

Financial Management of Pig Businesses: Making Your Lenders, Investors & Partners Comfortable with Your Business Plans

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■ Introduction

In general, two groups are interested in the financial success of your pig business: the internal and external stakeholders. The internal stakeholders include the employees of the business, which not only includes the management team but also the business's front-line workers, the farm workers and production-support staff. External stakeholders include lenders and investors in the business. While technically being internal stakeholders, the owners of the business, depending on their orientation and degree of involvement in day-to-day decision making, may behave as either internal or external stakeholders.

We believe that a business is more likely to achieve its long-term potential, if all parties involved, from the investors down to the staff, are aligned toward a common goal: optimizing the long-term profitability of the business. Through our work with numerous production groups, during both good and bad markets, we have also come to recognize that only when a business is consistently profitable can it dependably take care of its commitments to all constituencies, whether they are lenders, investors, partners or employees. Central to our beliefs is that (1) all parties should be provided with the information that they need to make their own independent decisions, if they are to be empowered to do their share of the work, and (2) the information provided to each group of stakeholders differs from that needed by other groups. Because pig production is a business, all parties involved in a swine enterprise should be exposed to at least some aspects of the business's financial information. Over the years, we have become acolytes of Peter F. Drucker, especially as it pertains to his advice on the financial management of businesses:

Feedback from the results of a decision compared against the expectations when it was being made makes even moderately endowed executives into competent decision makers

The financial management systems that we have developed are geared to creating internal standards of performance that allow both internal and external stakeholders to readily interpret the financial performance of a business.

In previous publications (Dial et al., 2003; Dial et al., 2004), we have discussed the financial management of pig businesses from the standpoint of internal stakeholders, focusing on how to drive down the understanding of financial performance from management through farm staff. This paper discusses how to establish financial information systems and report financial performance data for the benefit of the external stakeholders, which as stated above, often also includes owners. We attempt to walk the reader through the various financial reports that we use informing them of what we have learned about the information needs of external stakeholders. We do not contend that our methods apply to all or that our approach is even the best one; quite simply, it is just an approach that has worked well for us, evolving over several years of consulting with and managing pig production businesses of all sizes and serving all types of markets.

■ **Assessing Profitability**

The Profit and Loss Statement (P&L) is usually the first bit of financial information reviewed by all stakeholders. Depending upon their specific roles or positions, some parties look initially at the P&Ls for individual flows or farms while others initially examine the consolidated financial information from all flows and farms. When financing is being procured, lenders and investors will want to see projections of financial information at least for the term of the loan, and they usually want to review it in the context of historical information. When projections are used to create budgets, employees and management, alike, typically want to participate in selecting the assumptions used to make projections, especially if they are to be held accountable for performance-relative-to-budget comparisons. All stakeholders usually need to see that financial projections are based upon historical levels of biological and financial performance that have actually been achieved, if they are to have confidence in projections. They all will need to see, for themselves, the assumptions used in making projections, including key input costs, market prices, and prime numbers of production. In addition, both internal and external stakeholders typically want ongoing financial performance to be provided relative to budgeted levels of performance, so that they can readily interpret the data.

In the following paper, we use both of the terms “projections” and “budgets,” which are derived in a near identical process, using similar assumptions and models. In our lexicon, projections encompass a multiple year period and are compiled for use in financing and long-term planning. Budgets typically cover a single fiscal year and are used as a reference for historical biological and financial data in order to allow the assessment of the business’s performance relative to an internal standard.

We base both our projections and the budgets used in historical financial performance reports on prime production numbers. These prime numbers, typically a half dozen or so for each phase of production, are the basis for the rate at which inputs are consumed by the production process. For example, as discussed in more detail in Dial et al., 2003, for a breeding farm budget, we budget each month of the fiscal year a number of females to be served, based upon projected farrowing rates, to achieve a consistent number of sows farrowing/week. Breeding and farrowing group sizes then allow us to use our “unit-use budgets” to predict the rate of use of individual inputs for the breeding herd (e.g. does of semen, doses of vaccines, kg of feed). Based upon the projected number of sows being farrowed, weaned and rebred, we can then predict the weekly number of pigs to be weaned and subsequently placed. As pigs flow through the growing pig phase(s) of the operation, we again use a set of “unit-use budgets” to project the rate of use of inputs (e.g. doses of vaccines and pharmaceuticals, kg of feed, number of housing spaces).

The prime numbers that we use in our projections are also used in the generation of our periodic historical income statements for a flow, farm or consolidated business serving as a benchmark for actual performance. In this manner “budget-to-actual” comparisons are consistent with the annual projections that we construct. **Figure 1** displays the monthly P&L for a breeding herd. Please note that monthly historical sales and expense data are compared with budgeted levels to obtain a dollar variance and a percent variance.

Figure 2 displays monthly projections over a one year period for a breeding farm during a start-up period. Please note that in accordance with the reproductive cycle of the pig, the ramp-up in breeding animal inventory is related temporally to changes in sales and expenditures.

It should be noted that the prime biological and financial numbers used to generate the budget contained in monthly P&L reports should be the same as those that are used in multi-year financial projections.

Figure 1. Monthly P&L Statement for a Breeding Herd Illustrating Comparisons of Annual and Monthly Line Items to Budget.

Profit and Loss Analysis									
<i>Breeding Herd #4</i>									
Month Ending: 30-May-06					<i>Updated: 26-Jun-06</i>				
		Period No.: 10		Year-to-Date					
		No. Weeks: 4		Cost Variance				Cost Variance	
	Actual	Budget	Total	Percent	Actual	Budget	Total	Percent	
Pigs Weaned	9,814	8,908	906	10%	92,341	92,494	(153)	0%	
Cull Sows	330	195	135	69%	2,274	2,060	214	10%	
Gilts Delivered	300	180	120	67%	3,329	1,935	1,394	72%	
TOTAL COSTS									
Net Sales	28,000	19,239	8,761	46%	156,701	152,629	4,073	3%	
COGS									
Purchased Animals	42,433	19,955	22,478	113%	260,272	214,813	45,459	21%	
Feed	69,231	61,669	7,562	12%	637,043	658,802	(21,759)	-3%	
Animal Health	9,074	9,779	(705)	-7%	118,089	113,248	4,841	4%	
Trucking	4,047	5,837	(1,790)	-31%	48,369	62,752	(14,383)	-23%	
Semen Fees	11,961	8,719	3,242	37%	136,781	120,076	16,705	14%	
Repairs & Maintenance	2,956	4,680	(1,724)	-37%	49,400	46,800	2,600	6%	
Utilities-LP	-	3,000	(3,000)	0%	34,434	52,800	(18,366)	-35%	
Utilities-Electric	10,741	6,120	4,621	76%	85,342	59,160	26,182	44%	
Utilities-Other	208	575	(367)	-64%	2,926	5,750	(2,824)	-49%	
Supplies	3,048	3,271	(223)	-7%	34,187	33,050	1,138	3%	
Production Payroll	46,940	47,662	(722)	-2%	534,712	512,365	22,348	4%	
Subtotal Controllable	200,638	171,266	29,372	17%	1,941,556	1,879,616	61,940	3%	
Other Facility Expenses	43,115	64,695	(21,580)	-33%	398,148	465,055	(66,907)	-14%	
Inventory Adjustments	24,327	-	24,327	100%	(141,486)	-	(141,486)	100%	
Miscellaneous COGS	144	891	(747)	-84%	5,610	8,915	(3,304)	-37%	
Total COGS	268,225	236,853	31,372	13%	2,203,828	2,353,586	(149,758)	-6%	
Gross Profit (Loss)	(240,225)	(217,614)	(22,611)	10%	(2,047,127)	(2,200,958)	153,831	-7%	
Gen. & Admin.									
Total Gen. & Admin.	12,268	11,185	1,083	10%	115,995	116,118	(123)	0%	
Operating Income	(252,492)	(228,799)	(23,693)	10%	(2,163,122)	(2,317,075)	153,954	-7%	
Other Income(Expense)									
Interest Expense	-	-	-	0%	-	-	-	0%	
Other	-	-	-	0%	-	-	-	0%	
Total Other	-	-	-	0%	-	-	-	0%	
Total Expenses	280,492	248,038	32,454	13%	2,319,823	2,469,704	(149,881)	-6%	
Net Income	(252,492)	(228,799)	(23,693)	10%	(2,163,122)	(2,317,075)	153,954	-7%	

Figure 2. Monthly Financial Projections for a Breeding Herd during the First Year of Ramp-up. (Note: only alternate months are shown)

	Period	1	3	5	7	9	11	Total
	Month	Jan	Mar	May	Jul	Sep	Nov	
	Weeks	4	5	4	4	5	4	Annual
								52
Sales								
Weaned Pigs Sold/Transferred	-	-	-	-	967	4,835	3,868	22,241
Cull Sows Sold	24	98	88	88	111	88	88	1,032
Gilts Delivered	680	850	112	112	139	112	112	3,866
Weaned Pig Sales	-	-	-	-	35,005	175,027	140,022	805,125
Net Weaned Pig Sales	-	-	-	-	35,005	175,027	140,022	805,125
Net Sales Price per Pig	-	-	-	-	36.20	36.20	36.20	36.20
Controllable Expenses								
Cull Stock Sales	3,377	13,455	13,035	13,203	15,849	12,469	12,469	146,955
Cull Stock Transport Costs	(108)	(440)	(398)	(398)	(498)	(398)	(398)	(4,646)
Net Cull Stock Sales	3,269	13,015	12,637	12,805	15,351	12,071	12,071	142,309
Net Cull Stock Sales per Sow	135.87	133.14	142.86	144.75	138.83	136.46	136.46	137.84
Replacement Gilt Expense	127,500	159,375	20,913	20,913	26,142	20,913	20,913	724,868
Cost per Gilt	187.50	187.50	187.50	187.50	187.50	187.50	187.50	187.50
Breeding Stock Inventory Adj.	(166,600)	(208,250)	-	-	-	-	-	(612,500)
Net Breeding Stock Costs	(42,369)	(61,890)	8,276	8,109	10,791	8,842	8,842	(29,941)
Feed Costs	16,853	35,512	20,812	23,014	35,655	28,558	28,558	332,822
Production Labor & Benefits	21,923	27,404	21,923	21,923	27,404	21,923	21,923	285,000
Production Bonus	-	-	-	290	1,451	1,160	1,160	6,672
Semen/A.I. Supplies	-	4,704	6,127	6,127	7,656	6,127	6,127	64,435
Health/Veterinary	1,661	1,661	1,661	1,661	2,768	2,215	2,215	23,808
Genetic Royalty & Fees	-	-	-	-	-	-	-	-
Supplies	2,667	2,667	2,667	2,667	2,667	2,667	2,667	32,000
Vehicle/Trucking (Internal)	4,760	5,950	781	781	976	781	781	27,062
Subtotal Controllable Costs	47,863	77,898	53,971	56,463	78,576	63,431	63,431	771,799
Utility-LP	6,000	4,000	-	-	2,000	6,000	6,000	36,000
Utility-Electric	4,125	4,125	4,125	4,125	4,125	4,125	4,125	49,500
Utility-Telephone	100	100	100	100	100	100	100	1,200
Utility-Water	50	50	50	50	50	50	50	600
Utility-Other	50	50	50	50	50	50	50	600
Waste Hauling	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
Repairs-Buildings & Equipment	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
Subtotal Other Facility Costs	14,325	12,325	8,325	8,325	10,325	14,325	14,325	135,900
Insurance-Property	750	750	750	750	750	750	750	9,000
Insurance-Inventory	317	317	317	317	317	317	317	3,809
Property Taxes	1,250	1,250	1,250	1,250	1,250	1,250	1,250	15,000
Lease/Rent-Equipment	360	360	360	360	360	360	360	4,315
Lease/Rent-Buildings	-	-	-	-	-	-	-	-
Interest Expense-Bldg./Equip.	12,949	12,866	12,782	12,697	12,611	12,524	12,524	152,599
Depreciation-Bldg/Equip.	23,420	23,420	23,420	23,420	23,420	23,420	23,420	281,036
Misc. Facility Expenses	444	444	444	444	444	444	444	5,333
Subtotal Facility Expenses	39,490	39,407	39,323	39,238	39,152	39,065	39,065	471,092
Pig Inventory Adjustment	-	-	-	(20,472)	-	-	-	(81,889)
Miscellaneous COGS	100	100	100	100	100	100	100	1,200
Total Expenses	59,409	67,840	109,995	91,762	138,944	125,763	125,763	1,268,161
Gross Profit	(59,409)	(67,840)	(109,995)	(56,756)	36,083	14,259	14,259	(463,036)
General & Administrative								
Total General & Administrative	-	-	-	2,901	14,505	11,604	11,604	66,723
Operating Income (Loss)	(59,409)	(67,840)	(109,995)	(59,657)	21,578	2,655	2,655	(529,759)
Other Income & Expense								
Interest Expense-RLOC	-	386	1,260	1,043	1,284	1,049	1,049	10,479
Other Expense	500	500	500	500	500	500	500	6,000
Other Income	-	-	-	-	-	-	-	-
Subtotal Other	500	886	1,760	1,543	1,784	1,549	1,549	16,479
Total Expenses	59,909	68,726	111,756	96,206	155,232	138,916	138,916	1,351,363
Net Income before Taxes	(59,909)	(68,726)	(111,756)	(61,200)	19,795	1,105	1,105	(546,238)

Key points to consider in the construction of a P&L statements which will allow it to be readily and reliably interpreted by external as well as internal stakeholders include:

The P&L report should be designed to reflect the true profitability of a Profit Center.

Summaries should be presented in a fashion that allows the reader to understand how all data points were derived. Methods used in the generation of reports should be in compliance with Generally Accepted Accounting Principles (GAAP) or the International Accounting Standards (IAS).

The format of the P&L should allow its ready use by the production team as well as by investors and lenders.

While we attempt to ensure that our overall analysis is GAAP compliant, we format our reports so that different stakeholders can access the information that is pertinent to them. For example, we group those expense items that are potentially influenced by farm and service staff in a “Controllable Expenses” section of the P&L and we list each utility expense as a separate line item under a general heading of “Other Facility Costs” (**Figure 3**). While various constituencies may require different types of information and different reports, data presented in commonly used reports should be identical. Nothing breeds distrust among users more than the feeling that there are two or more sets of data being kept.

Figure 3. Financial Projections Highlighting the “Controllable Expenses” during the First Six Months of the Start-up of a Breeding Herd.

Period	1	2	3	4	5	6
	Jan	Feb	Mar	Apr	May	Jun
Month						
Weeks	4	4	5	4	4	5
Feed Costs	16,853	22,102	35,512	30,513	20,812	25,973
Production Labor & Benefits	21,923	21,923	27,404	21,923	21,923	27,404
Production Bonus	-	-	-	-	-	-
Semen/A.I. Supplies	-	-	4,704	6,127	6,127	7,656
Health/Veterinary	1,661	1,661	1,661	1,661	1,661	1,661
Genetic Royalty & Fees	-	-	-	-	-	-
Supplies	2,667	2,667	2,667	2,667	2,667	2,667
Vehicle/Trucking (Internal)	4,760	4,760	5,950	4,760	781	976
Subtotal Controllable Costs	47,863	53,113	77,898	67,651	53,971	66,336

Figure 4. Financial Projections of a Breeding Herd in Steady-state Production Illustrating Annualized “Per Unit” Averages.

	Month Weeks	Sep 5	Oct 4	Nov 4	Dec 5	Annual 52	Per Pig
Sales							
Weaned Pigs Sold/Transferred		5,128	4,102	4,102	5,128	53,326	
Cull Sows Sold		111	88	88	111	1,150	
Gilts Delivered		139	112	112	139	1,450	
Weaned Pig Sales		185,617	148,493	148,493	185,617	1,930,415	
Less Transportation		-	-	-	-	-	
Net Weaned Pig Sales		185,617	148,493	148,493	185,617	1,930,415	36.20
Net Sales Price per Pig		36.20	36.20	36.20	36.20	36.20	
Controllable Expenses							
Cull Stock Sales		15,849	12,490	12,469	15,561	163,379	3.06
Cull Stock Transport Costs		(498)	(398)	(398)	(498)	(5,175)	(0.10)
Cull Stock Selling Costs		-	-	-	-	-	-
Net Cull Stock Sales		15,351	12,092	12,071	15,063	158,204	2.97
Net Cull Stock Sales per Sow		138.83	136.70	136.46	136.22	137.57	
Replacement Gilt Expense		26,142	20,913	20,913	26,142	271,875	5.10
Cost per Gilt		187.50	187.50	187.50	187.50	187.50	
Breeding Stock Inventory Adj.		-	-	-	-	-	-
Net Breeding Stock Costs		10,791	8,821	8,842	11,079	113,671	2.13
Feed Costs		35,655	28,558	28,558	35,655	374,527	7.02
Production Labor & Benefits		27,404	21,923	21,923	27,404	285,000	5.34
Production Bonus		1,538	1,231	1,231	1,538	15,998	0.30
Semen/A.I. Supplies		7,656	6,127	6,127	7,656	79,641	1.49
Health/Veterinary		2,936	2,349	2,349	2,936	30,533	0.57
Genetic Royalty & Fees		-	-	-	-	-	-
Supplies		2,667	2,667	2,667	2,667	32,000	0.60
Vehicle/Trucking (Internal)		976	781	781	976	10,150	0.19
Subtotal Controllable Costs		78,831	63,635	63,635	78,831	941,520	17.66
Utility-LP		2,000	3,000	6,000	6,000	36,000	0.68
Utility-Electric		4,125	4,125	4,125	4,125	49,500	0.93
Utility-Telephone		100	100	100	100	1,200	0.02
Utility-Water		50	50	50	50	600	0.01
Utility-Other		50	50	50	50	600	0.01
Waste Hauling		3,667	3,667	3,667	3,667	44,000	0.83
Repairs-Buildings & Equipment		2,000	2,000	2,000	2,000	24,000	0.45
Subtotal Other Facility Costs		11,992	12,992	15,992	15,992	155,900	2.92
Insurance-Property		750	750	750	750	9,000	0.17
Insurance-Inventory		317	317	317	317	3,809	0.07
Property Taxes		1,250	1,250	1,250	1,250	15,000	0.28
Lease/Rent-Equipment		360	360	360	360	4,315	0.08
Lease/Rent-Buildings		-	-	-	-	-	-
Interest Expense-Bldg./Equip.		12,074	12,028	11,981	11,934	146,252	2.74
Depreciation-Bldg./Equip.		23,420	23,420	23,420	23,420	281,036	5.27
Depreciation-Other		-	-	-	-	-	-
Misc. Facility Expenses		444	444	444	444	5,333	0.10
Subtotal Facility Expenses		38,615	38,569	38,522	38,475	464,744	8.72
Pig Inventory Adjustment		-	-	-	-	(4,954)	(0.09)
Miscellaneous COGS		100	100	100	100	1,200	0.02
Total COGS		140,329	124,117	127,091	144,477	1,558,410	31.36
Gross Profit		45,288	24,376	21,402	41,139	372,005	6.98
General & Administrative							
Total General & Administrative		15,383	12,306	12,306	15,383	159,979	3.00
Operating Income (Loss)		29,905	12,070	9,096	25,757	212,025	3.98
Other Income & Expense							
Interest Expense-RLOC		1,489	1,363	1,551	1,457	16,666	0.31
Other Expense		500	500	500	500	6,000	0.11
Other Income		-	-	-	-	-	-
Subtotal Other		1,989	1,863	2,051	1,957	22,666	0.43
Total Expenses		157,701	138,286	141,449	161,817	1,741,055	32.65
Net Income before Taxes		27,916	10,208	7,045	23,799	189,360	3.55

Financial data should always be accompanied by the production data (kg, number of head) that underpin it.

Therefore, in most instances, it is necessary to know the “denominator” before a line item expense can be interpreted. We always list key units in the “Sales” section of the P&L, including such things as: pig sales, cull sows sold, replacement gilts and market pigs delivered. Inclusion of units allows financial data to be expressed on a “per pig” or “per kg” basis. Even though budgets allow absolute dollars spent or earned during a time period to be understood, external stakeholders will have substantial trouble referencing the performance of a farm to other businesses with which they work unless financial summaries are adjusted for number of units. **Figure 4** displays a financial projection with data summarized annually in terms of total dollars spent by line item and costs expressed on a “per unit” basis.

Cost and Income Items included as Expenses or as Sales

While it may at first glance seem obvious, the user will need to understand what cost and income items are included as Expenses and what are included as Sales. For example, the sales revenue for culled breeding stock can be included as cost-offsetting income in the Expense section of the P&L as a component of Net Breeding Stock or, alternatively, the cost of replacement gilts entering a herd may be included in the sales portion of the P&L as an offset to cull sow sales. With the former, breakeven costs of production for a breeding herd may be understated relative to other reference farms, suggesting that the farm has a lower breakeven than a farm that manages its culled sow sales as revenue. Knowing how costs and sales are handled is especially critical if the user of the information desires to relate the farm’s cost of production to external reference standards with which they are familiar.

Figure 5. Net Breeding Stock Section of the Financial Projections for a Breeding Herd during Ramp-up.

	Period	1	2	3	4	5	6
	Month	Jan	Feb	Mar	Apr	May	Jun
	Weeks	4	4	5	4	4	5
Cull Stock Sales		3,377	6,704	13,455	12,323	13,035	15,495
Cull Stock Transport Costs		(108)	(217)	(440)	(398)	(398)	(498)
Cull Stock Selling Costs		-	-	-	-	-	-
Net Cull Stock Sales		3,269	6,487	13,015	11,925	12,637	14,998
Net Cull Stock Sales per Sow		135.87	134.80	133.14	134.80	142.86	135.63
Replacement Gilt Expense		127,500	127,500	159,375	127,500	20,913	26,142
Cost per Gilt		187.50	187.50	187.50	187.50	187.50	187.50
Breeding Stock Inventory Adj.		(166,600)	(166,600)	(208,250)	(71,050)	-	-
Net Breeding Stock Costs		(42,369)	(45,587)	(61,890)	44,525	8,276	11,144

Reports should be set up on a “4-4-5 schedule”

Reports should be set up on a “4-4-5 schedule” wherein successive months are configured as having 4 weeks, 4 weeks, then 5 weeks, allowing all

quarters of the year to be 13 weeks in length. This schedule allows meaningful comparison of months having a different number of days, wherein the days available for the consumption of inputs vary. **Figure 6** shows financial projections of a steady state breeding farm set up in the 4-4-5 format. Please note that costs, revenues and pig numbers in the 5-week time periods are 25% higher than that of the 4-week periods.

Figure 6. Financial Projections for a Steady-state Breeding Farm Illustrating the Effect of Using the “4-4-5 Schedule” on Select Sales and Expense Line Items.

	Period	19	20	21	22	23	24
	Month	Jul	Aug	Sep	Oct	Nov	Dec
	Weeks	4	4	5	4	4	5
Sales							
Weaned Pigs Sold/Transferred		4,102	4,102	5,128	4,102	4,102	5,128
Cull Sows Sold		88	88	111	88	88	111
Gilts Delivered		112	112	139	112	112	139
Weaned Pig Sales		148,493	148,493	185,617	148,493	148,493	185,617
Less Transportation		-	-	-	-	-	-
Net Weaned Pig Sales		148,493	148,493	185,617	148,493	148,493	185,617
Net Sales Price per Pig		36.20	36.20	36.20	36.20	36.20	36.20
Controllable Expenses							
Cull Stock Sales		13,203	12,993	15,849	12,490	12,469	15,561
Cull Stock Transport Costs		(398)	(398)	(498)	(398)	(398)	(498)
Cull Stock Selling Costs		-	-	-	-	-	-
Net Cull Stock Sales		12,805	12,595	15,351	12,092	12,071	15,063
Net Cull Stock Sales per Sow		144.75	142.38	138.83	136.70	136.46	136.22
Replacement Gilt Expense		20,913	20,913	26,142	20,913	20,913	26,142
Cost per Gilt		187.50	187.50	187.50	187.50	187.50	187.50
Breeding Stock Inventory Adj.		-	-	-	-	-	-
Net Breeding Stock Costs		8,109	8,318	10,791	8,821	8,842	11,079
Feed Costs		29,617	29,617	35,655	28,558	28,558	35,655
Production Labor & Benefits		21,923	21,923	27,404	21,923	21,923	27,404
Production Bonus		1,231	1,231	1,538	1,231	1,231	1,538
Semen/A.I. Supplies		6,127	6,127	7,656	6,127	6,127	7,656
Health/Veterinary		2,349	2,349	2,936	2,349	2,349	2,936
Genetic Royalty & Fees		-	-	-	-	-	-
Supplies		2,667	2,667	2,667	2,667	2,667	2,667
Vehicle/Trucking (Internal)		781	781	976	781	781	976
Subtotal Controllable Costs		64,694	64,694	78,831	63,635	63,635	78,831

Controllable costs should be segregated

Controllable costs, potentially influenced by either on-site management or production-support staff (e.g. feed, labor, semen, health products, supplies), should be segregated from Fixed, General and Administrative (G&A), also called Overhead Costs, and Interest Expense. In this manner, the party responsible for overseeing either the rate of use or purchase price of an item can readily access the data relative to the amounts and prices included in the budget. Note: the units of inputs included as controllable costs (i.e. unit-use inputs) are typically under the control of either the workers on the farm or production-support staff, because they are the ones who determine either the

quantity of input used or delivered to the farm. On the other hand, the cost of inputs (i.e. unit cost) is typically determined by the buying practices of either a member of the management team or a member of the production support staff.

Reference values for line items included in budgets should be determined either from:

- *projected* rates of use for the period, as based upon unit-use budgets, whenever possible (e.g. kg feed, doses of semen, number of spaces), or
- *historical* rates of use by number of units used (e.g. liters of propane, kilowatts of electricity) coupled with predicted purchase price (e.g. \$/liter, \$/kw).

As expenditures are grouped into line-item expenses, the reader will need to know what is included in each line-item grouping. For example, are “Utility” costs grouped together with Facility Expenses or included as one or more separate line-item expenses in “Other Facility Expenses.” We often list each type of utility expense separately (e.g. gas, electricity, telephone), so that they can be readily reviewed by any party that influences their use.

Breeding Stock Expense captures the net of the cost of incoming replacement gilts and the value of culled stock that are sold. An “Inventory Adjustment” to breeding stock is made in order to dampen the effects of fluctuations over time in the value of inventory (i.e. purchases of gilts – sales of sows). When sow sales are recorded as an offset to gilt purchase expense, the sale of an extraordinary number of sows during a time period would artificially reduce the total expense for producing a weaned pig during that period, if an inventory adjustment was not made. Correspondingly, when an unusually low number of gilts enter a herd during a period, as often occurs during the fall months, weaned pig costs would be artificially reduced, unless an inventory adjustment is made. In order to interpret a P&L Statement, the reader will need to understand the changes in Inventory Adjustment that are being made over time, especially during periods of inconsistent inventory change (e.g. when the herd inventory is ramping up as during the summer season). As herd size increases (more gilts are added and/or less sows are culled), the inventory adjustment will be an offset to costs (i.e. costs will be reduced), resulting in a lower breakeven. If herd size is decreasing (i.e. less gilts are added and/or more sows are culled), the inventory adjustment will add to Total Expenses, resulting in a higher breakeven. Several methods are being used across the industry to value inventory (e.g. value inventory at its procurement cost, valuing inventory at its market value). Everyone should seek methods that comply with either GAAP or IAS standards, while ensuring that their approach truly reflects the financial performance of the operation.

Lenders and investors should be reminded of how facilities are being financed; that is, whether they are leased or being purchased. Only if they understand the farm's capital structure can they effectively interpret the farm's total "Fixed Expenses" relative to external standards that they may want to use. For example, leased facilities typically require less start-up capital from the owners of the pig business, but often are associated with higher facility cost.

Lenders and investors will also need to be informed of the method used to depreciate assets, if they are going to be able to interpret the capital structure and understand the calculated profitability of the farm. Methods that accelerate or decelerate rates of depreciation increase or decrease, respectively, a farm's breakeven. We believe that the methods used to depreciate an asset should reflect what is actually happening on the farm. For example, if you have a 50% replacement rate, the sow herd only lasts two years, not three. If equipment lasts only 5 years, not 7 years, depreciate it for 5 years. Work with your accountant and financial advisor to determine what is actually going on the farm.

The interest expense on the Revolving Line of Credit will vary by period according to the size of the Loan Balance at the beginning of the period. During periods of high profit, the loan balance will likely shrink, resulting in lower overall costs and a lower breakeven. Lenders often need to be reminded where the business is relative to the amount of its RLOC remaining available for use before they can accurately interpret the farm's overall cost structure.

Businesses often have non-pig sources of income, which are included as an off-set to the business's expenses. For example, when pigs belonging to another entity are being managed by the business, the resultant income acts as cost-offsetting income, resulting in overall costs being understated and unusually lower breakevens. To avoid misleading them regarding the true cost of production for an enterprise, lenders and investors should be informed of any unusual income.

Accrual Adjustments attempt to normalize expenses that do not occur in all time periods. Expenses are annualized then apportioned evenly throughout all periods being measured. Examples of expenses that commonly have accrual adjustments made include: Property taxes, waste management expenses, payroll, interest payments (other than monthly interest payments), and insurance premiums.

■ Assessing Cash Flow

The old time-worn adage “Cash is King” has proven, in our experience, to be true. If you do not have the funds to pay the bills, future profitability may not matter to your lender. External stakeholders want to be assured that, despite the projected profitability of a business, it will be able to meet its expenses each and every month and pay back its obligations to creditors. We make simple adjustments to our P&L Statements and Projections to derive Cash Flow (CF) Statements and Projections, respectively, thereby linking them integrally.

Direct adjustments to the P&L statement for specific cash and non-cash line items are made in the creation of simple CF reports. Non-cash items reflected in the P&L (e.g. depreciation) are added back to the P&L. Similarly, all cash items that were excluded from a P&L analysis are included in the CF statement (e.g. principal, inventory adjustments, accrued expenses). **Figure 7** illustrates the adjustments that we make to our P&L projections in an effort to simply derive CF projections for use by our external stakeholders.

Figure 7. Adjustments Made to Monthly P&L Projections to Predict Monthly Cash Flow during the First Six Months of the Start-up of a Breeding Herd.

	Period Month Weeks	1 Jan 4	2 Feb 4	3 Mar 5	4 Apr 4	5 May 4	6 Jun 5
Depreciation		23,420	23,420	23,420	23,420	23,420	23,420
Principal Payments-Bldg./Equip.		(7,250)	(7,292)	(7,333)	(7,375)	(7,417)	(7,460)
Inventory Adjustments		(166,600)	(166,600)	(208,250)	(71,050)	-	-
Monthly Accrual Adjustments		(7,712)	3,250	1,231	3,250	(8,750)	8,731
Other Accrual/Cash Adjustments		-	-	-	-	-	-
Subtotal Accrual to Cash		<u>(158,142)</u>	<u>(147,222)</u>	<u>(190,933)</u>	<u>(51,756)</u>	<u>7,252</u>	<u>24,691</u>
Net Cash Flow Expenses		<u>218,051</u>	<u>209,211</u>	<u>259,659</u>	<u>215,156</u>	<u>104,503</u>	<u>102,028</u>
Net Cash Flow before Taxes		<u>(218,051)</u>	<u>(209,211)</u>	<u>(259,659)</u>	<u>(215,156)</u>	<u>(104,503)</u>	<u>(102,028)</u>
Cumulative Cash Flow for Start Up		(218,051)	(427,262)	(686,921)	(902,077)	(1,006,581)	(1,108,609)

Simple highlights that we keep in mind as we generate CF Statements and Projections are:

- Depreciation is added back in a CF Statement, with a corresponding allowance being made for the actual CF draw of Principal.
- During periods of herd ramp-up or sale down, the reader will need to consider the impact of Inventory Adjustments on CF. Inventory Adjustments will be positive to cash flow when herd size is decreasing and will be negative to cash flow when inventory is expanding.
- Accrued Expenses payments behave similar to Principal Payments and Inventory Adjustments in a CF, in that they are subtracted from the Expenses of the P&L Statement and, thus, are additive to CFs.

- Accrued Expenses are adjusted for the month in which the payment is actually made in the CF. For example, in the CF, the entire property tax payment will be expensed in the month it actually occurred. Any accruals for property taxes in month's other than that of payment will be additive to the CF.

■ Determining Financing Needs for Operations

The financing of fixed assets (i.e. Term Debt) is typically based upon a lender financing a portion of the appraised value of the asset. While lenders typically require 25% or greater equity in order to finance an asset, the percentage equity required may vary with the market value of the asset, which, in turn, usually varies with market conditions. Some type of marketing agreement having a reasonable term will usually be required for lenders to finance a fixed asset. For example, a weaned pig sale agreement for seven years or more may be required to obtain term debt on a breeding farm. An Independent Contractor Agreement for the term of the loan (e.g. 12 or 15 years) may be needed by a lender in order for them to finance an independent producer wishing to build barns to be contracted to an integrated hog producer. A three-to-five-year market hog sales agreement may be required for an independent producer to build their own finishing barns. A "Keep Full Agreement" is often required in instances wherein the owner of the pig inventory has insufficient business history or inadequate equity to provide the requisite security for the lender. Keep Full Agreements ensure that a third party is available to assume the debt and use the assets if the borrower defaults on the loan.

The cash made available by a lender or group of lenders to fund the business's operations is typically set up as a Revolving Line of Credit (RLOC) or an Operating Line. The RLOC reflects the borrowing ability of company. Asset-based lenders usually determine the maximum RLOC from a borrowing base using the number of animals in inventory by stage of production. Thus, the RLOC limit changes with estimated animal inventory. Animals are given an average value based upon their stage of production (e.g. sows=\$200, gilts=\$150, unweaned pigs=\$30, feeder pigs=\$45, finish pigs=\$75). For growing pigs, valuation will be based upon average weight of the pigs on feed, considering their entry and exit weights. Feed supply inventories are also included in the valuation of inventories and are based upon projected averages of period ending stocks.

Lenders typically advance monies at a percentage of the value of the inventory. An Advance Rate of 75% is a standard value, but may be reduced, if the borrower has an uncertain future or suspect historical performance. Advance Rates of 80% or greater may be provided when the lender has a high level of confidence in the business and/or the collateral is sufficiently

liquid. Advance rates may be increased or decreased from standard values in accordance with reductions and augmentations, respectively, in the inventory valuation agreed to by the lender. For example, some lenders may advance 80% or greater while making corresponding reductions in the value of the animal inventory. In this manner, the amount actually advanced is held constant. A lender advancing 75% on sows valued at \$200 each (i.e. $75\% \times \$200 = \150) results in the same advance as when a lender advances 80% on sows valued at \$187.50 (i.e. $80\% \times \$187.50 = \150).

Lenders will typically make advances on Accounts Receivable (i.e. consider them in the loan availability), if they deem them to have a high likelihood of being collected. Correspondingly, all Accounts Payable are generally deducted at 100% from the loan availability.

As illustrated in the financial projections that we make specifically for lenders (**Figure 8**), there are several calculations that they will likely want to see, including:

Advance Limit.

The Advance Limit refers to how much the lender will advance under the operating line. It is based upon the summation of inventory values (times the respective advance rate) up to a maximal amount that a lender is willing to loan. Changes in inventories over time impact the Advance Limit. Increases in inventory (as occur during the ramp-up of a start-up herd or increased deliveries of gilts during the summer breeding season) increase availability. Correspondingly, reductions in inventory (as occurs during herd liquidation or commonly during the fall season) result in a lowering of the Advance Limit.

Ending Loan Balance.

The Ending Loan Balance reflects the changes in total cash outflow and inflows during a given period. It is impacted by net cash flow, capital expenditures, and the net of equity infusions and distributions paid to investors. The Ending Loan Balance decreases during periods of positive cash flow and increases when cash is used by the operation. Similarly, equity infusions decrease the Ending Loan Balance while distributions increase it.

Loan Availability.

The Loan Availability is calculated from the Advance Limit minus the Ending Loan Balance. It reflects the outstanding amount remaining to be borrowed before the business reaches the Advance Limit. Net Loan Availability is a key measure of (1) how well an operation is performing and (2) the amount available to either sustain or grow the business. During profitable times, the Net Loan Availability increases; whereas during unprofitable periods, the Net

Loan Availability decreases. If Net Loan Availability becomes negative, additional equity infusions are required to cover the shortfall.

Cushion.

Lenders and investors often want to see that some of the Loan Availability is held in reserve as a “Cushion” and not spent. The Cushion reflects the business’s ability to weather times of poor production, high costs, or negative cash flow. The size of the Cushion varies with operation. It will typically vary according to the marketing arrangement under which pigs are sold. Lenders will be more comfortable with a smaller cushion for a company with less market risk. For example, a company selling weaned pigs on a fixed contract to a financially secure organization will need a lower Cushion than an independent farrow-to-finish company selling market pigs on the open market. Similarly, a company working in an economic environment of uncertain or variable input prices might be expected to maintain a higher Cushion than one with predictable input price. It is critical to your lenders that you be able to project the Loan Availability during periods of rapid growth and declining prices.

Figure 8. Financial Projections Used by Lenders and Internal Financial Managers to Predict the Rate of Use of Funds by Ongoing Operations

	Period Month Weeks	1 Jan 4	2 Feb 4	3 Mar 5	4 Apr 4	5 May 4	6 Jun 5
RLOC							
No. Sows on Inventory		680	1,360	2,210	2,500	2,500	2,500
Value per Sow		200					
Sow Value		136,000	272,000	442,000	500,000	500,000	500,000
No. Gilts on Inventory		-	-	-	390	223	223
Value per Gilt		90					
Gilt Value		-	-	-	35,100	20,077	20,077
No. Unweaned Pigs		-	-	-	-	-	-
Value per Weaned Pig		25					
Unweaned Pig Value		-	-	-	-	-	-
Total Inventory Value		136,000	272,000	442,000	535,100	520,077	520,077
Advance Rate		75%					
Advance Limit		102,000	204,000	331,500	401,325	390,058	390,058
Beginning Loan Value		0	18,051	77,262	186,921	252,077	206,581
Net Cash Flow		(218,051)	(209,211)	(259,659)	(215,156)	(104,503)	(102,028)
Equity Infusion		200,000	150,000	150,000	150,000	150,000	100,000
Owner Dividends							
Ending Loan Balance		18,051	77,262	186,921	252,077	206,581	208,609
Loan Availability		83,949	126,738	144,579	149,248	183,477	181,449
% Availability		82%	62%	44%	37%	47%	47%

■ Understanding the Financial Structure of the Business

As stated previously, lenders will always need to understand the financial structure of your business if they are to: (1) be able to accurately interpret its financial performance and (2) ensure that they understand their risk. The Balance Sheet (B/S) is the financial statement commonly used by lenders to get a handle on a business's financial structure. The B/S portrays the financial structure of a business; that is, its assets, liabilities and owner equity. As earnings and liabilities are captured in the other financial statements, they are carried over into the B/S to determine changes in the assets of a business in accordance with the formula:

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

Over time, assets, liabilities, and equity change, requiring the generation of periodic balance sheets that are linked to corresponding income statements. The income and cash flow statements link the balance sheet from one period to the next. Examples of line items on the income or cash flow statements that change over time, affecting the Balance Sheet, include:

- Depreciation of assets (changes the value of assets.)
- Principal Payments and Loan Advances (change the amount of liabilities.)
- Capital Expenditures (change the value of assets)
- Profits generated by the business during a time period (reduce the loan balance while increasing retained earnings, thereby increasing equity.)
- Investor infusions of equity (increase equity) and distributions to owners (reduce equity)

Figure 9 illustrates a projected B/S created, in part, from the projections shown in Figure 2.

Figure 9. Example Balance Sheet (Data was derived, in part, from the projections shown in Figure 2)

Balance Sheet	
<i>For the Twelve Months Ending December 31, ____</i>	
ASSETS	
Cash	\$ -
Accounts Receivable	\$ 80,272
Inventory	\$ 306,920
Prepaid Expenses	\$ -
Other Current Assets	\$ -
Current Assets	\$ 387,192
Land	\$ 25,000
Building	\$ 1,935,000
Building Improvements	\$ -
Building Equipment	\$ 1,290,000
Machinery & Equipment	\$ -
Breeding Stock	\$ 412,500
Accumulated Depreciation	\$ (562,071)
Fixed Assets	\$ 3,100,429
Other LT Assets	\$ -
Net LT Assets	\$ 3,100,429
Total Assets	\$ 3,487,621
LIABILITIES & SHAREHOLDERS' EQUITY	
Accounts Payable	\$ 100,349
Current Portion of LT Debt	\$ 102,932
Accrued Interest	\$ -
Accrued Expenses	\$ -
Notes Payable - RLOC	\$ 269,281
Total Current Liabilities	\$ 472,563
Capital Leases	\$ -
LT Notes Payable	\$ 2,082,450
Less: Current Portion of LT Debt	\$ (102,932)
Long-Term Liabilities	\$ 1,979,517
Total Liabilities	\$ 2,452,080
Partner Equity	\$ 1,881,625
Retained Earnings	\$ (846,084)
Equity	\$ 1,035,541
Total Liabilities and Equity	\$ 3,487,621

Key things that your lender will likely examine on your B/S include:

- How the overall debt has been structured; for example, the proportion that is current versus long term. Typically, your lender will want as much of your debt to be long term as possible.

- The absolute dollar amount as well as the percent equity. Lenders will want to ensure that there is sufficient equity in the business for it to draw on during hard financial times. Loan covenants will often be put in place that should govern the minimum equity or growth in equity required.
- Lenders will always need to understand how assets are being valued. Third-party verification of assets may be required. Financial statements will need to be differentiated as to their being “audited” in accordance with GAAP or IAS by an independent third party accounting firm, “reviewed” by independent accountants but not audited, or simply “compiled” by an accounting firm. Confidence of the lenders in the accuracy of your financial information increases dramatically as you proceed from compiled via reviewed to audited.

■ Managing Lender Relations

We believe that solid (trusting and long-lasting) relations with lenders will best occur:

- with the open sharing of all business and financial information and
- when you understand their needs and expectations.

What are lenders looking for? They need to be convinced of the ability of your business to repay their loans. In most cases, this requires that, in the short term, the business generates positive cash flows and that, in the long term, the business is sustainably profitable. In order for Lenders to be assured of the viability of your business, they must completely understand your business and all associated risks. Lenders will likely expect to see the following in financial reports:

Financial Projections

Lenders will need to see detailed income statements, cash flows and balance sheet, and have data expressed on a total dollar as well as *per unit* basis. Analyses should be compiled by site, flow and production system. Consolidated reports should reflect the overall operations of any business that are inter-related with the one that they are financing.

Assumptions

Lenders will need to understand the assumptions that were used in all projections and budgets, including the production numbers driving output and throughput, major cost line items, and revenues. We suggest that all assumptions be put in one Figure so that they are easily accessed and understood (**Figure 10**).

Figure 10. Summary of Assumptions Used in the Financial Projections for a Breeding Herd during Start-up.

<i>Drivers of Output</i>		
Breeding Female Inventory		2,500
Sows Farrowed/Wk		112
Age at Weaning (days)		23
Relative to Ramp Up		
<i>Drivers of Efficiency</i>		
	<u>Prior to</u>	<u>After</u>
Pigs Born Alive/Litter	10.35	10.85
Preweaning Mortality	14.0%	13.0%
Pigs Weaned/Wk	997	1,057
Pigs Weaned/Sow Farrowed	8.90	9.44
Pigs Weaned/Inv. Female/Yr	22.03	21.33
<i>Cost Drivers</i>		
Staffing Level (includes mgr)		8.00
Cost Replacement Gilt	\$	187.50
Genetic Royalty/Wn'd Pig	\$	-
Semen Cost/Dose	\$	4.85
Facility Cost/Sow Space	\$	1,236
Corn Cost/Bushel	\$	2.05
SBM Cost/Ton	\$	185.00
G&A Cost/Wn'd Pig	\$	3.00
<i>Marketing</i>		
Pricing of Wn'd Pig: Flat or Slide?		SLIDE
Weaning Weight (lbs)		15.50
Price Rec'd/Wn'd Pig	\$	36.20
<i>Financing</i>		
RLOC		
Valuation: Sows	\$	200.00
Valuation: Gilts	\$	90.00
Valuation: Suckling Pigs	\$	25.00
Advance Rate		75%
Advance Limit	\$	455,190
Equity	\$	787,056
Peak Availability Used	\$	271,114
Interest Rate (%)		6.00%
<i>Facilities</i>		
Total Cost Bld, Land, Equip	\$	3,250,000
Sow Spaces		2,630
Cost/Sow Space	\$	1,236
Lease Rate (%)		11.38%
Monthly Payment	\$	20,199.04
<i>Depreciation</i>		
Depreciation: Blds		20
Depreciation: Equipment		7
% Depreciation of Buildings		60%
% Depreciation of Equipment		40%

Figure 11. Example Sensitivity Analysis for Changes in Breeding Herd Parameters that Must Be Reached before a Business Cannot Service Its Debt: (1) Reduction in Net Income, (2) Reduction in Number of Pigs Weaned/Week, (3) Reduction in Weaned Pig Sales Price, (4) Increase in Sow Feed Cost, and (5) Increase in Total Weaned Pig Cost.

Net Income

Debt Service + Rent	389,959
Covenant Level for DSC	1.25
Minimum EBITDAR to Meet DSC Covenant	487,449
Amount Net Income Must Fall to Break DSC Covenant	150,179
Sensitivity Analysis	247,669
Net Income When Reach Covenant Level for DSC	97,490

Weaned Pigs Sold

Projected Pigs Sold/Yr	53,326
Projected Pigs Sold per Week	1,026
Projected Weaned Pig Sales	\$ 1,930,415
Sale Price/Pig	\$ 36.20
Amount Net Income Must Fall to Break DSC Covenant	\$ 150,179
Sale Price/Pig	\$ 36.20
Reduction in Pigs Sold/Yr Needed to Reach DSC Covenant	4,149
% Fewer Pigs Sold	7.8%
Reduction in Pigs Sold/Week	80

Weaned Pig Sale Price

Projected Weaned Pig Sales/Yr	\$ 1,930,415
Amount Net Income Must Fall to Break DSC Covenant	\$ 150,179
Sales When Reach DSC Covenant	\$ 1,780,236
Net Sales Price/Pig Needed to Reach DSC Covenant	\$ 33.38
Net Reduction in Sale Price	(2.82)

Feed Costs

Projected Feed Cost/Yr	\$ 374,527
Projected Feed Cost/Pig Sold	\$ 7.02
Amount Net Income Must Fall to Break DSC Covenant	\$ 150,179
Total Feed Cost When Reach DSC Covenant	\$ 524,706
Projected Pigs Sold	53,326
Feed Cost/Pig Needed to Reach DSC Covenant	\$ 9.84
Increase in Feed Cost/Pig to Reach DSC Covenant	\$ 2.82
% Change in Feed Cost	40.1%

Total Costs

Projected Total Expenses/Yr	\$ 1,682,746
Projected Expenses/Pig Sold	\$ 31.56
Increase in Expenses Needed to Reach DSC Covenant	\$ 150,179
Total Expenses When Reach DSC Covenant	\$ 1,832,925
Total Expenses/Pig When Reach DSC Covenant	\$ 34.37
Increase in Total Expenses/Pig to Reach DSC Covenant	\$ 2.82
% Change in Total Expenses	8.9%

Sensitivities

Lenders often require that sensitivity analyses be conducted for key inputs, such as production inputs, major ingredients in feed, market prices and, possibly, interest rates. Sensitivities should display the profitability of the corporation through the broad range of what might reasonably happen during the coming periods. Examples of sensitivities are included in **Figure 11**.

Financial Ratios

Key ratios, useful primarily to lenders, will need to be derived from data presented in one or more of the financial statements. Although there are numerous others, the ratios that we see most commonly being used by lenders are included below. **Figure 12**, illustrates a Ratio Compliance Report that we have submitted to lenders.

Debt Service Coverage

This is the ratio of EBITDAR (Earnings before Interest, Taxes, Depreciation, Amortization and Rent) to Principal + Interest + Rent, and often is required to be at least 1.25. Debt Service Coverage is also called the Fixed Charge Coverage and gives the lender an assessment as to whether your business will generate sufficient cash flow to cover debt payments and rent (i.e. your fixed costs).

$$\text{Debt Service Coverage} = \text{EBITDAR}/(\text{P}+\text{I}+\text{R})$$

Interest Coverage

This ratio compares EBIT to Interest and usually must be at least 2.0. This metric reflects the ability of your business to cover interest payments.

$$\text{Interest Coverage} = \text{EBIT}/\text{I}$$

Leverage

This metric compares Equity to Total Assets and is expressed as percentage. A standard of 40% is typically used, although, as stated previously, degree of risk and economic climate may encourage lenders to require either a higher or lower minimum.

$$\% \text{ Leverage} = \text{Equity}/\text{Assets}$$

Working Capital

The Working Capital is the difference between Current Assets and Current Liabilities as shown below:

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

Figure 12. Sample Loan Covenant Compliance Report for Lenders. (Data was derived, in part, from the projections shown in Figure 2.)

Loan Covenant Compliance Report				
Type of Covenant	Frequency Measured	Calculation	Steady State Year	Covenant
<i>Debt Service Coverage</i>	Quarterly	Net Income (4 rolling qtrs)	189,360	
		+ Income Taxes	-	
		+ Interest	162,918	
		+ Rent	4,315	
		+ Depreciation	281,036	
		+ Amortization	-	
		= EBITDAR	637,628	
		Interest	162,918	
		+ Principal	96,136	
		+ Rent	4,315	
= Debt Service & Rent Coverage	263,369	2.42	1.25	
<i>Interest Coverage</i>	Quarterly	Net Income	189,360	
		+ Income Taxes	-	
		+ Interest	162,918	
		EBIT	352,278	
Interest Coverage	162,918	2.16	2.00	
<i>Net Working Capital</i>	Quarterly	Current Assets	387,192	
		+ Brd Herd @ Book Value	412,500	
		= Adj Current Assets	799,692	
		Current Liabilities	472,563	
		+ Term Debt on Brd Herd	-	
		= Adj Current Liabilities	472,563	
Net Working Capital	327,130	250,000		
<i>Current Ratio</i>	Quarterly	Adj Current Assets	799,692	
		Adj Current Liabilities	472,563	
		Current Ratio	1.69	1.25
<i>Tangible Net Worth</i>	Annual	Equity	1,035,541	
		- Intangibles	-	
		= Tangible Net Worth	1,035,541	900,000
<i>Leverage</i>	Quarterly	Total Assets	3,487,621	
		Tangible Net Worth	1,035,541	
		Percent Equity	29.7%	27.5%

A Working Capital standard is often included in the loan covenants defining a fixed dollar amount that must be maintained. A comparable metric is the Current Ratio which relates Current Assets to Current Liabilities. A minimum standard of 1.25 is often used for Current Ratio.

$$\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities}$$

Lenders often prefer Current Ratio over Working Capital, since the former is applicable to any size of the business.

Borrowing Base

As mentioned earlier, lenders will examine projections to determine if there is adequate cushion to cover variability in earnings during the term of the loan. Specifically, they are attempting to predict whether there will be adequate Net Loan Availability under the borrowing base.

Historical Financial Data

Lenders will want to see summaries of pertinent historical financial data, with a detailed accounting of variances from budget. Explanations should consider both variances that are positive (help the business) as well as negative (hurt the business). Variances should also explain whether the variances were due to a variation:

- from budget in the production volume (which would change the rate of consumption of inputs and volume of sales),
- in the units of inputs used per head or kg of product produced, or
- in the projected price paid for an input or price received for a product sold.

Figure 13 illustrates the partitioning of the variance in a P&L report into that part due to production and that part due to cost management.

Figure 13. P&L Report Illustrating the Partitioning of Variances into the Portions Due to Production and Cost.

Month Ending: 30-May-06						
No. Weeks: 4 Period No.: 10						
	Actual	Budget	Cost Variance		Variance due to:	
			Total	Percent	Prod'n	Cost
SALES						
Pigs Weaned	9,814	8,908	906	10%		
Cull Sows	330	195	135	69%		
Gilts Delivered	300	180	120	67%		
COST/WEANED PIG						
Net Sales	2.85	2.16	0.69	32%		
EXPENSES						
Purchased Animals	4.32	2.24	2.08	93%	(0.44)	2.52
Feed	7.05	6.92	0.13	2%	(0.72)	0.85
Animal Health	0.92	1.10	(0.17)	-16%	(0.09)	(0.08)
Trucking	0.41	0.66	(0.24)	-37%	(0.04)	(0.20)
Semen Fees	1.22	0.98	0.24	25%	(0.12)	0.36
Repairs & Maintenance	0.30	0.53	(0.22)	-43%	(0.03)	(0.19)
Utilities-LP	-	0.34	(0.34)	0%	-	(0.34)
Utilities-Electric	1.09	0.69	0.41	59%	(0.11)	0.52
Utilities-Other	0.02	0.06	(0.04)	-67%	(0.00)	(0.04)
Supplies	0.31	0.37	(0.06)	-15%	(0.03)	(0.03)
Production Payroll	4.78	5.35	(0.57)	-11%	(0.49)	(0.08)
Subtotal Controllable	20.44	19.23	1.22	6%	(2.08)	3.30
Other Facility Expenses	4.39	7.26	(2.87)	-40%	(0.45)	(2.42)
Inventory Adjustments	2.48	-	2.48	100%	(0.25)	2.73
Miscellaneous Expenses	0.01	0.10	(0.09)	-85%	(0.00)	(0.08)
Total Expenses	27.33	26.59	0.74	3%	2.78	(2.04)
Gross Profit (Loss)	(24.48)	(24.43)	(0.05)	0%	2.49	(2.54)
Total G&A	1.25	1.26	(0.01)	0%	(0.13)	0.12
Operating Income	(25.73)	(25.68)	(0.04)	0%	2.62	(2.66)
Interest Expense	-	-	-	0%	-	-
Other	-	-	-	0%	-	-
Total Other	-	-	-	0%	-	-
Total Expenses	28.58	27.84	0.74	3%	(2.91)	3.64
Net Income	(25.73)	(25.68)	(0.04)	0%	2.62	(2.66)

Marketing Agreements.

Text copies of all agreements, along with detailed explanations of their strengths and weaknesses, should be made available to lenders. As appropriate, the hypothetical revenues generated using the terms of the marketing agreement under historical market conditions should be generated to help the lender understand how the company would have performed had it sold under the agreement in past years. Start-up businesses will need to

conduct sensitivity analyses using a broad range of market prices to project how the agreement would work under diverse market conditions.

Net Worth

The Net Worth Statement is intended to reflect the fixed dollar value of equity that individual owners have in all of their investments. Lenders will want to see the degree to which owners have the ability to make additional investments in the business, whether they are equity or sub-debt.

■ **Managing Investor/Owner Relations**

Investors and owners, who use professionals to manage their business, will want to see several things:

Plans

A current Business Plan will be required by investors and some lenders, who will likely expect that plans include:

- a thorough market analysis,
- an identification of those things that could go wrong with the plan along with likely solutions,
- financial projections, and
- plan for growth

Some investors will want to see a defined exit strategy and/or a plan for selling the business. A separate Operational Plan may be required which details the facilities and management practices used to produce pigs.

Financial Data

Production and financial summaries should be made available monthly and include narrative explanations. Financial projections and budgets should be completed well in advance of upcoming fiscal years.

Return on Equity

ROE is calculated as net income corrected for the average equity during a defined historical period, according to the formula:

$$ROE = NI/E$$

ROE uses historical information to calculate a single point in time metric, usually around annual returns. ROE typically does not take into account timing

from inception of a business or purchase of an asset until it is sold. **Figure 14** illustrates the calculation of ROE to an owner of a breeding farm who leased the facility to a pig producer.

Figure 14. Example Calculation of the ROE to the Owner of Breeding Farm after It Has Reached Steady State Production.

Site Equity	981,625
Total Start Up Capital	1,171,114
% Cost Overrun Factor	5.76%
Borrowing Base Cushion	67,417
Maximum Advance Limit	451,475
Herd Start Up Equity	787,056
Total Equity	1,768,681
Steady State Net Income	189,360
ROE	10.7%

Internal Rate of Return

IRR is a broader measurement of a return to an investment. It reflects the cash invested into a business relative to the cash that can be extracted over the term of the investment. For a swine business the term usually covers the time from when the business was launched through the projected end of ownership in the business, whether the business is sold to external investors or an individual's shares in the business are sold. The ending value used in the calculation of can be a projected sale or transfer value of a business. Unlike ROE, IRR takes into account the timing of cash in and cash out. Because pig businesses are, by nature, less liquid, the IRRs sought by investors are often greater than those expected by investors in the stock market. Expectations for returns of greater than 15% are common. Start-up businesses often consume considerable cash before generating a profit. They, therefore, tend to have lower IRRs than established businesses over the short term. **Figure 15** illustrates the calculation of the IRR to the owner of a leased breeding facility.

Figure 15. Example Calculation of the IRR to an Investor Using Debt Financing to Start Up a Breeding Herd.

	YEAR							
	0	1	2	3	4	5	6	7
Facility Equity	-981,625							
Ramp-up Equity		-787,056						
Cash Flow			369,305	369,305	369,305	369,305	369,305	369,305
Sales Price								1,846,524
Total	-981,625	-787,056	369,305	369,305	369,305	369,305	369,305	2,215,828
IRR								18.4%

NOTE: Sales price was determined as 5X steady state cash flow before taxes.

Distributions

Owners will want to see projections of distributions and their timing. Investors will need to see how their investments will be paid out and the impact of the distributions on the cash flows of the business.

Valuation of Investment

Owners will want to see projections that forecast how their investment will appreciate over time. In valuing investments made in pig operations, we often establish the value of the business over a 3-to-5-year period as a 5-fold multiple of either EBITDA or Net Income. There are numerous other methods for valuing businesses.

Capital Structure

As a business performs over time, the capital structure of the business changes. Owners and investors will want to see periodic updates of current equity and amounts of debt and sub-debt to be repaid.

Debt Structure

Owners will not only be keenly interested in the interest rates and terms of the loan but also, the covenants and personal guarantees being considered with new loans. In addition, they will want to be assured that closing costs are being managed.

■ Conclusion - What Is Everyone Looking For?

While everyone involved with a pig business has different needs, orientations, and goals, they should all be committed to the common goal of the business being financially successful. We believe that the more minds that work on the problems and opportunities of a business, the more likely the business will be successful. Business success appears to be more likely when all parties are united around a common business model, one which provides the correct balance of profits, risks, and leverage.

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