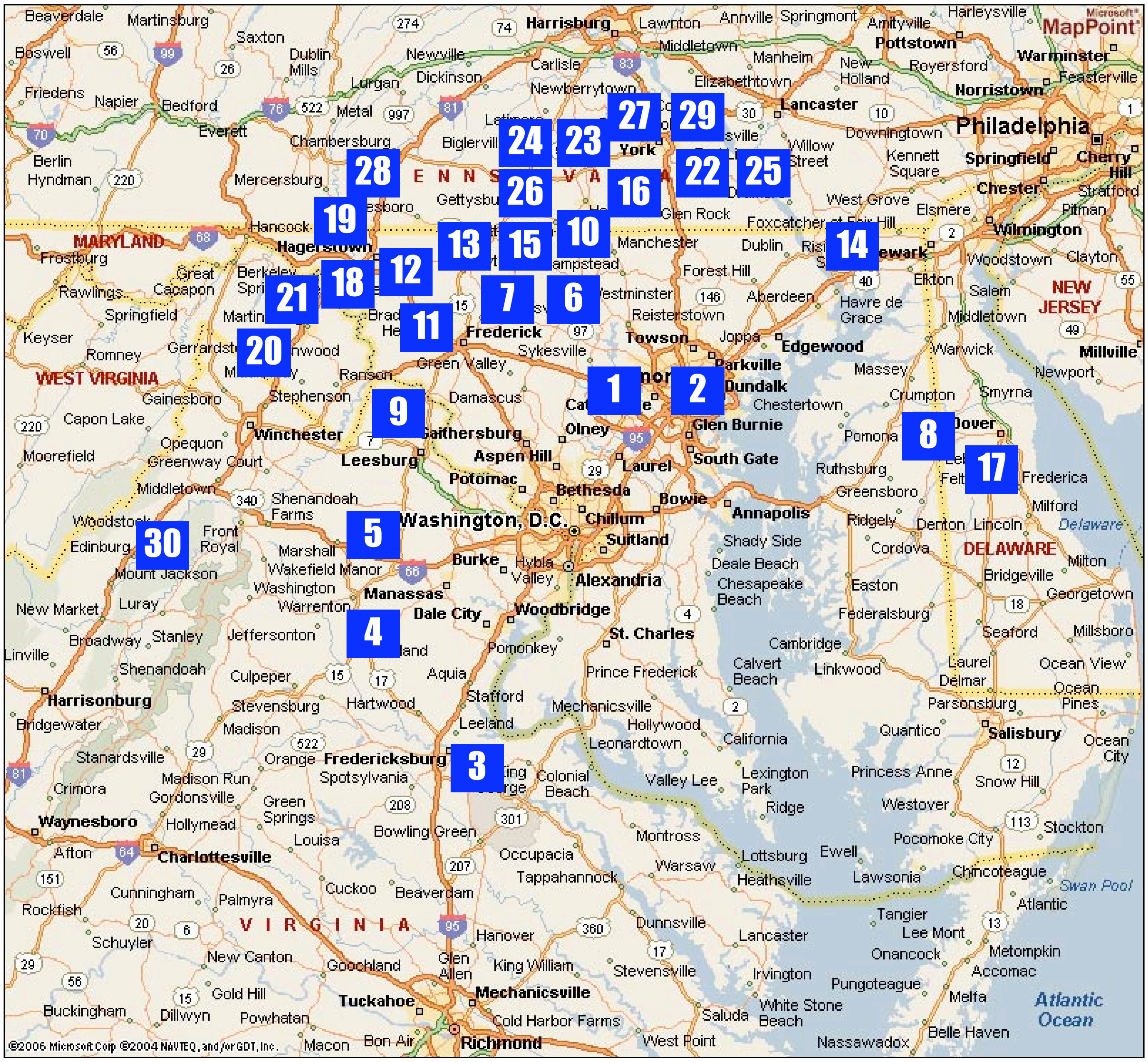
Existing slaughterhouse facilities in the region, their current volumes, their processing capacities, and whether they offer specific services such as aging, specialized packaging, smoking or manufacture of value added products were all assessed. USDA Food Safety and Inspection Service records were reviewed and interviews conducted with the operators of existing processing facilities within and adjacent to the market area to determine how much underutilized capacity exists and the specific markets which these facilities serve. Wait times at existing facilities and capacities in relation to the animal supply and demand, as well as meat supply and demand, were all examined. Facilities processing poultry only were excluded from the analysis. A list of USDA-FSIS permitted slaughter operations within roughly 2.5 to 3 hours of Southern Maryland follows:

Figure 3-1
Existing Slaughter Facilities Proximate to Market Area

No.	Name of Facility	USDA No.	City	St.	Zip	Miles	General Characteristics
1	J.W. Treuth & Sons, Inc.	2612	Baltimore	MD	21228	57	Beef
2	G. G. Ruppersberger & Sons	5931	Baltimore	MD	21217	59	Beef & sheep
3	New Takbeer Halal Meat	33786	Fredericksburg	VA	22401	74	Beef, sheep & goats
4	Lebanese Butcher Slaughter	31959	Warrenton	VA	20186	76	Beef, sheep & goats
5	Ayrshire Farm	33831	Upperville	VA	20184	77	Fabrication only
6	Wood Meats	8461	Westminster	MD	21157	83	Sheep & goats
7	Wagner Meats, LLC	10804	Mount Airy	MD	21771	83	All major species
8	Sudlersville Meat Locker	10835	Sudlersville	MD	21668	87	All major species
9	Hemp's Meats	10799	Jefferson	MD	21755	87	Beef
10	Maurer & Miller Meats, Inc.	10789	Manchester	MD	21102	88	All major species
11	Dorsey Meats, Inc.	10790	Woodsboro	MD	21798	92	Hogs
12	A & W Country Meats, Inc.	10801	Taneytown	MD	21787	96	All major species
13	Shuff's Meats, Inc.	10808	Thurmont	MD	21788	97	N/A
14	Galvinell Meat Company	10803	Conowingo	MD	21918	102	Busy, not interested
15	Shriver Meats	10800	Emmitsburg	MD	21727	103	Beef
16	Twin Pine Farm	9814	Seven Valleys	PA	17360	105	N/A (also very small)
17	Haass Family Butcher Shop	8892	Dover	DE	19904	105	N/A
18	Roy L. Hoffman & Sons	7415	Hagerstown	MD	21740	105	Beef, hogs & goats
19	Horst Meats	7882	Hagerstown	MD	21740	105	Busy, not interested
20	Woodlawn Farms	10786	Sharpsburg	MD	21782	108	All major species
21	Hamzah Slaughter House	10805	Williamsport	MD	21795	108	N/A
22	Sechrist Brothers, Inc.	8596	Dallastown	PA	17313	110	In-house fabrication only
23	Godfrey Brothers	8562	York	PA	17403	111	All major species
24	Meyers/Perry Meats	9565	York	PA	17404	117	Busy, not interested
25	Windsor Meat Market	9500	Windsor	PA	17366	119	Beef & hogs
26	Bucher Meats	9492	Biglerville	PA	17307	127	Very small, not interested
27	Smucker's Meats	21265	Mount Joy	PA	17552	131	Beef (would do hogs)
28	Rosenberry's Abattoir, Inc.	9640	Chambersburg	PA	17201	132	Busy, not interested
29	Wayne Nell & Sons Meats	9548	East Berlin	PA	17316	133	All major species
30	Gove's Processing, Inc.	27237	Edinburg	VA	22842	135	Busy, not interested

* Miles distant from Waldorf, MD

Existing Slaughter Facilities Proximate to Market Area



Note: Facility numbers are keyed to preceding table and locations are approximate.

As the table and map reveal, there is a dearth of slaughter facilities serving the Southern Maryland region. Moreover, some facilities (e.g., Ayrshire Farm) are special purpose in nature or limited to fabrication, although strictly poultry facilities have not been included. Many are also very small or extremely busy, while others are, if accessible, still somewhat remote.

Telephone conversations were conducted with all available facilities to determine their specific features and services. This narrowed the list considerably, although some facilities not responding to calls (e.g., Lebanese Butcher Slaughter, Wood Meats, Haas Family Butcher Shop) could well be available to provide limited services. The following two tables summarize the nature of the facilities exhibiting potential to serve Southern Maryland. Among them are facilities looking to expand operations or take on more capacity. These include Ruppersberger, Smuckers, New Takber and

Dorsey. Ruppersberger and Smuckers are both working with Roseda Farms to develop new business.

Figure 3-2: Facilities with Capacity to Serve Market

No.	Name of Facility	Freezing	Custom Retail Fabrication	Vacuum Packing	Private Labeling	Aging	Smoking	Other
1	Treuth	No	No	No	No	Yes	No	Kosher
2	Ruppersberger	Yes	Yes	Yes	Yes	Yes	Yes	Kosher
3	New Takbeer	No	Would	Would	Would	No	No	Halal, Kosher
4	Wagner	Yes	Yes	Yes	Yes	Yes	Yes	Sausages, Jerky
5	Hemp's	Yes	Yes	Yes	No	Yes	Yes	Sausages, Loafs
6	Maurer & Miller	Yes	Yes	Yes	Yes	Yes	Yes	Sausages
7	Dorsey Meats	Yes	Yes	Yes	Would	Yes	Yes	Sausages
8	Hoffman	Yes	Yes	Yes	Yes	Yes	Yes	Sausages
9	Smucker's	Yes	Yes	Yes	Yes	Yes	Yes	B/P BBQ, Jerky

Figure 3-3: Capacity of Existing Facilities to Serve Market

		Present Volume (Weekly)			Processing Capacity (Weekly)			Typical
No.	Name of Facility	Beef	Hogs	Lamb/Other	Beef	Hogs	Lamb/Other	Wait Time
1	Treuth	100	N/A	N/A	100	N/A	N/A	1 week
2	Ruppersberger	60	N/A	300	65	N/A	300	1 week
3	New Takbeer	10	N/A	100	10	N/A	100	1 week
4	Wagner	90	25	25	100	30	25	3-6 weeks
5	Hemp's	20	N/A	15	30	N/A	30	1 week
6	Maurer & Miller	12	40	15	15	50	25	1 week
7	Dorsey Meats	N/A	20	N/A	N/A	40	N/A	1 week
8	Hoffman	35	35	30	45	45	35	1 week
9	Smucker's	15	N/A	N/A	50	N/A	N/A	1 week
Total/Average		**342**	**120**	**485**	**415**	**165**	**515**	**1 Week**

Interviews with facility owners suggest there is available additional capacity among them to slaughter and process approximately 65-70 beef, 45-50 hogs and 30-35 lambs/goats. Nevertheless, this capacity varies seasonally with the Autumn months being very busy, particularly during deer season. Facilities such as Ruppersberger's also have to reserve volume for select customers for whom they have committed capacity. Wait times can lengthen considerably during busy periods, although the typical wait time when interviews were conducted in February, 2006, was one week or less. The practical capacity to take new business, therefore, is more limited than the above numbers alone indicate.

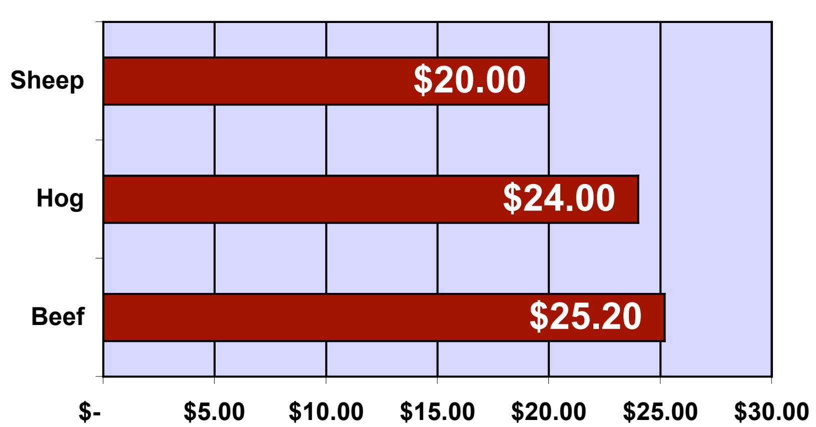
There is some additional capacity to process hogs, however, the Smucker's operation being willing to get back into that business under the right circumstances. It had processed hogs some time ago, but dropped that service as the industry went to contract growing and margins became too tight. Regular demand on the custom side of the business would have some appeal to Smucker's, however, and there could be some additional capacity (perhaps 30-50 hogs per week) made available if Southern Maryland Livestock Producers were to contract with Smucker's for this service. Smucker's also has capacity to take additional beef.

There is one proposed new processing facility in the region. The Ruppersberger operation in Baltimore has loosely affiliated with Roseda Farms, a beef producer and marketer of Roseda Beef that also has an affiliation with Smucker's in Lancaster County, Pennsylvania. Ruppersberger, backed up by volume commitments from Roseda Farms, proposes to build a new facility with the capacity to handle as many as 600 beef per week, or the equivalent, in mixed species. This facility would offer both slaughter and fabrication and be located directly across the street from Ruppersberger's current facility, which is obsolete by today's standards. The Ruppersberger facility must be replaced or the company will not be able to stay in business more than a few years. It currently serves specialty Kosher and other wholesale markets, operating at low margins that will not sustain such an inefficient operation over the long-term.

This operation will require a minimum volume of 200 beef per week or the equivalent in throughput to break even, which will, in turn, demand committed volumes from not only Roseda Farms but also other producers. It will require an investment of as much as $10 million in the plant and working capital. The site chosen offers certain financial benefits, has the City of Baltimore's support and has access to a labor market that can supply the operation with workers. There may be an opportunity for Southern Maryland Livestock Producers to affiliate at some level with Ruppersberger to take its volume while it establishes a *Southern Maryland Meats* marketing program. However, there are some issues with this, including the considerable challenge of getting such a facility up and running, defining the relationship, accommodating Southern Maryland volume in the interim and dealing with species Ruppersberger does not now handle or might not handle in the future. Halal product lines will be difficult as well, because Ruppersberger is focused on Kosher products and the two practices are not easily mixed.

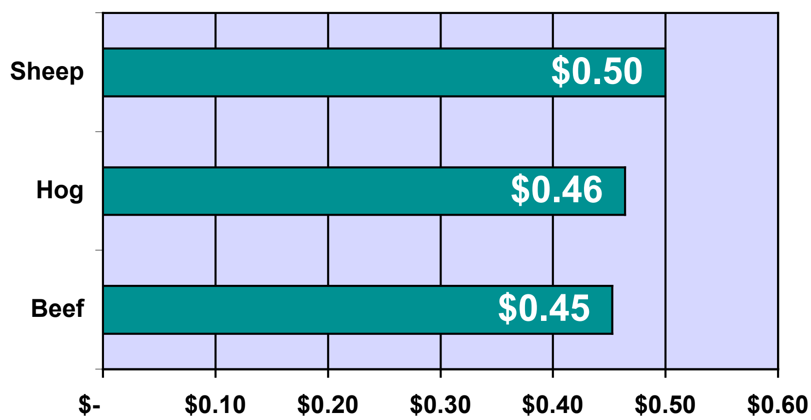
Charts following depict typical charges for killing and fabrication by these facilities. The slaughter charges include no fabrication, transportation or charges for other than killing, evisceration and hide removal. Most facilities impose a $5 to $10 rendering fee on top of the kill charge. The charges assume the slaughter facility retains ownership of hides and other drop items.

Figure 3-4
Average Slaughter Charges Per Animal



The fabrication charges are, likewise, for basic services only, which includes cutting and wrapping, but not smoking, patties or similar special products or services. Typically, the charges apply to hanging weight although a few facilities work off live weight. Freezing is typically included but aging for more than a few days is not. Some facilities provide vacuum packing as part of their quoted fee and others charge extra. There is no consistent method of charging for fabrication among the many facilities surveyed nor were all facilities willing to share information. Much depends on the focus of the operation. Those facilities geared toward specific markets tend to offer fewer options and higher charges for custom processing.

Figure 3-5
Average Fabrication Charge Per Pound



An assessment was also made of facilities within the Southern Maryland region and nearby counties that offer fabrication services independent of slaughtering. They are very limited in number, most facilities being special purpose in nature and not offering custom services. The following table lists USDA licensed facilities permitted to do fabrication:

Figure 3-6
Existing Processing Facilities Near Market Area (MD Only)

No.	Name of Facility	USDA No.	City	Zip	Miles
1	Binkert's Meat Products	2666	Baltimore	21237	64
2	Gilco Meats	4761	Baltimore	21208	65
3	Gladhill Meat Market	10791	Damascus	20872	69
4	Hahn Brothers	2000	Westminster	21187	84
5	Rocko Meats	5987	Thurmont	21788	97
6	Horst Meats	7882	Hagerstown	21740	105

Note: List does not include clearly special purpose processors or wholesale distributors. Miles indicate the distance from Waldorf, Maryland.

None of these facilities, to the best of the consultants' knowledge, accept carcasses and, therefore, none are particularly relevant to meeting the needs of Southern Maryland Livestock Producers.

Overall, the inventory of processing facilities indicates there is limited capacity to accept new volume from Southern Maryland, enough relative to the regional animal supply to get a *Southern Maryland Meats* marketing program up and running (see Section 2.0), although additional capacity will be required if the program is successful and additional demand is generated. The demand for the meat products that Southern Maryland Livestock Producers might produce is, in a metro region such as Baltimore-Washington, a function of marketing. That is to say, there is far more than enough demand to sell any product the organization can produce, if it is marketed properly. Therefore, it will be the marketing capacity of the organization that will determine how far and how fast production grows and demand for processing capacity increases. Section 5.0 addresses this matter in more detail.

4.0 Facility Requirements

The foregoing analysis establishes establishes the basic facility design parameters for any meat processing operation that *Southern Maryland Meats* might undertake. Such a system must:

- Have a minimum capacity at the outset to slaughter and process the meat from up to 135 beef per month (30-35 per week), 55-60 hogs per month and 25-30 sheep and goats per month.
- Be able to expand to meet future demand with the ultimate capacity to slaughter and process as many as 500 beef per month (125-150 per week), 300-350 hogs per month and 125-150 sheep and goats per month.
- Include capacity at the outset to fully fabricate a weekly throughput of up to 20,000 pounds of meat, including vacuum-packing, labeling, manufacturing of patties and preparing of cooked products; with the ability to expand to as much as 75,000 pounds of meat per week in the future as the *Southern Maryland Meats* volume grows with aggressive marketing of the brand.

- Include the capacity to age meat carcasses for up to two weeks, which, in turn, demands cool storage areas that will ultimately accommodate as many as 250 carcasses at any one time (approximately 2,000 square feet of floor area, based upon criteria found in the Pennsylvania State University's guide: *Planning a Small Meat Packing Business*). This is essential to offering a distinctive line of products that will serve to attract the attention of the targeted urban market consumer.
- Include sufficient freezer capacity to store a two-week supply of fabricated meat products, which will ultimately require area sufficient to accommodate as much as 150,000 pounds of

meat. This will, in turn, easily demand as much as 1,500 square feet of walk-in freezer space, assuming the use of 5-shelf storage racks, which are typically employed for this type of freezer storage space.

- Include the capacity to store and/or dispose of offal and drop items (e.g., hides and other specialty items). Depending on the methods employed, this may require land area sufficient to accommodate composting, which is a cost-effective disposal technique for most meat wastes.

  According to the University of Nebraska at Lincoln, "a ton of meat waste by itself will occupy about 1.2 - 1.5 cubic yards and, with bulking agent mixed in, a newly mixed pile will occupy about 5 cubic yards for each ton of meat waste...if (an) operation generates 250 tons of meat waste per year...the composting area (will) occupy 40,000 square feet, or about one acre...(plus) sufficient land area to buffer the operation from neighboring land uses (a minimum of 2-5 acres recommended)."

- Include office space for use of management, marketing personnel and USDA inspectors.

- Include a small retail area for walk-in business and promotion of the brand.

- Include equipment to collect and transport all animals to the facility (a truck and stock trailer) and a freezer truck(s) to transport fabricated products to purchasers and/or distributors.

Why Farms and Butchers Should Compost Mortality and Residuals

- ✓ Pathogen kill occurs in thermophilic composts
- ✓ Can be done any time of the year, even when the ground is frozen
- ✓ Can be done with equipment available on most farms
- ✓ Relatively odor free
- ✓ All sizes of animals can be composted
- ✓ Placental membranes and other tissue can be composted
- ✓ Paunch manure and other parts not accepted in rendering will compost
- ✓ Relatively low labor and management needed
- ✓ Low cost

Source:
Natural Rendering: Composting Livestock Mortality and Butcher Waste
Cornell Waste Management Institute

- Have the capacity, for marketing purposes, to accommodate both Kosher and Halal practices as well as the use of humane slaughter practices.

There are at least four different options that must be considered in investigating the feasibility of meat processing options. These include: 1) contract capacity from existing provider(s); 2) leasing space in an existing but vacant facility; 3) purchasing or constructing a mobile slaughter facility; and 4) construct a new fixed plant facility (with or without fabricating capacity). Each of these options includes distinct advantages and disadvantages that must be considered in deriving the best possible solution for launching a *Southern Maryland Meats* marketing program.

The four options and the implications of each are summarized in the table following:

Figure 4-1
Southern Maryland Livestock Producers
Comparison of Processing Options

Contract Capacity - Existing Provider(s)	Lease Space in Vacant Facility	Construct Mobile Slaughter Facility	Construct New Fixed Plant Facility
Advantages			
Capital expense limited to organizational costs and transportation system Allows SMLP to concentrate on organization and marketing Piggyback's on existing services, allowing overhead costs to be spread Volume commitments will allow negotiation of best price Can create multiple options for fabrication Would have potential source of volume to meet unexpected demand for product Combining forces with others could attract more capital and grant funds Allows operations to begin quickly Spreads risks by contracting with multiple providers of services	Capital expense would be limited to organizational costs and transportation system Could provide site for fabrication as well and avoid two-step processing Lowers risk of investment in enterprise Overhead cost of paying for building are likely to be low compared to amortizing costs of a new building Allows operations to begin quickly Allows for much room to grow the business Could take on Kosher or Halal business	Capital expense would be limited to organizational costs and mobile unit Requires less investment than existing facility Avoids site development issues and allows operations to begin more quickly than fixed plant Brings services to the farm, lowering costs for producers Offers an adjustable service that can be tailored to the situation Could lower manpower requirements for slaughter operation Scale of enterprise is suitable for small start-up operation of SMLP Avoids some waste disposal issues. Very attractive to funding agencies Provides a marketing angle	Could provide site for fabrication as well and avoid two-step processing Allows for much room to grow the business Could be attractive to funding agencies Would place facility at a more convenient location for producers Building could be designed for maximum efficiency Could provide a focal point for SMLP and its marketing Could be designed for multiple species Could take on Kosher or Halal business Could allow SMLP to generate additional revenue from outside its membership by providing services
Disadvantages			
Won't necessarily have priority over other users to ensure timely service Physical location may require additional transportation and logistics Puts SMLP at risk if existing facility folds or has other issues Will require specific volume commitments to achieve best price Logistics of arranging fabrication may become complicated Could be pushed out by larger producers if contract is not strong enough Might throw away grant money that could be used to lower costs of fixed facility Could require multiple contracts with different facilities for different species on both short and long-term basis	Physical location may require additional transportation and logistics Puts SMLP at risk if existing facility is sold Logistics of fabrication may be complicated if not done on-site Might throw away grant money that could be used to lower costs of fixed facility Managing a slaughter/processing facility will require talented staff and distract from marketing effort Cash flow will be difficult at outset and generate large working capital requirements Limits options for processing and locks SMLP into a particular approach for the period of the lease Facilities available are likely to be old and very inefficient with issues that led to their closing	Creates issues of where to go first in serving member producers Logistics of storage and fabrication could become complicated Managing the mobile unit will require talented staff and distract from marketing effort Cash flow could be difficult at outset and generate some working capital requirements Securing USDA approval may be an issue (although there is now precedent) Efficiencies of the operation could be an issue Limits ability of SMLP to grow unless it establishes other units Could be difficult to handle multiple species No opportunity for Kosher or Halal marketing	Managing the facility will require talented staff and distract from marketing effort Cash flow will be very difficult at outset and generate large working capital requirements Large investment and risk involved for SMLP Will take 2-3 years to design, locate, secure approvals and build facility, delaying SMLP start-up unless it makes interim arrangements Fixed-plant facility will limit some of SMLP's options, forcing it to concentrate efforts on that operation's success Will require the most sophisticated level of management of any of the options available. Will require SMLP to spend much of its time soliciting outside volume to support facility and hired labor.

The choice of options will determine how much additional detail is required to evaluate financial feasibility. A typical layout for a small fixed plant facility of the sort required to handle the anticipated Southern Maryland Livestock Producers volume is provided below:

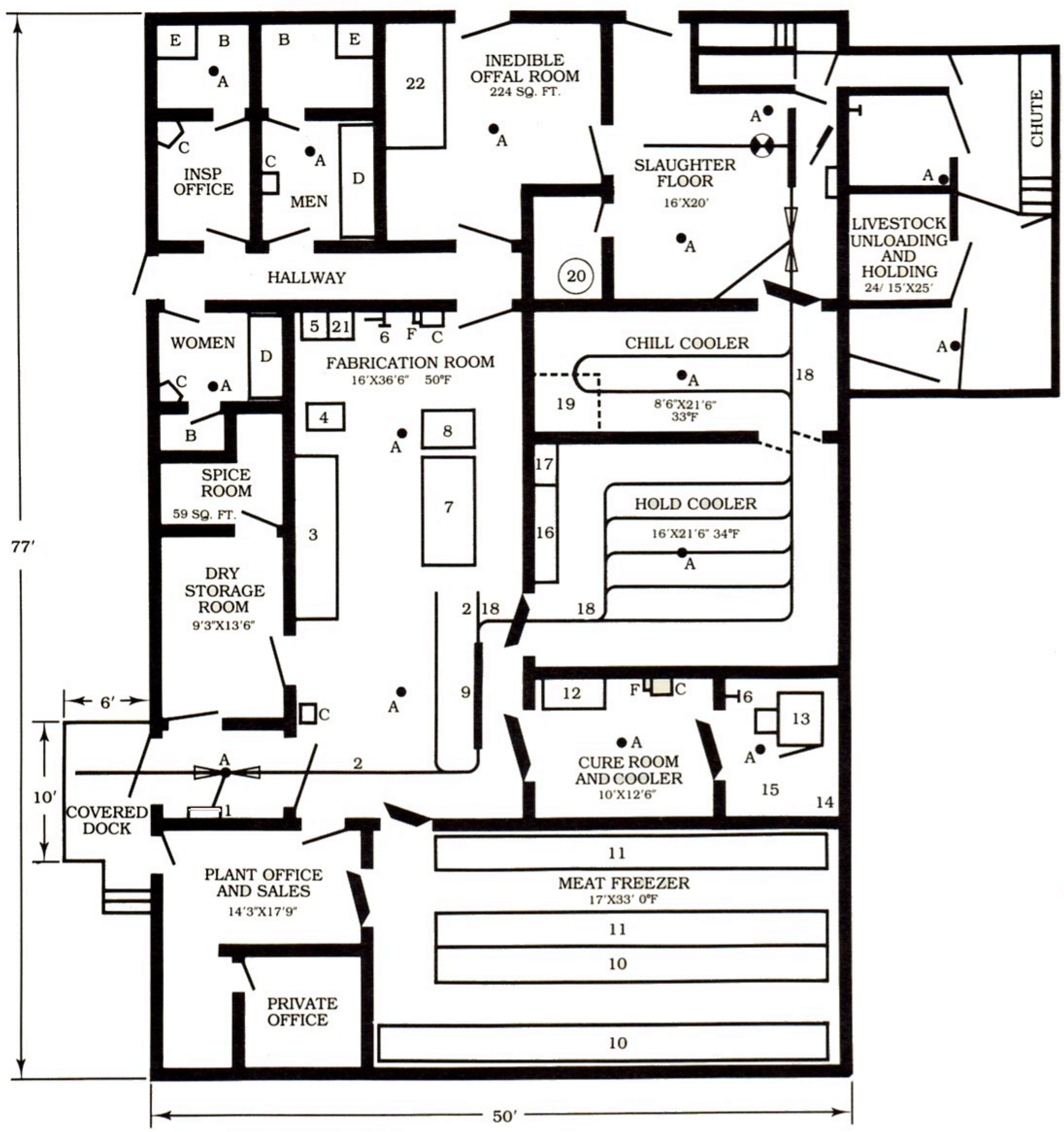
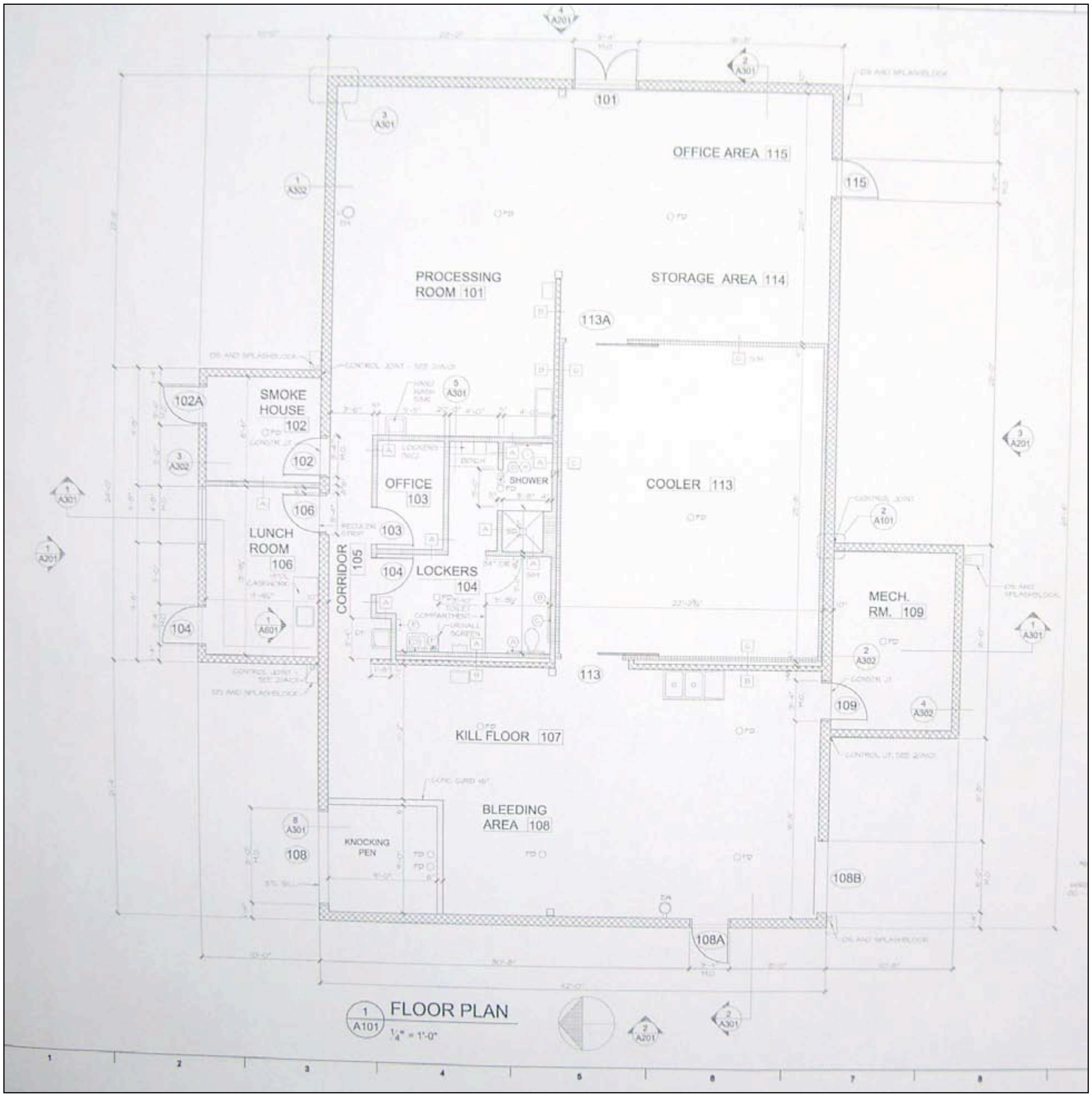


Figure 5. *Layout for a slightly larger slaughtering and processing plant*

(1) track scale, (2) 7'6" high rail, (3) packing table, (4) meat grinder, (5) sink, (6) hot and cold water, (7) boning table, (8) bandsaw, (9) quarter dropper, (10) meat baskets, (11) meat lockers, (12) ham-pump table, (13) smokehouse, (14) exhaust fan, (15) smoke room 8'X10', (16) meat shelves, (17) return products, (18) 11' high rail, (19) collapsible retaining cage, (20) water heater 180° F, (21) thermometer in waterline, (22) paunch work table, (A) floor drain, (B) toilet, (C) lavatory, (D) clothing locker, (E) shower, and (F) sterilizer.

This facility is approximately 4,400 square feet in size. The plans would have to be modified somewhat depending on the species and there would have to be additional storage space for aging purposes but the essential layout would have to include all the elements depicted. This layout is from the Penn State *Planning a Small Meat-Packing Business* handbook. Sullivan County, New York is now engaged in building a similar facility intended for multiple species and with the capacity to also take large breed beef. Their layout is offered below:



Mobile slaughter design specifications are also available if that option is determined to be worth further pursuing. The costs of a mobile facility are obviously less than a fixed-plant but also do not include the freezing, storage, fabrication, office or retail space that will have to be created, depending upon the nature and size of the operation. Therefore, there is not a great deal of difference in total costs.

5.0 Financial Analysis and Feasibility

Based upon the foregoing analyses of supply and demand and the needs of Southern Maryland Livestock Producers, three different physical options were finally considered from a financial feasibility perspective. These included;

1) Building a new slaughter and processing plant with the capacity to fully process 100 beef, 60 hogs and 20 lambs per week,

2) A mobile slaughter facility with the capacity to slaughter 35 beef, 21 hogs and 7 lambs per week, and

3) A fixed-facility processing plant capable of fabricating the meat from from 100 beef, 60 hogs and 20 lambs per week.

Ten year cash flow analyses were performed on each of the options, with start-up at one-third of the designated volume. The analyses and detailed assumptions for each follow. Breakeven levels of volume were also determined for each option and also follow along with explanations of each. The data, summarized in Figure 5-1, indicates the following:

1) A new fixed-plant slaughter and processing (fabrication) facility is not practical at the volumes that no exist or are likely to exist in the near-term. Such a facility will require a capital investment of over $1.5 million with $1.0 million of that being equity, plus a $865,000 line of credit. Such an option requires a volume of 4,600 beef, 2,800 hogs and 900 lambs/goats per year to break even, which will take as much as four years to reach. Even then, the very favorable financial arrangements assumed here are required to achieve a break even operation. Given the difficulty in covering the cash flow shortages in the early years, this option is simply not feasible at this time.

2) The mobile unit option also faces cash flow problems but not nearly so severe. It is only feasible if costs are carefully controlled and the unit operates consistently throughout the year without significant downtime. It does offer a practical short-term option that might be considered as a short-term operation once a minimum volume of animals is secured and a n animal collection and marketing program is established. The downside is that this option can only accommodate a limited volume and take Southern Maryland Livestock Producers so far. Eventually another option will have to be developed. More importantly the logical option for transitioning from a mobile unit to a fixed-plant facility is the contract purchasing of capacity from existing facilities, which begs the question of what purpose the mobile unit serves other than to provide an alternative for purposes of price negotiation. The mobile option would also have to be pursued with an understanding by funding agencies of the risk involved and the need to invest large amounts of high risk working capital. The management skills required to manage such an operation are also considerable for its size.

3) The processing-only facility option also requires major capital investment and large amounts of equity. However, it is feasible at the fourth or fifth year volume, if a transition to that volume level can be accomplished through contracted services, there may well be an opportunity to develop such a facility but it will still require some $922,500 of capital investment and $550,000 of equity as part of that investment.

Fixed-Plant Slaughter and Processing Facility

A fixed facility slaughter and processing facility designed to serve Southern Maryland Livestock Producers will demand a building of as much as 5,000 square feet in size. It will need to include a rail system such as depicted to the right and various fabrication equipment, estimated to cost $150,000 in total. A slaughter facility will generally require a public source of sewer and water due to its large amount of water use. An estimated five acres of land will be demanded to properly site and buffer such a facility. Rendering, transportation and plant labor are the major operational costs. It is expected the facility would open at 33% of capacity.

The fixed-plant option will require estimated total capital investment of $1,565,000 and a line of credit of $865,000 to generate a positive cash flow over the 10-year startup period examined. This assumes, moreover, a $1,000,000 equity investment, consisting of $500,000 in donated land and another $500,000 of cash equity. While such an option will generate cumulative cash of $207,000 at the end of the 10 years, with all working capital repaid, it is clearly too risky and the required terms of financing are too generous, to consider it feasible from a practical perspective.

Fixed-Plant Slaughter and Processing Facility
Cash Flow Analysis at 100 Beef, 60 Hogs & 20 Lambs Per Week Volume in 5th Year

Cash Flow Assumptions

Land costs/acre	$100,000	Carcass size (beef)	650
Building cost per square foot	$150	Beef live weight (other)	1,150
Building size (square feet)	5,000	Carcass size (hogs)	155
Loan interest rate	7.0%	Carcass size (lambs)	67
Loan term (months)	180	Ground beef per head	150
Man-hours to process custom beef	10.0	Sausage and smoking per hog	50
Man-hours to process hogs	4.0	Lamb extras per head	15
Man-hours to process lambs, etc.	2.0	Supply/packaging costs - beef	$30.00
Beef proceesed per year	5,200	Supply/packaging costs - hogs	$7.50
Hogs proceesed per year	3,120	Supply/packaging costs - lamb	$4.00
Lambs/goats processed per year	1,040	Maintenance/heat costs (monthly)	$2,500
Manager's salary (annual)	$50,000	Chemical costs (monthly)	$1,000
Average cost of plant labor (per hour)	$12.50	Other processing supplies (monthly)	$500
Bookkeeper	$25,000	Sewer/water utilities (monthly)	$2,000
Beef slaughter/rendering charge	$35.00	Electric utilities (monthly)	$7,500
Hog slaughter/rendering charge	$30.00	Rendering costs (weekly)	$3,500
Lamb/other slaughter/rendering charge	$20.00	Other supplies (monthly)	$500
Beef fabrication charge (per lb.)	$0.450	Health insurance % of payroll	20.0%
Hog fabrication charge (per lb.)	$0.475	Workers com. insurance % of payroll	20.0%
Lamb fabrication charge (per lb.)	$0.500	Other insurance costs (monthly)	$6,000
Extra charge for beef patties (per lb.)	$0.25	Payroll/misc. taxes %	8.5%
Extra charge for sausage/smoking (per lb.)	$0.50	Contingency %	10.0%
Extra charge for lamb extras (per lb.)	$0.50	Office/telephone costs (monthly)	$500
Drop income (per beef)	$45.37	Transportation costs (weekly)	$2,500
Drop income (per hog)	$3.93	USDA overtime rate	$43.64
Drop income (per lamb)	$2.50	USDA overtime hours per week	2.0

Fixed-Plant Slaughter and Processing Facility
Cash Flow Analysis at 100 Beef, 60 Hogs & 20 Lambs Per Week Volume in 5th Year

FISCAL YEAR	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	1	2	3	4	5	6	7	8	9	10
VOLUME AS % OF BASE	33.3%	60.0%	75.0%	90.0%	100.0%	105.0%	110.0%	115.0%	117.5%	120.0%
Beef per year	1,733	3,120	3,900	4,680	5,200	5,460	5,720	5,980	6,110	6,240
Hogs per year	1,040	1,872	2,340	2,808	3,120	3,276	3,432	3,588	3,666	3,744
Lambs/goats per year	347	624	780	936	1,040	1,092	1,144	1,196	1,222	1,248
REVENUE										
Beef slaughter/processing	$567,667	$1,021,800	$1,277,250	$1,532,700	$1,703,000	$1,788,150	$1,873,300	$1,958,450	$2,001,025	$2,043,600
Beef patty & extras charges	$65,000	$117,000	$146,250	$175,500	$195,000	$204,750	$214,500	$224,250	$229,125	$234,000
Hog slaughter/processing	$107,770	$193,986	$242,483	$290,979	$323,310	$339,476	$355,641	$371,807	$379,889	$387,972
Sausages & extras charges	$43,333	$78,000	$97,500	$117,000	$130,000	$136,500	$143,000	$149,500	$152,750	$156,000
Lamb/goat slaughter processing	$18,547	$33,384	$41,730	$50,076	$55,640	$58,422	$61,204	$63,986	$65,377	$66,768
Lamb extras charges	$2,600	$4,680	$5,850	$7,020	$7,800	$8,190	$8,580	$8,970	$9,165	$9,360
Drop	$83,586	$150,454	$188,068	$225,681	$250,757	$263,295	$275,833	$288,371	$294,639	$300,908
TOTAL REVENUE	$888,502	$1,599,304	$1,999,130	$2,398,956	$2,665,507	$2,798,782	$2,932,058	$3,065,333	$3,131,971	$3,198,608
OPERATING EXPENSES										
Manager's salary	$50,000	$52,500	$55,125	$57,881	$60,775	$63,814	$67,005	$70,355	$73,873	$77,566
Bookkeeper's salary	$25,000	$26,250	$27,563	$28,941	$30,388	$31,907	$33,502	$35,178	$36,936	$38,783
Plant labor	$277,333	$499,200	$624,000	$748,800	$832,000	$873,600	$915,200	$956,800	$977,600	$998,400
Supplies (packaging)	$62,400	$112,320	$140,400	$168,480	$187,200	$196,560	$205,920	$215,280	$219,960	$224,640
Supplies (chemical)	$12,000	$12,600	$13,230	$13,892	$14,586	$15,315	$16,081	$16,885	$17,729	$18,616
Supplies (other)	$6,000	$6,300	$6,615	$6,946	$7,293	$7,658	$8,041	$8,443	$8,865	$9,308
Utilities (sewer/water)	$24,000	$25,200	$26,460	$27,783	$29,172	$30,631	$32,162	$33,770	$35,459	$37,232
Utilities (electric)	$90,000	$94,500	$99,225	$104,186	$109,396	$114,865	$120,609	$126,639	$132,971	$139,620
Rendering	$182,000	$191,100	$200,655	$210,688	$221,222	$232,283	$243,897	$256,092	$268,897	$282,342
Payroll tax	$29,948	$49,126	$60,068	$71,028	$78,469	$82,392	$86,335	$90,298	$92,515	$94,754
Insurance (health)	$70,467	$115,590	$141,338	$167,124	$184,633	$193,864	$203,141	$212,467	$217,682	$222,950
Insurance (W/C)	$70,467	$115,590	$141,338	$167,124	$184,633	$193,864	$203,141	$212,467	$217,682	$222,950
Insurance (other)	$72,000	$72,000	$72,000	$72,000	$72,000	$72,000	$72,000	$72,000	$72,000	$72,000
Office/telephone expense	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000
Maintenance expense	$30,000	$31,500	$33,075	$34,729	$36,465	$38,288	$40,203	$42,213	$44,324	$46,540
Transportation costs	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000
USDA overtime costs	$1,455	$2,618	$3,273	$3,928	$4,364	$4,582	$4,800	$5,019	$5,128	$5,237
Contingency	$113,762	$153,978	$177,709	$201,560	$218,423	$228,304	$238,324	$248,489	$255,249	$262,170
TOTAL OPERATING EXPENSES	$1,252,831	$1,696,372	$1,958,073	$2,221,089	$2,407,018	$2,515,929	$2,626,362	$2,738,394	$2,812,869	$2,889,107
OPERATING MARGIN (CASH)	($364,329)	($97,068)	$41,057	$177,867	$258,489	$282,853	$305,695	$326,939	$319,102	$309,502
DEVELOPMENT COSTS										
Land	$500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building construction costs	$750,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Equipment costs	$150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Financing/organizational costs	$25,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contingency	$140,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL DEVELOPMENT COSTS	$1,565,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
FINANCING & EQUITY										
Equity in land	$500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash equity contribution	$500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL EQUITY	$1,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan proceeds	$500,000	$240,000	$125,000	$0	$0	$0	$0	$0	$0	$0
Working capital loan repayments	$0	$0	$0	$20,000	$100,000	$140,000	$175,000	$210,000	$210,000	$10,000
Working capital loan balance	$500,000	$740,000	$865,000	$845,000	$745,000	$605,000	$430,000	$220,000	$10,000	$0
Working capital loan interest	$17,500	$51,800	$60,550	$59,150	$52,150	$42,350	$30,100	$15,400	$700	$0
Loan proceeds	$565,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Amortization	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328
TOTAL DEBT SERVICE	$119,828	$154,128	$162,878	$161,478	$154,478	$144,678	$132,428	$117,728	$103,028	$102,328
CASH FLOW	$15,843	($11,196)	$3,179	($3,611)	$4,010	($1,825)	($1,733)	($789)	$6,073	$197,173
CUMULATIVE CASH	$15,843	$4,647	$7,826	$4,214	$8,225	$6,400	$4,667	$3,878	$9,951	$207,124

Fixed-Plant Slaughter and Processing Facility
Breakeven Cash Flow Analysis

FISCAL YEAR	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	1	2	3	4	5	6	7	8	9	10
VOLUME AS % OF BASE	89.0%	89.0%	89.0%	89.0%	89.0%	89.0%	89.0%	89.0%	89.0%	89.0%
Beef per year	4,628	4,628	4,628	4,628	4,628	4,628	4,628	4,628	4,628	4,628
Hogs per year	2,777	2,777	2,777	2,777	2,777	2,777	2,777	2,777	2,777	2,777
Lambs/goats per year	926	926	926	926	926	926	926	926	926	926
REVENUE										
Beef slaughter/processing	$1,515,670	$1,515,670	$1,515,670	$1,515,670	$1,515,670	$1,515,670	$1,515,670	$1,515,670	$1,515,670	$1,515,670
Beef patty & extras charges	$173,550	$173,550	$173,550	$173,550	$173,550	$173,550	$173,550	$173,550	$173,550	$173,550
Hog slaughter/processing	$287,746	$287,746	$287,746	$287,746	$287,746	$287,746	$287,746	$287,746	$287,746	$287,746
Sausages & extras charges	$115,700	$115,700	$115,700	$115,700	$115,700	$115,700	$115,700	$115,700	$115,700	$115,700
Lamb/goat slaughter processing	$49,520	$49,520	$49,520	$49,520	$49,520	$49,520	$49,520	$49,520	$49,520	$49,520
Lamb extras charges	$6,942	$6,942	$6,942	$6,942	$6,942	$6,942	$6,942	$6,942	$6,942	$6,942
Drop	$223,174	$223,174	$223,174	$223,174	$223,174	$223,174	$223,174	$223,174	$223,174	$223,174
TOTAL REVENUE	$2,372,301	$2,372,301	$2,372,301	$2,372,301	$2,372,301	$2,372,301	$2,372,301	$2,372,301	$2,372,301	$2,372,301
OPERATING EXPENSES										
Manager's salary	$50,000	$52,500	$55,125	$57,881	$60,775	$63,814	$67,005	$70,355	$73,873	$77,566
Bookkeeper's salary	$25,000	$26,250	$27,563	$28,941	$30,388	$31,907	$33,502	$35,178	$36,936	$38,783
Plant labor	$740,480	$740,480	$740,480	$740,480	$740,480	$740,480	$740,480	$740,480	$740,480	$740,480
Supplies (packaging)	$166,608	$166,608	$166,608	$166,608	$166,608	$166,608	$166,608	$166,608	$166,608	$166,608
Supplies (chemical)	$12,000	$12,600	$13,230	$13,892	$14,586	$15,315	$16,081	$16,885	$17,729	$18,616
Supplies (other)	$6,000	$6,300	$6,615	$6,946	$7,293	$7,658	$8,041	$8,443	$8,865	$9,308
Utilities (sewer/water)	$24,000	$25,200	$26,460	$27,783	$29,172	$30,631	$32,162	$33,770	$35,459	$37,232
Utilities (electric)	$90,000	$94,500	$99,225	$104,186	$109,396	$114,865	$120,609	$126,639	$132,971	$139,620
Rendering	$182,000	$191,100	$200,655	$210,688	$221,222	$232,283	$243,897	$256,092	$268,897	$282,342
Payroll tax	$69,316	$69,635	$69,969	$70,321	$70,690	$71,077	$71,484	$71,911	$72,360	$72,831
Insurance (health)	$163,096	$163,846	$164,634	$165,460	$166,329	$167,240	$168,197	$169,203	$170,258	$171,366
Insurance (W/C)	$163,096	$163,846	$164,634	$165,460	$166,329	$167,240	$168,197	$169,203	$170,258	$171,366
Insurance (other)	$72,000	$72,000	$72,000	$72,000	$72,000	$72,000	$72,000	$72,000	$72,000	$72,000
Office/telephone expense	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000
Maintenance expense	$30,000	$31,500	$33,075	$34,729	$36,465	$38,288	$40,203	$42,213	$44,324	$46,540
Transportation costs	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000	$130,000
USDA overtime costs	$3,884	$3,884	$3,884	$3,884	$3,884	$3,884	$3,884	$3,884	$3,884	$3,884
Contingency	$192,960	$195,236	$197,627	$200,137	$202,773	$205,541	$208,447	$211,498	$214,702	$218,066
TOTAL OPERATING EXPENSES	$2,126,439	$2,151,485	$2,177,783	$2,205,396	$2,234,389	$2,264,832	$2,296,797	$2,330,361	$2,365,603	$2,402,607
OPERATING MARGIN (CASH)	$245,862	$220,816	$194,518	$166,906	$137,912	$107,469	$75,504	$41,940	$6,698	($30,305)
DEVELOPMENT COSTS										
Land	$500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building construction costs	$750,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Equipment costs	$150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Financing/organizational costs	$25,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contingency	$140,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL DEVELOPMENT COSTS	$1,565,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
FINANCING & EQUITY										
Equity in land	$500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash equity contribution	$500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL EQUITY	$1,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan proceeds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan repayments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan interest	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan proceeds	$565,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Amortization	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328
TOTAL DEBT SERVICE	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328	$102,328
CASH FLOW	$143,534	$118,488	$92,190	$64,577	$35,584	$5,141	($26,825)	($60,388)	($95,630)	($132,634)
CUMULATIVE CASH	$143,534	$262,021	$354,211	$418,789	$454,372	$459,513	$432,688	$372,300	$276,670	$144,037

Mobile Slaughter Unit

A USDA-inspected mobile slaughter unit in use in Washington State is pictured to the right. It is a 33 feet long, 13 feet tall gooseneck trailer divided into a carcass processing area, a 6,000 lb. capacity holding cooler and mechanical room. It is equipped with a generator, water storage and hot water heater. Slaughter capacity is 5 beef, 12 hogs or 20 sheep per day (up to 9 beef per day with a second butcher assisting). The unit can operate for two days before returning to its base to unload carcasses and re-supply. Total project cost for design, construction and testing of the unit is about $150,000 or $110,000 without the tow vehicle.

The mobile unit option will require estimated total capital investment of $212,500 and a line of credit of $365,000 to maintain a positive cash flow over the 10-year startup period examined. This assumes a $212,500 equity investment covering all equipment and startup costs. This option, based on assumptions used, cannot repay working capital and is not feasible. However, the annual loss is small enough to be covered by the contingency, which is high (15%) to cover unit down time. Therefore, practically speaking, the option could be feasible with tight control of costs.

Mobile Slaughter Unit
Cash Flow Analysis at 35 Beef, 21 Hogs & 7 Lambs Per Week Volume

Cash Flow Assumptions

Land costs/acre	$0	Carcass size (beef)	650
Building cost per square foot	$0	Beef live weight (other)	1,150
Building size (square feet)	0	Carcass size (hogs)	155
Loan interest rate	7.0%	Carcass size (lambs)	67
Loan term (months)	180	Ground beef per head	150
Man-hours to process custom beef	0.0	Sausage and smoking per hog	50
Man-hours to process hogs	0.0	Lamb extras per head	15
Man-hours to process lambs, etc.	0.0	Supply/packaging costs - beef	$0.00
Beef proceesed per year	1,820	Supply/packaging costs - hogs	$0.00
Hogs proceesed per year	1,092	Supply/packaging costs - lamb	$0.00
Lambs/goats processed per year	364	Maintenance/heat costs (monthly)	$0
Operator's salary (annual)	$45,000	Chemical costs (monthly)	$200
Second butcher salary	$35,000	Other processing supplies (monthly)	$100
Bookkeeper	$10,000	Sewer/water utilities (monthly)	$0
Beef slaughter/rendering charge	$65.00	Vehicle operation expense (per mile)	$2.50
Hog slaughter/rendering charge	$50.00	Rendering costs (weekly)	$500
Lamb/other slaughter charge	$30.00	Other supplies (monthly)	$0
Beef fabrication charge (per lb.)	$0.000	Health insurance % of payroll	20.0%
Hog fabrication charge (per lb.)	$0.000	Workers com. insurance % of payroll	20.0%
Lamb fabrication charge (per lb.)	$0.000	Other insurance costs (monthly)	$0
Extra charge for beef patties (per lb.)	$0.00	Payroll/misc. taxes %	8.5%
Extra charge for sausage/smoking (per lb.)	$0.00	Contingency % (includes down time)	15.0%
Extra charge for lamb extras (per lb.)	$0.00	Office/telephone costs (monthly)	$0
Drop income (per beef)	$45.37	Storage and maintenance building rent (monthly)	$625
Drop income (per hog)	$3.93	USDA overtime rate	$43.64
Drop income (per lamb)	$2.50	USDA overtime hours per week	8.0

Mobile Slaughter Unit
Cash Flow Analysis at 35 Beef, 21 Hogs & 7 Lambs Per Week Volume

FISCAL YEAR	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	1	2	3	4	5	6	7	8	9	10
VOLUME AS % OF BASE	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%
Beef per year	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
Hogs per year	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080
Lambs/goats per year	360	360	360	360	360	360	360	360	360	360
REVENUE										
Beef slaughter	$117,000	$117,000	$117,000	$117,000	$117,000	$117,000	$117,000	$117,000	$117,000	$117,000
Hog slaughter	$54,000	$54,000	$54,000	$54,000	$54,000	$54,000	$54,000	$54,000	$54,000	$54,000
Lamb/goat slaughter	$10,800	$10,800	$10,800	$10,800	$10,800	$10,800	$10,800	$10,800	$10,800	$10,800
Drop	$86,801	$86,801	$86,801	$86,801	$86,801	$86,801	$86,801	$86,801	$86,801	$86,801
TOTAL REVENUE	$268,601	$268,601	$268,601	$268,601	$268,601	$268,601	$268,601	$268,601	$268,601	$268,601
OPERATING EXPENSES										
Operator's salary	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000
Bookkeeper's salary	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Butcher No. 2 salary	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000
Supplies (chemical)	$2,400	$2,400	$2,400	$2,400	$2,400	$2,400	$2,400	$2,400	$2,400	$2,400
Supplies (other)	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200
Rendering	$26,000	$27,300	$28,665	$30,098	$31,603	$33,183	$34,842	$36,585	$38,414	$40,335
Vehicle operation expense	$62,500	$62,500	$62,500	$62,500	$62,500	$62,500	$62,500	$62,500	$62,500	$62,500
Payroll tax	$7,650	$7,650	$7,650	$7,650	$7,650	$7,650	$7,650	$7,650	$7,650	$7,650
Insurance (health)	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000
Insurance (W/C)	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000
Storage/maintenance building rent	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500
USDA inspection costs	$17,456	$17,456	$17,456	$17,456	$17,456	$17,456	$17,456	$17,456	$17,456	$17,456
Contingency	$34,988	$35,183	$35,387	$35,602	$35,828	$36,065	$36,314	$36,575	$36,850	$37,138
TOTAL OPERATING EXPENSES	$285,694	$287,189	$288,758	$290,406	$292,137	$293,954	$295,862	$297,866	$299,969	$302,178
OPERATING MARGIN (CASH)	($17,093)	($18,588)	($20,158)	($21,806)	($23,537)	($25,354)	($27,262)	($29,265)	($31,369)	($33,578)
DEVELOPMENT COSTS										
Land	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building construction costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Equipment costs	$175,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Financing/organizational costs	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contingency	$17,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL DEVELOPMENT COSTS	$212,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
FINANCING & EQUITY										
Equity in land	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash equity contribution	$212,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL EQUITY	$212,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan proceeds	$25,000	$15,000	$25,000	$30,000	$35,000	$35,000	$45,000	$45,000	$50,000	$60,000
Working capital loan repayments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan balance	$25,000	$40,000	$65,000	$95,000	$130,000	$165,000	$210,000	$255,000	$305,000	$365,000
Working capital loan interest	$875	$2,800	$4,550	$6,650	$9,100	$11,550	$14,700	$17,850	$21,350	$25,550
Loan proceeds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Amortization	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL DEBT SERVICE	$875	$2,800	$4,550	$6,650	$9,100	$11,550	$14,700	$17,850	$21,350	$25,550
CASH FLOW	$7,032	($6,388)	$292	$1,544	$2,363	($1,904)	$3,038	($2,115)	($2,719)	$872
CUMULATIVE CASH	$7,032	$644	$936	$2,480	$4,844	$2,940	$5,978	$3,863	$1,144	$2,016

As the table above indicates, the mobile unit produces an operating margin within the amount of the contingency line item, meaning this option would necessitate no borrowing of working capital beyond those amounts capable of being repaid within a given year. Mobile unit costs include an estimated 8 hours of week of USDA inspection staff overtime, assuming the unit will have to be on the road and away from the office for extended periods of time.

Mobile Slaughter Unit
Breakeven Cash Flow Analysis

FISCAL YEAR	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	1	2	3	4	5	6	7	8	9	10
VOLUME AS % OF BASE	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%
Beef per year	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
Hogs per year	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080
Lambs/goats per year	360	360	360	360	360	360	360	360	360	360
REVENUE										
Beef slaughter	$117,000	$117,000	$117,000	$117,000	$117,000	$117,000	$117,000	$117,000	$117,000	$117,000
Hog slaughter	$54,000	$54,000	$54,000	$54,000	$54,000	$54,000	$54,000	$54,000	$54,000	$54,000
Lamb/goat slaughter	$10,800	$10,800	$10,800	$10,800	$10,800	$10,800	$10,800	$10,800	$10,800	$10,800
Drop	$86,801	$86,801	$86,801	$86,801	$86,801	$86,801	$86,801	$86,801	$86,801	$86,801
TOTAL REVENUE	$268,601	$268,601	$268,601	$268,601	$268,601	$268,601	$268,601	$268,601	$268,601	$268,601
OPERATING EXPENSES										
Operator's salary	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000
Bookkeeper's salary	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Butcher No. 2 salary	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000
Supplies (chemical)	$2,400	$2,400	$2,400	$2,400	$2,400	$2,400	$2,400	$2,400	$2,400	$2,400
Supplies (other)	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200
Rendering	$26,000	$27,300	$28,665	$30,098	$31,603	$33,183	$34,842	$36,585	$38,414	$40,335
Vehicle operation expense	$62,500	$62,500	$62,500	$62,500	$62,500	$62,500	$62,500	$62,500	$62,500	$62,500
Payroll tax	$7,650	$7,650	$7,650	$7,650	$7,650	$7,650	$7,650	$7,650	$7,650	$7,650
Insurance (health)	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000
Insurance (W/C)	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000
Storage/maintenance building rent	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500	$7,500
USDA inspection costs	$17,456	$17,456	$17,456	$17,456	$17,456	$17,456	$17,456	$17,456	$17,456	$17,456
Contingency	$34,988	$35,183	$35,387	$35,602	$35,828	$36,065	$36,314	$36,575	$36,850	$37,138
TOTAL OPERATING EXPENSES	$285,694	$287,189	$288,758	$290,406	$292,137	$293,954	$295,862	$297,866	$299,969	$302,178
OPERATING MARGIN (CASH)	($17,093)	($18,588)	($20,158)	($21,806)	($23,537)	($25,354)	($27,262)	($29,265)	($31,369)	($33,578)
DEVELOPMENT COSTS										
Land	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building construction costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Equipment costs	$175,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Financing/organizational costs	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contingency	$17,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL DEVELOPMENT COSTS	$212,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
FINANCING & EQUITY										
Equity in land	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash equity contribution	$475,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL EQUITY	$475,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan proceeds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan repayments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan interest	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan proceeds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Amortization	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL DEBT SERVICE	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
CASH FLOW	$245,407	($18,588)	($20,158)	($21,806)	($23,537)	($25,354)	($27,262)	($29,265)	($31,369)	($33,578)
CUMULATIVE CASH	$245,407	$226,819	$206,661	$184,855	$161,319	$135,965	$108,703	$79,438	$48,069	$14,491

Because the mobile unit can only operate at a limited capacity, there is no such thing as a breakeven level of sales if the unit's operation is not profitable at full capacity. Achieving a breakeven financial condition under such circumstances requires adjusting the term of financing or reducing costs. One approach is to increase the equity investment involved. A $475,000 cash equity investment at the outset would cover all cash losses for 10 years.

Fixed-Plant Processing Facility

A fixed-plant processing facility designed to serve Southern Maryland Livestock Producers will demand a building of as much as 4,000 square feet in size and an estimated $75,000 of meat fabricating equipment. A processing-only facility uses relatively little water and can usually rely upon on-site well and septic systems. It is anticipated that two acres of land will be needed to properly site the use. A facility limited to meat fabrication only will require contract relationships with slaughter facilities and also involve considerable transportation costs for the pickup and delivery of product at various stages of meat processing.

A fixed-plant processing option will require estimated capital investment of $922,500 and a line of credit of $605,000 to generate a positive cash flow over the 10-year startup period examined. This assumes, moreover, a $650,000 equity investment, consisting of $150,000 in donated land and another $400,000 of cash equity. While such an option will generate cumulative cash of $409,000 at the end of the 10 years, with all working capital repaid, it involves considerable equity investment and risk. It could be feasible at a later point when a higher level of startup volume is established.

Fixed-Plant Processing Facility
Cash Flow Analysis at 100 Beef, 60 Hogs & 20 Lambs Per Week Volume in 5th Year

Cash Flow Assumptions

Land costs/acre	$75,000	Carcass size (beef)	650
Building cost per square foot	$150	Beef live weight (other)	1,150
Building size (square feet)	4,000	Carcass size (hogs)	155
Loan interest rate	7.0%	Carcass size (lambs)	67
Loan term (months)	180	Ground beef per head	150
Man-hours to process custom beef	8.5	Sausage and smoking per hog	50
Man-hours to process hogs	3.0	Lamb extras per head	15
Man-hours to process lambs, etc.	1.5	Supply/packaging costs - beef	$25.00
Beef proceesed per year	5,200	Supply/packaging costs - hogs	$6.00
Hogs proceesed per year	3,120	Supply/packaging costs - lamb	$3.00
Lambs/goats processed per year	1,040	Maintenance/heat costs (monthly)	$1,500
Manager's salary (annual)	$50,000	Chemical costs (monthly)	$600
Average cost of plant labor (per hour)	$12.50	Other processing supplies (monthly)	$400
Bookkeeper	$25,000	Sewer/water utilities (monthly)	$500
Beef slaughter/rendering charge	$0.00	Electric utilities (monthly)	$7,000
Hog slaughter/rendering charge	$0.00	Waste disposal costs (weekly)	$500
Lamb/other slaughter charge	$0.00	Other supplies (monthly)	$400
Beef fabrication charge (per lb.)	$0.450	Health insurance % of payroll	20.0%
Hog fabrication charge (per lb.)	$0.475	Workers com. insurance % of payroll	20.0%
Lamb fabrication charge (per lb.)	$0.500	Other insurance costs (monthly)	$5,000
Extra charge for beef patties (per lb.)	$0.25	Payroll/misc. taxes %	8.5%
Extra charge for sausage/smoking (per lb.)	$0.50	Contingency %	10.0%
Extra charge for lamb extras (per lb.)	$0.50	Office/telephone costs (monthly)	$400
Drop income (per beef)	$0.00	Transportation costs (weekly)	$3,500
Drop income (per hog)	$0.00	USDA overtime rate	$43.64
Drop income (per lamb)	$0.00	USDA overtime per week	2.0

Fixed-Plant Processing Facility
Cash Flow Analysis at 100 Beef, 60 Hogs & 20 Lambs Per Week Volume in 5th Year

FISCAL YEAR	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	1	2	3	4	5	6	7	8	9	10
VOLUME AS % OF BASE	33.3%	60.0%	75.0%	90.0%	100.0%	105.0%	110.0%	115.0%	117.5%	120.0%
Beef per year	1,733	3,120	3,900	4,680	5,200	5,460	5,720	5,980	6,110	6,240
Hogs per year	1,040	1,872	2,340	2,808	3,120	3,276	3,432	3,588	3,666	3,744
Lambs/goats per year	347	624	780	936	1,040	1,092	1,144	1,196	1,222	1,248
REVENUE										
Beef processing	$507,000	$912,600	$1,140,750	$1,368,900	$1,521,000	$1,597,050	$1,673,100	$1,749,150	$1,787,175	$1,825,200
Beef patty & extras charges	$65,000	$117,000	$146,250	$175,500	$195,000	$204,750	$214,500	$224,250	$229,125	$234,000
Hog processing	$76,570	$137,826	$172,283	$206,739	$229,710	$241,196	$252,681	$264,167	$269,909	$275,652
Sausages & extras charges	$43,333	$78,000	$97,500	$117,000	$130,000	$136,500	$143,000	$149,500	$152,750	$156,000
Lamb/goat processing	$11,613	$20,904	$26,130	$31,356	$34,840	$36,582	$38,324	$40,066	$40,937	$41,808
Lamb extras charges	$2,600	$4,680	$5,850	$7,020	$7,800	$8,190	$8,580	$8,970	$9,165	$9,360
TOTAL REVENUE	$706,117	$1,271,010	$1,588,763	$1,906,515	$2,118,350	$2,224,268	$2,330,185	$2,436,103	$2,489,061	$2,542,020
OPERATING EXPENSES										
Manager's salary	$50,000	$52,500	$55,125	$57,881	$60,775	$63,814	$67,005	$70,355	$73,873	$77,566
Bookkeeper's salary	$25,000	$26,250	$27,563	$28,941	$30,388	$31,907	$33,502	$35,178	$36,936	$38,783
Plant labor	$229,667	$413,400	$516,750	$620,100	$689,000	$723,450	$757,900	$792,350	$809,575	$826,800
Supplies (packaging)	$51,653	$92,976	$116,220	$139,464	$154,960	$162,708	$170,456	$178,204	$182,078	$185,952
Supplies (chemical)	$7,200	$7,560	$7,938	$8,335	$8,752	$9,189	$9,649	$10,131	$10,638	$11,170
Supplies (other)	$4,800	$5,040	$5,292	$5,557	$5,834	$6,126	$6,432	$6,754	$7,092	$7,446
Utilities (sewer/water)	$6,000	$6,300	$6,615	$6,946	$7,293	$7,658	$8,041	$8,443	$8,865	$9,308
Utilities (electric)	$84,000	$88,200	$92,610	$97,241	$102,103	$107,208	$112,568	$118,196	$124,106	$130,312
Waste disposal	$26,000	$27,300	$28,665	$30,098	$31,603	$33,183	$34,842	$36,585	$38,414	$40,335
Payroll tax	$25,897	$41,833	$50,952	$60,088	$66,314	$69,630	$72,965	$76,320	$78,233	$80,168
Insurance (health)	$60,933	$98,430	$119,888	$141,384	$156,033	$163,834	$171,681	$179,577	$184,077	$188,630
Insurance (W/C)	$60,933	$98,430	$119,888	$141,384	$156,033	$163,834	$171,681	$179,577	$184,077	$188,630
Insurance (other)	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000
Office/telephone expense	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800
Maintenance expense	$18,000	$18,900	$19,845	$20,837	$21,879	$22,973	$24,122	$25,328	$26,594	$27,924
Transportation costs	$182,000	$182,000	$182,000	$182,000	$182,000	$182,000	$182,000	$182,000	$182,000	$182,000
USDA inspection costs	$1,455	$2,618	$3,273	$3,928	$4,364	$4,582	$4,800	$5,019	$5,128	$5,237
Contingency	$89,688	$122,392	$141,415	$160,506	$173,777	$181,231	$188,764	$196,380	$201,136	$205,982
TOTAL OPERATING EXPENSES	$988,026	$1,348,929	$1,558,838	$1,769,489	$1,915,907	$1,998,128	$2,081,209	$2,165,194	$2,217,620	$2,271,042
OPERATING MARGIN (CASH)	($281,910)	($77,919)	$29,925	$137,026	$202,443	$226,140	$248,976	$270,908	$271,441	$270,978
DEVELOPMENT COSTS										
Land	$150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building construction costs	$600,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Equipment costs	$75,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Financing/organizational costs	$15,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contingency	$82,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL DEVELOPMENT COSTS	$922,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
FINANCING & EQUITY										
Equity in land	$150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash equity contribution	$400,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL EQUITY	$550,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan proceeds	$370,000	$185,000	$75,000	$0	$0	$0	$0	$0	$0	$0
Working capital loan repayments	$0	$0	$0	$25,000	$100,000	$130,000	$170,000	$205,000	$0	$0
Working capital loan balance	$370,000	$555,000	$630,000	$605,000	$505,000	$375,000	$205,000	$0	$0	$0
Working capital loan interest	$12,950	$38,850	$44,100	$42,350	$35,350	$26,250	$14,350	$0	$0	$0
Loan proceeds	$372,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
Amortization	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464
TOTAL DEBT SERVICE	$80,414	$106,314	$111,564	$109,814	$102,814	$93,714	$81,814	$67,464	$67,464	$67,464
CASH FLOW	$7,676	$767	($6,639)	$2,211	($371)	$2,425	($2,839)	($1,556)	$203,977	$203,514
CUMULATIVE CASH	$7,676	$8,443	$1,803	$4,015	$3,644	$6,069	$3,230	$1,674	$205,651	$409,164

Fixed-Plant Processing Facility
Breakeven Cash Flow Analysis

FISCAL YEAR	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	1	2	3	4	5	6	7	8	9	10
VOLUME AS % OF BASE	86.0%	86.0%	86.0%	86.0%	86.0%	86.0%	86.0%	86.0%	86.0%	86.0%
Beef per year	4,472	4,472	4,472	4,472	4,472	4,472	4,472	4,472	4,472	4,472
Hogs per year	2,683	2,683	2,683	2,683	2,683	2,683	2,683	2,683	2,683	2,683
Lambs/goats per year	894	894	894	894	894	894	894	894	894	894
REVENUE										
Beef processing	$1,308,060	$1,308,060	$1,308,060	$1,308,060	$1,308,060	$1,308,060	$1,308,060	$1,308,060	$1,308,060	$1,308,060
Beef patty & extras charges	$167,700	$167,700	$167,700	$167,700	$167,700	$167,700	$167,700	$167,700	$167,700	$167,700
Hog processing	$197,551	$197,551	$197,551	$197,551	$197,551	$197,551	$197,551	$197,551	$197,551	$197,551
Sausages & extras charges	$111,800	$111,800	$111,800	$111,800	$111,800	$111,800	$111,800	$111,800	$111,800	$111,800
Lamb/goat processing	$29,962	$29,962	$29,962	$29,962	$29,962	$29,962	$29,962	$29,962	$29,962	$29,962
Lamb extras charges	$6,708	$6,708	$6,708	$6,708	$6,708	$6,708	$6,708	$6,708	$6,708	$6,708
TOTAL REVENUE	$1,821,781	$1,821,781	$1,821,781	$1,821,781	$1,821,781	$1,821,781	$1,821,781	$1,821,781	$1,821,781	$1,821,781
OPERATING EXPENSES										
Manager's salary	$50,000	$52,500	$55,125	$57,881	$60,775	$63,814	$67,005	$70,355	$73,873	$77,566
Bookkeeper's salary	$25,000	$26,250	$27,563	$28,941	$30,388	$31,907	$33,502	$35,178	$36,936	$38,783
Plant labor	$592,540	$592,540	$592,540	$592,540	$592,540	$592,540	$592,540	$592,540	$592,540	$592,540
Supplies (packaging)	$133,266	$133,266	$133,266	$133,266	$133,266	$133,266	$133,266	$133,266	$133,266	$133,266
Supplies (chemical)	$7,200	$7,560	$7,938	$8,335	$8,752	$9,189	$9,649	$10,131	$10,638	$11,170
Supplies (other)	$4,800	$5,040	$5,292	$5,557	$5,834	$6,126	$6,432	$6,754	$7,092	$7,446
Utilities (sewer/water)	$6,000	$6,300	$6,615	$6,946	$7,293	$7,658	$8,041	$8,443	$8,865	$9,308
Utilities (electric)	$84,000	$88,200	$92,610	$97,241	$102,103	$107,208	$112,568	$118,196	$124,106	$130,312
Waste disposal	$26,000	$27,300	$28,665	$30,098	$31,603	$33,183	$34,842	$36,585	$38,414	$40,335
Payroll tax	$56,741	$57,060	$57,394	$57,746	$58,115	$58,502	$58,909	$59,336	$59,785	$60,256
Insurance (health)	$133,508	$134,258	$135,046	$135,872	$136,741	$137,652	$138,609	$139,615	$140,670	$141,778
Insurance (W/C)	$133,508	$134,258	$135,046	$135,872	$136,741	$137,652	$138,609	$139,615	$140,670	$141,778
Insurance (other)	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000
Office/telephone expense	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800
Maintenance expense	$18,000	$18,900	$19,845	$20,837	$21,879	$22,973	$24,122	$25,328	$26,594	$27,924
Transportation costs	$182,000	$182,000	$182,000	$182,000	$182,000	$182,000	$182,000	$182,000	$182,000	$182,000
USDA inspection costs	$3,753	$3,753	$3,753	$3,753	$3,753	$3,753	$3,753	$3,753	$3,753	$3,753
Contingency	$151,736	$153,023	$154,374	$155,793	$157,283	$158,847	$160,489	$162,214	$164,025	$165,926
TOTAL OPERATING EXPENSES	$1,672,852	$1,687,007	$1,701,871	$1,717,477	$1,733,864	$1,751,071	$1,769,137	$1,788,107	$1,808,025	$1,828,940
OPERATING MARGIN (CASH)	$148,929	$134,774	$119,910	$104,304	$87,917	$70,710	$52,644	$33,674	$13,756	($7,159)
DEVELOPMENT COSTS										
Land	$150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building construction costs	$600,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Equipment costs	$75,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Financing/organizational costs	$15,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contingency	$82,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL DEVELOPMENT COSTS	$922,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
FINANCING & EQUITY										
Equity in land	$150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash equity contribution	$400,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL EQUITY	$550,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan proceeds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan repayments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan balance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Working capital loan interest	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loan proceeds	$372,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
Amortization	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464
TOTAL DEBT SERVICE	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464	$67,464
CASH FLOW	$81,465	$67,309	$52,446	$36,839	$20,452	$3,246	($14,820)	($33,790)	($53,709)	($74,623)
CUMULATIVE CASH	$81,465	$148,774	$201,220	$238,059	$258,512	$261,758	$246,938	$213,147	$159,439	$84,816

Figure 5-1
Southern Maryland Livestock Producers
Financial Comparison of Processing Options

Fixed Plant Slaughter and Processing Facility	Mobile Slaughter Unit (Processing by Contract)	Processing Only Facility (Slaughter by Contract)
Site Requirements		
Will demand a site to accommodate; a) building of some 5,000 to 10,000 square feet in size, b) parking space for customers, employees and delivery vehicles, 3) future expansion, and 4) zoning setbacks. Sewer and water use related to the slaughter operation demand the availability of public services or the construction of a sewage treatment facility that is cost-prohibitive for smaller facilities. Minimum of five acres recommended to provide additional buffers. Cost of $100,000 per acre or $500,000 assumed for vacant industrial land in Charles County.	Will demand a location for storage and routine maintenance of unit when not in use. Rental of space for this purpose at a cost of $625 per month or $7,500 annually is assumed.	Will demand a site to accommodate; a) building of about 4,000 to 5,000 square feet in size, b) parkiing space for customers, employees and delivery vehicles, 3) future expansion, and 4) zoning setbacks. Sewer and water demands largely related to employees. Facility, therefore, may not require public services but, if not available, additional land area may be required for an on-site septic system. A minimum of two acres of land recommended. Cost of $75,000 per acre or $150,000 assumed for vacant rural industrial land in Charles County.
Regulatory and Permitting Issues		
USDA Food Safety and Inspection Service inspection of meat and operations required for compliance with Federal Pathogen Reduction and Hazard Analysis and Critical Control Points (HACCP), Maryland having no meat inspection program of its own. No USDA preapproval procedure applies to design of the facility but application for inspection must be made under 9CFR304 and a HACCP plan must be in place and verified by USDA per 9CFR417. Space for inspectors must be provided in the building and $43.64 per hour charge applies to overtime hours, estimated at 2 hours per week. Maryland DOH Division of Food Control and County building and zoning approval also required. Other permits (grading permit, sewer, etc.) may be required, depending on site.	Mobile slaughter units have typically been used for custom services only, but USDA has permitted at least one such unit in Washington State. USDA Food Safety and Inspection Service inspection of meat and operations required for compliance with Federal Pathogen Reduction and Hazard Analysis and Critical Control Points (HACCP). No USDA preapproval procedure applies to design of the facility but application for inspection must be made under 9CFR304 and a HACCP plan must be in place and verified by USDA per 9CFR417. A USDA inspector must ride with the operator and a $43.64 per hour charge applies to overtime hours estimated at 8 hours weekly. Maryland Division of Food Control also required. There is no Maryland experience with mobile units and this will demand a change in regulatory approach, which could be a major obstacle. Other permits (grading permit, sewer, etc.) may be required, depending on site.	Unless the facility is using meat acquired from a USDA inspected slaughter facility and is restricted to selling directly to household consumers (and a limited number of hotels and restaurants, up to 25% of dollar volume), USDA Food Safety and Inspection Service inspection of meat and operations is required for compliance with Federal Pathogen Reduction and Hazard Analysis and Critical Control Points (HACCP). No USDA preapproval procedure applies to design of the facility but application for inspection must be made under 9CFR304 and a HACCP plan must be in place and verified by USDA per 9CFR417. Space for inspectors must be provided in the building and $43.64 per hour charge applies to overtime and 2 hours per week is estimated. Maryland DOH Division of Food Control and County building and zoning approval also required. Other permits (grading permit, sewer, etc.) may be required, depending on site.

Figure 5-1 (Continued)
Southern Maryland Livestock Producers
Financial Comparison of Processing Options

Fixed Plant Slaughter and Processing Facility	Mobile Slaughter Unit (Processing by Contract)	Processing Only Facility (Slaughter by Contract)
Acquisition and Building Costs		
Will demand facility of about 5,000 square feet in size plus storage space for vehicular equipment and room for expansion. Such a building can be expected to cost as much as $150 per square foot (including the fabrication, cooler and freezer space required as well as design and site preparation). An investment of as much as $750,000 can be anticipated (not including land required).	Mobile slaughter unit cabable of slaughtering 5 beef, 12 hogs, or 20 sheep per day with one butcher and up to 9 beef per day with a second butcher, can be purchased for approximately $110,000 plus cost of delivery, ancillary equipment and the tow vehicle. Altogether, a basic unit cost of up to $175,000 can be anticipated, not including a storage or maintenance building.	Will demand a building of 3,000 to 4,000 square feet in size plus storage space for vehicular equipment and room for expansion. Such a processing facility can be expected to cost as much as $150 per square foot (including cooler and freezer space required as well as design and site preparation). An investment of up to $600,000 can be anticipated (not including land).
Staffing		
Slaughter and processing of animals requires up to 10 man hours per beef, 4 hours per hog and 2 hours per lamb at estimated rate of $12.50 per hour. Plant manager and a plant bookkeeper also required at estimated salaries of $50,000 and $25,000, respectively. A plant to slaughter, process and distribute 100 beef, 60 hogs and 20 lambs per week (projected 5th year volume available) will generate labor and associated costs for fringes of over $1.37 million annually (including USDA inspection).	A mobile slaughter unit requires a one butcher/operator, a second butcher and a USDA inspector to achieve a 9 beef per day rate. Because the USDA inspector has to accompany the unit , the volume is limited and the time on the road considerable, the cost is relatively high in this situation. The mobile unit would presumably deliver to a contracted processor to fabricate the meat, the cost of which id not reflected in this analysis. Total labor cost, including USDA inspection will be about $151,000.	Processing of animals (fabrication only) requires up to 8.5 man hours per beef, 3 hours per hog and 1.5 hours per lamb at estimated rate of $12.50 per hour. Plant manager and a plant bookkeeper also required at estimated salaries of $50,000 and $20,000, respectively. A facility to fabricate and distribute meat from100 beef, 60 hogs and 20 lambs per week (projected 5th year volume available) will generate labor and associated costs for fringes of up to $1.16 million annually (including USDA inspection).
Equipment		
A fixed plant slaughter and meat processing facility will require, in addition to aging, cooling and freezer space, approximately $150,000 of equipment. This includes both slaughter and fabrication equipment, purchased on the used market whereever possible. Some new equipment (cryovac equipment, patty machines, etc.) may required for technological competitiveness. A relatively small new commercial grade vacuum packaging machine sells for $7,500 and several other similar pieces of equipment may be required.	Although most of the equipment required in a mobile slaughter unit is part of the design and the cost estimate for the delivered unit, up to $25,000 of additional equipment can be required to fully equip the unit. Additionally, a separate tow vehicle is required, the unit being a modified gooseneck trailer. The total cost of the unit, extra equipment and tow vehicle is estimated at $175,000.	A meat processing facility will require, in addition to aging, cooling and freezer space, about $75,000 of equipment. This includes all fabrication equipment, purchased on the used market where possible. Some new equipment (cryovac equipment, patty machines, etc.) may also required to ensure technological competitiveness. A relatively small new commercial grade vacuum packaging machine sells for $7,500 and several other similar pieces of equipment may be required.

Figure 5-1 (Continued)
Southern Maryland Livestock Producers
Financial Comparison of Processing Options

Fixed Plant Slaughter and Processing Facility	Mobile Slaughter Unit (Processing by Contract)	Processing Only Facility (Slaughter by Contract)
Waste Disposal		
Rendering costs and other waste disposal are major issues for any fixed plant slaughter facility. Some wastes can be recycled into byproducts through composting or other means, but large quantities of materials that cannot be efficiently or safely composted must still be removed from the site at relatively high costs, given the restrictions imposed by regulations for dealing with BSE (nad cow disease). Those costs can, based on the experience of other similar sized facilities, be as much as $3,500 per week, net of the "drop" or byproduct value.	A key advantage of the mobile slaughter unit is that most waste disposal can be accomplished on the farm through composting or other means, the amount of offal being relatively small. Therefore, the cost associated with rendering or other means of waste disposal is estimated at a modest $500 per week, net of the "drop" or byproduct value.	Waste disposal associated with fabrication are limited. There is relatively little water use other than that associated with employees. Therefore, an on-site septic system is often suitable for disposing of wastewater. Other waste material (e.g, bones) can, depending upon the volume, typically be recovered for other uses such as bone meal. Therefore, the cost associated with waste disposal is estimated at a modest $500 per week, net of the "drop" or byproduct value.
Transportation		
A fixed plant slaughter and meat fabrication operation will demand transportation at two points in the process; when live animals are picked up at the farm and brought to the plant and when fabricated meat products are delvered from the plant to end users. The former is a cost recoverable from the farmer by either charging an additional pickup fee (some plants include this in the basic kill charge) or by letting the farmer bring animals to the plant. It is, therefore, a neutral feasibility factor. Transportation to end users, however, is a cost that must be absorbed to capture full value for producers. It is estimated operation of a refrigerated delivery truck will cost $2.50 per mile (including labor) and require 200 miles per day of travel.	A mobile slaughter unit will, by its nature, involve transportation from farm to farm. It will also have to transport its product back to a processing facility every 1-2 days. It is estimated the unit will cost $2.50 per mile to transport and involve average daily travel of 100 miles.	A meat fabrication operation will also demand transportation at two points in the process; when carcasses are picked up from the slaughter facility and brought to the fabrication facility and when fabricated meat products are delvered from the plant to end users. Both cost must be absorbed by the facility to capture full value for producers. It is estimated the operation of a refrigerated delivery truck will cost $2.50 per mile (including labor) and require 200 miles per day of travel. An additional 75-80 miles per day average travel will be required to pick up carcasses and deliver them to the fabrication facility.

Figure 5-1 (Continued)
Southern Maryland Livestock Producers
Financial Comparison of Processing Options

Fixed Plant Slaughter and Processing Facility	Mobile Slaughter Unit (Processing by Contract)	Processing Only Facility (Slaughter by Contract)
Operational Costs		
The cash flow analysis of the fixed plant slaughter and fabrication option indicates the total cost of operating a facility with a base volume of 100 beef, 60 hogs and 20 lambs per week is about $2.41 million annually. Such an operation can be expected to produce net operating income of approximately $258,000 in the facility's 5th year of operation.	A cash flow analysis of the mobile slaughter unit option is attached. It indicates the total cost of operating a facility with a base volume of 35 beef, 21 hogs and 7 lambs per week (maximum output of one such unit) is approximately $292,000 annually. It can be expected to produce a net operating loss of approximately $17,000 per year. This amount can, however, be covered by a $36,000 contingency item in the assumptions, suggesting a mobile unit will essentially break even.	A cash flow analysis of fabrication only option is attached. It indicates the total cost of operating a facility with a base volume of 100 beef, 60 hogs and 20 lambs per week is approximately $1.92 million annually. It can be expected to produce net operating income of approximately $202,000 per year.
Marketing Costs		
Marketing costs will be associated with this or any other option. They must be evaluated in assessing the ultimate feasibility of Southern Maryland Meats as an enterprise. However, such costs are an add-on expense that will have to be covered by charges to producers. Therefore, they are a neutral factor with respect comparing processing options. They become relevant only in comparison to the additional premiums obtained from branding and offering niche lines of products and must be separately evaluated in that context.	Marketing costs will be associated with this or any other option. They must be evaluated in assessing the ultimate feasibility of Southern Maryland Meats as an enterprise. However, such costs are an add-on expense that will have to be covered by charges to producers. Therefore, they are a neutral factor with respect comparing processing options. They become relevant only in comparison to the additional premiums obtained from branding and offering niche lines of products and must be separately evaluated in that context.	Marketing costs will be associated with this or any other option. They must be evaluated in assessing the ultimate feasibility of Southern Maryland Meats as an enterprise. However, such costs are an add-on expense that will have to be covered by charges to producers. Therefore, they are a neutral factor with respect comparing processing options. They become relevant only in comparison to the additional premiums obtained from branding and offering niche lines of products and must be separately evaluated in that context.
Capital Investment		
The total capital costs associated with the fixed plant slaughter and processing facility are estimated at $1.57 million, which includes $500,000 of land, a $750,000 building, $150,000 of equipment, $25,000 in financing and other organizational costs (HACCP plans included) and $140,000 as a contingency. It is assumed capital costs would be financed at a 7% interest rate over a term of 15 years.	The total capital costs associated with the mobile slaughter unit are estimated at $212,500, which includes $175,000 of equipment, $20,000 in financing and other organizational costs (HACCP plans included) and $17,500 as a contingency. It is assumed capital costs would be financed at a 7% interest rate over a term of 15 years.	The total capital costs associated with the fixed plant processing facility are estimated at $922,500, which includes $150,000 of land, a $600,000 building, $75,000 of equipment, $15,000 in financing and other organizational costs (HACCP plans included) and $82,500 as a contingency. It is assumed capital costs would be financed at a 7% interest rate over a term of 15 years.

Figure 5-1 (Continued)
Southern Maryland Livestock Producers
Financial Comparison of Processing Options

Fixed Plant Slaughter and Processing Facility	Mobile Slaughter Unit (Processing by Contract)	Processing Only Facility (Slaughter by Contract)
Breakeven Volume		
The cash flow analysis attached indicates the breakeven volume of activity for a fixed plant slaughter and fabrication facility is 89 beef, 53 hogs and 18 lambs per week. However, because this level of activity cannot reached at the outset, the cash flow losses of earlier years must be covered with a combination of working capital and other financial assistance. Assuming land for the facility is donated, another $500,000 grant is provided to help cover capital costs and up to $865,000 of working capital is made available, the project can cover those costs in the 9th year of operation at a volume of 120 beef, 72 hogs and 24 lambs per week.	The cash flow analysis attached indicates a mobile slaughter unit will, at full capacity, lose about $17,000 per year. Assuming the unit and all other capital costs are donated, as much as $365,000 of additional donated working capital would be required to sustain the operation over a 10 year period. However, because this cost is within the operational contingency amount and there may be opportunities to cover such small losses through charges to producers rewarded with higher prices from Southern Maryland Meats, it can be concluded the mobile unit option is roughly a breakeven operation at a volume of 35 beef, 21 hogs and 7 lambs per week.	The cash flow analysis attached indicates the breakeven volume of activity for a fixed plant fabrication only facility is 86 beef, 52 hogs and 17 lambs per week. However, because this level of activity probably cannot reached at the outset, the cash flow losses of earlier years must be covered with a combination of working capital and other financial assistance. Assuming land for the facility is donated, another $400,000 grant is provided to help cover capital costs and up to $630,000 of working capital is made available, the project can cover those costs in the 8th year of operation at a volume of slightly less than 115 beef, 69 hogs and 23 lambs per week.

6.0 Feasibility Conclusions and Recommendations

The financial and other analyses conducted as part of this study were thoroughly reviewed and discussed in a Southern Maryland Livestock Producers strategic planning session on May 1, 2006. This session, guided by Shepstone Management Company, led to the following conclusions:

1) There are three basic inter-related needs connected with launching a *Southern Maryland Meats* program: a) marketing, b) slaughter and c) processing. The last two can be purchased in the short-term, but marketing will require hands-on leadership and, for this reason, is the most important at the outset. Moreover, a fixed-plant facility to do slaughter or any extensive fabrication is probably beyond the capacity of the organization at the current time. Neither is financially feasible in the foreseeable future. A mobile facility combined with aging and storage capacity is a much more realistic next objective after a marketing program is established and could be financially feasible within a shorter time-frame than a fixed-plant facility. Therefore, it is important to proceed in a progressive fashion based on a series of incremental steps as opportunities permit. Those steps are as follows:

   Step 1:

   Corporately organize Southern Maryland Livestock Producers in the manner of a produce auction, perhaps as a S corporation, with shares of the company to be made available for purchase by producers.

   Step 2:

   Develop a relationship with a non-profit entity that can accept grants for equipment (e.g. stock trailer unit) and the hiring of a marketing manager who would be contracted by *Southern Maryland Meats* at a nominal fee.

   Step 3:

   Register the name of *Southern Maryland Meats*.

   Step 4:

   Develop and secure USDA approval of the *Southern Maryland Meats* "natural" claim along with the specific guidelines, practices and oversight to ensure this claim is met.

   Step 5:

   Hire a marketing manager to run the program, manage relationships with producers and processors and make arrangements with potential distributors or purveyors of meat products.

   Step 6:

   Contract with processor to slaughter. age and fabricate products.

<u>Step 7:</u>

Develop relationship with a purveyor or distributor to handle the *Southern Maryland Meats* line and with others to take the remainder of the products and by-products (e.g., marketing front beef quarters through relationships with Kosher buyers).

<u>Step 8:</u>

Continually promote the *Southern Maryland Meats* line with events and public relations activities both independently and cooperatively with the distributor/ purveyor and other partners.

2) Marketing should begin as soon as possible and with whatever volume, however small, exists at the outset. Marketing needs to be directed not only at selling products, but also helping farmers with marketing in general, so as to develop greater capacity. Southern Maryland Livestock Producers needs a strong economic development oriented individual assigned to work exclusively for livestock producers and act in a deal-making, marketing capacity on their behalf. This position needs to be crafted on a demonstration basis for a 3--5 year period with transition to an operation that is sustainable from fees charged to participating farmers and/or county or local contributions based upon the contributions made to farmland preservation and control of urban sprawl. Hiring a good marketing person at the outset will help to bring other participants along and set the stage for a successful program.

3) Essential equipment at the outset of any marketing effort will include a stock trailer for picking up livestock and transporting them to slaughter as well as a refrigerated truck to deliver product. Acquiring capacity to age meat is also critical to marketing niche products. Existing providers have been unable or unwilling to sacrifice the required space. It will have to purchased on a lease basis or as part of the processing fee as arrangements are made to secure slaughter and processing capacity. Barbecue could be one of several niches in marketing products and, especially, in selling front quarters. Purchase and lease-out of barbecue equipment, therefore, could be a way to develop that niche.

4) A for-profit private corporation is the best model for the organization. This will allow better adaptation to circumstances. The need to make a profit will also ensure the organization is focused on realistic objectives. Finally, corporate organization will allow control of the organization to remain where it belongs, with the producers.

Summarizing, there is real potential for Southern Maryland Livestock Producers to develop a *Southern Maryland Meats* brand and marketing program. Realizing this potential will, however, require a more detailed business plan and marketing plan. A detailed financial analysis of the above described program should be prepared using break-even, cash flow and rate of return analyses to identify the minimum volume of throughput which would be required to achieve a reasonable rate of return to potential investors. Pro forma financial statements, strategic objectives, a recommended organizational structure and other documentation to establish the viability of the business operation should be assembled for purposes of securing financing. It should also include a detailed implementation plan. A marketing plan that identifies potential product lines and specific markets and makes marketing and distribution recommendations is also required. It is recommended Southern Maryland Livestock Producers proceed with these measures to create the foundation for *Southern Maryland Meats*.

APPENDIX

Livestock Producers Survey

A group of livestock producers from Anne Arundel, Calvert, Charles, Prince George's and St. Mary's Counties, known as Southern Maryland Livestock Producers, is studying the feasibility of establishing a marketing organization to collect animals for processing and develop a *Southern Maryland Meats brand*. It may also create new slaughter or processing capacity. Options include contracting with existing processors, building new or constructing a mobile facility. Please answer the following questions with this in mind:

1) Name of person answering (optional): N/A County: A..A..-2, Calvert-8, Charles-7, P.G.-6 and St. Mary's.-8
Farm or business name (optional): N/A Phone: N/A

2) Type and amount of livestock you currently raise or would produce for slaughter on an **annual** bas

	Current type of operation (e.g. feedlot, cow-calf, etc.)	Animals Produced		
		In 2002	Currently	Goal in 5 Years
Beef (cows)	21	520	510	553
Beef (feeders)	11	194	184	215
Beef (fed cattle)	9	168	150	210
Dairy beef	0	0	0	0
Hogs	2	30	38	85
Lamb	4	290	200	154
Goats	5	64	88	80
Poultry	5	425	2,350	700
Other	0	0	0	0

3) Do you produce any livestock which can be characterized as natural or marketable as a similar product?

13 (37%)	YES
22 (63%)	NO

If yes, please explain. Grass-fed, no hormones, free-range, no meds or chemicals

"Natural" means raised without using antibiotics or additional hormones, using humane practices.

4) Do you produce any livestock for the Kosher or Halal markets or other specialty markets not addressed above?

8 (24%)	YES
26 (76%)	NO

If yes, please explain. Kosher, Halal and Orthodox holidays

5) If applicable, how do you currently market your livestock? PLEASE INDICATE NUMBERS OF EACH

	Feeder Calves	Fed Cattle	Dairy Beef	Hogs	Lamb	Goats	Other
Live to dealers	9	47	0	0	30	0	0
To the live markets	31	24	0	0	10	30	0
Live to auctions	200	7	0	12	91	0	0
Live to consumers	12	9	0	3	0	12	0
Cut & wrapped to consumers	3	1	0	2	0	0	100
Quarters/halves to consumers	0	14	0	0	5	5	0
Dressed weight to packers	0	1	0	0	0	0	0
Live to finishers or stockers	12	1	0	6	0	0	0
Live weight to packers	0	83	0	0	0	0	0
Contract to feedlots	0	0	0	0	0	0	0
Other (explain)	0	0	0	0	0	0	0
TOTALS	**267**	**187**	**0**	**23**	**136**	**47**	**100**

6) If you direct market, what is the distance to the processing facility you use most often?

1	Picked up by processor at farm		3	40-59 miles
1	Less than 10 miles		4	60-79 miles
3	10-19 miles		3	80-99 miles
1	20-39 miles		2	100+ miles

What is the maximum distance you can economically travel for processing? 53 Miles

7) What processing services do you now use, or would you use if available? CHECK ALL APPLICABL

	Feeder Calves	Fed Cattle	Dairy Beef	Hogs	Lamb	Goats	Other
U.S.D.A. Approved facility	3	14	0	4	2	2	0
Non-USDA facility	1	4	0	3	1	1	0
Aging	0	5	0	1	0	0	0
Smoking	0	1	0	3	0	0	1
Curing	0	1	0	4	0	1	1
Cryo-packaging	0	3	0	2	0	0	0
Sausage making	0	1	0	5	0	1	1
Private farm label	0	6	0	2	0	1	0
Marketing organization	0	4	0	1	0	0	0
More cut & wrap options	1	6	0	3	0	0	0
Outlet for natural/specialty products	1	5	0	3	0	1	0
Trucking & distribution	1	2	0	1	0	0	0
Better outlet for the extras	1	2	0	1	0	0	0
Others (explain)	1	0	0	1	0	0	0
Others (explain)	1	0	0	1	0	0	0

8) Are you satisfied with the service provided by your current slaughtering and/or processing facility?

11 (52%)	Yes
9 (43%)	No
1 (5%)	Somewhat

If not, please explain why. Need local USDA facility

9) Would you expand your current operation over the next 5 years, given more convenient processing facilities and options and the availability of new stable markets?

14 (47%)	Yes
7 (23%)	No
9 (30%)	Maybe

If yes, by how much would you expand?

2	<10%		3	25-50%
8	10-25%		2	50% +

10) Would you be interested, for a premium price, in contract-raising animals to market specifications?

13 (41%)	Yes
7 (22%)	No
12 (37%)	Maybe

11) Would you be willing to adjust your current breeding schedule to enable the facility to provide meat on a year-round basis?

18 (31%)	Yes
7 (23%)	No
12 (39%)	Maybe

12) Would you be willing to coordinate the delivery of livestock with other users to ensure a steady supply of livestock to the program or facility?

16 (50%)	Yes
3 (9%)	No
13 (41%)	Maybe

13) Would you be willing to sign an agreement committing yourself to process a certain number of your livestock through the proposed program or facility?

9 (28%)	Yes
7 (22%)	No
16 (50%)	Maybe

If so, please indicate the number of head per year you could provide to the facility annually.

Feeder Calves	Fed Cattle	Dairy Beef	Hogs	Lamb	Goats	Other
80	210	0	50	100	50	0

14) Would you be interested in making an initial investment in the business or facility?

8 (26%)	Yes
13 (42%)	No
10 (32%)	Maybe

15) If you participate in the tobacco buy-out program, how will its cessation in the next 5 years affect your production goals?

1	Will likely increase production
0	Will likely decrease production
12	No particular impact expected
2	Not sure of the impacts

16) Please tell us any other thoughts or concerns you have.

Should be small / Market first - build later / Very interested / Good luck / Up to market / Too much government and not worth the hassle / Very interested in USDA / Feel there is a market for niche beef products / Like to know more / I concentrate on feeder calves / Would be great to have local slaughter facility / Fuel and other prices too high now / Do not see a market / Too difficult in this marketplace / Frmly committed to a mobile facility / How many cattle in Southern MD / Too old to pursue this after tobacco money runs out / Need feeder calves and good prices / Probably would expand cow-calf, but not fed cattle operation.

Thank You!