Annual Report Prepared for the Leopold Center for Sustainable Agriculture

Title: Alternative Swine Cost of Production Project

Iowa State University Extension

Principal investigator, David Stender
Iowa State University Swine Field Specialist

921 South 2nd Street
Cherokee, IA 51012-2119

Phone (712)225-6196
Cell phone (712)225-6196
FAX (712)225-3173

Email dstender@iastate.edu

Timeline:
The project started in September of 2002 in an attempt to collect data from niche producers for the 2002 year and was continued, encouraging producers to submit records as well as locating new producers to participate through Feb of 2004.

Principal investigator:
David Stender

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Non Technical Summary:
As part of the Pork Niche Working group, it became apparent that information regarding the cost of production would be meaningful to the group for a couple reasons. First, to help new and entering producers understand what it takes to produce pork sustainably and to be able to provide the numbers they need to complete a business plan for starting a sustainable system. A second objective was to help existing producers benchmark and improve there operations using the data as and method to transfer good ideas from one operation to the next.

The idea was to collect and analyze records already in possession of current niche producers. Cooperation from several of the larger niche systems was obtained and a letter was sent with a survey, returned by 14 operations. Eight producers sent in useable data that was summarized in the report.

Data from these operations showed that the cost of production from a niche market is comparable to the cost of production from conventional producers.

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I. Background:

This project gathered and analyzed production data from niche pork producers to help assess the risks and potential profits when considering new niche pork ventures. Two purposes of the project include 1) generating cost and efficiency numbers for business plans for niche pork producers and their lenders and 2) helping producers improve management and efficiencies in their operations. A desired outcome is that younger, entrepreneurial producers will take the information, find a reasonable priced existing facility, and make a respectable income from an alternative swine operation.

II. Methods:

A letter was sent to over 250 niche swine producers through Niman Ranch, Organic Valley and Eden Farms. The letter requested participation in the program. Included with the letter was a survey asking for various production and herd health practices and technologies in use on their farm (Appendix A). A second sheet asked for simple financial and production data that can be entered into the Iowa State University Extension Swine Business Records (Appendix B). Instructions for filling out the data were included on a separate form (Appendix C). Key variables were management techniques and technologies effective in reducing production costs and/or increasing herd health. A total of 14 operations submitted information from the 2002 production year. Twelve included survey information on practices and technologies in use on their farm. Eight sent in cost of production data that were complete enough to include in the cost summary. The data from these producers were analyzed on using an Excel spreadsheet.

III. Annual Results:

Because of the limited number of producers involved, the data gathered to date should be considered preliminary and caution should be used in applying the results. The following discussion starts with information on the operations involved that comes from survey responses. The second section reports on the results from responses for financial and production variables. The report concludes with a discussion of the results and some observations about productivity and costs for alternative production systems.

A. General information:

The genetic makeup of the data set was predominately Duroc, with 77% having some crossbred Duroc lines. Thirty eight percent had some crossbred Chester, 31% some crossbred Berkshire and 31% of the operations used some Hampshire crossbreeding. Only 15% cited the Yorkshire breed in their crossbreeding system. Replacement gilt genetics was purchased by 31%, while 69% used home-raised gilts. Twenty-three percent used some artificial insemination.

The nutrition programs used grain, soybean meal and premix to formulate their rations. Feedstuffs used included oats (69% of operations), barley (15%), and wheat (8%). In addition, 55% used some organic feedstuffs, while 75% had access to GMO free feed.

Management systems cited included 70% that used all-in/all-out in farrowing, while 50% used all-in/all-out in their nurseries and finishers. Sixty-two percent of the operations used some pasture farrowing, and 36% finished in a pasture or dirt lot.

Typical health problems listed included Ileitis, Salmonella, E-coli, SIV, general scours and Erysipelas. Some of the non-antibiotic products and technologies used were proper vaccination programs, cultures, oregano product, bio-moss (Mannan-Oligosaccharides), full fat soybean meal, and bio-security procedures. None of the operations used antibiotics except to treat seriously sick animals.

B. Cost of production results:

Cost of production data was available from 12 operations. However, data from four farms were not complete enough to use. The eight operations with adequate data were farrow-to-finish herds, and cost data from these operations will be discussed in three parts: feed costs, non-feed costs, and labor costs. Note that feed cost data are from six of the eight herds because two herds were organic, and their feed costs were excluded because these data would skew the results.

1. Feed costs:

Table 1 shows an average feed cost for the six farrow-to-finish non-organic operations of $21/cwt with a standard deviation[1] of $4.39/cwt. The range of feed costs went from $15/cwt to $27/cwt. Sorted on feed cost, the average of low cost herds was just over $17/cwt while the average of high cost herds was almost $24/cwt. Herds feeding organic feed (not included in Table 1) averaged close to $39/cwt in feed costs because of prices for organic feedstuffs.

Table 1: Summary Costs Per Hundred Pounds (cwt)

	Average cost	Low cost average	High cost average	Standard Deviation
1. Feed costs	$21 (n=6)	$17 (n=3)	$23 (n=3)	4.39
2. Total non-feed costs*	$17 (n=8)	$13.5 (n=4)	$20 (n=4)	5.21
a. Non-feed costs excluding labor	$9.50 (n=8)	$6.50 (n=4)	$12.50 (n=4)	4.02
b. Labor @ $8/hr (~$15,000/yr)	$7.50 (n=8)	$7.50 (n=4)	$7.50 (n=4)	3.20
3. Breakeven @ $8/hr	$38 (n=6)	$30.5 (n=3)	$43 (n=3)	8.37
4. Additional labor cost to bring per hour wage to $15/hr (~$30,000/yr)	$7.50/cwt	$7.50/cwt	$7.50/cwt	
5. Breakeven to attract new producers	$45.50/cwt	$38.00/cwt	$50.50/cwt	

* Non-feed costs from two organic operations were included in the non-feed costs analysis.

[1] Standard deviation is a term that specifies the amount of variation in data. Large standard deviations indicate wide variation across farms, while small standard deviations indicate low variations. Technically, two-thirds of the data are within one standard deviation of the mean. This means that with an average feed cost of $21/cwt and a standard deviation of $4.39, two-thirds of the farms had feed costs between $16.61 and $25.39/cwt and one-third had costs above or below these numbers. Similar calculations can be made for the other variables included in Table 1.

2. Non-feed costs:

Non-feed costs included in line 2 of Table 1 were made up of operating expenses such as utilities/fuel, vet bills, bedding, repairs, variable and fixed capital costs, fixed expenses of depreciation, taxes, insurance, and labor expenses. Non-feed costs averaged close to $17/cwt for the eight operations that had reasonably accurate data, and the standard deviation was $5.21/cwt. The range in non-feed costs went from $9 to $24/cwt, which is a large spread in these costs.

Data from individual producers revealed great variation in some non-feed cost components. For example, utility costs ranged from near nothing to more than $5.00/cwt, which is understandable because production systems ranged from summer pasture to winter inside farrowing. On the other hand, operating capital cost (calculated by multiplying an interest rate by the capital value of the operation plus a portion of feed and other expenses) only amounted to $0.75/cwt without much variation across operations. Fixed costs, which included fixed expenses of depreciation, facility interest, taxes, and insurance, averaged only $1.50/cwt. This low figure is understandable because most of the production systems operated with low value, fully depreciated facilities. If replacement facilities were needed, these costs would increase to at least $6 to $8/cwt.

3. Labor costs:

Producers were asked to estimate the number of hours they worked with their herd. Using these estimates and a wage rate of $8/hr, labor costs were calculated to be nearly $7.50/cwt, with the range being from $6 to $11/cwt. Another number reported was hours per sow per year, and the average hours per sow was around 26, with the range being from 17 to 40.

Another way to examine labor is the number of hours required to produce one hundred pounds of pork. The average of estimates for farmers in this study was close to one hour per cwt produced. Traditional farrow-to-finish operations averaged .65 hour per cwt in the early 1990s, and this figure moved down to ½ hour per cwt in the late 90's. These data show that low overhead, pen farrowed, bedded systems are more labor intensive than traditional operations.

C. Productivity measurement results:

Two key productivity measurements are pigs weaned per sow and death loss. Producers involved in this study averaged 6.7 pigs weaned per litter and 10 pigs weaned per breeding female per year, with the latter number being low because some of the operations involved seasonal farrowing systems. Death loss pigs averaged 19%, with the range being from 3% to 38%. Death loss for some of these operations needs to be addressed. Also, if the losses occur with young pigs and output through facilities still respectable, these losses can be a relatively minor factor.

IV. Discussion:

A. Breakevens and Labor Costs

Line 3 of Table 1 shows that $38.00/cwt was the average breakeven point for producers included in this study with labor valued at $8/hr. Line 3 also shows that the breakeven point was

$30.50/cwt for low cost herds and $43.00/cwt for high cost herds. However, $8/hr is not likely to attract new farmers into using alternative systems; a higher return to labor is necessary. One way to approach estimating the value of labor is to assume the operation needs to cover family living expenses. Data from the late 1990s show that farm families need at least $30,000/year to cover living cost (FM 1790 Family Living Expenditures of Iowa Farm Families). Given the typical full time equivalent is 2,000 hours per year, at least $15/hr ($30,000 ÷ 2,000 hrs) is needed to sustain a living in rural Midwest. Because it takes almost an hour to produce a hundred pounds of pork (as noted above), the labor cost per cwt should be $15. As shown in line 5 of Table 1, adding $7.50/cwt to increase labor to $15/cwt would raise the breakeven point to $45.50/cwt for the average operation, $38.00/cwt for low cost operations, and $50.50/cwt for high cost operations.

B. Feed Costs

Feed costs in 2002 were relatively low, with corn in Iowa averaging just under $2/bushel and soybean meal less than $150/ton. Given these relatively low feed costs, it is important to recognize how changes in feed prices can change the costs of production in case feed costs increase as they have recently. Table 2 shows that as feed costs increase $10/ton, the cost per cwt increases by $1.50. This means that a $30/ton increase in feed costs increases the cost per cwt for finishing pigs by $4.50. The importance of feed efficiency is also evident in Table 2. As feed efficiency decreases from 2.9 lbs feed per pound of gain to 3.6 lbs, the cost per cwt increases by $4 to $4.50 depending of costs of the feed.

Table 2. Finishing Feed Costs Per Head and Per CWT as Impacted by Feed Efficiency and Cost[1]

Feed Efficiency	2.9	3.0	3.1	3.2	3.4	3.6
Lbs Feed Needed	580#	600#	620#	640#	680#	720#
Feed cost/ton						
$110	$32/hd $16/cwt	$33/hd $16.50/cwt	$34/hd $17/cwt	$35/hd $17.50/cwt	$37/hd $18.50/cwt	$40/hd $20/cwt
$120	$35/hd $17.50/cwt	$36/hd $18/cwt	$37/hd $18.50/cwt	$38/hd $19/cwt	$41/hd $20.50/cwt	$43/hd $21.50/cwt
$130	$38/hd $19/cwt	$39/hd $19.50/cwt	$40/hd $20/cwt	$42/hd $21/cwt	$44/hd $22/cwt	$47/hd $23.50/cwt
$140	$41/hd $20.50/cwt	$42/hd $21/cwt	$43/hd $21.50/cwt	$45/hd $22.50/cwt	$48/hd $24/cwt	$50/hd $25/cwt

[1]Assumes 200 pound gain from feeder to market

C. Other Productivity Factors

Productivity on a per sow basis is usually less important with alternative systems for two reasons. First, sow herd costs are a relatively small percentage of total costs, with finishing costs being close to 75% of total cost. This means that the sow herd cost portion of producing a pig amounts to about $25 per head out of a $100 total cost (calculated by multiplying 263 pounds by $.38/lb average production cost). Second, most operations using alternative systems have low overheads, which means they have room for more sows with relatively low added costs.

On the other hand, productivity on a whole operation basis (sow herd plus the grower and finisher phases) is more important with alternative systems because unused capacity is very costly. An example of an operation that can sell 1,000 head per year based on space available, but only produces 750, demonstrates the impacts of unused capacity on cost structures and potential income. In this example, fixed costs plus the part of variable costs that would remain constant would likely equal about $35,000. Spreading these costs over 1,000 head gives $35/head for these costs, but spreading them over 750 pigs gives $46.67/head for these costs. The result is increased costs $11.67 per head, or $4.44/cwt of increased costs. (See Table 3.)

What are the financial implications of 25% higher costs and lost potential revenues from 250 fewer pigs? As noted, increasing costs by 25% calculates to $11.67 higher per head costs on 750 head, which equals $8,752.50 more costs than a 750 head operation running at full capacity. Additionally, there is lost profits from pigs not produced. Estimating total return over feed costs at $60/head ($125 market hog - $65 feed costs) means that raising 250 more pigs would increase profit by $15,000. Therefore, an operation producing 1,000 head generates $15,000 more profit than the same operation producing 750 head.

An important question is how best to increase the pig throughput to achieve the finishing capacity of 1,000 head per year. One option is to increase pigs/sow/year (p/s/y). Table 3 uses estimates of income and cost figures to compare a 50-sow herd producing 15 p/s/y (750 head total) with a 50-sow herd producing 20 p/s/y (1,000 head total). Comparing columns 1 and 2 shows that increasing p/s/y from 15 to 20 increases gross income from $93,750 to $125,000, which is a $31,250 increase. The data also show that feed costs increase from $83,750 to $100,000, which means it takes $16,250 more feed to feed 1,000 pigs rather than 750. Therefore, the result of increasing sow productivity by five pigs per year is $15,000 more income over expenses ($31,250 - $16,250). As well, increasing the annual average pigs/sow/year by one pig would be worth $3,000 to that operation given that the increase of 5 pigs/sow/year is worth $15,000 ($15,000 ÷5 p/s/y).

Another option to achieve the finishing capacity of 1,000 head per year is to increase the number of sows in the herd. Table 3 includes a column with estimates of income and cost figures for a 67-sow herd producing 15 p/s/y (1,000 head total). Seventeen extra sows cost about $1,700 to feed and $900 yardage cost at $.15/day for a year, or a total of $2,600 in more cost. However, these 17 sows would gain 1,700 pounds of weight worth $600 at $.35/lb, making the net increase in costs $2,000. Thus, an alternative system has the option to spend $2,000 on extra sows to regain the $15,000 in profit from selling 1,000 pigs.

A comparison of these two options is reveals some important considerations to keep in mind when choosing which option to pursue. Note that while the $2,000 in extra costs from increasing the sow herd to 67 head could be saved by producing 20 p/s/y with a 50-sow herd, increasing the average p/s/y by one pig is only worth $400 ($2,000 ÷5 p/s/y) in the 67-sow system compared to $3,000 in a 50-sow system. This means that while it is reasonable to try to save $2,000 by increasing productivity to 20 p/s/y, it is 7.5 times ($3000 ÷ $400) more important to produce 1,000 salable pigs per operation per year by adding 17 sows.

Table 3. Comparisons of Income and Costs for Three Production Scenarios

	50 sows 15 p/s/y (750 head)	50 sow 20 p/s/y (1,000 head)	67 sows 15 p/s/y (1,000 head)
Income @ $125/hd ($41/cwt + $6 premium with 263# hogs)	$93,750	$125,000	$125,000
Income loss with low productivity (15 p/s/y)	$31,250	$0	$0
Value of weight gain of 17 additional sows			$600
Fixed costs with some variable costs	$35,000	$35,000	$35,900
Feed costs with some variable cost	$48,750	$65,000	$66,700
Feed cost saved by feeding less pigs (250 hd less at $65/hd)	$16,250		
Cost per pig	$111.67 ($42/cwt)	$100 ($38/cwt)	$102.60 ($39/cwt)
Increase in cost/pig	$11.67 **($4.44/cwt)**		$2.60 **($0.99/cwt)**
Income over costs per head	$13.33/hd	$25/hd	$23/hd
Income over costs per year	$10,000	$25,000	$23,000
Income loss compared to 1,000 hd finish from 20 p/s/y productivity	$15,000		$2,000

This discussion also helps understand why these operations only wean 6.7 pigs per litter and 10 pigs per breeding female per year and still have a "typical average" cost of production. It also helps understand why the breakeven for this group of niche operations can be $38/cwt, about the same as conventional operations for this past year. Low productivity herds increase cost of production by less than $1/cwt, while underutilization of facilities is 7+ times more important because it raises the cost by $4.44/cwt. Every 5 extra pigs per sow per year lowers production cost about $1/cwt. An operation can have 10 less p/s/y in this example and only increase cost $2/cwt.

Understand also that other production cost factors have large influences in production cost compared to sow productivity. For example, new facilities can cost $6/cwt or more, and lean genetics another $3/cwt. The only way to really know if an operation is competitive is to take into account all the production cost factors and income involved in that operation with a whole operation analysis. Any individual production factor by itself can be misleading.

Death loss is also a production factor that could be improved and income enhanced if there is room in the system to finish the pigs. As noted above, death loss of growing pigs averaged 19% in this set of data, with the range being from 3% to 38%. Death loss can be a huge economic factor if the lost pigs are older with higher production cost. Death loss can also be a huge economic fact if the operation's total output is reduced below its optimal capacity. For example, if the operation has room to finish 1,000 pigs and they raise 1,300 and loose 300, this is a much different economic picture than if they raise 1,000 and loose 250 to only sell 750.

V. Next Steps

Work continues on the project to collect 2003 data and to start new producers keeping records for 2004. More years and larger numbers of participants will add to the accuracy of the data and increase confidence in the numbers and findings. The project has also shown that while cost structures for many alternative pork operations appear reasonable, efficiencies can likely but obtained by almost all operations. There is a strong need to share information within and amongst the producers involved regarding health practices, feed cost savings ideas, labor saving ideas, and ideas to reduce operating expenses. Additionally, pig flow analysis should be done for each operation to make sure the output for the farm is close to optimal. Steps to try to add these pieces to the project's activities are being pursued, with the key needs for these components being to secure resources and commitment from agencies, organizations, niche pork groups, and individual farmers.

Conclusion:
There is a variety of idea and concepts learned from this project. Some of these include the following: Producers are hesitant to share production and financial through the mail with someone they don't know. Some producers in niche markets need to upgrade their record systems so they are useable for management as well as taxes. Records that were received showed that niche production can be competitive in cost with commodity production. Areas of issue in the competitiveness in niche marketing generally include productivity, mortality, morbidity, labor efficiency, bedding cost, transportation and not large enough to make a living. Areas of advantage tend to include facility cost, capital cost, feed cost, medicine expense and sometimes operating cost. Overall, the cost of production in niche production is not much different from that of conventional commodity pork. There is an extreme range in cost of production for both production methods. Ideas and technologies from the low cost operations need to be shared more within the group with solid data supporting. There are many examples of producers surprised after sharing cost data with what is and isn't important. Evident from the records is the realization that improved production can be purchased, but sometimes at a huge price in terms of cost of production. Many times miracle products, inputs and ideas only treat the symptom and not the cause of symptom. Some operations are managed in such a way that miracle products and inputs are not need much, and when needed only used a short time. These operations have lower cost and higher performance. Other operations continually use 'crutches' to keep the pigs surviving. The 'crutches' push the cost up at the same time the performance of the pigs stays below average resulting in a high cost, less competitive operation.

Impact:
Producers participating in this project and discussion surrounding the project are now talking about implementing management factors that increase the chance of successful niche market production. The closest thing to a silver bullet in swine production these days is the technology of all in and all out. That means pigs are produced in groups and one group is completely finished before the next group comes in. Several operations are talking about modifying their production systems to capture the benefits of this technology. In niche marketing this is more important because of the need to keep pigs healthy without the use of antibiotics. Larger,

continuous flow operations are not able to stay in the sustainable pig business long term because continuous flow production will eventually multiply disease problems. These disease problems multiply because there are no breaks in the production cycle. Some smaller herds are looking into seasonal production, farrowing just one or twice a year to break up disease problems and improve herd health. Other producers are talking about formulating rations that are lower cost and more suited to sustainable production.

This report has been given at least in part to the Pork Niche Working Group, Niman Ranch Grower meetings and the annual meeting. A workshop was held as well at the Practical Farmers of Iowa Cooperator meeting. Additionally, two regional meetings on niche production was held in December of 2003 were some of this information was shared.

The study asked can niche marketing be competitive, can the cost position be improved and what is the benchmark cost of production for niche producers?

The answer is yes, niche production can be competitive. Additionally the cost structure of many niche operations can be improved through the data, by continued sharing of information and by implementing ideas and technologies that are proven by the project.

Appendix A

In order to help your producer's share information with each other the following information will be needed for each operation. Items marked with * are essential to get any kind of information back:

Average sow herd size _____

Average boar inventory _____

Number of litters _____

Number of pigs weaned _____

Death loss after weaning _____

Estimate of number of hours working with swine enterprise _____

*All purchases # of Head ____ Wt purchased _____ $ purchased _____

Jan 1 2002 inventory (all pigs, sows and boars after weaning)

*# of Head ____ *Estimated Wt inv _____ *$ valued _____

Jan 1 2003
*# of Head ____ *Wt purchased _____ *$ valued _____

All sales *# of Head ____ *Wt sold _____ *$ sold _____

Feed *total pounds of feed _____ *value of feed _____

*Operation expense:

Misc. utilities (Phone, rural water, etc.)	9.1 _____	Cash maintenance & repairs	9.7 _____
Fuel (Diesel, LP, etc.)	9.2 _____	Production contract expenses	9.8 _____
Electricity	9.3 _____	Misc. machine hire/trucking	9.9 _____
Veterinary fees	9.4 _____	Building rent	9.10 _____
Injectables, vaccines, etc.	9.5 _____	Property taxes & insurance	9.11 _____
Swine production supplies	9.6 _____	Other	9.12 _____

Fixed cost:

FIXED COST(Current year)	Total Value $	Total Depreciation
Equipment - Form 17	17.1_____	17.2_____
Housing - Form 18	18.1 _____	18.2 _____

Appendix B Survey to help transfer information that works from one to another.
Let's try to identify the top genetic, health practices, nutrition, and other management issues.

Mark closest to your genetic program:
❑ Purebred, check breeds: ❑ Berkshire ❑ Duroc ❑ Other
❑ Crossbred, check breeds:
❑ Berk ❑ York ❑ Chester ❑ Landrace ❑ Duroc ❑ Hamp ❑ Other

Do you purchase replacement gilts? ❑ Yes ❑ No
If yes, want % do you purchase ❑ <30% ❑ 30 – 70 % ❑ < 70%

Do you use AI technology? ❑ Yes ❑ No If yes, What % of breeding is AI _____%?

What is the maximum one time inventory of your swine herd according to space allocation by welfare standards?
_____ Sows/boars, _____ nursery pigs, _____ Grow finish pigs

What health problems is your herd continually challenged with?
List your disease problems in rank order as you see it:

1. _____ 2. _____

3. _____ 4. _____

5. _____ 6. _____

Are you growing pigs without any traditional antibiotics? ❑ Yes ❑ No
If no, are you antibiotic free in which phase(s)?: ❑ finishing ❑ nursery ❑ wean to finish
❑ breeding herd ❑ the only exception is to treat sick pigs.
Sick pigs are ❑ removed from production area or ❑ Identified as treated within the pen.

Please list the names of nontraditional herd health products you are using:

1. _____ 2. _____

3. _____ 4. _____

Do you have a veterinarian that understands your operation needs? ❑ Yes ❑ No
If your on a natural production farm, On a scale from one to ten, how helpful is your veterinarian in solving problems: (1 is less useful) 1 2 3 4 5 6 7 8 9 or 10 (10 is more useful)

How is your feed delivered? ❑ on-farm grinder w scale ❑ on-farm grinder without scale
❑ delivered from elevator ❑ Other _____

Feed formulation? ❑ corn, soy meal & premix ❑ corn with supplement
Do you feed organic feedstuff? ❑ Yes ❑ No GMO free? ❑ Yes ❑ No

Which phases are all-in/all-out? ❑ farrowing house ❑ nursery ❑ finisher
Do swine have access to pasture/dirt lot? ❑ farrowing huts ❑ weaned pigs ❑ finisher pigs

Appendix C: GENERAL INSTRUCTIONS for DATA INPUT for WHOLE HERD ANALYSIS:

Try to keep it simple. Keep in touch with your questions. As you fill our your tax forms, this one page input can be completed in large part by your tax records. Try to closely estimate if you don't have the data readily available.

Sow herd size is the monthly average of gilts and sows. Number of litter and pigs weaned is per year. Death loss after weaning, record the number of breeding stock and pigs after weaning.

Swine Inventory It is important to take an inventory as close to the 1st of the year as possible.
To calculate your inventory values should be close to those listed in the table below:

Farrow Phase	**$/head**	***Nursery***	**$/head**	***Grow-finish***	**$/head**
Gestation gilt	$ 120	<30 #	$25	<30 #	$25
Gestation sow	$ 120	30-50 #	$30	30 -50 #	$31
Lactating sows	$ 180	50-70 #	$36	50-70 #	$38
Cull sows	$ 100			70 - 100 #	$50
Gilts (gilt pool)	$ 100			100 - 150 #	$60
Nursing pigs	$ 15			150 - 200 #	$75
Boars	$ 100			200 to Market	$90

MOST IMPORTANT!! Please work on this before sending information in!

OPENING INVENTORY			+CASH PURCHASES			+ WEANED =	TOTAL
Nursery	G/finish	Breeding	SEW	Feeder	Breeding	Pigs	**SUM in**

CLOSE INVENTORY			+ CASH SALES					+ DEATH LOSS =			TOT
Nurs	G/finish	Breed	Breed	Home used	SEW	Feeder	market	Nursery	G/finish	Sow	**SUM out**

Fill in the numbers in the tables below to help make sure the numbers of hogs are in balance:

The SUM in should equal the SUM out.

Feed Record **Corn price for home grown corn is $2.20/bushel. Record number of bushel feed and the value of those bushels. All grain should be entered in the corn blank.**

Even if unknown, enter the cost and pounds of all other feeds fed supplement and additives. I can estimate corn usage from the pounds of supplement used.

If you purchase all complete feed from town, all that is needed is pounds of feed, value of feed and GMD charges.

Enter the Processing & Delivery cost if purchased from town and not included in the feed cost figures.

Operating Expenses These expenses would be cash expenses that are not included on the depreciation schedule. Be sure to include all operating expenses related to swine. Examples include: tractor fuel used for feed processing and delivery as well as manure removal. (This should be calculated by estimating tractor hours and multiplying hours and gallons per hour and price per gallon), the portion of your phone bill used for swine business, and other like items.

Equipment Value & Depreciation Need the market value and annual depreciation total for all equipment used for the swine enterprise. A tractor used for both crops and livestock should be split by the proportion used in each enterprise.

Housing Value & Depreciation Use straight line depreciation for both housing (10 to 15 years) and equipment (5 to 10 years). Value the assets as close to market value as possible. Undepreciated value may be a good estimate.