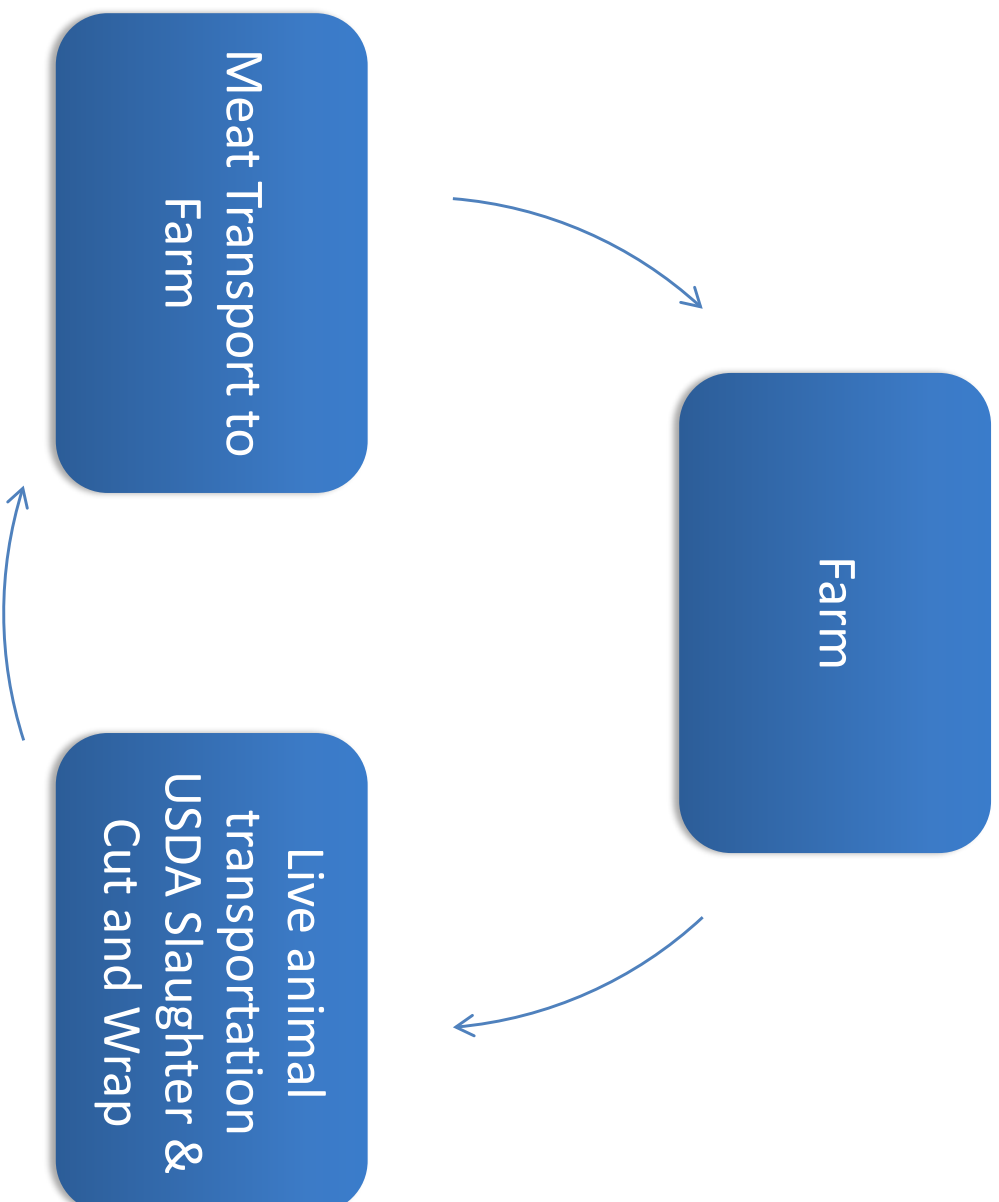


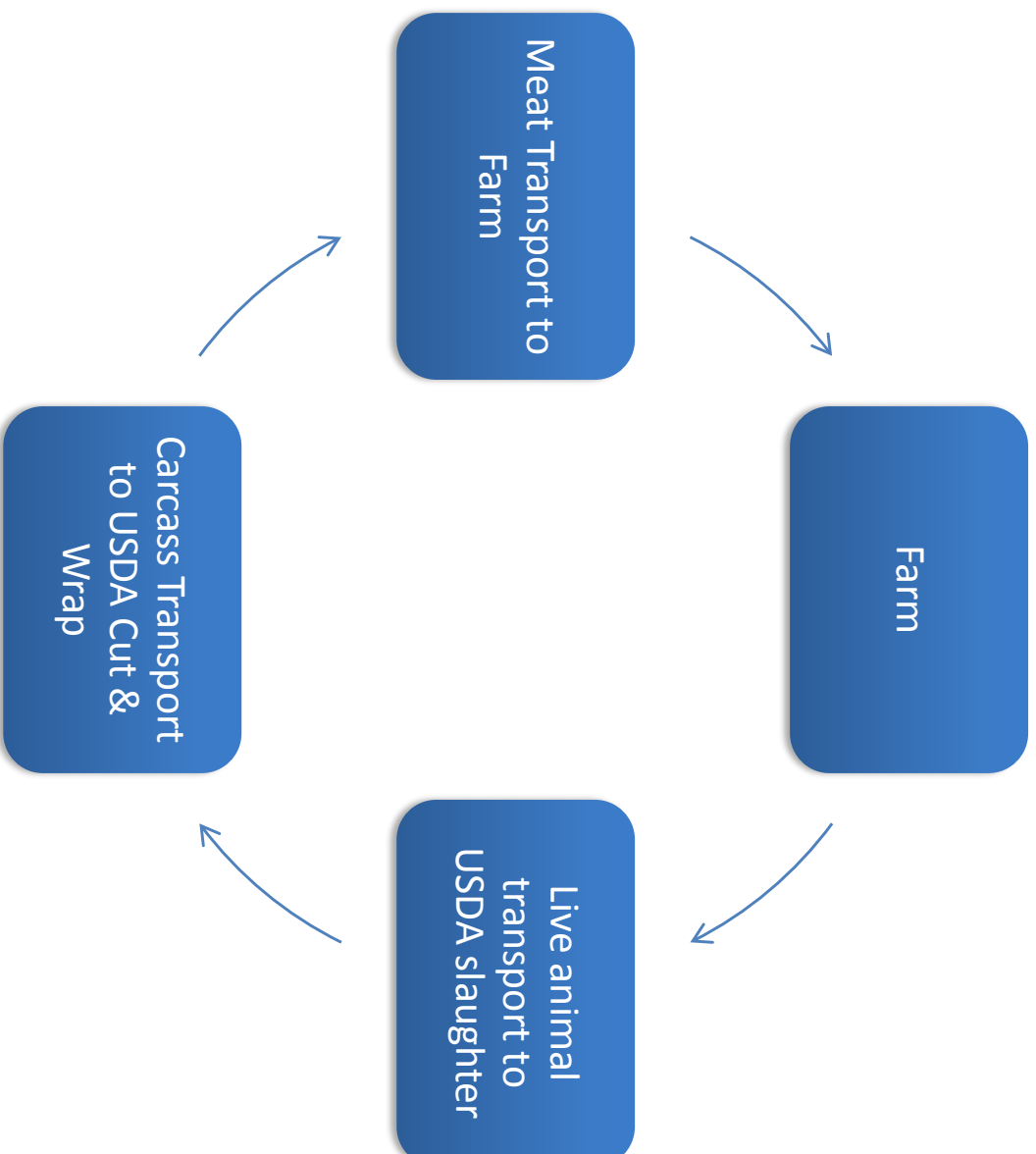
Cooperative Transportation Options

Roger Ingram
UCCE County Director and
Farm Advisor
Placer and Nevada Counties

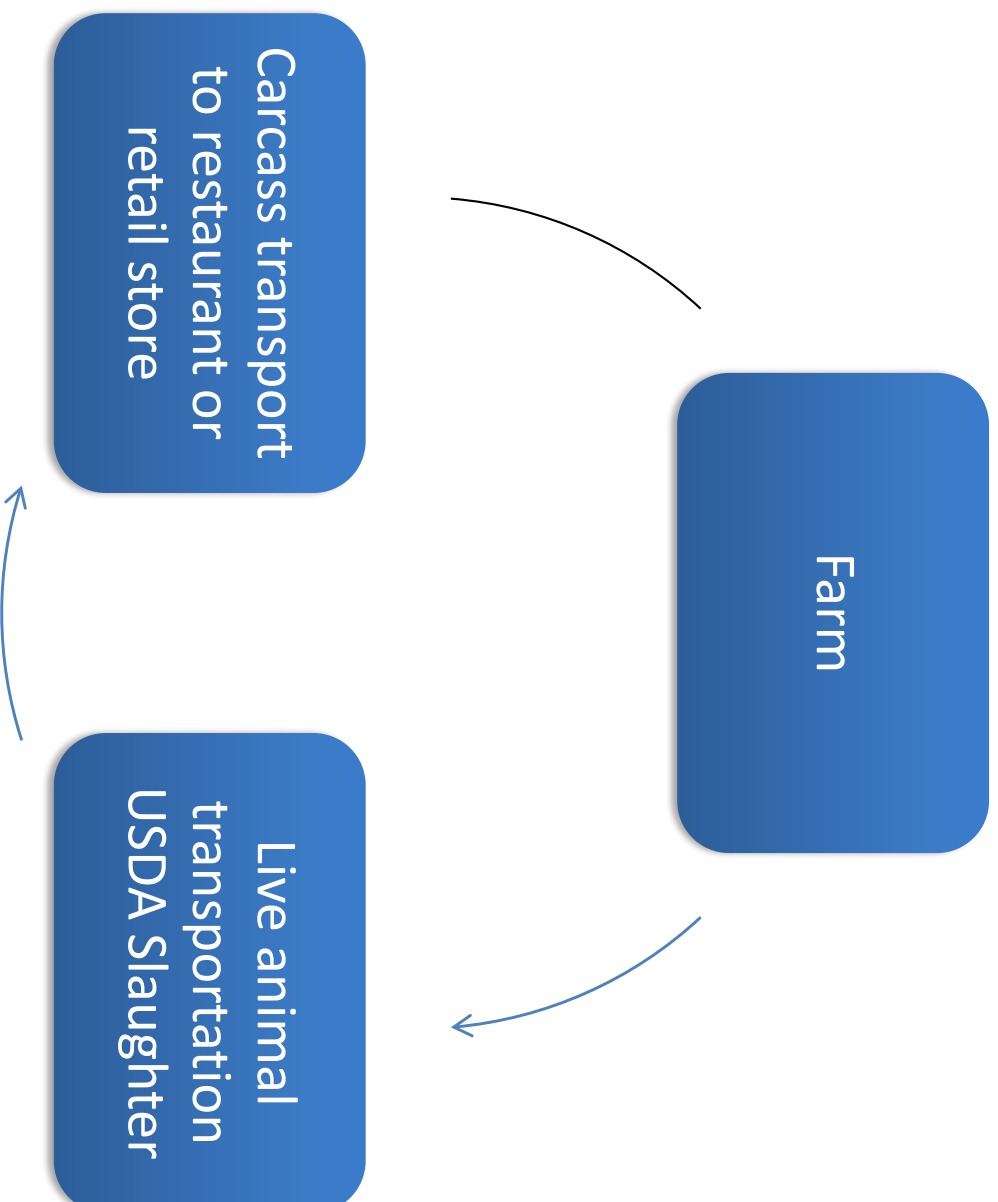
Transport Option 1



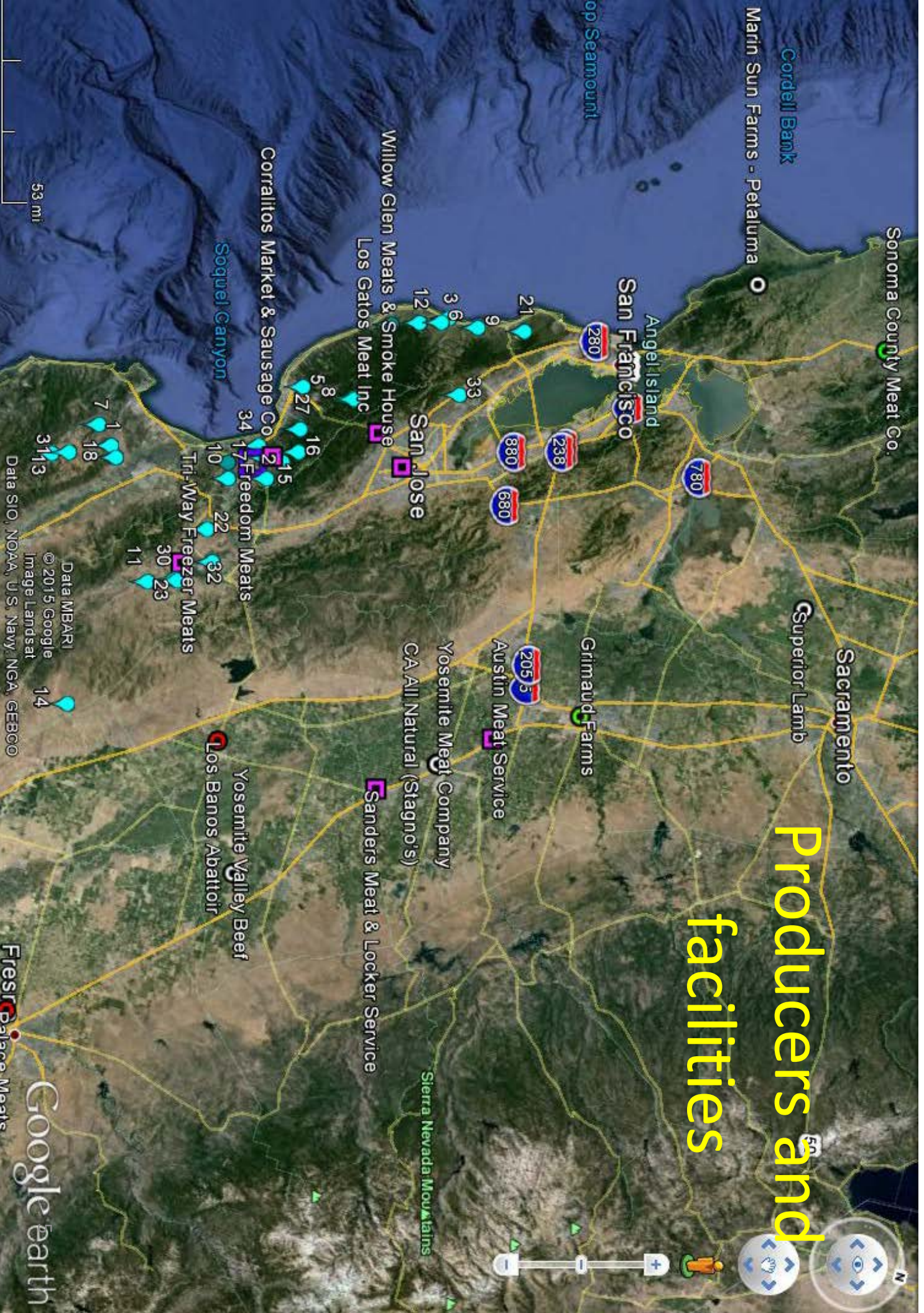
Transport Option 2



Transport Option 3



Producers and facilities



Transportation Costs

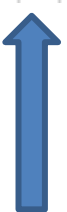
- Easy cost to ignore
- Must account for two trips: one for live animals and one for meat
- Taking one or two animals to a processor causes transportation costs to rise per head
- Rise in transportation cost per head reduces profitability
- Must account for: labor, fuel, repair and maintenance, insurance

| Species | Pork 1 Head | Pork 5 head |
|-------------------------------------|-------------|-------------|
| Live Animal Finish Weight | 275 | 275 |
| Live Animal Price (per lb) | \$ 1.00 | \$ 1.00 |
| Dressing Percentage | 70% | 70% |
| Retail Product Yield (% of live wt) | 35% | 35% |
| Average Retail Price (per lb) | \$ 6.50 | \$ 6.50 |
| Roundtrip Mileage to Processor | 230 | 230 |
| Mileage Rate (\$/mile) | \$ 0.57 | \$ 0.57 |
| Number of Animals | 1 | 5 |
| Live Animal Value | \$ 275.00 | \$ 275.00 |
| Retail Value | \$ 625.63 | \$ 625.63 |
| Hot Carcass Weight | 192.5 | 192.5 |
| Slaughter Charge (per head) | \$ 85.00 | \$ 85.00 |
| Processing Charge (per head) | | |
| - OR - | | |
| Processing Charge (per lb HCW) | \$ 1.00 | \$ 1.00 |
| Loads | 2 | 2 |

| | | |
|----------------------------|-----------|-------------|
| Gross Product | | |
| Meat Sales | \$ 625.63 | \$ 3,128.13 |
| Total Gross Product | \$ 625.63 | \$ 3,128.13 |

| | | |
|-----------------------------|-------------|-------------|
| Direct Costs | | |
| Live Animal Purchase | \$ 275.00 | \$ 1,375.00 |
| Slaughter Fee | \$ 85.00 | \$ 425.00 |
| Processing Fee (per head) | \$ - | \$ - |
| - OR - | | |
| Processing Fee (per lb HCW) | \$ 192.50 | \$ 962.50 |
| Total Direct Costs | \$ 360.00 | \$ 1,800.00 |
| Gross Margin | \$ 265.63 | \$ 1,328.13 |
| | 0.424575425 | 0.4245754 |

| | | |
|----------------------------|-------------|-----------|
| Overhead | | |
| Live Animal Transportation | \$ 262.20 | \$ 262.20 |
| Product Transportation | \$ 262.20 | \$ 262.20 |
| Storage | \$ 125.00 | \$ 125.00 |
| Marketing Expenses | \$ 100.00 | \$ 100.00 |
| Total Overhead | \$ 749.40 | \$ 749.40 |
| Net Profit (Loss) | \$ (483.78) | \$ 578.73 |



What is a Capital Purchase?

- Durable – expected useful life of 2 years or more (usually much more)
- Expensive – Costs more than \$ 250 and often thousands of dollars

What to Buy

- Don't think about the object, think function
 - A tractor is the object – cultivation is the function
 - A hoop house is the object – increasing market (through season extension) is the function
 - A portable electric fence is the object – better use of forage is the function
 - Refrigerated Truck – Solves transportation and labor bottleneck

The Money

1. What are your sources of money?
 - a) Farm profit
 - b) Savings
 - c) Debt
2. Have you covered other uses of money?
 - a) Operating funds
 - b) Reserve funds
 - c) Prior debt service
 - d) Family expenses (drawing)

How much money can you risk?

- Farm profit – have you covered
 - Operating expenses
 - Capital replacement
 - Market cycles and production problems
- Saved money
 - Do you have non-farm uses for this money?
- Borrowed money
 - How big a loan can you pay back without the added income you expect from the purchase.

What about Cash Flow?

- Make sure you have operations cash when you need it.
- You will need a Cash Flow Budget

Meat Transport - \$30,000



**Meat Transport 16 foot - \$25,000 –
Haul 6 pallets, 10 mpg**



Meat Transport Sprinter – \$50,000

Haul 2 pallets



Meat Transport – Cooler - \$85



Meat Transport - Distributor

Distribution Network

Tony's Fine Foods service area includes a significant portion of the West Coast. We offer distribution from Seattle and Portland, down through the coasts and valleys of Salinas, Bakersfield, Los Angeles and into Western



Nevada. Our fleet of modern trailers are equipped with multi-temperature chambers and lift gate availability. Fleet drivers utilize state of the art technology to ensure fuel efficiency and order accuracy at the time of delivery. Tony's customers can feel secure knowing that their orders are quality assured, routed and tracked — thus making deliveries consistently more efficient.



3 Options on Getting Meat to Farm

- Purchase refrigerated vehicle
- Contract with distributor
- Pick-up meat and put in coolers.
- Cost of delivery of 5 pigs (1 pallet) = \$135
- Cost for picking up meat for 5 pigs in coolers = \$162 mileage + \$90 labor = \$252

Refrigerated Truck

- You still have the 284 mile round trip.
- Mileage costs will still at least .57 per mile at IRS rate. *Actual cost per mile higher.*
- Labor is still at least 7 hours to drive vehicle
- Cost will be the same or even slightly higher if the truck only gets 5 pigs (one pallet).
- 16 foot refrigerated truck and handle 6 pallets (30 pigs) in one trip.

IRS Mileage Rate

- 2015: 57.5 cents per mile for business miles driven, up from 56 cents in 2014 for car, van, pickup, or panel truck

Actual Costs

| | | | | | | | | | | |
|-----------------------|---------|--------------|--------|--------------|-----------|-------|-------------|---------|--------------------------|-----------------------|
| 10 MPG | IRS | Miles Driven | Fuel | Depreciation | Insurance | Tires | Maintenance | Total | IRS vs Actual Difference | Adjusted mileage rate |
| Mileage Cost per trip | 161.88 | | | | | | | | | |
| 12 trips per year | 1942.56 | 3408 | 1192.8 | 1,667 | 800 | 150 | 500 | 4309.47 | 2366.91 | 1.26 |
| 6 trips per year | 971.28 | 1704 | 596.4 | 1,667 | 800 | 150 | 500 | 3713.07 | 2741.79 | 2.18 |
| 4 trips per year | 647.52 | 1136 | 397.6 | 1,667 | 800 | 150 | 500 | 3514.27 | 2866.75 | 3.09 |
| 2 trips per year | 323.76 | 568 | 198.8 | 1,667 | 800 | 150 | 500 | 3315.47 | 2991.71 | 5.27 |

| | | | | | | | | | | |
|-----------------------|---------|--------------|------|--------------|-----------|-------|-------------|---------|--------------------------|-----------------------|
| 18 MPG | IRS | Miles Driven | Fuel | Depreciation | Insurance | Tires | Maintenance | Total | IRS vs Actual Difference | Adjusted mileage rate |
| Mileage Cost per trip | 161.88 | | | | | | | | | |
| 12 trips per year | 1942.56 | 3408 | 852 | 1,667 | 800 | 150 | 500 | 3968.67 | 2026.11 | 1.16 |
| 6 trips per year | 971.28 | 1704 | 426 | 1,667 | 800 | 150 | 500 | 3542.67 | 2571.39 | 2.08 |
| 4 trips per year | 647.52 | 1136 | 284 | 1,667 | 800 | 150 | 500 | 3400.67 | 2753.15 | 2.99 |
| 2 trips per year | 323.76 | 568 | 142 | 1,667 | 800 | 150 | 500 | 3258.67 | 2934.91 | 5.74 |

Depreciation figured on \$25,000 with a 15 year life.
Fuel cost calculated at \$3.50 per mile.
Tires figured at replacing one tire a year.

Refrigerated Truck Transportation – Actual Mileage Rate – 12 trips per year and \$1.26 per mile

| | | | | | | |
|----------------------|--------|--------|--------|--------|--------|--------|
| Refrigerated Truck | | | | | | |
| # pigs hauled | 5 | 10 | 15 | 20 | 25 | 30 |
| Mileage | 284 | 284 | 284 | 284 | 284 | 284 |
| Mileage Rate | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 |
| Mileage | 357.84 | 357.84 | 357.84 | 357.84 | 357.84 | 357.84 |
| Labor | 105 | 105 | 105 | 105 | 105 | 105 |
| Total per trip | 462.84 | 462.84 | 462.84 | 462.84 | 462.84 | 462.84 |
| Number of trips | 1 | 1 | 1 | 1 | 1 | 1 |
| Total Transportation | 462.84 | 462.84 | 462.84 | 462.84 | 462.84 | 462.84 |
| Cost Per Pig | 92.57 | 46.28 | 30.86 | 23.14 | 18.51 | 15.43 |

Savings and Payback Period for \$25,000 Refrigerated Truck – 12 trips per year - \$1.26 per mile

| Number of Pigs | 5 | 10 | 15 | 20 | 25 | 30 |
|---|----------|--------|----------|----------|-----------|-----------|
| Difference (Truck with coolers & Refrig. Truck) | -195.96 | 70.92 | 337.8 | 604.68 | 871.56 | 1138.44 |
| Savings on trips per year | | | | | | |
| Monthly – 12 trips | -2351.52 | 851.04 | 4,053.60 | 7,256.16 | 10,458.72 | 13,661.28 |
| | | | | | | |
| Payback period on \$25,000 truck | | | | | | |
| # pigs hauled | 5 | 10 | 15 | 20 | 25 | 30 |
| 12 trips (years) | N/A | 29.4 | 6.2 | 3.4 | 2.4 | 1.8 |

Distributor Transportation

- \$135 for one pallet (5 pigs) = \$27 per pig
- \$183 for two pallets (10 pigs) = \$18.30 per pig
- \$283 for three pallets (15 pigs) = \$18.87 per pig

Transportation Cost per Pig – Live Transport by Farm and Meat Transport by Distributor

| # pigs | 5 | 8 | 10 | 12 |
|---|-------|-------|-------|-------|
| Live Transport mileage RT | 260 | 260 | 260 | 260 |
| Mileage Rate | 0.57 | 0.57 | 0.57 | 0.57 |
| Mileage Cost (\$) | 148.2 | 148.2 | 148.2 | 148.2 |
| Labor (6 hours driving X \$15 per hour) | 90 | 90 | 90 | 90 |
| Total Live Transport (\$) | 208.2 | 208.2 | 208.2 | 208.2 |
| Carcass Transport (\$15 per pig) | 75 | 120 | 150 | 180 |
| Number of pallets (5 pigs per pallet) | 1 | 2 | 2 | 2 |
| Cost per pallet (\$) | 135 | 91.5 | 91.5 | 91.5 |
| Distributor Transportation Cost (\$) | 135 | 183 | 183 | 183 |
| Total Transportation Cost | 418.2 | 511.2 | 541.2 | 571.2 |
| Transportation Cost per pig (\$) | 89.64 | 67.65 | 57.12 | 50.1 |
| % Savings compare to 5 pigs transportation cost | 22.7% | 13.4% | | |

Transportation Cost per Pig – Live Transport by Farm and Meat Transport by Farm

| # pigs | 5 | 8 |
|--|--------|--------|
| Live Transport mileage RT | 260 | 260 |
| Mileage Rate | 0.57 | 0.57 |
| Mileage Cost (\$) | 148.2 | 148.2 |
| Labor (6 hours driving X \$15 per hour) | 90 | 90 |
| Total Live Transport (\$) | 238.2 | 238.2 |
| Carcass Transport (\$15 per pig) | 75 | 120 |
| Mear Transport with Coolers Mileage RT | 284 | 284 |
| Mileage Rate | 0.57 | 0.57 |
| Mileage Cost (\$) | 161.88 | 161.88 |
| Labor (7 hours driving X \$10 per hour) | 105 | 105 |
| Total Meat Transport (\$) | 266.88 | 266.88 |
| Total Transportation Cost | 580.08 | 625.08 |
| Transportation Cost per pig (\$) | 116.02 | 78.14 |
| % Savings compared to 5 pigs transportation cost | | 32.6% |

Van Conversion – Refrigeration Only

| | IRS | Miles Driven | Fuel | Depreciation | Insurance | Tires | Maintenance | Total | IRS vs Actual Difference | Adjusted mileage rate |
|-----------------------|---------|--------------|------|--------------|-----------|-------|-------------|---------|--------------------------|-----------------------|
| 13 MPG | | | | | | | | | | |
| Mileage Cost per trip | 161.88 | | | | | | | | | |
| 12 trips per year | 1942.56 | 3408 | 918 | 1,250 | 800 | 100 | 500 | 3568.00 | 1625.44 | 1.05 |
| 6 trips per year | 971.28 | 1704 | 459 | 1,250 | 800 | 100 | 500 | 3109.00 | 2137.72 | 1.82 |
| 4 trips per year | 647.52 | 1136 | 284 | 1,250 | 800 | 100 | 500 | 2934.00 | 2286.48 | 2.58 |
| 2 trips per year | 323.76 | 568 | 142 | 1,250 | 800 | 100 | 500 | 2792.00 | 2468.24 | 4.92 |

Refrigerated Truck Transportation – Actual Mileage Rate – 12 trips and 6 trips per year

| Refrigerated Truck | 12 trips / Year | 12 trips / year | 6 trips / year | 6 trips / year |
|----------------------|--------------------|--------------------|-------------------|-------------------|
| # pigs hauled | 5 | 10 | 5 | 10 |
| Mileage | 284 | 284 | 284 | 284 |
| Mileage Rate | 1.05 | 1.05 | 1.82 | 1.82 |
| Mileage | 298.20 | 298.20 | 516.88 | 516.88 |
| Labor | 105 | 105 | 105 | 105 |
| Total per trip | 403.20 | 403.20 | 621.88 | 621.88 |
| Number of trips | 1 | 1 | 1 | 1 |
| Total Transportation | 403.20 | 403.20 | 621.88 | 621.88 |
| Cost per Pig | 80.64 | 40.32 | 124.38 | 62.19 |



Initial Thoughts

- For this group, the comparison is between distributor providing these services and doing it themselves.
- If a capital purchase is going to make sense, the truck needs to add additional trips per month and additional functions to spread out the fixed costs and lower per unit costs.
- This might best be served by a producer purchasing a truck for retail route and adding this service for other farmers.