

Feasibility Analysis of a Mobile Slaughter Unit

Kathleen Painter¹



Table of Contents

[Summary of Potential Returns from a Mobile Slaughter Unit \(\\$/yr\)](#)

[Total Value Added](#)

[Total Costs per year](#)

[Net Revenue per year](#)

[Value-Added by Species for Mobile Slaughter Unit Per Kill Day](#)

[Estimated Revenue](#)

[Estimated Cost](#)

[Estimated Value-Added](#)

[Value-added by species](#)

[Carcass yield assumption by species](#)

[Enterprise Budget for Mobile Slaughter Unit \(MSU\): Costs and Returns per Year](#)

[Gross Returns](#)

[Net Returns Above Operating Expenses](#)

[Net Returns over Total Costs](#)

[Loan and Depreciation Schedules for the Mobile Slaughter Unit](#)

[Loan payment calculation](#)

[Straight-line depreciation calculation](#)

¹ Analyst, University of Idaho Ag Economics & Rural Sociology
Adjunct, Wash. State Univ. School of Economic Sciences
(208) 885-6041
kpainter@uidaho.edu

Summary of Potential Returns from a Mobile Slaughter Unit (\$/yr)

Instructions: Fill in orange cells for number of kill days per week that you plan to use the mobile slaughter unit. Then fill in the number of animals per week by species. If orange cell says "too many animals," reduce your animal numbers until it says "within allowable limits."

Please see Value-Added tab for determining margins by animal species. These values are transferred to this sheet.

Please see Enterprise Budget tab for information on costs of realizing this value-added revenue.

Number of kill days per week:

1

The maximum number of kill days per week would be 4 or 5 to allow for transport, off-loading, cleaning, and maintenance.

<u>Species:</u>	<u>Max no. per hour</u>	<u>Max no. per week</u>	<u>Number of animals per week by species</u>	<u>Hours per week by species</u>	<u>Total revenue by animal (\$/head)</u>	<u>Total revenue by kill day (\$/day)</u>	<u>Total revenue per week (\$/week)</u>	<u>Total revenue per year (\$/year)</u>
Cattle	2	14	6.00	3.00	\$2,700	\$16,200	\$16,200	\$810,000
Pigs	4	28	10.00	2.50	\$598	\$5,980	\$5,980	\$299,000
Sheep	6	42	9.00	1.50	\$336	\$3,024	\$3,024	\$151,200
			Total:	7.00				
				within allowable limits				
		Total:	25	7				
Total Value Added					\$3,634	\$25,204	\$25,204	\$1,260,200
Total Costs per year								\$979,429
Net Revenue per year								\$280,771

Assumptions:

Mobile Slaughter Unit (MSU) operates for 7 hours per day in order to allow for set-up and paperwork.

Mobile Slaughter Unit (MSU) operates 50 weeks of the year.

Costs and returns are as outlined in the following tabs.

Value-Added by Species for Mobile Slaughter Unit Per Kill Day

Instructions: Adjust data in orange cells, including retail and wholesale prices, wholesale weights, and carcass yield assumptions as necessary.

Animal	Weight per animal (lb)	Price or Cost (\$/lb)	Revenue per animal (\$)	Capacity Per Day (head)	Value or Cost Per Day (\$)
Estimated Revenue:					
<u>Retail Price -- cut & wrapped</u>					
Average Beef Yield	450	\$6.00	\$ 2,700.00	14	\$37,800.00
Average Pork Yield	130	\$4.60	\$ 598.00	28	\$16,744.00
Average Sheep Yield	48	\$7.00	\$ 336.00	42	\$14,112.00
Estimated Cost:					
<u>Wholesale Price -- on the hoof</u>					
Average Liveweight for Beef	1250	\$1.00	\$ 1,250.00	14	\$17,500.00
Average Liveweight for Pork	260	\$0.70	\$ 182.00	28	\$5,096.00
Average Liveweight for Sheep	120	\$1.05	\$ 126.00	42	\$5,292.00
Estimated Value-Added: (Revenue - Cost):					
<u>Value-added by kill day</u>					
Beef				14	\$20,300.00
Pork				28	\$11,648.00
Sheep				42	\$8,820.00
Total					\$40,768.00
Value-added by species:					
Beef (each)	\$1,450.00				
Pork (each)	\$416.00				
Sheep (each)	\$210.00				
Carcass yield assumption by species:					
	Hanging weight:		Cut & wrapped weight:		
Beef	62%	775	36%	450	
Pork	72%	187.2	50%	130	
Sheep	54%	64.8	40%	48	

Please see Enterprise Budget tab for information on costs of realizing this value-added revenue.

Enterprise Budget for Mobile Slaughter Unit (MSU): Costs and Returns per Year

Note: The quantity of animals to be processed is carried over to this worksheet from the Summary tab.
Costs in the orange cells can be tailored to your operation.

Item	Quantity	Unit	Price or Cost (\$)	Value or Cost/Year
Gross Returns				\$1,260,200
Beef	300	head	\$ 2,700.00	\$810,000
Pork	500	head	\$ 598.00	\$299,000
Sheep	450	head	\$ 336.00	\$151,200
Operating Inputs				
Cost of animals:				\$522,700
Beef	300	head	\$ 1,250.00	\$375,000
Pork	500	head	\$ 182.00	\$91,000
Sheep	450	head	\$ 126.00	\$56,700
Labor for MSU:				\$43,100.00
Butchers	3	employee(s)	\$ 10,000.00	\$30,000.00
Assistant butchers	2	employee(s)	\$ 6,000.00	\$12,000.00
USDA inspector @ \$55 per hour	1	employee(s)	\$ 1,100.00	\$1,100.00
<i>Labor rate assumption, butchers</i>	\$ 25.00			
<i>Labor rate assumption, assistant butchers</i>	\$ 15.00			
Supplies:				\$1,000.00
Cleaning supplies, plastic bags, paper towels	50	days	\$ 20.00	\$1,000.00
Utilities:				\$900.00
Propane for hot water heater, per day	50	days	\$ 18.00	\$900.00
Electricity for lights & air conditioner, per day	50	days	\$ 20.00	\$1,000.00
Other:				\$285,656.25
Cut & wrap (shrink wrap) based on hanging weights	355260	lb	\$ 0.65	\$230,919.00
Smoke hams and bacon (1/3 of pork carcass)	21450	lb	\$ 1.25	\$26,812.50
Storage Locker Rental	221600	lb	\$ 0.10	\$22,160.00
Fuel for driving truck to butcher shop @ 12 gal/trip	600	gal	\$ 2.50	\$1,500.00
Lubricants for truck	18%	of fuel cost		\$264.75
Machinery Repairs (per day)	50	days	\$ 60.00	\$3,000.00
Labor for truck driver (1 hour/day)	50	days	\$ 20.00	\$1,000.00
Management fee (per day)	50	days	\$ 100.00	\$5,000.00
Operating Costs				\$859,356.25
<i>Percent of operating costs that are financed:</i>	50%			
Operating Interest	7%	of oper costs	\$ 30,077.47	\$30,077.47
Overhead (legal, accounting, phone)	2.5%	of oper costs	\$ 21,483.91	\$21,483.91
Total Operating Costs				\$910,917.63
Net Returns Above Operating Expenses				\$349,282.38

Enterprise Budget for Mobile Slaughter Unit (MSU): Costs and Returns per Year

Ownership Costs per year:

[Note: Depreciation and payment schedules can be adjusted in the following worksheet.](#)

Total Depreciation (straight line)	\$25,600.00
Depreciation on MSU	\$24,000.00
Depreciation on truck	\$1,600.00
Loan Payments	\$42,911.10
Amortized payment on MSU (10-year loan)	\$35,594.38
Amortized payment on tandem axle truck (5-year loan)	\$4,877.81
Amortized payment on holding corrals, knock box (5-year loan)	\$2,438.91
Total Ownership Costs	\$68,511.10
Total Costs per Year	\$979,428.72
Returns to Risk (Net Returns over Total Costs)	\$280,771.28

Loan and Depreciation Schedules for the Mobile Slaughter Unit

Instructions: Change numbers in the orange cells to recalculate payment and depreciation amount for different situations.

Loan payment calculation:

Item:	Cost:	Payment Period (yrs)	Interest Rate	Annual Payment
Mobile Slaughter Unit	\$250,000	10	7.00%	\$35,594
Tandem Axle Truck, used	\$20,000	5	7.00%	\$4,878
Holding/Kill Facilities	\$10,000	5	7.00%	\$2,439

Straight-line depreciation calculation:

Item:	Cost:	Salvage Value	Length of Life (yrs)	Annual Depreciation
Mobile Slaughter Unit	\$250,000	10,000	10	\$24,000
Tandem Axle Truck, used	\$20,000	4,000	10	\$1,600
Holding/Kill Facilities	\$10,000	500	25	\$380