

Agriculture Development Branch Notes for the 2009 Swine Budget

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Infosheet

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This information sheet provides the assumptions that are used to calculate the monthly OMAFRA Swine Budget. The monthly OMAFRA Swine Budget provides a guide and format to estimate the cost of production for a swine enterprise. The cost estimates and assumptions are based on information from a variety of industry sources. The cost figures are not obtained from an actual survey. Therefore, adjustments and interpretations are necessary when applying these figures to a particular business enterprise. Individual farm figures will vary depending on the resources, management, production, health status, size, market conditions, risk, and financial arrangements!

Farrow to Finish – To arrive at an estimated cost of production for farrow to finish, the estimated production costs are split into three production phases, Farrow to Wean, Nursery, and Grow-Finish. The Farrow to Finish Budget is the accumulated cost of the three phases and is based on 21 market pigs sold per sow per year. The various costs from the three phases are totalled on a per sow basis and divided by 21 to arrive at the per pig cost for the farrow to finish budget. By doing this, a mortality and morbidity cost is built into budget estimates.

- The Farrow to Wean Phase is based on producing 23 weaned pigs per sow per year. Assuming a 12% pre-weaning death loss and 2.35 litters per sow per year; it would take 11.25 pigs born alive per litter to achieve this. To arrive at a cost per sow, multiply the per pig figures by 23.
- The Nursery Pig Phase is based on producing 96% of the weaned pigs placed as feeder pigs weighing 27 kilograms. The

nursery pig space is assumed to be turned over 6.5 times per year or approximately 56 days per turn. To arrive at a cost per sow, multiply the per pig figures by 22.

- The Grow-Finish Phase is based on marketing 94% of the feeder pigs placed as market pigs. Pigs are placed on feed at 27 kilograms for approximately 105 days and finished at the indicated average monthly market weight and index. It is assumed that each barn space is turned three times per year. To arrive at a cost per sow, multiply the per pig figures by 21.

Assumptions:

1. **Income** –The market pig value is determined using a monthly calculated average price, dressed market weight and average index for Ontario market pigs using marketing information from Ontario Pork. There are no grid premiums included. To determine a live market weight assume an 80% dressing percent.
2. **Feed** – The feed costs are estimated using corn, soybean meal, premix or supplement. The monthly corn value is based on the average of the daily Huron FOB Farm and the Western Ontario Feed corn prices. The monthly soybean meal value is based on the average daily Hamilton soybean meal prices plus \$20 per tonne for trucking and handling. A feed processing charge of \$20 per tonne is included for feed and storage equipment overhead costs (depreciation, interest, insurance), operating costs (labour, repairs, hydro), handling and preparation costs (invisible loss). No feed additive or

medication cost is included in the feed cost since these are estimated on the health cost line.

- **Breeding Herd Feed** – This is a combination of gestation and lactation feed assuming 1,100 kilograms of feed per sow per year. A five month rolling average feed cost based on the time of the gestation and lactation feed is used to produce the market pig (5 to 9 months prior).
 - **Nursery Feed** – This is based on a phase feeding feed budget using a total of 32.55 kilograms of feed per pig. A two month rolling average feed cost is used based on the nursery period of time to produce the market pig (3 to 4 months prior).
 - **Grower-Finisher Feed** – This is based on a phase feeding feed budget assuming a 2.85 feed conversion and on feed for an average of 105 days. A four month rolling average feed cost is used based on feed costs during the past four months.
3. **Net Replacement Cost for Gilts** –The value shown is the difference between the estimated cost of commercial replacement gilts and an estimated cull sow value. The gilt replacement value is the market hog value plus \$130 and a cull sow value is calculated from the marketplace. The replacement rate is assumed at 42%, based on a 35% cull rate and a 7% sow death loss rate. The calculation is a five month rolling average based on the values during the time of gestation and lactation.
 4. **Health** – These are the estimated costs for prevention and control of disease within a herd. They would include injectibles, water and feed treatments. These figures will vary depending on the health status, protocols, and cost of supplies and services.
 - The farrow to wean cost is estimated at \$45 per sow per year. This could include the cost of vaccines for PRRS, parvovirus, leptospira, swine influenza, and erysipelas, iron treatments for piglets, worming treatment for sows, supplies, veterinarian expenses, production and Canadian Quality Assurance (CQA®) records.
 - The nursery cost could include vaccination for mycoplasma and circovirus, water and/or feed treatment programs.
 - The grow-finish cost could include water and/or feed treatment programs and some treatment costs for minor health challenges.
5. **Breeding (A.I. & Supplies)** - 100% A.I. is assumed based on 2.35 litters per sow, an 85% farrowing rate and \$12 per breeding (double dose of semen and supplies).
 6. **Marketing** - The market hog estimate includes the Ontario Pork service fee (\$1.65), grading fee (\$0.06), and an allowance for trucking and assembly (\$1.85). In some cases a trucking or transfer fee between the sow and nursery and the nursery and grow-finish sites should be included. These fees may range from \$0.50 to \$2.00 per pig. Fees will depend on the volume of pigs moved, the number of movements per week, and whether it is done commercially or handled internally.
 7. **Utilities (Hydro & Gas)** – These costs have been estimated and allocated based on individual site barns (i.e. sow, nursery, grow-finish), farrow to feeder pig and farrow to finish operations. Costs will vary due to a number of reasons including barn and equipment efficiencies, cost of inputs, size, production efficiency, and management.
 8. **Miscellaneous** – These are estimated figures to cover other costs that are allocated to the swine enterprise.

9. **Manure Disposal** – A cost is estimated for each phase based on a yearly volume of manure calculated using the NMAN computer program. Costs will vary depending on the volume of manure, the distance to be hauled and the number of times spreading occurs each year. Within some operations the cost to handle and spread the manure produced maybe assumed to be covered by the economic value the manure nutrients supply to the cropping enterprise. Therefore, no cost would be charged to the swine enterprise.
10. **Repairs and Maintenance** – These are estimated using 1% of the estimated building, equipment, and site investment values.
11. **Labour Cost** – These costs will vary depending on the number of employees, wage and benefit level, number of hours worked and management and owner-operator labour allocation. For the purposes of this budget, an estimated cost of \$48,000 per person is used. Labour estimates used are farrow to wean labour cost based on 300 sows per person and the nursery and grow-finish on 4,000 pig spaces per person. If an allocation of 2,500 nursery pig spaces per person was assumed the labour cost per feeder pig would be \$2.95. If an allocation of 3,500 finishing pig spaces per person was assumed the labour cost per grow-finish pig would be \$4.57.
12. **Operating Interest** – Calculated on one-half of the operating costs less the marketing costs at the prime chartered bank rate plus 1%. The farrow to wean interest cost is based on 22 weeks, the nursery on 8 weeks and the grow-finish on 17 weeks. The nursery phase also includes an interest cost based on the cost of producing the weaned pig and the grow-finish phase includes an interest cost based on the cost of producing the feeder pig.
13. **Fixed Costs – (Depreciation, Interest, Taxes, and Insurance)** – These costs are based on a ten year average using estimated building, equipment and site costs from 1998 to 2007. The estimated investment values used are \$1,600 per sow for the farrow to wean, \$230 per pig space for the nursery, and \$340 per pig space for the grow-finish. Investment cost over the years have varied depending on a variety of items including the quality of equipment, site conditions, supply and demand of inputs, site services costs, upgrading costs, and the year the buildings were constructed.
 - **Depreciation** – Depreciation is the estimated by dividing the investment value by 20.
 - **Interest** – The interest cost is estimated using 40% of the investment value at a rate of 8%.
 - **Taxes and Insurance** – These are estimated using 1% of the investment value.
14. **Summary of Costs** – This section provides a summary of the costs within each production phase. The Other Variable Costs include the applicable lines from Net Replacement Cost for Gilts to Operating Loan Interest and the Fixed Costs include the Depreciation, Interest, Taxes and Insurance.
15. **Summary** – this section provides the following information:
 - **Net Return Farrow to Finish** – this is the difference between the Market Pig Income at the top of the budget and the total variable and fixed costs on a per pig basis.
 - **Farrow to Weaned Pig Cost** – this is the estimated total variable and fixed costs to produce a weaned pig five months prior on a per pig basis.

- **Farrow to Feeder Pig Cost** – this is the estimated total variable and fixed costs to produce a feeder pig three to four months prior on a per pig basis.
- **Wean to Finish Cost** – this is the estimated total variable and fixed costs to produce a market hog for sale in the stated month based on the nursery and grow-finish costs on a per pig basis.
- **Farrow to Finish Breakeven Price** – this is the estimated breakeven market hog price based on the farrow to finish total variable and fixed costs. The average monthly market hog weight and market index is used to calculate the price on a \$ per ckg, 100 index basis.

The OMAFRA Swine Budget provides a format and guide to estimate a cost of production. The variation in production practices gives rise to a large variation in costs of production. Interpretation and utilization of the information will require adjustments to apply these figures to an individual swine production enterprise. Therefore, it is important for individual operations to determine their cost of production based on their records. Accurate and up to date information is essential to determine an individual farm cost of production and to make management, financial, and marketing decisions.

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