

Guidelines For Estimating
Swine Hoop Shelter Finishing Costs
Based on marketing 11,353 pigs sold from 19 shelters

Date: Oct, 2009

This publication is intended to provide a format and a set of guidelines for determining the costs of production of a hoop shelter housing system for a finishing (23-118 kg) enterprise. The assumptions on which the costs are based are outlined in the supporting pages. Productivity and performance assumptions are based on information collected by department specialists, feed companies and other organizations. Adjustments will be necessary where individual productivity and performance levels differ from those listed.

A hoop shelter is a Quonset-shaped building with sidewalls made from wood planks and posts. Steel arches are fastened to the posts to form a hooped roof, which is covered by a UV resistant tarp (See Figure 1, Page 16). Most hoop structures have a deep-bedded earthen floor except for a concrete pad section containing the feed bin and waterer (See Figure 2, Page 16). These naturally ventilated structures are often sited in an east-west orientation in Manitoba to take advantage of our prevailing wind conditions.

Hoop shelters have been used for several years in Manitoba and have potential benefits for pigs and producers including: 1) they are low capital (fixed) cost facilities; 2) they are flexible, practical and can be used or adapted for other purposes; 3) hoop shelters provide an environment for pigs with bedding (usually straw) and allow for group interactions among pigs, and; 4) hoop shelters provide a working environment with lower levels of manure gases and a solid (straw based) manure handling system.

Disclaimer: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user. If you require assistance with developing your individual budget, please contact your local MAFRI office.

Swine Hoop Shelter Finishing Cost of Production

The following 23-118 kg hoop budget is based on the assumption that **all feed rations are purchased**. The budget also includes a land investment cost based on the assumption that 160 acres would be required for this size operation, with 140 acres rented out at \$35 per acre.

The budget includes an assumption that 1.5% of the market pigs are sold as lightweight pigs. It is assumed that when the lightweight pigs are sold, they will have a salvage value. Therefore, total marketing's are reduced by 1% to compensate for the lightweight pigs.

The budget also includes an assumption that this particular hoop shelter operation is "all-in, all-out" by shelter. Each shelter is designed to house 250 growing/finishing pigs. The budget includes an assumption that five hundred (500) pigs will be delivered on site every two weeks. This will provide enough 23-kg pigs to fill two shelters at a time. Marketing of pigs will also be completed on a two to three week schedule. Once the market pigs are all removed from a shelter, the manure pack is cleaned out and the shelter is re-strawed with 12 to 15 large (700 kg) round or square bales. A producer can expect to finish three batches (cycles) of pigs per year per hoop shelter.

The suggested space allocation for finishing pigs in a hoop shelter is 1.1 square metres (12 square feet) per pig.

The rations illustrated in this budget are examples only. Individual farm conditions should be taken into account when formulating the diets. Producers need to know the feed intakes of their animals. Pigs will consume approximately 10% more feed in a hoop shelter than in a confinement system during the winter (1 batch), whereas feed intakes will be approximately the same as in a confinement system for the remainder of the year (2 batches). Please consult with a nutritionist for diet information suggestions.

The Manitoba pork production industry profile is changing and this budget was specifically designed to address the need of producers who may want to analyze the cost of starting up or switching to a hoop shelter 23-118 kg finishing operation. Several companies are offering contracts with varying levels of guarantees. Producers need to accurately calculate their costs before they can properly make a decision.

Swine Hoop Shelter Finishing Costs Summary Oct, 2009

| | <u>\$/Pig Sold</u> | <u>Total Cost</u> | <u>Your Cost</u> |
|--|-------------------------|-----------------------|----------------------|
| A. Operating Costs | | | |
| 1. Feed Costs: | | | |
| 1.01 Starter | \$11.21 | \$127,296 | _____ |
| 1.02 Grower | \$45.25 | \$513,744 | _____ |
| 1.03 Finisher | <u>\$22.63</u> | <u>\$256,887</u> | _____ |
| Total Feed Cost | \$79.09 | \$897,927 | _____ |
| 2. Other Operating Costs: | | | |
| 2.01 Weanling Cost | \$16.03 | \$181,994 | _____ |
| 2.02 Straw | \$2.63 | \$29,829 | _____ |
| 2.03 Veterinary Medicine & Supplies | \$1.67 | \$19,000 | _____ |
| 2.04 Maintenance & Repairs | \$0.58 | \$6,588 | _____ |
| 2.05 Hydro & Propane | \$0.09 | \$1,000 | _____ |
| 2.06 Insurance | \$0.97 | \$10,975 | _____ |
| 2.07 Manure Costs | \$2.91 | \$33,000 | _____ |
| 2.08 Office Supplies | \$0.11 | \$1,225 | _____ |
| 2.09 Marketing & Transport | \$8.37 | \$95,027 | _____ |
| 2.10 Property Tax | <u>\$0.09</u> | <u>\$1,000</u> | _____ |
| Subtotal Operating Costs | \$112.53 | \$1,277,565 | _____ |
| 2.11 Interest on Operating Costs | <u>\$1.45</u> | <u>\$16,505</u> | _____ |
| Total Operating Costs | \$113.98 | \$1,294,070 | _____ |
| B. Fixed Costs | | | |
| 3. Depreciation: | | | |
| 3.01 Buildings & Manure Storage | \$3.21 | \$36,393 | _____ |
| 3.02 Equipment | <u>\$1.84</u> | <u>\$20,939</u> | _____ |
| Total Depreciation Cost | \$5.05 | \$57,332 | _____ |
| 4. Investment: | | | |
| 4.01 Land | \$0.12 | \$1,400 | _____ |
| 4.02 Buildings & Manure Storage | \$0.56 | \$6,369 | _____ |
| 4.03 Equipment | \$0.40 | \$4,524 | _____ |
| Total Investment Cost | \$1.08 | \$10,893 | _____ |
| Total Fixed Costs | \$6.13 | \$68,225 | _____ |
| C. Labour | | | |
| Wages, benefits and hired manager | \$4.53 | \$51,480 | _____ |
| Total Cost of Production | \$124.65 | \$1,413,775 | _____ |
| Break-Even Price (carcass) ¹ | <u>\$/100 kg</u> | <u>\$/cwt</u> | |
| Operating Cost | \$110.88 | \$50.29 | _____ |
| Operating & Labour Cost | \$115.29 | \$52.29 | _____ |
| Operating, Labour & Fixed Cost | \$121.25 | \$55.00 | _____ |

¹ Break-even Price = Cost per Hog Sold ÷ (Slaughter Weight (-shrink) x Dressing Percentage x Index)

Disclaimer: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user.

Swine Hoop Shelter Finishing Production Cost Assumptions

1. This input table outlines the cost of production for a finishing enterprise.
2. Buildings and equipment are valued at new cost.
3. Purchased feed is used.
4. Manure haulage is contracted out.

| | | | |
|------------------------|----------------------|---------------|--------------|
| Weanling Cost based on | \$39 | | |
| Market Price | \$123 /100 kg | 110 | Market Index |
| | or: \$0.5557 /lb | 80 | % Dress |
| | Premium/head | \$2.00 | |

Indicators of Productivity

| | <u>Starter</u> | <u>Grower</u> | <u>Finish</u> | <u>Total</u> |
|-----------------------------------|----------------|---------------|---------------|--------------|
| Number of Pigs Purchased Annually | 12000 | 11820 | 11643 | 12000 |
| Average Beginning Weight (kg) | 23 | 40 | 95 | 23 |
| Average Ending Weight (kg) | 40 | 95 | 118 | 118 |
| Percent Mortality | 1.5 | 1.5 | 1.5 | 4.4 |
| Days on Feed | 23 | 65 | 28 | 116 |
| Feed Conversion Ratio | 2.00 | 2.80 | 3.65 | 2.86 |
| Number of Pigs (Ending) | 11820 | 11643 | 11468 | 11468 |
| Weight Gain/Pig (kg) | 17.0 | 55.0 | 23.0 | 95.0 |
| Feed Disappearance/Pig (kg) | 34.00 | 154.00 | 83.95 | 272.0 |
| Average Daily Gain (kg) | 0.739 | 0.846 | 0.821 | 0.819 |
| Average Number Pigs in Shelters | 4144 | 4082 | 4021 | 4082 |

Productivity Profile

| | <u>Total</u> | | |
|---|--------------|-------------|-------------|
| Pigs Purchased | 12,000 | | |
| Pigs Died | 532 | 4.4 | % mortality |
| Pigs available for marketing | 11,468 | | |
| Less Light Weight Pig Adjustment | 115 | 1.00 | % |
| Pigs Sold at full market value | 11,353 | | |
| Washing and restocking days | 11 | | |
| Total Days to Market | 127 | | |
| Turnover (365 / days to market) | 2.87 | | |
| Pigs per shelter | 250 | | |
| Shelters required (1 extra for overflows) | 19 | | |

Feed Requirements and Costs

| | <u>FCR *</u> | <u>kg/pig</u> | <u>Ration Cost</u> | |
|-------------------|--------------|---------------|--------------------|-------------------|
| | | | <u>Purchased</u> | <u>Home-Mixed</u> |
| Pre-Grower Ration | 2.00 | 34.0 | \$312.00 | \$0.00 /tonne |
| Grower Ration | 2.80 | 154.0 | \$278.00 | \$0.00 /tonne |
| Finisher Ration | 3.65 | 84.0 | \$255.00 | \$0.00 /tonne |

* FCR = Feed Conversion Ratio (Feed:Gain)

Labour

Total Hours per year **66.0** hours/week 3,432 hours/year
 Wage (includes hired manager) **\$15.00** /hour

Capital Investment¹

Based on 4,500 Pig Places

| | | | <u>Total</u> | <u>/Pig Place</u> | <u>Your Cost</u> |
|--|----------------------|----------|------------------|-------------------|------------------|
| Buildings | | | | | |
| Shelters | 19 @ | \$18,000 | \$342,000 | \$76.00 | _____ |
| Office & Loading | 300 ft. ² | \$29.75 | \$8,925 | \$1.98 | _____ |
| Standby Generator | | | \$3,000 | \$0.67 | _____ |
| Feed Mill (building only) | | | \$10,000 | \$2.22 | _____ |
| Total Building Cost | | | \$363,925 | \$80.87 | _____ |
| Equipment | | | | | |
| Skid Steer loader | | | \$20,000 | \$4.44 | _____ |
| Tractor | | | \$50,000 | \$11.11 | _____ |
| Snow Blower | | | \$3,000 | \$0.67 | _____ |
| Auto sorter (4 @ \$8,000) | | | \$32,000 | \$7.11 | _____ |
| Storage Bins | | | \$30,000 | \$6.67 | _____ |
| Feed Mill (equipment only) | | | \$100,000 | \$22.22 | _____ |
| Total Equipment Cost | | | \$235,000 | \$52.22 | _____ |
| Total Buildings and Equipment Cost | | | \$598,925 | \$133.09 | _____ |
| Land Value | | | | | |
| Land Investment | 20 acres @ | \$500 | \$10,000 | \$2.22 | _____ |
| Rental Income | | | | | _____ |
| Other Costs | | | | | |
| Site preparation (includes manure storage) | | | \$30,000 | \$6.67 | _____ |
| Manure Storage | | | \$0 | \$0.00 | _____ |
| Total Other Costs | | | \$30,000 | \$6.67 | _____ |
| Total Capital Investment | | | \$638,925 | \$141.98 | _____ |

Feed Ingredient Costs

| | <u>Price/tonne</u> | <u>Your Cost</u> |
|---|--------------------|------------------|
| Wheat | \$128 | |
| Barley | \$125 | |
| Corn | \$190 | |
| Soybean Meal - 47 % | \$425 | |
| Canola Meal - 34 % | \$225 | |
| Peas | \$200 | |
| Sow Mico Premix | \$4,000 | |
| Grower Micro Premix | \$3,000 | |
| Canola Oil | \$930 | |
| Whey Powder | \$995 | |
| Herring Meal | \$1,380 | |
| Plasma | \$5,525 | |
| Limestone | \$75 | |
| Dical (16% Ca-21% P) | \$860 | |
| Salt - 96% | \$195 | |
| Phytase | \$7,175 | |
| L-Lysine HCL | \$2,200 | |
| L-Threonine | \$3,150 | |
| DL-Methionine | \$6,675 | |
| Oats Steam Rolled | \$310 | |
| Processing Cost (Hydro, Repairs/Maintenance & Insurance) | \$3.25 | |
| Percent Weight loss due to processing | 1.25 % | |
| Labour Cost | \$4.00 | |

Ration Formulas

| | Starter Ration (kg) | Grower Ration (kg) | Finisher Ration (kg) |
|----------------------|------------------------------------|-----------------------------------|-------------------------------------|
| Wheat | 532.56 | 372.39 | 220.04 |
| Barley | 183.30 | 268.60 | 408.35 |
| Corn | 0.00 | 0.00 | 0.00 |
| Soybean Meal - 47 % | 158.80 | 45.37 | 0.00 |
| Canola Meal - 34 % | 0.00 | 84.39 | 79.40 |
| Peas | 100.00 | 204.07 | 272.13 |
| #REF! | 0.00 | 0.00 | 0.00 |
| Sow Mico Premix | 0.00 | 0.00 | 0.00 |
| Grower Micro Premix | 3.00 | 3.00 | 3.00 |
| Canola Oil | 0.00 | 0.00 | 0.00 |
| Whey Powder | 0.00 | 0.00 | 0.00 |
| Herring Meal | 0.00 | 0.00 | 0.00 |
| Plasma | 0.00 | 0.00 | 0.00 |
| Limestone | 12.21 | 11.71 | 10.38 |
| Dical (16% Ca-21% P) | 4.85 | 5.38 | 2.84 |
| Salt - 96% | 3.50 | 3.50 | 3.50 |
| Phytase | 0.20 | 0.20 | 0.20 |
| L-Lysine HCL | 1.36 | 1.36 | 0.00 |
| L-Threonine | 0.09 | 0.00 | 0.02 |
| DL-Methionine | 0.13 | 0.03 | 0.14 |
| Oats Steam Rolled | <u>0.00</u> | <u>0.00</u> | <u>0.00</u> |
| Total | 1,000.00 | 1,000.00 | 1,000.00 |

Feed Requirement and Cost Summary

| | Amount (kg) | Ingredient Price (\$ /tonne) | Ration Cost (\$ /tonne) | Your Cost |
|--------------------------|--------------------|------------------------------------|-------------------------------|-----------|
| Starter | | | | |
| Wheat | 532.56 | \$128.00 | \$68.17 | |
| Barley | 183.30 | \$125.00 | \$22.91 | |
| Soybean Meal - 47 % | 158.80 | \$425.00 | \$67.49 | |
| Peas | 100.00 | \$200.00 | \$20.00 | |
| Grower Micro Premix | 3.00 | \$3,000.00 | \$9.00 | |
| Limestone | 12.21 | \$75.00 | \$0.92 | |
| Dical (16% Ca-21% P) | 4.85 | \$860.00 | \$4.17 | |
| Salt - 96% | 3.50 | \$195.00 | \$0.68 | |
| Phytase | 0.20 | \$7,175.00 | \$1.44 | |
| L-Lysine HCL | 1.36 | \$2,200.00 | \$2.99 | |
| L-Threonine | 0.09 | \$3,150.00 | \$0.28 | |
| DL-Methionine | <u>0.13</u> | \$6,675.00 | <u>\$0.87</u> | |
| Total Starter | 1,000.00 kg | | \$198.92 | |
| Adjusted For Weight Loss | | 1.25 % | \$201.41 | |
| Plus Processing Cost | | \$3.25 | <u>\$204.66</u> | |
| Plus Labour Cost | | \$4.00 | \$208.66 | |
| | | | | |
| Grower | | | | |
| Wheat | 372.39 | \$128.00 | \$47.67 | |
| Barley | 268.60 | \$125.00 | \$33.58 | |
| Canola Meal - 34 % | 84.39 | \$225.00 | \$18.99 | |
| Soybean Meal - 47 % | 45.37 | \$425.00 | \$19.28 | |
| Peas | 204.07 | \$200.00 | \$40.81 | |
| Grower Micro Premix | 3.00 | \$3,000.00 | \$9.00 | |
| Limestone | 11.71 | \$75.00 | \$0.88 | |
| Dical (16% Ca-21% P) | 5.38 | \$860.00 | \$4.63 | |
| Salt - 96% | 3.50 | \$195.00 | \$0.68 | |
| Phytase | 0.20 | \$7,175.00 | \$1.44 | |
| L-Lysine HCL | 1.36 | \$2,200.00 | \$2.99 | |
| DL-Methionine | <u>0.03</u> | \$6,675.00 | <u>\$0.20</u> | |
| Total Grower | 1,000.00 kg | | \$180.15 | |
| Adjusted For Weight Loss | | 1.25 % | \$182.40 | |
| Plus Processing Cost | | \$3.25 | <u>\$185.65</u> | |
| Plus Labour Cost | | \$4.00 | \$189.65 | |

Finisher

| | | | | |
|--------------------------|--------------------|------------|-----------------|--|
| Wheat | 220.04 | \$128.00 | \$28.17 | |
| Barley | 408.35 | \$125.00 | \$51.04 | |
| Canola Meal - 34 % | 79.40 | \$225.00 | \$17.87 | |
| Soybean Meal - 47 % | 0.00 | \$425.00 | \$0.00 | |
| Peas | 272.13 | \$200.00 | \$54.43 | |
| Grower Micro Premix | 3.00 | \$3,000.00 | \$9.00 | |
| Limestone | 10.38 | \$75.00 | \$0.78 | |
| Dical (16% Ca-21% P) | 2.84 | \$860.00 | \$2.44 | |
| Salt - 96% | 3.50 | \$195.00 | \$0.68 | |
| Phytase | 0.20 | \$7,175.00 | \$1.44 | |
| L-Threonine | 0.02 | \$3,150.00 | \$0.06 | |
| DL-Methionine | <u>0.14</u> | \$6,675.00 | <u>\$0.93</u> | |
| Total Finish | 1,000.00 kg | | \$166.84 | |
| Adjusted For Weight Loss | | 1.25 % | \$168.93 | |
| Plus Processing Cost | | \$3.25 | <u>\$172.18</u> | |
| Plus Labour Cost | | \$4.00 | \$176.18 | |

Swine Hoop Structure Finishing Production Cost Worksheet

A. Operating Costs

Your Cost

1. Feed Requirements and Costs

1.01 Starter

| | | | |
|---|----------------|-----------------------|--|
| | 17.0 | weight gain/pig | |
| x | 2.0 | feed conversion ratio | |
| = | 34.0 | kg ration/pig | |
| x | \$312.00 | /tonne ration | |
| ÷ | 1,000 | kg/tonne | |
| x | 12,000 | weanlings purchased | |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | |
| = | \$11.21 | /pig sold | |

1.02 Grower

| | | | |
|---|----------------|-----------------------|--|
| | 55.0 | weight gain/pig | |
| x | 2.8 | feed conversion ratio | |
| = | 154.0 | kg ration/pig | |
| x | \$278.00 | /tonne ration | |
| ÷ | 1,000 | kg/tonne | |
| x | 12,000 | weanlings purchased | |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | |
| = | \$45.25 | /pig sold | |

1.03 Finisher

| | | | |
|---|----------------|-----------------------|--|
| | 23.0 | weight gain/pig | |
| x | 3.7 | feed conversion ratio | |
| = | 84.0 | kg ration/pig | |
| x | \$255.00 | /tonne ration | |
| ÷ | 1,000 | kg/tonne | |
| x | 12,000 | weanlings purchased | |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | |
| = | \$22.63 | /pig sold | |

2. Other Operating Costs

2.01 Weanling Cost

| | | | |
|---|----------------|---------------------|--|
| | \$17.84 | market price | |
| ÷ | 100 | lbs/cwt | |
| x | 1.7 | formula factor | |
| x | 50 | lbs | |
| x | 12,000 | weanlings purchased | |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | |
| = | \$16.03 | /pig sold | |

2.02 Straw

| | | | |
|---|---------------|------------------|-------|
| | 12,000 | number of pigs | _____ |
| x | 116 | days on feed | _____ |
| x | 1.0 | kg straw/pig/day | _____ |
| x | \$15.00 | per bale | _____ |
| ÷ | 700 | kg/bale | _____ |
| ± | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$2.63 | /pig sold | _____ |

2.03 Veterinary Cost

| | | | |
|---|---------------|-----------------------|-------|
| | \$1,000 | professional services | _____ |
| + | \$18,000 | medication | _____ |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$1.67 | /pig sold | _____ |

2.04 Maintenance & Repairs

| | | | |
|---|---------------|------------------------------------|-------|
| | 1.10 | % of total capital investment | _____ |
| x | \$598,925 | total buildings and equipment cost | _____ |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$0.58 | /pig sold | _____ |

2.05 Utilities

| | | | |
|---|---------------|------------------|-------|
| | \$1,000 | hydro | _____ |
| + | \$0 | propane | _____ |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$0.09 | /pig sold | _____ |

2.06 Insurance

| | | | |
|----------|---------------|----------------------------|-------|
| | \$598,925 | buildings & equipment | _____ |
| x | \$0.78 | /\$100 | _____ |
| ÷ | 100 | /\$100 capital | _____ |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$0.41 | /pig sold | _____ |
| | 4,082 | average # pigs in shelters | _____ |
| x | \$140.00 | average value | _____ |
| x | \$0.88 | /\$100 | _____ |
| ÷ | 100 | /\$100 capital | _____ |
| ± | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$0.44 | /pig sold | _____ |
| | \$40.00 | insured value | _____ |
| x | 4,082 | average number in barn | _____ |
| x | \$0.78 | rate /\$100 | _____ |
| ± | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$0.11 | /pig sold | _____ |
| = | \$0.97 | /pig sold | _____ |

2.07 Manure Costs

| | | | |
|---|---------------|------------------|-------|
| | \$33,000 | annual cost | _____ |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$2.91 | /pig sold | _____ |

2.08 Office Supplies

| | | | |
|---|---------------|------------------|-------|
| | \$0.30 | /pig place | _____ |
| x | 4,082 | pig places | _____ |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$0.11 | /pig sold | _____ |

2.09 Marketing & Transportation

| | | | |
|---|---------------|--------------------|-------|
| | \$3.50 | trucking-in | _____ |
| + | \$3.70 | trucking-out | _____ |
| + | \$0.80 | council levy | _____ |
| + | \$0.12 | grading charge | _____ |
| + | \$0.25 | insurance | _____ |
| + | <u>\$0.00</u> | <u>Special fee</u> | _____ |
| = | \$8.37 | /pig sold | _____ |

2.10 Property Taxes

| | | | |
|---|---------------|------------------|-------|
| | \$1,000 | taxes | _____ |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$0.09 | /pig sold | _____ |

2.11 Interest on Operating Cost

| | | | |
|---|---------------|-------------------------|-------|
| | \$16.03 | weaner cost | _____ |
| x | 127 | total days to market | _____ |
| x | 6.5 | % operating rate | _____ |
| ÷ | <u>365</u> | <u>days/year</u> | _____ |
| = | \$0.36 | /pig sold | _____ |
| | \$112.53 | subtotal operating cost | _____ |
| - | \$16.03 | weaner cost | _____ |
| ÷ | 2 | average | _____ |
| x | 127 | total days to market | _____ |
| ÷ | 365 | days/year | _____ |
| x | <u>6.50</u> | <u>% operating rate</u> | _____ |
| = | \$1.09 | /pig sold | _____ |
| = | \$1.45 | /pig sold | _____ |

B. Fixed Costs

3. Depreciation

Original cost - Salvage Value
Useful Life

3.01 Buildings

| | | | |
|----------|---------------|-------------------|--|
| | \$363,925 | total cost | |
| - | \$0 | salvage value | |
| ÷ | 10 | years useful life | |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | |
| = | \$3.21 | /pig sold | |

3.02 Equipment

| | | | |
|----------|---------------|----------------------|--|
| | \$235,000.00 | total equipment cost | |
| - | \$23,500.00 | salvage value | |
| ÷ | 10 | years useful life | |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | |
| = | \$1.84 | /pig sold | |

4. Investment Cost

(Original Cost + Salvage Value) X Investment Rate
2

4.01 Land

| | | | |
|----------|---------------|-------------------|--|
| | \$10,000 | land investment | |
| + | \$30,000 | site preparation | |
| x | 3.5 | % investment rate | |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | |
| = | \$0.12 | /pig sold | |

4.02 Buildings

| | | | |
|----------|---------------|-------------------|--|
| | \$363,925 | total cost | |
| + | \$0 | salvage value | |
| ÷ | 2 | average | |
| x | 3.5 | % investment rate | |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | |
| = | \$0.56 | /pig sold | |

4.03 Equipment

| | | | |
|---|---------------|----------------------|-------|
| | \$235,000 | total equipment cost | _____ |
| + | \$23,500 | salvage value | _____ |
| ÷ | 2 | average | _____ |
| x | 3.5 | % investment rate | _____ |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$0.40 | /pig sold | |

C. Labour Cost

| | | | |
|---|---------------|------------------|-------|
| | 3432 | total hours/year | _____ |
| x | \$15.00 | /hour | _____ |
| ÷ | <u>11,353</u> | <u>pigs sold</u> | _____ |
| = | \$4.53 | /pig sold | _____ |

Summary of Purchased Feeds Used
11,468 Pigs available for marketing (includes lightweights)

| | Total per Pig Mkt (kgs) | Total per Year (tonnes) | Total per Month (tonnes) | Total per Pig Mkt (lbs) |
|--------------|--|--|---|--|
| Starter | 34.00 | 389.91 | 32.49 | 74.96 |
| Grower | 154.00 | 1,766.07 | 147.17 | 339.51 |
| Finisher | 83.95 | 962.74 | 80.23 | 185.08 |
| Total | 271.95 | 3,118.72 | 259.89 | 599.54 |

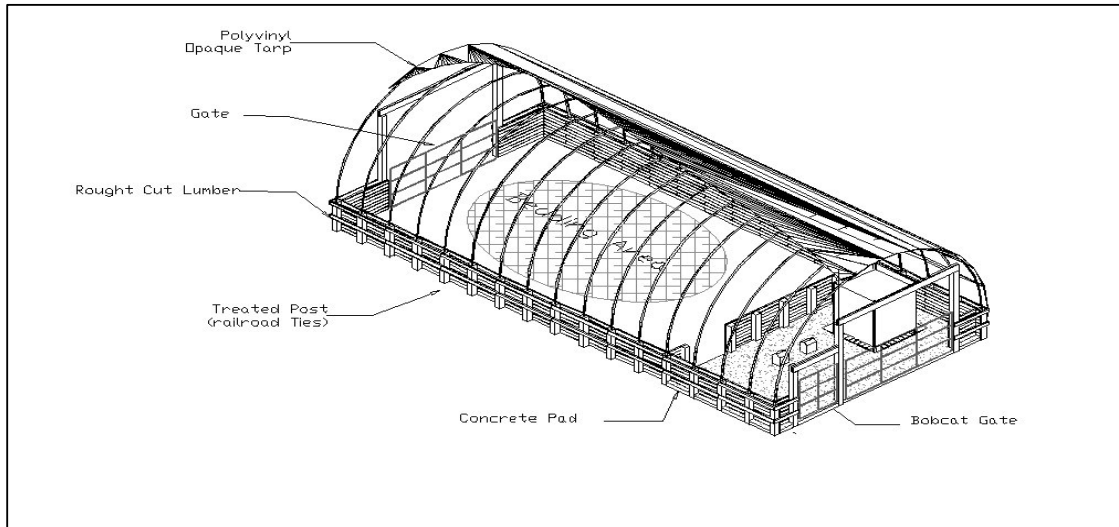
Summary of Home Mixed Feed Ingredients Used

| | Total per Pig (kgs) | Total per Year (tonnes) | Total per Month (tonnes) | Total per Pig (lbs) |
|----------------------|------------------------------------|--|---|------------------------------------|
| Wheat | 0.00 | 0.00 | 0.00 | 0.00 |
| Barley | 0.00 | 0.00 | 0.00 | 0.00 |
| Corn | 0.00 | 0.00 | 0.00 | 0.00 |
| Soybean Meal - 47 % | 0.00 | 0.00 | 0.00 | 0.00 |
| Canola Meal - 34 % | 0.00 | 0.00 | 0.00 | 0.00 |
| Peas | 0.00 | 0.00 | 0.00 | 0.00 |
| #REF! | 0.00 | 0.00 | 0.00 | 0.00 |
| Sow Mico Premix | 0.00 | 0.00 | 0.00 | 0.00 |
| Grower Micro Premix | 0.00 | 0.00 | 0.00 | 0.00 |
| Canola Oil | 0.00 | 0.00 | 0.00 | 0.00 |
| Whey Powder | 0.00 | 0.00 | 0.00 | 0.00 |
| Herring Meal | 0.00 | 0.00 | 0.00 | 0.00 |
| Plasma | 0.00 | 0.00 | 0.00 | 0.00 |
| Limestone | 0.00 | 0.00 | 0.00 | 0.00 |
| Dical (16% Ca-21% P) | 0.00 | 0.00 | 0.00 | 0.00 |
| Salt - 96% | 0.00 | 0.00 | 0.00 | 0.00 |
| Phytase | 0.00 | 0.00 | 0.00 | 0.00 |
| L-Lysine HCL | 0.00 | 0.00 | 0.00 | 0.00 |
| L-Threonine | 0.00 | 0.00 | 0.00 | 0.00 |
| DL-Methionine | 0.00 | 0.00 | 0.00 | 0.00 |
| Oats Steam Rolled | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 271.95 | 3,118.72 | 259.89 | 599.54 |

For further information contact your local MAFRI office.

Prepared by:
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Figure 1 Common components of hoop structures



Estimated shelter costs for a 30 'x 102' structure

| | |
|------------------|-----------------|
| Tarp & hoops | \$7,000 |
| End doors | \$800 |
| 4 Corner Panels | \$500 |
| Feeder 6 x 6 x 6 | \$1,800 |
| Waterer (4-Hole) | \$1,000 |
| Heater Cables | \$100 |
| Concrete | \$1,500 |
| Railroad Ties | \$800 |
| Planking | \$1,000 |
| <u>Labour</u> | <u>\$3,500</u> |
| Total | \$18,000 |

Figure 2 Common layout of a grow finish structure



Return On Assets (ROA)

Assumptions

| | | |
|------------------------|--------------------------|---------|
| Total Assets | \$638,925 | \$57.24 |
| Total Pigs Sold | 11,353 | |
| Days to Market | 127 | |
| Market Weight (shrunk) | 116.8 kg/hog (live) | |
| Dressing % | 80 % | |
| Carcass Weight | 93.5 kg/hog carcass | |
| Market Index | 110 | |
| Market Price | \$122.50 /100 kg carcass | |

Return On Assets Calculation

| | <u>\$/Pig Sold</u> | <u>% of Total</u> |
|--|--------------------|-------------------|
| Total Revenue | \$125.93 | |
| Premium | <u>\$2.00</u> | |
| Total | \$127.93 | |
| Less Expenses | | |
| Feed Costs | \$79.09 | 63.5 |
| Feeder Cost | \$16.03 | |
| Other Operating Costs | \$17.41 | 14.0 |
| Interest on Operating Costs | <u>\$1.45</u> | <u>1.2</u> |
| Total Operating Costs | \$113.98 | 91.4 |
| Depreciation | \$5.05 | 4.1 |
| Interest on Investment | \$1.08 | 0.9 |
| Labour (Family & Hired) | <u>\$4.53</u> | <u>3.6</u> |
| Total Expenses (Cost Of Production) | \$124.65 | 100.0 |
| Net Income | \$3.28 | |

Return On Assets (ROA)

10.3%

Equation

$$\frac{\text{Net Income} + \text{Operating Interest} + \text{Investment Interest} - \text{Value of Unpaid Family and Operator Labour}}{\text{Total Assets}}$$

Total Assets

Definition: Total Assets includes the buildings, equipment, land, manure storage.

Cash Flow Calculation

| | |
|----------------------------------|----------------------|
| Income | <u>Total</u> |
| Per market pig | \$127.93 |
| Number of pigs marketed | <u>11,353</u> |
| Total Income | \$1,452,452 |
| | |
| Operating Expenses | |
| Feed Cost | \$897,927 |
| Feeder Cost | \$181,994 |
| Veterinary Medicine & Supplies | \$19,000 |
| Maintenance & Repairs | \$6,588 |
| Hydro & Propane | \$1,000 |
| Insurance | \$10,975 |
| Manure Costs | \$33,000 |
| Office Supplies | \$1,225 |
| Levy, Marketing & Transportation | \$95,027 |
| Property Taxes | \$1,000 |
| Interest on Operating Cost | \$16,505 |
| Total Operating Costs | \$1,264,241 |
| Manure Value | \$0 |
| Total Operating Costs | \$1,264,241 |
| | |
| Labour Costs | \$51,480 |
| | |
| Loan Payment | |
| Total Capital Investment | \$638,925 |
| Portion financed % | 60.0% |
| Loan Amount | \$383,355 |
| Term in years | 15.0 |
| Interest Rate | 6.0% |
| Annual Payment | \$39,471 |

| Returns to Enterprise | |
|-------------------------------------|-----------|
| Cash over operating costs | \$188,211 |
| Cash over operating & loan payments | \$148,740 |
| Cash over total (includes labour) | \$97,260 |

| Breakeven Calculations \$/market pig | |
|--------------------------------------|----------|
| Breakeven operating | \$111.35 |
| Breakeven operating & loan payments | \$114.83 |
| Breakeven total (includes labour) | \$119.37 |