An Economic Evaluation of Low Investment Swine Production Systems

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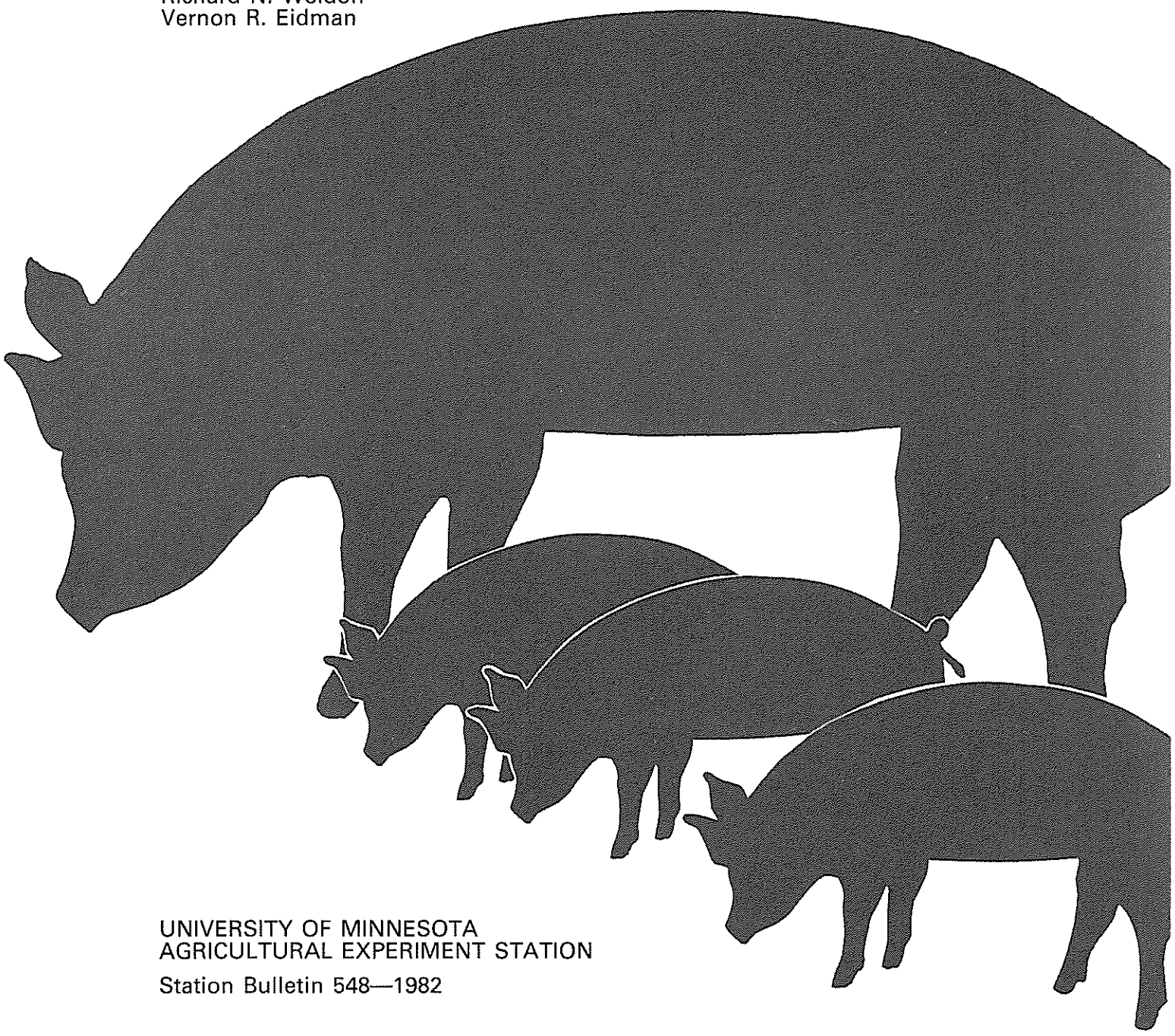

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This publication is one in a series on the economics of swine production and marketing in Minnesota. The other reports in this series are *An Economic Analysis of Three Confinement Farrow-to-Finish Systems,* Station Bulletin 533, 1979; *An Economic Analysis of Three Confinement Feeder Pig Systems,* Station Bulletin 534, 1980; *An Economic Analysis of Three Confinement Hog Finishing Systems,* Station Bulletin 535, 1980; and *Changing Marketing and Production Patterns of Minnesota Swine Producers,* Station Bulletin 542, 1981.

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This report describes and evaluates low investment swine systems. The analysis includes the calculation of annual enterprise budgets and projected cash flows for eight feeder pig producing systems, eight farrow-to-finish systems, and three hog finishing systems.

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An Economic Evaluation of Low Investment Swine Production Systems

Introduction

Swine are produced under a wide variety of production systems in Minnesota. These systems can be divided into feeder pig production, finishing of feeder pigs, and farrow-to-finish operations. The facilities used in the production of each group range from portable buildings and equipment on pasture to environmentally controlled confinement facilities.

Potential swine producers as well as those producers who are evaluating changes in their swine production system can use comparative data to help develop their plans. Data on the capital requirements, relative profitability, and cash flows of alternative production systems can be used to analyze adjustments in production systems. Such planning data are available for high investment confinement systems for farrow-to-finish operations, feeder pig production, and feeder pig finishing in Minnesota Agricultural Experiment Station Bulletins 533, 534, and 535 [9, 10, 7]. This publication summarizes an evaluation of smaller and lower investment swine production systems. The systems analyzed range from pasture operations with production during the warm months to operations with intensive year-round use of remodeled buildings. In each case the system emphasizes use of facilities that can be constructed and remodeled by the farm operator.

The report includes one section for each type of hog production: feeder pig production, farrow-to-finish operations, and hog finishing.

Feeder pig production includes a breeding herd, the farrowing of pigs, and the marketing of pigs at approximately eight weeks of age and weighing approximately 40 pounds (18.2 kg).

Farrow-to-finish operations include a breeding herd, the farrowing of pigs, feeding the pigs to approximately six months of age, and selling slaughter hogs weighing 220-230 pounds (100-104 kg).

Swine finishing operations include the purchasing of approximately eight-week-old feeder pigs weighing approximately 40 pounds (18.2 kg) and the selling of slaughter hogs weighing 220-230 pounds (100-104 kg).

Systems for each type of hog production were defined based on the number of litters produced (or farrowing periods) per year and the facilities used to house the enterprise. Nineteen individual systems were examined: eight feeder pig production systems, eight farrow-to-finish systems, and three hog finishing systems. Brief descriptions of these systems follow.

Description of Feeder Pig Systems

System A: This is a pasture operation with gilts in portable A-frame buildings farrowing one litter per year. The A-frame buildings also are used as nursery facilities. Portable gestation facilities provide protection from the weather for the breeding herd.

System B: This is a pasture operation with sows farrowing two litters per year in portable A-frame buildings. Both the nursery and gestation facilities are portable buildings.

System C: A remodeled uninsulated building, such as an old utility building or garage, is used to farrow two litters per year and for nursery facilities. An open front remodeled shed is used as the gestation facility.

System D: The remodeled farrowing building used in system C has insulation and mechanical ventilation added to allow farrowing over more of the year. Four litters are produced per year. The breeding herd is housed in a new open front shed.

System E: A remodeled dairy barn with neither insulation nor mechanical ventilation is used to farrow two litters per year and as a nursery. A new open front shed is used for gestation.

System F: The remodeled dairy barn used in system E has insulation and mechanical ventilation added to accommodate four litters per year. The barn also includes the nursery facilities. The breeding herd is housed in a new open front shed.

System G: The major building in this system is the remodeled dairy barn of system E with insulation, mechanical ventilation, and

concrete manure storage added. The barn is used to farrow six litters per year and to house the nursery unit. Breeding animals are housed in a new modified open front building.

System H: This system uses a new pole building for farrowing and as the nursery unit. The breeding herd is housed in another new pole building. Four litters are farrowed per year.

Description of Farrow-to-Finish Systems

The eight farrow-to-finish systems are identical to the eight feeder pig systems in terms of farrowing, nursery, and gestation facilities. Finishing facilities are added to complete the systems.

System A: This is a pasture operation with gilts in portable A-frame buildings farrowing one litter per year. The A-frame buildings also are used as nursery facilities. Portable gestation facilities are used to house breeding stock. Hogs are finished in a remodeled permanent building.

System B: This is a pasture operation with sows farrowing two litters per year in portable A-frame buildings. Portable buildings are also used as nursery and gestation facilities. Finishing is in a remodeled building such as an old utility shed or garage.

System C: An uninsulated remodeled building, such as a utility building or garage, is used for farrowing two litters per year and for the nursery. An open front remodeled shed is used to house the breeding herd. Another remodeled building is used to finish slaughter hogs.

System D: The remodeled farrowing/nursery building used in system C has insulation and mechanical ventilation added to allow farrowing over more months of the year. Four litters are produced per year. The breeding herd and hogs being finished are housed in new open front sheds.

System E: A remodeled uninsulated dairy barn is used for farrowing two litters per year and as a nursery. A new open front shed is used to house the breeding herd, and a remodeled building is used to finish hogs.

System F: Insulation and mechanical ventilation are added to the remodeled dairy barn used in system E, making it possible to farrow four litters per year. New open front sheds are used for gestation and finishing facilities.

System G: The remodeled dairy barn used in system F provides farrowing facilities. A nursery unit and concrete manure storage are added so the building can be used for six litters per year. The breeding herd is housed in new modified open front facilities. Finishing is done in a new open front shed.

System H: A new pole building is used for farrowing and for housing the nursery unit, which is large enough to hold the pigs during the early growing phase during winter months. The breeding herd is housed in another new pole building. A new open front shed is used for finishing the four litters produced annually.

Description of Hog Finishing Systems

System A: This pasture system has seven acres of high quality pasture and sun shades for shelters. It can be used to finish one group of pigs per year.

System B: This is a dirt lot system with two acres of land and sun shades for finishing one group of pigs per year.

System C: A remodeled building and a small adjacent outside lot are used to finish one group of pigs during the summer; a second group of pigs can be finished inside during the winter.

Method of Analysis and Assumptions

The discussion for each type of production is divided into several subsections. The first subsection presents an annual **production calendar** that outlines the timing of production activities and the animal flow through the facilities. This provides the basis for the analysis.

A 16-sow farrowing unit is the basic unit for the feeder pig production and the farrow-to-finish systems. A group of 140 purchased feeder pigs is the basic unit for the hog finishing systems. The size and production of the individual systems increase as the number of basic units increases.

The number of pigs weaned per litter is one major assumption that affects production for the feeder pig and farrow-to-finish systems. In this study, those numbers were:

System A: 7.0 pigs weaned per litter
System B: 7.0 pigs weaned per litter
System C: 7.0 pigs weaned per litter
System D: 7.3 pigs weaned per litter
System E: 7.0 pigs weaned per litter
System F: 7.3 pigs weaned per litter
System G: 7.5 pigs weaned per litter
System H: 7.3 pigs weaned per litter

These litter sizes reflect the type of facility used for farrowing, the season of year that farrowing takes place, and the age of the females being farrowed. System A is an all-gilt herd that is planned to farrow during ideal weather conditions. Systems B-H assume a herd made up of sows and replacement gilts. When an all-gilt herd is used for systems B-H (during the startup period, for instance), the number of pigs weaned per litter is assumed to be reduced by .7.

The assumed levels for several other biological factors are important in determining the level of production and animal flow of the hog systems. Table 1 summarizes the standards assumed for conception rates, culling rates, and death loss.

The impact of conception rates, culling rate, and death loss on the animal flow for one group of females in the breeding herd for the feeder pig producing and farrow-to-finish systems is shown in figure 1. This 52-week period begins with the initial breeding of 20 gilts. The 80-percent conception rate and 4-percent death loss assumed results in the sale of three unbred gilts and the death of one gilt. The remaining 16 bred gilts go through 114 days of gestation and farrow. Of the 16 females that have farrowed, three sows are culled in accordance with the 20-percent culling rate, and one sow dies. The 20-percent culling rate and 4-percent death loss used in the analysis result in no sow being held for more than four farrowings or two years. The 12 sows that remain are combined with 6 replacement gilts and bred. With an assumed conception rate of 90 percent for the sows and 80 percent for the gilts, all but one sow and one gilt are bred, leaving a 16-female unit consisting of 11 sows and 5 gilts. One deviation in this schedule occurs when breeding takes place in late July or during August. Because of the heat at that time of the year, the assumed conception rates are reduced to 80 percent for sows and 70 percent for gilts. Also, system A only produces one litter per year. It is assumed that all sows are culled; only gilts are maintained for breeding the following year.

In addition to the above assumptions on reproduction, the number of hogs marketed during any time period is affected by the rations fed, the number of days on feed, and the rate of gain. The assumed number of days a pig is fed a particular ration is shown in table 2. The analysis assumes that feeder pigs will reach market weight at 65 days, that 220-pound market hogs produced in farrow-to-finish operations will reach market weight at 180 days, and that purchased feeder pigs will reach market weight at 120 days.

Market hogs are assumed to average 1.4 pounds of gain per day while on grower ration (from 40 to 110 pounds) and 1.7 pounds gain per day during the finishing period.

The days-on-feed for feeder pigs or market hogs is affected directly by the rations fed and the level of feeding. The seven basic rations used in this study

Table 1. Performance standards

Item	Sows	Gilts
Conception rates	----------percent----------	
September-June breeding	90	80
July and August breeding	80	70
Culling rate after lactation[1]	20	—
Death loss[2]	4	4

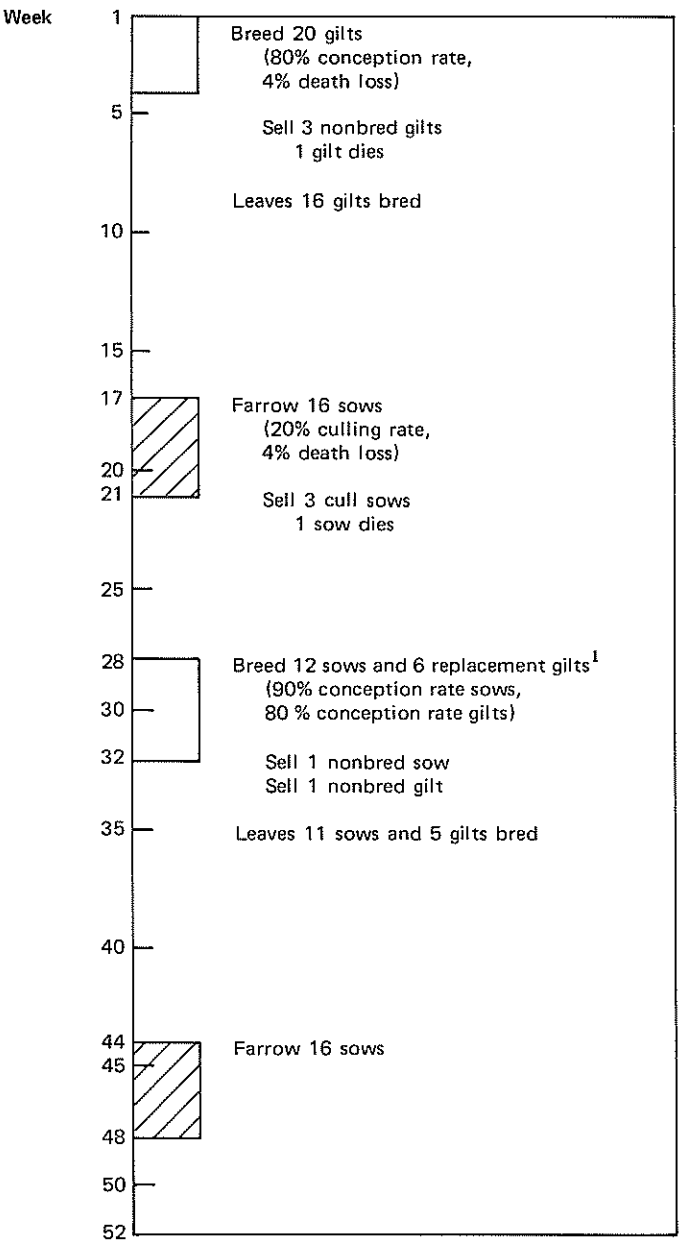
[1]The culling rate for system A is 100 percent.

[2]The death loss for slaughter hogs for the period from weaning to market weight is 2.5 percent for farrow-to-finish systems and 3.0 percent for hog finishing systems.

Table 2. Days on feed for pigs

	Weight of pig		Number of days		
Ration fed	Begin	End	Feeder pigs	Farrow to finish	Hog finish
Creep	—	15	28	28	—
Starter	15	40	37	37	—
Grower	40	110	—	50	50
Finishing	110	220	—	65	70
			65	180	120

Figure 1. Effect of conception rates, culling rates, and death loss on the breeding herd for 52 weeks beginning at startup with all gilts



[1]If breeding takes place in late July or August, an all-gilt herd of 23 will be needed due to the lower (70%) conception rate during this period. A sow-gilt herd will require 9 replacement gilts to compensate for the 80% and 70% conception rates for sows and gilts.

Table 3. Rations

Ingredient	Growing	Finishing	Gestation and boars	Farrowing/ lactation	Creep	Starter
	percent					
Corn[1]	80.5	86.6	80.1	69.0	44.7	71.5
Soybean meal (48.5%)[2]	17.0	10.7	16.2	17.5	22.0	25.0
Wheat bran	—	—	—	10.0	—	—
Sugar	—	—	—	—	10.0	—
Rolled oats	—	—	—	—	20.0	—
Vitamin-mineral supplement[3]	2.5	2.7	3.7	3.5	3.3	3.5
Composition						
Protein	16.0	13.0	15.0	16.0	18.0	18.0
Calcium	0.65	0.5	0.9	0.8	0.8	0.8
Phosphorous	0.50	0.5	0.6	0.6	0.6	0.6

[1]Ground milo can replace corn in the rations on a 1 to 1 basis. If ground barley is used to replace the corn, the quantity of soybean meal must be reduced by 10 percent and replaced by an equal amount of ground barley. The feeding of ground barley will not affect the level of feed intake by the hogs, but it will reduce the rate of gain by up to 10 percent.

[2]If 44 percent protein rather than 48.5 percent soybean meal is fed, increase the amount of soybean meal and reduce the amount of corn by 12 percent.

[3]The trace mineralized salt should contain at least .008 percent iodine.

were recommended by University of Minnesota animal scientists [12, 13, 14, 15]. They are presented in table 3.

Table 4 summarizes the feeding rates used in the analysis. The pounds of ration fed per head per day varied by season of the year and according to whether the animal was in pasture or drylot, as well as by the size of the animal and its stage in the reproduction cycle.

Other rations and feeding rates may be more economical and efficient for different prices, availability of feed ingredients, and general management practices. But these rations and feeding rates meet the nutritional requirements for the size of hogs included and can be expected to provide standard growth rates for swine in Minnesota.

The second subsection of the analysis, the estimated total **investment cost** for buildings and equipment, is based on the cost for the components and necessary materials for each system. Average Upper Midwest material prices for mid-1980 were used in estimating investment costs. Reasonable work rates for individuals familiar with routine construction and maintenance of small farm facilities were assumed in making the hourly construction labor estimates. Actual investment costs may differ substantially among producers because of the variation in material costs and the amount of hired labor used in building the facilities. And, of course, the hours of labor required will vary according to the experience and skill of the individual worker. No dollar value was placed on the operator's construction labor since this would be determined by the opportunity cost for an individual's time.

The space needs per hog and the number of hogs determine the size of the facilities required. The space requirements recommended by the Midwest Plan Service [21, 22] were used in this study. They are summarized in table 5.

Investment costs for construction and remodeling were based on typical purchase prices for materials and supplies at local lumber yards. Design of the facilities was based on plans available from the Mid-

Table 4. Daily feeding rates

	Pounds per day, summer	Pounds per day, winter
Market hogs and replacement gilts to prebreed		
Grower ration: 40-110 lb.	4.3	5.3
Finishing ration: 110-220 lb.	6.5	7.5
Sows and gilts		
Pasture prebreed and gestation ration	3.3	5.5
Drylot prebreed and gestation ration	4.5	5.5
Flush gilts	6.5	7.5
Farrowing pasture	4.0	—
Farrowing drylot	5.0	5.0
Lactation sows (summer and winter)	3.0 plus 1 lb. per pig nursing per day	
Pigs		
Creep: 1 week to 15 lb.	0.1	0.1
Starter: 15-40 lb.	1.8	1.8
Cull sows		
Finishing ration	6.5	7.5
Boars	6.0	7.0

Table 5. Space requirements

Square feet of floor space per hog

	Open front housing	Confinement housing
Sows and boars	15 covered, 10 outdoors	15-20
Sow and litter		35
Pigs to 60 lb.		3
60-125 lb.	4 covered, 6 outdoors	6
125 lb. and up	5 covered, 7 outdoors	8

Pasture space

10 gestating sows/acre
7 sows with litters/acre
50 to 100 growing-finishing pigs/acre, depending on type and yield of forage

Shade space

15-20 sq. ft./sow
20-30 sq. ft./sow and litter
4 sq. ft./pig to 100 lb.
6 sq. ft./pig over 100 lb.

Feeder and waterer space

Self-feeders: one space per 4-5 pigs
Supplement feeders: one space per 15 pigs
Sow feeders: 1 ft./sow self-fed, 2 ft./sow all fed at once
Waterers: one space per 20-25 pigs

west Plan Service [17, 21, 22]. A more complete description of the systems, including facility plans, is contained in University of Minnesota Department of Agricultural and Applied Economics Staff Paper P81-111 [24]. An additional 20 percent was added to the initial cost of materials and supplies to cover miscellaneous items. Certain portions of these investment costs are eligible for investment tax credit. Such items as the fences, paved outside aprons, feeders, and waterers would qualify for the 10 percent investment credit. But, since part of the investment cost will not qualify and because the tax situation would differ widely for individuals considering these systems, no investment credit was deducted. Individuals who can utilize investment credit may want to include the appropriate amount of investment credit in the cash flow at the time the credit would be received. Additional information on property that qualifies for investment credit is provided in the *Farmers Tax Guide* [8].

Average annual enterprise budgets (projected average annual costs and returns) were calculated for each system to summarize the estimated gross receipts, total operating inputs and costs, total ownership costs, and net returns to the operator's land, labor, and management. Enterprise budgets provide an estimate of the profitability of an enterprise based on projected costs and returns for the "average" year.

Prices for major feed inputs and livestock sales were based on five-year planning prices prepared by extension agricultural economists at the University of Minnesota and reported in *Minnesota Farm Planning Prices* [20]. The major prices used were:

Corn: $3.00 per bushel
Soybean meal: $14.50 per hundredweight
Feeder pigs: $50.00 per head
Market hogs: $52.00 per hundredweight

Estimates for the major operating cost—feed—were based on the production calendar and the assumed rations and feeding rates. Another operating input considered was energy. Three types of energy consumption were estimated as operating costs: electricity for lighting and ventilation, L.P. gas (or natural gas) for space heating, and gasoline and diesel fuel to run machinery and equipment for such things as manure handling and disposal.

The level of energy consumption on a livestock operation is a function of many variables, including animal numbers, inside-outside temperature, and size of equipment. In this study the requirements for a kilowatt hour (KWH) of electricity were derived from estimates of KWH usage per month for the electrical equipment [5] used in a given system. The heating calculations take into consideration the number of animals in the building, the ventilation rate, expected building heat loss, a desired inside temperature of 70° F. in the farrowing house and 80° F. in the nursery, and the expected outside temperature based on historical data for Minnesota. The gasoline and diesel fuel requirements for manure handling reflect the level of manure the system is expected to produce, the type of manure handling system, and the size of the tractor.

The estimated energy requirements for the various types of electrical equipment are given in appendix A. Also provided in appendix A are the equations and data used to calculate the supplemental heat requirements and the temperature data.

The other operating cost items were based on actual farm accounts (2), research findings [3, 4, 23], and mid-1980 prices. These cost items are listed in each enterprise budget. The *Hog Producers Planning Guide,* prepared by the University of Minnesota Agricultural Extension Service, contains annually updated operating cost information [11]. Labor requirements for operating each system were estimated on an annual basis [16]. No dollar cost was placed on the labor, since this would be determined by the opportunity cost for the individual operator's time.

Ownership costs are the annual cash and noncash costs for the investment in the hog system. They include depreciation, interest on the money invested, real estate taxes, and insurance. Interest on the investment in this study was calculated at an annual rate of 12 percent, which reflects cash interest expenditures, the opportunity cost of owner equity, or both. The largest ownership cost is depreciation on the facilities. The remodeled facilities were assumed to have a useful life of seven years, whereas new facilities were expected to be fully depreciated over 12 years. The livestock investment was calculated as an average investment of $160 for gilts, $200 for sows, and $300 for boars. These prices are the average of their assumed purchase price and salvage value. Insurance on the investment for buildings, machinery, and livestock was estimated to be 0.6 percent of the average investment. Taxes were estimated as one percent of the average investment in buildings.

The sensitivity of average annual net returns to changes in certain prices was examined. Changes in net returns were calculated for price changes in corn, soybean meal, slaughter hogs, and feeder pigs. The sensitivity to changes in the number of pigs marketed per litter and the pounds of feed per hundred pounds of pork produced is also shown.

It is also useful to project cash receipts and expenses for the startup period, when capital outlays typically exceed cash income from the swine enterprise. The projected **monthly cash flow** estimates the cash receipts and the cash expenditures, both operating and investment capital, on a month-by-month basis. The projected cash flow for the first and second years indicates how much capital the hog operator will have to obtain from other sources to start the enterprise, and the expected repayment capacity. Completing the cash flow projections for succeeding years provides information on the payback period and the amount of time needed to repay the initial investment.

The projected cash flows were based on the construction and investment calendar for getting equipment and buildings in place and functioning on the farm, and on the production schedule for purchasing

the breeding stock and farrowing the first litter. Obviously, these two time schedules are interdependent. The breeding stock cannot be purchased until the gestation facilities are ready for use, and the farrowing facilities must be ready before the first farrowing.

A construction and production schedule for the first and second years of operation was projected for each swine system. These schedules form the basis for the cash flow analysis of the systems. The analysis assumed that no construction of new structures could take place until the frost had left the ground, but that remodeling of existing structures could start somewhat earlier. Payment for construction materials was assumed to be made when the materials were used. Purchases of livestock and machinery were also assumed to be made when those items were scheduled to be placed in service or used on the farm. For some systems, for example, the first group of gilts would be purchased after half the gestation building had been completed.

Detailed cash flow projections for year one through the average year of production were made for all systems. These cash flow projections assumed that average annual prices remain constant over the years analyzed, although the base price of feeder pigs and slaughter hogs was seasonally adjusted. Withdrawals for family living expenses, labor, and income taxes were not included in the projected cash flows. These cash outflows depend on the individual and on factors beyond the scope of this study. The cash flow analysis concludes with an estimate of the time required to repay the total accumulated debt for the various systems, first if there is no charge for labor and then if labor costs $5 per hour.

Feeder Pig Production Systems

The eight feeder pig production systems described above are analyzed in this bulletin. System B, the two litter pasture operation, and system D, the four litter system using a remodeled building, are discussed in detail. A summary of the analysis is then presented for all eight systems.

The production calendar for the average year of operation for these two systems is shown in figure 2. System B has farrowing taking place during mid-March to mid-April and also in September; sales are in May and November. System D has two sow groups scheduled to farrow alternately in January, April, July, and October, with feeder pig sales following in March, June, September, and December.

The animal flows and the assumed space requirements form the basis for the facilities described in tables 6 and 7. Listed are all items that must be constructed, remodeled, or purchased, with a brief description, the number of units, cost per unit, and total cost for each. New construction costs include all materials. Remodeling costs include the lumber, hardware, electrical supplies, plumbing supplies, and concrete. Both the wooden farrowing crates that are constructed and the purchased steel crates contain waterers and feeders. In some systems, such as system B, certain common items, such as feeders and waterers, are used for both farrowing and gestation; these items are included in investment costs for the gestation facilities. No labor costs or wage rates are included in these estimates. So, if it is necessary to hire part of the construction labor (the concrete work, for example), then that cost must be added to the investment costs. Farrowing facilities cost $3,560 for system B and $9,000 for system D. Gestation facilities are $6,244 and $9,666 for systems B and D. The addition of machinery and equipment increases the total estimated investment costs to $10,249 and $24,611 for systems B and D. The production calendars, facilities, and investment costs for the remaining systems are given in appendix C.

Enterprise Budgets for Average Year of Operation

The enterprise budgets for systems B and D shown in tables 8 and 9 list expected sales based on the production calendar for an average year of operation. Prices for culled breeding stock are based on $52 per hundredweight for market hogs and the normal price differences for other classes of swine commonly paid at the South St. Paul market [18].

The annual price of $50 per head for feeder pigs was seasonally adjusted for each marketing month. The feeder pig price index was calculated from the average prices paid by the Wisconsin Feeder Pig Marketing Cooperative [25] for 1970 through 1979. The monthly prices and the seasonal index are presented in appendix B.

The production calendar provides information on annual animal numbers over time for each system. Combining these numbers with the rations fed and the corresponding feeding rates yields an estimate of the amount of feed needed for each operation. The budgets give the calculated annual amounts of corn and soybean meal (48.5%) and the pounds of other feed ingredients necessary for each system. These figures reflect winter feeding from November through March, increased replacement numbers for summer breeding, and reduced feed for pasture systems.

Net returns above costs shown is the residual return to labor, management, and land. Systems B and D show net returns above costs shown of $2,043.89 and $4,584.57. Average annual enterprise budgets for the other systems are shown in appendix C. A comparison of net returns for the eight systems is included in the summary for this section.

Sensitivity of Net Returns to Changes in Prices

Relative feed and hog prices vary to some extent by area depending on transportation costs and local market conditions. Because of differences in managerial ability, some producers may wean more pigs per litter

Figure 2. **Production calendar for average year of operation, feeder pig systems B and D**

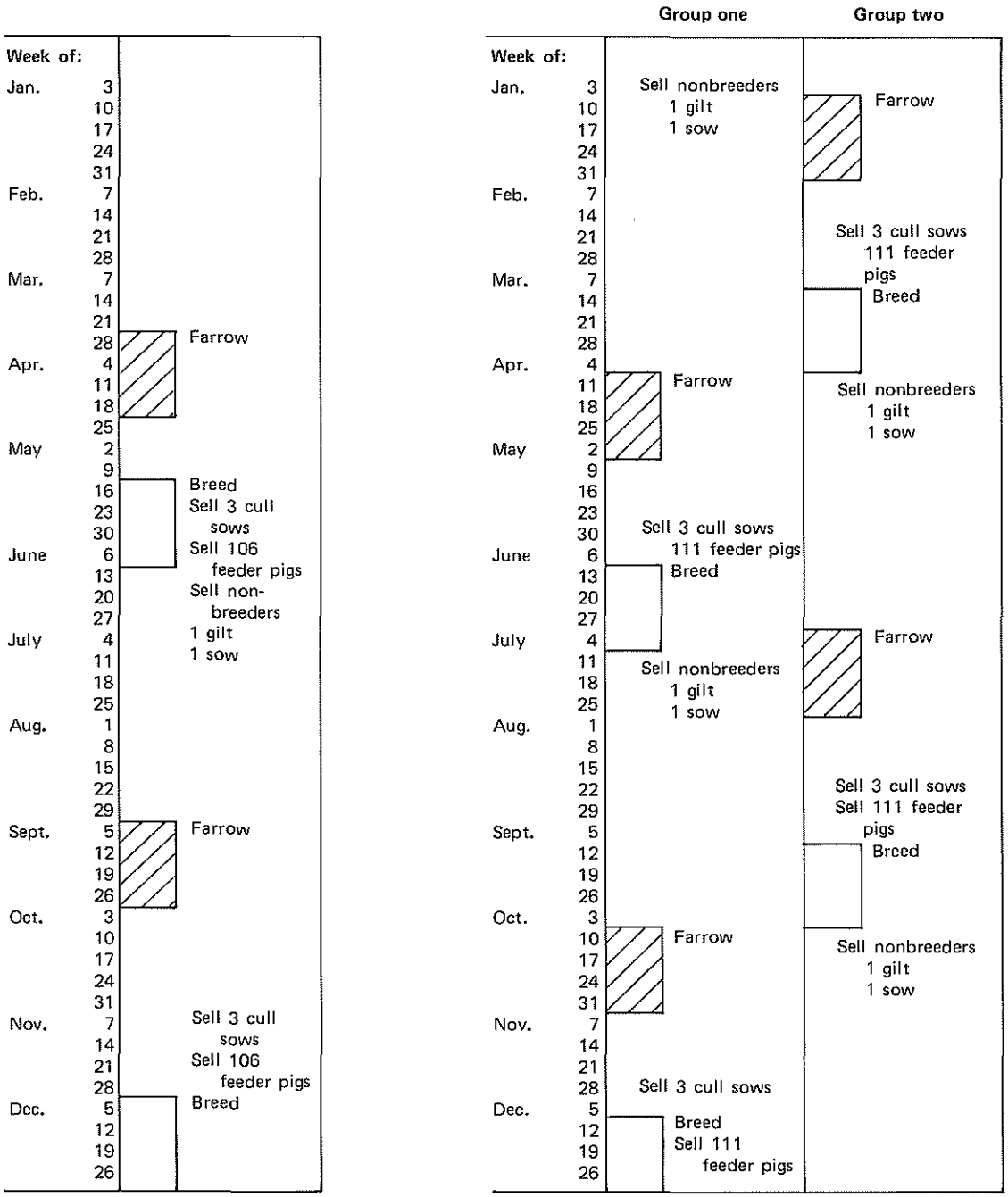


Table 6. Facilities required, investment cost, and labor required for construction for system B, two litters per year

Item	Size and description	Units	Cost per unit	Total
Farrowing facilities 1a (pasture system, 16 A-frame huts)				
Farrowing huts	7′ x 7′ 11″ wood A-frame	16	$115	$ 1,840
Waterers	95-gallon stock tank	1	73	73
	2 ft. trough	1	11	11
	Pig cups-pans	8	8	64
Portable nursery shelters	11′ x 16′ portable	2	785	1,575
Total				$ 3,560
Gestation facilities 1 (pasture system, 16 sows, 6 gilts, 3 boars)				
Sow shelters	8′ x 16′ portable	2	$763	$ 1,526
Boar shelters	6′ x 8′ portable	1	285	285
Feeders	8 ft. trough	2	55	110
	2 ft. trough	2	14	28
Waterers	2-hole frost proof	1	95	95
Plumbing and electrical	Water line hydrant, electrical for water heaters			960
Fencing and posts	3,240′		1/ft.	3,240
Total				$ 6,244
Equipment and machinery				
Loading and sorting chutes				$ 445
Total equipment, machinery, and facilities investment				$10,249
Total hours of labor for construction				230

Table 7. Facilities required, investment cost, and labor required for construction for system D, four litters per year

Item	Size and description	Units	Cost per unit	Total
Farrowing facilities 3 (remodeled building with insulation and mechanical ventilation)				
Farrowing house	Remodel and insulate 16′ × 28′ building	2	$ 5.77/sq. ft.	$ 5,170
Farrowing crates	Wooden	16	100	1,600
Heating	40,000 Btu/hr. unit	2	260	520
	250 Watt heat lamps	14	15	210
Ventilation	6 fans (160, 1040, 1680 CFM)			1,500
Total				$ 9,000
Gestation facilities 4 (new open front shed with lot, 32 sows, 12 gilts, 3 boars)				
Building	16′ × 64′ open front	1,024 sq. ft.	$ 2.57/sq.ft.	$ 2,627
Concrete	In building, lot, apron	2,816 sq. ft.	.58/sq ft.	1,663
Fencing	Pen dividers	250 ft.		486
	Outside fence			250
Feeders	16-hole fence-line	3	325	975
	2-hole feeder	2	100	200
Feed system	3-ton bin and auger			1,625
Waterers	2-hole frost proof	4	100	400
Plumbing and electrical				1,440
Total				$ 9,666
Equipment and machinery				
Loading and sorting chutes				$ 445
Manure spreader, 100-bushel dry				2,000
Used skid loader				3,500
Total				$ 5,945
Total equipment, machinery, and facilities investment				$24,611
Total hours of labor for construction				464

Table 8. Average annual costs and returns for the 16-sow feeder pig production system B

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Litter
1.	GROSS RECEIPTS						
	FEEDER PIGS	1.00	HD.	56.40	106.00	5978.40	
	FEEDER PIGS	1.00	HD.	43.35	106.00	4595.10	
	GILT N. B.	2.90	CWT.	48.00	2.00	278.40	
	SOW N. B.	3.60	CWT.	45.00	2.00	324.00	
	SOW CULL	3.70	CWT.	44.00	6.00	976.80	
	BOAR	4.50	CWT.	39.00	3.00	526.50	
	TOTAL					12679.20	396.23
2.	OPERATING COSTS						
	CORN		BU.	3.00	861.50	2584.50	
	SOYBEAN MEAL		CWT.	14.50	116.00	1682.00	
	MINERALS		LBS.	.05	2230.20	111.51	
	OATS		LBS.	.07	125.20	8.76	143.39
	WHEAT BRAN		LBS.	.05	1120.00	56.00	
	SUGAR		LBS.	.17	62.60	10.64	
	GRIND & MIX		TONS	4.50	30.00	135.00	
	VET & MED.		DOL.	1.00	251.00	251.00	
	ELECTRICITY		KWH	.05	2135.00	117.42	
	INS. AND TAXES		DOL.	1.00	190.00	190.00	
	HAULING & MKTG.		DOL.	1.00	390.00	390.00	
	MISCL EXPENSE		DOL.	1.00	204.00	204.00	103.30
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			57.45	
	MACHINERY(FUEL,LUBE,REP)		DOL.			3.11	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			575.06	
	INTEREST ON OPER.CAP.,		DOL.	.12		167.47	
	TOTAL OPERATING COSTS					7893.93	246.69
3.	INCOME ABOVE OPERATING COSTS					4785.27	149.54
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	4260.00	511.20	
	INT. ON EQUIPMENT		DOL.	.12	5124.50	614.94	
	INT. ON MACHINERY		DOL.	.12	282.23	33.87	
	DEPR. ON EQUIPMENT		DOL.			1437.65	
	DEPR. ON MACHINERY		DOL.			34.47	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			109.25	
	TOTAL OWNERSHIP COSTS					2741.38	85.67
5.	TOTAL COSTS SHOWN					10635.31	332.35
6.	NET RETURNS ABOVE COSTS SHOWN					2043.89	63.87

2 LITTER-16 SOWS FARROWING IN PORTABLE A-FRAME BUILDINGS.
PORTABLE NURSERY AND GESTATION FACILITIES.

Table 9. Average annual costs and returns for the 32-sow feeder pig production system D

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Litter
1.	GROSS RECEIPTS						
	FEEDER PIGS	1.00	HD.	56.65	111.00	6288.15	
	FEEDER PIGS	1.00	HD.	49.55	111.00	5500.05	
	FEEDER PIGS	1.00	HD.	48.05	111.00	5333.55	
	FEEDER PIGS	1.00	HD.	43.35	111.00	4811.85	
	SOW N. B.	3.60	CWT.	45.00	4.00	648.00	
	GILT N. B.	2.90	CWT.	48.00	4.00	556.80	
	SOW CULL	3.70	CWT.	44.00	12.00	1953.60	
	BOAR	4.50	CWT.	39.00	3.00	526.50	
	TOTAL					25618.50	400.29
2.	OPERATING COSTS						
	CORN		BU.	3.00	1727.90	5183.70	
	SOYBEAN MEAL		CWT.	14.50	234.00	3393.00	
	MINERALS		LBS.	.05	4478.30	223.92	
	OATS		LBS.	.07	261.60	18.31	144.41
	WHEAT BRAN		LBS.	.05	2293.30	114.67	
	SUGAR		LBS.	.17	130.80	22.24	
	GRIND & MIX		TONS	4.50	63.60	286.20	
	VET & MED.		DOL.	1.00	444.00	444.00	
	INS. AND TAXES		DOL.	1.00	330.00	330.00	
	HAULING & MKTG.		DOL.	1.00	718.00	718.00	
	LP GAS		GAL.	1.00	664.00	664.00	
	ELECTRICITY		KWH	.05	15700.00	863.50	109.24
	MISCL EXPENSE		DOL.	1.00	252.00	252.00	
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			1244.47	
	MACHINERY(FUEL,LUBE,REP)		DOL.			33.32	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			667.11	
	INTEREST ON OPER.CAP.,		DOL.	.12		424.75	
	TOTAL OPERATING COSTS					16233.18	253.64
3.	INCOME ABOVE OPERATING COSTS					9385.32	146.65
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	7620.00	914.40	
	INT. ON EQUIPMENT		DOL.	.12	9555.50	1146.66	
	INT. ON MACHINERY		DOL.	.12	1702.39	204.29	
	DEPR. ON EQUIPMENT		DOL.			2128.30	
	DEPR. ON MACHINERY		DOL.			198.28	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			208.82	
	TOTAL OWNERSHIP COSTS					4800.75	75.01
5.	TOTAL COSTS SHOWN					21033.93	328.66
6.	NET RETURNS ABOVE COSTS SHOWN					4584.57	71.63

4 LITTER-32 SOWS A REMODELED INSULATED AND VENTILATED BUILDING FOR FARROWING NEW OPEN FRONT SHED FOR GESTATION.

than others. Tables 10 and 11 can be used to assess the effect of such differences on the net returns shown in the enterprise budgets. They can also be used to assess the effect of short-run adjustments (the uncertainty) in relative prices and the variability in pigs weaned per litter on net returns for the enterprise. Relatively wide ranges are shown in order to include the likely adjustments. Users can interpolate to estimate the effect of smaller changes.

Tables 10 and 11 show the sensitivity of annual net returns to various price levels for systems B and D. The upper portion of each table shows the change in net returns associated with changes of $3 and $6 in the average annual price of feeder pigs and changes of 50¢ and $1 per bushel in the price of corn. The middle part shows the effect of changes in the prices of corn and soybean meal. The change in net returns is calculated for 50¢ and $1 changes in the price of corn per bushel, with $3 and $6 price changes per hundredweight of soybean meal. The sensitivity of net returns to a change of 0.5 and 1.0 pigs weaned per litter is shown for each of the feeder pig price levels in the lower part of each table.

Table 10. Effect of changes in prices and pigs weaned per litter on net returns above cost shown for feeder pig system B

		Price of feeder pigs per head				
		$43.88	$46.88	$49.88	$52.88	$55.88
		changes in net returns				
Price of corn per bushel	$ 2.00	-410.50	225.50	861.50	1,497.50	2,133.50
	$ 2.50	-841.25	-205.25	430.75	1,066.75	1,702.75
	$ 3.00	-1,272.00	-636.00	.00	636.00	1,272.00
	$ 3.50	-1,702.75	-1,066.75	-430.75	205.25	841.25
	$ 4.00	-2,133.50	-1,497.50	-861.50	-225.50	410.50
		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundred-weight	$ 8.50	1,557.50	1,126.75	696.00	265.25	-165.50
	$11.50	1,209.50	778.75	348.00	-82.75	-513.50
	$14.50	861.50	430.75	.00	-430.75	-861.50
	$17.50	513.50	82.75	-348.00	-778.75	-1,209.50
	$20.50	165.50	-265.25	-696.00	-1,126.75	-1,557.50
		Price of feeder pigs				
		$43.88	$46.88	$49.88	$52.88	$55.88
		changes in net returns				
Pigs weaned per litter	6.0	-2,676.16	-2,136.16	-1,596.16	-1,056.16	-516.16
	6.5	-1,974.08	-1,500.16	-798.08	-210.08	377.92
	7.0	-1,272.00	-636.00	.00	636.00	1,272.00
	7.5	-596.92	114.08	798.08	1,482.08	2,166.08
	8.0	132.16	864.16	1,596.16	2,328.16	3,060.16

Table 11. Effect of changes in prices and pigs weaned per litter on net returns above costs shown for feeder pig system D

		Price of feeder pigs per head				
		$43.40	$46.40	$49.40	$52.40	$55.40
		changes in net returns				
Price of corn per bushel	$ 2.00	-936.10	395.90	1,727.90	3,059.90	4,391.90
	$ 2.50	-1,800.05	-468.05	863.95	2,195.95	3,527.95
	$ 3.00	-2,664.00	-1,332.00	.00	1,332.00	2,664.00
	$ 3.50	-3,527.95	-2,195.95	-863.95	468.05	1,800.05
	$ 4.00	-4,391.90	-3,059.90	-1,727.90	-395.90	936.10
		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundred-weight	$ 8.50	3,131.90	2,267.95	1,404.00	540.05	-323.90
	$11.50	2,429.90	1,565.95	702.00	-161.95	-1,025.90
	$14.50	1,727.90	863.95	.00	-863.95	-1,727.90
	$17.50	1,025.90	161.95	-702.00	-1,565.95	-2,429.90
	$20.50	323.90	-540.50	-1,404.00	-2,267.95	-3,131.90
		Price of feeder pigs				
		$43.40	$46.40	$49.40	$52.40	$55.40
		changes in net returns				
Pigs weaned per litter	6.3	-5,441.60	-4,301.60	-3,160.60	-2,021.60	-881.60
	6.8	-4,052.80	-2,816.80	-1,580.00	-344.80	891.20
	7.3	-2,664.00	-1,332.00	.00	1,332.00	2,664.00
	7.8	-1,275.20	152.80	1,580.00	3,008.80	4,436.80
	8.3	113.60	1,637.60	3,161.60	4,685.60	6,209.60

Table 10 indicates that if the price of feeder pigs falls by $3 per head to $46.88 and the price of corn increases from $3 to $3.50 per bushel, then net returns for system B will fall $1,066.75 to $977.14 per year. Another $3 decrease in feeder pig prices and a 50¢ increase in the price of corn would result in negative net returns for system B. Table 11 shows similar results for system D, except that in none of the price situations would system D have negative annual net returns. Similar information for the other systems is contained in appendix C.

Cash Flow Projections

Projected monthly cash flows were calculated for all systems from startup year through an average year of operation. These cash flows were based on the construction and production calendar for each system. Figures 3 and 4 illustrate the two-year construction and production calendar for systems B and D. Construction of the fence and gestation shelter for system B takes place in late March or early April, weather permitting. The A-frames and nursery shed are built in June and July. Construction of the new gestation facilities for system D is partially completed in April to allow for the purchase of the first group of gilts. The gestation facility is completed by the end of July. The farrowing facility is remodeled in August. Purchases and sales of livestock take place relative to the construction and breeding schedules. Construction and production calendars for the remaining systems are given in appendix C.

Tables 12-15 show the monthly enterprise cash flow projections for systems B and D for the years depicted in figures 3 and 4. Each cash flow is composed of four sections. The first section describes the monthly cash inflows or receipts to the feeder pig operation. The second section lists the cash expenditures for both operating inputs and capital investments. The third section is the flow of funds summary. The first line of this section, cash balance beginning, indicates the monthly cash balance on hand at the beginning of the month. Line 2, the cash difference between receipts and expenses, is added to line 1 to give the current cash balance at the end of each month (line 3). If expenditures are greater than receipts and borrowing is necessary, the amount borrowed is shown in line 4. If receipts are greater than expenditures and the diffference is greater than the cash balance assumed, payments are made first on the interest accrued (line 6) at the specified interest rate (12 percent) and then on the loan principal (line 5). The cash balance at the end of the month (line 7) is at least

Figure 3. Construction and production calendar for the first two years of operation, two-litter feeder pig system B

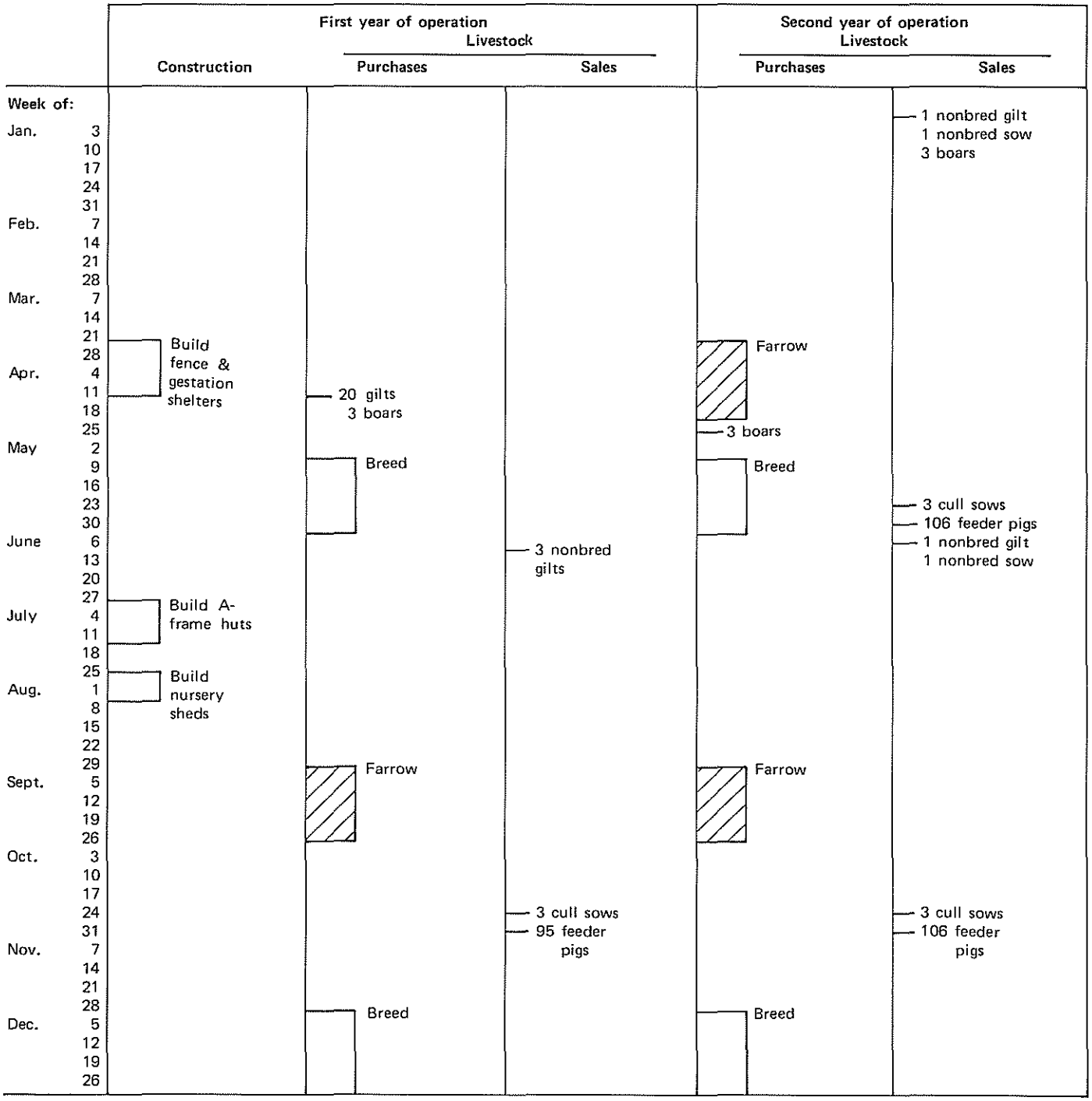


Figure 4. Construction and production calendar for the first two years of operation, four-litter feeder pig system D

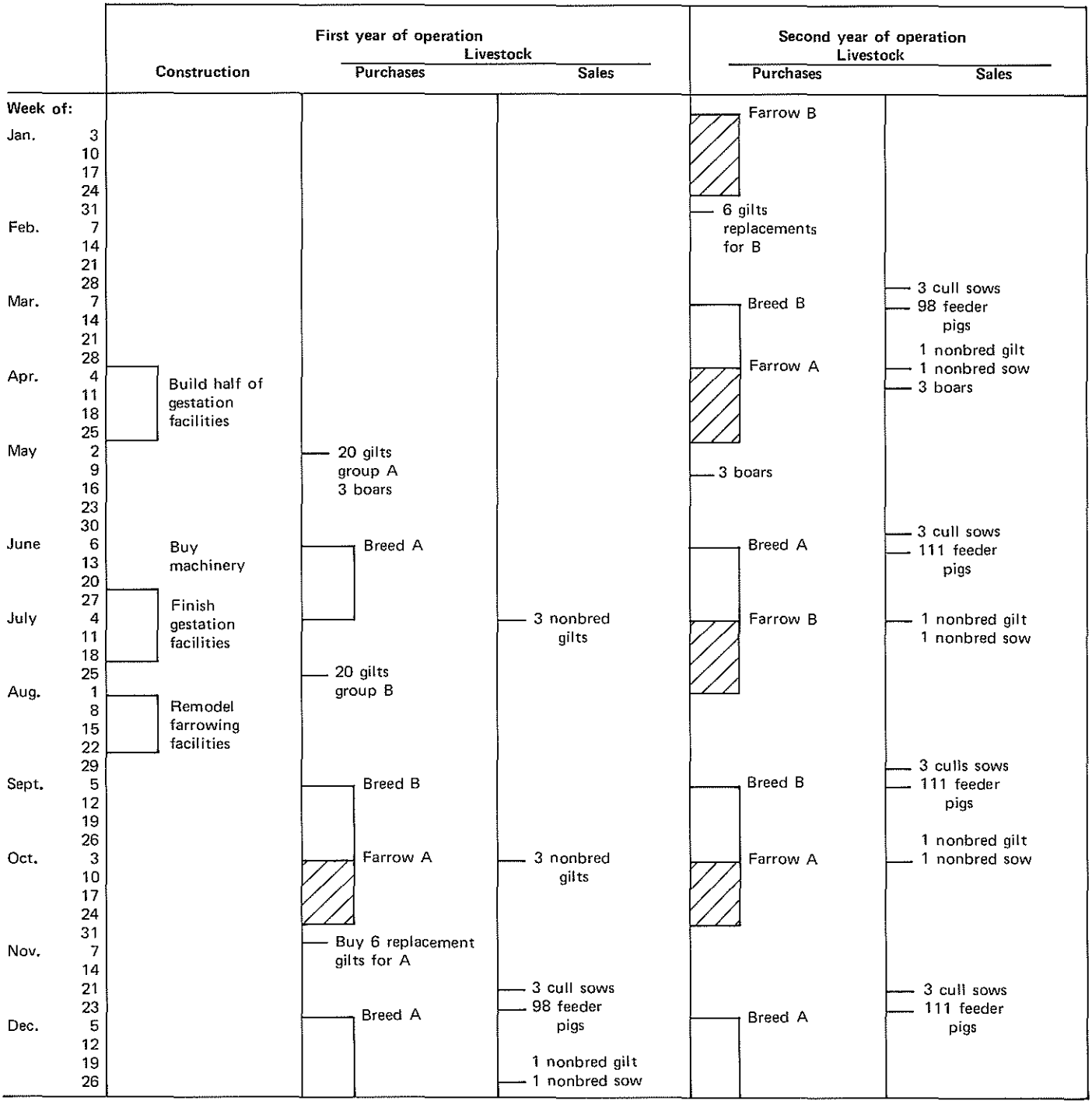


Table 12. Monthly enterprise cash flow projection for feeder pig production system B, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
I. CASH RECEIPTS														
FEEDER PIGS	1.0	0	0	0	0	0	0	0	0	0	0	4248.	0	4248.
GILT N. B.	1.0	0	0	0	0	0	418.	0	0	0	0	0	0	418.
SOW CULL	1.0	0	0	0	0	0	0	0	0	0	488.	0	0	488.
TOTAL		0	0	0	0	0	418.	0	0	0	488.	4248.	0	5154.
II. CASH EXPENSES														
CORN	1.0	0	0	0	36.	117.	115.	94.	94.	159.	376.	229.	206.	1426.
SOYBEAN MEAL	1.0	0	0	0	19.	64.	62.	52.	52.	107.	303.	144.	112.	915.
MINERALS	1.0	0	0	0	2.	5.	5.	4.	4.	8.	17.	10.	8.	62.
OATS	1.0	0	0	0	0	0	0	0	0	4.	0	0	0	4.
WHEAT BRAN	1.0	0	0	0	0	0	0	0	0	17.	11.	0	0	28.
SUGAR	1.0	0	0	0	0	0	0	0	0	5.	0	0	0	5.
GRIND & MIX	1.0	0	0	0	2.	6.	6.	5.	5.	9.	21.	12.	11.	77.
VET & MED.	1.0	0	0	0	25.	0	0	0	25.	63.	25.	0	0	138.
ELECTRICITY	1.0	0	0	0	20.	5.	0	0	0	0	0	1.	15.	39.
INS. AND TAXES	1.0	0	0	0	0	0	0	143.	0	0	0	0	0	143.
HAULING & MKTG.	1.0	0	0	0	0	0	13.	0	0	0	17.	143.	0	173.
MISCL EXPENSE	1.0	0	0	0	17.	17.	17.	17.	17.	17.	17.	17.	17.	153.
GILTS	1.0	0	0	0	3700.	0	0	0	0	0	1110.	0	0	4810.
YOUNG BOAR	1.0	0	0	0	1350.	0	0	0	0	0	0	0	0	1350.
GESTATION SHLTER	1.0	0	0	1502.	1502.	0	0	0	0	0	0	0	0	3004.
A-FRAME FARO-HUT	1.0	0	0	0	0	0	994.	994.	0	0	0	0	0	1988.
LOADING CHUTE	1.0	0	0	0	0	0	0	0	300.	0	0	0	0	300.
SORTING CHUTE	1.0	0	0	0	0	0	0	0	145.	0	0	0	0	145.
NURSERY	1.0	0	0	0	0	0	0	786.	786.	0	0	0	0	1572.
FENCE	1.0	0	0	3240.	0	0	0	0	0	0	0	0	0	3240.
EQUIP-LUB&REPAIR	1.0	0	0	13.	24.	28.	28.	36.	48.	48.	48.	48.	48.	365.
TOTAL		0	0	4755.	6696.	236.	1240.	2131.	1476.	436.	1946.	604.	417.	19935.
III. FLOW OF FUNDS SUMMARY						DOLLARS								
1. CASH BALANCE BEGINING	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
2. +CASH DIFFERENCE	0	0	-4755.	-6696.	-236.	-822.	-2131.	-1476.	-436.	-1457.	3645.	-417.	-14781.	
3. =CURRENT CASH BALANCE	0	0	-4755.	-6696.	-236.	-822.	-2131.	-1476.	-436.	-1457.	3645.	-417.		
4. +MONEY BORROWED	0	0	4755.	6696.	236.	822.	2131.	1476.	436.	1457.	0	417.		
5. -PAYMENT ON LOAN	0	0	0	0	0	0	0	0	0	0	2588.	0		
6. -INTEREST PAID AT .12	0	0	0	0	0	0	0	0	0	0	1057.	0		
7. =CASH BALANCE ENDING	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0		
IV. CURRENT LOAN SUMMARY						DOLLARS								
1. -LOAN OUT-JAN 1														
2. ACCUMULATED BORROWING	0	0	4755.	11451.	11687.	12509.	14640.	16116.	16552.	18009.	15422.	15838.		
3. -ACCRUED INTEREST-JAN 1														
4. ACCRUED INTEREST AT .12	0	0	0	48.	162.	279.	404.	550.	712.	877.	0	154.		
5. 0 ACCURED TOTAL DEBT-JAN 1														
6. ACCUMULATED TOTAL DEBT	0	0	4755.	11498.	11849.	12788.	15044.	16667.	17264.	18886.	15422.	15993.		

Table 13. Monthly enterprise cash flow projection for feeder pig production system B, second year of production

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
I. CASH RECEIPTS														
FEEDER PIGS	1.0	0	0	0	0	5978.	0	0	0	0	0	0	0	5978.
FEEDER PIGS	1.0	0	0	0	0	0	0	0	0	0	0	4595.	0	4595.
GILT N. B.	1.0	139.	0	0	0	0	139.	0	0	0	0	0	0	278.
SOW N. B.	1.0	162.	0	0	0	0	162.	0	0	0	0	0	0	324.
SOW CULL	1.0	0	0	0	0	488.	0	0	0	0	488.	0	0	977.
BOAR	1.0	527.	0	0	0	0	0	0	0	0	0	0	0	527.
TOTAL		828.	0	0	0	6467.	301.	0	0	0	488.	4595.	0	12679.
II. CASH EXPENSES														
CORN	1.0	194.	146.	166.	233.	389.	135.	137.	141.	182.	418.	240.	205.	2584.
SOYBEAN MEAL	1.0	94.	80.	94.	171.	310.	75.	67.	71.	120.	334.	154.	112.	1682.
MINERALS	1.0	8.	6.	7.	11.	18.	5.	5.	6.	9.	19.	10.	8.	112.
OATS	1.0	0	0	1.	4.	0	0	0	0	4.	0.	0	0	9.
WHEAT BRAN	1.0	0	0	3.	19.	6.	0	0	0	16.	12.	0	0	56.
SUGAR	1.0	0	0	1.	4.	0	0	0	0	5.	0.	0	0	11.
GRIND & MIX	1.0	10.	8.	9.	13.	22.	7.	7.	7.	10.	18.	13.	11.	135.
VET & MED.	1.0	25.	0	25.	63.	25.	0	0	25.	63.	25.	0	0	251.
ELECTRICITY	1.0	25.	27.	26.	20.	3.	0	0	0	0	0	1.	15.	117.
INS. AND TAXES	1.0	0	0	0	0	0	0	190.	0	0	0	0	0	190.
HAULING & MKTG.	1.0	30.	0	0	0	159.	26.	0	0	0	16.	159.	0	390.
MISCL EXPENSE	1.0	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	204.
YOUNG BOAR	1.0	0	0	0	0	0	0	0	0	0	0	0	1350.	1350.
TRACTOR(FUEL,LUB,REP)		0	0	0	57.	0	0	0	0	0	0	0	0	57.
MACHINE(FUEL,LUB,REP)		0	0	0	3.	0	0	0	0	0	0	0	0	3.
EQUIP. (FUEL,LUB,REP)		48.	48.	48.	48.	48.	48.	48.	48.	48.	48.	48.	48.	575.
TOTAL		451.	332.	396.	663.	996.	314.	471.	314.	475.	907.	642.	1766.	7726.
III. FLOW OF FUNDS SUMMARY						DOLLARS								
1. CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
2. +CASH DIFFERENCE		377.	-332.	-396.	-663.	5471.	-13.	-471.	-314.	-475.	-419.	3953.	-1766.	4953.
3. =CURRENT CASH BALANCE		377.	-332.	-396.	-663.	5471.	-13.	-471.	-314.	-475.	-419.	3953.	-1766.	
4. +MONEY BORROWED		0	332.	396.	663.	0	13.	471.	314.	475.	419.	0	1766.	
5. -PAYMENT ON LOAN		65.	0	0	0	4816.	0	0	0	0	0	3170.	0	
6. -INTEREST PAID AT .12		312.	0	0	0	655.	0	0	0	0	0	783.	0	
7. =CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
IV. CURRENT LOAN SUMMARY						DOLLARS								
1. 15828.00 LOAN OUT-JAN 1														
2 ACCUMULATED BORROWING		15763.	16095.	16491.	17154.	12338.	12351.	12822.	13137.	13611.	14030.	10860.	12625.	
3. 154.00 ACCRUED INTEREST-JAN 1														
4 ACCRUED INTEREST AT .12		0	158.	319.	483.	0	123.	247.	375.	506.	643.	0	109.	
5. 15982.00 ACCURED TOTAL DEBT-JAN 1														
6 ACCUMULATED TOTAL DEBT		15763.	16253.	16810.	17638.	12338.	12475.	13069.	13512.	14118.	14673.	10860.	12734.	

Table 14. Monthly enterprise cash flow projection for feeder pig production system D, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
I. CASH RECEIPTS														
FEEDER PIGS	1.0	0	0	0	0	0	0	0	0	0	0	0	4248.	4248.
SOW N. B.	1.0	0	0	0	0	0	0	0	0	0	0	0	162.	162.
GILT N. B.	1.0	0	0	0	0	0	0	418.	0	418.	0	0	139.	974.
SOW CULL	1.0	0	0	0	0	0	0	0	0	0	0	0	488.	488.
TOTAL		0	0	0	0	0	0	418.	0	418.	0	0	5039.	5873.
II. CASH EXPENSES														
CORN	1.0	0	0	0	0	123.	152.	120.	234.	241.	273.	539.	360.	2041.
SOYBEAN MEAL	1.0	0	0	0	0	67.	84.	65.	125.	132.	174.	392.	215.	1253.
MINERALS	1.0	0	0	0	0	5.	7.	5.	10.	10.	13.	24.	15.	89.
OATS	1.0	0	0	0	0	0	0	0	0	0	4.	0	0	4.
WHEAT BRAN	1.0	0	0	0	0	0	0	0	0	0	18.	11.	0	29.
SUGAR	1.0	0	0	0	0	0	0	0	0	0	5.	0	0	5.
GRIND & MIX	1.0	0	0	0	0	6.	8.	6.	12.	13.	16.	30.	19.	111.
VET & MED.	1.0	0	0	0	0	30.	30.	30.	30.	30.	51.	30.	30.	261.
INS. AND TAXES	1.0	0	0	0	0	0	0	220.	0	0	0	0	0	220.
HAULING & MKTG.	1.0	0	0	0	0	0	0	11.	0	11.	0	0	153.	176.
LP GAS	1.0	0	0	0	0	0	0	0	0	0	0	53.	153.	205.
ELECTRICITY	1.0	0	0	0	0.	0.	15.	15.	15.	15.	15.	186.	15.	276.
MISCL EXPENSE	1.0	0	0	0	0	21.	21.	21.	21.	21.	21.	21.	21.	168.
GILTS	1.0	0	0	0	0	3700.	0	0	3700.	0	1110.	0	0	8510.
YOUNG BOAR	1.0	0	0	0	0	1350.	0	0	0	0	0	0	0	1350.
GESTATION SHED	1.0	0	0	0	4833.	0	4833.	0	0	0	0	0	0	9666.
REMODEL BUILDING	1.0	0	0	0	0	0	0	4500.	4500.	0	0	0	0	9000.
LOADING CHUTE	1.0	0	0	0	0	0	0	0	0	300.	0	0	0	300.
SORTING CHUTE	1.0	0	0	0	0	0	0	0	0	145.	0	0	0	145.
EQUIP-LUB&REPAIR	1.0	0	0	0	18.	18.	29.	42.	55.	56.	56.	56.	56.	386.
MANURE SPREADER	1.0	0	0	0	0	0	2000.	0	0	0	0	0	0	2000.
USED SKID LOADR	1.0	0	0	0	0	0	3500.	0	0	0	0	0	0	3500.
TRACTOR(FUEL,LUB,REP)		0	0	0	0	0	156.	0	0	311.	0	0	311.	778.
MACHINE(FUEL,LUB,REP)		0	0	0	0	0	4.	0	0	8.	0	0	8.	21.
TOTAL		0	0	0	4851.	5320.	10839.	5036.	8702.	1293.	1755.	1340.	1356.	40494.
III. FLOW OF FUNDS SUMMARY						DOLLARS								
1. CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
2. +CASH DIFFERENCE		0	0	0	-4851.	-5320.	-10839.	-4619.	-8702.	-876.	-1755.	-1340.	3682.	-34621.
3. =CURRENT CASH BALANCE		0	0	0	-4851.	-5320.	-10839.	-4619.	-8702.	-876.	-1755.	-1340.	3682.	
4. +MONEY BORROWED		0	0	0	4851.	5320.	10839.	4619.	8702.	876.	1755.	1340.	0	
5. -PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	1617.	
6. -INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	2065.	
7. =CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
IV. CURRENT LOAN SUMMARY						DOLLARS								
1. -0LOAN OUT-JAN 1														
2. ACCUMULATED BORROWING	0	0	0	0	4851.	10171.	21010.	25629.	34331.	35207.	36962.	38302.	36685.	
3. -0ACCRUED INTEREST-JAN 1														
4. ACCRUED INTEREST AT .12	0	0	0	0	49.	150.	360.	617.	960.	1312.	1682.	0		
5. 0 ACCURED TOTAL DEBT-JAN 1														
6. ACCUMULATED TOTAL DEBT	0	0	0	4851.	10220.	21160.	25989.	34948.	36167.	38274.	39984.	36685.		

Table 15. Monthly enterprise cash flow projection for feeder pig production system D, second year of production

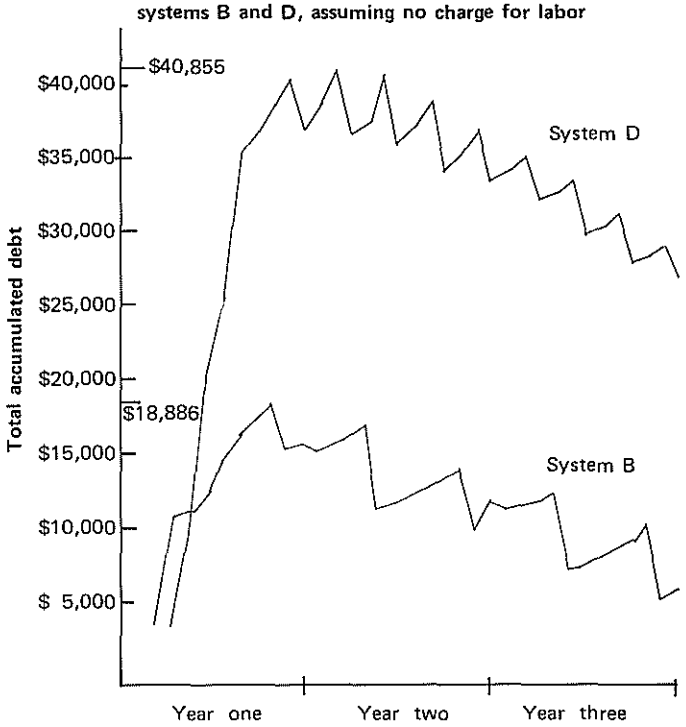
ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
I. CASH RECEIPTS														
FEEDER PIGS	1.0	0	0	5552.	0	0	0	0	0	0	0	0	0	5552.
FEEDER PIGS	1.0	0	0	0	0	0	5500.	0	0	0	0	0	0	5500.
FEEDER PIGS	1.0	0	0	0	0	0	0	0	0	5334.	0	0	0	5334.
FEEDER PIGS	1.0	0	0	0	0	0	0	0	0	0	0	0	4812.	4812.
SOW N. B.	1.0	0	0	162.	0	0	0	162.	0	162.	0	0	0	486.
GILT N. B.	1.0	0	0	139.	0	0	0	139.	0	139.	0	0	0	418.
SOW CULL	1.0	0	0	488.	0	0	488.	0	0	488.	0	0	488.	1954.
BOAR	1.0	0	0	0	527.	0	0	0	0	0	0	0	0	527.
TOTAL		0	0	6341.	527.	0	5988.	301.	0	6123.	0	0	5300.	24581.
II. CASH EXPENSES														
CORN	1.0	365.	559.	404.	314.	591.	343.	348.	595.	329.	338.	630.	416.	5232.
SOYBEAN MEAL	1.0	231.	383.	239.	191.	422.	212.	215.	425.	197.	204.	441.	251.	3410.
MINERALS	1.0	16.	24.	17.	14.	26.	15.	15.	26.	14.	15.	27.	18.	226.
OATS	1.0	4.	0	0	4.	0.	0	0	0	0	5.	0	0	13.
WHEAT BRAN	1.0	20.	9.	0	17.	12.	0	18.	11.	0	17.	12.	0	115.
SUGAR	1.0	5.	0	0	5.	0.	0	6.	0	0	6.	0	0	22.
GRIND & MIX	1.0	21.	31.	22.	18.	27.	18.	20.	33.	18.	19.	35.	22.	282.
VET & MED.	1.0	51.	30.	30.	51.	30.	30.	51.	30.	30.	51.	30.	30.	444.
INS. AND TAXES	1.0	0	0	0	0	0	0	330.	0	0	0	0	0	330.
HAULING & MKTG.	1.0	0	0	153.	18.	0	166.	9.	0	175.	0	0	166.	687.
LP GAS	1.0	213.	153.	80.	14.	0	0	0	0	0	0	53.	153.	664.
ELECTRICITY	1.0	15.	186.	15.	15.	186.	15.	15.	186.	15.	15.	186.	15.	864.
MISCL EXPENSE	1.0	21.	21.	21.	21.	21.	21.	21.	21.	21.	21.	21.	21.	252.
YOUNG BOAR	1.0	0	0	0	0	1350.	0	0	0	0	0	0	0	1350.
GILTS	1.0	0	960.	0	0	0	0	0	0	0	0	0	0	960.
TRACTOR(FUEL,LUB,REP)		0	0	311.	0	0	311.	0	0	311.	0	0	311.	1244.
MACHINE(FUEL,LUB,REP)		0	0	8.	0	0	8.	0	0	8.	0	0	8.	33.
EQUIP. (FUEL,LUB,REP)		56.	56.	56.	56.	56.	56.	56.	56.	56.	56.	56.	56.	667.
TOTAL		1016.	2410.	1356.	737.	2720.	1195.	1103.	1382.	1173.	746.	1490.	1466.	16795.
III. FLOW OF FUNDS SUMMARY					DOLLARS									
1. CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
2. +CASH DIFFERENCE		-1016.	-2410.	4985.	-211.	-2720.	4793.	-802.	-1382.	4950.	-746.	-1490.	3834.	7786.
3. =CURRENT CASH BALANCE		-1016.	-2410.	4985.	-211.	-2720.	4793.	-802.	-1382.	4950.	-746.	-1490.	3834.	
4. +MONEY BORROWED		1016.	2410.	0	211.	2720.	0	802.	1382.	0	746.	1490.	0	
5. -PAYMENT ON LOAN		0	0	3840.	0	0	3674.	0	0	3854.	0	0	2789.	
6. -INTEREST PAID AT .12		0	0	1145.	0	0	1120.	0	0	1096.	0	0	1046.	
7. =CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
IV. CURRENT LOAN SUMMARY					DOLLARS									
1. 36685.00LOAN OUT-JAN 1														
2. ACCUMULATED BORROWING	37701.	40111.	36271.	36482.	39202.	35528.	36330.	37712.	33858.	34604.	36094.	33305.		
3. -UACCRUED INTEREST-JAN 1														
4. ACCRUED INTEREST AT .12	367.	744.	0	363.	728.	0	355.	719.	0	339.	685.	0		
5. 36685.00 ACCURED TOTAL DEBT-JAN 1														
6. ACCUMULATED TOTAL DEBT	38068.	40855.	36271.	36845.	39930.	35528.	36686.	38431.	33858.	34943.	36778.	33305.		

equal to the assumed minimum cash balance. The cash balance ending for one month (line 7) is the cash balance beginning for the succeeding month. The fourth section is the current loan summary. The first, third, and fifth lines of this section show accumulated borrowing, accrued interest, and accumulated total debt (borrowing plus interest) carried over from the previous year of operation. The second, fourth, and sixth lines indicate monthly accumulated borrowing, accrued interest, and accumulated total debt that the enterprise accrues during the given year.

In table 14, system D begins to accumulate debt in the first month of construction of the gestation shed (April). This continues through the year, and by the end of the year total accumulated debt is $36,685. The debt level continues to grow and reaches a maximum of $40,855 in February of year two. Part of the borrowed funds is repaid with receipts from the enterprise during the remainder of year two, reducing the debt to $33,305 by the end of year two. Table 15 presents the projected cash flow for year two for system D.

Figure 5 summarizes the results of the cash flows with a graph of the monthly accumulated total debt for systems B and D for the first three years of operation. This graph provides a comparison of the maximum total debt for these systems and the rate at which the debt is being retired from earnings generated. The maximum accumulated debt of $18,886 for system B occurs in October of the first year. System D has a maximum accumulated debt of $40,855 in February of year two. The debt level for both systems then begins a downward trend in the months following the maximum debts accumulated. Appendix C contains an abbreviated cash flow for the remaining systems. Detailed cash flows appear in Staff Paper P81-11 [24].

Figure 5. Total accumulated debt levels, feeder pig production systems B and D, assuming no charge for labor



Summary of the Eight Feeder Pig Systems

Table 16 compares the physical inputs and outputs of selected items for all eight systems. Output in terms of litters produced per year and number of feeder pigs sold per year ranges from the smallest, system A, with 16 litters per year and 92 feeder pigs sold, to the largest, system G, with 96 litters resulting in sales of 681 feeder pigs annually. The differences in levels of output between systems is reflected in the differences of major inputs such as feed, energy, and labor. System A has the lowest labor and feed requirements and, along with system B, the lowest energy requirements. The two-litter systems B, C, and E consume similar amounts of labor and feed; however, systems C and E use substantially more energy than the two-litter pasture system. The four-litter systems use rela-

Table 16. Selected input-output summary for eight feeder pig systems

	System							
	A	B	C	D	E	F	G	H
Litters produced per year	16	32	32	64	32	64	96	64
Feeder pigs sold per year	92	212	212	444	212	444	681	444
Feeder pigs sold per litter	5.75	6.63	6.63	6.94	6.63	6.94	7.09	6.94
Tons of feed per year	21.8	30.0	33.4	63.6	33.6	63.6	97.2	63.6
Energy per year								
KWH	2,135	2,135	8,432	15,700	6,044	13,316	19,440	13,316
L.P. gas, gallons	—	—	—	664	—	664	851	664
Diesel and gasoline, gallons	29	29	330	633	330	633	537	633
Annual cost	$160.87	$160.87	$984.06	$2,527.7	$852.72	$2,396.58	$2,754.20	$2,396.58
Labor hour								
Initial facilities construction	166	230	200	464	248	384	528	600
Annual operation of system	304	485	480	882	480	882	1,264	882
Requirements per feeder pig sold								
Pounds feed	473.9[1]	283.0	315.1	286.5	317.0	286.5	285.5	286.5
Energy cost	$ 1.75	.76	4.64	5.69	4.02	5.40	4.04	5.40
Hours operation labor	3.30	2.29	2.26	1.99	2.26	1.99	1.86	1.99

[1]High feeding levels per pig reflect production of only one litter per sow per year.

tively similar amounts of feed, energy, and labor. And, as would be expected, the largest system, system G, consumes the highest level of inputs listed.

The variation of inputs and outputs is reflected in the financial comparision summarized in table 17. System F, which has the second highest annual net returns, has the highest net returns per hour of annual labor, $5.45. The other four-litter systems, D and H, show net returns per hour just below that of system F. System G, the largest system, has the highest annual returns but has substantially lower net returns per hour than systems D, F, and H. The net return per hour of $4.38 for system G results from two factors: (1) system G requires more labor than the other systems, and (2) the high investment cost, particularly the $8,944 for the concrete manure storage tank and the $6,000 for the liquid manure spreader, increase ownership costs. Systems E, C, and B, with net returns per hour of $1.71, $2.10, and $4.21, are substantially below the four-litter systems. The low returns to these three systems reflect the higher overhead costs inherent in farrowing just two litters per year.

Similar results are evident with net returns per litter. The four-litter systems are again the most profitable and the one-litter system is the least profitable. The two-litter pasture system, however, is more profitable than the six-litter system G on a per-litter basis. This again reflects the high ownership cost of system G.

The lack of profit for system A is the result of two items: (1) the investment cost is high relative to gross receipts, and (2) total operating costs are high due to the year-round feeding of the gilt breeding herd that produces just one litter annually.

An increase in energy prices can be expected to affect the price of feed and many other inputs required to produce hogs. As the cost of producing hogs with all systems increases, hog prices can be expected to adjust and at least partially offset the increased production costs. But the effect will not be uniform for all systems of production. Those systems using more fossil fuel energy per unit of pork produced will decrease in relative profitability as energy prices increase.

Table 17 compares the relative change in annual net returns per litter by system as the price of direct energy inputs increases. Net returns were recalculated for direct energy prices double and triple those used in the enterprise budgets, with the price of all other inputs and the price of hogs held constant. The results indicate that the low energy use systems A and B are little affected by the increase in energy prices. The profitability of the more energy intensive systems is drastically reduced by the price increases. With a doubling of energy prices and other costs held constant, the net returns of systems C and E become negative and the net returns of the remaining systems are cut to less than half. Increasing energy prices to triple current levels results in negative net returns for all but system B. It can be argued that electricity may not increase as rapidly as other types of energy. Assuming that the cost of electricity does not increase as rapidly would change the size of the net returns of table 17, but not the relationship of the various systems. The low energy systems A and B use mostly electricity, whereas the high energy use systems consume a smaller proportion of electricity.

Table 17. Summary of financial comparison for eight feeder pig systems

	System							
	A	B	C	D	E	F	G	H
Total equipment and facilities investment	$ 8,677	$10,249	$14,531	$24,611	$17,503	$24,378	$58,802	$29,003
Net returns								
Average annual	−$ 739.83	$ 2,943.89	$ 1,008.71	$ 4,548.57	$ 818.73	$ 4,807.02	$ 5,541.02	$ 4,658.05
Per hour of labor	−$ 2.43	$ 4.21	$ 2.10	$ 5.20	$ 1.71	$ 5.45	$ 4.38	$ 5.28
Per litter	−$ 46.24	$ 63.87	$ 31.52	$ 71.63	$ 25.59	$ 75.11	$ 57.72	$ 72.78
Net returns per litter with increased energy costs								
Energy costs double[1]	−$ 56.89	$ 58.54	−$ 1.85	$ 29.76	−$ 2.66	$ 35.41	$ 27.31	$ 33.08
Energy costs triple[2]	−$ 67.55	$ 53.21	−$ 34.44	$ 12.11	−$ 30.91	−$ 4.28	$ 3.10	−$ 6.61
Accumulation of total debt								
Maximum amount	$16,051	$18,886	$24,955	$40,855	$27,904	$40,635	$82,047	$45,582
Month and year of maximum amount	Oct., Yr. 1	Oct., Yr. 1	April, Yr. 2	Feb., Yr. 2	Mar., Yr. 2	Feb., Yr. 2	Mar., Yr. 2	Feb., Yr. 2
Approximate number of years to repay debt								
No labor charge	25	5¼	10	6¾	15	6½	8½	7½
Labor charge of $5/hour	30+	10¼	30+	11¼	30+	10¾	15	14

[1]Prices at: Electricity .....$ .11/KWH; L.P. gas ..... 2.00/gal.; Diesel fuel ..... 3.00/gal.; Gasoline ..... 3.20/gal.

[2]Prices at: Electricity .....$ .165/KWH; L.P. gas ..... 3.00/gal.; Diesel fuel ..... 4.50/gal.; Gasoline ..... 4.80/gal.

Table 17 includes an estimate of the time required to repay the total accumulated debt for the various systems. With no labor charge withdrawn and average annual prices in effect over the repayment period, system A would require 25 years to repay its debt, whereas system B, the two-litter pasture operation with its low investment, would retire its debt in 5¼ years. The other two-litter systems (C and E) take 10 to 15 years to repay their accumulated debt. The four-litter systems D, F, and H require 6¾, 6½, and 7½ years; the six-litter system requires 8½ years. Withdrawing a $5 per hour charge for labor increases the payback period to a range of 10-15 years for systems B, D, F, G, and H. Subtracting the $5 per hour for labor makes the repayment period unreasonably long for systems A, C, and E.

Farrow-to-Finish Systems

The farrow-to-finish enterprise integrates the production of feeder pigs and the feeding of the pigs produced to a slaughter weight of 220-230 pounds. The other types of swine production—the feeder pig operation and the finishing operation—can be thought of as components of farrow-to-finish operations.

Production calendars, enterprise budgets, and projected cash flows were estimated for the eight farrow-to-finish systems described previously. This discussion will concentrate on two of the systems. Figure 6 gives the average year production calendar for the two-litter system B and the four-litter system D. Breeding is scheduled for system B so that litters are farrowed in late March and early April and in September, with the resulting hogs sold in September and March. System D, with two groups of sows, has a breeding schedule so that litters are farrowed in January, April, July, and October, with slaughter hog sales in June, September, December, and March. Production calendars for the other systems are given in appendix D.

Animal flows and space requirements determine the size of facilities needed for each system. The farrowing, gestation, and nursery facilities for farrow-to-finish systems A through H are identical to the facilities used in feeder pig systems A through H. One of two finishing facilities is added to each system for feeder pig production to complete the required facilities for the farrow-to-finish operation. Finishing facility 1 has a capacity for 130 hogs and is used for the one- and two-litter farrow-to-finish systems. Finishing facility 2 is added as a component of the systems that farrow four and six litters per year. Table 18 describes these two facilities and gives the investment cost and labor requirements for remodeling and construction. The total estimated investment cost for all facilities and equipment is $14,162 for system B and $37,849 for system D.

Enterprise Budgets for Average Year of Operation

The enterprise budgets for the farrow-to-finish operations shown in tables 19 and 20 are based on the average year production calendars shown in figure 6 and the investment facilities shown in tables 6, 7, and 18. The gross receipts assume an average annual price of $52 per hundredweight for a 220-pound market hog. This price is seasonally adjusted for each marketing month based on the seasonal index presented in

Table 18. Investment costs and labor required to construct finishing facilities used in the farrow-to-finish swine systems

Item	Size and description	Units	Cost per unit	Total
Finishing facilities 1: remodeled building, 130-hog capacity; insulated, naturally ventilated building with concrete floor				
Building remodeling[1]	36′ x 48′	1,728 sq. ft.[2]		$ 1,782
Concrete and reinforcing		1,728 sq. ft.[2]		1,031
Feeders	8-hole fence line	4	$250	1,000
Waterers	2-hole	4	25	100
Total				$ 3,913
Total hours of labor for construction: 72				
Finishing facilities 2: new open front shed with lot, 280-hog capacity				
Open front building[2]	16′ x 96′	1,536 sq. ft.[2]		$ 4,544
Concrete and reinforcing	56′ x 96′	5,376 sq. ft.[2]	$ .58/sq. ft.[2]	3,127
Pen dividers	Wooden planks			562
Fencing	Hog panels	352 ft.	.80/ft	282
	Posts	23	5.00	115
Feeders	10-hole feeder	3	500	1,500
Waterers	2-hole frost proof	3	100	300
Feed system	14.7 tons			2,808
Total				$13,238
Total hours of labor for construction: 480				

[1]Includes electrical, plumbing, and pen partitions.
[2]Includes construction materials, plumbing, and electrical.

Figure 6. Production calendar for average year of operation, farrow to finish systems B and D

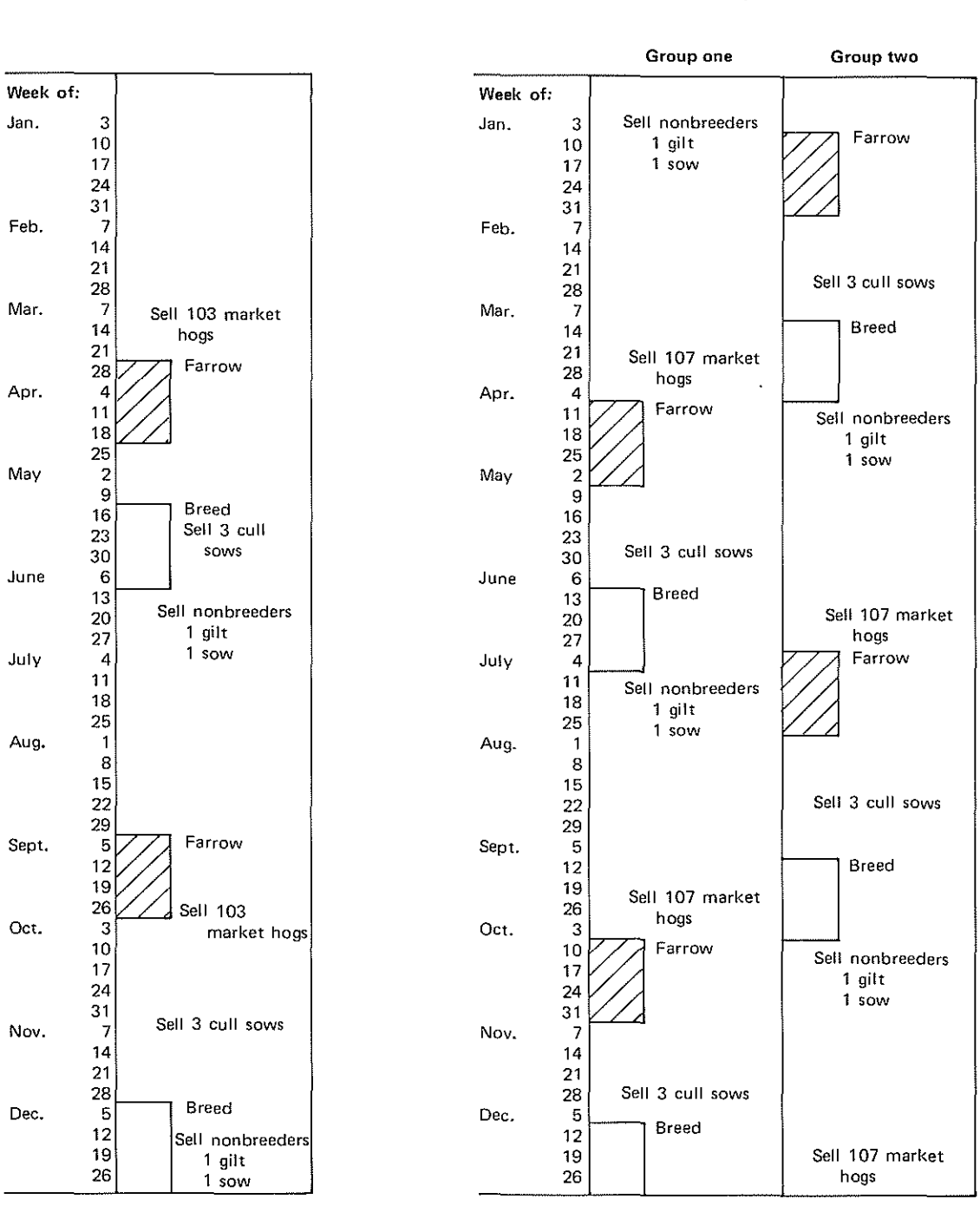


Table 19. Average annual costs and returns for the 16-sow farrow-to-finish system B

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Cwt. Pork Sold
1.	GROSS RECEIPTS						
	SLAUGHTER HOGS	2.20	CWT.	51.17	103.00	11594.67	
	SLAUGHTER HOGS	2.20	CWT.	52.62	103.00	11924.60	
	GILT N.B.	2.90	CWT.	48.00	2.00	278.40	
	SOW N.B.	3.60	CWT.	45.00	2.00	324.00	
	SOW CULL	3.70	CWT.	44.00	6.00	976.80	
	BOAR	4.50	CWT.	39.00	3.00	526.50	
	TOTAL					25624.97	51.06
2.	OPERATING COSTS						
	CORN		BU.	3.00	3122.60	9367.80	
	SOYBEAN MEAL		CWT.	14.50	308.00	4466.00	
	MINERALS		LBS.	.05	5850.70	292.53	
	OATS		LBS.	.07	125.20	8.76	29.24
	WHEAT BRAN		LBS.	.05	1120.00	56.00	
	SUGAR		LBS.	.17	62.60	10.64	
	GRIND & MIX		TONS	4.50	105.00	472.50	
	VET & MED		DOL.	1.00	347.00	347.00	
	ELECTRICITY		KWH	.05	2695.00	148.23	
	INS. AND TAXES		DOL.	1.00	215.00	215.00	
	MKTG & HAULING		DOL.	1.00	628.00	628.00	
	MISCL EXPENSE		DOL.	1.00	306.00	306.00	9.41
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			377.39	
	MACHINERY(FUEL,LUBE,REP)		DOL.			23.61	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			808.53	
	INTEREST ON OPER.CAP.,		DOL.	.12		521.16	
	TOTAL OPERATING COSTS					19399.17	38.65
3.	INCOME ABOVE OPERATING COSTS					6225.80	12.40
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	4260.00	511.20	
	INT. ON EQUIPMENT		DOL.	.12	7081.00	849.72	
	INT. ON MACHINERY		DOL.	.12	1119.41	134.33	
	DEPR. ON EQUIPMENT		DOL.			1996.65	
	DEPR. ON MACHINERY		DOL.			133.60	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			145.57	
	TOTAL OWNERSHIP COSTS					3771.07	7.51
5.	TOTAL COSTS SHOWN					23170.24	46.17
6.	NET RETURNS ABOVE COSTS SHOWN					2454.73	4.89

2 LITTER-16 SOWS FARROWING IN PORTABLE A-FRAME BUILDINGS. PORTABLE NURSERY AND GESTATION FACILITIES. REMODELED PERMANENT BUILDING FOR FINISHING. PRODUCING 501.9 CWT. OF PORK PER YEAR.

Table 20. Average annual costs and returns for the 32-sow farrow-to-finish system D

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Cwt. Pork Sold
1.	GROSS RECEIPTS						
	SLAUGHTER HOGS	2:20	CWT.	51.17	107.00	12044.95	
	SLAUGHTER HOGS	2:20	CWT.	51.95	107.00	12228.56	
	SLAUGHTER HOGS	2:20	CWT.	52.62	107.00	12387.69	
	SLAUGHTER HOGS	2:20	CWT.	50.34	107.00	11849.09	
	GILT N.B.	2:90	CWT.	48.00	4.00	556.80	
	SOW N.B.	3:60	CWT.	45.00	4.00	648.00	
	SOW CULL	3:70	CWT.	44.00	12.00	1953.60	
	BOAR	4:50	CWT.	39.00	3.00	526.50	
	TOTAL					52195.19	50.90
2.	OPERATING COSTS						
	CORN		BU.	3.00	6393.00	19179.00	
	SOYBEAN MEAL		CWT.	14.50	625.60	9071.20	
	MINERALS		LBS.	.05	12600.20	630.01	
	OATS			.07	261.40	18.30	29.27
	WHEAT BRAN		LBS.	.05	2293.30	114.66	
	SUGAR		LBS.	.17	130.70	22.22	
	GRIND & MIX		TONS	4.50	219.00	985.50	
	VET & MED		DOL.	1.00	689.00	689.00	
	INS. AND TAXES		DOL.	1.00	380.00	380.00	
	MKTG & HAULING		DOL.	1.00	1289.50	1289.50	
	LP GAS		GAL.	1.00	664.00	664.00	
	ELECTRICITY		KWH	.05	20500.00	1127.50	9.51
	MISCL EXPENSE		DOL.	1.00	378.00	378.00	
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			1804.24	
	MACHINERY(FUEL,LUBE,REP)		DOL.			74.33	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			944.78	
	INTEREST ON OPER.CAP.,		DOL.	.12		1052.73	
	TOTAL OPERATING COSTS					39774.97	38.79
3.	INCOME ABOVE OPERATING COSTS					12420.22	12.11
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	7620.00	914.40	
	INT. ON EQUIPMENT		DOL.	.12	16219.50	1946.34	
	INT. ON MACHINERY		DOL.	.12	3171.56	380.59	
	DEPR. ON EQUIPMENT		DOL.			3238.96	
	DEPR. ON MACHINERY		DOL.			374.21	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			324.26	
	TOTAL OWNERSHIP COSTS					7178.76	7.00
5.	TOTAL COSTS SHOWN					46953.73	45.79
6.	NET RETURNS ABOVE COSTS SHOWN					5241.46	5.11

4 LITTER-32 SOWS A REMODELED INSULATED AND VENTILATED BUILDING FOR FARROWING NEW OPEN FRONT SHED FOR GESTATIO AND FOR FINISHING. PRODUCING 1025.5 CWT. OF PORK PER YEAR.

appendix B. This index was calculated using monthly prices from seven major U.S. hog markets [1].

Operating cost is the major cost component of the farrow-to-finish operations, and feed costs are the largest portion of operating cost. The production calendar provides information on annual animal numbers for the various systems. The feeding rates for the breeding herd of the farrow-to-finish systems, which are identical to those used with the feeder pig production systems, are given in table 4. The feeding rates and days on feed for the slaughter hogs as they go through growing and finishing are given in tables 2 and 4. These feeding rates and animal numbers, combined with the rations presented in table 3, provide the basis for calculating the amounts of corn, soybean meal, and other feed required annually, as shown in the enterprise budgets.

The two-litter system, system B, has estimated net returns of $2,454.73 annually; the four-litter operation, system D, yields net returns of $5,241.46. Net returns above costs shown for the other six systems are provided in the summary of this section.

Sensitivity of Net Returns to Changes in Prices

Tables 21 and 22 show the sensitivity of average annual net returns to changes in feeding efficiency and levels of selected prices for systems B and D. First, the change in net returns for each system is calculated when the average annual price of slaughter hogs changes by $3 and $6 per hundredweight and when the price of corn changes by 50¢ and $1 per bushel. Then the effect of changes in the price of corn and feeding efficiency is shown. The change in net returns is calculated for 50¢ and $1 changes in corn per bushel and with 20-pound and 40-pound changes in the amount of feed required for each 100 pounds of pork sold. Also shown are changes in net returns for $3 and $6 changes in the price of slaughter hogs, along with 20- and 40-pound changes in feeding levels per hundredweight of pork sold. Similar information for systems A, C, E, F, G, and H is contained in appendix C.

The sensitivity tables can be used to analyze the effect of alternative slaughter hog prices, corn prices, and feed conversion ratios on the net returns of the enterprise, as explained in the analysis of feeder pig production systems. The magnitude of the changes in net returns emphasizes the importance of corn prices, the feed conversion ratio, and slaughter hog prices in determining the profitability of farrow-to-finish swine systems. Because system D produces approximately twice as much pork as system B, any given change in these variables has approximately twice as much effect on the net returns of system D.

Table 21. Effect of changes in prices and feed efficiency on net returns above costs shown for farrow-to-finish system B

		Price of slaughter hogs per hundredweight				
		$45.90	$48.90	$51.90	$54.90	$57.90
		changes in net returns				
Price of corn per bushel	$ 2.00	403.40	1,763.00	3,122.60	4,482.20	5,841.80
	$ 2.50	-1,157.90	201.70	1,561.30	2,920.90	4,280.50
	$ 3.00	-2,719.20	-1,359.60	.00	1,359.60	2,719.20
	$ 3.50	-4,280.50	-2,920.90	-1,561.30	-201.70	1,157.90
	$ 4.00	-5,841.80	-4,482.20	-3,122.60	-1,763.00	-403.40
		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Pounds of feed per hundredweight of pork sold	378.4	4,227.04	2,815.00	1,402.96	-12.69	-1,420.57
	398.4	3,674.82	2,188.15	701.48	-788.70	-2,271.28
	418.4	3,122.60	1,561.30	.00	-1,561.30	-3,122.60
	438.4	2,570.38	934.45	-701.48	-2,333.90	-3,972.72
	458.4	2,018.17	307.60	-1,402.96	-3,109.91	-4,823.43
		Price of slaughter hogs per hundredweight				
		$45.90	$48.90	$51.90	$54.90	$57.90
		changes in net returns				
Pounds of feed per hundredweight of pork sold	378.4	-1,316.44	43.36	1,402.96	2,762.56	4,122.16
	398.4	-2,017.72	-658.12	701.48	2,061.08	3,420.68
	418.4	-2,719.20	-1,359.60	.00	1,359.60	2,719.20
	438.4	-3,420.68	-2,061.08	-701.48	658.12	2,017.72
	458.4	-4,122.16	-2,762.56	-1,402.96	-43.36	1,316.24

Table 22. Effect of changes in prices and feed efficiency on net returns above costs shown for farrow-to-finish system D

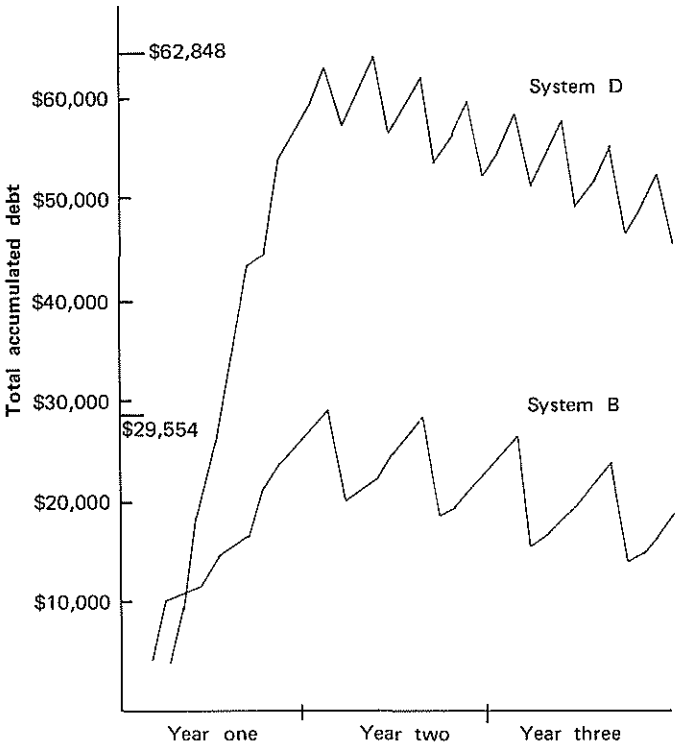
		Price of slaughter hogs per hundredweight				
		$45.52	$48.52	$51.52	$54.52	$57.52
		changes in net returns				
Price of corn per bushel	$ 2.00	743.40	3,568.20	6,393.00	9,217.80	12,042.60
	$ 2.50	-2,453.10	371.70	3,196.50	6,021.30	8,846.10
	$ 3.00	-5,649.60	-2,824.80	.00	2,824.80	5,649.60
	$ 3.50	-8,846.10	-6,021.30	-3,196.50	-371.70	2,453.10
	$ 4.00	-12,042.60	-9,217.80	-6,393.00	-3,568.20	-743.40
		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Pounds of feed per hundredweight of pork sold	387.1	8,613.60	5,717.57	2,821.54	74.49	-2,970.52
	407.1	7,503.30	4,457.04	1,410.77	-1,635.49	-4,681.76
	427.1	6,393.00	3,196.50	.00	-3,196.50	-6,393.00
	447.1	5,282.70	1,935.97	-1,410.77	-4,757.50	-8,104.24
	467.1	4,172.40	675.43	-2,821.54	-6,318.51	-9,815.48
		Price of slaughter hogs per hundredweight				
		$45.52	$48.52	$51.52	$54.52	$57.52
		changes in net returns				
Pounds of feed per hundredweight of pork sold	387.1	-2,838.00	-13.20	2,811.50	5,636.40	8,461.20
	407.1	-4,243.00	-1,419.00	1,405.80	4,230.60	7,055.44
	427.1	-5,649.60	-2,824.80	.00	2,824.80	5,649.60
	447.1	-7,055.44	-4,230.60	-1,405.80	1,419.00	4,243.80
	467.1	-8,461.20	-5,636.40	-2,811.50	13.20	2,838.00

Cash Flow Projections

Production and construction calendars for the first two years of operation for all systems are contained in appendix C. Summarized cash flows based on these construction and production calendars appear in appendix C. Detailed cash flows are contained in Staff Paper P81-11 [24].

Figure 7 summarizes the monthly accumulated debt levels of systems B and D for the first three years of operation. System D experiences its maximum debt level of $62,848 in May of year two. System B realizes its maximum debt level, $29,554, in February of year two. Given the price and production levels assumed, the debt level of both systems decreases through the remainder of the second and third years as shown. The length of time required to repay the debt is presented in the following summary.

Figure 7. Monthly total accumulated debt levels, farrow-to-finish systems B and D assuming no charge for labor



Summary of the Eight Farrow-to-Finish Systems

Table 23 compares the physical inputs and outputs of selected items for all eight farrow-to-finish systems. Output as measured by litters produced per year varies from 16 for system A to 96 for system G; output as measured by hundredweight of pork sold ranges from 273.5 to 1574.6. Similarly, system A uses the lowest and system G uses the highest levels of total inputs. Perhaps the input levels per hundred pounds of pork sold annually are of more interest. The pasture systems, A and B, have the lowest feed and energy requirements per hundredweight of pork sold, but they have relatively high labor requirements per unit of pork sold. The remaining systems have higher feed and energy requirements but lower labor requirements per hundredweight of pork sold. For example, system D, using remodeled facilities to produce four litters per year, has somewhat higher feed requirements (427.16 pounds per hundredweight of pork sold) and the highest energy cost ($3.15 per hundredweight of pork sold) but somewhat lower labor requirements (1.22 hours per hundredweight of pork sold) than system B. System G is particularly interesting. It has feed requirements per unit of pork sold that are close to system B, lower energy costs than most other confinement systems, and the lowest labor requirement per unit of pork sold.

The financial comparison summarized in table 24 also reflects the input-output differences. System G, with the largest levels of inputs and outputs, also exhibits the largest net returns above costs ($9,314.12) annually. This is about $4,000 greater than the annual net returns of the four-litter systems D, F, and H. Systems A, B, C, and E have net returns of less than $2,500, substantially less than the larger systems. The increased profitability of the larger systems is primarily a reflection of two factors: (1) the pigs weaned per litter increase with the better facilities used in these systems, and (2) the systems that produce more pigs have more units of output over which to spread the annual fixed ownership cost.

System G is also the most profitable of the eight farrow-to-finish systems based on net returns per hundredweight of pork sold ($5.92) and net returns per hour of labor ($5.55). The difference between this system and the four-litter systems D, F, and H is not as dramatic using these two return measures. Also, system B, the two-litter pasture system, has net returns per hundredweight of pork sold and net returns per hour of labor approaching those of systems D, F, and H and substantially better than those of the other two-litter systems.

Table 23. Selected input-output summary for farrow-to-finish systems

	System							
	A	B	C	D	E	F	G	H
Litters produced per year	16	32	32	64	32	64	96	64
Hundredweight of pork sold per year	273.5	501.9	501.9	1,025.5	501.9	1,025.5	1,574.6	1,025.5
Tons of feed per year	57.5	105.0	108.5	219.0	108.5	219.0	331.2	219.0
Energy per year								
KWH	2,415	2,695	8,984	20,500	6,604	18,116	24,240	18,116
L.P. gas, gallons	—	—	—	664	—	664	851	664
Diesel and gasoline fuel, gallons	119	189	472	915	472	915	885	915
Total annual cost	$ 314.53	$ 438.03	$ 1,233.82	$ 3,227.40	$ 1,102.92	$ 3,096.28	$ 3,548.90	$ 3,096.28
Labor hours								
Total hours for facilities construction	238	302	272	944	728	864	1,008	1,080
Annual operation of system	453	690	696	1,246	696	1,246	1,679	1,246
Requirements per hundredweight of pork sold								
Pounds of feed	420.5	418.4	432.4	427.1	432.4	427.1	420.7	427.1
Energy cost in dollars	$1.15	$ .87	$ 2.46	$ 3.15	$ 2.20	$ 3.02	$ 2.25	$ 3.02
Hours of operation labor	1.65	1.37	1.39	1.22	1.39	1.22	1.07	1.22

Table 24. Summary of financial comparison for farrow-to-finish systems

	System							
	A	B	C	D	E	F	G	H
Total equipment and facilities investment	$12,590	$14,162	$18,444	$37,849	$21,416	$37,616	$ 72,040	$42,242
Net returns								
Average annual	-$ 1,339.78	$ 2,454.73	$ 1,782.04	$ 5,241.46	$ 1,598.40	$ 5,447.22	$ 9,314.12	$ 5,321.08
Net returns per hour of labor	-$ 2.96	$ 3.58	$ 2.56	$ 4.21	$ 2.30	$ 4.37	$ 5.55	$ 4.27
Net returns per hundredweight of pork sold	-$ 4.90	$ 4.89	$ 3.55	$ 5.11	$ 3.18	$ 5.31	$ 5.92	$ 5.19
Net returns per litter with increased energy costs								
Energy costs double[1]	-$ 6.12	$ 3.97	$ .94	$ 1.77	$ .85	$ 2.11	$ 3.54	$ 1.99
Energy costs triple[2]	-$ 7.34	$ 3.05	-$ 1.67	-$ 1.57	-$ 1.48	-$ 1.09	$ 1.15	-$ 1.21
Accumulated total debt								
Maximum amount	$24,599	$29,554	$35,253	$62,848	$36,987	$62,493	$110,136	$67,532
Month and year of maximum	Feb., Yr. 2	Feb., Yr. 2	Aug., Yr. 2	May, Yr. 2	Aug., Yr. 2	May, Yr. 2	May, Yr. 2	May, Yr. 2
Approximate number of years to repay debt								
No labor charge	30+	6¾	9¾	7½	10¾	7¼	7¾	8
Labor charge of $5/hour	—	14	30+	15	30+	15	12	18

[1]Prices at: Electricity $ .11/KWH; L.P. gas 2.00/gal.; Diesel fuel 3.00/gal.; Gasoline 3.20/gal.

[2]Prices at: Electricity $ .165/KWH; L.P. gas 3.00/gal.; Diesel fuel 4.50/gal.; Gasoline 4.80/gal.

Table 24 shows the impact increased energy prices have on the representative systems. With a doubling of energy prices, the two-litter pasture system, system B, is more profitable on a per hundredweight of pork sold basis and would have similar net returns above costs as system D. System G still has the highest total net returns above costs. With triple the energy cost, systems B and G are the only systems to show positive net returns per hundredweight of pork sold.

Under the assumption that prices remain constant over time, table 24 gives the estimated years required to reduce the accumulated debt to zero. Even under the assumption that no labor charge is withdrawn, system A, the one-litter pasture system, would require more then 30 years to repay the debt. System B requires 6¾ years to repay the debt, the shortest payback period for the eight systems analyzed. A slightly faster payback exists for the four-litter systems D and F than the 7¾ years required for the six-litter system G because of the higher maximum debt level for system G.

When an amount equal to $5 per hour of labor is withdrawn for hired labor or for operator withdrawal, more time is required to repay the debt. Under this condition, system G, the six-litter system, has the shortest loan payback of 12 years, followed by 14 years for system B. System A does not generate enough cash to provide money for both debt repayment and a $5 per hour labor payment.

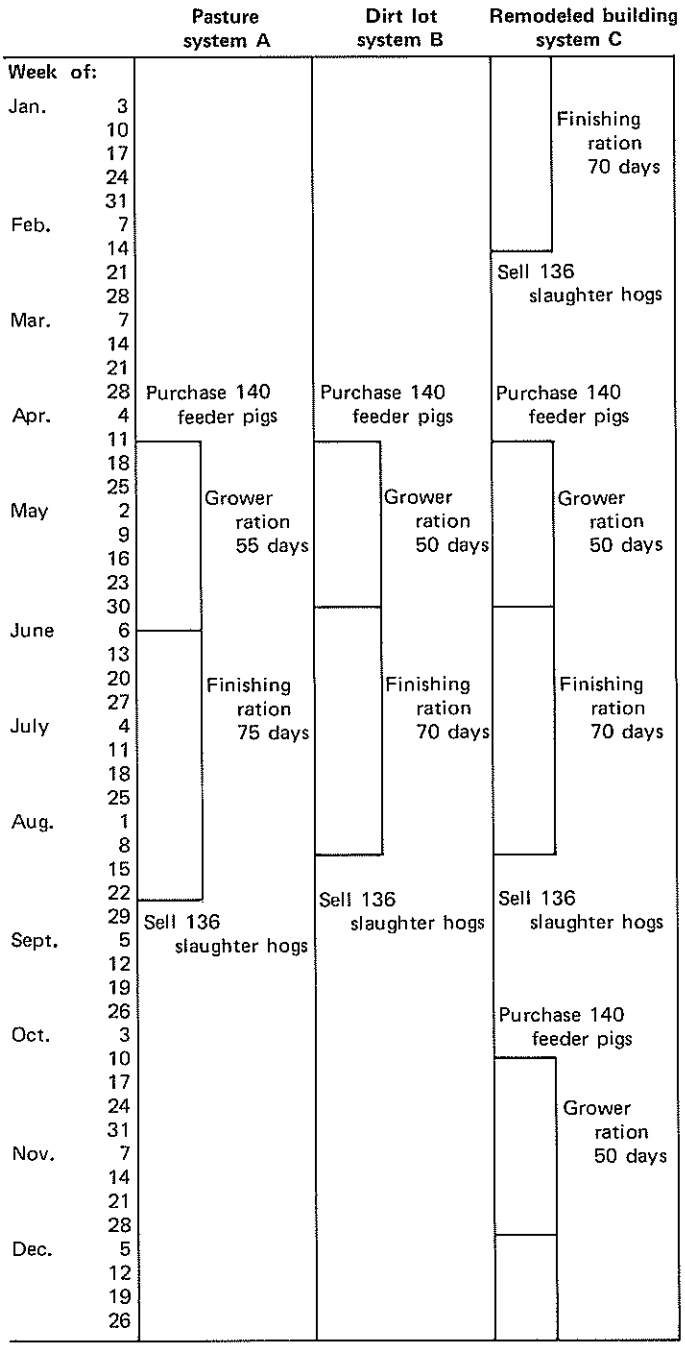
Hog Finishing Systems

Three hog finishing systems were analyzed: a quality pasture operation, a dirt lot operation, and an operation using a remodeled building. The three systems were designed for 140-head capacity. As indicated by the production calendar in figure 8, the analysis assumes that the remodeled building is used twice a year and that the pasture and dirt lot systems finish one group annually during the summer months. Purchases of feeder pigs are timed so that sales occur during months of seasonally high hog prices.

A difference between the systems is the length of time required for the purchased feeder pigs to reach market weight. Estimates of the length of time were based on the composition of the rations fed, feeding rates, and the type of facilities. It was assumed that a hog finished in the remodeled building was fed 4.3 pounds per day of a 16-percent protein grower ration for 50 days and 6.3 pounds of a 13-percent finisher ration for 70 days. The same feeding assumptions were made for the dirt lot system, with 120 days needed to finish the pigs.

Research indicates that good legume pasture will reduce the amount of feed required as well as the protein level needed to finish hogs to market weight. This analysis assumed that grazing good alfalfa pasture at the rate of 20 pigs per acre would reduce the feeding rate for the grower ration to 3.8 pounds per pig per day and would reduce the rate of feeding the finishing ration to 5.8 pounds per day [6]. The protein

Figure 8. Production calendar, rations fed, and sales during average year of operation, three finishing systems



level for pigs on good legume pasture can be reduced to 14 percent for growing rations and 11 percent for finishing rations. Feeding these pasture rations will add approximately five days to the feeding period for each stage, resulting in 130 days to reach market weight. The composition of the 14-percent grower ration and the 11-percent finishing ration used are given in appendix D.

Facilities for the pasture operation include enough fencing to enclose seven acres, sun shades that provide a minimum of six square feet per finished hog, and feeders, waterers, and a loading chute.

The dirt lot system is two acres of fenced pasture with 70 pigs per acre. Little, if any, feed value is expected from the forage due to the high concentration of pigs and the associated difficulty in maintaining the pasture. Equipment includes three sun shades, waterers, feeders, and a loading chute. No machinery is required.

The remodeled facility could be a pole barn, a machinery shed, or possibly even a dairy barn. The hogs finished during the summer months would be fed and watered in a small outside dirt lot adjacent to the barn. This lot is added to reduce manure handling from hogs fed during the summer. Hogs are finished inside during the winter. This building is uninsulated and naturally ventilated with a concrete floor sloped to a wide gutter. A description of each item, the number of units, the investment costs, and the total hours of labor required for construction for each system are given in tables 25-27.

Table 25. Finishing facilities for pasture finishing system A, 140-hog capacity

Item	Size and description	Units	Cost per unit	Total
Fencing	Fence and posts	2,210 ft.	$ 1.00	$2,210
Sun shades	16' x 20'	3	390	1,170
Feeders	12 opening, round	2	250	500
Waterers	95-gallon fountain	3	150	450
Loading chute				300
Total investment				$4,630
Total hours of labor for construction: 100				

Table 26. Finishing facilities for dirt lot finishing system B, 140-pig capacity

Item	Size and description	Units	Cost per unit	Total
Fencing	Fence and posts	1,207 ft.	$ 1.00	$1,207
Sun shades	16' x 20'	3	390	1,170
Feeders	12 opening, round	2	250	500
Waterers	95-gallon fountain	3	150	450
Loading chute				300
Total investment				$3,627
Total hours of labor for construction: 56				

Table 27. Finishing facilities for system C, 140-pig capacity

Item	Size and description	Units	Cost per unit	Total
Finishing facilities				
Building remodeling	36' x 48'	1,728 sq. ft	$ 1	$1,782
Concrete and reinforcing	36' x 48'	1,728 sq. ft	.60	1,031
Fencing	Fence and posts	100 ft	1	100
Feeders	8-hole fence line	4	250	1,000
Waterers	2-hole	4	25	100
Loading chute				445
Total investment				$4,458
Machinery and equipment				
Manure spreader	125-bushel			$2,000
Used skid loader				3,500
Total				$5,500
Total for facilities and machinery				$9,958
Total hours of labor for construction: 72				

Enterprise Budgets for Average Year of Operation

Enterprise budgets that list the estimated average annual net returns for the three finishing systems are presented in tables 28-30. The budgets provide itemized receipt and cost information for an average year of production.

Gross receipts from the marketing of slaughter hogs are based on the production calendar given for each system in figure 8; receipts reflect a three-percent death loss. The annual price for slaughter hogs is $52 per hundred pounds. This price is seasonally adjusted for the month that the sales take place.

The purchase of feeder pigs is at an annual average price of $50 per pig. This annual price is seasonally adjusted for the month of purchase.

Feed quantities for each system are based on the annual animal flow and the corresponding feeding rates. The budgets give the annual amounts of corn and soybean meal and the pounds of other feed ingredients required by each system.

The net return above costs shown is the return to land (including forage for the pasture system), labor, and management. The net returns are $395.78 for the dirt lot systems, $691.41 for the pasture system, and $2,570.57 for finishing in the remodeled building. The remodeled structure requires a negligible amount of land for production, but the dirt lot system requires two acres of pasture, and the pasture system requires seven acres. This land can be used for purposes other

Table 28. Average annual costs and returns for hog finishing system A

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Cwt. of Gain
1.	GROSS RECEIPTS						
	SLAUGHTER HOGS	2.20	CWT.	56.11	136.00	16788.11	
	TOTAL					16788.11	69.03
2.	OPERATING COSTS						
	CORN		BU.	3.00	1394.00	4182.00	
	SOYBEAN MEAL		CWT.	14.50	80.10	1161.45	23.27
	MINERALS		LBS.	.05	2358.00	117.90	
	GRIND & MIX		TONS	4.50	44.20	198.90	
	VET & MED.		DOL.	1.00	74.00	74.00	
	INS. AND TAXES		DOL.	1.00	85.00	85.00	2.36
	HAULING & MKTG.		CWT.	1.25	299.20	374.00	
	MISCL EXPENSE		DOL.	1.00	40.00	40.00	
	FEEDER PIGS		HD.	58.50	140.00	8190.00	33.68
	HAULING IN		HD.	.30	140.00	42.00	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			166.57	2.94
	INTEREST ON OPER.CAP.,		DOL.	.12		506.47	
	TOTAL OPERATING COSTS					15138.29	65.25
3.	INCOME ABOVE OPERATING COSTS					1649.82	6.78
4.	OWNERSHIP COSTS						
	INT. ON EQUIPMENT		DOL.	.12	2315.00	277.80	
	DEPR. ON EQUIPMENT		DOL.			643.57	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			37.04	
	TOTAL OWNERSHIP COSTS					958.41	3.94
5.	TOTAL COSTS SHOWN					16096.71	66.19
6.	NET RETURNS ABOVE COSTS SHOWN					691.41	2.84

SEVEN ACRES PASTURE (20 PIGS/ACRE FOR 140 HOG CAPACITY).
FEED: 14 PERCENT GROWER RATION - 11 PERCENT FINISHER RATION.

PRODUCING 136 SLAUGHTER HOGS AND 299.2 CWT. OF PORK.

Table 29. Average annual costs and returns for hog finishing system B

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Cwt. of Gain
1.	GROSS RECEIPTS						
	SLAUGHTER HOGS	2.20	CWT.	56.11	136.00	16788.11	
	TOTAL					16788.11	69.03
2.	OPERATING COSTS						
	CORN		BU.	3.00	1360.10	4080.30	
	SOYBEAN MEAL		CWT.	14.50	115.40	1673.30	
	MINERALS		LBS.	.05	2371.90	118.60	24.98
	GRIND & MIX		TONS	4.50	45.00	202.50	
	VET & MED.		DOL.	1.00	114.00	114.00	
	INS. AND TAXES		DOL.	1.00	85.00	85.00	
	HAULING & MKTG.		CWT.	1.25	299.20	374.00	2.52
	MISCL EXPENSE		DOL.	1.00	40.00	40.00	
	FEEDER PIGS		HD.	58.50	140.00	8190.00	33.68
	HAULING IN		HD.	.30	140.00	42.00	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			200.11	3.16
	INTEREST ON OPER.CAP.,		DOL.	.12		525.60	
	TOTAL OPERATING COSTS					15645.41	64.33
3.	INCOME ABOVE OPERATING COSTS					1142.71	4.70
4.	OWNERSHIP COSTS						
	INT. ON EQUIPMENT		DOL.	.12	1813.50	217.62	
	DEPR. ON EQUIPMENT		DOL.			500.29	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			29.02	
	TOTAL OWNERSHIP COSTS					746.92	3.07
5.	TOTAL COSTS SHOWN					16392.33	67.40
6.	NET RETURNS ABOVE COSTS SHOWN					395.78	1.63

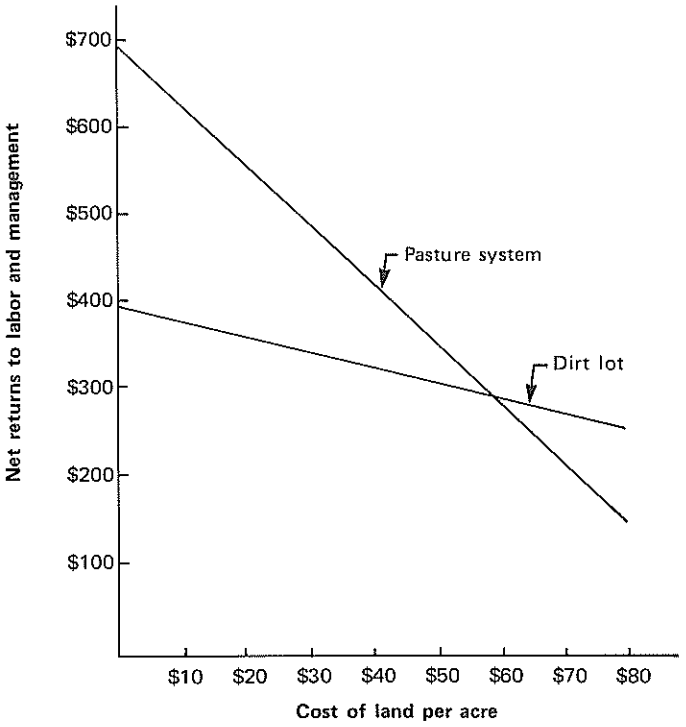
TWO ACRES DIRT LOT (70 PIGS/ACRE FOR 140 HOG CAPACITIY).- PRODUCING 136 SLAUGHTER HOGS AND 299.2 CWT. OF PORK.

Table 30. Average annual costs and returns for hog finishing system C

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Cwt. of Gain
1.	GROSS RECEIPTS						
	SLAUGHTER HOGS	2.20	CWT.	56.11	136.00	16788.11	
	SLAUGHTER HOGS	2.20	CWT.	54.86	136.00	16414.11	
	TOTAL					33202.22	68.26
2.	OPERATING COSTS						
	CORN		BU.	3.00	2720.10	8160.30	
	SOYBEAN MEAL		CWT.	14.50	230.80	3346.60	24.98
	MINERALS		LBS.	.05	4743.80	237.19	
	GRIND & MIX		TONS	4.50	90.10	405.45	
	VET & MED.		DOL.	1.00	228.00	228.00	
	ELECTRICITY		KWH	.05	490.00	26.95	
	INS. AND TAXES		DOL.	1.00	145.00	145.00	2.69
	HAULING & MKTG.		CWT.	1.25	598.40	748.00	
	MISCL EXPENSE		DOL.	1.00	160.00	160.00	
	FEEDER PIGS		HD.	58.50	140.00	8190.00	30.35
	FEEDER PIGS		HD.	46.95	140.00	6573.00	
	HAULING IN		HD.	.30	280.00	84.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			262.39	
	MACHINERY(FUEL,LUBE,REP)		DOL.			19.22	2.73
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			188.25	
	INTEREST ON OPER.CAP.,		DOL.	.12		774.55	
	TOTAL OPERATING COSTS					29548.90	60.75
3.	INCOME ABOVE OPERATING COSTS					3653.32	7.51
4.	OWNERSHIP COSTS						
	INT. ON EQUIPMENT		DOL.	.12	2229.00	267.48	
	INT. ON MACHINERY		DOL.	.12	688.67	82.64	
	DEPR. ON EQUIPMENT		DOL.			610.37	
	DEPR. ON MACHINERY		DOL.			82.47	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			39.80	
	TOTAL OWNERSHIP COSTS					1082.75	2.23
5.	TOTAL COSTS SHOWN					30631.65	62.98
6.	NET RETURNS ABOVE COSTS SHOWN					2570.57	5.28

REMODELED BUILDING, WITH SMALL OUTSIDE LOT FOR SUMMER FINISHING, CAPACITY FOR 140 HOGS IN SUMMER AND WINTER, PRODUCING 272 SLAUGHTER HOGS AND 598.4 CWT. OF PORK.

Figure 9. Net returns to labor and management for the pasture and dirt lot finishing systems at various prices for land



than raising hogs, so this opportunity cost will affect the profit of these operations. Furthermore, the two systems use different amounts of land, suggesting that the cost of land will affect their relative profitability. Figure 9 illustrates the effect of differing annual land costs on the net returns of the pasture system and the dirt lot operation. The analysis indicates that returns for the pasture system exceed returns to a dirt lot operation when the land charge is less than $59 per acre. At an annual land charge above $59 per acre, the dirt lot is more profitable than the pasture system.

Sensitivity of Net Returns to Changes in Prices

Tables 31-33 show the sensitivity of annual net returns to changes in prices and feeding efficiency for the three systems. First the change in net returns is calculated when the average annual prices of slaughter hogs and feeder pigs change. The slaughter hog price is varied by $3 and $6 per hundredweight, and the feeder pig price is varied by $3 and $6 per head. Then the changes in net returns are calculated when the price of corn changes by 50¢ and $1 per bushel and with 20-pound and 40-pound changes in the amount of feed required per hundred pounds of pork gained. Finally, net return changes are calculated for changes in the price of corn and the price of feeder pigs.

Changes in the prices of slaughter hogs and feeder pigs affect systems A and B in an identical manner, but system B requires a higher level of protein, making it more sensitive to changes in feeding efficiency at a given price for corn. On the other hand, changes in corn prices affect system A more than system B.

Table 31. Effect of changes in prices and feed efficiency on net returns above costs shown for hog finishing system A

		Price of slaughter hogs				
		$50.11	$53.11	$56.11	$59.11	$62.11
		changes in net returns				
Price of feeder pigs	$52.50	-955.20	-57.60	840.00	1,737.60	2,635.20
	$55.50	-1,375.20	-477.60	420.00	1,317.60	2,215.20
	$58.50	-1,795.20	-897.60	.00	897.60	1,795.20
	$61.50	-2,215.20	-1,317.60	-420.00	477.60	1,375.20
	$64.50	-2,635.20	-1,737.60	-840.00	57.60	955.20
		Price of corn				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Pounds of feed per hundredweight of pork sold	323.5	1,863.29	1,242.96	622.63	2.30	-618.03
	343.5	1,628.64	969.98	311.31	-347.35	-1,006.02
	363.5	1,394.00	697.00	.00	-697.00	-1,394.00
	383.5	1,159.36	424.02	-311.31	-1,046.65	-1,781.98
	403.5	924.71	151.04	-622.63	-1,396.30	-2,169.97
		Price of corn				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of feeder pigs	$52.50	2,234.00	1,537.00	840.00	143.00	-554.00
	$55.50	1,814.00	1,117.00	420.00	-277.00	-974.00
	$58.50	1,394.00	697.00	.00	-697.00	-1,394.00
	$61.50	974.00	277.00	-420.00	-1,117.00	-1,814.00
	$64.50	554.00	-143.00	-840.00	-1,537.00	-2,234.00

Table 32. Effect of changes in prices and feed efficiency on net returns above costs shown for hog finishing system B

		Price of slaughter hogs				
		$50.11	$53.11	$56.11	$59.11	$62.11
		changes in net returns				
Price of feeder pigs	$52.50	-955.20	-57.60	840.00	1,737.60	2,635.20
	$55.50	-1,375.20	-477.60	420.00	1,317.60	2,215.20
	$58.50	-1,795.20	-897.60	.00	897.60	1,795.20
	$61.50	-2,215.20	-1,371.60	-420.00	477.60	1,375.20
	$64.50	-2,635.20	-1,737.60	-840.00	57.60	955.20
		Price of corn				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Pounds of feed per hundredweight of pork sold	330.1	1,869.28	1,262.66	656.08	49.54	-557.09
	350.1	1,614.69	971.34	328.04	-315.22	-958.57
	370.1	1,360.10	680.05	.00	-680.05	-1,360.10
	390.1	1,105.46	388.71	-328.04	-1,044.73	-1,761.53
	410.1	850.86	97.39	-656.08	-1,409.49	-2,163.01
		Price of corn				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of feeder pigs	$52.50	2,200.10	1,520.05	840.00	159.95	-520.10
	$55.50	1,780.10	1,100.05	420.00	-260.05	-940.10
	$58.50	1,360.10	680.05	.00	-680.05	-1,360.10
	$61.50	940.10	260.05	-420.00	-1,100.05	-1,780.10
	$64.50	520.10	-159.95	-840.00	-1,520.05	-2,200.10

Cash Flow Projections

Figure 10 shows the level of monthly accumulated total debt for the first three years of operation for systems A and C. (Cash flow for system B during the first year is virtually identical to that for system A.) The level of accumulated loan balance fluctuates widely as feeder pigs are purchased and slaughter hogs are sold in these all-in and all-out finishing systems. The pattern of maximum debt level for each group fed is the

Table 33. Effect of changes in prices and feed efficiency on net returns above costs shown for hog finishing system C

		Price of slaughter hogs				
		$49.49	$52.49	$55.49	$58.49	$61.49
		changes in net returns				
Price of feeder pigs	$46.73	−1,910.40	−115.20	1,680.00	3,475.20	5,270.40
	$49.73	−2,750.40	−955.20	840.00	2,635.20	4,430.40
	$52.73	−3,590.40	−1,795.20	.00	1,795.20	3,590.40
	$55.73	−4,430.40	−2,635.20	−840.00	955.20	2,750.40
	$58.73	−5,270.40	−3,475.20	−1,680.00	115.20	1,910.40
		Price of corn				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Pounds of feed per hundredweight of pork sold	330.5	3,738.48	2,525.32	1,312.15	99.08	−1,114.18
	350.5	3,229.29	1,942.68	656.08	−630.44	−1,917.14
	370.5	2,720.10	1,360.05	.00	−1,360.05	−2,720.10
	390.5	2,210.91	777.42	−656.08	−2,089.46	−3,523.06
	410.5	1,701.72	194.78	−1,312.15	−2,818.98	−4,326.02
		Price of corn				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of feeder pigs	$46.73	4,400.10	3,040.05	1,680.00	319.95	−1,040.10
	$49.73	3,560.10	2,200.05	840.00	−520.05	−1,880.10
	$52.73	2,720.10	1,360.05	.00	−1,360.05	−2,720.10
	$55.73	1,880.10	520.05	−840.00	−2,200.05	−3,560.10
	$58.73	1,040.10	−319.95	−1,680.00	−3,040.05	−4,400.10

significant aspect for analysis. The maximum accumulated debt for system A is $17,911 in July of the startup year (the maximum for system B is $19,722 for the same month). The remodeled building system, which finishes two groups per year, reaches the maximum debt of $21,881 at the end of January of year two. After the maximum debt level is reached, there is a decrease in the loan balance during the following years. The production calendar and summarized cash flows for the three systems are provided in appendix D. Detailed cash flows appear in Staff Paper P81-11 [24].

Summary of the Three Hog Finishing Systems

Key physical input and output levels for the three systems are given in table 34. Output for system C is 272 slaughter hogs or 598.4 hundredweight of pork, twice that of systems A and B. System C uses 90.1 tons of feed, compared to 44.2 tons for system A and 45 tons for system B. System C is the only finishing system that uses cultural energy; it consumes $230.89 of electricity and fuel. The labor requirement of system C is more than twice that of the other two systems due to the manure handling it requires. The pounds of feed, dollars of energy cost, and hours of operating labor per hundredweight of gain are shown in the lower portion of table 34.

Table 35 shows a financial comparison of the systems. Net returns per hour and net returns per hundred pounds of gain follow a pattern similar to that of annual net returns above costs. Notice, however, that

Figure 10. Monthly total accumulated debt, hog finishing systems A and C, assuming no charge for labor

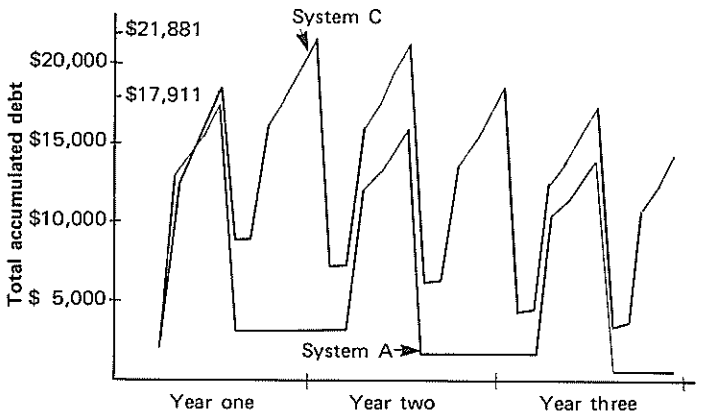


Table 34. Selected input-output summary for hog finishing systems

	System A	System B	System C
Hogs sold per year (at 220 pounds)	136	136	272
Hundredweight of pork sold per year	299.2	299.2	598.4
Hundredweight of gain	243.2	243.2	486.4
Tons of feed per year	44.2	45.0	90.1
Energy per year			
KWH	—	—	490
L.P. gas, gallons	—	—	—
Diesel and gasoline fuel, gallons	—	—	132
Cost annually	—	—	$230.89
Labor hours			
Total hours for facilities construction	100	56	72
Annual operation of system	100	100	228
Requirements per hundredweight of gain			
Pounds of feed	363.5	370.1	370.5
Dollars of energy cost	—	—	$ .47
Hours operating labor	.41	.41	.38

Table 35. Summary of financial comparison for hog finishing systems

	System A	System B	System C
Total equipment and facilities investment	$ 4,630	$ 3,627	$ 9,958
Net returns			
Average annual	$ 691.41	$ 395.78	$ 2,570.57
Net returns per hundredweight of gain	$ 2.84	$ 1.63	$ 5.28
Net returns per hour of labor	$ 6.91	$ 3.96	$ 11.27
Average annual net returns with increased energy cost			
Energy costs double[1]	$ 691.41	$ 395.78	$ 2,325.83
Energy costs triple[2]	$ 691.41	$ 395.78	$ 2,081.08
Accumulated total debt			
Maximum amount	$17,911	$17,722	$21,881
Month and year of maximum	July, Yr. 1	July, Yr. 1	Jan., Yr. 2
Approximate number of years to eliminate all debt			
No labor charge	12½	19	6
With labor charge at $5 hour	30+	30+	9½

[1]Prices at: Electricity $ .11/KWH; Diesel fuel 3.00/gal.; Gasoline 3.20/gal.

[2]Prices at: Electricity $ .165/KWH; Diesel fuel 4.50/gal.; Gasoline 4.80/gal.

system C does not enjoy quite the advantage over systems A and B on a per hour basis because of the labor required to handle manure in system C.

The net returns of the dirt lot and pasture systems are not affected by energy prices because these systems require little if any fossil fuel energy. System C, on the the other hand, requires 490 KWH of electricity, 59.4 gallons of gasoline, and 72.6 gallons of diesel fuel, amounting to a total annual energy cost of $230.89 under the assumed prices. Net returns for system C remain above those for systems A and B even when energy costs are doubled and tripled. Doubling energy prices reduces returns for system C by approximately $244.74; tripling them reduces returns by approximately $489.49, leaving net returns for system C substantially above returns for systems A and B.

Table 35 also compares the estimated number of years needed to repay the investment on facilities and the operating capital; these estimates assume that prices remain constant. Assuming no charge for labor, system C completely retires the debt and accumulates enough cash balance to pay for the purchase of a group of feeder pigs without borrowing funds in approximately six years. Systems A and B reach this point after 12½ and 19 years. Subtracting a $5 per hour charge for labor increases the length of payback to 9½ years for system C and to more than 30 years for systems A and B.

Table 36. Comparison of net returns for all systems

Feeder pig systems	Average net annual returns to land, labor, and management
A	-$ 739.93
B	$2,043.89
C	1,008.71
D	4,548.57
E	818.73
F	4,807.02
G	5,541.02
H	4,658.05
Farrow-to-finish systems	
A	-$1,339.78
B	$2,454.73
C	1,782.04
D	5,241.46
E	1,598.40
F	5,447.22
G	9,314.12
H	5,321.09
Hog finishing systems	
A	$ 691.41
B	395.78
C	2,570.57

Conclusions

This analysis examines 19 low investment swine systems: eight for feeder pig production, eight for farrow-to-finish production, and three hog finishing units. Table 36 lists the average annual net returns to land, labor, and management for all systems. These returns range from a low of −$1,339.78 for farrow-to-finish system A to a high of $9,314.12 for farrow-to-finish system G. Five systems, feeder pig system G and farrow-to-finish systems D, F, G, and H, have annual net returns greater than $5,000. Five systems, feeder pig systems A and E, farrow-to-finish system A, and hog finishing systems A and B, are estimated to have net returns less than $1,000. This leaves nine systems with annual net returns between $1,000 and $5,000.

The 19 systems also differ in terms of the type and size of facilities, labor used, capital requirements, and the management needed for successful operation. These differences in resource requirements must be considered in selecting a system for use.

The availability of land and buildings is an important consideration when deciding which of these systems may be feasible on a particular farm. Feeder pig systems A and B, farrow-to-finish systems A and B, and hog finishing system A require seven acres of pasture, and finishing system B requires a two-acre drylot. Many of the systems are based on remodeling existing buildings on the farm to provide facilities for the swine enterprise. Table 37 indicates the systems in this study that require the availability of unused buildings that can be remodeled and used for farrowing, nursery, gestation, and finishing. Only feeder pig systems A, B, and H, farrow-to-finish system H, and finishing systems A and B are based on all-new facilities. See the detailed descriptions of the facilities for each system in the text and in the appendixes for the minimum building sizes required for each system.

After identifying the systems that can be considered given the availability of land and buildings, the next step is to consider the amount of labor and capital available for the swine enterprise. Table 37 lists the investment and hours of labor required annually for the alternative systems. The highest level of investment for equipment and facilities is $72,040 for farrow-to-finish system G. This system also has the largest annual labor requirement of 1,679 hours. The second highest level of investment is $58,802 for feeder pig system G. Hog finishing systems A and B have the smallest amount of investment in equipment and facilities ($4,630 and $3,627); these two systems also have the lowest labor requirements (100 hours per year).

The profitability of the alternative systems can be compared based on returns per hour of labor and the number of years required for the system to recover both the investment and operating capital. The residual return to land, labor, and management for the average year of operation is used to calculate the return per hour of labor for each system. The projected cash flow is used to estimate the number of years required to recover all the investment and operating capital required by the system. These estimates, which are presented in table 37, are based on the assumption that no money is withdrawn for labor (all labor, capital,

Table 37. Summary comparison of systems

System	Litters or groups per year	System uses remodeled facilities[1]				Total equipment and facilities investment	Hours labor annually	Return per hour of labor	Years of debt repayment	
		Farrowing	Nursery	Gestation	Finishing				No labor charge	Labor charge of $5/ hour
Feeder pig										
A	1				—	$ 8,677	304	-$2.43	25	†
B	2				—	10,249	485	$4.21	5¼	10¼
C	2	*	*	*	—	14,531	480	2.10	10	†
D	4	*	*		—	24,611	882	5.20	6¾	11¼
E	2	*	*		—	17,503	480	1.71	15	†
F	4	*	*		—	24,378	882	5.45	6½	10¾
G	6	*	*		—	58,802	1,264	4.38	8½	15
H	4				—	29,003	882	5.28	7½	14
Farrow-to-finish										
A	1				*	$12,590	453	-$2.96	†[2]	—
B	2				*	14,162	690	$3.58	6¾	14
C	2	*	*	*	*	18,444	696	2.56	9¾	†
D	4	*	*			37,849	1,246	4.21	7½	15
E	2	*	*		*	21,416	696	2.30	10¾	†
F	4	*	*			37,616	1,246	4.37	7¼	15
G	6	*	*			72,040	1,679	5.55	7¾	12
H	4					42,242	1,246	4.27	8	18
Hog finishing										
A	1	—	—	—		$ 4,630	100	$6.91	12½	†
B	1	—	—	—		3,627	100	$3.96	19	†
C	2	—	—	—	*	9,958	228	11.27	6	9½

[1]The asterisk indicates that existing buildings are remodeled for this purpose. Dashes indicate that the system does not require the type of facility named.
[2]The dagger indicates that it would take more than 30 years to recover the investment.

and management earnings are used to pay the debt) and that all labor is paid $5 per hour (and only the residual earnings to labor, capital, and management are used to retire debt).

Consider the relative profitability of alternative swine systems based on returns per hour of labor. Those systems having returns in excess of $4 per hour of labor include feeder pig systems B, D, F, G, and H; farrow-to-finish systems D, F, G, and H; and hog finishing systems A and C. Feeder pig systems A, C, and E and farrow-to-finish systems A and E have returns of less than $2.50 per hour.

Those systems that generate enough income to recover all investment and operating funds in 10 years or less are feeder pig and farrow-to-finish systems B, C, D, F, G, and H and finishing system C. The systems that generate enough net returns to withdraw $5 per hour for labor and recover the capital in 15 years or less are feeder pig systems B, D, F, G, and H; farrow-to-finish systems B, D, F, and G; and finishing system C.

This analysis suggests that no one type of operation is superior to the others in all respects. Feeder pig systems B, D, F, and H have relatively high returns to labor and relatively rapid capital recovery. Farrow-to-finish systems B, D, F, G, and H compare favorably on the basis of returns to labor and capital recovery. Hog finishing systems A and C compare favorably in terms of returns per hour of labor to the feeder pig production and farrow-to-finish systems listed. Because most of these systems utilize existing facilities, the alternatives to be considered on an individual farm can be narrowed down to the availability of facilities for remodeling. The availability of labor by season and the capital available for investment in the swine system are other factors to be considered. Individuals with limited capital may want to compare alternative feeder pig systems that require relatively more labor and less capital in order to maximize returns to the labor and capital available for swine production. Farmers with somewhat more capital will probably find that a farrow-to-finish system that utilizes more capital per hour of labor required will maximize net returns to the labor and capital resources utilized. Producers with limited amounts of labor and relatively more capital may want to consider purchasing feeder pigs and finishing them under one of the finishing systems described. Producers can budget these comparisons for their own farms by using the data in this and the companion publications on confinement swine production systems cited in the introduction.

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Appendix A: Energy Requirements and Calculations

Appendix table A-1. Energy requirements of electrical equipment[1]

Equipment	Capacity, hp. or Watts	Estimated KWH/month[2]
Lighting, small home	1,600 Watts; varies widely	75-125
Lighting, large home	4,000 Watts	150-250
Water pump (deep)	⅓-1 hp.	10-60
Water pump (shallow)	¼ hp.	5-20
Barn cleaner	2-5 hp.	25-40
Brooder (hogs)	250 Watts	1 per 4 hours
Feed grinder (grinder blender)	2-7½ hp.	3-7 per ton
Feed mixer	1-7½ hp.	1 per ton
Stock tank heater	250-1500 Watts	90-500
Ventilation fans (hogs), winter	⅛-½ hp.	7-10 per month per 1,000 lb. animal weight
Ventilation fans (hogs), summer	⅛-½ hp.	14-20 per month per 1,000 lb. animal weight
Heater, portable	1,000-3,000 Watts	1-3 per hour
Small motors	½-5 hp.	1 per hp. per hour

[1]D.W. Bates and H.A. Cloud, *Energy Requiremens of Electrical Equipment,* Agricultural Engineering Fact Sheet 1. Agricultural Extension Service, University of Minnesota, 1977.
[2]Unless otherwise specified.

Energy Requirements, Monthly Basis

Derivation of Heat Balance Equations

Basic equation: $q_{sen} + q_{sup} = 1.1\ CFM\ \Delta T + q_B$ (1)

where:

q_B = building heat loss [Btu/hr]
q_{sen} = sensible heat from the animals [Btu/hr]
q_{sup} = supplemental heat [Btu/hr]
CFM = ventilation rate [cubic feet per min]

Assumptions:

16-sow farrowing building 36′ x 38′ x 8′, kept at 70° F.
128-piglet nursery 36′ x 22′ x 8′, kept at 80° F.
Both buildings will be operated independently and kept at 40° F. to prevent freezing when not in use.

A. Farrowing building full

q_{sen} = (1,000 Btu/hr/sow and litter) (16 sows and litter) = 16,000 Btu/hr
minimum ventilation rate = (20 CFM/sow) (16 sows) = 320 CFM
$q_B = A_B/R_B\ (T_n - T_o)$
where: A_B = area of building
R_B = R−value of building
T_n = room temperature
T_o = outside temperature

$$\frac{A_B}{R_B} = \frac{A_{walls}}{R_{walls}} + \frac{A_{ceiling}}{R_{ceiling}}$$

$$= \frac{1184\ sq.\ ft.}{13\ Btu/hr./sq.\ ft/°F.} + \frac{1368\ sq.\ ft.}{23\ Btu/hr./sq.\ ft./°F.}$$

$= 151$ Btu/hr./°F.

$T_n = 70°$ F.

Equation 1 becomes: $16{,}000 + q_{sup} = (1.1)\ (320)\ (70 - T_o) + 151(70 - T_o)$

therefore: $q_{sup} = 503(70 - T_o) - 16{,}000$ (A)

This is the equation used to determine the amount of supplemental heat required in the farrowing house when it is full of sows.

B. Farrowing building empty

$q_{sen} = 0$
$T_n = 40$

therefore equation 1 becomes:

$q_{sup} = 151(40 - T_o)$ (B)

This is the equation used to determine the amount of supplemental heat required in the farrowing house when it is empty.

C. Nursery building full

q_{sen} = (80 Btu/pig) (128 pigs) = 10,240 Btu/hr
minimum ventilation rate = (2.5 CFM/pig) (128 pigs) = 320 CFM

$$\frac{A_B}{R_B} = \frac{(36' + 22')\ (2)\ (8')}{13} + \frac{36' \times 22'}{23}$$

$= 106$ Btu/hr./°F.

$T_n = 80°$ F.

Equation 1 becomes: $10{,}240 + q_{sup} = (1.1)\ (320)\ (80 - T_o) + 106(80 - T_o)$

therefore: $q_{sup} = 458(80 - T_o) - 10{,}240$ (C)

D. Nursery building empty

$q_{sen} = 0$
$T_n = 40$

therefore equation 1 becomes:

$q_{sup} = 106(40 - T_o)$ (D)

Sample Calculations

From original cumulative frequency of occurrence, table A-2, subtract cumulative frequencies to get a frequency of occurrence at an average temperature between two cumulative frequency temperatures. This has been done and recorded in table A-3. Table A-4 contains values obtained by multiplying (frequency) (0.1) (number of days in the appropriate month). This gives the number of days in each month that a temperature occurs. In table A-5 q-supplemental is obtained by substituting $q_{sup} = 503(70 - T_o) - 16{,}000$ when $T_o = -22.5$.

$$q_{sup} = 30{,}528 \text{ Btu/hr}$$

This value is then multiplied by the appropriate frequency for each month found in table A-4 x 24 hr/day to obtain energy values.

These values are then summed over the month in each of the four categories to obtain the total energy requirement for each month under four circumstances.

Example using (A) and January at −22.5° F.

q_{sup} = 30,528 Btu/hr

(30,528 Btu/hr) (.155 days) (24 hr/day) = 113,564 Btu

(q_{sup}) (# of days from table A-4) (24 hr/day)

Appendix table A-2. Cumulative frequency of temperature occurrence[1]

Temperature	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mean
							percent						
90							.1						.0
85						1.3	2.5	2.5	.3				.5
80					.5	3.3	13.5	11.2	3.1				2.9
75				.2	3.1	20.0	41.2	32.1	7.1	.3			8.8
70				1.3	9.3	42.2	73.0	59.0	15.6	2.2			17.1
65			.2	4.4	24.2	66.2	93.4	83.7	32.4	9.3			26.4
60			.6	9.6	41.7	67.9	99.3	95.9	55.1	20.5			34.4
55			1.9	20.0	63.6	95.6	99.9	99.6	76.0	36.6	1.3		41.4
50			5.1	32.4	81.5	99.0	100.0	100.0	90.3	55.2	8.1	.4	47.7
45		.5	10.3	51.4	92.3	99.9			97.5	72.0	14.7	.9	53.5
40	.2	1.2	19.4	71.0	98.4	100.0			99.7	87.6	27.1	2.3	59.1
35	1.7	6.1	29.7	89.2	99.6				100.0	96.5	46.5	8.4	65.0
30	7.6	15.8	50.4	96.9	100.0					98.8	64.9	22.9	71.5
25	20.0	30.4	67.9	99.1						99.9	79.3	37.7	77.9
20	33.8	46.3	81.6	99.7						100.0	88.0	51.4	83.6
15	47.3	60.4	90.6	100.0							94.8	68.4	88.5
10	60.1	73.4	93.9								98.3	78.3	92.0
5	70.9	84.5	97.8								99.5	86.1	94.9
0	81.2	91.8	99.4								99.7	92.0	97.1
−5	88.8	96.7	99.6								100.0	97.2	98.5
−10	95.3	99.0	99.9									99.2	99.4
−15	98.3	99.7	100.0									99.9	99.8
−20	99.5	100.0										100.0	100.0
−25	100.0												100.0

[1]The percentage of time that the temperature is equal to or exceeds a particular temperature during that month.

Appendix table A-3. Frequency of occurrence[1]

Temperature outside	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
							percent					
−22.5	.5											
−17.5	1.2	.3										.1
−12.5	3.0	.7	.1									.7
−7.5	6.5	2.3	.3									2.0
−2.5	7.6	4.9	.2								.3	5.2
2.5	10.3	7.3	1.6								.2	5.9
7.5	10.8	11.1	3.9								1.2	7.8
12.5	12.8	13.0	3.3								3.5	9.9
17.5	13.5	14.1	9.0	.3							6.8	17.0
22.5	13.8	15.9	13.7	.6						.1	8.7	13.7
27.5	12.4	14.6	17.5	2.2						1.1	14,4	14.8
32.5	5.9	9.7	20.7	7.7	.4					2.3	18.4	14.5
37.5	1.5	4.9	10.3	18.2	1.2				.3	8.9	19.4	6.1
42.5		.7	9.1	19.6	6.1	.1			2.2	15.6	12.4	1.4
47.5			5.2	19.0	10.8	.9			7.2	16.8	6.6	.5
52.5			3.2	12.4	17.9	3.4	.1	.4	14.3	18.6	6.8	
57.5			1.3	10.4	22.0	27.7	.7	3.7	20.9	16.1		

[1]Difference of cumulative frequency of temperature occurrence of table A-2 for temperature stated in table A-2.

Appendix table A-4. Number of days per month that each temperature occurred[1]

Temperature outside	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
−22.5	.155											
−17.5	.372	.084										.031
−12.5	.93	.196	.031									.217
−7.5	2.015	.644	.093									.62
−2.5	2.356	1.372	.062								.09	1.612
2.5	3.193	2.044	.496								.06	1.829
7.5	3.348	3.108	1.209								.36	2.418
12.5	3.968	3.64	1.023								1.05	3.069
17.5	4.185	3.948	2.79	.09							2.04	5.27
22.5	4.278	4.452	4.247	.18						.031	2.61	4.247
27.5	3.844	4.088	5.425	.66						.341	4.32	4.588
32.5	1.829	2.716	6.417	2.31	.124					.713	5.52	4.495
37.5	.465	1.372	3.193	5.46	.372				.09	2.759	5.82	1.891
42.5		.196	2.821	5.88	1.891	.03			.66	4.836	3.72	.434
47.5			1.612	5.7	3.348	.27			2.16	5.208	1.98	.155
52.5			.992	3.72	5.549	1.02	.031	.124	4.29	5.766	2.04	
57.5			.403	3.12	6.82	8.31	.217	1.147	6.27	4.991		

[1]Frequency from table A-3 × number of days per month x .01.

Appendix table A-5. Supplemental heat requirements (Btu) for farrowing facilities 6 of system G

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Farrowing full	9,529,992	6,922,075	3,748,920	346,094	11,627				752	121,921	2,518,591	6,961,453
Farrowing empty	3,063,991	2,259,604	1,289,447	161,011	6,747				817	61,835	899,651	2,288,652
Nursery full	15,291,805	12,249,859	9,460,140	4,002,588	1,126,208	105,218	2,076	8,738	620,766	2,649,248	7,923,179	12,903,581
Nursery empty	2,150,621	1,585,981	904,962	112,955	4,732				572	43,375	631,358	1,606,347

Appendix table B-1. Feeder pig seasonal price index, dollars per head[1]

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	AVERAGE FOR YEAR	STANDARD DEVIA-TION	COEFFI-CIENT OF VARIATION
1970-71	22.60	24.90	27.70	25.00	21.60	19.10	16.30	13.60	12.60	11.50	9.20	8.70	17.73	6.62	.37
1971-72	7.80	10.50	10.80	11.40	12.20	11.80	10.70	10.60	11.00	13.10	13.30	14.60	11.48	1.73	.15
1972-73	18.70	21.30	21.30	23.30	22.90	22.40	22.60	22.50	24.30	24.40	22.70	21.90	22.36	1.51	.07
1973-74	22.90	25.80	31.60	30.10	30.80	26.70	33.70	40.40	31.20	31.80	31.50	29.70	30.52	4.35	.14
1974-75	30.20	30.90	29.30	28.30	20.20	13.50	16.80	13.90	14.30	18.30	18.50	21.00	21.27	6.66	.31
1975-76	25.80	29.80	34.30	36.40	39.30	40.40	40.10	42.30	53.90	51.90	45.00	41.60	40.07	8.09	.20
1976-77	41.40	44.50	43.80	46.70	43.80	37.30	31.00	27.50	24.60	17.80	17.50	20.70	33.05	11.16	.34
1977-78	22.30	26.20	33.90	36.70	38.30	33.20	34.40	35.80	36.40	32.30	29.60	28.20	32.28	4.80	.15
1978-79	32.70	38.10	45.10	49.60	50.00	44.10	42.30	45.60	47.80	50.10	45.30	42.90	44.47	5.12	.12
AVERAGE FOR MONTH	24.93	28.00	30.87	31.94	31.01	27.61	27.54	28.02	28.46	27.91	25.84	25.48	28.14	2.21	.08
SEASONAL INDEX	93.1	105.0	113.3	116.9	112.8	99.1	99.0	97.1	96.1	93.9	86.9	86.7	100.00		

1/ Based on prices from the Wisconsin Feeder Pig Marketing Cooperative. Figures represent monthly average prices for central Minnesota and central Wisconsin.

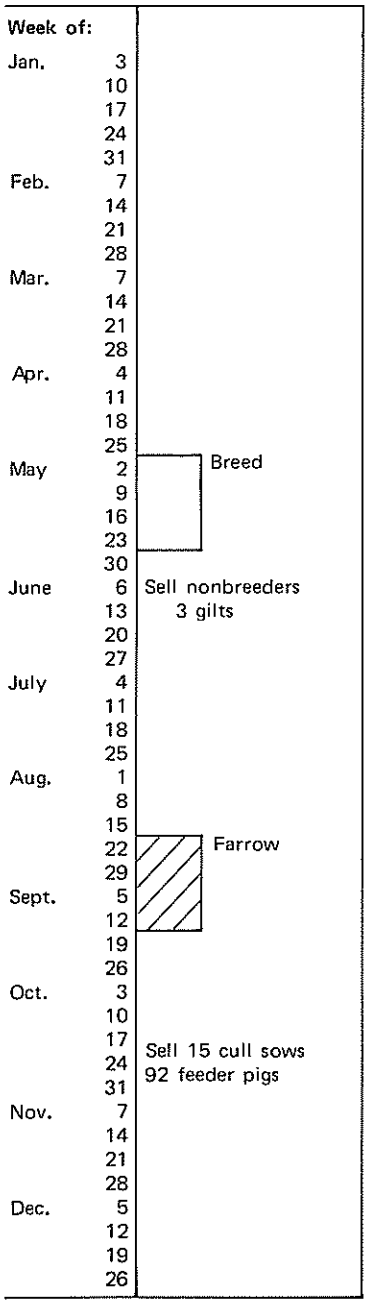
Appendix table B-2. Market hog seasonal price index (dollars per hundredweight) based on seven major markets[1]

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	AVERAGE FOR YEAR	STANDARD DEVIA-TION	COEFFI-CIENT OF VARIATION
1969-70	19.77	20.41	20.69	20.38	23.14	25.16	26.05	26.91	25.94	25.53	25.77	26.93	23.89	2.82	.12
1970-71	27.40	28.25	25.97	24.05	23.53	24.04	25.13	22.12	20.35	17.91	15.69	15.67	22.51	4.27	.19
1971-72	16.25	19.43	17.13	16.19	17.43	18.38	19.84	19.05	18.91	19.80	19.39	20.98	18.57	1.51	.08
1972-73	24.84	26.61	23.56	22.89	25.32	26.74	28.57	28.70	28.75	28.18	27.61	30.43	26.85	2.30	.09
1973-74	32.54	36.23	38.13	35.56	36.35	38.55	46.64	56.68	43.79	42.12	40.97	39.79	40.61	6.37	.16
1974-75	40.59	39.73	34.88	30.52	26.09	27.40	36.31	37.67	35.79	38.90	38.34	39.93	35.51	4.93	.14
1975-76	38.93	39.61	39.52	40.69	46.44	51.19	57.17	58.10	61.23	58.52	49.74	48.33	48.12	8.26	.17
1976-77	48.40	48.85	46.71	47.89	48.89	50.80	48.26	44.00	39.39	32.66	32.05	38.05	43.83	6.62	.15
1977-78	39.52	40.18	37.53	36.97	41.79	43.86	45.76	44.38	41.40	40.83	39.33	43.99	41.30	2.78	.07
1978-79	45.99	48.83	47.50	46.04	49.17	48.31	46.78	48.77	50.00	52.23	48.36	49.57	48.46	1.77	.04
1979-80	52.13	54.42	49.38	45.04	43.79	40.29	38.73	38.21	38.62	34.73	36.01	38.45	42.48	6.48	.15
AVERAGE FOR MONTH	35.12	36.60	34.64	33.29	34.72	35.88	38.11	38.60	36.74	35.58	33.93	35.65	35.74	1.58	.04
SEASONAL INDEX	100.6	105.5	98.4	93.8	97.0	99.9	108.0	107.9	101.2	98.1	92.4	96.8	100.00		

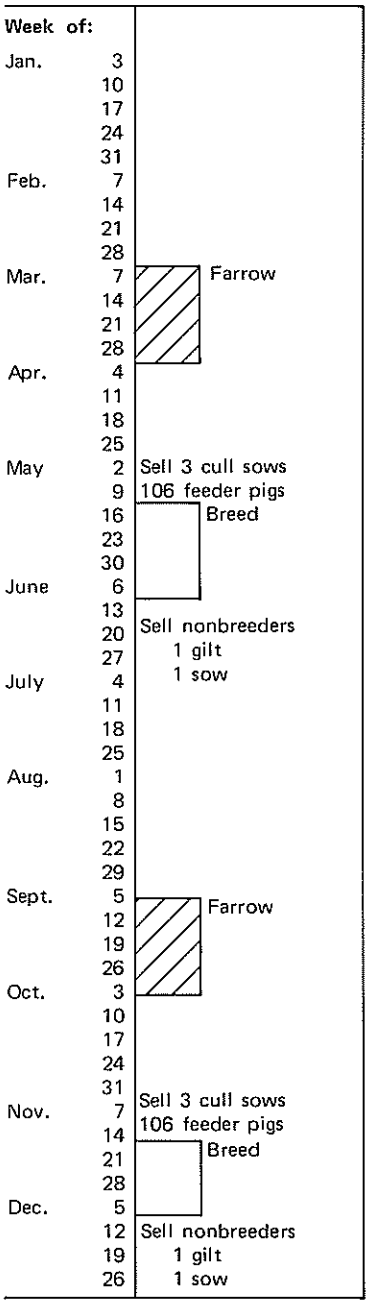
1/ Average monthly prices at St.Louis, Kansas City, Omaha, Sioux City, South St.Joseph, South St.Paul, and Indianapolis.

Appendix C: Feeder Pig Production Systems

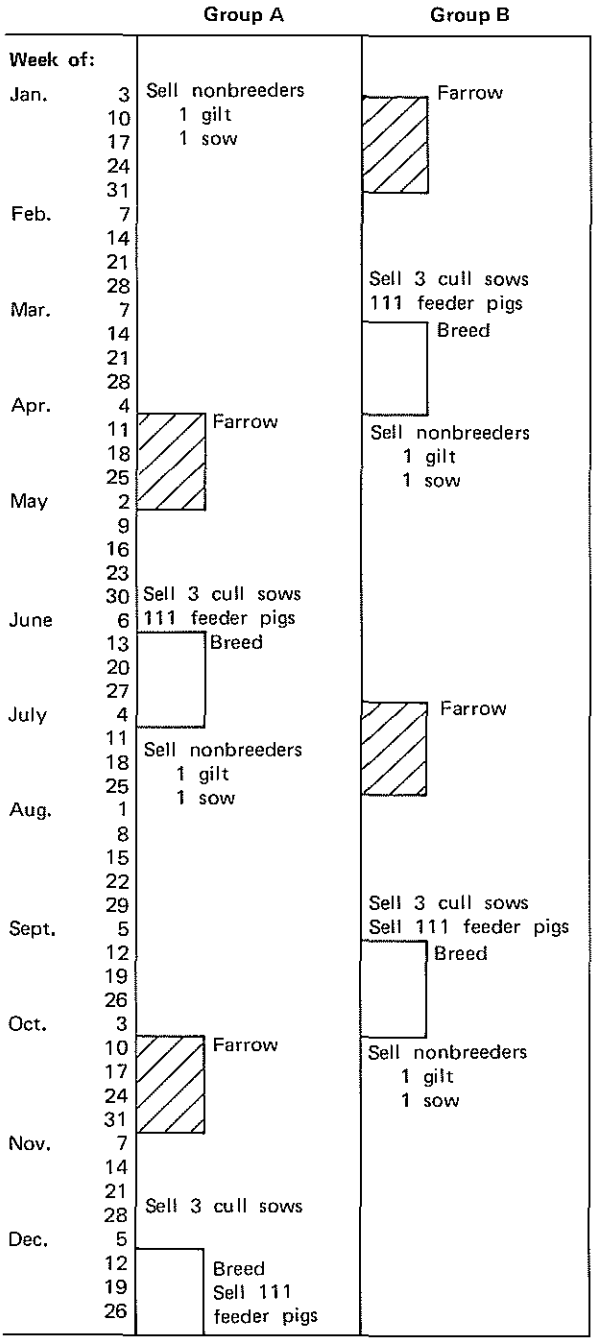
Appendix figure C-1. Production calendar for average year of operation, feeder pig system A



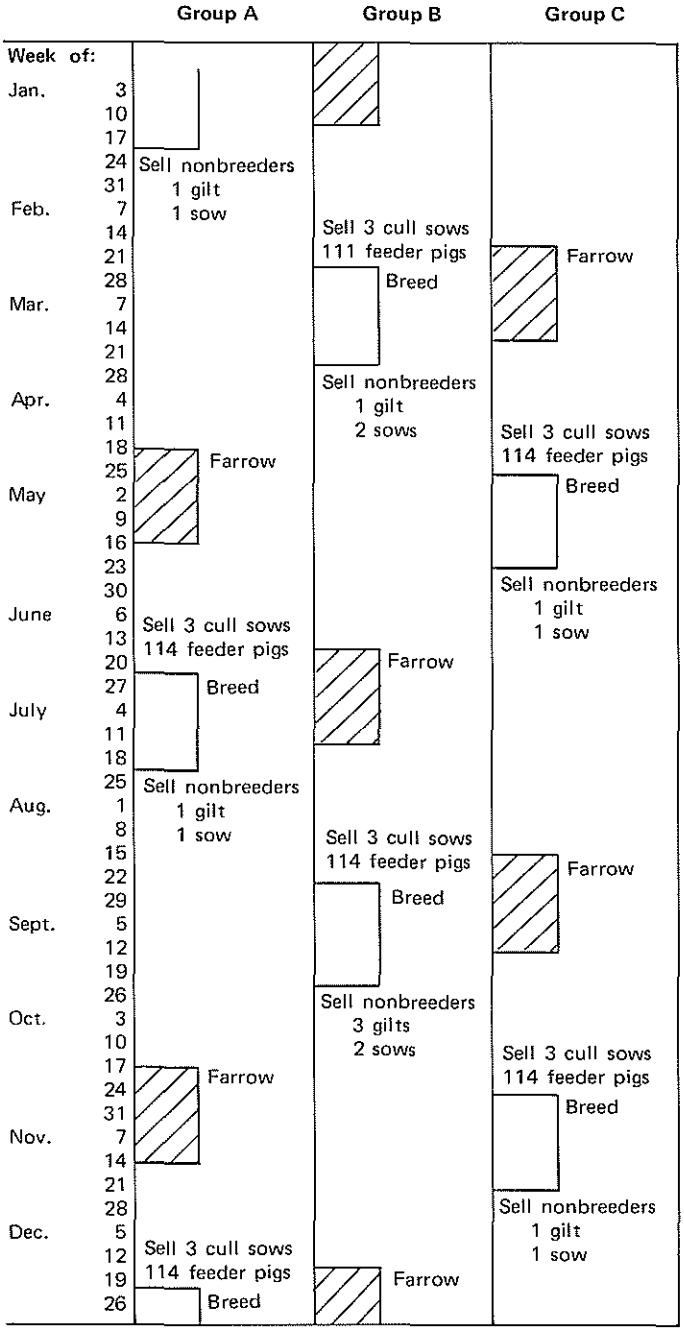
Appendix figure C-2. Production calendar for average year of operation, feeder pig systems C and E



Appendix figure C-3. Production calendar for average year of operation, feeder pig systems F and H



Appendix figure C-4. Production calendar for average year of operation, feeder pig system G



Appendix table C-1. Facilities required, investment cost, and labor required for construction for system A, one litter per year

Item	Size and description	Units	Cost per unit	Total
Farrowing facilities 1: pasture system, 16 A-frame huts				
Farrowing huts	7' x 7' 11" Wood A-Frame	16	$115	$1,840
Waterers and feeders	95-gallon stock tank	1	73	73
	2 ft. trough	1	11	11
	Pig cups-pans	8	8	64
Total				$1,988
Gestation facilities1: pasture system, 16 gilts, 3 boars				
Sow shelters	8' x 16' portable	2	763	$1,526
Boar shelters	6' x 8' portable	1	285	285
Feeders	8 ft. trough	2	55	110
	2 ft. trough	2	14	28
Waterers	2-hole frost proof	1	95	95
Plumbing and electrical	Water line, hydrant, electrical for water heaters			960
Fencing and posts	3,240'		1/ft	3,240
Total				$6,244
Equipment and machinery				
Loading and sorting chutes				$ 445
Total equipment, machinery, and facilities investment				$8,677
Total hours of labor for construction				166

Appendix table C-2. Facilities required, investment cost, and labor required for construction of system C, two litters per year

Item	Size and description	Units	Cost per unit	Total
Farrowing facilities 2: remodeled building				
Farrowing house	Remodel 16' x 28' bldg.	2@ 483/sq. ft.	$3.45/sq. ft.	$ 3,190
Farrowing crates	Wooden	16	$100	1,600
Heating	250 Watt heat lamps	6	15	90
Total				$ 4,880
Gestation facilities 2: remodeled pole building, 16 sows, 6 gilts, 3 boars				
Building	Remodel 32' x 40' pole bldg.	1,280 sq. ft.	$ .35	$ 448
Feeders	8 ft. trough	5	83	415
	2 ft. trough	2	11	22
Waterers	2-hold frost proof	2	95	190
	1-hold frost proof	1	75	75
Concrete, reinforcing inside, lot, apron	40' × 60'	2,400 sq. ft.	.58 sq. ft.	1,392
Fencing	Hog panels	200 ft.	.80	160
	Posts	25	1.75	44
Plumbing and electrical				960
Total				$ 3,706
Equipment and machinery				
Loading and sorting chutes				$ 445
Manure spreader, 100-bushel dry				2,000
Used skid loader				3,500
Total				$ 5,945
Total equipment, machinery, and facilities investment				$14,531
Total hours of labor for construction				200

Appendix table C-3. Facilities required, investment cost, and labor required for construction of system E, two litters per year

Item	Size and description	Units	Cost per unit	Total
Farrowing facilities 4: remodeled dairy barn				
Farrowing facilities	Remodel 36' x 38' dairy barn	1,368 sq. ft.	$ 1.81/sq. ft.	$ 2,473
Farrowing crates	Steel	16	250	4,000
Heating	250 Watt heat lamps	9	15	135
Total				$ 6,608
Gestation facilities 3: new open front shed with lot, 16 sows, 6 gilts, 3 boars				
Building	16' x 32' open front	512 sq. ft.	$ 3.12/sq. ft.	$ 1,598
Concrete	In building, lot, apron	1408 sq. ft.		823
Fencing	Pen dividers			244
	Outside fence	135 ft.	1/ft.	135
Feeders	10-hole feeders	3	200	600
	2-hole feeders	1	100	100
Waterers	2-hole frost proof	2	100	200
Plumbing and electrical				1,250
Total				$ 4,950
Equipment and machinery				
Loading and sorting chutes				445
Manure spreader, 100-bushel dry				2,000
Used skid loader				3,500
Total				$ 5,945
Total equipment, machinery, and facilities investment				$17,503
Total hours of labor for construction				248

Appendix table C-4. Facilities required, investment cost, and labor required for construction of system F, four litters per year

Item	Size and description	Units	Cost per unit	Total
Farrowing facilities 5: remodeled dairy barn with insulation and mechanical ventilation				
Farrowing	Remodel and insulate 36' x 38' dairy barn	1,368	$ 2.60	$ 3,557
Farrowing crates	Steel	16	250	4,000
Heating	60,000 Btu/hr. unit	1	300	300
	250 Watt heat lamps	9	15	135
Ventilation	3 fans (320, 2080, 3360 CFM)			775
Total				$ 8,767
Gestation facilities 4: new open front shed with lot, 32 sows, 12 gilts, 3 boars				
Building	16' x 32' open front	1,024 sq. ft.	$ 2.57/sq. ft.	$ 2,627
Concrete	In building, lot, apron	2,816 sq. ft.	.58/sq. ft.	1,663
Fencing	Pen dividers			486
	Outside fence	250 sq. ft.	1/ft.	250
Feeders	16-hole fence line	3	325	975
	2-hole feeder	2	100	200
Feed system	3-ton bin and auger			1,625
Waterers	2-hole frost proof	4	100	400
Plumbing and electrical				1,440
Total				$ 9,666
Equipment and machinery				
Loading and sorting chutes				$ 445
Manure spreader, 125-bushel				2,000
Used skid loader				3,500
Total				$ 5,945
Total equipment, machinery, and facilities investment				$24,378
Total hours of labor for construction				384

Appendix table C-5. Facilities required, investment cost, and labor required for construction of system G, six litters per year

Item	Size and description	Units	Cost per unit	Total
Farrowing and nursery facilities 6: remodeled dairy barn with liquid manure storage				
Farrowing and nursery	Remodel 36' x 60' dairy barn	2,160 sq. ft.	$ 2.03/sq. ft.	$ 4,385
Farrowing crates	Steel	16	250	4,000
Nursery pens	Wooden			209
Heating	60,000 Btu/hr. unit	2	300	600
	250 Watt heat lamps	9	15	135
Ventilation	6 fans (320, 960, 2080 320, 2080, 3360 CFM)			1,485
Feeders (nursery)	5-hole troughs	2	130	260
	5-hole feeder	2	84	168
Waterers (nursery)	Cup waterer	6	12	72
Concrete resloping	36' x 60'			1,253
Concrete storage tank	22' x 22' x 8'			8,944
Total				$21,511
Gestation facilities 5: new pole building, 48 sows, 21 gilts, 3 boars				
Sow housing	30' x 80' pole building	2,400 sq. ft.	$ 6.27/sq. ft.	$15,048
Concrete floor	30' x 80'			1,440
Waterers	2-hole frost proof	5	100	500
Feeders	16-door feeder	5	323	1,615
	12-door feeder	5	263	1,315
Feed system	4.4-ton bin and auger			1,918
Total				$21,846
Equipment and machinery				
Loading and sorting chute				$ 445
Manure spreader, 100-bushel dry				2,000
Liquid manure spreader, 1,500-gallon				6,000
Pit-agitator pump, 8'				3,500
Used skid loader				3,500
Total				$15,445
Total equipment, machinery, and facilities investment				$58,802
Total hours of labor for construction				528

Appendix table C-6. Facilities required, investment cost, and labor required for construction of system H, four litters per year

Item	Size and description	Units	Cost per unit	Total
Farrowing facilities 7: new pole building				
Farrowing house	24' x 40' pole building	1,152 sq. ft.	$ 6.50/sq. ft.	$ 7,488
Farrowing crates	Steel	16	250	4,000
Concrete floor	24' x 48'			679
Heating	60,000 Btu/hr. unit	1	300	300
	250 Watt heat lamps	10	15	150
Ventilation	3 fans (320, 2080, 3360 CFM)			775
Total				$13,392
Gestation facilities 4: new open front shed with lot, 32 sows, 12 gilts, 3 boars				
Open front unit	16' x 64'	1,024 sq. ft.	$ 2.57/sq. ft.	$ 2,627
Concrete	In building, lot, apron	2,816 sq. ft.	.58/sq. ft.	1,663
Fencing	Pen dividers			486
	Outside fence	250 ft.	1/ft.	250
Feeders	16-hole fence-line	3	325	975
	2-hole	2	100	200
Feed system	3-ton			1,625
Waterers	2-hole frost proof	4	100	400
Plumbing and electrical				1,440
Total				$ 9,666
Equipment and machinery				
Loading and sorting chutes				$ 445
Manure spreader, 125-bushel dry				2,000
Used skid loader				3,500
Total				$ 5,945
Total equipment, machinery, and facilities investment				$29,003
Total hours of labor for construction				600

Appendix table C-7. Average annual costs and returns for the 16-gilt feeder pig production system A

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Litter
1.	GROSS RECEIPTS						
	FEEDER PIGS	1.00	HD.	43.35	92.00	3988.20	
	GILT N. B.	2.90	CWT.	48.00	3.00	417.60	
	SOW CULL	3.70	CWT.	47.00	15.00	2608.50	
	BOAR	4.50	CWT.	39.00	3.00	526.50	
	TOTAL					7540.80	471.30
2.	OPERATING COSTS						
	CORN		BU.	3.00	603.90	1811.70	
	SOYBEAN MEAL		CWT.	14.50	76.00	1102.00	
	MINERALS		LBS.	.05	1472.70	73.64	
	OATS		LBS.	.07	62.60	4.38	195.35
	WHEAT BRAN		LBS.	.05	672.00	33.60	
	SUGAR		LBS.	.17	31.30	5.32	
	GRIND & MIX		TONS	4.50	21.10	94.95	
	VET & MED.		DOL.	1.00	138.00	138.00	
	ELECTRICITY		KWH	.05	2135.00	117.42	
	INS. AND TAXES		DOL.	1.00	101.00	101.00	
	HAULING & MKTG.		DOL.	1.00	259.00	259.00	
	MISCL EXPENSE		DOL.	1.00	204.00	204.00	
	YOUNG BOAR		HD.	450.00	3.00	1350.00	179.92
	TRACTORS(FUEL,LUBE,REP)		DOL.			57.45	
	MACHINERY(FUEL,LUBE,REP)		DOL.			3.11	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			485.23	
	INTEREST ON OPER.CAP.,		DOL.	.12		163.58	
	TOTAL OPERATING COSTS					6004.38	375.27
3.	INCOME ABOVE OPERATING COSTS					1536.42	96.03
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	3200.00	384.00	
	INT. ON EQUIPMENT		DOL.	.12	4338.50	520.62	
	INT. ON MACHINERY		DOL.	.12	282.23	33.87	
	DEPR. ON EQUIPMENT		DOL.			1213.08	
	DEPR. ON MACHINERY		DOL.			34.47	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			90.31	
	TOTAL OWNERSHIP COSTS					2276.35	142.27
5.	TOTAL COSTS SHOWN					8280.73	517.55
6.	NET RETURNS ABOVE COSTS SHOWN					-739.93	-46.24

1 LITTER-16 GILTS FARROWING IN PORTABLE A-FRAME BUILDINGS.
PORTABLE GESTATION FACILITIES.

Appendix table C-8. Average annual costs and returns for the 16-sow feeder pig production system C

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Litter
1.	GROSS RECEIPTS						
	FEEDER PIGS	1.00	HD.	56.40	106.00	5978.40	
	FEEDER PIGS	1.00	HD.	43.35	106.00	4595.10	
	GILT N. B.	2.90	CWT.	48.00	2.00	278.40	
	SOW N. B.	3.60	CWT.	45.00	2.00	324.00	
	SOW CULL	3.70	CWT.	44.00	6.00	976.80	
	BOAR	4.50	CWT.	39.00	3.00	526.50	
	TOTAL					12679.20	396.23
2.	OPERATING COSTS						
	CORN		BU.	3.00	917.50	2752.50	
	SOYBEAN MEAL		CWT.	14.50	122.40	1774.80	
	MINERALS		LBS.	.05	2375.30	118.76	
	OATS		LBS.	.07	125.20	8.76	152.24
	WHEAT BRAN		LBS.	.05	1120.00	56.00	
	SUGAR		LBS.	.17	62.60	10.64	
	GRIND & MIX		TONS	4.50	33.40	150.30	
	VET & MED.		DOL.	1.00	251.00	251.00	
	ELECTRICITY		KWH	.05	8432.00	463.76	
	INS. AND TAXES		DOL.	1.00	165.00	165.00	
	HAULING & MKTG.		DOL.	1.00	354.50	354.50	
	MISCL EXPENSE		DOL.	1.00	228.00	228.00	129.61
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			651.49	
	MACHINERY(FUEL,LUBE,REP)		DOL.			20.51	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			417.66	
	INTEREST ON OPER.CAP.,		DOL.	.12		245.55	
	TOTAL OPERATING COSTS					9019.24	281.85
3.	INCOME ABOVE OPERATING COSTS					3659.96	114.37
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	4260.00	511.20	
	INT. ON EQUIPMENT		DOL.	.12	4515.50	541.86	
	INT. ON MACHINERY		DOL.	.12	973.97	116.88	
	DEPR. ON EQUIPMENT		DOL.			1263.65	
	DEPR. ON MACHINERY		DOL.			114.01	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			103.65	
	TOTAL OWNERSHIP COSTS					2651.25	82.85
5.	TOTAL COSTS SHOWN					11670.49	364.70
6.	NET RETURNS ABOVE COSTS SHOWN					1008.71	31.52

2 LITTER-16 SOWS A REMODELED UNINSULATED BUILDING FOR FARROWING AND NURSERY. OPEN FRONT REMODELED SHED USED FOR GESTATION.

Appendix table C-9. Average annual costs and returns for the 16-sow feeder pig production system E

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Litter
1.	GROSS RECEIPTS						
	FEEDER PIGS	1.00	HD.	56.40	106.00	5978.40	
	FEEDER PIGS	1.00	HD.	43.35	106.00	4595.10	
	GILT N. B.	2.90	CWT.	48.00	2.00	278.40	
	SOW N. B.	3.60	CWT.	45.00	2.00	324.00	
	SOW CULL	3.70	CWT.	44.00	6.00	976.80	
	BOAR	4.50	CWT.	39.00	3.00	526.50	
	TOTAL					12679.20	396.22
2.	OPERATING COSTS						
	CORN		BU.	3.00	918.60	2755.80	
	SOYBEAN MEAL		CWT.	14.50	122.60	1777.70	
	MINERALS		LBS.	.05	2372.10	118.61	
	OATS		LBS.	.07	125.20	8.76	152.46
	WHEAT BRAN		LBS.	.05	1120.00	56.00	
	SUGAR		LBS.	.17	62.60	10.64	
	GRIND & MIX		TONS	4.50	33.60	151.20	
	VET & MED.		DOL.	1.00	251.00	251.00	
	ELECTRICITY		KWH	.05	6044.00	332.42	
	HAULING & MKTG.		DOL.	1.00	354.50	354.50	
	INS. AND TAXES		DOL.	1.00	142.00	142.00	
	MISCL EXPENSE		DOL.	1.00	240.00	240.00	
	YOUNG BOAR		HD.	450.00	3.00	1350.00	124.95
	TRACTORS(FUEL,LUBE,REP)		DOL.			651.49	
	MACHINERY(FUEL,LUBE,REP)		DOL.			20.51	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			401.16	
	INTEREST ON OPER.CAP.,		DOL.	.12		255.42	
	TOTAL OPERATING COSTS					8877.20	277.41
3.	INCOME ABOVE OPERATING COSTS					3802.00	118.81
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	4260.00	511.20	
	INT. ON EQUIPMENT		DOL.	.12	6001.50	720.18	
	INT. ON MACHINERY		DOL.	.12	973.97	116.88	
	DEPR. ON EQUIPMENT		DOL.			1393.58	
	DEPR. ON MACHINERY		DOL.			114.01	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			127.43	
	TOTAL OWNERSHIP COSTS					2983.27	93.23
5.	TOTAL COSTS SHOWN					11860.47	370.64
6.	NET RETURNS ABOVE COSTS SHOWN					818.73	25.59

2 LITTER-16 SOWS REMODELED UNINSULATED DAIRY BARN FOR FARROWING AND NURSERY. NEW OPEN FRONT SHED FOR GESTATION.

Appendix table C-10. Average annual costs and returns for the 32-sow feeder pig production system F

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Litter
1.	GROSS RECEIPTS						
	FEEDER PIGS	1;00	HD.	56.65	111.00	6288.15	
	FEEDER PIGS	1;00	HD.	49.55	111.00	5500.05	
	FEEDER PIGS	1;00	HD.	48.05	111.00	5333.55	
	FEEDER PIGS	1;00	HD.	43.35	111.00	4811.85	
	SOW N. B.	3;60	CWT.	45;00	4.00	648.00	
	GILT N. B.	2;90	CWT.	48;00	4.00	556.80	
	SOW CULL	3.70	CWT.	44.00	12.00	1953.60	
	BOAR	4.50	CWT.	39.00	3.00	526.50	
	TOTAL					25618.50	400.29
2.	OPERATING COSTS						
	CORN		BU.	3.00	1727.90	5183.70	
	SOYBEAN MEAL		CWT.	14.50	234.00	3393.00	
	MINERALS		LBS.	.05	4478.30	223.92	
	OATS		LBS.	.07	261.60	18.31	144.41
	WHEAT BRAN		LBS.	.05	2293.30	114.67	
	SUGAR		LBS.	.17	130;80	22.24	
	GRIND & MIX		TONS	4.50	63.60	286.20	
	VET & MED'.		DOL.	1.00	444.00	444.00	
	INS', AND TAXES		DOL.	1.00	290.00	290.00	
	HAULING & MKTG.		DOL.	1.00	718.00	718.00	
	LP GAS		GAL.	1.00	664.00	664.00	
	ELECTRICITY		KWH	.05	13316.00	732.38	106.53
	MISCL EXPENSE		DOL.	1.00	242.00	242.00	
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			1244.47	
	MACHINERY(FUEL,LUBE,REP)		DOL.			33.32	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			679.61	
	INTEREST ON OPER.CAP.,		DOL.	.12		420.05	
	TOTAL OPERATING COSTS					16059.86	250.94
3.	INCOME ABOVE OPERATING COSTS					9558.64	149.35
4.	OWNERSHIP COSTS						
	INT'. ON LIVESTOCK CAPITAL		DOL.	.12	7620.00	914.40	
	INT. ON EQUIPMENT		DOL.	.12	9439.00	1132.68	
	INT'. ON MACHINERY		DOL.	.12	1702.39	204.29	
	DEPR. ON EQUIPMENT		DOL.			2095.01	
	DEPR. ON MACHINERY		DOL.			198.28	
	INS',,TAXES ON EQPT.,, LVSTK.,, AND MACH.		DOL.			206.96	
	TOTAL OWNERSHIP COSTS					4751.62	74.24
5.	TOTAL COSTS SHOWN					20811.48	325.18
6.	NET RETURNS ABOVE COSTS SHOWN					4807.02	75.11

4 LITTER-32 SOWS REMODELED INSULATED VENTILATED DAIRY BARN FOR FARROWING AND NURSERY. NEW OPEN FRONT SHED FOR GESTATION.

Appendix table C-11. Average annual costs and returns for the 48-sow feeder pig production system G

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Litter
1.	GROSS RECEIPTS						
	FEEDER PIGS	100	HD.	52.55	111.00	5833.05	
	FEEDER PIGS	100	HD.	58.50	114.00	6669.00	
	FEEDER PIGS	100	HD.	49.55	114.00	5648.70	
	FEEDER PIGS	100	HD.	48.55	114.00	5534.70	
	FEEDER PIGS	100	HD.	46.95	114.00	5352.30	
	FEEDER PIGS	100	HD.	43.35	114.00	4941.90	
	SOW N. B.	360	CWT.	45.00	7.00	1134.00	
	GILT N. B.	290	CWT.	48.00	8.00	1113.60	
	SOW CULL	370	CWT.	44.00	18.00	2930.40	
	BOAR	450	CWT.	39.00	3.00	526.50	
	TOTAL					39684.15	413.38
2.	OPERATING COSTS						
	CORN		BU.	3.00	2671.90	8015.70	
	SOYBEAN MEAL		CWT.	14.50	363.90	5276.55	
	MINERALS		LBS.	.05	6978.60	348.93	
	OATS		LBS.	.07	402.80	28.20	149.12
	WHEAT BRAN		LBS.	.05	3494.40	174.72	
	SUGAR		LBS.	.17	201.40	34.24	
	GRIND & MIX		TONS	4.50	97.20	437.40	
	VET & MED.		DOL.	1.00	612.00	612.00	
	INS. AND TAXES		DOL.	1.00	440.00	440.00	
	HAULING & MKTG.		DOL.	1.00	1092.00	1092.00	
	LP GAS		GAL.	1.00	760.00	760.00	
	ELECTRICITY		KWH	.05	19440.00	1069.20	94.39
	MISCL EXPENSE		DOL.	1.00	276.00	276.00	
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			1064.45	
	MACHINERY(FUEL,LUBE,REP)		DOL.			107.66	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			1642.76	
	INTEREST ON OPER.CAP.,		DOL.	.12		647.10	
	TOTAL OPERATING COSTS					23376.91	243.51
3.	INCOME ABOVE OPERATING COSTS					16307.24	169.87
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	10980.00	1317.60	
	INT. ON EQUIPMENT		DOL.	.12	23651.00	2838.12	
	INT. ON MACHINERY		DOL.	.12	2953.16	354.38	
	DEPR. ON EQUIPMENT		DOL.			5430.58	
	DEPR. ON MACHINERY		DOL.			363.53	
	INS.,TAXES ON EQPT., LVSTK. AND MACH.		DOL.			462.01	
	TOTAL OWNERSHIP COSTS					10766.23	112.15
5.	TOTAL COSTS SHOWN					34143.13	355.66
6.	NET RETURNS ABOVE COSTS SHOWN					5541.02	57.72

6 LITTER-48 SOWS REMODELED INSULATED VENTILATED DAIRY BARN WITH MANURE STORAGE FOR FARROWING AND NURSERY,NEW MODIFIED OPEN FRONT SHED FOR GESTATION

Appendix table C-12. Average annual costs and returns for the 32-sow feeder pig production system H

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Litter
1.	GROSS RECEIPTS						
	FEEDER PIGS	1.00	HD.	56.65	111.00	6288.15	
	FEEDER PIGS	1.00	HD.	49.55	111.00	5500.05	
	FEEDER PIGS	1.00	HD.	48.05	111.00	5333.55	
	FEEDER PIGS	1.00	HD.	43.35	111.00	4811.85	
	SOW N. B.	3.60	CWT.	45.00	4.00	648.00	
	GILT N. B.	2.90	CWT.	48.00	4.00	556.80	
	SOW CULL	3.70	CWT.	44.00	12.00	1953.60	
	BOAR	4.50	CWT.	39.00	3.00	526.50	
	TOTAL					25618.50	400.29
2.	OPERATING COSTS						
	CORN		BU.	3.00	1727.90	5183.70	
	SOYBEAN MEAL		CWT.	14.50	234.00	3393.00	
	MINERALS		LBS.	.05	4478.30	223.92	
	GRAIN		LBS.	.07	261.60	18.31	144.41
	WHEAT BRAN		LBS.	.05	2293.30	114.67	
	SUGAR		LBS.	.17	130.80	22.24	
	GRIND & MIX		TONS	4.50	63.60	286.20	
	VET & MED.		DOL.	1.00	444.00	444.00	
	INS. AND TAXES		DOL.	1.00	290.00	290.00	
	HAULING & MKTG.		DOL.	1.00	718.00	718.00	
	LP GAS		GAL.	1.00	664.00	664.00	
	ELECTRICITY		KWH	.05	13316.00	732.38	
	MISCL EXPENSE		DOL.	1.00	264.00	264.00	106.07
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			1244.47	
	MACHINERY(FUEL,LUBE,REP)		DOL.			33.32	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			629.13	
	INTEREST ON OPER.CAP.,		DOL.	.12		419.43	
	TOTAL OPERATING COSTS					16030.76	250.48
3.	INCOME ABOVE OPERATING COSTS					9587.74	149.81
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	7620.00	914.40	
	INT. ON EQUIPMENT		DOL.	.12	11751.50	1410.18	
	INT. ON MACHINERY		DOL.	.12	1702.39	204.29	
	DEPR. ON EQUIPMENT		DOL.			1958.58	
	DEPR. ON MACHINERY		DOL.			198.28	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			243.96	
	TOTAL OWNERSHIP COSTS					4929.69	77.03
5.	TOTAL COSTS SHOWN					20960.45	327.51
6.	NET RETURNS ABOVE COSTS SHOWN					4658.05	72.78

4 LITTER-32 SOWS NEW POLE BUILDING FOR FARROWING AND NURSERY.
NEW POLE BUILGING FOR GESTATION.

Appendix table C-13. Effect of changes in prices and pigs weaned per litter on net returns above costs shown for feeder pig system A

		Price of feeder pigs per head				
		$37.35	$40.35	$43.35	$46.35	$49.35
		changes in net returns				
Price of corn per bushel	$ 2.00	51.90	327.90	603.90	879.90	1,155.90
	$ 2.50	-250.05	25.95	301.95	577.95	853.95
	$ 3.00	-552.00	-276.00	.00	276.00	552.00
	$ 3.50	-853.95	-577.95	-301.95	-25.95	250.05
	$ 4.00	-1,155.90	-879.90	-603.90	-327.90	-51.90

		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundred-weight	$ 8.50	1,059.90	757.95	456.00	154.05	-147.90
	$11.50	831.90	529.95	228.00	-73.95	-375.90
	$14.50	603.90	301.95	.00	-301.95	-603.90
	$17.50	375.90	73.95	-228.00	-529.95	-831.90
	$20.50	147.90	-154.05	-456.00	-757.95	-1,059.90

		Price of feeder pigs per head				
		$37.35	$40.35	$43.35	$46.35	$49.35
		changes in net returns				
Pigs weaned per litter	6.5	-1,149.60	-921.60	-693.60	-465.60	-237.60
	7.0	-850.80	-598.80	-346.80	-94.80	157.20
	7.5	-552.00	-276.00	.00	276.00	552.00
	8.0	-253.20	46.80	346.80	646.80	946.80
	8.5	45.60	369.60	693.60	969.60	1,341.60

Appendix table C-14. Effect of changes in prices and pigs weaned per litter on net returns above costs shown for feeder pig system C

		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundred-weight	$ 8.50	1,651.90	1,193.15	734.40	275.65	-183.10
	$11.50	1,284.70	825.95	367.20	-91.55	-550.30
	$14.50	917.50	458.75	.00	-458.75	-917.50
	$17.50	550.30	91.55	-367.20	-825.95	-1,284.70
	$20.50	183.10	-275.65	-734.40	-1,193.15	-1,651.90

		Price of feeder pigs per head				
		$43.88	$46.88	$49.88	$52.88	$55.88
		changes in net returns				
Price of corn per bushel	$ 2.00	-354.40	281.50	917.50	1,553.50	2,189.50
	$ 2.50	-813.25	-177.25	458.75	1,094.75	1,730.75
	$ 3.00	-1,272.00	-636.00	.00	636.00	1,272.00
	$ 3.50	-1,730.75	-1,094.75	-458.75	177.25	813.25
	$ 4.00	-2,189.50	-1,553.50	-917.50	-281.50	354.50

		Price of feeder pigs per head				
		$43.88	$46.88	$49.88	$52.88	$55.88
		changes in net returns				
Pigs weaned per litter	6.0	-2,676.16	-2,136.16	-1,596.16	-1,056.16	-516.16
	6.5	-1,974.08	-1,386.08	-798.08	-210.08	377.92
	7.0	-1,272.00	-636.00	.00	636.00	1,272.00
	7.5	-569.92	114.08	798.08	1,482.08	2,166.08
	8.0	132.16	864.16	1,596.16	2,328.16	3,060.16

Appendix table C-15. Effect of changes in prices and pigs weaned per litter on net returns above costs shown for feeder pig system E

		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundred-weight	$ 8.50	1,654.20	1,194.90	735.60	276.30	-183.00
	$11.50	1,286.40	827.10	367.80	-91.50	-550.80
	$14.50	918.60	459.30	.00	-459.30	-918.60
	$17.50	550.80	91.50	-367.80	-827.10	-1,286.40
	$20.50	183.00	-276.30	-735.60	-1,194.90	-1,654.20

		Price of feeder pigs per head				
		$43.88	$46.88	$49.88	$52.88	$55.88
		changes in net returns				
Price of corn per bushel	$ 2.00	-353.40	282.60	918.60	1,554.60	2,190.60
	$ 2.50	-812.70	-176.70	459.30	1,095.30	1,731.30
	$ 3.00	-1272.00	-636.00	.00	636.00	1,272.00
	$ 3.50	-1,731.30	-1,095.30	-459.30	176.70	812.70
	$ 4.00	-2,190.60	-1,554.60	-918.60	-282.60	353.40

		Price of feeder pigs per head				
		$43.88	$46.88	$49.88	$52.88	$55.88
		changes in net returns				
Pigs weaned per litter	6.0	-2,676.16	-2,136.16	-1,596.16	-1,056.16	-516.16
	6.5	-1,974.08	-1,386.08	-798.08	-210.08	377.92
	7.0	-1,272.00	-636.00	.00	636.00	1,272.00
	7.5	-569.92	114.08	798.08	1,482.08	2,166.08
	8.0	132.16	864.16	1,596.16	2,328.16	3,060.16

Appendix table C-16. Effect of changes in prices and pigs weaned per litter on net returns above costs shown for feeder pig system F

		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundred-weight	$ 8.50	3,131.90	2,267.95	1,404.00	540.05	-323.90
	$11.50	2,429.90	1,565.95	702.00	-161.95	-1,025.90
	$14.50	1,727.90	863.95	.00	-863.95	-1,727.90
	$17.50	1,025.90	161.95	-702.00	-1,565.95	-2,429.90
	$20.50	323.90	-540.05	-1,404.00	-2,267.95	-3,131.90

		Price of feeder pigs per head				
		$43.40	$46.40	$49.40	$52.40	$55.40
		changes in net returns				
Price of corn per bushel	$ 2.00	-936.10	395.90	1,727.90	3,059.90	4,391.90
	$ 2.50	-1,800.05	-468.05	863.95	2,195.95	3,527.95
	$ 3.00	-2,664.00	-1,332.00	.00	1,332.00	2,664.00
	$ 3.50	-3,527.95	-2,195.95	-863.95	468.05	1,800.05
	$ 4.00	-4,391.90	-3,059.90	-1,727.90	-395.90	936.10

		Price of feeder pigs per head				
		$43.40	$46.40	$49.40	$52.40	$55.40
		changes in net returns				
Pigs weaned per litter	6.3	-5,441.60	-4,301.60	-3,161.60	-2,021.60	-881.60
	6.8	-4,052.80	-2,816.80	-1,580.80	-344.80	891.20
	7.3	-2,664.00	-1,332.00	.00	1,332.00	2,664.00
	7.8	-1,275.20	152.00	1,580.80	3,008.80	4,436.80
	8.3	113.60	1,637.60	3,161.60	4,685.60	6,209.60

Appendix table C-17. Effect of changes in prices and pigs weaned per litter on net returns above costs shown for feeder pig system G

		Price of feeder pigs per head				
		$43.90	$46.90	$49.90	$52.90	$55.90
		changes in net returns				
Price of corn per bushel	$ 2.00	-1,414.10	628.90	2,671.90	4,714.90	6,757.90
	$ 2.50	-2,750.05	-707.05	1,335.95	3,378.95	5,421.95
	$ 3.00	-4,086.00	-2,043.00	.00	2,043.00	4,086.00
	$ 3.50	-5,421.95	-3,378.95	-1,335.95	707.05	2,750.05
	$ 4.00	-6,757.90	-4,714.90	-2,671.90	-628.90	1,414.10

		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundred-weight	$ 8.50	4,855.30	3,519.35	2,183.40	847.45	-488.50
	$11.50	3,763.60	2,427.65	1,091.70	-244.25	-1,580.20
	$14.50	2,671.90	1,335.95	.00	-1,335.95	-2,671.90
	$17.50	1,580.20	224.25	-1,091.70	-2,427.65	-3,763.60
	$20.50	488.50	-847.45	-2,183.40	-3,519.35	-4,855.30

		Price of feeder pigs per head				
		$43.90	$46.90	$49.90	$52.90	$55.90
		changes in net returns				
Pigs weaned per litter	6.5	-8,300.40	-6,545.40	-4,790.40	-3,035.40	-1,280.40
	7.0	-6,193.20	-4,294.2	-2,395.28	496.20	1,402.80
	7.5	-4,086.00	-2,043.00	.00	2,043.00	4,086.00
	8.0	-1,978.80	208.20	2,395.20	4,582.20	6,769.20
	8.5	128.40	2,459.40	4,790.40	7,121.40	9,452.40

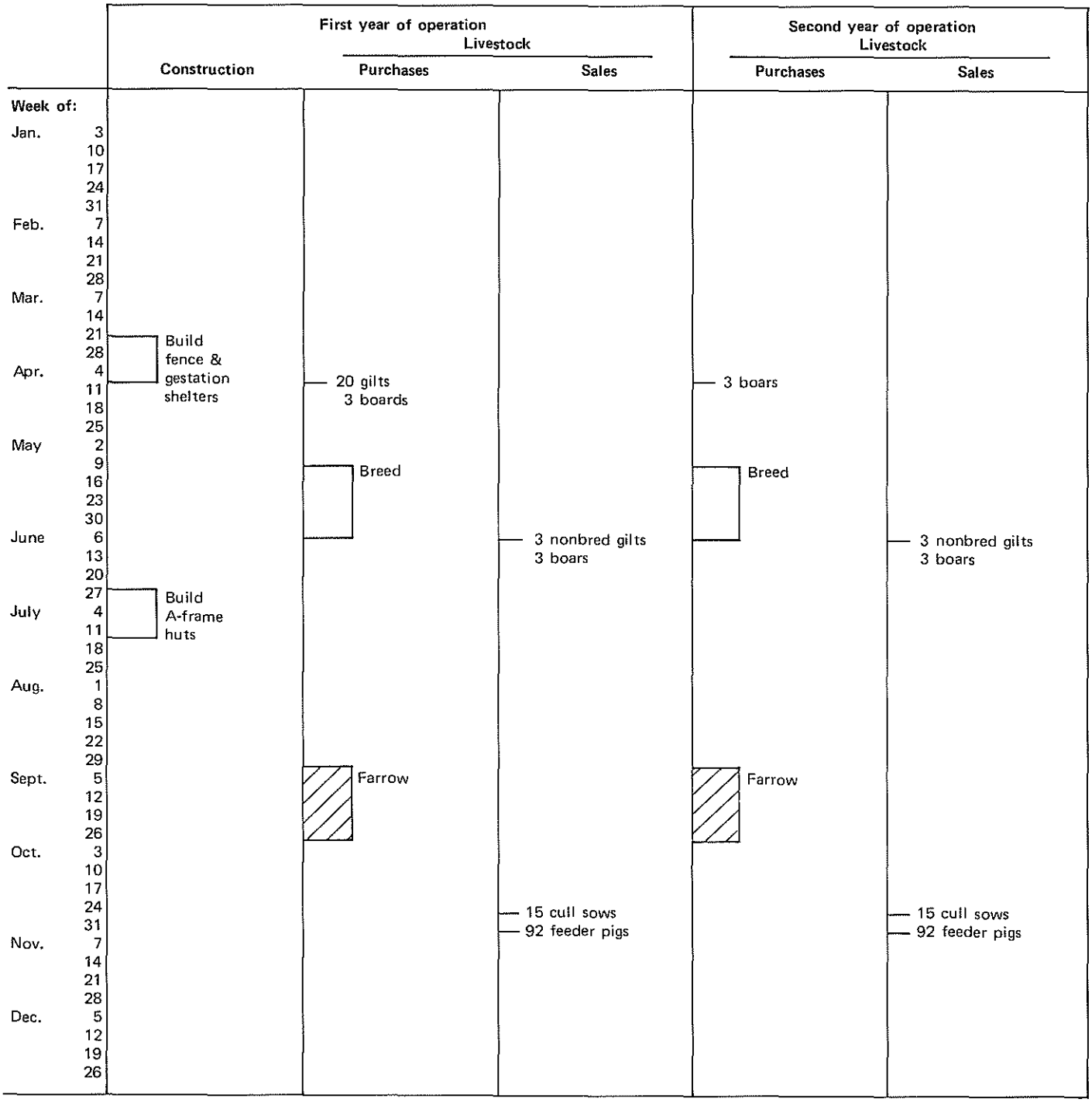
Appendix table C-18. Effect of changes in prices and pigs weaned per litter on net returns above costs shown for feeder pig system H

		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundred-weight	$ 8.50	3,131.90	2,267.95	1,404.00	540.05	-323.90
	$11.50	2,429.90	1,565.95	702.00	-161.95	-1,025.90
	$14.50	1,727.90	863.95	.00	-863.95	-1,727.90
	$17.50	1,025.90	161.95	-702.00	-1,565.95	-2,429.90
	$20.50	323.90	-540.05	-1,404.00	-2,267.95	-3,131.90

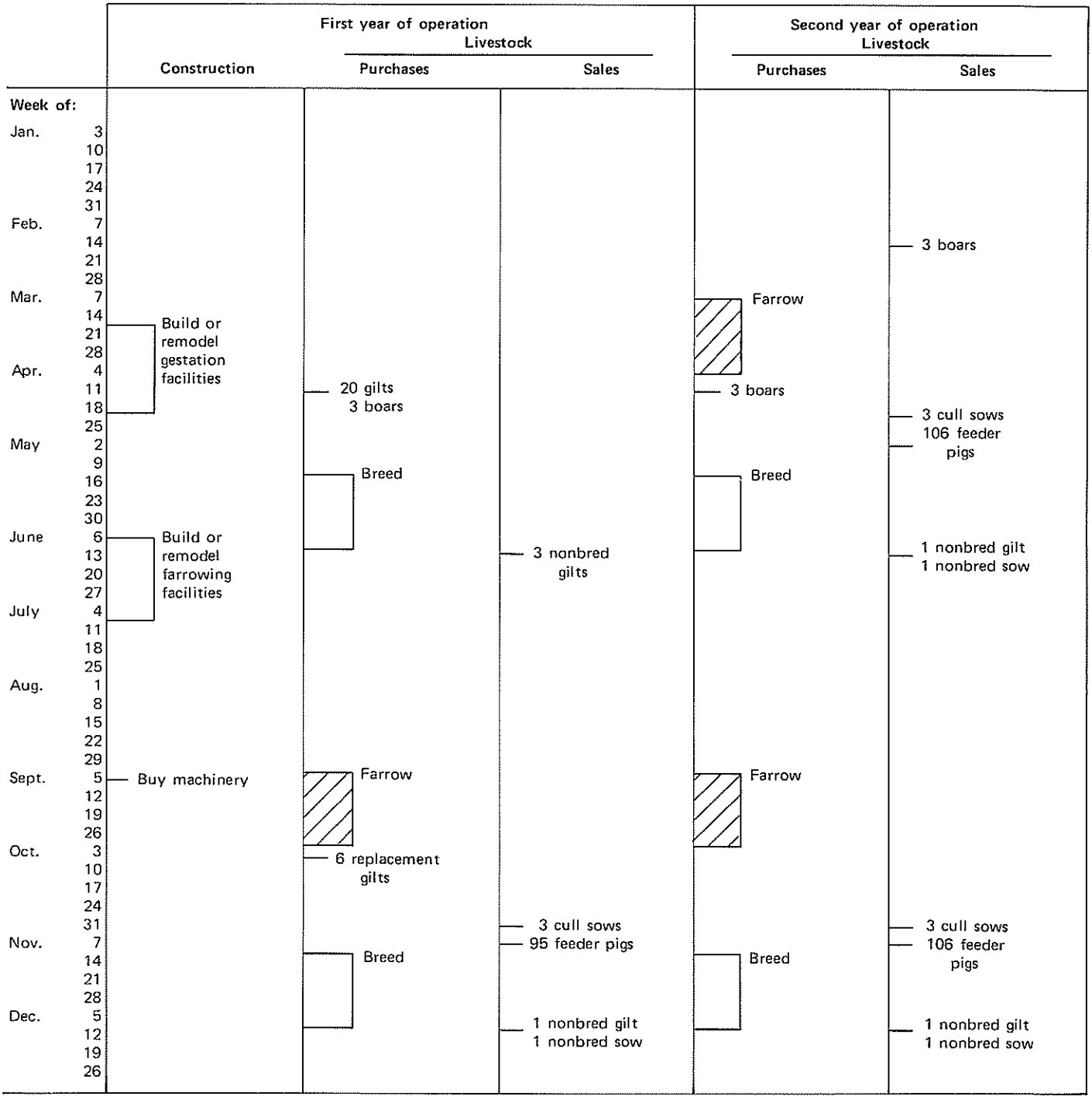
		Price of feeder pigs per head				
		$43.40	$46.40	$49.40	$52.40	$55.40
		changes in net returns				
Price of corn per bushel	$ 2.00	-936.10	395.90	1,727.90	3,059.90	4,391.90
	$ 2.50	-1,800.05	-468.05	863.95	2,195.95	3,527.95
	$ 3.00	-2,664.00	-1,332.00	.00	1,332.00	2,664.00
	$ 3.50	-3,527.95	-2,195.95	-863.95	468.05	1,800.05
	$ 4.00	-4,391.90	-3,059.90	-1,727.90	-395.90	936.10

		Price of feeder pigs per head				
		$43.40	$46.40	$49.40	$52.40	$55.40
		changes in net returns				
Pigs weaned per litter	6.3	-5,441.60	-4,301.60	-3,161.60	-2,021.60	-881.60
	6.8	-4,052.80	-2,816.80	-1,580.80	-344.80	891.20
	7.3	-2,664.00	-1,332.00	.00	1,332.00	2,664.00
	7.8	-1,275.20	152.00	1,580.80	3,008.80	4,436.80
	8.3	113.60	1,637.60	3,161.60	4,685.60	6,209.60

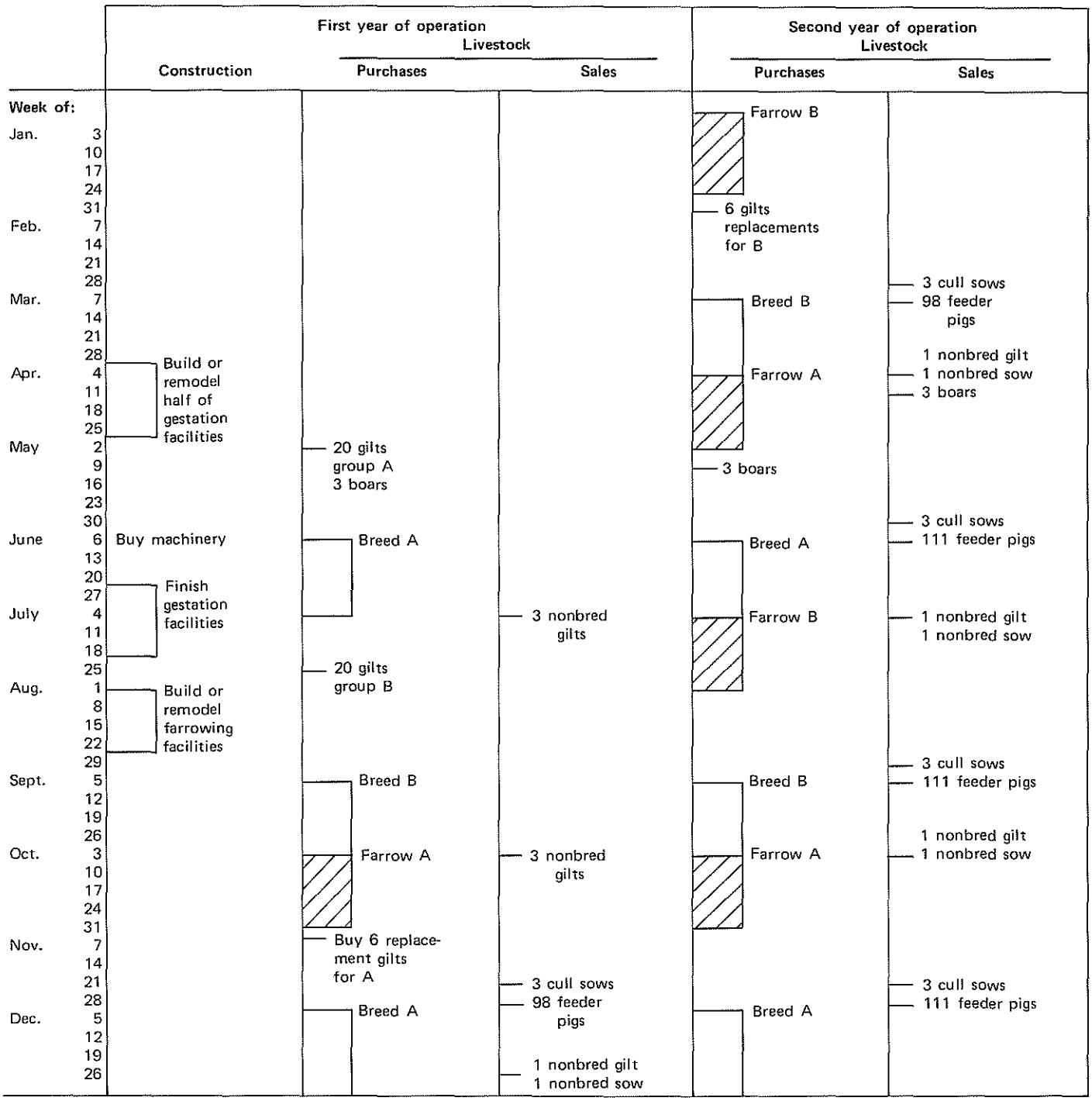
Appendix figure C-5. Construction and production calendar for first two years of operation, one-litter feeder pig system A



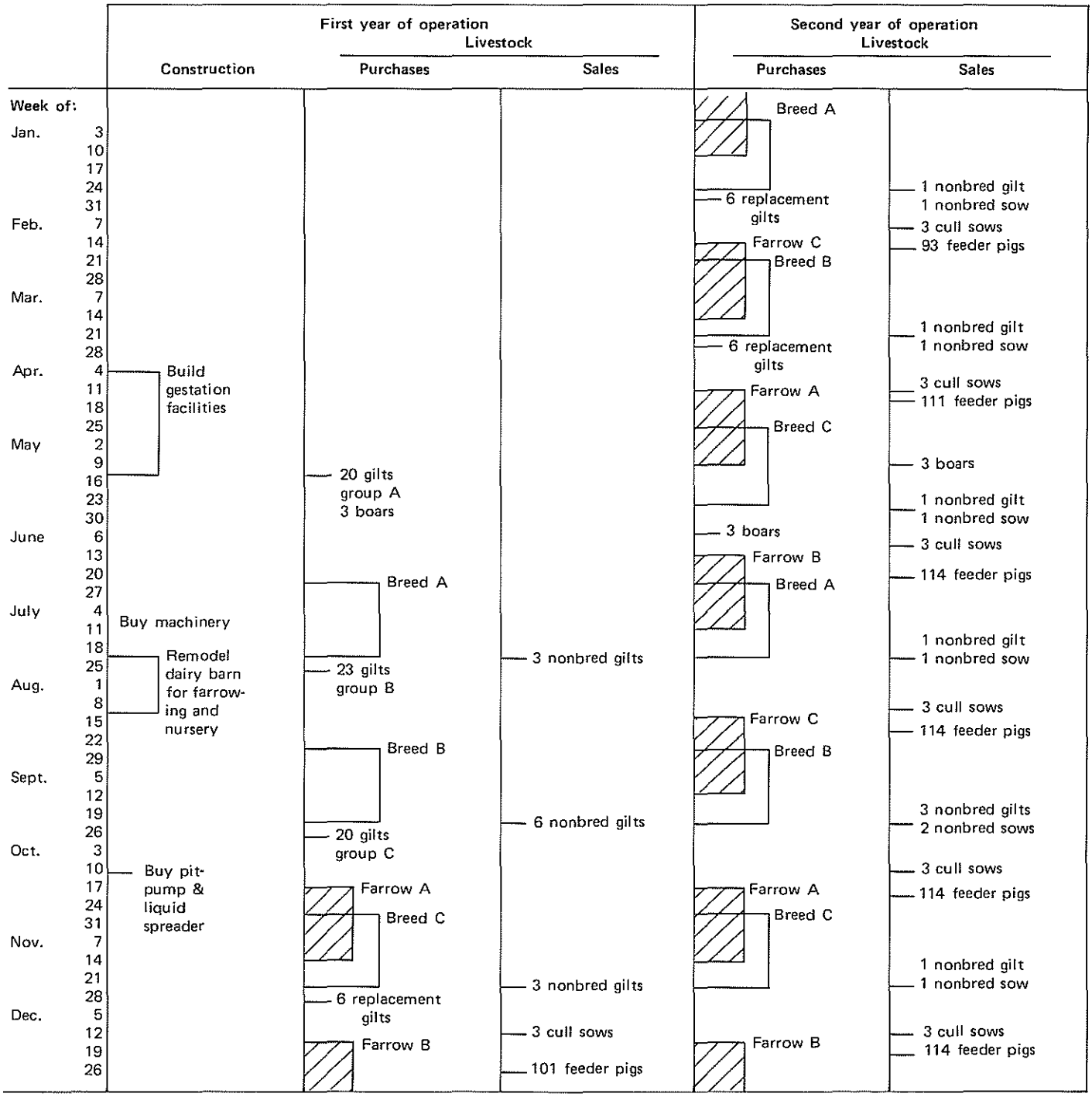
Appendix figure C-6. Construction and production calendar for first two years of operation, two-litter feeder pig systems C and E



Appendix figure C-7. Construction and production calendar for first two years of operation, four-litter feeder pig systems F and H



Appendix figure C-8. Construction and production calendar for first two years of operation, six-litter feeder pig system G



Appendix table C-19. Monthly enterprise cash flow projection for feeder pig production system A, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
TOTAL		0	0	0	0	0	944.	0	0	0	0	6597.	0	7541.
CASH EXPENSES														
TOTAL		0	0	4764.	6771.	249.	1310.	1164.	643.	394.	882.	592.	316.	17084.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	-4764.	-6771.	-249.	-366.	-1164.	-643.	-394.	-882.	6005.	-316.	-9543.
=CURRENT CASH BALANCE		0	0	-4764.	-6771.	-249.	-366.	-1164.	-643.	-394.	-882.	6005.	-316.	
+MONEY BORROWED		0	0	4764.	6771.	249.	366.	1164.	643.	394.	882.	0	316.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	5034.	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	971.	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	4764.	11535.	11784.	12150.	13314.	13957.	14351.	15232.	10198.	10514	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	48.	163.	281.	402.	535.	675.	819.	0	102	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	4764.	11582.	11947.	12431.	13716.	14492.	15026.	16051.	10198.	10616.	

Appendix table C-20. Monthly enterprise cash flow projection for feeder pig production system A, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	944.	0	0	0	0	6597	0	7541.
CASH EXPENSES														
TOTAL		406.	302.	323.	1671.	260.	323.	173.	198.	394.	882.	592.	316.	5841.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-406.	-302.	-323.	-1671.	-260.	622.	-173.	-198.	-394.	-882.	6005.	-316.	1700.
=CURRENT CASH BALANCE		-406.	-302.	-323.	-1671.	-260.	622.	-173.	-198.	-394.	-882.	6005.	-316.	
+MONEY BORROWED		406.	302.	323.	1671.	260.	0	173.	198.	394.	882.	0	316.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	5124.	0	
-INTEREST PAID AT .12		0	0	0	0	0	622.	0	0	0	0	881.	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
10514.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		10920.	11222.	11545.	13216.	13476.	13476.	13649.	13847.	14241.	15123.	9999.	10315.	
102.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		207.	316.	428.	543.	675.	188.	323.	459.	597.	739.	0.	100.	
10616.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		11127.	11538.	11973.	13759.	14151.	13664.	13972.	14306.	14838.	15862.	9999.	10400.	

Appendix table C-21. Monthly enterprise cash flow projection for feeder pig production system B, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	418.	0	0	0	488.	4248.	0	5154.
CASH EXPENSES														
TOTAL		0	0	4755.	6896.	236.	1240.	2131.	1476.	436.	1946.	604.	417.	19935.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	-4755.	-6896.	-236.	-822.	-2131.	-1476.	-436.	-1457.	3645.	-417.	-14781.
=CURRENT CASH BALANCE		0	0	-4755.	-6896.	-236.	-822.	-2131.	-1476.	-436.	-1457.	3645.	-417.	
+MONEY BORROWED		0	0	4755.	6896.	236.	822.	2131.	1476.	436.	1457.	0	417.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	2588.	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	1057.	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	4755.	11651.	11887.	12709.	14840.	16316.	16752.	18209.	15622.	15838.	
0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	48.	102.	279.	484.	550.	712.	877.	0	154.	
0 ACCRED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	4755.	11698.	11988.	12988.	15044.	16867.	17264.	18886.	15622.	15993.	

Appendix table C-22. Monthly enterprise cash flow projection for feeder pig production system B, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		828.	0	0	0	6467.	301.	0	0	0	488.	4595.	0	12679.
CASH EXPENSES														
TOTAL		451.	332.	396.	663.	996.	314.	471.	314.	475.	907.	642.	1766.	7726.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		377.	-332.	-396.	-663.	5471.	-13.	-471.	-314.	-475.	-419.	3953.	-1766.	4953.
=CURRENT CASH BALANCE		377.	-332.	-396.	-663.	5471.	-13.	-471.	-314.	-475.	-419.	3953.	-1766.	
+MONEY BORROWED		0	332.	396.	663.	0	13.	471.	314.	475.	419.	0	1766.	
-PAYMENT ON LOAN		65.	0	0	0	4816.	0	0	0	0	0	3170.	0	
-INTEREST PAID AT .12		312.	0	0	0	655.	0	0	0	0	0	783.	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
15828.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		15763.	16095.	16491.	17154.	12338.	12351.	12822.	13137.	13611.	14030.	10860.	12625.	
154.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	158.	319.	483.	0	123.	247.	375.	506.	643.	0	109.	
15982.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		15763.	16253.	16810.	17638.	12338.	12475.	13069.	13512.	14118.	14673.	10860.	12734.	

Appendix table C-23. Monthly enterprise cash flow projection for feeder pig production system C, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	418.	0	0	0	0	4607.	301.	5325.
CASH EXPENSES														
TOTAL		0	0	1860.	7131.	3517.	1960.	834.	290.	6018.	2032.	715.	550.	24906.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	-1860.	-7131.	-3517.	-1543.	-834.	-290.	-6018.	-2032.	3892.	-248.	-19581.
=CURRENT CASH BALANCE		0	0	-1860.	-7131.	-3517.	-1543.	-834.	-290.	-6018.	-2032.	3892.	-248.	
+MONEY BORROWED		0	0	1860.	7131.	3517.	1543.	834.	290.	6018.	2032.	0	248.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	2773.	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	1119.	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	1860.	8991.	12508.	14051.	14885.	15175.	21193.	23225.	20451.	20700.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	19.	109.	234.	374.	523.	675.	887.	0	205.	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	1860.	9010.	12617.	14285.	15259.	15698.	21868.	24111.	20451.	20904.	

Appendix table C-24. Monthly enterprise cash flow projection for feeder pig production system C, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	527.	0	0	6467.	301.	0	0	0	0	5083.	301.	12679.
CASH EXPENSES														
TOTAL		398.	386.	646.	2300.	725.	495.	510.	350.	658.	967.	757.	583.	8774.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-398.	140.	-646.	-2300.	5742.	-194.	-510.	-350.	-658.	-967.	4326.	-281.	3906.
=CURRENT CASH BALANCE		-398.	140.	-646.	-2300.	5742.	-194.	-510.	-350.	-658.	-967.	4326.	-281.	
+MONEY BORROWED		398.	0	646.	2300.	0	194.	510.	350.	658.	967.	0	281.	
-PAYMENT ON LOAN		0	0	0	0	4590.	0	0	0	0	0	3096.	0	
-INTEREST PAID AT .12		0	140.	0	0	1152.	0	0	0	0	0	1231.	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
20700.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		21098.	21098.	21743.	24044.	19454.	19648.	20157.	20507.	21165.	22131.	19036.	19317.	
205.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		412.	483.	694.	911.	0	195.	391.	593.	798.	1009.	0	190.	
20905.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		21510.	21581.	22437.	24955.	19454.	19842.	20548.	21100.	21962.	23141.	19036.	19507.	

Appendix table C-25. Monthly enterprise cash flow projection for feeder pig production system D, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	418.	0	418.	0	0	5038.	5873.
CASH EXPENSES														
TOTAL		0	0	0	4851.	5320.	10839.	5036.	8702.	1293.	1755.	1340.	1356.	40494.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-4851.	-5320.	-10839.	-4619.	-8702.	-876.	-1755.	-1340.	3682.	-34621.
=CURRENT CASH BALANCE		0	0	0	-4851.	-5320.	-10839.	-4619.	-8702.	-876.	-1755.	-1340.	3682.	
+MONEY BORROWED		0	0	0	4851.	5320.	10839.	4619.	8702.	876.	1755.	1340.	0	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	1617.	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	2065.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	0	4851.	10171.	21010.	25629.	34331.	35207.	36962.	38302.	36685.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	0	49.	150.	360.	617.	960.	1312.	1682.	0	
0 ACCRUED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	0	4851.	10220.	21160.	25989.	34948.	36167.	38274.	39984.	36685.	

Appendix table C-26. Monthly enterprise cash flow projection for feeder pig production system D, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	6341.	527.	0	5988.	301.	0	6123.	0	0	5300.	24581.
CASH EXPENSES														
TOTAL		1016.	2410.	1356.	737.	2720.	1195.	1103.	1382.	1173.	746.	1490.	1466.	16795.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-1016.	-2410.	4985.	-211.	-2720.	4793.	-802.	-1382.	4950.	-746.	-1490.	3834.	7786.
=CURRENT CASH BALANCE		-1016.	-2410.	4985.	-211.	-2720.	4793.	-802.	-1382.	4950.	-746.	-1490.	3834.	
+MONEY BORROWED		1016.	2410.	0	211.	2720.	0	802.	1382.	0	746.	1490.	0	
-PAYMENT ON LOAN		0	0	3840.	0	0	3674.	0	0	3854.	0	0	2789.	
-INTEREST PAID AT .12		0	0	1145.	0	0	1120.	0	0	1096.	0	0	1046.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
36685.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		37701.	40111.	36271.	36482.	39202.	35528.	36330.	37712.	33858.	34604.	36094.	33305.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		367.	744.	0	363.	728.	0	355.	719.	0	339.	685.	0	
36685.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		38068.	40855.	36271.	36845.	39930.	35528.	36686.	38431.	33858.	34943.	36778.	33305.	

Appendix table C-27. Monthly enterprise cash flow projection for feeder pig production system D, third year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		301.	0	6916.	889.	0	5988.	301.	0	6123.	0	0	5300.	25619.
CASH EXPENSES														
TOTAL		1083.	1509.	1323.	673.	1310.	1195.	2458.	1382.	1173.	746.	1490.	1467.	15808.
FLOW OF FUNDS SUMMARY					DOLLARS									
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-782.	-1509.	5593.	16.	-1310.	4793.	-2157.	-1382.	4950.	-746.	-1490.	3833.	9810.
=CURRENT CASH BALANCE		-782.	-1509.	5593.	16.	-1310.	4793.	-2157.	-1382.	4950.	-746.	-1490.	3833.	
+MONEY BORROWED		782.	1509.	0	0	1310.	0	2157.	1382.	0	746.	1490.	0	
-PAYMENT ON LOAN		0	0	4563.	0	0	3865.	0	0	4039.	0	0	2964.	
-INTEREST PAID AT .12		0	0	1030.	16.	0	928.	0	0	911.	0	0	869.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY					DOLLARS									
33305.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		34087.	35596.	31033.	31049.	32343.	28478.	30635.	32016.	27978.	28724.	30214.	27249.	
-UACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		333.	674.	0	294.	605.	0	285.	591.	0	280.	567.	0	
33305.00 ACCRUED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		34420.	36270.	31033.	31327.	32948.	28478.	30919.	32608.	27978.	29004.	30781.	27249.	

Appendix table C-28. Monthly enterprise cash flow projection for feeder pig production system E, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	418.	0	0	0	0	4118.	790.	5325.
CASH EXPENSES														
TOTAL		0	0	0	10022.	326.	5862.	2963.	4730.	506.	1730.	976.	590.	27705.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-10022.	-326.	-5444.	-2963.	-4730.	-506.	-1730.	3142.	199.	-22379.
=CURRENT CASH BALANCE		0	0	0	-10022.	-326.	-5444.	-2963.	-4730.	-506.	-1730.	3142.	199.	
+MONEY BORROWED		0	0	0	10022.	326.	5444.	2963.	4730.	506.	1730.	0	0	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	1861.	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	1281.	199.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	0	10022.	10348.	15792.	18755.	23485.	23991.	25721.	23860.	23860.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	0	100.	204.	362.	549.	784.	1024.	0	39.	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	0	10022.	10448.	15996.	19116.	24034.	24775.	26745.	23860.	23899.	

Appendix table C-29. Monthly enterprise cash flow projection for feeder pig production system E, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	527.	0	6467.	301.	0	0	0	0	5083.	301.	12679.
CASH EXPENSES														
TOTAL		401.	381.	1993.	768.	1062.	500.	472.	354.	630.	859.	967.	589.	8976.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-401.	-381.	-1466.	-768.	5405.	-199.	-472.	-354.	-630.	-859.	4117.	-288.	3703.
=CURRENT CASH BALANCE		-401.	-381.	-1466.	-768.	5405.	-199.	-472.	-354.	-630.	-859.	4117.	-288.	
+MONEY BORROWED		401.	381.	1466.	768.	0	199.	472.	354.	630.	859.	0	288.	
-PAYMENT ON LOAN		0	0	0	0	4108.	0	0	0	0	0	2690.	0	
-INTEREST PAID AT .12		0	0	0	0	1296.	0	0	0	0	0	1427.	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
23860;00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		24261.	24642.	26108.	26876.	22767.	22966.	23438.	23793.	24423.	25282.	22592.	22880.	
39;00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		278.	520.	767.	1028.	0	228.	457.	692.	930.	1174.	0	226.	
23899;00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		24538.	25162.	26874.	27904.	22767.	23194.	23896.	24485.	25353.	26456.	22592.	23106.	

Appendix table C-30. Monthly enterprise cash flow projection for feeder pig production system F, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	418.	0	418.	0	0	5034.	5873.
CASH EXPENSES														
TOTAL		0	0	0	4854.	5324.	10838.	5263.	8349.	1292.	1754.	1315.	1355.	40345.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-4854.	-5324.	-10838.	-4845.	-8349.	-875.	-1754.	-1315.	3683.	-34471.
=CURRENT CASH BALANCE		0	0	0	-4854.	-5324.	-10838.	-4845.	-8349.	-875.	-1754.	-1315.	3683.	
+MONEY BORROWED		0	0	0	4854.	5324.	10838.	4845.	8349.	875.	1754.	1315.	0	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	1621.	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	2062.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	0	4854.	10178.	21016.	25861.	34210.	35085.	36839.	38154.	36533.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	0	49.	150.	360.	619.	961.	1312.	1680.	0	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	0	4854.	10227.	21166.	26222.	34829.	36046.	38151.	39835.	36533.	

Appendix table C-31. Monthly enterprise cash flow projection for feeder pig production system F, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	6341.	527.	0	5988.	301.	0	6123.	0	0	4812.	24092.
CASH EXPENSES														
TOTAL		1015.	2535.	1355.	736.	2695.	1194.	1062.	1357.	1172.	745.	1465.	1465.	16799.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-1015.	-2535.	4986.	-210.	-2695.	4794.	-761.	-1357.	4951.	-745.	-1465.	3347.	7294.
=CURRENT CASH BALANCE		-1015.	-2535.	4986.	-210.	-2695.	4794.	-761.	-1357.	4951.	-745.	-1465.	3347.	
+MONEY BORROWED		1015.	2535.	0	210.	2695.	0	761.	1357.	0	745.	1465.	0	
-PAYMENT ON LOAN		0	0	3849.	0	0	3681.	0	0	3863.	0	0	2311.	
-INTEREST PAID AT .12		0	0	1137.	0	0	1113.	0	0	1087.	0	0	1036.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
36365.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		37380.	39916.	36066.	36276.	38971.	35290.	36051.	37408.	33545.	34290.	35755.	33444.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		364.	737.	0	361.	723.	0	353.	713.	0	335.	678.	0	
36365.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		37744.	40653.	36066.	36637.	39695.	35290.	36404.	38122.	33545.	34626.	36433.	33444.	

Appendix table C-32. Monthly enterprise cash flow projection for feeder pig production system F, third year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		301.	0	6916.	689.	0	5988.	301.	0	6123.	0	0	5300.	25619.
CASH EXPENSES														
TOTAL		1082.	1484.	1322.	672.	1264.	1194.	2417.	1357.	1172.	745.	1465.	1466.	15640.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-781.	-1484.	5594.	17.	-1264.	4794.	-2116.	-1357.	4951.	-745.	-1465.	3834.	9979.
=CURRENT CASH BALANCE		-781.	-1484.	5594.	17.	-1264.	4794.	-2116.	-1357.	4951.	-745.	-1465.	3834.	
+MONEY BORROWED		781.	1484.	0	0	1264.	0	2116.	1357.	0	745.	1465.	0	
-PAYMENT ON LOAN		0	0	4560.	0	0	3864.	0	0	4038.	0	0	2965.	
-INTEREST PAID AT .12		0	0	1034.	17.	0	930.	0	0	912.	0	0	869.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
33444.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		34225.	35709.	31149.	31149.	32412.	28549.	30664.	32021.	27983.	28728.	30193.	27228.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		334.	677.	0	295.	606.	0	285.	592.	0	280.	567.	0	
33444.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		34559.	36386.	31149.	31444.	33019.	28549.	30950.	32613.	27983.	29008.	30760.	27228.	

Appendix table C-33. Monthly enterprise cash flow projection for feeder pig production system G, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	418.	0	835.	0	418.	4867.	6537.
CASH EXPENSES														
TOTAL		0	0	0	10032.	17142.	427.	22218.	11566.	4980.	10593.	2670.	1682.	81311.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-10032.	-17142.	-427.	-21801.	-11566.	-4145.	-10593.	-2253.	3185.	-74774.
=CURRENT CASH BALANCE		0	0	0	-10032.	-17142.	-427.	-21801.	-11566.	-4145.	-10593.	-2253.	3185.	
+MONEY BORROWED		0	0	0	10032.	17142.	427.	21801.	11566.	4145.	10593.	2253.	0	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	3185.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	0	10032.	27174.	27601.	49402.	60968.	65113.	75706.	77959.	77959.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	0	100.	372.	648.	1142.	1752.	2403.	3160.	755.	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	0	10032.	27274.	27973.	50050.	62110.	66865.	78109.	81119.	78713.	

Appendix table C-34. Monthly enterprise cash flow projection for feeder pig production system G, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		301.	5796.	301.	6997.	828.	6137.	301.	6023.	742.	5841.	301.	5430.	38398.
CASH EXPENSES														
TOTAL		2907.	1648.	2885.	1716.	1691.	2951.	2081.	1632.	1585.	1753.	1763.	1904.	24517.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-2606.	4148.	-2584.	4681.	-863.	3186.	-1780.	4391.	-844.	4088.	-1462.	3526.	13881.
=CURRENT CASH BALANCE		-2606.	4148.	-2584.	4681.	-863.	3186.	-1780.	4391.	-844.	4088.	-1462.	3526.	
+MONEY BORROWED		2606.	0	2584.	0	863.	0	1780.	0	844.	0	1462.	0	
-PAYMENT ON LOAN		0	1812.	0	3082.	0	1614.	0	2825.	0	2552.	0	2018.	
-INTEREST PAID AT .12		0	2336.	0	1599.	0	1572.	0	1566.	0	1536.	0	1508.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
77882.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		80488.	78676.	81260.	78179.	79042.	77428.	79208.	76384.	77228.	74676.	76137.	74119.	
752.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		1531.	0	787.	0	782.	0	774.	0	764.	0	747.	0	
78634.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		82019.	78676.	82047.	78179.	79824.	77428.	79983.	76384.	77991.	74676.	76884.	74119.	

Appendix table C-35. Monthly enterprise cash flow projection for feeder pig production system G, third year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		301.	6321.	301.	7157.	828.	6137.	301.	6023.	742.	5841.	301.	5430.	39684.
CASH EXPENSES														
TOTAL		1942.	1810.	1845.	3140.	1667.	1601.	2081.	1632.	1585.	1753.	1764.	1910.	22730.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-1641.	4511.	-1543.	4018.	-839.	4536.	-1780.	4391.	-844.	4088.	-1463.	3520.	16954.
=CURRENT CASH BALANCE		-1641.	4511.	-1543.	4018.	-839.	4536.	-1780.	4391.	-844.	4088.	-1463.	3520.	
+MONEY BORROWED		1641.	0	1543.	0	839.	0	1780.	0	844.	0	1463.	0	
-PAYMENT ON LOAN		0	3013.	0	2547.	0	3093.	0	2983.	0	2714.	0	2178.	
-INTEREST PAID AT .12		0	1499.	0	1470.	0	1443.	0	1408.	0	1374.	0	1343.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
74119.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		75760.	72748.	74291.	71744.	72583.	69490.	71270.	68287.	69130.	66417.	67879.	65702.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		741.	0	727.	0	717.	0	695.	0	683.	0	664.	0	
74119.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		76501.	72748.	75019.	71744.	73300.	69490.	71965.	68287.	69813.	66417.	68544.	65702.	

Appendix table C-36. Monthly enterprise cash flow projection for feeder pig production system H, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	418.	0	418.	0	0	5038.	5873.
CASH EXPENSES														
TOTAL		0	0	0	4844.	5324.	10847.	7215.	11043.	1290.	1752.	1313.	1353.	44981.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-4844.	-5324.	-10847.	-6798.	-11043.	-873.	-1752.	-1313.	3685.	-39108.
=CURRENT CASH BALANCE		0	0	0	-4844.	-5324.	-10847.	-6798.	-11043.	-873.	-1752.	-1313.	3685.	
+MONEY BORROWED		0	0	0	4844.	5324.	10847.	6798.	11043.	873.	1752.	1313.	0	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	1418.	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	2267.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	0	4844.	10168.	21015.	27813.	38855.	39728.	41480.	42793.	41375.	
0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	0	48.	150.	360.	638.	1027.	1424.	1839.	0	
0 ACCRUED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	0	4844.	10216.	21165.	28173.	39494.	40755.	42904.	44632.	41375.	

Appendix table C-37. Monthly enterprise cash flow projection for feeder pig production system H, second year of operation

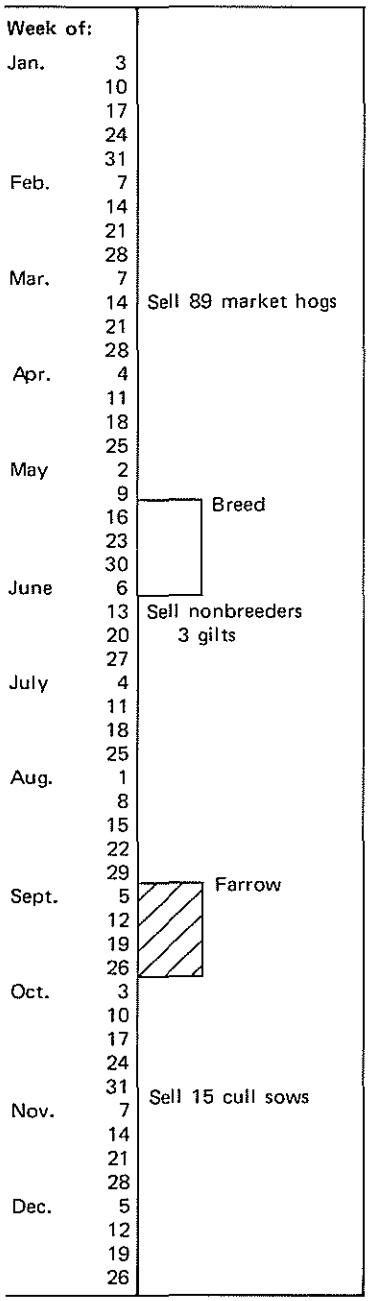
ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	6341.	527.	0	5988.	301.	0	6123.	0	0	4812.	24092.
CASH EXPENSES														
TOTAL		1011.	2531.	1351.	732.	2691.	1190.	1058.	1353.	1168.	741.	1460.	1461.	16748.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-1011.	-2531.	4990.	-206.	-2691.	4798.	-757.	-1353.	4955.	-741.	-1460.	3351.	7344.
=CURRENT CASH BALANCE		-1011.	-2531.	4990.	-206.	-2691.	4798.	-757.	-1353.	4955.	-741.	-1460.	3351.	
+MONEY BORROWED		1011.	2531.	0	206.	2691.	0	757.	1353.	0	741.	1460.	0	
-PAYMENT ON LOAN		0	0	3709.	0	0	3536.	0	0	3714.	0	0	2158.	
-INTEREST PAID AT .12		0	0	1282.	0	0	1262.	0	0	1241.	0	0	1193.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
41206.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		42217.	44748.	41040.	41245.	43936.	40400.	41157.	42510.	38796.	39537.	40997.	38839.	
0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		412.	834.	0	410.	823.	0	404.	816.	0	388.	783.	0	
41206.00 ACCRUED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		42629.	45582.	41040.	41656.	44759.	40400.	41561.	43325.	38796.	39925.	41780.	38839.	

Appendix table C-38. Monthly enterprise cash flow projection for feeder pig production system H, third year of operation

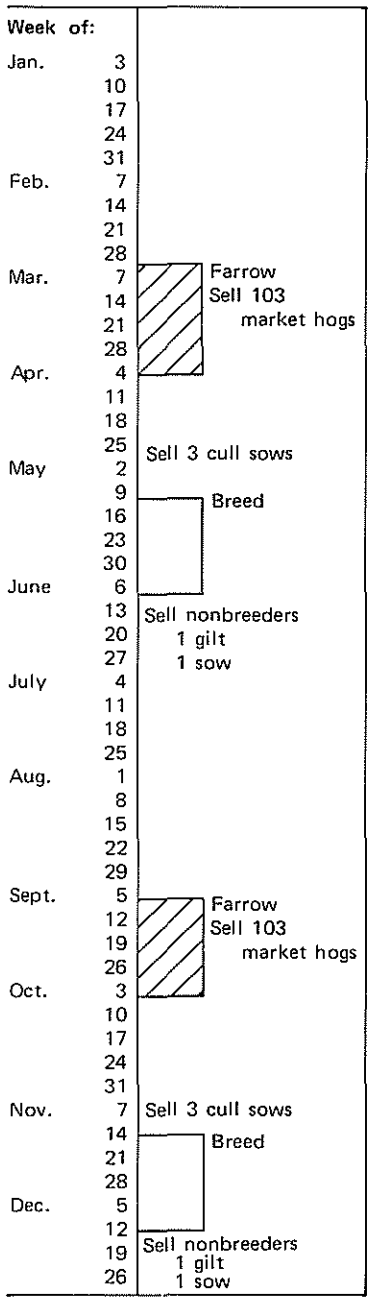
ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		301.	0	6916.	689.	0	5988.	301.	0	6123.	0	0	5300.	25619.
CASH EXPENSES														
TOTAL		1078.	1480.	1318.	668.	1281.	1190.	2413.	1353.	1168.	741.	1460.	1462.	15611.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-777.	-1480.	5598.	21.	-1281.	4798.	-2112.	-1353.	4955.	-741.	-1460.	3838.	10007.
=CURRENT CASH BALANCE		-777.	-1480.	5598.	21.	-1281.	4798.	-2112.	-1353.	4955.	-741.	-1460.	3838.	
+MONEY BORROWED		777.	1480.	0	0	1281.	0	2112.	1353.	0	741.	1460.	0	
-PAYMENT ON LOAN		0	0	4402.	0	0	3706.	0	0	3871.	0	0	2793.	
-INTEREST PAID AT .12		0	0	1196.	21.	0	1093.	0	0	1084.	0	0	1045.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
38839.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		39616.	41095.	36693.	36693.	37974.	34269.	36380.	37733.	33862.	34603.	36063.	33270.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		388.	785.	0	946.	713.	0	343.	706.	0	339.	685.	0	
38839.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		40004.	41880.	36693.	37639.	38687.	34269.	36723.	38439.	33862.	34941.	36748.	33270.	

Appendix D: Farrow-to-Finish Systems

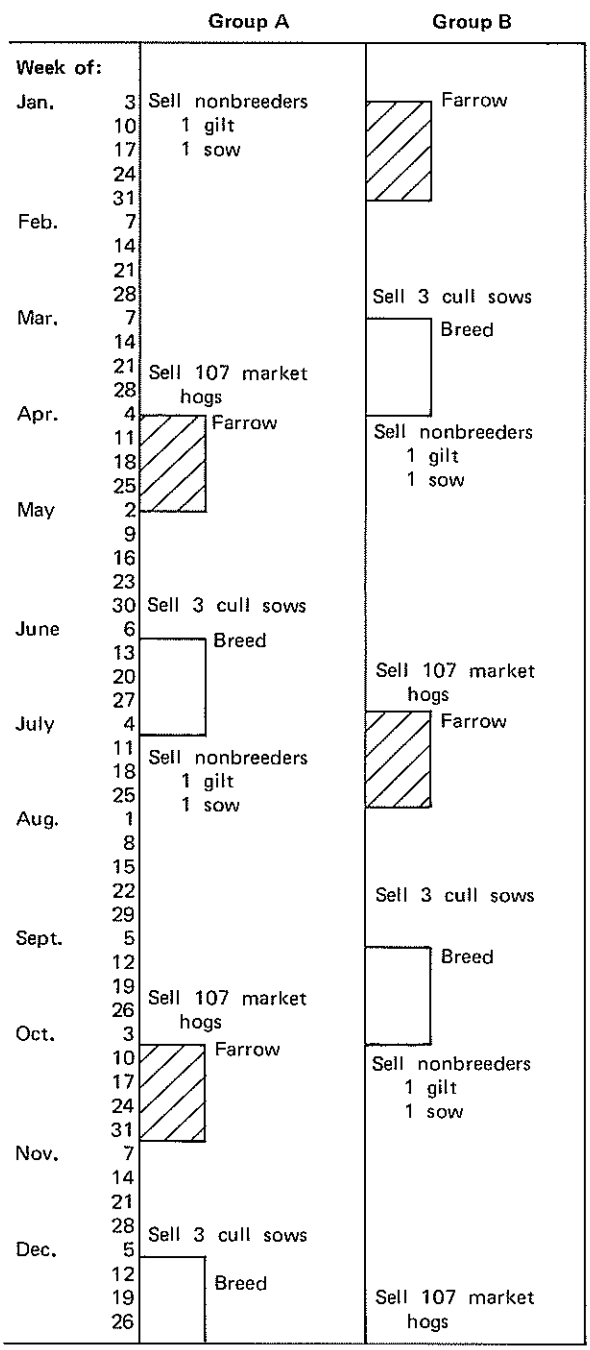
Appendix figure D-1. Average year of operation, farrow-to-finish system A



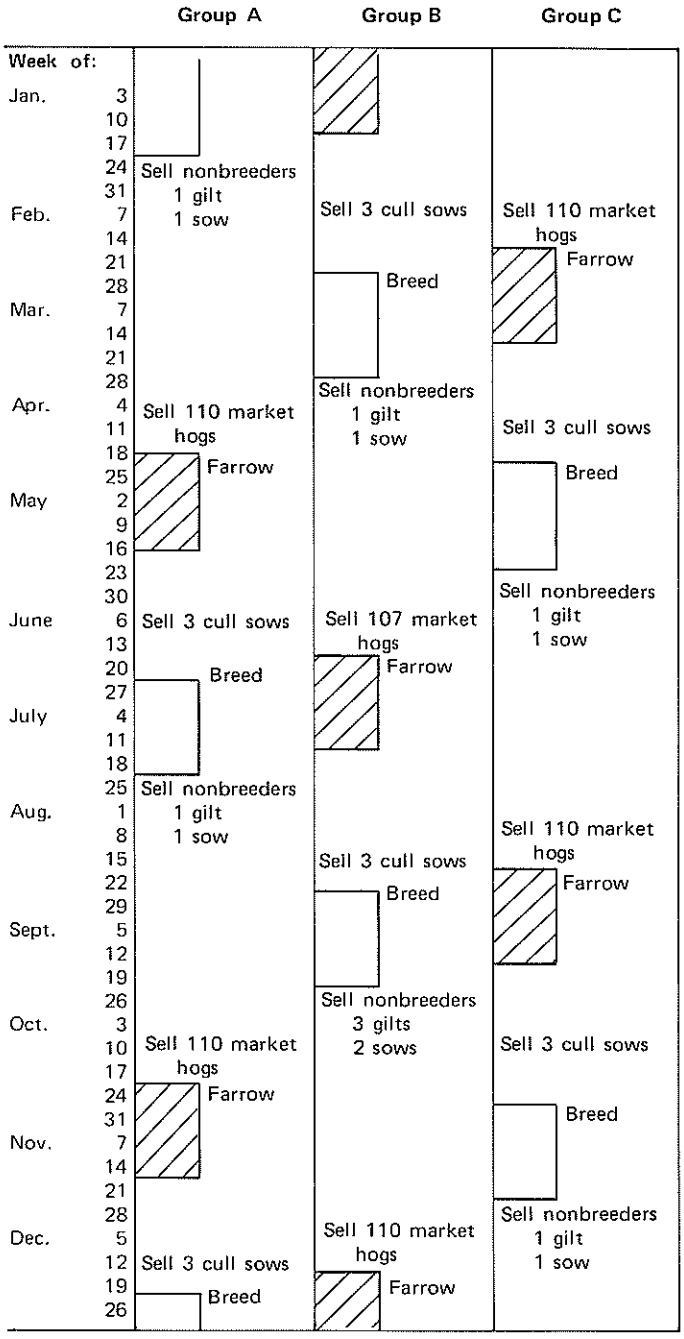
Appendix figure D-2. Average year of operation, farrow-to-finish systems C and E



Appendix figure D-3. Average year of operation, farrow-to-finish systems F and H



Appendix figure D-4. Average year of operation, farrow-to-finish system G



Appendix table D-1. Average annual costs and returns for the 16-gilt farrow-to-finish system A

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Cwt. Pork Sold
1.	GROSS RECEIPTS						
	SLAUGHTER HOGS	2.20	CWT.	51.17	89.00	10018.69	
	GILT N.B.	2.90	CWT.	48.00	3.00	417.60	
	SOW CULL	3.70	CWT.	47.00	15.00	2608.50	
	BOAR	4.50	CWT.	39.00	3.00	526.50	
	TOTAL					13571.29	49.62
2.	OPERATING COSTS						
	CORN		BU.	3.00	1672.30	5016.90	
	SOYBEAN MEAL		CWT.	14.50	169.30	2454.85	
	MINERALS		LBS.	.05	3375.10	168.76	
	OATS		LBS.	.07	62.60	4.38	29.04
	WHEAT BRAN		LBS.	.05	672.00	33.60	
	SUGAR		LBS.	.17	31.30	5.32	
	GRIND & MIX		TONS	4.50	57.50	258.75	
	VET & MED		DOL.	1.00	178.00	178.00	
	ELECTRICITY		KWH	.05	2415.00	132.82	
	INS. AND TAXES		DOL.	1.00	115.00	115.00	
	MKTG & HAULING		DOL.	1.00	350.00	350.00	
	MISCL EXPENSE		DOL.	1.00	306.00	306.00	13.72
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			237.45	
	MACHINERY(FUEL,LUBE,REP)		DOL.			13.36	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			718.70	
	INTEREST ON OPER.CAP.,		DOL.	.12		351.39	
	TOTAL OPERATING COSTS					11695.28	42.76
3.	INCOME ABOVE OPERATING COSTS					1876.01	6.86
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	3200.00	384.00	
	INT. ON EQUIPMENT		DOL.	.12	6295.00	755.40	
	INT. ON MACHINERY		DOL.	.12	752.12	90.25	
	DEPR. ON EQUIPMENT		DOL.			1772.08	
	DEPR. ON MACHINERY		DOL.			89.62	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			124.43	
	TOTAL OWNERSHIP COSTS					3215.79	11.76
5.	TOTAL COSTS SHOWN					14911.07	54.52
6.	NET RETURNS ABOVE COSTS SHOWN					-1339.78	-4.90

1 LITTER-16 GILTS FARROWING IN PORTABLE A-FRAME BUILDINGS.
PORTABLE GESTATION FACILITIES. REMODELED PERMANENT BUILDING FOR FINISHING.
PRODUCING 273.5 CWT. OF PORK PER YEAR.

Appendix table D-2. Average annual costs and returns for the 16-sow farrow-to-finish system C

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Cwt. Pork Sold
1.	GROSS RECEIPTS						
	SLAUGHTER HOGS	220	CWT.	51.17	103.00	11594.67	
	SLAUGHTER HOGS	220	CWT.	52.62	103.00	11924.60	
	GILT N.B.	290	CWT.	48.00	2.00	278.40	
	SOW N.B.	360	CWT.	45.00	2.00	324.00	
	SOW CULL	370	CWT.	44.00	6.00	976.80	
	BOAR	450	CWT.	39.00	3.00	526.50	
	TOTAL					25624.97	51.06
2.	OPERATING COSTS						
	CORN		BU.	3.00	3176.10	9528.30	
	SOYBEAN MEAL		CWT.	14.50	299.10	4336.95	
	MINERALS		LBS.	.05	6328.40	316.42	
	OATS		LBS.	.07	125.20	8.76	29.38
	WHEAT BRAN		LBS.	.05	1120.00	56.00	
	SUGAR		LBS.	.17	62.60	10.64	
	GRIND & MIX		LBS.	4.50	108.50	488.25	
	VET & MED		DOL.	1.00	322.00	322.00	
	ELECTRICITY		KWH	.05	8984.00	494.12	
	INS. AND TAXES		DOL.	1.00	185.00	185.00	
	MKTG & HAULING		DOL.	1.00	629.50	629.50	
	MISCL EXPENSE		DOL.	1.00	342.00	342.00	10.84
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			931.37	
	MACHINERY(FUEL,LUBE,REP)		DOL.			41.01	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			585.36	
	INTEREST ON OPER.CAP.,		DOL.	.12		560.39	
	TOTAL OPERATING COSTS					20186.08	40.22
3.	INCOME ABOVE OPERATING COSTS					5438.89	10.84
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	4260.00	511.20	
	INT. ON EQUIPMENT		DOL.	.12	6472.00	776.64	
	INT. ON MACHINERY		DOL.	.12	1708.55	205.03	
	DEPR. ON EQUIPMENT		DOL.			1822.65	
	DEPR. ON MACHINERY		DOL.			201.97	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			139.36	
	TOTAL OWNERSHIP COSTS					3656.85	7.29
5.	TOTAL COSTS SHOWN					23842.93	47.51
6.	NET RETURNS ABOVE COSTS SHOWN					1782.04	3.55

2 LITTER-16 SOWS A REMODELED UNINSULATED BUILDING FOR FARROWING AND NURSERY. OPEN FRONT REMODELED SHED FOR GESTATION. REMODELED BUILDING FOR FINISHING. PRODUCING 501.9 CWT. OF PORK PER YEAR.

Appendix table D-3. Average annual costs and returns for the 16-sow farrow-to-finish system E

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Cwt. Pork Sold
1.	GROSS RECEIPTS						
	SLAUGHTER HOGS	220	CWT.	51.17	103.00	11594.67	
	SLAUGHTER HOGS	220	CWT.	52.62	103.00	11924.60	
	GILT N.B.	290	CWT.	48.00	2.00	278.40	
	SOW N.B.	360	CWT.	45.00	2.00	324.00	
	SOW CULL	370	CWT.	44.00	6.00	976.80	
	BOAR	450	CWT.	39.00	3.00	526.50	
	TOTAL					25624.97	51.06
2.	OPERATING COSTS						
	CORN		BU.	3.00	3176.10	9528.30	
	SOYBEAN MEAL		CWT.	14.50	299.10	4336.95	
	MINERALS		LBS.	.05	6328.40	316.42	
	OATS		LBS.	.07	125.20	8.76	29.38
	WHEAT BRAN		LBS.	.05	1120.00	56.00	
	SUGAR		LBS.	.17	62.60	10.64	
	GRIND & MIX		LBS.	4.50	108.50	488.25	
	VET & MED		DOL.	1.00	347.00	347.00	
	ELECTRICITY		KWH	.05	6604.00	363.22	
	MKTG & HAULING		DOL.	1.00	629.50	629.50	
	INS. AND TAXES		DOL.	1.00	168.00	168.00	
	MISCL EXPENSE		DOL.	1.00	330.00	330.00	
	YOUNG BOAR		HD.	450.00	3.00	1350.00	10.54
	TRACTORS(FUEL,LUBE,REP)		DOL.			931.37	
	MACHINERY(FUEL,LUBE,REP)		DOL.			41.01	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			568.86	
	INTEREST ON OPER.CAP.,		DOL.	.12		563.40	
	TOTAL OPERATING COSTS					20037.69	39.92
3.	INCOME ABOVE OPERATING COSTS					5587.28	11.13
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	4260.00	511.20	
	INT. ON EQUIPMENT		DOL.	.12	7958.00	954.96	
	INT. ON MACHINERY		DOL.	.12	1708.55	205.03	
	DEPR. ON EQUIPMENT		DOL.			1952.58	
	DEPR. ON MACHINERY		DOL.			201.97	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			163.14	
	TOTAL OWNERSHIP COSTS					3988.88	7.95
5.	TOTAL COSTS SHOWN					24026.56	47.87
6.	NET RETURNS ABOVE COSTS SHOWN					1598.40	3.18

2 LITTER-16 SOWS REMODELED UNINSULATED DAIRY BARN FOR FARROWING AND NURSERY. NEW OPEN FRONT SHED FOR GESTATION. REMODELED BUILDING FOR FINISHING. PRODUCING 501.9 CWT. OF PORK PER YEAR.

Appendix table D-4. Average annual costs and returns for the 32-sow farrow-to-finish system F

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Cwt. Pork Sold
1.	GROSS RECEIPTS						
	SLAUGHTER HOGS	2.20	CWT.	51.17	107.00	12044.95	
	SLAUGHTER HOGS	2.20	CWT.	51.95	107.00	12228.56	
	SLAUGHTER HOGS	2.20	CWT.	52.62	107.00	12387.69	
	SLAUGHTER HOGS	2.20	CWT.	50.34	107.00	11849.09	
	GILT N.B.	2.90	CWT.	48.00	4.00	556.80	
	SOW N.B.	3.60	CWT.	45.00	4.00	648.00	
	SOW CULL	3.70	CWT.	44.00	12.00	1953.60	
	BOAR	4.50	CWT.	39.00	3.00	526.50	
	TOTAL					52195.19	50.90
2.	OPERATING COSTS						
	CORN		BU.	3.00	6393.00	19179.00	
	SOYBEAN MEAL		CWT.	14.50	625.60	9071.20	
	MINERALS		LBS.	.05	12600.20	630.01	
	OATS		LBS.	.07	261.40	18.30	29.27
	WHEAT BRAN		LBS.	.05	2293.30	114.66	
	SUGAR		LBS.	.17	130.70	22.22	
	GRIND & MIX		TONS	4.50	219.00	985.50	
	VET & MED		DOL.	1.00	689.00	689.00	
	INS. AND TAXES		DOL.	1.00	328.00	328.00	
	MKTG & HAULING		DOL.	1.00	1289.50	1289.50	
	LP GAS		GAL.	1.00	664.00	664.00	
	ELECTRICITY		KWH	.05	18116.00	996.38	
	MISCL EXPENSE		DOL.	1.00	396.00	396.00	9.36
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			1804.24	
	MACHINERY(FUEL,LUBE,REP)		DOL.			74.33	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			957.27	
	INTEREST ON OPER.CAP.,		DOL.	.12		1048.72	
	TOTAL OPERATING COSTS					39618.34	38.63
3.	INCOME ABOVE OPERATING COSTS					12576.85	12.26
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	7620.00	914.40	
	INT. ON EQUIPMENT		DOL.	.12	16103.00	1932.36	
	INT. ON MACHINERY		DOL.	.12	3171.56	380.59	
	DEPR. ON EQUIPMENT		DOL.			3205.68	
	DEPR. ON MACHINERY		DOL.			374.21	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			322.40	
	TOTAL OWNERSHIP COSTS					7129.63	6.95
5.	TOTAL COSTS SHOWN					46747.97	45.59
6.	NET RETURNS ABOVE COSTS SHOWN					5447.22	5.31

4 LITTER-32 SOWS REMODELED INSULATED VENTILATED DAIRY BARN FOR FARROWING AND NURSERY. NEW OPEN FRONT SHED FOR GESTATION AND FOR FINISHING, PRODUCING 1025.5 CWT. OF PORK PER YEAR.

Appendix table D-5. Average annual costs and returns for the 48-sow farrow-to-finish system G

ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Cwt. Pork Sold
1. GROSS RECEIPTS						
SLAUGHTER HOGS	2.20	CWT.	54.86	110.00	13276.12	
SLAUGHTER HOGS	2.20	CWT.	48.78	110.00	11803.79	
SLAUGHTER HOGS	2.20	CWT.	51.95	107.00	12228.56	
SLAUGHTER HOGS	2.20	CWT.	56.11	110.00	13578.14	
SLAUGHTER HOGS	2.20	CWT.	50.96	110.00	12332.32	
SLAUGHTER HOGS	2.20	CWT.	50.34	110.00	12181.31	
GILT N.B.	2.90	CWT.	48.00	7.00	974.40	
SOW N.B.	3.60	CWT.	45.00	8.00	1296.00	
SOW CULL	3.70	CWT.	44.00	18.00	2930.40	
BOAR	4.50	CWT.	39.00	3.00	526.50	
TOTAL					81127.54	51.52
2. OPERATING COSTS						
CORN		BU.	3.00	9707.20	29121.60	
SOYBEAN MEAL		CWT.	14.50	954.30	13837.35	
MINERALS		LBS.	.05	19124.50	956.23	
OATS		LBS.	.07	400.40	28.03	28.99
WHEAT BRAN		LBS.	.05	3482.00	174.10	
SUGAR		LBS.	.17	200.20	34.03	
GRIND & MIX		TONS	4.50	331.20	1490.40	
VET & MED		DOL.	1.00	942.00	942.00	
INS. AND TAXES		DOL.	1.00	512.00	512.00	
MKTG & HAULING		DOL.	1.00	1969.50	1969.50	
LP GAS		GAL.	1.00	851.00	851.00	
ELECTRICITY		KWH	.05	24240.00	1333.20	
MISCL EXPENSE		DOL.	1.00	414.00	414.00	8.14
YOUNG BOAR		HD.	450.00	3.00	1350.00	
TRACTORS(FUEL,LUBE,REP)		DOL.			1761.32	
MACHINERY(FUEL,LUBE,REP)		DOL.			176.86	
EQUIPMENT(FUEL,LUBE,REP)		DOL.			1920.43	
INTEREST ON OPER.CAP.,		DOL.	.12		1586.39	
TOTAL OPERATING COSTS					58458.44	37.13
3. INCOME ABOVE OPERATING COSTS					22669.10	14.40
4. OWNERSHIP COSTS						
INT. ON LIVESTOCK CAPITAL		DOL.	.12	10980.00	1317.60	
INT. ON EQUIPMENT		DOL.	.12	30315.00	3637.80	
INT. ON MACHINERY		DOL.	.12	5272.79	632.73	
DEPR. ON EQUIPMENT		DOL.			6541.25	
DEPR. ON MACHINERY		DOL.			643.04	
INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			582.56	
TOTAL OWNERSHIP COSTS					13354.98	8.48
5. TOTAL COSTS SHOWN					71813.42	45.61
6. NET RETURNS ABOVE COSTS SHOWN					9314.12	5.92

6 LITTER-48 SOWS REMODELED INSULATED VENTILATED DAIRY BARN FOR FARROWING AND NURSERY WITH MANURE STORAGE. NEW MODIFIED OPEN FRONT SHED FOR GESTATION. PRODUCING 1574.6 CWT. OF PORK PER YEAR.

Appendix table D-6. Average annual costs and returns for the 32-sow farrow-to-finish system H

	ITEM	WEIGHT EACH	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST	Per Cwt. Pork Sold
1.	GROSS RECEIPTS						
	SLAUGHTER HOGS	2.20	CWT.	51.17	107.00	12044.95	
	SLAUGHTER HOGS	2.20	CWT.	51.95	107.00	12228.56	
	SLAUGHTER HOGS	2.20	CWT.	52.62	107.00	12387.69	
	SLAUGHTER HOGS	2.20	CWT.	50.34	107.00	11849.09	
	GILT N.B.	2.90	CWT.	48.00	4.00	556.80	
	SOW N.B.	3.60	CWT.	45.00	4.00	648.00	
	SOW CULL	3.70	CWT.	44.00	12.00	1953.60	
	BOAR	4.50	CWT.	39.00	3.00	526.50	
	TOTAL					52195.19	50.90
2.	OPERATING COSTS						
	CORN		BU.	3.00	6393.00	19179.00	
	SOYBEAN MEAL		CWT.	14.50	625.60	9071.20	
	MINERALS		LBS.	.05	12600.20	630.01	
	OATS		LBS.	.07	261.40	18.30	29.27
	WHEAT BRAN		LBS.	.05	2293.30	114.66	
	SUGAR		LBS.	.17	130.70	22.22	
	GRIND & MIX		TONS	4.50	219.00	985.50	
	VET & MED		DOL.	1.00	689.00	689.00	
	INS. AND TAXES		DOL.	1.00	328.00	328.00	
	MKTG & HAULING		DOL.	1.00	1289.50	1289.50	
	LP GAS		GAL.	1.00	664.00	664.00	
	ELECTRICITY		KWH	.05	18116.00	996.38	
	MISCL EXPENSE		DOL.	1.00	396.00	396.00	9.31
	YOUNG BOAR		HD.	450.00	3.00	1350.00	
	TRACTORS(FUEL,LUBE,REP)		DOL.			1804.24	
	MACHINERY(FUEL,LUBE,REP)		DOL.			74.33	
	EQUIPMENT(FUEL,LUBE,REP)		DOL.			906.80	
	INTEREST ON OPER.CAP.,		DOL.	.12		1047.28	
	TOTAL OPERATING COSTS					39566.41	38.58
3.	INCOME ABOVE OPERATING COSTS					12628.78	12.31
4.	OWNERSHIP COSTS						
	INT. ON LIVESTOCK CAPITAL		DOL.	.12	7620.00	914.40	
	INT. ON EQUIPMENT		DOL.	.12	18415.50	2209.86	
	INT. ON MACHINERY		DOL.	.12	3171.56	380.59	
	DEPR. ON EQUIPMENT		DOL.			3069.25	
	DEPR. ON MACHINERY		DOL.			374.21	
	INS.,TAXES ON EQPT., LVSTK., AND MACH.		DOL.			359.40	
	TOTAL OWNERSHIP COSTS					7307.70	7.13
5.	TOTAL COSTS SHOWN					46874.12	45.71
6.	NET RETURNS ABOVE COSTS SHOWN					5321.08	5.19

4 LITTER-32 SOWS NEW POLE BUILDING FOR FARROWING AND NURSERY.
NEW POLE BUILDING FOR GESTATION. NEW OPEN FRONT SHED FOR FINISHING.
PRODUCING 1025.5 CWT. OF PORK PER YEAR.

Appendix table D-7. Effect of changes in prices and feed efficiency on net returns above costs shown, farrow-to-finish system A

		Price of slaughter hogs per hundredweight				
		$45.17	$48.17	$51.17	$54.17	$57.17
		changes in net returns				
Price of corn per bushel	$ 2.00	497.50	1,084.90	1,672.30	2,259.70	2,847.10
	$ 2.50	-338.65	248.75	836.15	1,423.55	2,010.95
	$ 3.00	-1,174.80	-587.40	.00	587.40	1,174.80
	$ 3.50	-2,010.95	-1,423.55	-836.15	-248.75	338.65
	$ 4.00	-2,847.10	-2,259.70	-1,672.30	-1,084.90	-497.50

		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundred-weight	$ 8.50	2,688.10	1,851.95	1,015.80	179.65	-656.50
	$11.50	2,180.20	1,344.05	507.90	-328.25	-1,164.40
	$14.50	1,672.30	836.15	.00	-836.15	-1,672.30
	$17.50	1,164.40	328.25	-507.90	-1,344.05	-2,180.20
	$20.50	656.50	-179.65	-1,015.80	-1,851.95	-2,688.10

		Price of slaughter hogs per hundredweight				
		$45.17	$48.17	$51.17	$54.17	$57.17
		changes in net returns				
Pounds of feed per hundred-weight of pork sold	380.5	-419.26	168.14	755.54	1,342.94	1,930.34
	400.5	-797.03	-209.63	377.77	965.17	1,552.57
	420.5	-1,174.80	-587.40	.00	587.40	1,174.80
	440.5	-1,552.57	-965.17	-377.77	209.63	797.03
	460.5	-1,930.34	-1,342.94	-755.54	-168.14	419.26

Appendix table D-8. Effect of changes in prices and feed efficiency on net returns above costs shown, farrow-to-finish system C

		Price of slaughter hogs per hundredweight				
		$45.90	$48.90	$51.90	$54.90	$57.90
		changes in net returns				
Price of corn per bushel	$ 2.00	456.90	1,816.50	3,176.10	4,535.70	5,895.30
	$ 2.50	-1,131.15	228.45	1,588.05	2,947.65	4,307.25
	$ 3.00	-2,719.20	-1,359.60	.00	1,359.60	2,719.20
	$ 3.50	-4,307.25	-2,947.65	-1,588.05	-228.45	1,131.15
	$ 4.00	-5,895.30	-4,535.70	-3,176.10	-1,816.50	-456.90

		Price of corn per bushel				
		$8.50	$11.50	$14.50	$17.50	$20.50
		changes in net returns				
Price of soybean meal per bushel	$ 2.00	4,970.70	4,073.40	3,176.10	2,278.80	1,381.50
	$ 2.50	3,382.65	2,485.35	1,588.05	690.75	-206.55
	$ 3.00	1,794.60	897.30	.00	-897.30	-1,794.60
	$ 3.50	206.55	-690.75	-1,588.05	-2,485.35	-3,382.65
	$ 4.00	-1,381.50	-2,278.80	-3,176.10	-4,073.40	-4,970.70

		Price of slaughter hogs per hundredweight				
		$45.90	$48.90	$51.90	$54.90	$57.90
		changes in net returns				
Pounds of feed per hundred-weight of pork sold	392.4	-1,355.10	4.44	1,364.04	2,723.64	4,083.24
	412.4	-2,037.18	-677.58	682.02	2,041.62	3,401.22
	432.4	-2,719.20	-1,359.60	.00	1359.60	2,719.20
	452.4	-3,401.22	-2,041.62	-682.02	677.58	2,037.18
	472.4	-4,083.24	-2,723.64	-1,364.04	-4.44	1,355.16

Appendix table D-9. Effect of changes in prices and feed efficiency on net returns above costs shown, farrow-to-finish system E

		Price of slaughter hogs per hundredweight				
		$45.90	$48.90	$51.90	$54.90	$57.90
		changes in net returns				
Price of corn per bushel	$ 2.00	456.90	1,816.50	3,176.10	4,535.70	5,895.30
	$ 2.50	-1,131.15	228.45	1,588.05	2,947.65	4,307.25
	$ 3.00	-2,719.20	-1,359.60	.00	1,359.60	2,719.20
	$ 3.50	-4,307.25	-2,947.65	-1,588.05	-228.45	1,131.15
	$ 4.00	-5,895.30	-4,535.70	-3,176.10	-1,816.50	-456.90

		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundred-weight	$ 8.50	4,970.70	3,382.65	1,794.60	206.55	-1,381.50
	$11.50	4,073.40	2,485.35	897.30	-690.75	-2,278.80
	$14.50	3,176.10	1,588.05	.00	-1,588.05	-3,176.10
	$17.50	2,278.80	690.75	-897.30	-2,485.35	-4,073.40
	$20.50	1,381.50	-206.55	-1,794.60	-3,382.65	-4,970.70

		Price of slaughter hogs per hundredweight				
		$45.90	$48.90	$51.90	$54.90	$57.90
		changes in net returns				
Pounds of feed per hundred-weight of pork sold	392.4	-1,355.10	4.44	1,364.04	2,723.64	4,083.24
	412.4	-2,037.18	-677.58	682.02	2,041.62	3,401.22
	432.4	-2,719.20	-1,359.60	.00	1,359.60	2,719.20
	452.4	-3,401.22	-2,041.62	-682.02	677.58	2,037.18
	472.4	-4,083.24	-2,723.64	-1,364.04	-4.44	1,355.16

Appendix table D-10. Effect of changes in prices and feed efficiency on net returns above costs shown, farrow-to-finish system F

		Price of slaughter hogs per hundredweight				
		$45.52	$48.52	$51.52	$54.52	$57.52
		changes in net returns				
Price of corn per bushel	$ 2.00	743.40	3,568.20	6,393.00	9,217.80	12,042.60
	$ 2.50	-2,453.10	371.70	3,196.50	6,021.30	8,846.10
	$ 3.00	-5,649.60	-2,824.80	.00	2,824.80	5,649.60
	$ 3.50	-8,846.10	-6,021.30	-3,196.50	-371.70	2,453.10
	$ 4.00	-12,042.60	-9,217.80	-6,393.00	-3,568.20	-743.40

		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundred-weight	$ 8.50	10,146.60	6,950.10	3,753.60	557.10	-2,639.40
	$11.50	8,269.80	5,073.30	1,876.80	-1,319.70	-4,516.20
	$14.50	6,393.00	3,196.50	.00	-3,196.50	-6,393.00
	$17.50	4,516.20	1,319.70	-1,876.80	-5,073.30	-8,269.80
	$20.50	2,639.40	-557.10	-3,753.60	-6,950.10	-10,146.60

		Price of slaughter hogs per hundredweight				
		$45.52	$48.52	$51.52	$54.52	$57.52
		changes in net returns				
Pounds of feed per hundred-weight of pork sold	387.1	-2,838.00	-13.20	2,811.50	5,636.00	8,461.20
	407.1	-4,243.80	-1,419.00	1,405.80	4,230.60	7,055.44
	427.1	-5,649.60	-2,824.80	.00	2,824.80	5,649.60
	447.1	-7,055.44	-4,230.60	-1,405.80	1,419.00	4,243.80
	467.1	-8,461.20	-5,636.40	-2,811.50	13.20	2,838.00

Appendix table D-11. Effect of changes in prices and feed efficiency on net returns above costs shown, farrow-to-finish system G

		Price of slaughter hogs per hundredweight				
		$46.17	$49.17	$52.17	$55.17	$58.17
		changes in net returns				
Price of corn per bushel	$ 2.00	1,034.80	5,371.00	9,707.20	14,043.40	18,379.60
	$ 2.50	-3,818.80	517.40	4,853.60	9,189.80	13,526.00
	$ 3.00	-8,672.40	-4,336.20	.00	4,336.20	8,672.40
	$ 3.50	-13,526.00	-9,189.80	-4,853.60	-517.40	3,818.80
	$ 4.00	-18,379.60	-14,043.40	-9,707.20	-5,371.00	-1,034.80

		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundredweight	$ 8.50	15,433.00	12,570.10	9,707.20	6,844.30	3,981.40
	$11.50	10,579.40	7,716.50	4,853.60	1,990.70	-872.20
	$14.50	5,725.80	2,862.90	.00	-2,862.90	-5,725.80
	$17.50	872.20	-1,990.70	-4,853.60	-7,716.50	-10,579.40
	$20.50	-3,981.40	-6,844.30	-9,707.20	-12,570.10	-15,433.00

		Price of slaughter hogs per hundredweight				
		$46.17	$49.17	$52.17	$55.17	$58.17
		changes in net returns				
Pounds of feed per hundredweight of pork sold	380.7	-4,332.80	3.40	4,339.60	8,675.80	13,012.00
	400.7	-6,502.60	-2,166.40	2,169.80	6,506.00	10,842.20
	420.7	-8,672.40	-4,336.20	.00	4,336.20	8,672.40
	440.7	-10,842.20	-6,506.00	-2,169.80	2,166.40	6,502.60
	460.7	-13,012.00	-8,675.80	-4,339.60	-3.40	4,332.80

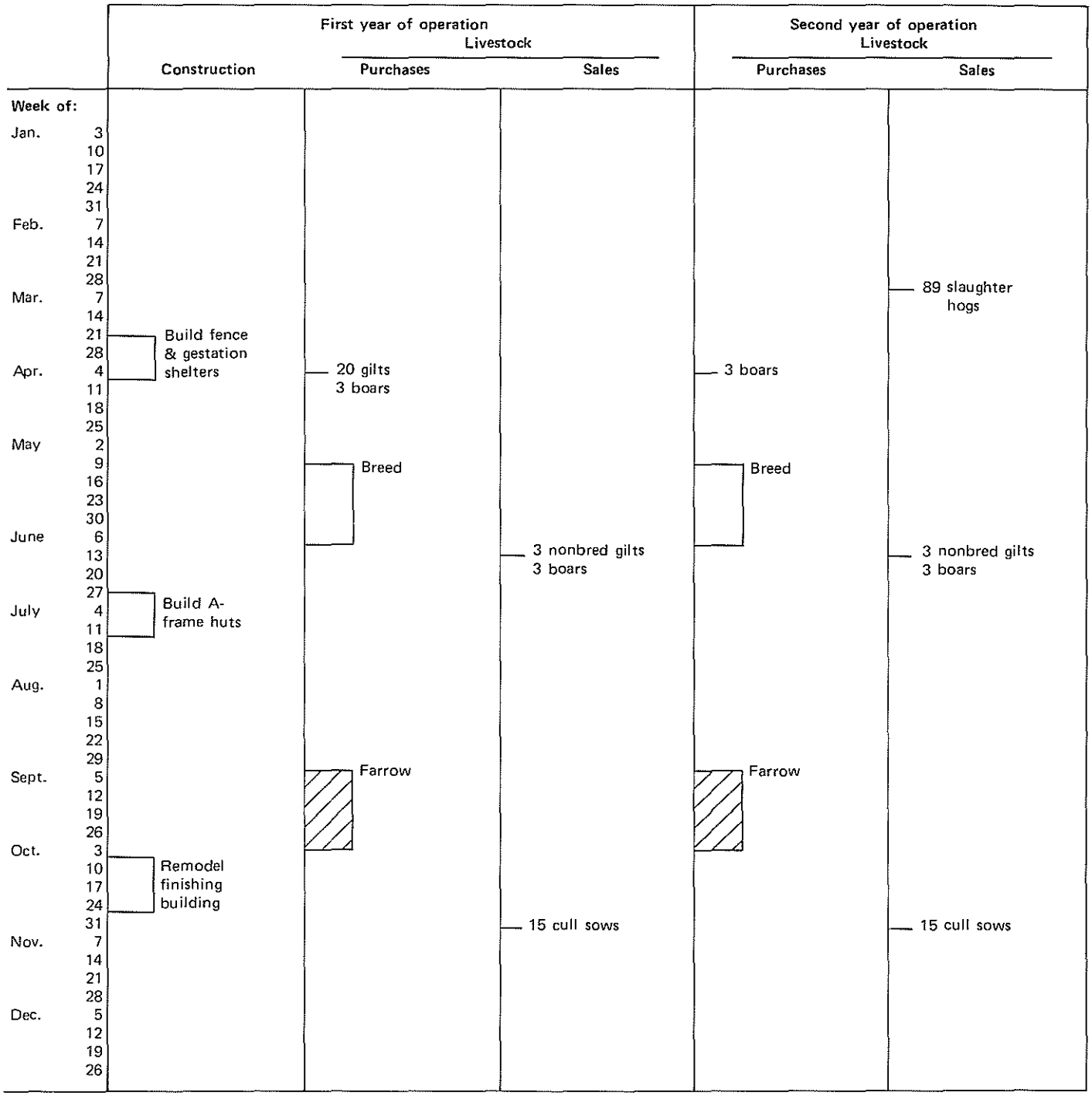
Appendix table D-12. Effect of changes in prices and feed efficiency on net returns above costs shown, farrow-to-finish system H

		Price of slaughter hogs per hundredweight				
		$45.52	$48.52	$51.52	$54.52	$57.52
		changes in net returns				
Price of corn per bushel	$ 2.00	743.40	3,568.20	6,393.00	9,217.80	12,042.60
	$ 2.50	-2,453.10	371.70	3,196.50	6,021.30	8,846.10
	$ 3.00	-5,649.60	-2,824.80	.00	2,824.80	5,649.60
	$ 3.50	-8,846.10	-6,021.30	-3,196.50	-371.70	2,453.10
	$ 4.00	-12,042.60	-9,217.80	-6,393.00	-3,568.20	-743.40

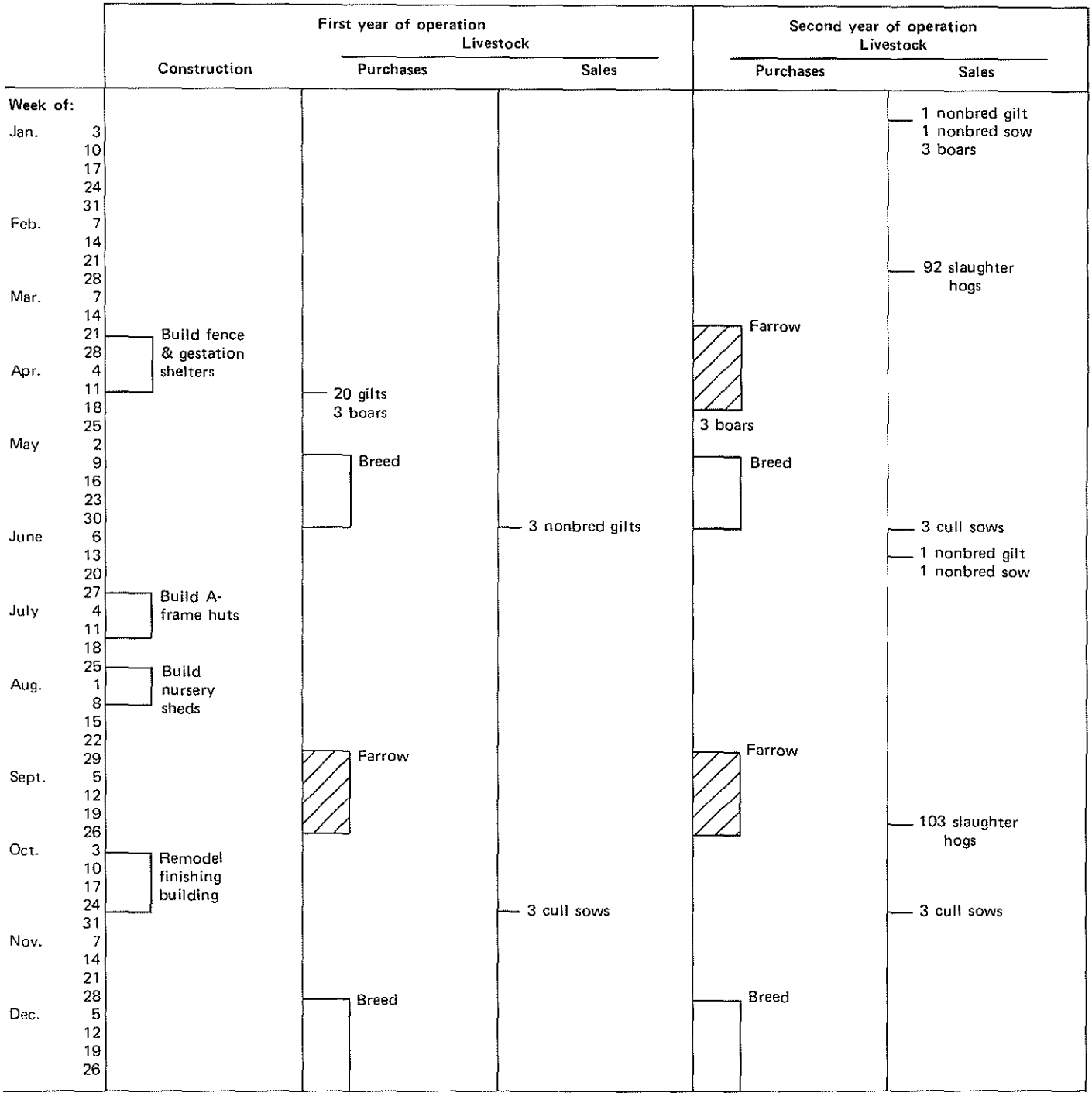
		Price of corn per bushel				
		$2.00	$2.50	$3.00	$3.50	$4.00
		changes in net returns				
Price of soybean meal per hundredweight	$ 8.50	10,146.60	6,950.10	3,753.60	557.10	-2,639.40
	$11.50	8,269.80	5,073.30	1,876.80	-1,319.70	-4,516.20
	$14.50	6,393.00	3,196.50	.00	-3,196.50	-6,393.00
	$17.50	4,516.20	1,319.70	-1,876.80	-5,073.30	-8,269.80
	$20.50	2,639.40	-557.10	-3,753.60	-6,950.10	-10,146.60

		Price of slaughter hogs per hundredweight				
		$45.52	$48.52	$51.52	$54.52	$57.52
		changes in net returns				
Pounds of feed per hundredweight of pork sold	387.1	-2,838.00	-13.20	2,811.50	5,636.40	8,461.20
	407.1	-4,243.80	-1,419.00	1,405.80	4,230.60	7,055.44
	427.1	-5,649.60	-2,824.80	.00	2,824.80	5,649.60
	447.1	-7,055.44	-4,230.60	-1,405.80	1,419.00	4,243.80
	467.1	-8,461.20	-5,636.40	-2,811.60	13.20	2,838.00

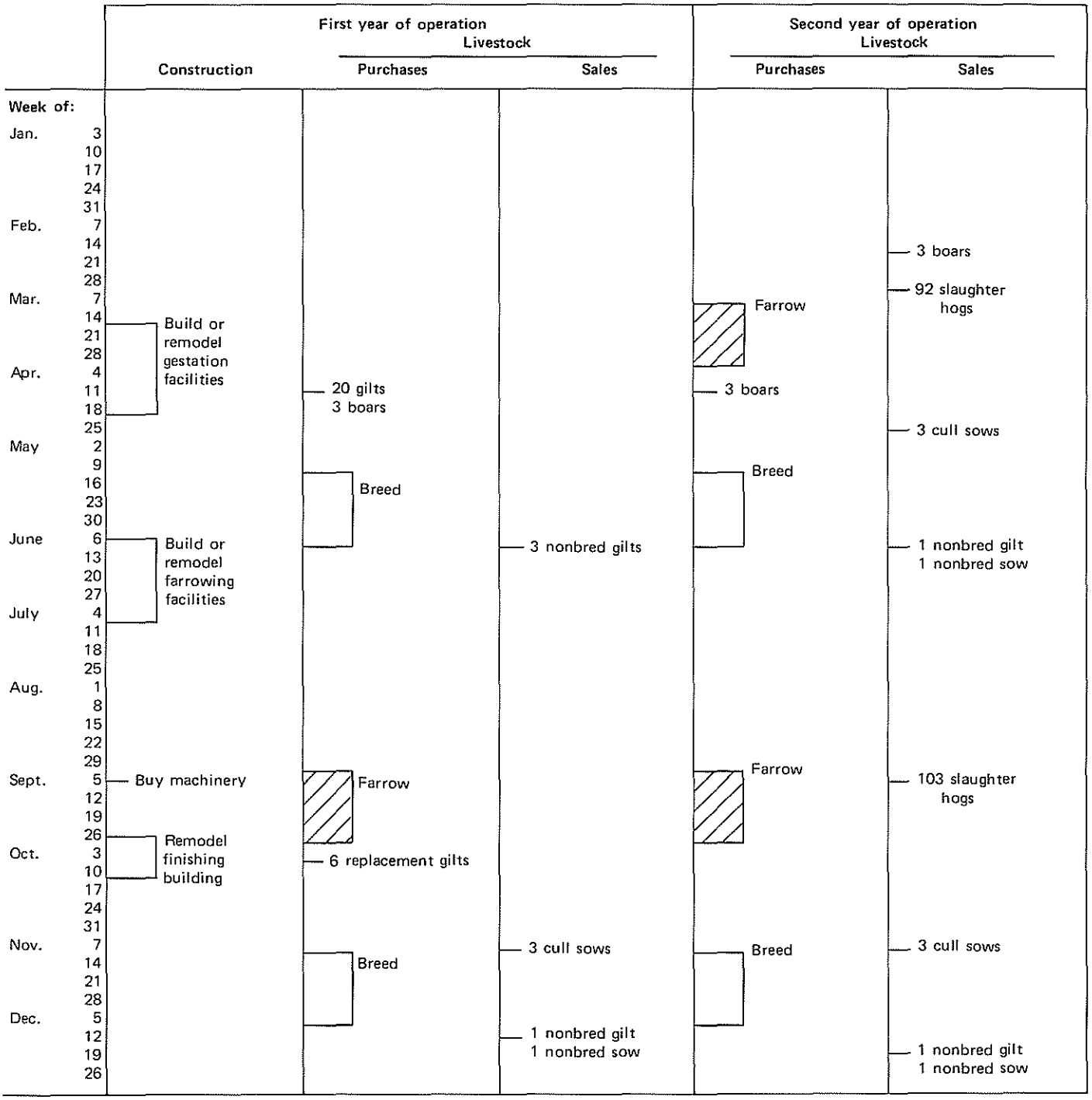
Appendix figure D-5. Construction and production calendar for the first two years of operation, one-litter farrow-to-finish system A



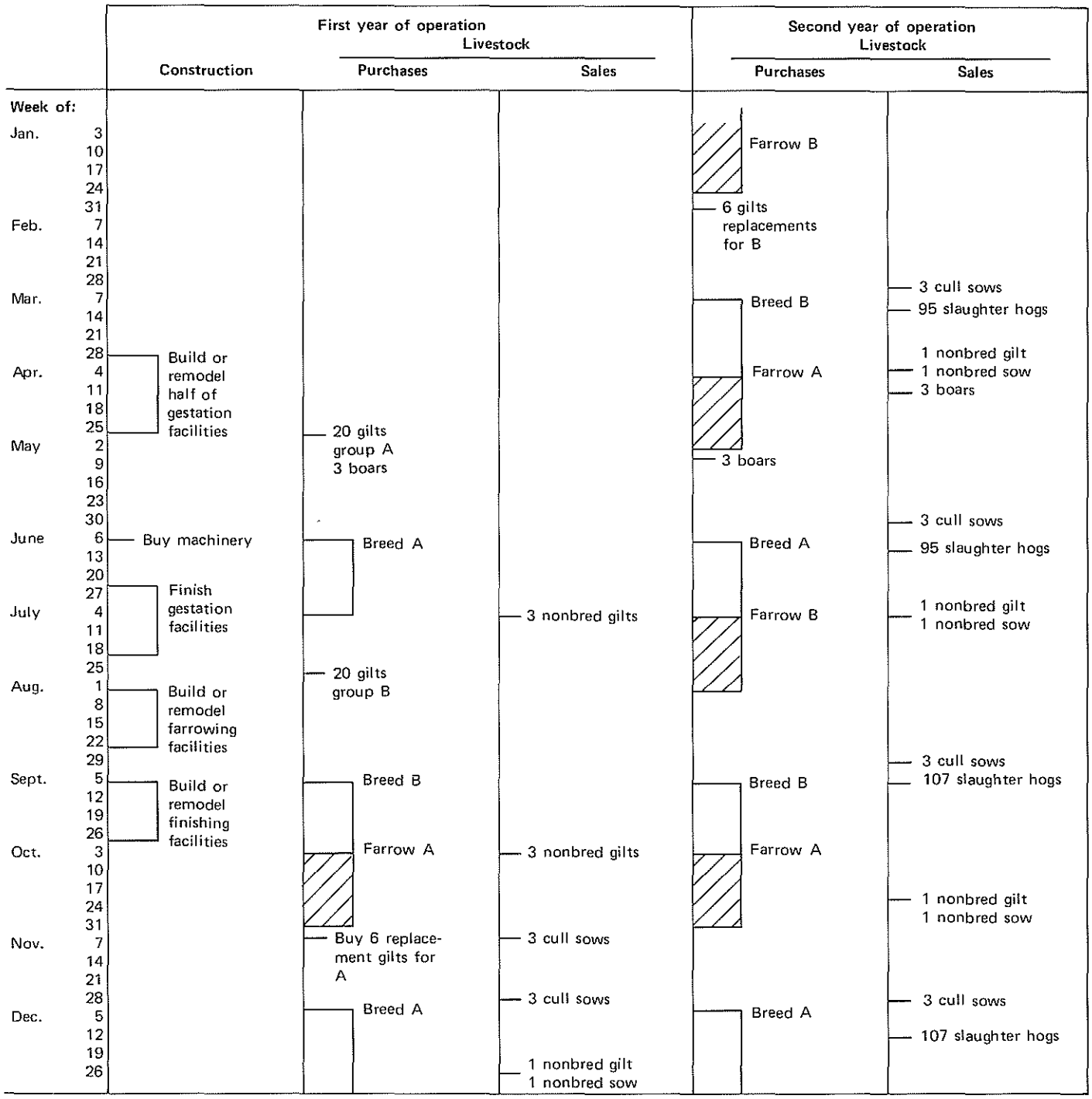
Appendix figure D-6. Construction and production calendar for the first two years of operation, two litter farrow-to-finish system B



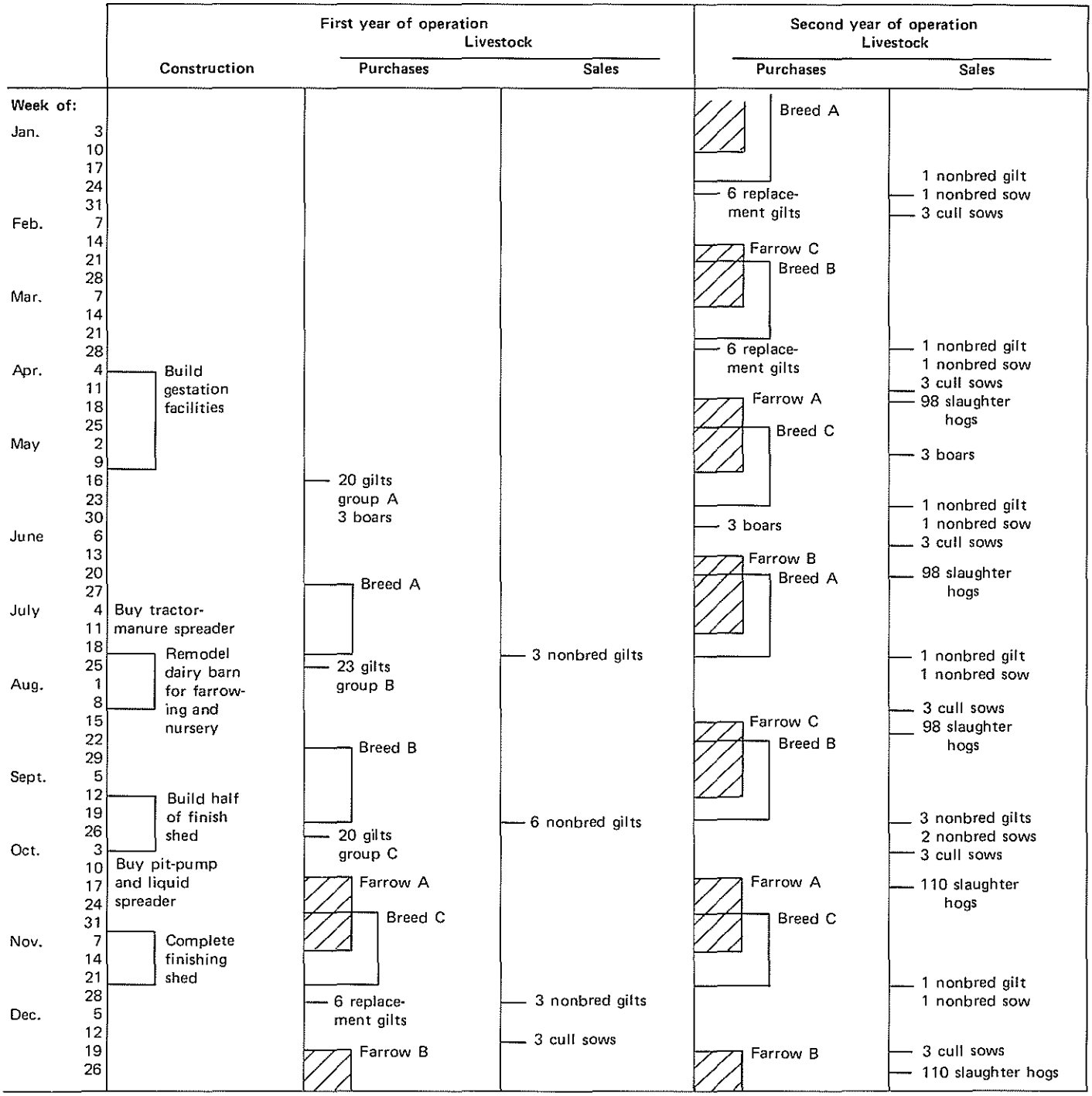
Appendix figure D-7. Construction and production calendar for the first two years of operation, two litter farrow-to-finish systems C and E



Appendix figure D-8. Construction and production calendar for the first two years of operation, four-litter farrow-to-finish systems D, F, and H



Appendix figure D-9. Construction and production calendar for the first two years of operation, six-litter farrow-to-finish system G



Appendix table D-13. Monthly enterprise cash flow projection for farrow-to-finish system A, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	944.	0	0	0	0	2609.	0	3553.
CASH EXPENSES														
TOTAL		0	0	4764.	6771.	249.	1295.	1164.	643.	394.	4815.	1307.	1512.	22913.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	-4764.	-6771.	-249.	-351.	-1164.	-643.	-394.	-4815.	1302.	-1512.	-19368.
=CURRENT CASH BALANCE		0	0	-4764.	-6771.	-249.	-351.	-1164.	-643.	-394.	-4815.	1302.	-1512.	
+MONEY BORROWED		0	0	4764.	6771.	249.	351.	1164.	643.	394.	4815.	0	1512.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	293.	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	1009.	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	4764.	11535.	11784.	12135.	13299.	13942.	14336.	19150.	18857	20369	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	48.	163.	281.	402.	535.	675.	818.	0	189	
0 ACCRED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	4764.	11582.	11947.	12416.	13701.	14477.	15010.	19968.	18857	20558	

Appendix table D-14. Monthly enterprise cash flow projection for farrow-to-finish system A, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	10019.	0	0	944.	0	0	0	0	2609.	0	572.
CASH EXPENSES														
TOTAL		2044.	1569.	2073.	388.	288.	239.	316.	226.	422.	910.	1311.	1556.	11344.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-2044.	-1569.	7945.	-388.	-288.	705.	-316.	-226.	-422.	-910.	1298.	-1556.	2228.
=CURRENT CASH BALANCE		-2044.	-1569.	7945.	-388.	-288.	705.	-316.	-226.	-422.	-910.	1298.	-1556.	
+MONEY BORROWED		2044.	1569.	0	388.	288.	0	316.	226.	422.	910.	0	1556.	
-PAYMENT ON LOAN		0	0	7088	0	0	186	0	0	0	0	392.	0	
-INTEREST PAID AT .12		0	0	857	0	0	519	0	0	0	0	906.	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
20536.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		22413	23982	16894	17282	17570	17384	17700	17925	18347	19257	18865	20421	
190.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		393	617	0	169	342	0	174	351	530	713	0	189	
20726.00 ACCRED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		22806	24599	16894	17451	18081	17384	17874	18277	18877	19970	18865	20610	

Appendix table D-15. Monthly enterprise cash flow projection for farrow-to-finish system B, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	418.	0	0	0	488.	0	0	906.
CASH EXPENSES														
TOTAL		0	0	4755.	6696.	236.	1240.	2149.	1476.	436.	5878.	1352.	1687.	25905.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	-4755.	-6696.	-236.	-822.	-2149.	-1476.	-436.	-5389.	-1352.	-1687.	-24999.
=CURRENT CASH BALANCE		0	0	-4755.	-6696.	-236.	-822.	-2149.	-1476.	-436.	-5389.	-1352.	-1687.	
+MONEY BORROWED		0	0	4755.	6696.	236.	822.	2149.	1476.	436.	5389.	1352.	1687.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	4755.	11451.	11687.	12509.	14658.	16135.	16570.	21960.	23312.	24999.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	48.	162.	279.	404.	551.	712.	878.	1097.	1330.	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	4755.	11498.	11849.	12788.	15062.	16685.	17282.	22837.	24409.	26330.	

Appendix table D-16. Monthly enterprise cash flow projection for farrow-to-finish system B, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		828.	0	10356.	0	488.	301.	0	0	11925.	488.	0	0	24387.
CASH EXPENSES														
TOTAL		1897.	1645.	1006.	732.	2281.	1380.	1687.	1718.	2043.	943.	1444.	1817.	18594.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-1070.	-1645.	9350.	-732.	-1793.	-1078.	-1687.	-1718.	9882.	-454.	-1444.	-1817.	5793.
=CURRENT CASH BALANCE		-1070.	-1645.	9350.	-732.	-1793.	-1078.	-1687.	-1718.	9882.	-454.	-1444.	-1817.	
+MONEY BORROWED		1070.	1645.	0	732.	1793.	1078.	1687.	1718.	0	454.	1444.	1817.	
-PAYMENT ON LOAN		0	0	7232.	0	0	0	0	0	8461.	0	0	0	
-INTEREST PAID AT .12		0	0	2118.	0	0	0	0	0	1420.	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
24999.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		26069.	27713.	20481.	21213.	23006.	24085.	25772.	27490.	19029.	19483.	20927.	22744.	
1330.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		1580.	1841.	0	205.	417.	647.	888.	1146.	0	190.	385.	594.	
26329.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		27649.	29554.	20481.	21418.	23423.	24732.	26660.	28636.	19029.	19674.	21313.	23339.	

Appendix table D-17. Monthly enterprise cash flow projection for farrow-to-finish system B, third year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		828.	0	11595.	0	488.	301.	0	0	11925.	488.	0	0	25625.
CASH EXPENSES														
TOTAL		2070.	1727.	1036.	732.	2281.	1380.	1687.	1718.	2043.	943.	1444.	1817.	18878.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-1242.	-1727.	10558.	-732.	-1793.	-1078.	-1687.	-1718.	9882.	-454.	-1444.	-1817.	6747.
=CURRENT CASH BALANCE		-1242.	-1727.	10558.	-732.	-1793.	-1078.	-1687.	-1718.	9882.	-454.	-1444.	-1817.	
+MONEY BORROWED		1242.	1727.	0	732.	1793.	1078.	1687.	1718.	0	454.	1444.	1817.	
-PAYMENT ON LOAN		0	0	9240.	0	0	0	0	0	8702.	0	0	0	
-INTEREST PAID AT .12		0	0	1318.	0	0	0	0	0	1180.	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
22744.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		23986.	25713.	16473.	17205.	18998.	20076.	21764.	23482.	14780.	15234.	16679.	18495.	
594.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		821.	1061.	0	165.	337.	527.	728.	945.	0	148.	300.	467.	
23338.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		24807.	26774.	16473.	17370.	19335.	20603.	22491.	24427.	14780.	15382.	16979.	18962.	

Appendix table D-18. Monthly enterprise cash flow projection for farrow-to-finish system C, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	418.	0	0	0	0	488.	301.	1207.
CASH EXPENSES														
TOTAL		0	0	1860.	7131.	3517.	1960.	849.	290.	6018.	5959.	1405.	1839.	30828.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	-1860.	-7131.	-3517.	-1543.	-849.	-290.	-6018.	-5959.	-917.	-1537.	-29621.
=CURRENT CASH BALANCE		0	0	-1860.	-7131.	-3517.	-1543.	-849.	-290.	-6018.	-5959.	-917.	-1537.	
+MONEY BORROWED		0	0	1860.	7131.	3517.	1543.	849.	290.	6018.	5959.	917.	1537.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	1860.	8991.	12508.	14051.	14900.	15190.	21208.	27167.	28084.	29621.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	19.	109.	234.	374.	523.	675.	887.	1159.	1440.	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	1860.	9010.	12617.	14285.	15274.	15713.	21883.	28054.	29242.	31061.	

Appendix table D-19. Monthly enterprise cash flow projection for farrow-to-finish system C, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	527.	10356.	0	488.	301.	0	0	11925.	0	488.	301.	24387.
CASH EXPENSES														
TOTAL		1839.	1692.	1318.	964.	2631.	1579.	1928.	1529.	1306.	994.	1486.	1933.	19200.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-1839.	-1166.	9039.	-964.	-2143.	-1278.	-1928.	-1529.	10619.	-994.	-998.	-1632.	5186.
=CURRENT CASH BALANCE		-1839.	-1166.	9039.	-964.	-2143.	-1278.	-1928.	-1529.	10619.	-994.	-998.	-1632.	
+MONEY BORROWED		1839.	1166.	0	964.	2143.	1278.	1928.	1529.	0	994.	998.	1632.	
-PAYMENT ON LOAN		0	0	6662.	0	0	0	0	0	8835.	0	0	0	
-INTEREST PAID AT .12		0	0	2377.	0	0	0	0	0	1784.	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
29621.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		31460.	32626.	25964.	26929.	29072.	30350.	32278.	33807.	24972.	25966.	26964.	28596.	
1440.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		1736.	2051.	0	260.	520.	820.	1123.	1446.	0	250.	509.	779.	
31061.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		33197.	34677.	25964.	27188.	29601.	31170.	33401.	35253.	24972.	26216.	27474.	29375.	

Appendix table D-20. Monthly enterprise cash flow projection for farrow-to-finish system C, third year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	527.	11595.	0	488.	301.	0	0	11925.	0	488.	301.	25625.
CASH EXPENSES														
TOTAL		2008.	1832.	1434.	965.	2631.	1579.	1928.	1529.	1306.	994.	1486.	1933.	19626.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-2008.	-1306.	10161.	-965.	-2143.	-1278.	-1928.	-1529.	10619.	-994.	-998.	-1632.	5999.
=CURRENT CASH BALANCE		-2008.	-1306.	10161.	-965.	-2143.	-1278.	-1928.	-1529.	10619.	-994.	-998.	-1632.	
+MONEY BORROWED		2008.	1306.	0	965.	2143.	1278.	1928.	1529.	0	994.	998.	1632.	
-PAYMENT ON LOAN		0	0	8471.	0	0	0	0	0	8986.	0	0	0	
-INTEREST PAID AT .12		0	0	1690.	0	0	0	0	0	1632.	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
28596.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		30604.	31910.	23439.	24404.	26547.	27825.	29753.	31282.	22296.	23290.	24288.	25919.	
779.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		1065.	1371.	0	234.	478.	744.	1022.	1320.	0	223.	456.	699.	
29375.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		31669.	33281.	23439.	24638.	27025.	28569.	30775.	32602.	22296.	23513.	24744.	26618.	

Appendix table D-21. Monthly enterprise cash flow projection for farrow-to-finish system D, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	418.	0	418.	0	0	790.	1625.
CASH EXPENSES														
TOTAL		0	0	0	4851.	5320.	10839.	5101.	8702.	7924.	1767.	8004.	2414.	54923.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-4851.	-5320.	-10839.	-4684.	-8702.	-7507.	-1767.	-8004.	-1624.	-53298.
=CURRENT CASH BALANCE		0	0	0	-4851.	-5320.	-10839.	-4684.	-8702.	-7507.	-1767.	-8004.	-1624.	
+MONEY BORROWED		0	0	0	4851.	5320.	10839.	4684.	8702.	7507.	1767.	8004.	1624.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	0	4851.	10171.	21010.	25694.	34396.	41903.	43670.	51674.	53298.	
0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	0	49.	150.	360.	617.	961.	1380.	1817.	2334.	
0 ACCRUED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	0	4851.	10220.	21160.	26054.	35014.	42864.	45050.	53491.	55632.	

Appendix table D-22. Monthly enterprise cash flow projection for farrow-to-finish system D, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	11484.	527.	0	11346.	301.	0	13177.	0	0	12337.	49172.
CASH EXPENSES														
TOTAL		2343.	2915.	5190.	5164.	2784.	3461.	2356.	2959.	3777.	1990.	3200.	4407.	38549.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-2343.	-2915.	6293.	-2837.	-2784.	7884.	-2055.	-2959.	9401.	-1990.	-3200.	7930.	10622.
=CURRENT CASH BALANCE		-2343.	-2915.	6293.	-2837.	-2784.	7884.	-2055.	-2959.	9401.	-1990.	-3200.	7930.	
+MONEY BORROWED		2343.	2915.	0	2837.	2784.	0	2055.	2959.	0	1990.	3200.	0	
-PAYMENT ON LOAN		0	0	2284.	0	0	6116.	0	0	7662.	0	0	6271.	
-INTEREST PAID AT .12		0	0	4009.	0	0	1769.	0	0	1738.	0	0	1660.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
53298.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		55641.	58556.	56272.	58909.	61695.	55581.	57635.	60594.	52932.	54922.	58122.	51851.	
2334.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		2867.	3423.	0	963.	1152.	0	556.	1132.	0	529.	1079.	0	
55632.00 ACCRUED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		58508.	61979.	56272.	59871.	62849.	55581.	58191.	61727.	52932.	55451.	59200.	51851.	

Appendix table D-23. Monthly enterprise cash flow projection for farrow-to-finish system D, third year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		301.	0	12533.	828.	0	12717.	301.	0	12876.	301.	0	12337.	52195.
CASH EXPENSES														
TOTAL		2563.	3138.	4457.	3478.	2936.	3663.	2356.	2959.	3768.	1999.	3200.	4407.	38722.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-2262.	-3138.	8076.	-2449.	-2936.	9054.	-2055.	-2959.	9108.	-1697.	-3200.	7930.	13473.
=CURRENT CASH BALANCE		-2262.	-3138.	8076.	-2449.	-2936.	9054.	-2055.	-2959.	9108.	-1697.	-3200.	7930.	
+MONEY BORROWED		2262.	3138.	0	2449.	2936.	0	2055.	2959.	0	1697.	3200.	0	
-PAYMENT ON LOAN		0	0	6444.	0	0	7451.	0	0	7575.	0	0	6479.	
-INTEREST PAID AT .12		0	0	1632.	0	0	1603.	0	0	1533.	0	0	1451.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
51851.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		54113.	57251.	50807.	53256.	56191.	48740.	50795.	53754.	46178.	47876.	51076.	44597.	
-UACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		519.	1060.	0	508.	1041.	0	487.	995.	0	462.	941.	0	
51851.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		54631.	58311.	50807.	53764.	57232.	48740.	51282.	54749.	46178.	48338.	52016.	44597.	

Appendix table D-24. Monthly enterprise cash flow projection for farrow-to-finish system E, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	418.	0	0	0	0	0	734.	1152.
CASH EXPENSES														
TOTAL		0	0	0	10068.	302.	5779.	2983.	4731.	4350.	1692.	931.	1800.	32634.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-10068.	-302.	-5361.	-2983.	-4731.	-4350.	-1692.	-931.	-1066.	-31483.
=CURRENT CASH BALANCE		0	0	0	-10068.	-302.	-5361.	-2983.	-4731.	-4350.	-1692.	-931.	-1066.	
+MONEY BORROWED		0	0	0	10068.	302.	5361.	2983.	4731.	4350.	1692.	931.	1066.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	0	10068.	10369.	15730.	18713.	23444.	27794.	29485.	30416.	31483.	
-UACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	0	101.	204.	362.	549.	783.	1061.	1356.	1660.	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	0	10068.	10470.	15935.	19075.	23993.	28577.	30547.	31772.	33143.	

Appendix table D-25. Monthly enterprise cash flow projection for farrow-to-finish system E, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	527.	10356.	0	488.	301.	0	0	11925.	0	488.	301.	24387.
CASH EXPENSES														
TOTAL		1669.	1710.	2243.	2154.	1059.	1578.	1769.	1755.	1836.	914.	1316.	1929.	19932.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-1669.	-1184.	8113.	-2154.	-570.	-1277.	-1769.	-1755.	10089.	-914.	-827.	-1628.	4455.
=CURRENT CASH BALANCE		-1669.	-1184.	8113.	-2154.	-570.	-1277.	-1769.	-1755.	10089.	-914.	-827.	-1628.	
+MONEY BORROWED		1669.	1184.	0	2154.	570.	1277.	1769.	1755.	0	914.	827.	1628.	
-PAYMENT ON LOAN		0	0	5464.	0	0	0	0	0	8135.	0	0	0	
-INTEREST PAID AT .12		0	0	2650.	0	0	0	0	0	1954.	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
31483.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		33152.	34335.	28872.	31026.	31597.	32874.	34643.	36397.	28262.	29177.	30004.	31632.	
1660.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		1975.	2306.	0	289.	599.	915.	1244.	1590.	0	283.	574.	874.	
33148.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		35127.	36642.	28872.	31315.	32196.	33789.	35886.	37987.	28262.	29459.	30579.	32506.	

Appendix table D-26. Monthly enterprise cash flow projection for farrow-to-finish system E, third year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	527.	11595.	0	488.	301.	0	0	11925.	0	488.	301.	25625.
CASH EXPENSES														
TOTAL		2004.	1828.	1429.	2291.	1257.	1575.	1907.	1525.	1302.	970.	1432.	1954.	19474.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-2004.	-1302.	10165.	-2291.	-769.	-1274.	-1907.	-1525.	10623.	-970.	-944.	-1653.	6151.
=CURRENT CASH BALANCE		-2004.	-1302.	10165.	-2291.	-769.	-1274.	-1907.	-1525.	10623.	-970.	-944.	-1653.	
+MONEY BORROWED		2004.	1302.	0	2291.	769.	1274.	1907.	1525.	0	970.	944.	1653.	
-PAYMENT ON LOAN		0	0	8289.	0	0	0	0	0	8787.	0	0	0	
-INTEREST PAID AT .12		0	0	1876.	0	0	0	0	0	1836.	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
31632.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		33636.	34938.	26648.	28939.	29708.	30982.	32889.	34414.	25627.	26597.	27541.	29193.	
674.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		1190.	1527.	0	266.	556.	853.	1163.	1492.	0	256.	522.	798.	
32506.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		34826.	36464.	26648.	29206.	30264.	31835.	34052.	35905.	25627.	26853.	28063.	29991.	

Appendix table D-27. Monthly enterprise cash flow projection for farrow-to-finish system F, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	418.	0	418.	0	0	790.	1625.
CASH EXPENSES														
TOTAL		0	0	0	4854.	5324.	10841.	5288.	8205.	7926.	1768.	8015.	2421.	54643.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-4854.	-5324.	-10841.	-4871.	-8205.	-7509.	-1768.	-8015.	-1631.	-53018.
=CURRENT CASH BALANCE		0	0	0	-4854.	-5324.	-10841.	-4871.	-8205.	-7509.	-1768.	-8015.	-1631.	
+MONEY BORROWED		0	0	0	4854.	5324.	10841.	4871.	8205.	7509.	1768.	8015.	1631.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	0	4854.	10178.	21019.	25890.	34095.	41604.	43372.	51387.	53018.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	0	49.	150.	361.	619.	960.	1376.	1810.	2324.	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	0	4854.	10227.	21169.	26250.	34715.	42565.	44749.	53197.	55342.	

Appendix table D-28. Monthly enterprise cash flow projection for farrow-to-finish system F, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	11484.	527.	0	11346.	301.	0	13177.	0	0	12337.	49172.
CASH EXPENSES														
TOTAL		2342.	2891.	5190.	3163.	2763.	3461.	2303.	2935.	3776.	1989.	3188.	4395.	38397.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-2342.	-2891.	6294.	-2637.	-2763.	7885.	-2002.	-2935.	9401.	-1989.	-3188.	7943.	10775.
=CURRENT CASH BALANCE		-2342.	-2891.	6294.	-2637.	-2763.	7885.	-2002.	-2935.	9401.	-1989.	-3188.	7943.	
+MONEY BORROWED		2342.	2891.	0	2637.	2763.	0	2002.	2935.	0	1989.	3188.	0	
-PAYMENT ON LOAN		0	0	2303.	0	0	6126.	0	0	7675.	0	0	6297.	
-INTEREST PAID AT .12		0	0	3990.	0	0	1759.	0	0	1726.	0	0	1646.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
53018.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		55360.	58251.	55948.	58584.	61348.	55222.	57224.	60159.	52484.	54473.	57661.	51364.	
2324.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		2854.	3408.	0	559.	1145.	0	552.	1124.	0	525.	1070.	0	
55342.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		58215.	61659.	55948.	59144.	62493.	55222.	57776.	61283.	52484.	54998.	58730.	51364.	

Appendix table D-29. Monthly enterprise cash flow projection for farrow-to-finish system F, third year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		301.	0	12533.	828.	0	12717.	301.	0	12876.	301.	0	12337.	52196.
CASH EXPENSES														
TOTAL		2563.	3114.	4457.	3276.	2911.	3663.	2303.	2935.	3767.	1998.	3188.	4395.	38570.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-2261.	-3114.	8077.	-2448.	-2911.	9054.	-2002.	-2935.	9109.	-1697.	-3188.	7943.	13626.
=CURRENT CASH BALANCE		-2261.	-3114.	8077.	-2448.	-2911.	9054.	-2002.	-2935.	9109.	-1697.	-3188.	7943.	
+MONEY BORROWED		2261.	3114.	0	2448.	2911.	0	2002.	2935.	0	1697.	3188.	0	
-PAYMENT ON LOAN		0	0	6459.	0	0	7468.	0	0	7594.	0	0	6512.	
-INTEREST PAID AT .12		0	0	1617.	0	0	1586.	0	0	1515.	0	0	1431.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
51364.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		53625.	56739.	50280.	52728.	55639.	48172.	50174.	53109.	45515.	47212.	50400.	43888.	
-UACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		514.	1050.	0	503.	1030.	0	482.	983.	0	455.	927.	0	
51364.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		54139.	57789.	50280.	53231.	56670.	48172.	50656.	54092.	45515.	47667.	51327.	43888.	

Appendix table D-30. Monthly enterprise cash flow projection for farrow-to-finish system G, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	418.	0	835.	0	418.	488.	2159.
CASH EXPENSES														
TOTAL		0	0	0	10032.	17142.	427.	22263.	11566.	11611.	10496.	9228.	2374.	95140.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-10032.	-17142.	-427.	-21846.	-11566.	-10776.	-10496.	-8811.	-1885.	-92981.
=CURRENT CASH BALANCE		0	0	0	-10032.	-17142.	-427.	-21846.	-11566.	-10776.	-10496.	-8811.	-1885.	
+MONEY BORROWED		0	0	0	10032.	17142.	427.	21846.	11566.	10776.	10496.	8811.	1885.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	0	10032.	27174.	27601.	49447.	61013.	71789.	82285.	91096.	92981.	
-UACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	0	100.	372.	648.	1143.	1753.	2471.	3293.	4204.	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	0	10032.	27274.	27973.	50095.	62155.	73542.	84756.	94389.	97186.	

Appendix table D-31. Monthly enterprise cash flow projection for farrow-to-finish system G, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		301.	488.	301.	10683.	828.	11688.	301.	12585.	764.	12821.	301.	12670.	63732.
CASH EXPENSES														
TOTAL		3108.	3454.	4544.	5389.	4122.	3984.	4628.	4290.	4130.	4555.	4755.	5182.	52142.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-2807.	-2966.	-4243.	5294.	-3294.	7704.	-4327.	8295.	-3366.	8266.	-4454.	7487.	11590.
=CURRENT CASH BALANCE		-2807.	-2966.	-4243.	5294.	-3294.	7704.	-4327.	8295.	-3366.	8266.	-4454.	7487.	
+MONEY BORROWED		2807.	2966.	4243.	0	3294.	0	4327.	0	3366.	0	4454.	0	
-PAYMENT ON LOAN		0	0	0	0	0	2796.	0	6182.	0	6199.	0	5467.	
-INTEREST PAID AT .12		0	0	0	5294.	0	4908.	0	2113.	0	2066.	0	2021.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
92981.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		95788.	98754.	102997.	102997.	106291.	103494.	107821.	101639.	105005.	98806.	103260.	97793.	
4204.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		5134.	6092.	7079.	2815.	3845.	0	1035.	0	1016.	0	988.	0	
97185.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		100922.	104846.	110076.	105812.	110136.	103494.	108856.	101639.	106021.	98806.	104248.	97793.	

Appendix table D-32. Monthly enterprise cash flow projection for farrow-to-finish system G, third year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		301.	13765.	301.	12292.	828.	12717.	301.	14067.	764.	12821.	301.	12670.	81128.
CASH EXPENSES														
TOTAL		5081.	4740.	4946.	5740.	4382.	4238.	4707.	4415.	4130.	4555.	4755.	5182.	56872.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-4780.	9024.	-4645.	6553.	-3555.	8479.	-4406.	9651.	-3366.	8266.	-4454.	7487.	24255.
=CURRENT CASH BALANCE		-4780.	9024.	-4645.	6553.	-3555.	8479.	-4406.	9651.	-3366.	8266.	-4454.	7487.	
+MONEY BORROWED		4780.	0	4645.	0	3555.	0	4406.	0	3366.	0	4454.	0	
-PAYMENT ON LOAN		0	7021.	0	4595.	0	6531.	0	7755.	0	6447.	0	5719.	
-INTEREST PAID AT .12		0	2004.	0	1957.	0	1948.	0	1897.	0	1819.	0	1768.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
97793.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		102573.	95552.	100197.	95602.	99156.	92625.	97031.	89276.	92642.	86195.	90649.	84930.	
-UACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		978.	0	956.	0	956.	0	926.	0	893.	0	862.	0	
97793.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		103550.	95552.	101152.	95602.	100112.	92625.	97957.	89276.	93535.	86195.	91511.	84930.	

Appendix table D-33. Monthly enterprise cash flow projection for farrow-to-finish system H, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	418.	0	418.	0	0	790.	1625.
CASH EXPENSES														
TOTAL		0	0	0	4844.	5324.	10847.	7238.	10896.	7921.	1763.	8011.	2417.	59262.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-4844.	-5324.	-10847.	-6821.	-10896.	-7504.	-1763.	-8011.	-1627.	-57637.
=CURRENT CASH BALANCE		0	0	0	-4844.	-5324.	-10847.	-6821.	-10896.	-7504.	-1763.	-8011.	-1627.	
+MONEY BORROWED		0	0	0	4844.	5324.	10847.	6821.	10896.	7504.	1763.	8011.	1627.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	0	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	0	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	0	4844.	10168.	21015.	27836.	38732.	46236.	47999.	56010.	57637.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	0	48.	150.	360.	639.	1026.	1488.	1968.	2528.	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	0	4844.	10217.	21165.	28196.	39371.	47262.	49488.	57978.	60166.	

Appendix table D-34. Monthly enterprise cash flow projection for farrow-to-finish system H, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	11484.	527.	0	11346.	301.	0	13177.	0	0	12337.	49172.
CASH EXPENSES														
TOTAL		2338.	2886.	5186.	3159.	2759.	3457.	2299.	2931.	3772.	1985.	3171.	4403.	38346.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-2338.	-2886.	6298.	-2632.	-2759.	7889.	-1998.	-2931.	9405.	-1985.	-3171.	7935.	10826.
=CURRENT CASH BALANCE		-2338.	-2886.	6298.	-2632.	-2759.	7889.	-1998.	-2931.	9405.	-1985.	-3171.	7935.	
+MONEY BORROWED		2338.	2886.	0	2632.	2759.	0	1998.	2931.	0	1985.	3171.	0	
-PAYMENT ON LOAN		0	0	1965.	0	0	5982.	0	0	7527.	0	0	6132.	
-INTEREST PAID AT .12		0	0	4333.	0	0	1907.	0	0	1878.	0	0	1803.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
57637.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		59975.	62862.	60897.	63529.	66288.	60306.	62304.	65235.	57708.	59693.	62865.	56732.	
2528.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		5104.	3704.	0	609.	1244.	0	603.	1226.	0	577.	1174.	0	
60165.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		65080.	66566.	60897.	64138.	67532.	60306.	62907.	66461.	57708.	60270.	64039.	56732.	

Appendix table D-35. Monthly enterprise cash flow projection for farrow-to-finish system H, third year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		301.	0	12533.	828.	0	12717.	301.	0	12876.	301.	0	12337.	52195.
CASH EXPENSES														
TOTAL		2558.	3110.	4452.	3272.	2907.	3659.	2299.	2931.	3763.	1994.	3171.	4403.	38519.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-2257.	-3110.	8081.	-2444.	-2907.	9058.	-1998.	-2931.	9113.	-1693.	-3171.	7935.	13676.
=CURRENT CASH BALANCE		-2257.	-3110.	8081.	-2444.	-2907.	9058.	-1998.	-2931.	9113.	-1693.	-3171.	7935.	
+MONEY BORROWED		2257.	3110.	0	2444.	2907.	0	1998.	2931.	0	1693.	3171.	0	
-PAYMENT ON LOAN		0	0	6303.	0	0	7306.	0	0	7428.	0	0	6329.	
-INTEREST PAID AT .12		0	0	1778.	0	0	1752.	0	0	1684.	0	0	1606.	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
56732.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		58989.	62099.	55796.	58240.	61147.	53841.	55839.	58770.	51341.	53034.	56205.	49876.	
-UACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		567.	1157.	0	558.	1140.	0	538.	1097.	0	513.	1044.	0	
56732.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		59556.	63256.	55796.	58798.	62288.	53841.	56377.	59866.	51341.	53547.	57249.	49876.	

Appendix E: Hog Finishing Systems

Table E-1. Growing (14%) and finishing (11%) rations

	Ration	
	14% Grower	11% Finishing
	percent	
Feed ingredient		
Ground yellow corn[1]	83.6	90.6
Soybean meal (48.5)[2]	13.8	6.7
Dicalcium phosphate[3]	1.3	1.4
Ground limestone	0.7	0.7
Salt[4]	0.3	0.3
Vitamin-mineral premix	0.3	0.3
Composition		
Protein	14.00	11.00
Calcium[3]	0.62	0.58
Phosphorus	0.55	0.55

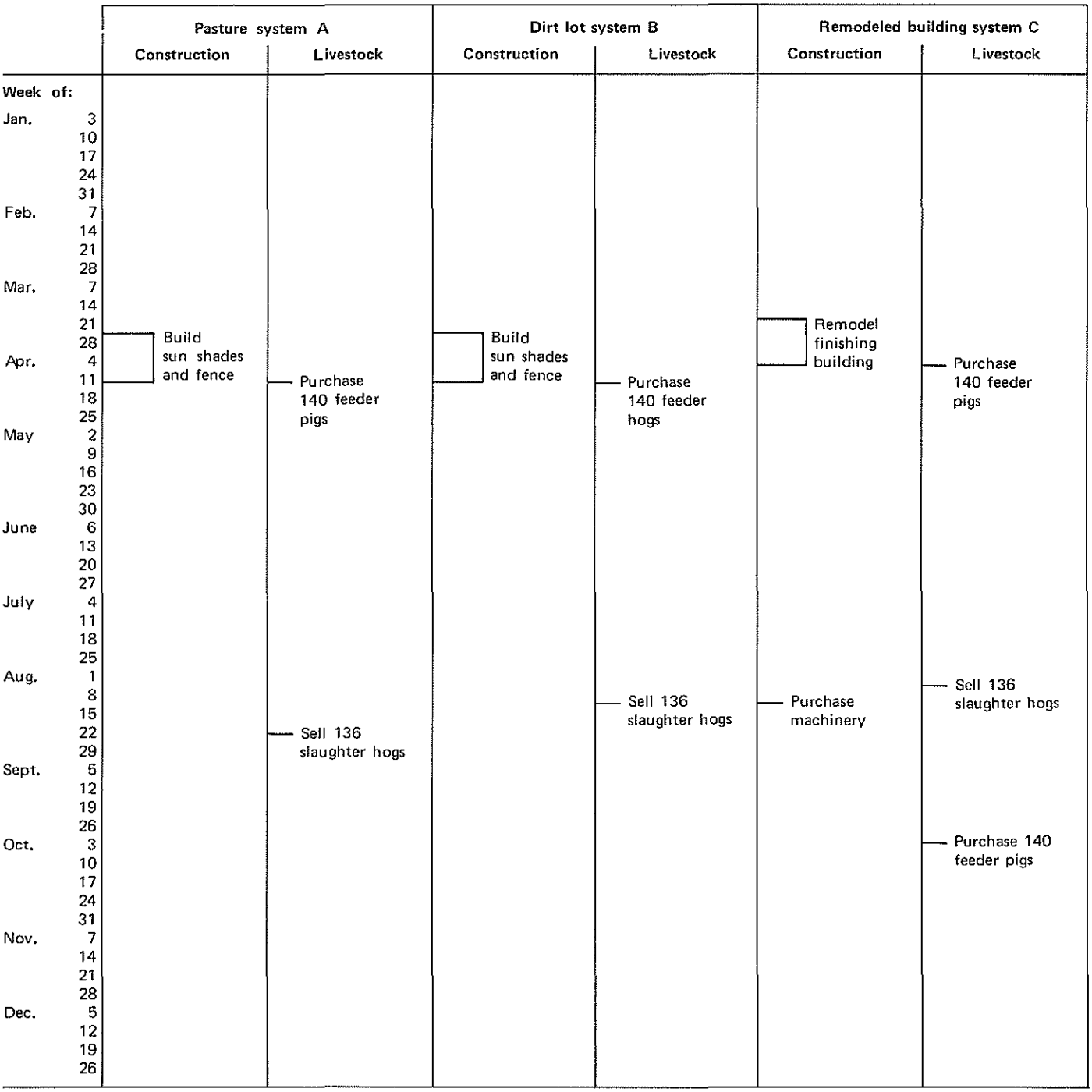
[1]Ground milo can replace corn in the rations on a 1 to 1 basis. If ground barley is used to replace the corn, the quantity of soybean meal must be reduced by 10 percent and replaced by an equal amount of ground barley. The feeding of ground barley will not affect the level of feed intake by the hogs, but it will reduce the rate of gain by up to 10 percent.

[2]If 44 percent rather than 48.5 percent soybean meal is fed, the amount of soybean meal should be increased and the amount of corn should be reduced by 12 percent.

[3]Less calcium is included in the 14 percent and 11 percent rations than in the 16 percent and 13 percent rations because of the high level of calcium in alfalfa pasture.

[4]The trace mineralized salt should contain at least .008 percent iodine.

Appendix figure E-1. Construction and production calendar for the first year, three finishing systems



Appendix table E-2. Monthly enterprise cash flow projection for hog finishing system A, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	0	16788.	0	0	0	0	16788.
CASH EXPENSES														
TOTAL		0	0	2126.	10899.	1166.	1340.	1932.	1706.	14.	14.	14.	14.	19224.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	-2126.	-10899.	-1166.	-1340.	-1932.	15082.	-14.	-14.	-14.	-14.	-2436.
=CURRENT CASH BALANCE		0	0	-2126.	-10899.	-1166.	-1340.	-1932.	15082.	-14.	-14.	-14.	-14.	
+MONEY BORROWED		0	0	2126.	10899.	1166.	1340.	1932.	0	14.	14.	14.	14.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	14459.	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	623.	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1 ACCUMULATED BORROWING		0	0	2126.	13025.	14191.	15531.	17462.	3003.	3017.	3031.	3045.	3059.	
-0ACCRUED INTEREST-JAN 1 ACCRUED INTEREST AT .12		0	0	0	21.	152.	293.	449.	0	30.	60.	91.	121.	
0 ACCURED TOTAL DEBT-JAN 1 ACCUMULATED TOTAL DEBT		0	0	2126.	13047.	14342.	15824.	17911.	3003.	3048.	3092.	3136.	3180.	

Appendix table E-3. Monthly enterprise cash flow projection for hog finishing system A, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	0	16788.	0	0	0	0	16788.
CASH EXPENSES														
TOTAL		0	0	0	8710.	1186.	1360.	1651.	1725.	0	0	0	0	14632.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-8710.	-1186.	-1360.	-1651.	15063.	0	0	0	0	2156.
=CURRENT CASH BALANCE		0	0	0	-8710.	-1186.	-1360.	-1651.	15063.	0	0	0	0	
+MONEY BORROWED		0	0	0	8710.	1186.	1360.	1651.	0	0	0	0	0	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	14269.	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	793.	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
3059.00LOAN OUT-JAN 1 ACCUMULATED BORROWING		3059.	3059.	3059.	11769.	12954.	14315.	15965.	1696.	1696.	1696.	1696.	1696.	
121.00ACCRUED INTEREST-JAN 1 ACCRUED INTEREST AT .12		152.	182.	213.	243.	361.	491.	634.	0	17.	34.	51.	68.	
3180.00 ACCURED TOTAL DEBT-JAN 1 ACCUMULATED TOTAL DEBT		3211.	3241.	3272.	12012.	13316.	14805.	16599.	1696.	1713.	1730.	1747.	1764.	

Appendix table E-4. Monthly enterprise cash flow projection for hog finishing system B, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	0	16788.	0	0	0	0	16788.
CASH EXPENSES														
TOTAL		0	0	2130.	9992.	1381.	1629.	2162.	1345.	17.	17.	17.	17.	18707.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	-2130.	-9992.	-1381.	-1629.	-2162.	15443.	-17.	-17.	-17.	-17.	-1919.
=CURRENT CASH BALANCE		0	0	-2130.	-9992.	-1381.	-1629.	-2162.	15443.	-17.	-17.	-17.	-17.	
+MONEY BORROWED		0	0	2130.	9992.	1381.	1629.	2162.	0	17.	17.	17.	17.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	14841.	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	602.	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	2130.	12122.	13502.	15132.	17293.	2452.	2469.	2486.	2503.	2520.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	21.	143.	278.	429.	0	25.	49.	74.	99.	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	2130.	12143.	13645.	15409.	17722.	2452.	2494.	2536.	2577.	2619.	

Appendix table E-5. Monthly enterprise cash flow projection for hog finishing system B, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	0	16788.	0	0	0	0	16788.
CASH EXPENSES														
TOTAL		0	0	0	8809.	1405.	1653.	1885.	1368.	0	0	0	0	15120.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	0	-8809.	-1405.	-1653.	-1885.	15420.	0	0	0	0	1668.
=CURRENT CASH BALANCE		0	0	0	-8809.	-1405.	-1653.	-1885.	15420.	0	0	0	0	
+MONEY BORROWED		0	0	0	8809.	1405.	1653.	1885.	0	0	0	0	0	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	14673.	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	747.	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
2520.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		2520.	2520.	2520.	11329.	12733.	14387.	16271.	1599.	1599.	1599.	1599.	1599.	
99.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12	124.	149.	175.	200.	315.	440.	584.	0	16.	32.	48.	64.		
2619.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT	2644.	2669.	2695.	11528.	13048.	14827.	16856.	1599.	1615.	1631.	1647.	1663.		

Appendix table E-6. Monthly enterprise cash flow projection for hog finishing system C, first year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	0	0	0	0	0	0	16788.	0	0	0	0	16788.
CASH EXPENSES														
TOTAL		0	0	2063.	10739.	1370.	2078.	1924.	6951.	16.	7230.	1349.	1804.	35524.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		0	0	-2063.	-10739.	-1370.	-2078.	-1924.	9837.	-16.	-7230.	-1349.	-1804.	-18736.
=CURRENT CASH BALANCE		0	0	-2063.	-10739.	-1370.	-2078.	-1924.	9837.	-16.	-7230.	-1349.	-1804.	
+MONEY BORROWED		0	0	2063.	10739.	1370.	2078.	1924.	0	16.	7230.	1349.	1804.	
-PAYMENT ON LOAN		0	0	0	0	0	0	0	9203.	0	0	0	0	
-INTEREST PAID AT .12		0	0	0	0	0	0	0	635.	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
-0LOAN OUT-JAN 1														
ACCUMULATED BORROWING		0	0	2063.	12802.	14172.	16250.	18174.	8972.	8988.	16217.	17567.	19370.	
-0ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		0	0	0	21.	149.	290.	453.	0	90.	180.	342.	517.	
0 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		0	0	2063.	12822.	14320.	16540.	18627.	8972.	9077.	16397.	17908.	19888.	

Appendix table E-7. Monthly enterprise cash flow projection for hog finishing system C, second year of operation

ITEM	UNITS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CASH RECEIPTS														
TOTAL		0	16414.	0	0	0	0	0	16788.	0	0	0	0	33202.
CASH EXPENSES														
TOTAL		1801.	1398.	20.	8786.	1373.	1634.	1926.	1452.	0	7231.	1350.	1805.	28774.
FLOW OF FUNDS SUMMARY						DOLLARS								
CASH BALANCE BEGINING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
+CASH DIFFERENCE		-1801.	15017.	-20.	-8786.	-1373.	-1634.	-1926.	15336.	0	-7231.	-1350.	-1805.	4428.
=CURRENT CASH BALANCE		-1801.	15017.	-20.	-8786.	-1373.	-1634.	-1926.	15336.	0	-7231.	-1350.	-1805.	
+MONEY BORROWED		1801.	0	20.	8786.	1373.	1634.	1926.	0	0	7231.	1350.	1805.	
-PAYMENT ON LOAN		0	14094.	0	0	0	0	0	14466.	0	0	0	0	
-INTEREST PAID AT .12		0	922.	0	0	0	0	0	870.	0	0	0	0	
=CASH BALANCE ENDING		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	
CURRENT LOAN SUMMARY						DOLLARS								
19370.00LOAN OUT-JAN 1														
ACCUMULATED BORROWING		21171.	7076.	7096.	15882.	17255.	18889.	20815.	6349.	6349.	13580.	14930.	16735.	
517.00ACCRUED INTEREST-JAN 1														
ACCRUED INTEREST AT .12		711.	0	71.	142.	301.	473.	662.	0	63.	127.	263.	412.	
19887.00 ACCURED TOTAL DEBT-JAN 1														
ACCUMULATED TOTAL DEBT		21881.	7076.	7167.	16023.	17555.	19362.	21477.	6349.	6412.	13707.	15193.	17147.	