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# Costs of Producing U.S. Livestock, 1972-87

## Estimating and Methodology Update

Hosein Shapouri, Russell Bowe,
Terry Crawford, and Warren Jessee

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**Costs of Producing U.S. Livestock, 1972-87: Estimating and Methodology Update.** By Hosein Shapouri, Russell Bowe, Terry Crawford, and Warren Jessee. Commodity Economics Division, Economic Research Service, U.S. Department of Agriculture. Agricultural Economic Report No. 632.

## Abstract

This report presents a way to make a consistent set of cost-and-returns estimates for U.S. livestock production in 1972-87, a period in which there were data gaps and in which many estimating methods and formats were used. The resulting consistent time series data can be used to track changes in the cost structure of the livestock industry over time and to analyze producer responses to costs. Forty-five tables compare costs of producing beef, hogs, and sheep by region and size of operation in 1972-87.

**Keywords:** Cost of production, costs and returns.

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## Summary

This report presents a way to make a consistent set of cost-and-returns estimates for U.S. livestock production in 1972-87, a period in which there were data gaps and in which many estimating methods and formats were used. The resulting consistent time series data can be used to track changes in the cost structure of the livestock industry over time and to analyze producer responses to costs. The format matches that used in the Economic Indicators of the Farm Sector: Costs of Production series published annually by USDA's Economic Research Service.

The report describes four major procedural and format revisions:

- The addition of an economic costs section that includes allocated returns to nonland production assets, land, labor, and capital.
- New procedures for calculating general farm overhead and interest as a percentage of receipts.
- A new concept for estimating management costs as a residual return rather than a fixed rate.
- The redefinition of some regional boundaries and size of production classifications.

Forty-five tables compare costs of producing beef, hogs, and sheep by region and size of operation in 1972-87. Comparisons show that, overall, total economic costs for feedlot-fed beef, beef cow-calf, farrow-to-finish hogs, feeder pig, and sheep production in the United States are higher in 1987 than in 1972. Total economic costs provide an estimate of the value of resources required to produce the current year's output.

Other report highlights:

- Costs of producing fed beef (cash expenses) from 1972 to 1987 averaged $57.16 per hundredweight (cwt) sold. Cash receipts averaged $54.37 per cwt over these 16 years, failing to cover cash expenses by an average of $2.79 per cwt.
- The average U.S. beef cow-calf enterprise had higher cash expenses than cash receipts in 9 of the 16 years. Net returns hit a high of $121.14 per cow in 1979 and a low of -$42.76 per cow in 1975.
- Farrow-to-finish enterprises averaged net returns of $6.23 per cwt more than cash expenses, ranging from -$2.66 per cwt in 1974 to $20.91 per cwt in 1987. But receipts for the period averaged $1.33 per cwt more than the sum of cash and capital replacement expenses, allowing farrow-to-finishers to replace facilities profitably.

- Total economic costs of $61.01 per ewe for sheep production enterprises were 103 percent higher in 1987 than those of $30.02 per ewe in 1972. Receipts failed to cover total economic costs in 10 of 16 years, but they covered the sum of cash expenses and capital replacement expenses in all but 1982.

# Costs of Producing U.S. Livestock, 1972-87

## Estimating and Methodology Update

Hosein Shapouri, Russell Bowe,
Terry Crawford, and Warren Jessee *

### Introduction

Sweeping change in estimating U.S. livestock production costs in the 1970's and 1980's and gaps in reporting them have spurred a drive for consistency. This report reconciles the methodology and format changes that have come about in estimating costs of U.S. livestock production. It provides one consistent set of cost analyses that can be used to evaluate producer response to costs.

The report also presents regional costs and returns of U.S. cattle, hog, and sheep producers by size of operation for 1972-87.

The report uses the methods and concepts described in the Economic Indicators of the Farm Sector: Costs of Production series published by the Economic Research Service (ERS), USDA, to adjust 1972-79 cost estimates to conform to the current definitions (22).1/

The new format, which is presented in Economic Indicators of the Farm Sector, employs cost-and-returns budgets that allow financial comparisons among regions and types of enterprises. The budgets also provide additional detail and better estimates of certain cost items from new survey data. This report compares the old and new formats by describing format and methodology changes in the accounts. It then describes the procedures for adjusting published 1976-79 livestock cost of production (COP) estimates and presents the budgets for 1972-87.

Back-casting procedures are used to estimate production costs for the livestock budgets for 1972-75, using 1976 as a base year for cost projections. Cost items in each budget were indexed back from 1976 to 1972 using the index of prices paid by producers for production inputs. The result is a consistent 16-year cost-and returns time series for each type of livestock enterprise that will be revised as needed.

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1/ Underscored numbers in parentheses refer to items listed in References at the end of this report.

## Structure of the Old and New Accounts

COP enterprise budgets were developed for the overall United States and were stratified under both the old and new formats according to either the number of animals in the production herd or the number of animals sold. Budgets were also developed for U.S. geographic regions.

The ERS and National Agricultural Statistics Service (NASS) collected data through enumerative surveys of farm operators to estimate these costs for cow-calf, hog, fed cattle, and sheep production. Quantities of inputs and outputs, taken from the surveys, are multiplied by their prices and then weighted by the number of head of each type of livestock being raised in each region to obtain the costs shown in the enterprise budgets.

Production cost estimates were first published for cow-calf or feeder cattle production enterprises in June 1978 (7). The COP budgets were estimated for 1976, primarily using information obtained from the 1976 cow-calf COP survey (which uses data for the 1975 production year) along with published data from NASS and the U.S. Department of Commerce (1).

Data on cow-calf enterprises were stratified into five regions: Great Plains, West, Southwest, North Central, and Southeast. The Great Plains and Southwest regions were combined to form one Great Plains region, while the other regions remained the same in the 1981 survey (which uses data for the 1980 production year) (5). In addition, different questionnaires were used in 1981 to survey beef cow-calf enterprises in the North Central and Southern regions than were used to survey the same kinds of enterprises in the Great Plains and Western regions. The 1976 survey used one general questionnaire for the United States. The 1981 questionnaires were designed to reflect regionalized terminology and production practices. Average COP budgets were not estimated for different size classifications until the 1977 production year and were first published in May 1979. They included five different sizes: less than 100 cows, 100 to 199 cows, 200 to 499 cows, 500 to 999 cows, and 1,000 or more cows. There were only three sizes in 1980: less than 100 cows, 100 to 499 cows, and 500 or more cows.

Hog and pig enterprises were divided into three major production categories and include feeder pig production, feeder pig finishing, and farrow-to-finish enterprises for both the 1976 and 1980 hog and pig surveys (34, 37). The 1976 survey stratified the three production categories into three regions: North Central, Southeast, and Southwest hog production regions. The 1976 survey size classifications were based on annual sales of slaughter hogs or feeder pigs. These included production sizes of 140, 300, 650, 1,600, and 5,000 head sold. An additional size category was computed for U.S. farrow-to-finish production operations with annual sales of 40 head. COP estimates for the 1976, 1977, and 1978 production years were first published in April 1978 (18). The 1980 COP survey dropped the Southwest region. The COP size budgets for the 1980 survey were also based

on annual sales broken out by categories of 140, 300, 650, 1,600, 3,000, and 10,000 head sold. COP budgets were not prepared for the size categories based on annual sales of 3,000 and 10,000 head for the periods 1976-79 and 1972-75 because there were no representative data for these sizes.

Budgets for fed cattle enterprises were estimated from the 1976 survey (3). Facilities, machinery, equipment inventories and their use rates, labor requirements, and cash expenses other than for feed and cattle were collected for fed cattle production. Data on feeder cattle purchases, kinds and quantities of feed consumed, and fed-beef marketings were obtained from records of farm feedlot businesses with capacities of less than 1,000 head in 1976. Records of commercial feedlots were used in 1977. ERS conducted a survey of farmer-fed cattle enterprises in the Corn Belt in 1981. New information was obtained on structure, costs, and returns for the 1980 production year (38). Information was not gathered for the commercial feedlot enterprises in 1981. New data for the production coefficients and costs were not obtained until 1984 from feedlot accounting and production records for commercial feedlot enterprises.

Budgets detailing sheep enterprises for 1977, 1978, and 1979 were estimated from a 1975 survey of sheep enterprises in the 17 western States. The geographical area was expanded in 1976 to include the North Central States (14). COP budgets using the 1975 survey data were first published in July 1980. The COP enterprise budgets were estimated for sheep enterprises in eight major sheep-producing regions: North Central, Northern Plains, Plains, Texas-New Mexico, Mountain, Great Basin, California-Arizona, and Pacific.

Another sheep enterprise production survey was conducted in 1981. Data were used to update sheep production and cost relationships for the 1980 production year (2). The North Central region was excluded from the 1981 survey, however.

Production coefficients, such as the pounds of slaughter hogs sold and pounds of grain fed per hundredweight (cwt) sold, have been a part of the published COP budgets since 1976. However, budgets for the cow-calf enterprises reported the quantity of calves, yearlings, and cull cows sold per cow. Not until 1977 were the quantities of feed, labor, bedding, and so forth that are used in the production process reported for the cow-calf, fed-beef, and sheep enterprise budgets. These production coefficients were not provided for the regional or size budgets from 1979 through 1981. Changes in format and the use of new data adapted from the 1981 survey resulted in several changes or exclusions of some of the production coefficients used to estimate pre-1980 costs. For example, most of the pasture and range quantities were measured by acres per cow in the 1976-79 estimates and changed to animal unit month (AUM) and animal month (AM) per cow measurement. With the available data, acre-per-cow quantities could not be converted or transformed into AUM or AM quantities.

Economic Indicators of the Farm Sector: Costs of Production, 1982 contained major changes in format and methodology for estimating many cost items incurred by livestock producers (24). The new budgets included estimates of overall crop and livestock returns producers realized based on harvest-month prices for crops and yearly average prices for livestock, enterprise cash costs and returns, and economic costs and returns. Many cost and cash-flow estimates and additional information on input costs were added to each budget to provide more comprehensive information.

Table 1 compares the two COP formats for U.S. cow-calf production costs for 1976-87. Comparison tables for commercial and farmer-fed cattle, feeder pig production, feeder pig finishing, farrow-to-finish, and sheep production enterprises are presented in appendix tables 1-6. The old format contained estimates for cash returns and estimates for cash and noncash variable costs together with costs imputed to inputs supplied by the operator: machinery, overhead, management, and land. Noncash costs are inputs supplied by the operator for home-grown feed, machinery and equipment, buildings and facilities, raised livestock, and operator and family labor and management. The new format contains revised cost-and-return measures separated into three major categories: cash receipts, cash expenses, and economic (full ownership) costs. The table presents a side-by-side comparison of major format and methodology changes that apply to all of the livestock budgets.

A summary of differences between the two formats are:

- Economic costs and returns are included in the new format.

- Variable cost items differ in that only the cash portion of the old format variable costs is comparable to cash expenses under the new format. There are also differences in the terms used for individual cost items and in the units and/or quantity measured.

- General farm overhead, taxes and insurance, and interest expenses are considerably higher under the new format. Taxes under the old format included only land taxes, while the insurance and taxes for machinery and equipment, buildings and facilities, and livestock were included in the cash portion of replacement, interest, taxes and insurance (RITI) ownership costs. The new format groups all taxes and insurance into one item. General farm overhead reflects actual cash expenses obtained from the Farm Costs and Returns Survey (FCRS) and presents dollars of expenses for overhead items per dollar of sales. Actual interest expenses are also estimated from the FCRS and are allocated by their contribution to gross revenue. In previous livestock budgets, interest on operating capital was calculated using Production Credit Association (PCA) interest rates and the average time each input was used in the

Table 1--Format differences in production cost reports for cow/calf enterprises, 1976-87

| 1976-79 format | 1980-87 format |
|---|---|
| Returns: | Cash receipts: |
| Feeder calves | Steer calves |
| Feeder yearlings | Heifer calves |
| Cull cows | Yearling steers |
| | Yearling heifers |
| | Cull cows |
| Direct costs: | Cash expenses: |
| | Feed-- |
| Improved pasture (acres) | Pasture (acres) |
| Small grain pasture (acres) | Pasture (AUM) 1/ |
| Native pasture (acres) | Pasture (AU) 2/ |
| Private pasture (acres) | Private range (acres) |
| Crop residue (acres) | Crop residue (acres) |
| Rented pasture (acres) | Crop residue (AUM) |
| Public grazing (AU) | Public grazing (AU) |
| | Public grazing (AUM) |
| Hay | Hay |
| Silage | Silage |
| Grain and concentrate | Grain |
| Protein supplements | Protein supplements |
| Salt and minerals | Salt and minerals |
| | Other-- |
| Veterinary and medicine | Veterinary and medicine |
| Livestock hauling | Livestock hauling |
| Marketing | Marketing |
| Fuel, lubricants (lube), and electricity | Fuel, lubricants (lube), and electricity |
| Machinery and building repairs | Machinery and building repairs |
| Hired labor | Hired labor |
| | Fixed expenses: |
| Interest on operating capital | Interest |
| General farm overhead | General farm overhead |
| | Taxes and insurance |
| Ownership costs, RITI 3/: | Capital replacement |
| Machinery and equipment | |
| Buildings and facilities | |
| Livestock | |
| | Economic (full ownership) costs: |
| | Variable cash expenses |
| | General farm overhead |
| | Taxes and insurance |
| | Capital replacement |

See footnotes at end of table.

Continued--

Table 1--Format differences in production cost reports for cow/calf enterprises, 1976-87--Continued

| 1976-79 format | 1980-87 format |
|---|---|
| | Returns to owned inputs: |
| Operator and family labor | Operating capital |
| Management | Other nonland capital |
| Land taxes | Land |
| | Unpaid labor |
| Returns to land and risk | Residual returns to management and risk |
| | Net returns to owned inputs |

1/ AUM = animal unit month, 1 animal unit for 1 month.
2/ AU = animal unit, a measure of forage consumed by 1 mature (1,000 lb.) cow or the equivalent based on the dairy forage consumption of 26 pounds of dry matter per day.
3/ RITI = replacement, insurance and taxes, and interest charges.

operation. Interest on investment in ownership RITI was charged annually at the PCA rate. Interest on livestock investment was based on the January 1 inventory values and the PCA rate. These methods failed to reflect the interest costs that actually were incurred. The FCRS data, however, provide actual interest costs incurred.

- Management costs under the old format were defined as 7 percent of all variable and fixed costs except land taxes and the cost of purchased livestock for all livestock operations excluding commercial cattle feedlots. Such a fixed charge, however, does not necessarily reflect how producers determine their return to management and risk (8). The new format, which uses receipt estimates, calculates this return as a residual rather than as a fixed, proportional charge.

- Returns, in the economic costs section of the new format, are allocated to the farmer's or rancher's owned factors of production. The allocation method is explained in (20) and is the same for all livestock operations. By excluding the cash interest payments, one can subtract total economic costs from total receipts to yield a return that can be used to compare total costs and returns across commodities regardless of equity levels or tenure of producers.

## New Methods and Format

### Cash Receipts

Cash receipts measure the gross value of production. Cash receipts permit cash flows, residual returns to management and risk, and returns to owned resources used for production to be estimated. Livestock receipts are estimated by calculating the total quantity of each livestock class including secondary products such as cull breeding stock and primary livestock outputs sold by region, subregion, or State. These weighted quantities per unit of sales are calculated so that sales from each livestock class can be accounted for and are then multiplied by the appropriate livestock price for the principal livestock production activity. A manure credit for hog and fed beef production, which is from the sale of animal feces for fertilizer, is included to discount charges made for manure handling equipment. When appropriate, this item is treated as a negative cash cost item.

### Cash Expenses

Cash expenses under the current format are separated into variable expenses and fixed expenses, and are estimated with the underlying concept that livestock enterprises should cover the costs they incur. Livestock enterprises, in other words, should not be supplemented by other enterprises to make them profitable in the short run. Variable cash expenses are expenses incurred only if production takes place, while fixed cash expenses occur regardless of whether production is initiated, continued, or ceases. Net cash returns excluding capital replacement are estimated by subtracting the variable and fixed expenses from cash receipts. The results represent a shortrun financial indicator of the operator's cash flow position (6). This discretionary income, which excludes deduction for income taxes, can be used to pay family living expenses, replace depreciable assets, and retire debt. Payments on loan principal were not included in costs because they reflect a change in equity.

Cash expense items were estimated in the same way under the new format as under the old format except for certain individual line items indicated on the budgets. COP surveys, NASS price reports, and the budget generator provided data for the cost estimates. Actual interest and general farm overhead paid is estimated from FCRS data under the new format. The charge for replacing capital investment (economic depreciation expense) in machinery, equipment, and breeding livestock is calculated at current replacement prices under the new methodology. Thus, it represents a charge sufficient to maintain the investment and production capacity over time. Returns to the operator are shown with and without capital replacement, because some operations can defer replacement if their debt, tax structure, and profits permit. The charge for breeding herd replacement accounts only for purchased breeding stock, not animals raised on the farm or ranch. Under the old format, charges for capital replacement

were listed as ownership costs and were a part of the RITI. They were, therefore, included with variable and fixed costs when subtracted from cash receipts.

Variable Cash Expenses

The current format for beef cow-calf production includes costs for silage, hay, pasture, private range, public grazing, and crop residues, where applicable. Except for silage, the budget for sheep COP has similar pasture and forage costs. Pasture and forage costs in the budgets for farmer-fed beef include costs for haylage, silage, legume hay, pasture, and crop residue, while commercial feedlots have costs for silage, legume hay, and other roughages. Where applicable, budgets for hog COP include a pasture cost. Pasture and forages are valued as a weighted average price, reflecting variable production costs for raised forages and owned pastures and market prices for purchased forages and rented pastures. Silage costs are valued at their grain equivalent plus additional cost of harvesting silage rather than grain. However, the forages used in commercial fed beef production are all assumed to be purchased. The amounts used in production are based on data from the 1981 surveys for cow-calf, sheep, farmer-fed beef, and hog production and on data from the 1984 surveys for commercial feedlots.

The various fixed costs associated with producing home-grown forage (crop machinery and land costs) are included in the appropriate items, such as taxes and insurance; capital replacement; and returns to operating capital, nonland capital, and land. The cost for unpaid crop labor is included in the allocated returns to unpaid labor costs. Cost for pasture and forages were also included in the 1976-79 COP reports for the different types of livestock production. Even though the forage and pasture costs were sometimes listed under different names for variable cash expenses and used different units of measure to gauge amounts used in production, the costs were calculated using similar prices and assumptions.

Meat livestock budgets currently use separate cost categories for grain and supplements. Salt and minerals are also a separate line item for cow-calf and sheep COP budgets. Farmer feedlot accounts contain a separate category for feed concentrates. Whether produced or purchased, grains are valued at the average regional prices received by farmers that are reported monthly by NASS. Protein supplements, commercial feeds, concentrates, and salt and minerals are valued at the regional and monthly average prices paid by farmers. The old COP accounts of 1976-79 (1977-83 for commercial feedlot COP budgets) included similar grain, protein supplements and salt and mineral costs; they used similar pricing mechanisms. Quantities fed were based on data from the respective livestock surveys. The current procedures use the 1981 survey data for "other cash expenses" for cow-calf, hog, sheep, and farmer-fed beef. They use the 1984 survey data for commercial feedlot expenses. Other cash expenses, such as veterinary/medicine and custom feed mixing, are adjusted annually by using a composite index of the prices paid by farmers for

wages, chemicals, and agricultural machinery and fuel which is published by NASS in Agricultural Prices (33). For example, veterinary and medicine costs are updated each year according to changes in 70 percent of the wage rate and 30 percent of the index of prices paid for chemicals. Custom feed mixing is adjusted annually by the changes in 50 percent of the wage rate, 40 percent of the index of prices paid for tractors and other self-propelled machinery, 3 percent of the index of prices paid for other machinery, and 7 percent of the index of prices paid for fuels and energy.

Livestock hauling charges are adjusted annually by the change in 60 percent of the index of prices paid for autos and trucks, 20 percent of the index of prices paid for farm and motor supplies, and 20 percent of the index of prices paid for fuels and energy.

The hired labor expense is calculated by multiplying the hours from the corresponding survey data by the reported farm labor wage rate for the appropriate year and corresponding region or State. Total labor costs for commercial feedlot COP budgets are updated using the yearly change in the index of prices paid for farm labor.

Marketing charges are updated annually for cow-calf, farmer feedlots, and hog COP budgets. They are updated annually by using the change in the index of all production items of nonfarm origin for those States in each region that charge a fee on a per-head basis. They are updated annually for those areas in which the marketing charge is based on a percentage of gross sales receipts. The cost is updated using the change in gross receipts per cow, per cwt of slaughter cattle sold, or per cwt of hog/pig sold. The marketing costs associated with Western and Great Plains cow-calf budgets, commercial feedlots, and sheep COP budgets are also updated using the change in the index of all production items.

Bedding costs associated with the hog and farmer feedlot COP enterprises are based on the 1980 harvesting cost. They are adjusted each year by 57 percent of the change in the index of prices paid for tractors and other self-propelled machinery, 3 percent of the change in the index of prices paid for other machinery, 11 percent of the change in the index of prices paid for fuels and energy, and 29 percent of the change in the index of wages.

The manure credit accounted for in the hog and fed beef COP budgets is updated annually using the change in the index of prices paid for fertilizer. A miscellaneous expense is included in the commercial feedlot accounts and is a combination of custom hauling cost and marketing cost. It is updated yearly by methods explained above.

The fuel, lubrication (lube), and electricity expense and the machinery and building repair expense are both calculated by the budget generator, which uses the survey data and updated prices. Fuel, lube, and electricity expenses are obtained by multiplying

the hours that each item is operated by the per-hour rate of power consumption; that number is then multiplied by the appropriate fuel price. However, for hog and farmer-fed beef, separate expenses for electricity and LP gas are updated annually using published State-weighted prices for electricity and LP gas. Commercial feedlots also have a separate utilities cost that is updated each year using the change in the index of prices paid for fuels and energy. Machinery and building repairs are estimated in relation to the average age and current list price of the machinery and buildings.

The COP reports under the old format also determined the other cash costs by an indexing procedure and used the budget generator with the current formulas. However, some of the prior indexing calculations used different ratios and indexes than those now used.

Fixed Cash Expenses

The general farm overhead expense is included in the fixed cash expenses category for the livestock COP budgets except for commercial feedlot budgets. It is allocated as a percentage of individual gross livestock receipts based on the FCRS data. It represents the actual cash expenses for electricity for general farm use, fees and dues, fence materials and supplies, farm telephone expenses, farm water (except for irrigation), water drainage, liability insurance, and general business expenses. However, electricity and liability insurance costs already accounted for in fuel, lube, and electricity for hog, farmer-feeder, and cow-calf COP budgets are eliminated from general farm overhead.

The amount estimated under the 1976-79 format to cover the portion of overhead costs chargeable to hog production was set at 5 percent of total direct cost, excluding interest on operating capital, for feeder pig production and farrow-to-finish enterprises. It was lowered to 3 percent for feeder pig finishing operations to allow for the purchase cost of feeder pigs, which is included as a direct cost.

The amount used for general farm overhead was set at 3 percent of direct cost for sheep budgets.

General farm overhead expenses for cow-calf and farmer-fed beef, under the new format, were estimated based on 1981 survey data.

The annual change in the Consumer Price Index for all items less feed was used to update the farm overhead costs for all the livestock COP budgets. General farm overhead for commercial cattle feeders is already accounted for in the other costs.

The tax expenses are based on the current value of new machinery, equipment, and buildings lagged back to the base year. The lags are based on the average age of equipment and buildings estimated from the 1981 and 1984 livestock surveys. Taxes include personal property tax on machinery and real estate taxes. Insurance is

computed on the current values of machinery, equipment, buildings, and livestock. The taxes and insurance expense for machinery and land used to produce forage for the livestock enterprises are also included.

The 1976-79 total ownership accounts included taxes, insurance, and replacement and interest charges related to machinery and equipment, but did not include these items for forage crop production for the livestock enterprises.

The current method for estimating interest expense is to calculate it as a percentage of gross receipts attributed to the specific livestock being produced or fed. The percentage of total receipts that represents interest is taken from the annual FCRS; it reflects real estate and operating capital interest costs. The old 1976-79 COP budgets included interest costs associated with machinery, equipment, buildings, and livestock based on PCA and Federal Land Bank (FLB) loan rates.

The capital replacement charge is estimated on the lagged value of machinery, equipment, buildings, and purchased breeding stock using the budget generator's computations. The replacement reserve charge was calculated in the same way for the 1976-79 reports; however, it was not a separate item but was grouped together with interest in the noncash portion of total ownership costs.

**Economic Costs**

The economic cost section is a new feature of the budgets that attempts to place a value on the inputs and resources required to produce the current year's production without regard to ownership. For example, the cash expenses of two beef cow operations may differ because of different debt levels, even if they have the same level of management ability and use identical practices and technology on similarly productive herds. The economic costs and returns section provides a framework for analyzing these diverse situations.

Estimated economic (or full ownership) costs allow livestock returns across varying levels of equity and tenure to be compared. Total variable expenses, general farm overhead, taxes and insurance, and capital replacement are the same as their counterparts shown in the cash expenses section. After subtracting the above items, the residual return to owned inputs is allocated to operating capital, family or unpaid labor, other nonland capital, land, and management and risk. These values are not determined during the production period through market transactions and are, therefore, imputed.

The new format's procedure for allocating returns (costs) to each asset uses the annual rate of return the producer could expect land, labor, and capital to earn in the current year. The return to management and risk, which is the residual amount after these deductions have been made, can be evaluated only in light of the given allocation of residual returns. If differing allocation

procedures are used, the returns to management and risk are not comparable.

The value of an owner-supplied input's earnings is often difficult to determine. One cannot easily assess how much additional revenue is earned when a producer invests more money in operation inputs than if the producer incurs additional short-term debt. Past livestock COP budgets determined the opportunity cost of operating capital in this way: they used the average time that variable inputs were employed in livestock production (calculated by the budget generator) and the Production Credit Association's recorded interest rates for each of the areas represented to apportion costs to the inputs. This method was legislatively mandated. Described as "interest on operating capital," it was considered a cash cost.

The accounts in the current procedure calculate the value of operating capital by assuming that a producer expects money invested in variable production inputs to earn at least as much as if the money were placed in a savings account or a similar financial instrument. ERS uses the average 6-month U.S. Treasury bill (T-bill) rate as a relatively risk-free rate of return (which is the opportunity cost of these funds).

The expected annual return that the average producer might receive from capital invested in land and nonland assets was estimated directly from national income and balance sheet data (25). A single real rate of return was estimated by taking a 10-year moving average of the ratio of residual income to assets for the farming and ranching sectors. This average rate is used as a proxy of the past and expected returns of production assets and ranch land. The estimates are for the annual earnings of assets for all commodities in all regions.

Data are not available to estimate rates of return specific to various commodities and regions. Therefore, the cost of capital invested in nonland production inputs is obtained by multiplying the total value of machinery, equipment, and breeding livestock by the rate of return to all production assets. The values for machinery, buildings, and equipment are lagged from current prices according to their average age to reflect their initial prices. The average age of equipment and permanent structures for each State or region is taken from the various livestock survey data. Livestock is valued at the current year's January 1 value.

The former 1976-79 estimates included the charge for capital invested in machinery, buildings, equipment, and livestock as the interest expense part of the ownership (RITI) costs. Prices for machinery and general livestock equipment were lagged to their average age of 4 years to provide an investment basis on which to calculate interest. Investments in facilities were lagged according to age as reported by producers in the surveys. Hog farmers reported average ages of major buildings ranging from 3 to 20 years, and cow-calf producers reported average ages of 10

to 25 years. The PCA rate was applied to the machinery, equipment, and facility lagged value.

The return to land is calculated by the same procedure as that for nonland capital, using the average 10-year rate of return together with the average current value of land values for specific regions weighted by the number of livestock within the States in the appropriate region. Land charges for feed production are included in either market prices for feeds or costs of production, whichever applies. These costs are accounted for in the variable expense category and are also factored in as a part of paid and unpaid labor.

The value of unpaid time that the operator and other individuals work on the farm is included as an allocated cost for the hours worked in the enterprise. It is a good estimate of the earnings the laborer could expect to receive if employed elsewhere. The hours are based on data from the 1981 surveys and are valued at the equivalent of the hired wage rate. Commercial feedlots, however, typically have hired management and thus have no unpaid labor.

Any additional return, reflecting the operator's entrepreneurial skill, was included in the residual return to management and risk. It is calculated by subtracting the total economic costs from the total cash receipts. In the 1976-79 series, the management charge was computed at a fixed rate, 7 percent of the total costs. This method did not prove to be satisfactory because management typically is not rewarded at a set rate. Management charges for commercial feedlots were and still are based on actual survey data and are included as fixed expenses.

## Adjustment Procedures

Much of the data presented in the old 1976-79 COP budgets was used for updating purposes (7, 10, 11, 12, 13, 14, 15, 16, 17, 18). Updating generally involved respecifying and/or manipulating available data into the proper categories or the current methodology. All of the reported livestock COP figures for 1976 through 1979 required revising those cost items for which the methodology had changed (for example, fixed expenses, capital replacement, and allocated returns to owned inputs). Expenses for general farm overhead and interest also were revised for 1980 and 1981 livestock COP reports. However, updating techniques used on the cost variables that are based on technical coefficients obtained from the 1976 survey (receipts, feed, bedding, and labor) were unique to each of the livestock types and cost categories. Other costs not directly tied to production coefficients, including veterinary and medicine, hauling, marketing, custom feed mixing, manure credit, ram death loss, shearing and tagging, and miscellaneous costs, were reestimated using 1980 as the base year. An exception was commercial feedlots, which used 1984 as the base year for some items to index backwards (21, 22, 23, 24, 25).

Expenses for fuel, lube, and electricity were indexed back from 1980 by the index of prices paid for fuels and energy. Machinery and building repairs were indexed back using 50 percent of the index of prices paid for buildings and fencing and 50 percent of the index of prices paid for other machinery for all the livestock COP budgets except hog budgets. The index of prices paid for farm and motor supplies was used to estimate machinery and building repairs for 1976 through 1977.

**Fixed and Capital Replacement Expenses**

Interest costs have been redefined and moved to the fixed expense section. Interest data are separated into two categories: interest on loans secured by real estate and all other interest. FCRS data were unavailable prior to 1980 and were revised for 1982-84. Consequently, the percentage distribution of the two interest items for the 1982-84 budgets was used to impute interest costs from 1976 to 1981 using the FLB and PCA interest rates.

For example, to impute interest for 1976-81, one obtains the average interest percentage of gross receipts for 1982-84 of each COP enterprise budget and indexes back using a combined FLB and PCA interest rate with 1982 as the base year. One then multiplies this figure by cash receipts. Thus, interest charges will vary according to interest rate fluctuations and gross receipts changes. The combined FLB- and PCA-weighted interest rate was weighted 75 percent FLB and 25 percent PCA for livestock production operation (cow-calf, feeder pig, farrow-to-finish, and sheep production). FLB and PCA were weighted evenly for livestock feeding (feeder pig finishing and fed beef).

Updated general farm overhead for 1976-81 was calculated by the same procedures developed for interest except that general farm overhead's percentage of cash receipts was indexed back using the index of prices paid for production items of nonfarm origin. These percentages were calculated for each livestock type, region, and size of operation.

Taxes and insurance under the old format were included in ownership RITI costs and real estate taxes. Taxes were recalculated for 1976-79 from the old format summaries as the sum of land taxes and the cash portion of ownership costs RITI.

Capital replacement costs were calculated by the methodology in the new format (4). However, replacement costs were included in the noncash portion of ownership costs RITI, along with an interest charge. Replacement costs were also accounted for in noncash feed costs (production costs of feeds) and the cash portion of buildings and facilities RITI. Capital replacement costs are derived by summing a factor of 0.695 times the noncash portion of machinery RITI, noncash feed costs, a factor of 0.685 times total buildings and facilities RITI, and a factor of 0.077 times the noncash portion of livestock RITI. To correct errors in partitioning livestock expenses into noncash and cash components, adjustments were made. The adjustments, which were

made only for cow-calf COP's, were $1.25 per cow in 1976, $1.48 per cow in 1977, $1.66 per cow in 1978, and $2.88 per cow in 1979 (4).

**Economic Costs**

COP budgets did not include returns to operating capital before 1983. These returns are currently calculated as a function of variable costs and the 6-month T-bill interest rate. Under the old format, interest on operating capital was based on the average time each input was used for production and the PCA interest rate. Dividing this number by the PCA interest rate and multiplying the result by the 6-month T-bill interest rate provides an estimate of returns to operating capital consistent with the current methodology (9).

The returns to nonland capital are currently defined as the total value of nonland assets multiplied by the average 10-year return to all production assets in the farm sector. As described in McElroy (9), nonland capital was estimated by using capital replacement costs. The average of the 1980-83 ratio of returns of nonland capital to capital replacement was calculated for each livestock type. This average was then multiplied by the capital replacement in each year to estimate the total value of nonland assets.

Land costs in the livestock COP budgets for 1976-79 were limited to taxes based on the current market value reported in the 1976 survey. Under the new format, the returns to land are land values multiplied by longrun real rate of return to production assets in the farm sector. The return to land for cow-calf production was calculated for 1976-79 by using the value of land per cow (17). It was then indexed for 1976, 1978, and 1979 by the farm real estate indexes in Agricultural Statistics and multiplied by the rate of return to agricultural capital for 1976-79 (27). The returns to land for fed beef, sheep, and hog production were adjusted from current values using farm real estate indexes.

Unpaid labor for 1976-79 was estimated by using the unpaid labor included in the old format plus one-half of the noncash feed costs.

Cow-Calf COP Adjustments

COP budgets for cow-calf or feeder cattle enterprises were first published for the 1976 production year, representing an average U.S. budget and five regional budgets. To correspond to current regional boundaries, analysts combined estimates for the Great Plains and the Southwest regions. The two were weighted based on the 1976 ERS survey of livestock inventory. COP budgets representing five size classifications for all U.S. regions were first published for average 1977 budgets of operations having less than 100 cows, 100 to 199 cows, 200 to 499 cows, and more than 500 cows (17). COP budgets for operations having less than

100 cows, 200 to 499 cows, and 500 to 999 cows were selected as the most representative of current size classifications.

A disparity exists between the cow-calf production coefficients calculated from the 1976 survey data and those obtained from the 1981 survey (1, 5, 17, 24). The total pounds of livestock (calves, yearlings, and cull cows) per cow for the all-U.S., all-sizes budget increased from 417.4 pounds in 1977 (quantities were not published in 1976) to 452.5 pounds in 1980. Feed fed per cow also changed dramatically from 1977 to 1980. These production changes resulted in abrupt shifts in receipts, feed costs, and labor charges regardless of changes in prices received or paid for those items when the coefficients used for the 1976-79 COP budgets are compared to those used for the current budgets.

The quantities were gradually adjusted from 1977 to 1980 to alleviate the sudden shifts in receipts and costs from 1979 to 1980 that were caused by the production differences. The production coefficients were adjusted for the 1978 and 1979 COP data by taking the difference between the 1977 and 1980 data and adding one-third of that difference to the 1977 production coefficient estimates to derive 1978 production coefficient estimates. Two-thirds of the difference was added to 1979 production estimates. Production changes occurring from 1977 to 1979 were incorporated in the procedure. Thus, the COP cow-calf budgets in this report incorporate both 1976 and 1980 survey results but reflect the gradual changes that might normally occur due to improved technical efficiencies in production within the U.S. cow-calf industry.

Total cash receipts were reported for the 1976 all-U.S. COP budgets but did not include any production coefficients. The regional COP budgets did not report receipts or quantities for 1976 (7). Also, receipts for cow-calf budgets covering 1977 through 1979 included only three sales classes (feeder calves, feeder yearlings, and cull cows), while the current COP format includes five sales categories (steer calves, heifer calves, yearling steers, yearling heifers, and cull cows). Quantities of steer and heifer calves, and steer and heifer yearlings were estimated by determining the percentage of the total of calves and yearlings for which each sex accounted and then applying that percentage to the 1977 value.

Like the quantities of livestock sold, the total receipts and subtotals were actual amounts and were used in estimating the 1977-79 line item values for steer and heifer calves. The procedure was to use the percentage change between the reported 1977 price (receipts divided by quantity reported) for feeder calves and the 1980 price (the sum of steer and heifer calves divided by the sum of the quantities sold) and to multiply that by the derived quantities for steer calves and heifer calves. However, the 1979 regional and size budgets reported only total receipts. Thus, the percentage change of 1979 total receipts to 1980 total receipts was multiplied by the 1980 prices to obtain the 1979 prices. The same procedures were used to estimate steer and heifer yearling receipts. Receipts for the 1976 regional

budgets were estimated by using the ratio of each of the 1977 regional receipts to the all-U.S. cow-calf receipts in 1977 and multiplying those quantities by the 1976 all-U.S. cow-calf receipts. That way, regional differences in cattle prices and weights could be accounted for in the receipts.

The 1976-79 cost estimates for grains, silage, protein supplements, hay, and salt and minerals are consistent with the current methodology except for the source of input quantities used to derive costs (either the 1976 survey or the 1980 survey). The quantities of feed fed per cow were adjusted for 1978 and 1979 using the same procedures outlined for adjusting the receipt quantities. Prices derived (cost divided by quantity) from the 1978 format and the old 1979 COP format were multiplied by the adjusted quantities to obtain the updated cost.

The current methodologies for estimating pasture, range, and public grazing costs are equal to those used for 1976-79, which were separated into different categories and were reported on the basis of acreage, AM's, or AUM's. For adjustment purposes, the individual pasture and range line items were grouped into an "all pasture and range" account and the public grazing items were grouped into an "all public grazing" for both the old and new formats. The line item for public grazing consisted of one item in the old format (public grazing on an AU basis), while the new format consists of two items (public grazing on AM and AUM bases). However, the cost of grazing crop residues was not estimated as a separate cost in the old 1976-79 format estimates but was included in equipment operations and ownership cost. Crop residue grazing costs were estimated for 1976-79, using the yearly change in all pasture and range for each budget times the 1980 crop residue cost.

Fed Beef COP Budget Adjustments

Cash receipts for farmer and commercial feedlots were consistent with current methodologies and procedures, and, therefore, these figures were not changed (38). The expense for purchases of feeder cattle were also unchanged. The mix of heifers and steers in the receipts and purchases, however, differs in the old and the new formats. Differences can also occur in the estimated receipts and purchases for the COP budgets of all-sized fed cattle enterprises because of revisions made in fed-beef marketings numbers used to aggregate the farmer and commercial budgets.

The feed cost accounts associated with the 1977-79 feedlot budgets required reestimation, due to procedural and format changes made in current budgets. The new feed accounts for the budgets of farmer-feeders added cost estimates for haylage, concentrates, pasture, and crop residue grazing. The new feed accounts also contained new values for the quantities fed for the remaining feeds. Refinements and formula calculation changes made in the budget generator for COP budgets of commercial feedlots made the feed estimates for 1977-79 differ from current cost estimating techniques.

The feed costs of farmer-fed beef are reestimated for 1977 through 1979 using 1980 feed amounts and prices from prices paid and prices received by farmers. Feed costs of commercial feedlots for 1977 through 1983, however, are based on 1976 quantities and current methodology, while the 1984 and 1985 estimates come from 1984 feed data.

It was necessary to estimate the other cash expenses for 1977-79 because the earlier reports had used differing data and procedures. In addition, the cash expenses of veterinary and medicine; fuel, lube, and electricity; and miscellaneous items for the commercial feedlots were reestimated using 1984 as the base year.

Hog COP Budget Adjustments

Hog COP budgets for the three different enterprises were first estimated for 1976 giving an overall U.S. budget and budgets for the North Central, Southeast, and Southwest hog production regions (18). COP budget estimates for the Southwest region have been discontinued because that region was excluded from the 1981 COP survey (34, 35). The current COP hog budgets, based on the number of hogs or pigs sold, estimate costs and returns for six size categories: 140-head, 300-head, 650-head, 1,600-head, 3,000-head, and 10,000-head operations. (The 40-head and 5,000-head size operations were dropped, and the 3,000-head and 10,000-head size operations were added) (21, 22, 23, 24). Thus, information pertaining to the 3,000- and 10,000-head size categories in this report is for 1980 through 1987.

Although the mix of slaughter hogs and cull sows for the reports covering 1976 through 1979 differ from the current mix, the procedures and methodologies used to estimate the cash receipts are compatible and were unchanged for this report. However, the mix of receipts for the 1979 COP budgets were not provided for the regional and size budgets. Therefore, the 1978 quantities of slaughter hogs/feeder pigs and cull sows were used to split the 1979 total receipts into the two categories (10, 13). Estimates of 1979 purchases used 1978 quantities of feeder pig purchases and 1979 prices.

Feed expenses were reestimated for 1976 through 1979 because the earlier reports had used differing data, assumptions, and procedures. Grain and protein supplement are indexed from 1980 according to changes in the reported prices received for corn and soybean meal for 1976 through 1979. Estimates of pasture costs remained unchanged. The corn and soybean prices are yearly averages of monthly prices by State, weighted by each State's percentage of hog production in 1980. Bedding costs for hog production were reestimated because the earlier reports used differing quantities and procedures, and were indexed from 1980 according to the indexes of prices paid for 1976 through 1979.

Sheep COP Budget Adjustments

The costs of producing sheep in the United States are currently estimated from aggregating the five major sheep producing regions in the West: the Pacific, Intermountain, Northern Plains, Southwest, and Texas (2). Earlier sheep COP budget are incompatible because the estimates were for eight regions and data came from two different surveys (14). Therefore, the sheep COP estimates for 1977 through 1979 are based on current methodologies and the 1980 survey data.

The quantity of products sold per ewe used to reestimate cash receipts for 1977 through 1979 are the same as those used in the 1980 COP budgets. Receipts attributable to the sale of slaughter and feeder lambs, cull ewes, and wool are indexed from 1980 according to changes in average prices for each cash market and the month or months in which the products were sold. Slaughter lamb and cull ewes used the Omaha, NE, market price for choice slaughter lambs and slaughter sheep reported in Livestock and Meat Statistics. Feeder lamb prices are those reported for the South St. Paul, MN, market for choice feeder lambs (25). May, June, September, and October are the sale months used to calculate the lamb prices, while June, September, and October are the sale months used to compute cull ewe prices (17). Wool prices are based on the average U.S. wool prices received by producers in April, May, June, and July (31). The receipts per ewe from the Government wool payment and the unshorn lamb payment are indexed from 1980 using the change in Government support price and the average market price received by producers.

Feed cost is reestimated for 1977-79 using the physical coefficients in 1980 as the base. Feed grain expenses are indexed back by the change in the U.S. yearly average of prices received by farmers for corn as reported in Agricultural Prices (33). The expenses for protein supplements fed and stock salt are indexed from 1980 by the change in the State-weighted average prices paid for 14 percent dairy feed and stock salt. The prices paid reported for each State are weighted by the January 1 inventory of ewes 1 year old and over reported in Sheep, Lambs, and Goats for 1977-79. Using the same weighting and indexing procedures, the cost of hay (both raised and purchased) for the earlier years is the average price received for alfalfa hay in July, August, and September of the previous year. Pasture/range expenses for 1977-79 are calculated by applying the ratio of 1980 pasture/range costs estimated under current procedures to pasture/range costs estimated for 1980 under the old format. Crop residue expenses were not included in the earlier reports, and are indexed from 1980 by the change in the newly estimated pasture costs.

## Livestock Production Costs and Returns

Costs of production vary significantly over time, from farm to farm, from ranch to ranch, and across States and regions. Variability among farms is due to such factors as size of

enterprise, system of production, intensity of facility use, types of livestock produced, and managerial skills of individual producers. Volume of production is important because some operators are more efficient than others. The most efficient operators use their resources, especially buildings and equipment, more intensively. Thus, while the costs reported in the COP budgets are average estimates, the broad range they encompass should not be overlooked. Furthermore, the performance estimates imbedded in the COP budgets reflect the weighted average of all size groups of livestock producers. The estimates should not be confused with the recommended production plans many universities and agencies issue, or with the performance of a selected group of superior producers.

Poor returns, drought, and structural adjustments throughout the economy during the 1980's sharply reduced beef cattle, hog, and sheep inventories. Beef cattle and hog breeding herds in 1987 and 1988 were at their lowest levels since the 1960's, while the sheep inventory was the smallest since records were established in 1867 (29, 30, 32).

Since 1982-83, when meat oversupply caused weak demand, livestock producers began reducing their inventories. Slackened demand stems from sluggish economic growth, constrained consumer purchasing power, and poultry's favorable retail prices relative to red meats. Poultry has set new production records each year since 1983. Poultry production, as a percentage of per capita quantities consumed, has been gaining in share of the consumer market. It reached 36 percent in 1988, up from 21 percent in 1970. Beef lost some of its market share in the same period, dropping from 42 to 32 percent. Pork has maintained its share of 29 percent of the total consumer meat market. Lamb and mutton consumption dropped from 1.4 percent of the total meat market in 1970 to less than 1 percent in 1988.

Total costs for producing livestock in the United States are higher in 1987 than in 1972. Total costs for U.S. cow-calf and farrow-to-finish production increased by 120 and 71 percent, respectively, in 1972-87. U.S. fed cattle production costs are 89 percent higher than total cost in 1972; U.S. sheep production costs are 103 percent higher. This total cost figure includes all cash expenses (except for interest expenses); capital replacement; and allocated returns to labor, operating capital, nonland capital, and land. It represents the breakeven longrun average revenue necessary to continue livestock production.

Livestock producer receipts have fluctuated with production cycles. Receipts for cow-calf and fed beef producers reached highs in 1979 and 1987, respectively. Receipts for hog and sheep producers peaked in 1987. During the period 1972-87, receipts for U.S. fed beef production were large enough to cover total economic costs in 4 years (1978, 1979, 1982, and 1987). Receipts for U.S. sheep production were large enough to cover total economic costs in 6 years (1977-79 and 1985-87). U.S. farrow-to-finish hog producers have encountered 8 years when receipts were high enough to cover total economic costs, while

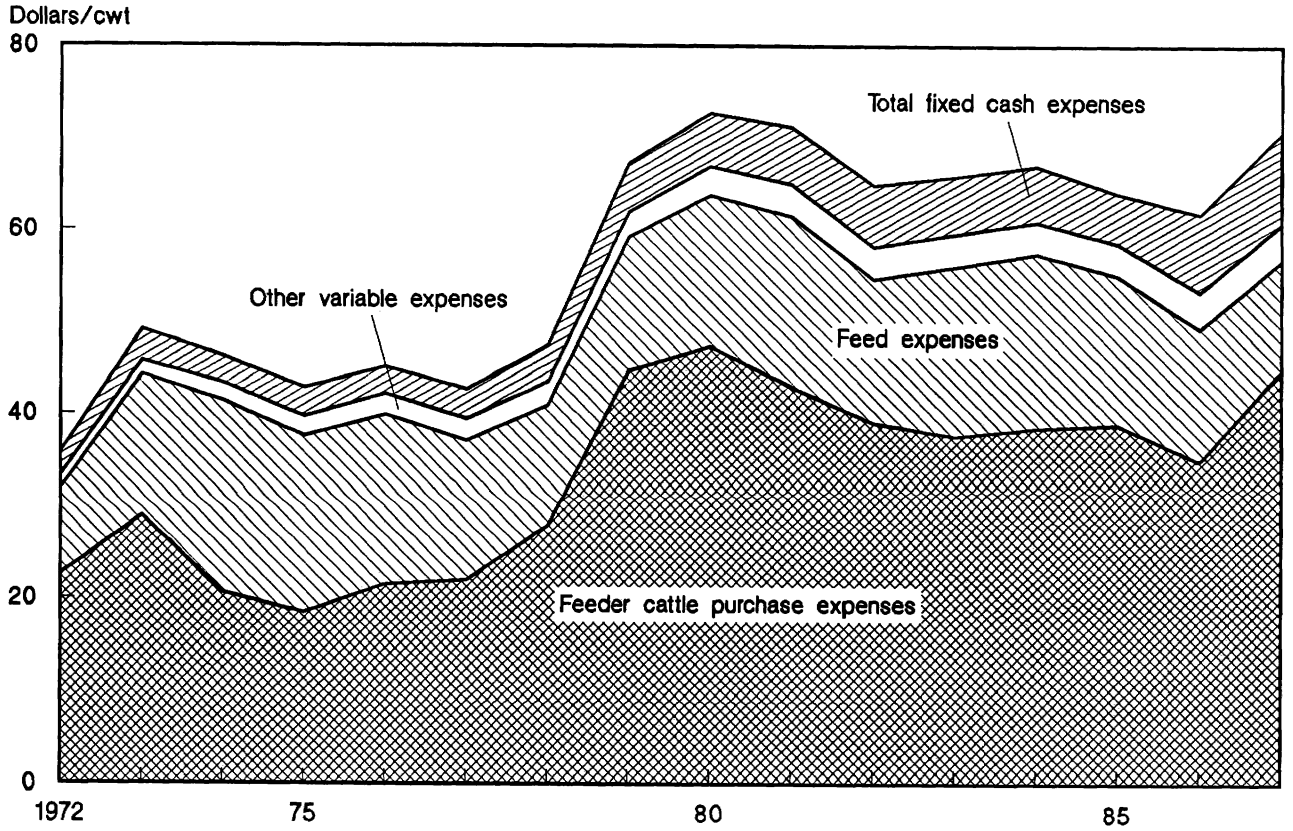
receipts for U.S. cow-calf production were never high enough to cover total economic costs from 1972 through 1987.

**Fed Beef Enterprises**

Production of fed cattle (steers and heifers) marketed from all U.S. feedlots from 1972 through 1987 cost producers an average of $57.16 per cwt sold in cash expenses. During these 16 years, cash receipts averaged $54.37 per cwt, failing to cover cash expenses by an average $2.79 per cwt. Net returns (receipts less cash expenses) were negative in all but 3 years, ranging from $0.55 to $4.99. Only in 1978 did receipts exceed cash and capital replacement costs.

Cash expenses increased by more than 103 percent from the lowest cost year to the highest cost year--from $35.83 per cwt in 1972 to $72.77 per cwt in 1980 (fig. 1). These cost increases can be attributed to a rapid rise in feeder cattle prices, feed prices, and fixed expenses. Purchases of feeder cattle, which account for an average 58 percent of total cash expenses, more than doubled from $22.58 per cwt in sales in 1972 to $47.33 per cwt by 1980. Feed costs ranged from a low of $9.33 per cwt in 1972 to a high of $20.76 per cwt in 1974. Other variable expenses steadily increased from $1.42 per cwt to a high of $3.99 per cwt in 1987.

Figure 1
**Cash expenses of U.S. fed cattle production enterprises, all sizes, 1972-87**



Fixed expenses, which include costs for general farm overhead, taxes and insurance, interest, and management, rose from $2.51 per cwt in 1972 to $9.97 per cwt in 1987, an increase of $7.46 per cwt (a 297-percent increase).

Receipts for all U.S. feedlots peaked in 1979 at $67.85 per cwt, 90 percent above the prices received in 1972. After 1979, receipts or slaughter prices tapered off to $63.41 per cwt by 1981, remained nearly steady for 1982, dropped to $62.12 per cwt in 1983, and then recovered to $64.95 per cwt in 1984. From 1984 to 1986, receipts dropped by $6.63 per cwt, lowering receipts to $58.32 per cwt, and increased by $13.31 per cwt in 1987.

Costs and returns for farmer-feeders (feedlots with less than 1,000-head capacity) and commercial feeders (feedlots with more than a 1,000-head capacity) differ because of seasonality of feeding, intensity of feedlot use, level of total cash costs, and total economic costs. Total cash expenses from 1972 through 1987 for farmer-feeders averaged $58.91 per cwt sold. Cash expenses for commercial feedlots during the same period averaged $56.47 per cwt sold, $2.44 less than the farmer-feeders. When capital replacement costs are included, the gap between the two production costs widens from $2.44 to $5.22 per cwt sold. Most of the cost advantages commercial feedlots have over farmer feedlots stem from better use of fixed equipment and resources. That, in turn, leads to lower fixed and capital replacement costs, averaging $8.32 per cwt lower for the 1972-87 period. Total economic costs were also higher for farmer-feeders, averaging $6.07 per cwt of sales more than those for commercial feedlots. By contrast, farmer-feeders have had lower costs for feeder cattle purchases and lower variable expenses in every year since 1972.

Since 1972, net returns (receipts less cash and capital replacement expenses) for farmer-feeders have been less than those for commercial feedlots in all years except 1972 and 1978. Commercial feedlots had 2 years of positive net returns, while farmer-feeders had only 1 year of positive net returns. Negative net returns in 15 of the last 16 years have encouraged many farmer feedlot operators to quit feeding cattle. The total number of farmer feedlots declined from 119,436 lots in 1970, amounting to 41 percent of the 13 State cattle marketings, to 41,353 lots in 1987, amounting to 23 percent fewer cattle marketings (31). Speculation over increases in cattle feeding profits encouraged more cattle feeding, pushing up the number of commercial feedlots from 1,859 lots in 1970 to 2,002 lots in 1983, but when profits continued to erode, the number of feedlots declined to 1,671 in 1987. However, the number of cattle marketed from commercial feedlots increased continually from 12,897,000 head in 1970 to 18,765,000 head in 1987 (31).

**Beef Cow-Calf Enterprises**

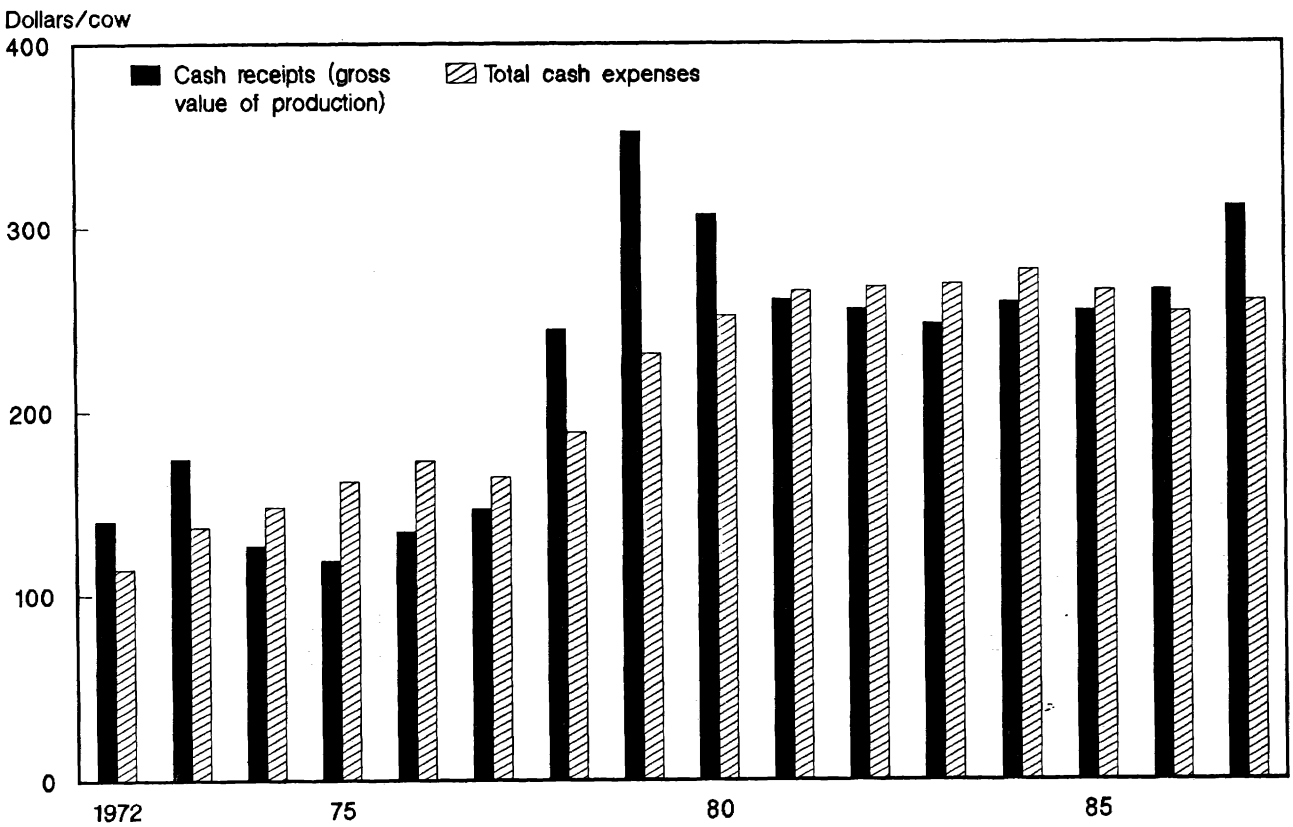
The average U.S. beef cow-calf enterprise has had higher cash expenses than cash receipts (gross value of production) in 9 of 16 years from 1972 through 1987 (fig. 2). Cow-calf producers

nationwide sustained positive net returns (receipts less cash expenses) of $51.63 per breeding cow in 1987, the second consecutive year of positive returns. Net returns for the 1972-87 period were at a high of $121.14 per cow in 1979 and were at a low of -$42.76 per cow in 1975. Improved net returns in 1986 and in 1987 pushed the 16-year average net return per cow to $10.75. When capital replacement costs are included with total cash expenses, however, the 16-year net return average is -$37.39 per cow.

Cash receipts of $311.25 per cow for U.S. cow-calf producers in 1987 moved up 122 percent from 1972 cash receipts of $140.39 per cow. Steep rises in feeder cattle prices in late 1978 and 1979 caused total receipts to reach a 16-year high of $352.30 per cow in 1979. Receipts in 1979 were 151 percent above 1972 levels and 13 percent above 1987 levels.

Total cash expenses for the average U.S. beef cow-calf enterprise increased steadily since 1972 except in 1977, 1985, and 1986 due mostly to a decline in feed expenses (fig. 3). Total cash expenses of $276.53 per cwt in 1984 are the highest for the 1972-87 period and are 143 percent higher than for 1972. When capital replacement costs (which are more than two times higher in 1984 than in 1972) are included in total costs, 1984 costs are

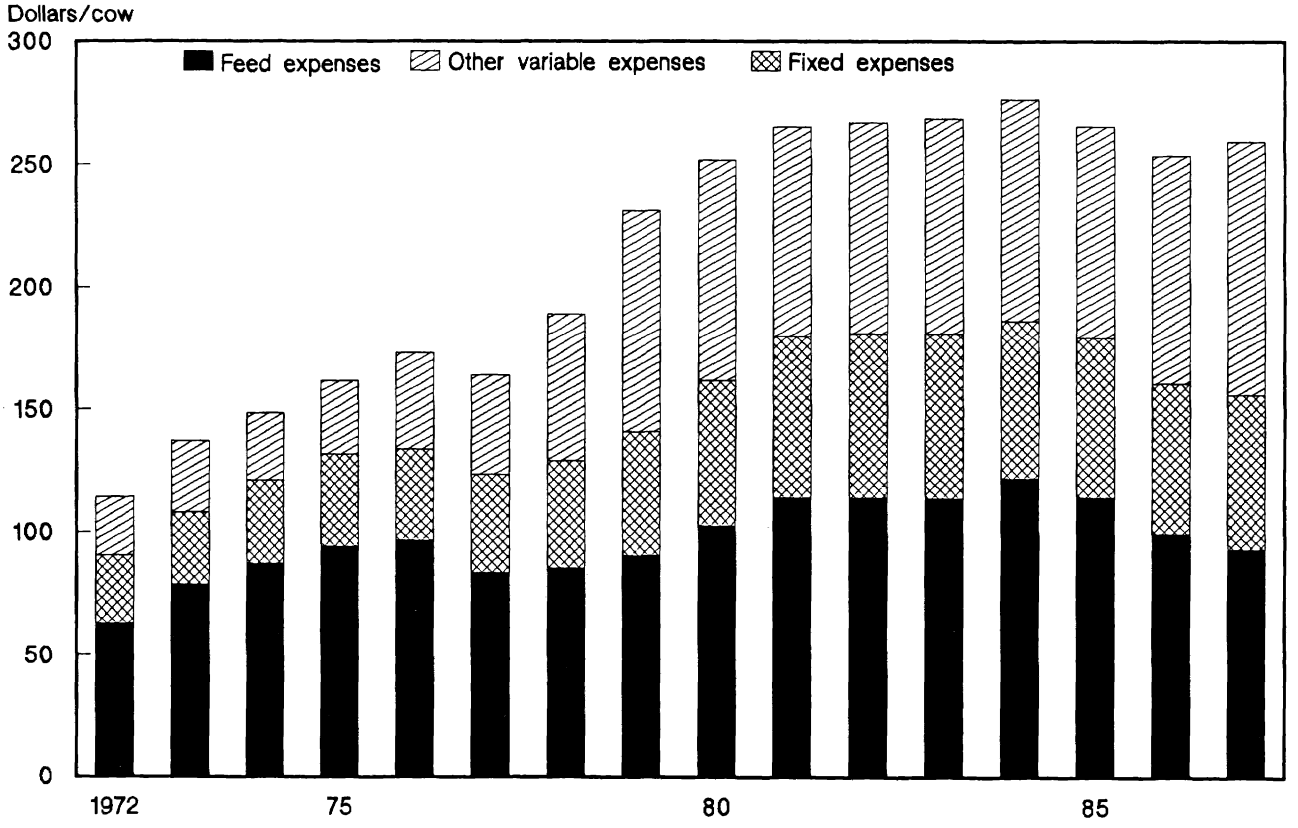
Figure 2
**Cash receipts and cash expenses for all U.S. beef cow-calf enterprises, 1972-87**



142 percent higher than 1972 costs. Even with the drop in 1987 variable cash expenses, total cash and replacement costs are more than double those of 1972. Feed costs, which account for about 45 percent of all cash expenses, were 48 percent higher in 1987 (at $93.07 per cow) than in 1972 (at $62.98 per cow). Feed expense increased by 81 percent from 1972 to 1981, then remained nearly constant in 1982 and 1983 before reaching the 10-year high of $121.77 per cow in 1984. Drought and the Payment-in-Kind (PIK) acreage reduction program reduced the supplies of feed grains and forage, increasing feed prices for cow-calf enterprises by $8.05 per cow (7 percent). Although fixed expenses declined in 1985, they more than quadrupled during 1972-87. An 811-percent increase in general farm overhead expenses and a 398-percent increase in interest expenses were leading reasons.

Economies of size provide strong incentives for individual producers to expand enterprise size if they plan to stay in the cow-calf business. Average total economic costs per cow for enterprises with fewer than 100 cows (small) were 40 percent higher in 1972 than operations with 100 to 499 cows (medium) and 49 percent greater than operations with 500 or more cows (large). Such costs were 16 percent greater than those of medium-sized operations and 51 percent greater than those of large operations in 1987. Most of the economic cost savings realized by large-

Figure 3
**Feed expenses compared with all kinds of cash expenses for all U.S. beef cow-calf enterprises, 1972-87**

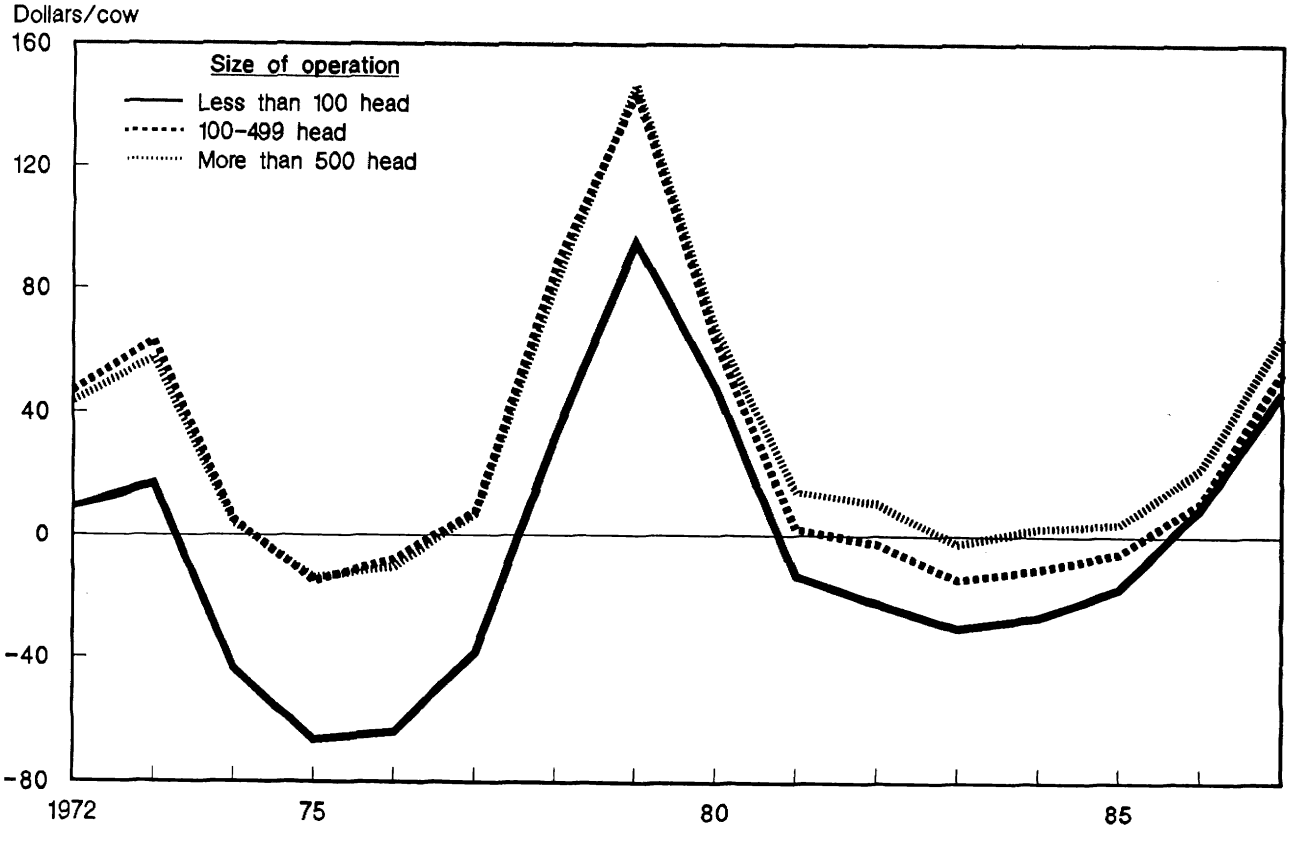


and medium-sized operations are derived from using machinery and facilities more efficiently and from reducing the amount of unpaid or family labor used per cow. However, total cash, total variable expenses, and fixed expenses also declined consistently with increases in enterprise size.

Net returns (receipts less cash expenses) per cow during 1972-87 favored the larger operations (fig. 4). Large operations had positive net returns in all but 3 years (1975, 1976, and 1983) in 1972-87, but the small operations had 9 years of negative net returns and the medium-sized operations had 6 years of negative net returns. The 16-year average of cash plus capital replacement expenses for the large-sized beef cow-calf enterprises averaged $25.20 per cow less than medium-sized cow-calf enterprises and $63.28 less than the small-sized cow-calf operations. Among the three size classes, average cash receipts are highest for the medium-sized operations, because those operations had the highest quantity of sales per cow.

Production costs for cow-calf enterprises of average size and production characteristics vary from region to region. Total cash expenses in the Great Plains are the lowest of the four cow-calf production regions, averaging $198.80 per cow, while those in the South were highest, averaging $234.68 per cow. Cash

Figure 4
**Receipts less cash expenses of U.S. beef cow-calf enterprises, by size of operation, 1972-87**

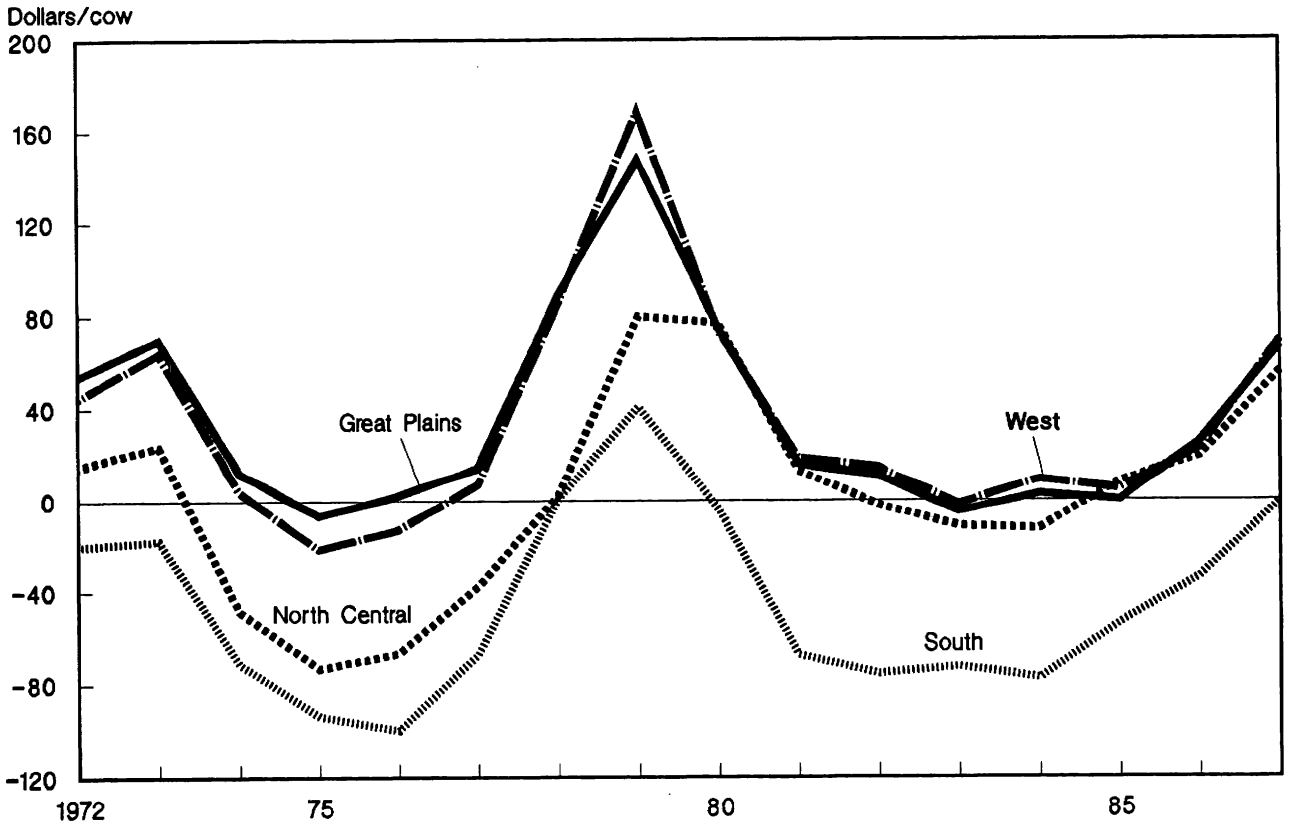


expenses averaged $204.40 per cow in the West and $233.37 in the North Central region.

The composition of cash expenses also differs regionally. For instance, feed costs in the North Central region were the largest, averaging 71 percent of total variable expenses. Feed averaged about 68 percent of total variable expenses in the South and 63 percent in the Great Plains, but it averaged 61 percent in the West. The South's disadvantage in average cow-calf production cost stems from the fact that grazed and harvested forages there in 1987 cost $18 to $40 more per cow than in other regions.

Net returns (receipts less cash expenses) are considerably lower for cow-calf enterprises in the South than in the other cow-calf regions (fig. 5). The South's cow-calf producers had only 2 years of positive net returns from 1972 through 1987, averaging -$44.68 per cow. By contrast the North Central's, Great Plains', and West's cow-calf producers had positive returns 9, 14, and 13 of those 16 years, respectively, averaging $2.47, $35.75, and $34.26 per cow.

Figure 5
**Receipts less cash expenses of U.S. beef cow-calf enterprises, by region, 1972-87**



## Hog and Pig Enterprises

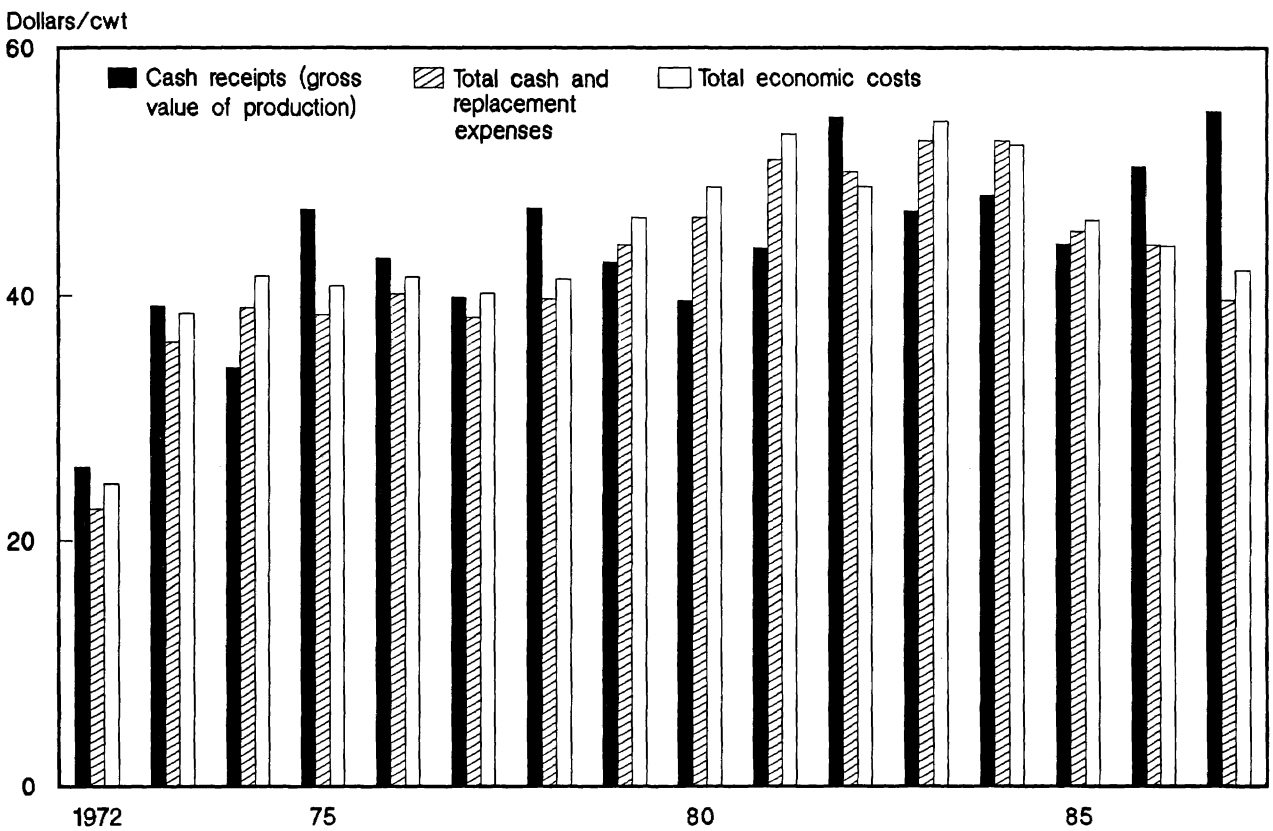
There are three types of hog production enterprises: farrow-to-finish, in which all stages of slaughter hog production are carried out in one operation; feeder pig production, in which farmers produce pigs and sell them to others for finishing; and feeder pig finishing, in which farmers purchase feeder pigs and feed them to reach slaughter weight. Farrow-to-finish enterprises account for about 80 percent of total production.

### Farrow-to-Finish

The total economic cost of producing slaughter hogs (barrows, gilts, and cull breeding stock) of average U.S. farrow-to-finish enterprises in 1987 was $17.47 per cwt higher than in 1972 (fig. 6). This amounts to a 71-percent increase. Economic expenses averaged $44.03 per cwt of hog sold in 1972-87, peaking in 1983 at $54.16. Average economic expenses in 1983 were 120 percent higher than in 1972, when they hit a 16-year low of $24.58.

Feed, including additives and/or medications combined with feed, dominates cash expenses for farrow-to-finish enterprises. Feed costs accounted for 68 percent of total cash expenses in 1972-87,

Figure 6
**Total economic costs of U.S. farrow-to-finish enterprises, all sizes, 1972-87**

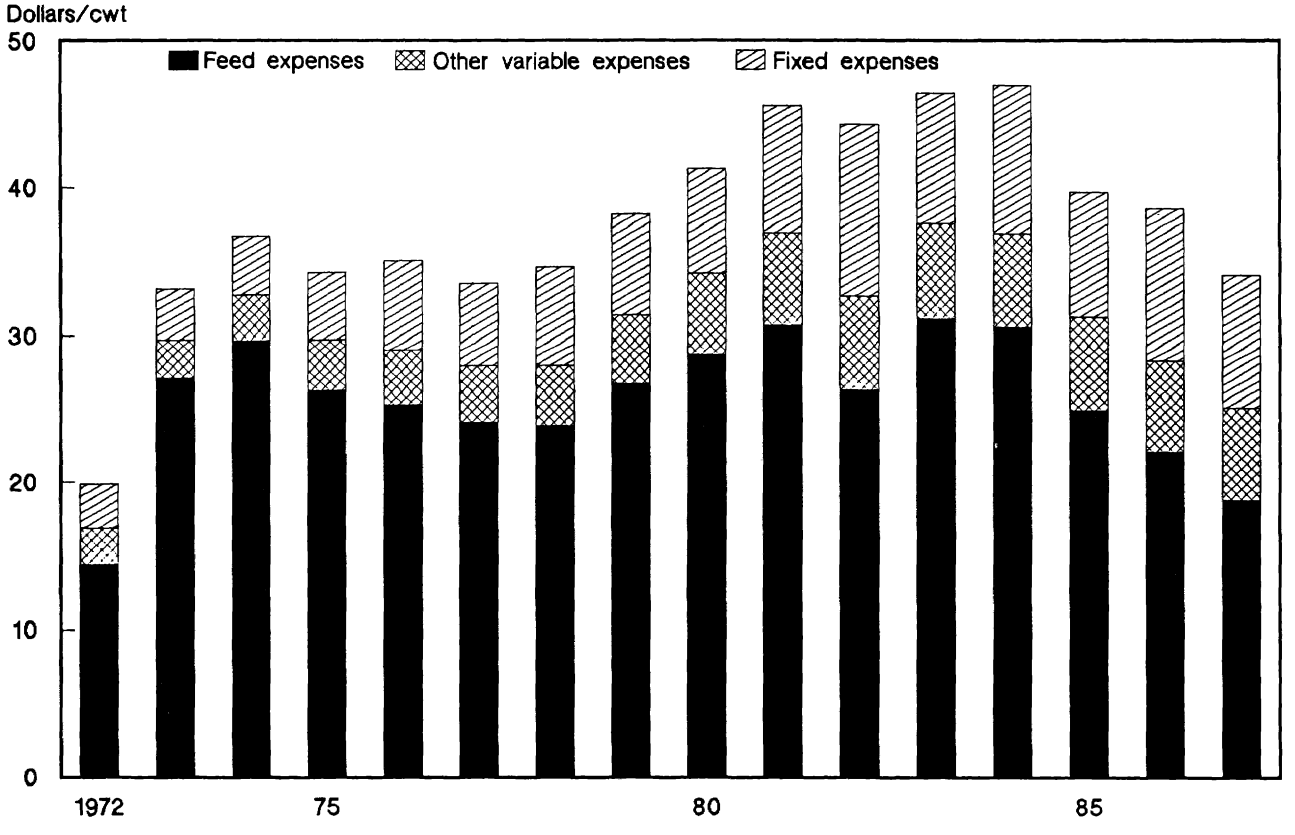


but actual feed costs varied greatly. Figure 7 shows that feed costs increased sharply in 1973 and 1974 and then declined in 1975-78. Feed costs increased by 12 percent in 1979 and continued to rise through 1981 to $30.64 per cwt. They fell by $4.36 per cwt in 1982 and then increased to the highest level since 1972 at $31.08 per cwt in 1983. Since 1983, feed expenses dropped by $0.56 per cwt in 1984 and decreased an additional $5.67 and $2.79 per cwt in 1985 and 1986. Feed costs for farrow-to-finish enterprises in 1987 were 31 percent higher than in 1972.

Although the average farrow-to-finish enterprise failed to cover total economic expenses in 8 of the 16 years during the 1972-87 period, returns did exceed cash expenses for 13 years. Over the 16-year period, receipts less cash expenses averaged $6.23 per cwt, ranging from -$2.66 per cwt in 1974 to $20.91 per cwt in 1987. However, receipts rose an average of $1.33 per cwt to cover cash and capital replacement expenses, allowing farrow-to-finish enterprises sufficient cash flow to replace facilities.

Farrow-to-finish production of slaughter hogs differs regionally. The North Central region had lower cash expenses than the South in every year except 1976, averaging $2.00 per cwt of sales less from 1972 through 1987. Cost advantages for the North Central

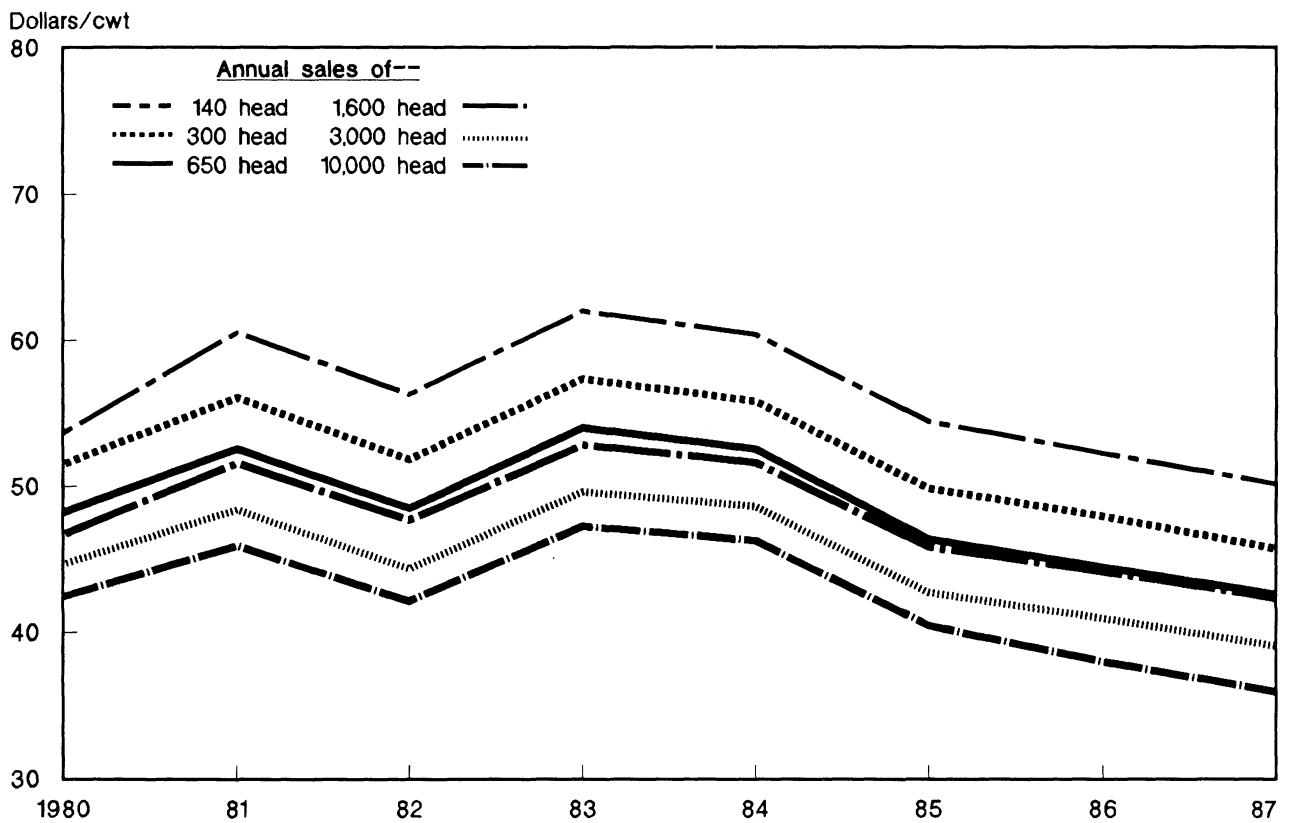
Figure 7
**Feed expenses compared with all kinds of cash expenses for all U.S. farrow-to-finish enterprises, 1972-87**



enterprises decrease to $1.14 per cwt when total economic expenses are compared. Cash receipts vary little between the two hog production regions, with 16-year average receipts for farrow-to-finish enterprises in the South falling only $0.35 below receipts in the North Central region. The cost and receipt advantages translate into net return advantages that are consistently higher for North Central producers, averaging $2.34 per cwt more for the 16-year period than for southern producers.

Costs differed by size of operation of farrow-to-finish enterprises. For 1980-87, enterprises having annual sales of only 140 head had total economic costs averaging $56.22 per cwt compared with $42.31 per cwt for enterprises having annual sales of 10,000 head (fig. 8). Most of this decline in unit cost is derived from fixed costs and replacement costs. It also stems from changes in the use of unpaid or family labor. Variable cash expenses averaged $34.21 per cwt in the 140-head enterprises and declined to only $32.01 per cwt in the 10,000-head enterprises. The difference increased to a $4.90-per-cwt advantage when fixed and capital replacement expenses were included in the comparison of costs. The shifting of unpaid labor to paid labor as the size of enterprise increased prevented further reductions in variable expenses.

Figure 8
**Total economic costs of U.S. farrow-to-finish enterprises, by size of operation, 1980-87**



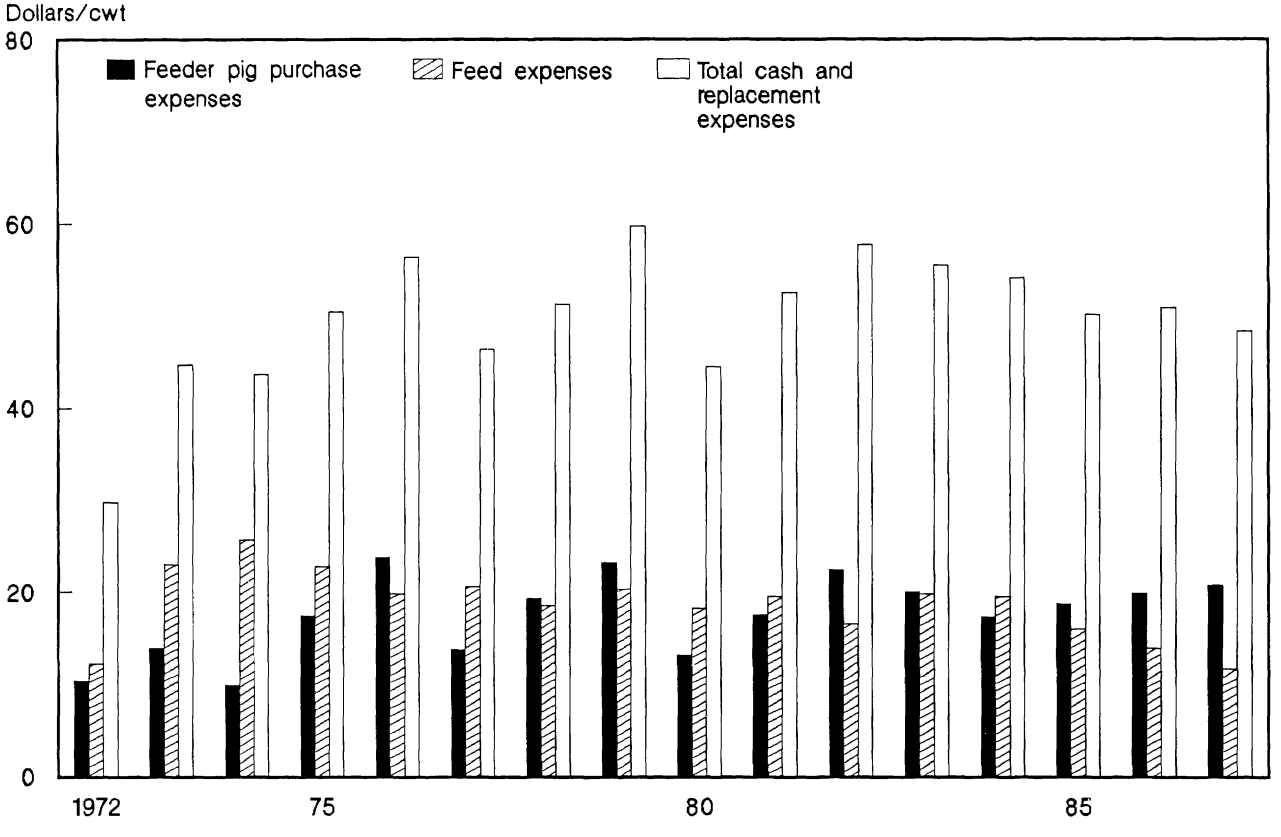
## Feeder Pig Finishing

Costs and returns for feeder pig finishers do not parallel those of farrow-to-finish enterprises. Although the cost of feed is important, the cost of feeder pigs is an added factor in the economic performance and success of pig finishing. For example, in 1972-87, feeder pig purchases accounted for 37 percent of total cash expenses, while feed costs accounted for 39 percent. All cash and replacement expenses peaked in 1979 at $59.73 per cwt, a year in which feed and pig prices were relatively high (fig. 9). In the 16-year period, both cost categories were higher only in one other year, 1974 for feed and 1976 for feeder pigs. By contrast, 1972 cash expenses and replacement costs were at a 16-year low at $29.70 per cwt when variable cash expenses were at a 16-year low.

During 1972-87, there were 8 years in which cash expenses were lower for feeder pig finishing enterprises in the North Central region than for those in the South. However, 16-year average cash expenses differ by only $0.09 per cwt. Receipts for enterprises in the South average $0.71 per cwt lower than in the North Central region. Net returns were also lower in the South, falling an average of $0.80 per cwt short of those in the North Central region.

Figure 9

**Cash and replacement expenses for all U.S. feeder pig finishing enterprises, 1972-87**



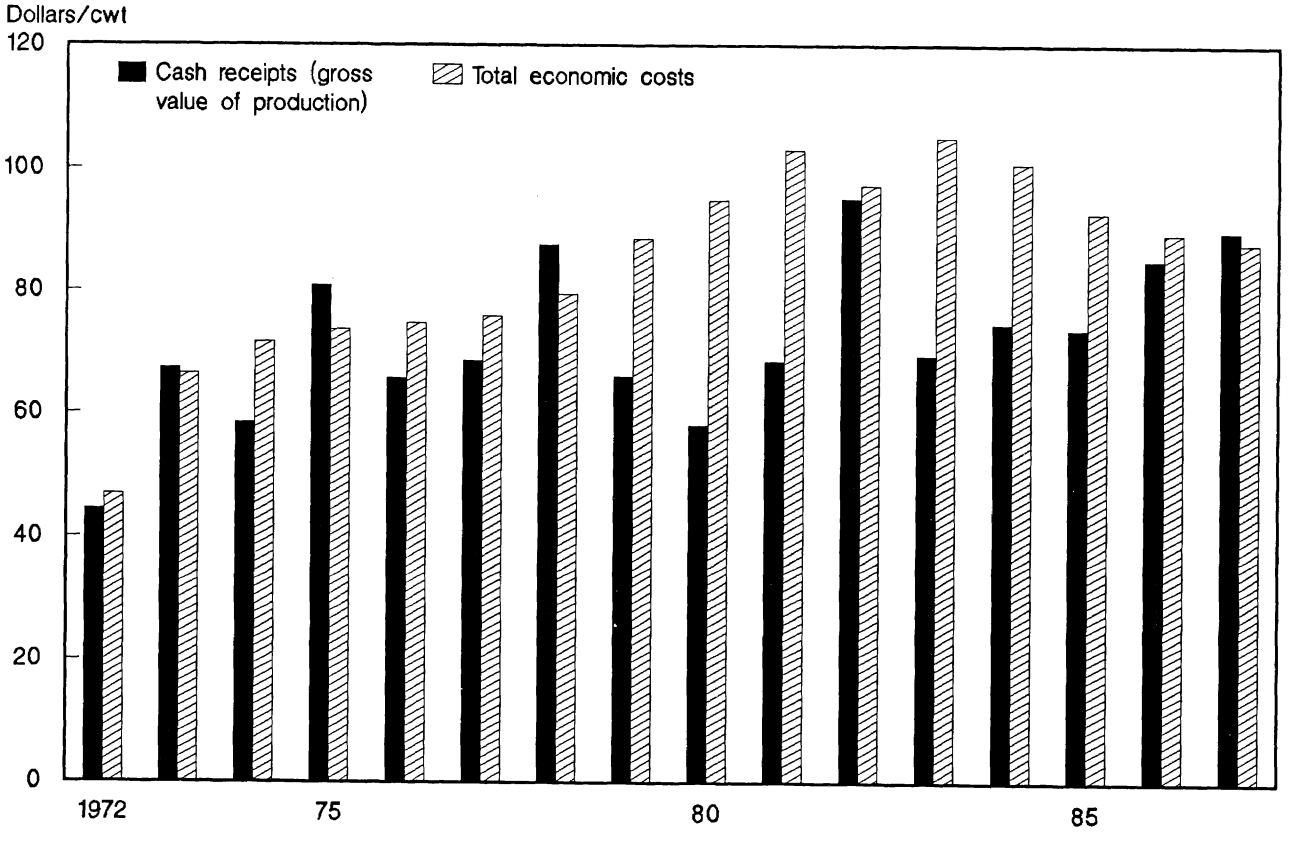
Costs of feeder pig finishing also differed by enterprise size. Hog operations with annual sales of 10,000 head incurred $4.41 per cwt less cash and capital replacement costs than those with annual sales of 140 hogs. Differences in unit costs occurred almost entirely in fixed and capital replacement expenses.

## Feeder Pig Production

Feeder pig production enterprises had much the same fortunes as farrow-to-finish enterprises, even though feed costs account for only 41 percent of all economic costs. Low costs sometimes strengthen the demand, hence, price, for feeder pigs. Increasing prices for market hogs can also increase the demand for pigs.

Total economic costs of feeder pig producers hit a 16-year low of $46.83 per cwt in 1972 (fig. 10). Costs increased steadily through 1981, reaching $103.19 per cwt, then fell by $5.83 per cwt in 1982 before peaking at $105.32 per cwt in 1983. Costs have since fallen by $4.52 in 1984 and fell $12.87 between 1984 and 1987 to average $84.29 per cwt for the 16-year period. Cash expenses for feeder pig producers paralleled those of farrow-to-finish enterprises.

Figure 10
**Total economic costs for all U.S. feeder pig production enterprises, 1972-87**



Prices received for feeder pigs can vary widely from year to year and during the year, depending on pig finishers' demand for feeder pigs. Demand for feeder pigs was especially strong in 1978, pushing receipts to $87.61 per cwt and to $95.23 per cwt in 1982, both of which exceeded the 16-year average. The fortunes of feeder pig producers and the finishers who buy their pigs thus swing widely about the relatively more stable economic position of producers who have farrow-to-finish enterprises. The 16-year average net returns of $10.25 per cwt for feeder pig production fall far below the 1978 returns of $30.76 and the 1987 returns of $28.74.

Residual returns (receipts less total economic expenses) for North Central feeder pig production enterprises are higher than those in the South in all years but 1982 and 1986. The 16-year average of residual returns in the North Central region is -$9.74 per cwt, while the average for producers in the South is -$17.74 per cwt. The $8.00-per-cwt difference is a result of feeder pig producers in the South having higher 16-year average economic expenses of $4.13 per cwt and having receipts averaging $3.87 per cwt below those of enterprises in the North Central region. Cost differences are most apparent when individual inputs are examined. Feed grains and supplements are higher priced in the South than in the North Central States. But veterinary, medicinal, fuel, lube, and electricity expenses are lower for producers in the South than in the North Central region.

Size of enterprise affects unit cost in feeder pig production more than in other hog enterprises because of the large amount of nonfeed inputs feeder pig producers use. Costs associated with fixed assets and unpaid labor use are particularly high for small feeder pig producers. From 1980 through 1987, operators selling only 140 head annually had average total economic expenses of $118.23 per cwt, while those selling 10,000 head annually had expenses of $71.09 per cwt. The 8-year average of capital replacement expenses for the 140-head operations is $4.69 per cwt more than for the 10,000-head enterprises, with the remainder of the $42.45-per-cwt cost difference attributable to cash variable expenses and unpaid labor expenses.

**Sheep Enterprises**

Total economic (national average) costs of production of sheep producers have increased steadily since 1972 except for 1977, 1983, 1985, and 1986 when they dropped mostly due to lower general farm overhead and interest cost. Total economic costs of $61.01 per ewe in 1987 are 103 percent higher than those in 1972 (fig. 11). Receipts of sheep producers have not been sufficiently large to cover all economic expenses in 10 of 16 years but have covered total cash expenses in all years except 1982. The 16-year average of cash expenses was $33.60 per ewe, while receipts averaged $47.52 per ewe, which translates to $13.92 per ewe above cash expenses.

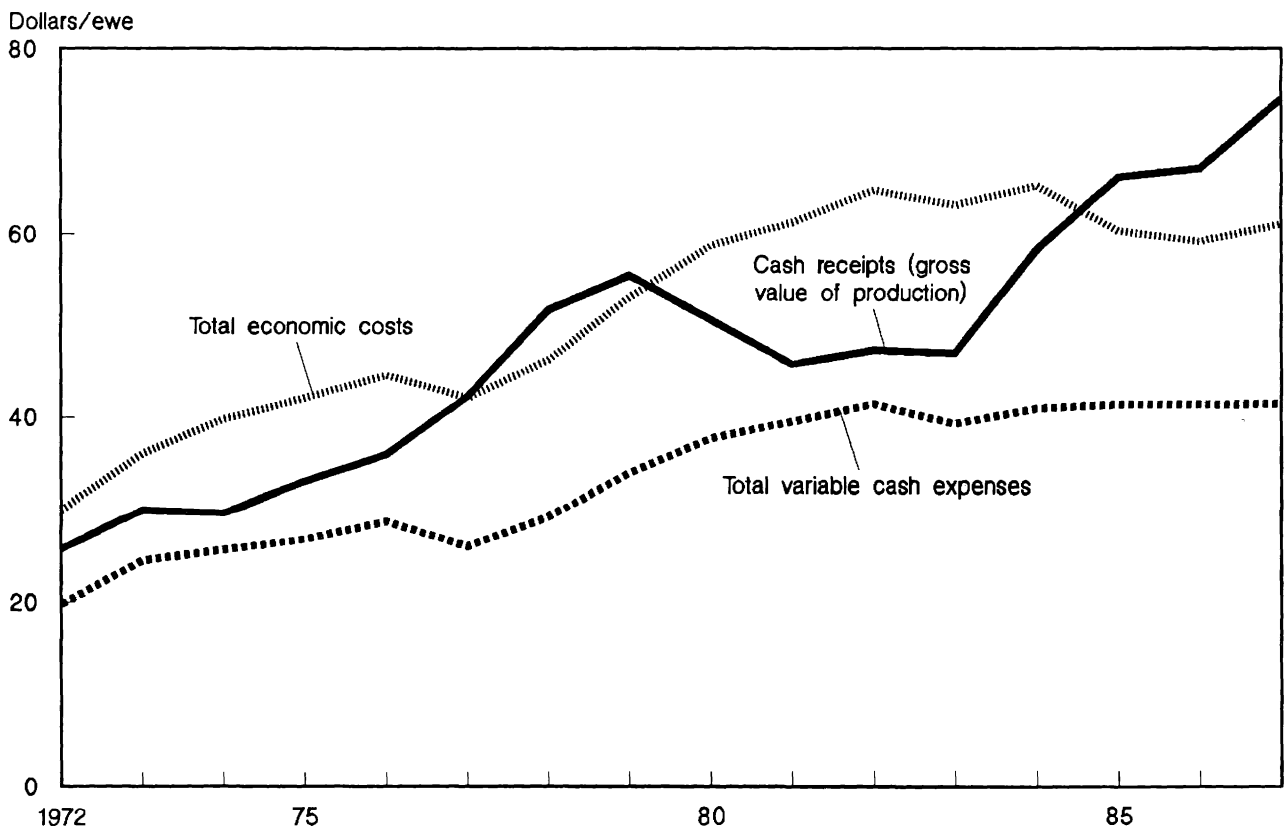
Cash expenses for average sheep producers are almost evenly split between feed, other variable expenses, and fixed expenses.

However, the trends for variable expenses were different from those for fixed expenses. Variable expenses increased steadily from $16.71 per ewe in 1972 to $27.56 per ewe in 1987, while fixed expenses continually rose from $3.06 per ewe in 1972 to a peak of $12.82 per ewe in 1982, then declined in 1983 and increased in 1984-87, ending at $13.85 per ewe in 1987.

U.S. average sheep enterprise receipts of $74.60 per ewe in 1987 are 189 percent higher than in 1972. The variation in slaughter and feeder lamb prices caused most of the variations in total cash receipts. Total receipts increased in 1978 by $9.40 and increased in 1979 by $3.75 to $55.37 per ewe above 1977 levels before declining $4.79 per ewe in 1980 and $4.88 per ewe in 1981. Receipts per ewe rose from $45.70 in 1981 to $47.20 in 1982, then dropped to $46.89 in 1983. Receipts in 1984 increased by $11.35 over 1983 levels to $58.24 per ewe and then rose again in 1985, 1986, and 1987, ending at $74.60 per ewe.

Although the sale of lambs is the major factor in determining the level of receipts for U.S. sheep producers (accounting for a 16-year average of 66 percent of total receipts), its importance has declined. Slaughter and feeder lambs accounted for 72 percent of total receipts in 1975 and, by 1987, their contribution dropped to 60 percent. This drop in the share

Figure 11
**Total economic costs for all U.S. sheep production enterprises, 1972-87**



attributable to lamb sales mostly resulted from increases in Federal wool incentive and unshorn lamb payments. These incentive payments rose from $3.38 per ewe in 1977 to $13.86 per ewe in 1987, accounting for 8 percent of total receipts in 1977 and 19 percent of total receipts 10 years later. Federal incentive payments averaged nearly 13 percent of total receipts for the 16-year span. When Government incentive payments are excluded from average cash receipts, only $2.66 per ewe remain after average cash and capital replacement expenses are paid.

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Appendix table 1--Format differences in production cost reports for commercial feedlots

| 1976-79 format | 1980-87 format |
|---|---|
| Returns: | Cash receipts: |
| | Fed beef |
| Direct costs: | Cash expenses: |
| | Feeders-- |
| Feeder cattle | Feeder cattle |
| | Feed-- |
| Corn silage | Silage |
| Grain | Dry grain |
| | Protein supplements |
| Legume hay | Legume hay |
| Other roughages | Other roughages |
| | Other-- |
| Veterinary and medicine | Veterinary and medicine |
| Livestock hauling | Livestock hauling |
| Marketing | |
| Utilities | |
| Legal fees | |
| Fuel, lubricants (lube), and electricity | Fuel, lubricants (lube), and electricity |
| Machinery and building repairs | Machinery and building repairs |
| Miscellaneous expense | Miscellaneous |
| Hired labor | Hired labor |
| | Manure credit |
| | Fixed expenses: |
| Interest on operating capital | Interest |
| General farm overhead | Hired management |
| | Taxes and insurance |
| Manure credit | |
| Ownership costs, RITI 1/: | Capital replacement |
| Machinery and equipment | |
| Buildings and facilities | |
| Livestock | |
| | Economic (full ownership) costs: |
| | Variable expenses |
| | General farm overhead |
| | Taxes and insurance |
| | Capital replacement |

See footnote at end of table.

Continued--

Appendix table 1--Format differences in production cost reports for commercial feedlots--Continued

| 1976-79 format | 1980-87 format |
|---|---|
| | Returns to owned inputs: |
| | Operating capital |
| Operator and family labor | Other nonland capital |
| Management | Land |
| Land taxes | Unpaid labor |
| Returns to land and risk | Residual returns to management and risk |
| | Net returns to owned inputs |

1/ RITI = replacement, insurance and taxes, and interest charges.

Appendix table 2--Format differences in productions cost reports for farmer feedlots

| 1976-79 format | 1980-87 format |
|---|---|
| Returns: | Cash receipts: |
| | Fed beef |
| Direct costs: | Cash expenses: |
| | Feeders-- |
| Feeder cattle | Feeder cattle |
| | Feed-- |
| Corn silage | Silage |
| Corn | Dry grain |
| | Concentrates |
| Protein supplements | Protein supplements |
| Legume hay | Legume hay |
| | Pasture |
| | Crop residue |
| | Other-- |
| Veterinary and medicine | Veterinary and medicine |
| Truck and machine hire | Livestock hauling |
| Marketing | Marketing |
| Bedding | Bedding |
| Fuel, lubricants (lube), and electricity | Fuel, lubricants (lube), and electricity |
| Machinery and building repairs | Machinery and building repairs |
| Hired labor | Hired labor |
| | Manure credit |
| | Fixed expenses: |
| Interest on operating capital | Interest |
| General farm overhead | General farm overhead |
| | Taxes and insurance |
| Manure credit | |
| Ownership costs, RITI 1/: | Capital replacement |
| Machinery and equipment | |
| Buildings and facilities | |
| Livestock | |
| | Economic (full ownership) costs: |
| | Variable expenses |
| | General farm overhead |
| | Taxes and insurance |
| | Capital replacement |

See footnote at end of table.

Continued--

Appendix table 2--Format differences in production cost reports for farmer feedlots--Continued

| 1976-79 format | 1980-87 format |
|---|---|
| | Returns to owned inputs: |
| Operator and family labor | Operating capital |
| Management | Other nonland capital |
| Land taxes | Land |
| | Unpaid labor |
| Returns to land and risk | Residual returns to management and risk |
| | Net returns to owned inputs |

1/ RITI = replacement, insurance and taxes, and interest charges.

Appendix table 3--Format differences in production cost reports for feeder pig enterprises

| 1976-79 format | 1980-87 format |
|---|---|
| Returns: | Cash receipts: |
| Feeder pigs | Market hogs |
| Cull sows | Cull sows |
| Direct costs: | Cash expenses: |
| | Feed-- |
| Grain | Grain |
| Protein supplements | Protein supplements |
| Pasture | Pasture |
| | Other-- |
| Veterinary and medicine | Veterinary and medicine |
| Livestock hauling | Livestock hauling |
| Marketing | Marketing |
| Bedding | Bedding |
| Custom feed processing | Custom feed processing |
| Fuel, lubricants (lube), and electricity | Fuel, lubricants (lube), and electricity |
| Machinery and building repairs | Machinery and building repairs |
| Miscellaneous supplies | |
| Hired labor | Hired labor |
| | Manure credit |
| | Fixed expenses: |
| Interest on operating capital | Interest |
| General farm overhead | General farm overhead |
| | Taxes and insurance |
| Ownership costs, RITI 1/: | Capital replacement |
| Machinery and equipment, RITI | |
| Buildings and facilities, RITI | |
| Livestock, RITI | |
| | Economic (full ownership) costs: |
| | Variable expenses |
| | General farm overhead |
| | Taxes and insurance |
| | Capital replacement |
| | Returns to owned inputs: |
| | Operating capital |
| Operator and family labor | Other nonland capital |
| Management | Land |

See footnote at end of table.

Continued--

Appendix table 3--Format differences in production cost reports for feeder pig enterprises--Continued

| 1976-79 format | 1980-87 format |
|---|---|
| Land taxes | Unpaid labor |
| Returns to land and risk | Residual returns to management and risk<br>Net returns to owned inputs |

1/ RITI = replacement, insurance and taxes, and interest charges.

Appendix table 4--Format differences in production cost reports for farrow-to-finish hog enterprises

| 1976-79 format | 1980-87 format |
|---|---|
| Returns: | Cash receipts: |
| Market hogs | Market hogs |
| Cull sows | Cull sows |
| Direct costs: | Cash expenses: |
| | Feed-- |
| Grain | Grain |
| Protein supplements | Protein supplements |
| Pasture | Pasture |
| | Other-- |
| Veterinary and medicine | Veterinary and medicine |
| Livestock hauling | Livestock hauling |
| Marketing | Marketing |
| Bedding | Bedding |
| Custom feed processing | Custom feed processing |
| Fuel, lubricants (lube), and electricity | Fuel, lubricants (lube), and electricity |
| Machinery and building repairs | Machinery and building repairs |
| Miscellaneous supplies | |
| Hired labor | Hired labor |
| | Manure credit |
| | Fixed expenses: |
| Interest on operating capital | Interest |
| General farm overhead | General farm overhead |
| | Taxes and insurance |
| Ownership costs, RITI 1/: | Capital replacement |
| Machinery and equipment, RITI | |
| Buildings and facilities, RITI | |
| Livestock, RITI | |
| | Economic (full ownership) costs: |
| | Variable expenses |
| | General farm overhead |
| | Taxes and insurance |
| | Capital replacement |
| | Returns to owned inputs: |
| | Operating capital |
| Operator and family labor | Other nonland capital |

See footnote at end of table.

Continued--

Appendix table 4--Format differences in production cost reports for farrow-to-finish hog enterprises--Continued

| 1976-79 format | 1980-87 format |
|---|---|
| Management | Land |
| Land taxes | Unpaid labor |
| Returns to land and risk | Residual returns to management and risk |
| | Net returns to owned inputs |

1/ RITI = replacement, insurance and taxes, and interest charges.

Appendix table 5--Format differences in production cost reports for feeder pig finishing enterprises

| 1976-79 format | 1980-87 format |
|---|---|
| Returns: | Cash receipts: |
| Market hogs | Market hogs |
| Direct costs: | Cash expenses: |
| | Feeders-- |
| Purchased feeder pigs | Feeder pigs |
| | Feed-- |
| Grain | Grain |
| Protein supplements | Protein supplements |
| Pasture | Pasture |
| | Other-- |
| Veterinary and medicine | Veterinary and medicine |
| Livestock hauling | Livestock hauling |
| Marketing | Marketing |
| Bedding | Bedding |
| Custom feed processing | Custom feed processing |
| Fuel, lubricants (lube), and electricity | Fuel, lubricants (lube), and electricity |
| Machinery and building repairs | Machinery and building repairs |
| Miscellaneous supplies | |
| Hired labor | Hired labor |
| | Manure credit |
| | Fixed expenses: |
| Interest on operating capital | Interest |
| General farm overhead | General farm overhead |
| | Taxes and insurance |
| Ownership costs, RITI 1/: | Capital replacement |
| Machinery and equipment, RITI | |
| Buildings and facilities, RITI | |
| Livestock, RITI | |
| | Economic (full ownership) costs: |
| | Variable expenses |
| | General farm overhead |
| | Taxes and insurance |
| | Capital replacement |
| | Returns to owned inputs: |
| | Operating capital |
| Operator and family labor | Other nonland capital |

See footnote at end of table.

Continued--

Appendix table 5--Format differences in production cost reports for feeder pig finishing enterprises--Continued

| 1976-79 format | 1980-87 format |
|---|---|
| Management | Land |
| Land taxes | Unpaid labor |
| Returns to land and risk | Residual returns to management and risk |
| | Net returns to owned inputs |

1/ RITI = replacement, insurance and taxes, and interest charges.

Appendix table 6--Format differences in production cost reports of sheep enterprises

| 1976-79 format | 1980-87 format |
|---|---|
| Returns: | Cash receipts: |
| Lambs | Slaughter lambs |
| Cull ewes | Feeder lambs |
| Wool | Cull ewes |
| Wool incentive payment | Wool |
| Unshorn lamb payment | Wool payment |
| | Unshorn lamb payment |
| Direct costs: | Cash expenses: |
| | Feed-- |
| Concentrates | Grain |
| Hay | Protein supplements |
| Pasture and range rented | Salt and minerals |
| Pasture and range owned (acre) | Hay |
| Federal range (AM) 1/ | Pasture (AUM) 2/ |
| | Public grazing (AUM) |
| | Public grazing (AUM) |
| | Crop residue (AUM) |
| | Other-- |
| Veterinary and medicine | Veterinary and medicine |
| Trucking, hired | Livestock hauling |
| Marketing | Marketing |
| Utilities | Ram death loss |
| Legal and accounting fees | |
| Predator control | |
| Shearing and tagging | Shearing and tagging |
| Grinding and mixing feeds | |
| Fuel, lubricants (lube), and electricity | Fuel, lubricants (lube), and electricity |
| Machinery and building repairs | Machinery and building repairs |
| Miscellaneous | Miscellaneous |
| Hired labor | Hired labor |
| Feeder lambs | |
| | Fixed expenses: |
| Interest on operating capital | Interest |
| General farm overhead | General farm overhead |
| | Taxes and insurance |
| Ownership costs, RITI 3/: | Capital replacement |
| Machinery and equipment, RITI | |
| Buildings and facilities, RITI | |

See footnotes at end of table.

Continued--

Appendix table 6--Format differences in production cost reports of sheep enterprises--Continued

| 1976-79 format | 1980-87 format |
|---|---|
| Livestock, RITI | |
| | Economic (full ownership) costs: |
| | Variable expenses |
| | General farm overhead |
| | Taxes and insurance |
| | Capital replacement |
| | Returns to owned inputs: |
| | Operating capital |
| Operator and family labor | Other nonland capital |
| Management | Land |
| Land taxes | Unpaid labor |
| Returns to land and risk | Residual returns to management and risk |
| | Returns to land and risk |

1/ AM = animal month, a cow with a calf under 6 months old, a dry cow, or calf or yearlings over 6 months old.
2/ AUM = animal unit month, 1 animal unit for 1 month.
3/ RITI = replacement, insurance and taxes, and interest charges.

Appendix table 7--U.S. fed cattle production costs, all sizes of operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Fed beef (100 lbs) | 35.76 | 44.20 | 38.97 | 41.79 | 38.97 | 40.18 | 52.40 | 67.85 | 66.20 | 63.41 | 63.62 | 62.12 | 64.95 | 59.49 | 58.32 | 71.63 |
| Total | 35.76 | 44.20 | 38.97 | 41.79 | 38.97 | 40.18 | 52.40 | 67.85 | 66.20 | 63.41 | 63.62 | 62.12 | 64.95 | 59.49 | 58.32 | 71.63 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feeders-- | | | | | | | | | | | | | | | | |
| Feeder cattle (58 lbs) | 22.58 | 28.93 | 20.60 | 18.41 | 21.48 | 21.92 | 27.84 | 44.67 | 47.33 | 42.90 | 39.05 | 37.62 | 38.53 | 38.90 | 34.68 | 44.83 |
| Feed-- | | | | | | | | | | | | | | | | |
| Haylage (20 lbs) | 0.03 | 0.04 | 0.06 | 0.06 | 0.07 | 0.06 | 0.05 | 0.05 | 0.05 | 0.06 | 0.06 | 0.07 | 0.06 | 0.05 | 0.09 | 0.08 |
| Silage (140 lbs) | 0.62 | 0.77 | 1.04 | 1.07 | 1.22 | 1.08 | 0.94 | 0.86 | 0.96 | 1.22 | 0.94 | 0.85 | 0.94 | 0.92 | 1.27 | 1.18 |
| Dry grain & concentrates (261 lbs) | 6.82 | 10.90 | 16.65 | 15.41 | 14.33 | 10.99 | 9.36 | 10.61 | 12.13 | 13.51 | 10.98 | 13.60 | 14.00 | 11.54 | 9.56 | 7.00 |
| Protein supplements (26 lbs) | 1.33 | 2.90 | 2.15 | 1.76 | 1.76 | 2.15 | 1.95 | 2.12 | 2.22 | 2.38 | 2.25 | 2.37 | 2.00 | 2.07 | 2.70 | 2.58 |
| Legume hay (60 lbs) | 0.39 | 0.49 | 0.66 | 0.68 | 0.78 | 0.69 | 0.60 | 0.72 | 0.79 | 0.98 | 0.96 | 1.04 | 1.25 | 1.02 | 1.04 | 1.04 |
| Other roughages (19.40 lbs) | 0.13 | 0.16 | 0.21 | 0.22 | 0.25 | 0.22 | 0.20 | 0.23 | 0.27 | 0.39 | 0.41 | 0.43 | 0.64 | 0.55 | 0.00 | 0.00 |
| Pasture | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crop residue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total feed costs | 9.33 | 15.26 | 20.76 | 19.20 | 18.41 | 15.19 | 13.10 | 14.59 | 16.42 | 18.54 | 15.60 | 18.36 | 18.89 | 16.15 | 14.66 | 11.88 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.29 | 0.31 | 0.34 | 0.37 | 0.39 | 0.38 | 0.41 | 0.44 | 0.47 | 0.51 | 0.49 | 0.51 | 0.51 | 0.52 | 0.59 | 0.60 |
| Livestock hauling | 0.10 | 0.11 | 0.12 | 0.13 | 0.13 | 0.13 | 0.14 | 0.12 | 0.15 | 0.17 | 0.16 | 0.15 | 0.14 | 0.15 | 0.35 | 0.35 |
| Marketing | 0.05 | 0.06 | 0.06 | 0.07 | 0.07 | 0.07 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.07 | 0.06 | 0.06 | 0.12 | 0.12 |
| Bedding | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.06 | 0.05 | 0.05 | 0.04 | 0.05 | 0.12 | 0.13 |
| Fuel, lube, and electricity | 0.21 | 0.22 | 0.30 | 0.33 | 0.35 | 0.38 | 0.40 | 0.49 | 0.67 | 0.76 | 0.72 | 0.67 | 0.51 | 0.48 | 0.61 | 0.59 |
| Machinery and building repairs | 0.25 | 0.26 | 0.36 | 0.40 | 0.43 | 0.46 | 0.50 | 0.49 | 0.53 | 0.57 | 0.56 | 0.58 | 0.51 | 0.55 | 0.84 | 0.84 |
| Hired labor (.59 hr) | 0.28 | 0.30 | 0.35 | 0.37 | 0.41 | 0.44 | 0.47 | 0.52 | 0.56 | 0.60 | 0.63 | 0.64 | 0.75 | 0.76 | 0.75 | 0.71 |
| Miscellaneous | 0.29 | 0.31 | 0.38 | 0.45 | 0.47 | 0.50 | 0.53 | 0.60 | 0.75 | 0.84 | 0.93 | 0.97 | 1.01 | 1.00 | 0.70 | 0.72 |
| Manure credit | -0.07 | -0.07 | -0.07 | -0.07 | -0.07 | -0.07 | -0.07 | -0.08 | -0.10 | -0.11 | -0.11 | -0.10 | -0.08 | -0.08 | -0.07 | -0.07 |
| Total, variable cash expenses | 33.33 | 45.72 | 43.24 | 39.71 | 42.11 | 39.44 | 43.44 | 61.96 | 66.90 | 64.92 | 58.16 | 59.52 | 60.87 | 58.54 | 53.35 | 60.70 |
| General farm overhead | 0.24 | 0.59 | 0.50 | 0.45 | 0.48 | 0.62 | 0.60 | 0.76 | 0.90 | 0.93 | 0.99 | 0.98 | 1.05 | 0.93 | 2.21 | 2.75 |
| Taxes and insurance | 0.12 | 0.15 | 0.14 | 0.15 | 0.14 | 0.14 | 0.17 | 0.16 | 0.17 | 0.17 | 0.18 | 0.18 | 0.16 | 0.16 | 0.28 | 0.30 |
| Hired management | 0.07 | 0.09 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.10 | 0.11 | 0.12 | 0.13 | 0.14 | 0.11 | 0.11 | 0.10 | 0.09 |
| Interest | 2.07 | 2.56 | 2.26 | 2.42 | 2.26 | 2.33 | 3.12 | 4.32 | 4.69 | 5.08 | 5.40 | 5.01 | 4.81 | 4.28 | 5.84 | 6.83 |
| Total, fixed cash expenses | 2.51 | 3.39 | 2.97 | 3.10 | 2.95 | 3.17 | 3.97 | 5.34 | 5.87 | 6.30 | 6.70 | 6.31 | 6.13 | 5.48 | 8.43 | 9.97 |
| Total, cash expenses | 35.83 | 49.11 | 46.21 | 42.81 | 45.06 | 42.61 | 47.41 | 67.30 | 72.77 | 71.22 | 64.86 | 65.83 | 67.00 | 64.02 | 61.78 | 70.67 |
| Value of production less cash expenses | -0.07 | -4.91 | -7.24 | -1.02 | -6.09 | -2.43 | 4.99 | 0.55 | -6.57 | -7.81 | -1.24 | -3.71 | -2.05 | -4.53 | -3.46 | 0.96 |
| Capital replacement | 0.93 | 0.98 | 1.08 | 1.17 | 1.23 | 1.21 | 1.34 | 1.57 | 1.12 | 1.23 | 1.19 | 1.21 | 1.07 | 1.11 | 1.89 | 1.89 |
| Value of production less cash expenses and capital replacement | -1.00 | -5.89 | -8.31 | -2.19 | -7.32 | -3.64 | 3.65 | -1.02 | -7.69 | -9.04 | -2.43 | -4.92 | -3.12 | -5.64 | -5.35 | -0.93 |

Continued--

Appendix table 7--U.S. fed cattle production costs, all sizes of operation, 1972-87--Continued

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 33.33 | 45.72 | 43.24 | 39.71 | 42.11 | 39.44 | 43.44 | 61.96 | 66.90 | 64.92 | 58.16 | 59.52 | 60.87 | 58.54 | 53.35 | 60.70 |
| General farm overhead | 0.24 | 0.59 | 0.50 | 0.45 | 0.48 | 0.62 | 0.60 | 0.76 | 0.90 | 0.93 | 0.99 | 0.98 | 1.05 | 0.93 | 2.21 | 2.75 |
| Taxes and insurance | 0.12 | 0.15 | 0.14 | 0.15 | 0.14 | 0.14 | 0.17 | 0.16 | 0.17 | 0.17 | 0.18 | 0.18 | 0.16 | 0.16 | 0.28 | 0.30 |
| Capital replacement | 0.93 | 0.98 | 1.08 | 1.17 | 1.23 | 1.21 | 1.34 | 1.57 | 1.12 | 1.23 | 1.19 | 1.21 | 1.07 | 1.11 | 1.89 | 1.89 |
| Hired management | 0.07 | 0.09 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.10 | 0.11 | 0.12 | 0.13 | 0.14 | 0.11 | 0.11 | 0.10 | 0.09 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.31 | 0.66 | 0.69 | 0.49 | 0.45 | 0.44 | 0.67 | 1.26 | 1.49 | 1.81 | 1.31 | 1.06 | 1.21 | 0.91 | 0.59 | 0.72 |
| Return to other nonland capital | 0.38 | 0.40 | 0.44 | 0.48 | 0.50 | 0.49 | 0.49 | 0.42 | 0.41 | 0.38 | 0.34 | 0.31 | 0.23 | 0.43 | 0.38 | 0.44 |
| Land | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.08 | 0.10 | 0.11 | 0.12 | 0.12 | 0.11 | 0.08 | 0.07 | 0.10 | 0.11 |
| Unpaid labor (.35 hr) | 0.63 | 0.66 | 0.73 | 0.80 | 0.84 | 0.82 | 0.90 | 0.81 | 0.58 | 0.60 | 0.55 | 0.52 | 0.47 | 1.39 | 1.11 | 1.15 |
| Total, economic costs | 36.05 | 49.29 | 46.94 | 43.38 | 45.89 | 43.32 | 47.77 | 67.14 | 71.79 | 70.28 | 62.96 | 64.02 | 65.26 | 63.65 | 60.01 | 68.15 |
| Residual returns to management and risk | -0.29 | -5.09 | -7.97 | -1.59 | -6.92 | -3.14 | 4.63 | 0.71 | -5.59 | -6.87 | 0.66 | -1.90 | -0.31 | -4.16 | -1.69 | 3.48 |
| Net returns to owned inputs | 1.07 | -3.33 | -6.05 | 0.23 | -5.06 | -1.31 | 6.77 | 3.30 | -3.00 | -3.96 | 2.97 | 0.09 | 1.69 | -1.36 | 0.49 | 5.90 |

Appendix table 8--U.S. fed cattle production costs, commercial feedlots, all sizes of operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Fed beef (100 lbs) | 35.65 | 44.07 | 38.86 | 41.66 | 38.86 | 40.06 | 51.93 | 67.99 | 66.11 | 63.47 | 63.64 | 62.15 | 64.92 | 59.79 | 58.52 | 74.63 |
| Total | 35.65 | 44.07 | 38.86 | 41.66 | 38.86 | 40.06 | 51.93 | 67.99 | 66.11 | 63.47 | 63.64 | 62.15 | 64.92 | 59.79 | 58.52 | 74.63 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feeders-- | | | | | | | | | | | | | | | | |
| Feeder cattle (65 lbs) | 24.44 | 31.32 | 22.31 | 19.93 | 23.26 | 23.73 | 30.81 | 47.76 | 48.54 | 44.19 | 40.50 | 41.02 | 39.64 | 39.75 | 37.66 | 49.25 |
| Feed-- | | | | | | | | | | | | | | | | |
| Silage (20 lbs) | 0.18 | 0.23 | 0.31 | 0.32 | 0.36 | 0.32 | 0.27 | 0.28 | 0.32 | 0.42 | 0.36 | 0.33 | 0.29 | 0.34 | 0.26 | 0.25 |
| Dry grain & concentrates (248 lbs) | 6.75 | 10.83 | 16.76 | 15.48 | 14.32 | 11.64 | 9.82 | 11.04 | 12.63 | 13.82 | 11.23 | 14.16 | 14.20 | 11.68 | 9.49 | 6.97 |
| Protein supplements (25 lbs) | 1.16 | 2.52 | 1.87 | 1.53 | 1.53 | 1.87 | 1.70 | 1.89 | 1.98 | 2.13 | 2.04 | 2.19 | 1.78 | 1.96 | 2.52 | 2.39 |
| Hay and other roughages | 0.58 | 0.73 | 0.99 | 1.02 | 1.16 | 1.03 | 0.90 | 1.04 | 1.17 | 1.52 | 1.50 | 1.59 | 2.04 | 1.81 | 1.11 | 1.13 |
| Total feed costs | 8.67 | 14.31 | 19.93 | 18.35 | 17.37 | 14.86 | 12.69 | 14.25 | 16.10 | 17.89 | 15.13 | 18.27 | 18.31 | 15.79 | 13.38 | 10.74 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.28 | 0.30 | 0.33 | 0.36 | 0.38 | 0.37 | 0.41 | 0.44 | 0.47 | 0.51 | 0.48 | 0.50 | 0.50 | 0.51 | 0.52 | 0.53 |
| Fuel, lube, and electricity | 0.14 | 0.14 | 0.20 | 0.22 | 0.23 | 0.25 | 0.26 | 0.34 | 0.47 | 0.53 | 0.52 | 0.50 | 0.38 | 0.38 | 0.36 | 0.36 |
| Machinery and building repairs | 0.11 | 0.11 | 0.16 | 0.18 | 0.19 | 0.20 | 0.22 | 0.24 | 0.26 | 0.28 | 0.29 | 0.30 | 0.28 | 0.30 | 0.30 | 0.30 |
| Hired labor (.85 hr) | 0.30 | 0.33 | 0.38 | 0.41 | 0.45 | 0.48 | 0.51 | 0.56 | 0.60 | 0.64 | 0.66 | 0.68 | 0.80 | 0.81 | 0.85 | 0.77 |
| Miscellaneous | 0.43 | 0.47 | 0.57 | 0.68 | 0.71 | 0.75 | 0.80 | 0.90 | 1.03 | 1.14 | 1.21 | 1.24 | 1.25 | 1.25 | 1.21 | 1.23 |
| Manure credit | -0.07 | -0.07 | -0.07 | -0.07 | -0.07 | -0.07 | -0.07 | -0.08 | -0.10 | -0.11 | -0.11 | -0.10 | -0.07 | -0.07 | -0.07 | -0.06 |
| Total, variable cash expenses | 34.30 | 46.91 | 43.80 | 40.05 | 42.50 | 40.57 | 45.63 | 64.41 | 67.37 | 65.07 | 58.68 | 62.41 | 61.09 | 58.72 | 54.21 | 63.12 |
| Taxes and insurance | 0.05 | 0.07 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.07 | 0.07 | 0.07 | 0.08 | 0.08 | 0.07 | 0.07 | 0.07 | 0.07 |
| Hired management | 0.11 | 0.13 | 0.12 | 0.12 | 0.12 | 0.12 | 0.13 | 0.14 | 0.15 | 0.16 | 0.17 | 0.18 | 0.14 | 0.14 | 0.15 | 0.14 |
| Interest | 1.59 | 1.97 | 1.74 | 1.86 | 1.74 | 1.79 | 2.35 | 3.45 | 3.76 | 4.11 | 4.65 | 4.08 | 4.07 | 3.92 | 4.33 | 5.90 |
| Total, fixed cash expenses | 1.75 | 2.17 | 1.91 | 2.05 | 1.91 | 1.97 | 2.54 | 3.66 | 3.98 | 4.34 | 4.90 | 4.34 | 4.28 | 4.13 | 4.55 | 6.11 |
| Total, cash expenses | 36.06 | 49.08 | 45.71 | 42.10 | 44.42 | 42.54 | 48.17 | 68.07 | 71.35 | 69.41 | 63.58 | 66.75 | 65.37 | 62.85 | 58.76 | 69.23 |
| Value of production less cash expenses | -0.40 | -5.01 | -6.85 | -0.44 | -5.56 | -2.48 | 3.76 | -0.08 | -5.24 | -5.94 | 0.06 | -4.60 | -0.45 | -3.06 | -0.24 | 5.40 |
| Capital replacement | 0.32 | 0.33 | 0.36 | 0.40 | 0.42 | 0.41 | 0.46 | 0.55 | 0.42 | 0.47 | 0.50 | 0.52 | 0.46 | 0.46 | 0.47 | 0.47 |
| Value of production less cash expenses and capital replacement | -0.72 | -5.35 | -7.22 | -0.84 | -5.98 | -2.89 | 3.30 | -0.63 | -5.66 | -6.41 | -0.44 | -5.12 | -0.91 | -3.52 | -0.71 | 4.93 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 34.30 | 46.91 | 43.80 | 40.05 | 42.50 | 40.57 | 45.63 | 64.41 | 67.37 | 65.07 | 58.68 | 62.41 | 61.09 | 58.72 | 54.21 | 63.12 |
| Taxes and insurance | 0.05 | 0.07 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.07 | 0.07 | 0.07 | 0.08 | 0.08 | 0.07 | 0.07 | 0.07 | 0.07 |
| Hired management | 0.11 | 0.13 | 0.12 | 0.12 | 0.12 | 0.12 | 0.13 | 0.14 | 0.15 | 0.16 | 0.17 | 0.18 | 0.14 | 0.14 | 0.15 | 0.14 |
| Capital replacement | 0.32 | 0.33 | 0.36 | 0.40 | 0.42 | 0.41 | 0.46 | 0.55 | 0.42 | 0.47 | 0.50 | 0.52 | 0.46 | 0.46 | 0.47 | 0.47 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.32 | 0.67 | 0.70 | 0.49 | 0.45 | 0.45 | 0.69 | 1.29 | 1.49 | 1.80 | 1.30 | 1.09 | 1.20 | 0.90 | 0.59 | 0.74 |
| Return to other nonland capital | 0.12 | 0.13 | 0.14 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.15 | 0.14 | 0.14 | 0.13 | 0.11 | 0.10 | 0.11 | 0.12 |
| Land | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 | 0.03 | 0.02 | 0.02 |
| Unpaid labor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total, economic costs | 35.23 | 48.26 | 45.19 | 41.30 | 43.73 | 41.79 | 47.16 | 66.65 | 69.68 | 67.74 | 60.91 | 64.45 | 63.10 | 60.42 | 55.62 | 64.68 |
| Residual returns to management and risk | 0.42 | -4.19 | -6.34 | 0.36 | -4.87 | -1.73 | 4.77 | 1.34 | -3.57 | -4.27 | 2.73 | -2.30 | 1.82 | -0.63 | 2.90 | 9.95 |
| Net returns to owned inputs | 0.74 | -3.52 | -5.64 | 0.85 | -4.42 | -1.28 | 5.47 | 2.63 | -2.08 | -2.47 | 4.03 | -1.20 | 3.02 | 0.27 | 3.49 | 10.69 |

Appendix table 9--U.S. fed cattle production costs, farmer feedlots, all sizes of operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Fed beef (100 lbs) | 35.96 | 44.45 | 39.20 | 42.03 | 39.20 | 40.41 | 53.29 | 67.50 | 66.44 | 63.24 | 63.57 | 62.03 | 65.09 | 58.28 | 57.95 | 65.98 |
| Total | 35.96 | 44.45 | 39.20 | 42.03 | 39.20 | 40.41 | 53.29 | 67.50 | 66.44 | 63.24 | 63.57 | 62.03 | 65.09 | 58.28 | 57.95 | 65.98 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feeders-- | | | | | | | | | | | | | | | | |
| Feeder cattle (46 lbs) | 18.95 | 24.29 | 17.30 | 15.46 | 18.03 | 18.40 | 22.26 | 36.88 | 44.18 | 39.38 | 34.18 | 35.21 | 33.79 | 35.48 | 29.08 | 36.48 |
| Feed-- | | | | | | | | | | | | | | | | |
| Haylage (60 lbs) | 0.10 | 0.12 | 0.16 | 0.17 | 0.19 | 0.17 | 0.15 | 0.17 | 0.19 | 0.24 | 0.25 | 0.31 | 0.30 | 0.25 | 0.25 | 0.24 |
| Silage (360 lbs) | 1.47 | 1.83 | 2.48 | 2.55 | 2.92 | 2.58 | 2.21 | 2.31 | 2.62 | 3.41 | 2.91 | 2.68 | 3.68 | 3.24 | 3.17 | 2.95 |
| Dry grain & concentrates (286 lbs) | 6.97 | 11.20 | 17.34 | 16.02 | 14.81 | 9.72 | 8.49 | 9.53 | 10.85 | 12.65 | 10.14 | 11.64 | 13.16 | 10.97 | 9.70 | 7.05 |
| Protein supplements (27 lbs) | 1.67 | 3.63 | 2.69 | 2.21 | 2.21 | 2.69 | 2.44 | 2.71 | 2.85 | 3.06 | 2.94 | 3.00 | 2.92 | 2.49 | 3.03 | 2.95 |
| Legume hay (68 lbs) | 0.23 | 0.28 | 0.38 | 0.40 | 0.45 | 0.40 | 0.35 | 0.40 | 0.44 | 0.66 | 0.58 | 0.54 | 0.69 | 0.57 | 0.89 | 0.85 |
| Pasture | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Crop residue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total feed costs | 10.44 | 17.07 | 23.06 | 21.35 | 20.58 | 15.57 | 13.65 | 15.13 | 16.96 | 20.03 | 16.83 | 18.18 | 20.76 | 17.53 | 17.05 | 14.05 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.31 | 0.32 | 0.36 | 0.39 | 0.41 | 0.40 | 0.41 | 0.44 | 0.47 | 0.50 | 0.53 | 0.54 | 0.56 | 0.56 | 0.71 | 0.72 |
| Livestock hauling | 0.30 | 0.32 | 0.35 | 0.38 | 0.40 | 0.39 | 0.42 | 0.44 | 0.56 | 0.64 | 0.68 | 0.70 | 0.72 | 0.75 | 0.78 | 0.78 |
| Marketing | 0.15 | 0.16 | 0.18 | 0.19 | 0.20 | 0.20 | 0.23 | 0.29 | 0.30 | 0.31 | 0.33 | 0.32 | 0.34 | 0.32 | 0.33 | 0.34 |
| Bedding | 0.09 | 0.10 | 0.11 | 0.12 | 0.12 | 0.12 | 0.13 | 0.14 | 0.16 | 0.24 | 0.21 | 0.22 | 0.23 | 0.23 | 0.36 | 0.36 |
| Fuel, lube, and electricity | 0.34 | 0.36 | 0.50 | 0.55 | 0.59 | 0.63 | 0.66 | 0.87 | 1.19 | 1.40 | 1.39 | 1.25 | 1.05 | 0.88 | 1.08 | 1.02 |
| Machinery and building repairs | 0.52 | 0.55 | 0.76 | 0.84 | 0.89 | 0.96 | 1.04 | 1.14 | 1.25 | 1.38 | 1.47 | 1.55 | 1.49 | 1.55 | 1.84 | 1.85 |
| Hired labor (.11 hr) | 0.23 | 0.26 | 0.29 | 0.31 | 0.34 | 0.37 | 0.39 | 0.43 | 0.46 | 0.49 | 0.51 | 0.52 | 0.52 | 0.54 | 0.57 | 0.59 |
| Manure credit | -0.07 | -0.07 | -0.07 | -0.07 | -0.07 | -0.07 | -0.07 | -0.08 | -0.10 | -0.11 | -0.11 | -0.11 | -0.11 | -0.10 | -0.08 | -0.07 |
| Total, variable cash expenses | 31.27 | 43.36 | 42.83 | 39.53 | 41.50 | 36.97 | 39.12 | 55.68 | 65.43 | 64.26 | 56.02 | 58.38 | 59.35 | 57.74 | 51.72 | 56.12 |
| General farm overhead | 0.68 | 1.68 | 1.42 | 1.28 | 1.37 | 1.76 | 1.72 | 2.18 | 2.57 | 2.66 | 2.83 | 2.80 | 3.01 | 2.66 | 6.37 | 7.92 |
| Taxes and insurance | 0.27 | 0.33 | 0.29 | 0.31 | 0.29 | 0.30 | 0.37 | 0.40 | 0.44 | 0.46 | 0.51 | 0.52 | 0.52 | 0.50 | 0.68 | 0.73 |
| Interest | 3.03 | 3.74 | 3.30 | 3.54 | 3.30 | 3.40 | 4.56 | 6.51 | 7.13 | 7.74 | 7.93 | 8.27 | 7.97 | 5.71 | 8.69 | 8.58 |
| Total, fixed cash expenses | 3.97 | 5.75 | 5.01 | 5.13 | 4.96 | 5.46 | 6.65 | 9.09 | 10.14 | 10.86 | 11.27 | 11.59 | 11.50 | 8.87 | 15.74 | 17.23 |
| Total, cash expenses | 35.24 | 49.11 | 47.84 | 44.66 | 46.46 | 42.43 | 45.77 | 64.77 | 75.57 | 75.12 | 67.29 | 69.97 | 70.85 | 66.61 | 67.46 | 73.35 |
| Value of production less cash expenses | 0.73 | -4.66 | -8.64 | -2.64 | -7.26 | -2.02 | 7.52 | 2.73 | -9.13 | -11.88 | -3.72 | -7.94 | -5.76 | -8.33 | -9.51 | -7.37 |
| Capital replacement | 2.13 | 2.24 | 2.46 | 2.68 | 2.82 | 2.76 | 3.06 | 3.56 | 2.97 | 3.30 | 3.48 | 3.62 | 3.65 | 3.72 | 4.56 | 4.57 |
| Value of production less cash expenses and capital replacement | -1.40 | -6.90 | -11.10 | -5.31 | -10.08 | -4.78 | 4.46 | -0.83 | -12.10 | -15.18 | -7.20 | -11.56 | -9.41 | -12.05 | -14.07 | -11.94 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 31.27 | 43.36 | 42.83 | 39.53 | 41.50 | 36.97 | 39.12 | 55.68 | 65.43 | 64.26 | 56.02 | 58.38 | 59.35 | 57.74 | 51.72 | 56.12 |
| General farm overhead | 0.68 | 1.68 | 1.42 | 1.28 | 1.37 | 1.76 | 1.72 | 2.18 | 2.57 | 2.66 | 2.83 | 2.80 | 3.01 | 2.66 | 6.37 | 7.92 |
| Taxes and insurance | 0.27 | 0.33 | 0.29 | 0.31 | 0.29 | 0.30 | 0.37 | 0.40 | 0.44 | 0.46 | 0.51 | 0.52 | 0.52 | 0.50 | 0.68 | 0.73 |
| Capital replacement | 2.13 | 2.24 | 2.46 | 2.68 | 2.82 | 2.76 | 3.06 | 3.56 | 2.97 | 3.30 | 3.48 | 3.62 | 3.65 | 3.72 | 4.56 | 4.57 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.30 | 0.65 | 0.71 | 0.51 | 0.46 | 0.43 | 0.62 | 1.17 | 1.51 | 1.85 | 1.30 | 1.07 | 1.22 | 0.92 | 0.58 | 0.69 |
| Return to other nonland capital | 0.88 | 0.92 | 1.01 | 1.11 | 1.16 | 1.14 | 1.10 | 1.09 | 1.07 | 1.01 | 0.99 | 0.93 | 0.74 | 0.70 | 0.91 | 1.04 |
| Land | 0.06 | 0.08 | 0.12 | 0.15 | 0.19 | 0.25 | 0.25 | 0.28 | 0.32 | 0.33 | 0.30 | 0.25 | 0.18 | 0.12 | 0.25 | 0.29 |
| Unpaid labor (1.02 hr) | 1.86 | 1.95 | 2.14 | 2.34 | 2.46 | 2.41 | 2.60 | 2.84 | 2.09 | 2.26 | 2.37 | 2.37 | 2.46 | 2.51 | 3.19 | 3.31 |
| Total, economic costs | 37.44 | 51.21 | 50.98 | 47.91 | 50.25 | 46.01 | 48.84 | 67.19 | 76.40 | 76.12 | 67.80 | 69.93 | 71.12 | 68.88 | 68.26 | 74.67 |
| Residual returns to management and risk | -1.47 | -6.76 | -11.78 | -5.88 | -11.05 | -5.60 | 4.45 | 0.31 | -9.96 | -12.88 | -4.23 | -7.90 | -6.03 | -10.60 | -10.31 | -8.69 |
| Net returns to owned inputs | 1.63 | -3.16 | -7.80 | -1.78 | -6.78 | -1.38 | 9.02 | 5.68 | -4.97 | -7.44 | 0.73 | -3.29 | -1.44 | -6.34 | -5.38 | -3.36 |

Appendix table 10--U.S. cow-calf production costs, all sizes of operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cow | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Steer calves (1.13 cwt) | 44.78 | 57.51 | 40.97 | 36.68 | 39.52 | 43.46 | 77.16 | 103.94 | 90.02 | 74.86 | 74.22 | 74.62 | 76.37 | 77.71 | 78.17 | 91.82 |
| Heifer calves (.80 cwt) | 26.50 | 34.04 | 24.25 | 21.71 | 23.38 | 25.72 | 45.66 | 61.51 | 53.27 | 44.02 | 44.25 | 43.80 | 44.36 | 46.22 | 47.81 | 50.35 |
| Yearling steers (1.07 cwt) | 29.06 | 37.32 | 26.59 | 23.80 | 34.42 | 28.20 | 48.34 | 83.37 | 78.40 | 67.72 | 64.73 | 61.23 | 65.89 | 61.52 | 66.69 | 82.61 |
| Yearling heifers (.77 cwt) | 18.25 | 23.44 | 16.70 | 14.95 | 21.62 | 17.71 | 30.36 | 52.36 | 49.24 | 44.08 | 42.19 | 38.89 | 41.47 | 40.30 | 43.97 | 53.33 |
| Cull cows (.81 cwt) | 21.80 | 22.11 | 18.24 | 21.89 | 15.79 | 31.82 | 43.03 | 51.12 | 35.98 | 29.96 | 30.10 | 28.64 | 30.69 | 28.64 | 28.83 | 33.14 |
| Total | 140.39 | 174.42 | 126.75 | 119.03 | 134.73 | 146.91 | 244.55 | 352.30 | 306.91 | 260.64 | 255.49 | 247.18 | 258.78 | 254.39 | 265.47 | 311.25 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (2.05 cwt) | 3.44 | 5.56 | 8.59 | 7.94 | 7.32 | 5.97 | 6.56 | 7.78 | 10.12 | 9.42 | 8.31 | 10.70 | 11.20 | 9.39 | 7.62 | 6.19 |
| Silage (.29 ton) | 1.34 | 2.16 | 3.34 | 3.09 | 2.85 | 2.32 | 2.20 | 2.66 | 4.58 | 5.51 | 4.66 | 6.20 | 5.83 | 6.04 | 5.55 | 5.09 |
| Protein supplements (1.47 cwt) | 4.25 | 9.24 | 6.81 | 5.58 | 5.58 | 6.84 | 9.21 | 12.34 | 17.28 | 18.21 | 17.26 | 18.13 | 18.69 | 16.00 | 15.83 | 15.49 |
| Salt and minerals (.33 cwt) | 1.52 | 1.63 | 1.83 | 2.07 | 2.25 | 2.55 | 2.60 | 2.65 | 2.13 | 2.41 | 2.40 | 2.52 | 2.62 | 2.69 | 1.96 | 1.97 |
| Hay (1.25 ton) | 27.13 | 31.00 | 36.28 | 45.38 | 47.21 | 35.03 | 33.05 | 29.86 | 32.03 | 40.23 | 41.47 | 38.99 | 43.34 | 42.96 | 33.34 | 31.77 |
| Pasture | 24.61 | 28.26 | 29.15 | 29.18 | 29.84 | 29.66 | 30.84 | 34.15 | 35.81 | 37.40 | 39.02 | 36.45 | 39.30 | 36.44 | 34.47 | 31.78 |
| Public grazing | 0.63 | 0.73 | 0.93 | 0.93 | 1.37 | 1.37 | 1.12 | 1.08 | 0.68 | 0.76 | 0.75 | 0.65 | 0.71 | 0.66 | 0.69 | 0.71 |
| Crop residue (purchased) | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.07 | 0.07 | 0.06 | 0.07 | 0.07 | 0.07 | 0.08 | 0.08 | 0.07 | 0.09 | 0.07 |
| Total feed costs | 62.98 | 78.64 | 86.99 | 94.23 | 96.48 | 83.81 | 85.65 | 90.58 | 102.70 | 114.01 | 113.94 | 113.72 | 121.77 | 114.25 | 99.55 | 93.07 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 3.85 | 4.01 | 3.82 | 3.98 | 3.79 | 3.94 | 4.45 | 4.54 | 5.05 | 5.52 | 5.91 | 6.11 | 6.31 | 6.38 | 6.60 | 6.72 |
| Livestock hauling | 0.95 | 1.04 | 0.95 | 1.03 | 0.94 | 1.02 | 1.07 | 1.23 | 1.40 | 1.75 | 1.70 | 1.74 | 1.80 | 1.85 | 1.86 | 1.85 |
| Marketing | 2.48 | 2.63 | 2.46 | 2.61 | 2.44 | 2.59 | 3.01 | 3.58 | 3.81 | 3.86 | 3.90 | 4.00 | 4.10 | 4.21 | 4.16 | 4.24 |
| Custom feed mixing | 0.29 | 0.30 | 0.29 | 0.30 | 0.29 | 0.30 | 0.34 | 0.38 | 0.42 | 0.44 | 0.49 | 0.47 | 0.48 | 0.49 | 0.48 | 0.49 |
| Fuel, lube, electricity | 5.52 | 5.83 | 8.08 | 9.00 | 9.52 | 10.23 | 10.73 | 14.02 | 19.23 | 21.72 | 21.30 | 19.54 | 16.58 | 16.00 | 11.90 | 12.76 |
| Machinery and building repairs | 9.34 | 9.88 | 12.05 | 13.81 | 12.58 | 13.54 | 14.62 | 16.04 | 17.60 | 19.31 | 21.17 | 22.09 | 21.58 | 22.51 | 21.71 | 21.83 |
| Hired labor (3.20 hr) | 4.99 | 5.46 | 6.26 | 6.73 | 7.62 | 7.92 | 9.00 | 10.46 | 11.72 | 13.41 | 13.02 | 13.48 | 13.72 | 13.98 | 14.40 | 14.47 |
| Total, variable cash expenses | 90.40 | 107.79 | 120.90 | 131.69 | 133.66 | 123.35 | 128.87 | 140.83 | 161.93 | 180.02 | 181.43 | 181.15 | 186.34 | 179.67 | 160.66 | 155.43 |
| General farm overhead | 4.10 | 5.55 | 4.96 | 5.53 | 6.54 | 7.59 | 13.53 | 22.06 | 21.94 | 20.68 | 19.47 | 19.26 | 24.13 | 22.43 | 29.20 | 37.35 |
| Taxes and insurance | 11.45 | 11.76 | 12.37 | 13.28 | 16.09 | 15.27 | 16.15 | 19.82 | 20.52 | 19.62 | 20.87 | 23.43 | 19.54 | 19.04 | 24.06 | 26.38 |
| Interest | 8.13 | 11.82 | 10.15 | 11.29 | 17.08 | 18.10 | 30.30 | 48.45 | 47.50 | 44.86 | 45.43 | 44.96 | 46.52 | 44.30 | 39.82 | 40.46 |
| Total, fixed cash expenses | 23.68 | 29.13 | 27.48 | 30.10 | 39.71 | 40.96 | 59.98 | 90.33 | 89.96 | 85.16 | 85.77 | 87.65 | 90.19 | 85.77 | 93.08 | 104.19 |
| Total, cash expenses | 114.08 | 136.92 | 148.38 | 161.79 | 173.37 | 164.31 | 188.85 | 231.16 | 251.89 | 265.18 | 267.20 | 268.80 | 276.53 | 265.44 | 253.74 | 259.62 |
| Value of production less cash expenses | 26.31 | 37.50 | -21.63 | -42.76 | -38.64 | -17.40 | 55.70 | 121.14 | 55.02 | -4.54 | -11.71 | -21.62 | -17.75 | -11.05 | 11.73 | 51.63 |
| Capital replacement | 26.65 | 28.16 | 30.64 | 33.49 | 35.21 | 34.59 | 37.39 | 46.74 | 54.19 | 59.22 | 62.88 | 64.28 | 64.46 | 64.53 | 63.37 | 64.31 |
| Value of production less cash expenses and capital replacement | -0.34 | 9.34 | -52.27 | -76.25 | -73.85 | -51.99 | 18.31 | 74.40 | 0.83 | -63.76 | -74.59 | -85.90 | -82.21 | -75.58 | -51.64 | -12.68 |

Continued--

Appendix table 10--U.S. cow-calf production costs, all sizes of operation, 1972-87--Continued

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 90.40 | 107.79 | 120.90 | 131.69 | 133.66 | 123.35 | 128.87 | 140.83 | 161.93 | 180.02 | 181.43 | 181.15 | 186.34 | 179.67 | 160.66 | 155.43 |
| General farm overhead | 4.10 | 5.55 | 4.96 | 5.53 | 6.54 | 7.59 | 13.53 | 22.06 | 21.94 | 20.68 | 19.47 | 19.26 | 24.13 | 22.43 | 29.20 | 37.35 |
| Taxes and insurance | 11.45 | 11.76 | 12.37 | 13.28 | 16.09 | 15.27 | 16.15 | 19.82 | 20.52 | 19.62 | 20.87 | 23.43 | 19.54 | 19.04 | 24.06 | 26.38 |
| Capital replacement | 26.65 | 28.16 | 30.64 | 33.49 | 35.21 | 34.59 | 37.39 | 46.74 | 54.19 | 59.22 | 62.88 | 64.28 | 64.46 | 64.53 | 63.37 | 64.31 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 2.02 | 3.87 | 4.79 | 4.03 | 3.52 | 3.40 | 4.88 | 7.04 | 9.21 | 12.40 | 10.05 | 7.93 | 9.13 | 6.88 | 4.34 | 4.55 |
| Return to other nonland capital | 28.67 | 30.31 | 33.03 | 36.12 | 37.93 | 36.26 | 35.21 | 34.90 | 34.17 | 32.29 | 31.55 | 29.67 | 23.61 | 22.36 | 23.05 | 28.21 |
| Land | 26.93 | 31.87 | 45.00 | 54.40 | 61.81 | 69.09 | 73.03 | 81.78 | 92.95 | 94.57 | 92.86 | 83.72 | 66.15 | 54.86 | 56.21 | 61.56 |
| Unpaid labor (27.62 hr) | 18.21 | 20.42 | 23.95 | 25.41 | 28.37 | 37.42 | 45.58 | 55.24 | 65.29 | 72.11 | 71.71 | 74.68 | 76.73 | 78.27 | 82.56 | 82.30 |
| Total, economic costs | 208.43 | 239.72 | 275.64 | 303.95 | 323.13 | 326.97 | 354.64 | 408.41 | 460.20 | 490.91 | 490.82 | 484.12 | 470.09 | 448.04 | 443.45 | 460.09 |
| Residual returns to management and risk | -68.04 | -65.30 | -148.89 | -184.92 | -188.40 | -180.06 | -110.09 | -56.11 | -153.29 | -230.27 | -235.33 | -236.94 | -211.31 | -193.65 | -177.98 | -148.84 |
| Net returns to owned inputs | 7.79 | 21.16 | -42.12 | -64.96 | -56.77 | -33.89 | 48.61 | 122.85 | 48.33 | -18.90 | -29.16 | -40.94 | -35.69 | -31.28 | -11.82 | 27.78 |

Appendix table 11--U.S. cow-calf production costs, operations with 100 or fewer cows, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Steer calves (1.24 cwt) | 48.80 | 62.67 | 44.65 | 39.97 | 43.07 | 47.36 | 84.16 | 119.27 | 98.13 | 81.47 | 81.16 | 81.80 | 83.90 | 85.05 | 86.80 | 101.93 |
| Heifer calves (.85 cwt) | 27.84 | 35.76 | 25.48 | 22.81 | 24.56 | 27.02 | 48.01 | 68.04 | 55.98 | 46.13 | 46.35 | 46.25 | 46.94 | 48.68 | 50.96 | 53.62 |
| Yearling steers (.89 cwt) | 22.74 | 29.21 | 20.81 | 18.63 | 26.94 | 22.07 | 37.41 | 60.52 | 66.24 | 57.57 | 53.62 | 52.03 | 55.20 | 52.53 | 55.59 | 68.89 |
| Yearling heifers (.72 cwt) | 16.16 | 20.75 | 14.79 | 13.24 | 19.14 | 15.68 | 26.58 | 42.99 | 47.06 | 42.14 | 39.11 | 37.29 | 38.98 | 39.59 | 41.27 | 50.10 |
| Cull cows (.75 cwt) | 21.19 | 21.49 | 17.73 | 21.28 | 15.35 | 30.93 | 40.25 | 48.27 | 34.95 | 28.66 | 28.68 | 27.58 | 29.63 | 27.43 | 26.98 | 31.03 |
| Total | 136.73 | 169.88 | 123.45 | 115.92 | 129.06 | 143.06 | 236.41 | 339.09 | 302.36 | 255.97 | 248.92 | 244.95 | 254.65 | 253.28 | 261.60 | 305.57 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (2.17 cwt) | 4.87 | 7.88 | 12.17 | 11.25 | 10.37 | 8.46 | 8.17 | 8.49 | 10.58 | 10.04 | 8.68 | 11.25 | 11.69 | 9.84 | 7.92 | 6.32 |
| Silage (.27 ton) | 1.14 | 1.83 | 2.84 | 2.62 | 2.42 | 1.97 | 1.86 | 1.61 | 4.12 | 5.11 | 4.25 | 5.70 | 5.33 | 5.47 | 5.13 | 4.71 |
| Protein supplements (1.24 cwt) | 4.90 | 10.64 | 7.85 | 6.43 | 6.43 | 7.88 | 9.49 | 12.97 | 15.42 | 16.41 | 15.35 | 16.43 | 16.75 | 14.32 | 13.46 | 13.19 |
| Salt and minerals (.33 cwt) | 1.83 | 1.96 | 2.20 | 2.49 | 2.71 | 3.07 | 3.04 | 2.55 | 2.36 | 2.66 | 2.68 | 2.78 | 2.88 | 2.96 | 1.96 | 1.97 |
| Hay (1.40 ton) | 33.12 | 37.84 | 44.29 | 55.39 | 57.63 | 42.76 | 40.29 | 36.35 | 38.94 | 48.27 | 49.49 | 47.29 | 52.64 | 51.64 | 40.04 | 38.75 |
| Pasture | 29.19 | 33.52 | 34.58 | 34.61 | 35.39 | 35.18 | 36.56 | 41.40 | 30.82 | 32.82 | 33.59 | 31.50 | 33.62 | 30.81 | 27.97 | 25.97 |
| Public grazing | 0.12 | 0.14 | 0.18 | 0.18 | 0.26 | 0.26 | 0.23 | 0.26 | 0.32 | 0.35 | 0.36 | 0.33 | 0.36 | 0.34 | 0.36 | 0.37 |
| Total feed costs | 75.17 | 93.82 | 104.09 | 112.98 | 115.21 | 99.58 | 99.64 | 103.63 | 102.56 | 115.66 | 114.40 | 115.28 | 123.27 | 115.38 | 96.84 | 91.28 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 3.83 | 3.99 | 3.80 | 3.96 | 3.77 | 3.92 | 4.43 | 4.52 | 5.02 | 5.52 | 5.92 | 6.12 | 6.31 | 6.37 | 6.62 | 6.75 |
| Livestock hauling | 0.75 | 0.82 | 0.75 | 0.81 | 0.74 | 0.80 | 0.84 | 0.96 | 1.10 | 1.24 | 1.40 | 1.44 | 1.48 | 1.52 | 1.54 | 1.53 |
| Marketing | 2.67 | 2.83 | 2.65 | 2.81 | 2.63 | 2.79 | 3.24 | 3.85 | 4.10 | 4.16 | 4.35 | 4.48 | 4.65 | 4.75 | 4.68 | 4.79 |
| Custom feed mixing | 0.35 | 0.36 | 0.35 | 0.36 | 0.35 | 0.36 | 0.40 | 0.44 | 0.49 | 0.53 | 0.57 | 0.56 | 0.59 | 0.59 | 0.59 | 0.61 |
| Fuel, lube, electricity | 6.74 | 7.12 | 9.87 | 10.99 | 11.62 | 12.49 | 13.10 | 17.12 | 23.48 | 26.61 | 26.14 | 23.90 | 20.36 | 19.62 | 14.32 | 15.45 |
| Machinery and building repairs | 11.33 | 11.98 | 14.61 | 16.75 | 15.26 | 16.42 | 17.74 | 19.46 | 21.35 | 23.52 | 25.83 | 26.90 | 26.32 | 27.41 | 26.21 | 26.39 |
| Hired labor (1.39 hr) | 2.92 | 3.20 | 3.67 | 3.94 | 4.46 | 4.64 | 4.97 | 5.80 | 5.86 | 6.53 | 6.50 | 6.66 | 6.69 | 6.92 | 6.15 | 6.31 |
| Total, variable cash expenses | 103.75 | 124.12 | 139.78 | 152.59 | 154.04 | 141.00 | 144.36 | 155.78 | 163.96 | 183.77 | 185.11 | 185.34 | 189.67 | 182.56 | 156.95 | 153.11 |
| General farm overhead | 3.99 | 5.41 | 4.83 | 5.39 | 6.26 | 7.39 | 13.08 | 21.23 | 21.61 | 20.31 | 18.97 | 19.09 | 23.74 | 22.33 | 28.78 | 36.67 |
| Taxes and insurance | 11.77 | 12.09 | 12.72 | 13.65 | 16.54 | 15.70 | 16.89 | 20.34 | 21.81 | 21.33 | 22.91 | 26.35 | 22.25 | 21.56 | 27.31 | 29.20 |
| Interest | 7.92 | 11.51 | 9.89 | 10.99 | 16.36 | 17.63 | 29.29 | 46.63 | 46.80 | 44.06 | 44.26 | 44.55 | 45.78 | 44.11 | 39.24 | 39.72 |
| Total, fixed cash expenses | 23.68 | 29.01 | 27.43 | 30.03 | 39.17 | 40.72 | 59.26 | 88.21 | 90.22 | 85.70 | 86.14 | 89.99 | 91.77 | 88.00 | 95.33 | 105.59 |
| Total, cash expenses | 127.43 | 153.13 | 167.22 | 182.63 | 193.21 | 181.72 | 203.62 | 243.99 | 254.18 | 269.47 | 271.25 | 275.33 | 281.44 | 270.56 | 252.28 | 258.70 |
| Value of production less cash expenses | 9.30 | 16.76 | -43.77 | -66.71 | -64.15 | -38.66 | 32.79 | 95.10 | 48.18 | -13.50 | -22.33 | -30.38 | -26.79 | -17.28 | 9.32 | 46.87 |
| Capital replacement | 35.39 | 37.39 | 40.69 | 44.47 | 46.75 | 45.93 | 48.01 | 53.80 | 63.87 | 70.15 | 74.64 | 76.62 | 77.05 | 77.53 | 76.12 | 77.09 |
| Value of production less cash expenses and capital replacement | -26.09 | -20.63 | -84.46 | -111.18 | -110.90 | -84.59 | -15.22 | 41.30 | -15.69 | -83.65 | -96.97 | -107.00 | -103.84 | -94.81 | -66.80 | -30.22 |

Continued--

Appendix table 11--U.S. cow-calf production costs, operations with 100 or fewer cows, 1972-87--Continued

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 103.75 | 124.12 | 139.78 | 152.59 | 154.04 | 141.00 | 144.36 | 155.78 | 163.96 | 183.77 | 185.11 | 185.34 | 189.67 | 182.56 | 156.95 | 153.11 |
| General farm overhead | 3.99 | 5.41 | 4.83 | 5.39 | 6.26 | 7.39 | 13.08 | 21.23 | 21.61 | 20.31 | 18.97 | 19.09 | 23.74 | 22.33 | 28.78 | 36.67 |
| Taxes and insurance | 11.77 | 12.09 | 12.72 | 13.65 | 16.54 | 15.70 | 16.89 | 20.34 | 21.81 | 21.33 | 22.91 | 26.35 | 22.25 | 21.56 | 27.31 | 29.20 |
| Capital replacement | 35.39 | 37.39 | 40.69 | 44.47 | 46.75 | 45.93 | 48.01 | 53.80 | 63.87 | 70.15 | 74.64 | 76.62 | 77.05 | 77.53 | 76.12 | 77.09 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 2.32 | 4.45 | 5.54 | 4.67 | 4.06 | 3.88 | 5.47 | 7.79 | 9.32 | 12.66 | 10.26 | 8.11 | 9.29 | 6.99 | 4.24 | 4.49 |
| Return to other nonland capital | 32.26 | 34.10 | 37.17 | 40.64 | 42.68 | 40.80 | 39.62 | 39.27 | 38.45 | 36.33 | 35.51 | 33.39 | 26.57 | 25.16 | 26.00 | 31.64 |
| Land | 26.78 | 31.69 | 44.75 | 54.10 | 61.46 | 68.71 | 72.62 | 81.32 | 92.43 | 94.04 | 92.34 | 83.26 | 65.78 | 54.56 | 58.93 | 61.71 |
| Unpaid labor (37.75 hr) | 27.03 | 30.31 | 35.56 | 37.72 | 42.12 | 55.55 | 64.79 | 81.10 | 87.64 | 97.71 | 96.27 | 100.60 | 103.17 | 105.32 | 112.39 | 113.25 |
| Total, economic costs | 243.29 | 279.56 | 321.02 | 353.23 | 373.91 | 378.96 | 404.84 | 460.64 | 499.10 | 536.30 | 536.00 | 532.75 | 517.53 | 496.01 | 490.72 | 507.16 |
| Residual returns to management and risk | -106.56 | -109.68 | -197.58 | -237.31 | -244.86 | -235.90 | -168.43 | -121.55 | -196.74 | -280.33 | -287.08 | -287.80 | -262.88 | -242.73 | -229.12 | -201.59 |
| Net returns to owned inputs | -18.17 | -9.12 | -74.57 | -100.18 | -94.54 | -66.96 | 14.07 | 87.94 | 31.11 | -39.59 | -52.71 | -62.45 | -58.06 | -50.70 | -27.56 | 9.50 |

Appendix table 12--U.S. cow-calf production costs, operations with 100-499 cows, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Steer calves (1.07 cwt) | 37.30 | 47.90 | 34.13 | 30.55 | 32.92 | 36.20 | 73.41 | 111.83 | 87.46 | 72.97 | 71.78 | 72.02 | 73.57 | 75.39 | 74.18 | 86.96 |
| Heifer calves (.79 cwt) | 23.15 | 29.74 | 21.19 | 18.97 | 20.43 | 22.47 | 45.58 | 69.42 | 54.30 | 45.09 | 45.37 | 44.35 | 44.83 | 46.96 | 47.76 | 50.26 |
| Yearling steers (1.20 cwt) | 40.22 | 51.65 | 36.80 | 32.94 | 47.64 | 39.03 | 61.90 | 86.51 | 87.82 | 74.95 | 72.70 | 67.99 | 73.29 | 68.09 | 74.80 | 92.87 |
| Yearling heifers (.79 cwt) | 23.08 | 29.65 | 21.12 | 18.91 | 27.35 | 22.40 | 35.52 | 49.64 | 50.39 | 45.10 | 44.11 | 39.69 | 42.84 | 41.17 | 45.88 | 55.74 |
| Cull cows (.88 cwt) | 22.69 | 23.01 | 18.99 | 22.78 | 16.44 | 33.12 | 45.84 | 50.86 | 37.01 | 31.32 | 31.66 | 29.83 | 31.96 | 30.00 | 31.14 | 35.74 |
| Total | 146.44 | 181.95 | 132.22 | 124.15 | 144.76 | 153.22 | 262.25 | 368.26 | 316.98 | 269.43 | 265.62 | 253.88 | 266.49 | 261.61 | 273.76 | 321.57 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (2.42 cwt) | 1.92 | 3.11 | 4.81 | 4.44 | 4.10 | 3.34 | 5.36 | 8.93 | 11.99 | 10.67 | 9.89 | 12.77 | 13.53 | 11.16 | 9.07 | 7.44 |
| Silage (.39 ton) | 0.77 | 1.25 | 1.93 | 1.78 | 1.65 | 1.34 | 2.14 | 6.01 | 6.63 | 7.80 | 6.66 | 8.80 | 8.34 | 8.73 | 7.44 | 6.80 |
| Protein supplements (1.83 cwt) | 3.37 | 7.34 | 5.41 | 4.43 | 4.43 | 5.43 | 8.01 | 12.12 | 20.50 | 21.21 | 20.54 | 21.29 | 21.77 | 18.74 | 19.95 | 19.46 |
| Salt and minerals (.34 cwt) | 1.22 | 1.30 | 1.46 | 1.66 | 1.80 | 2.04 | 2.10 | 1.48 | 1.91 | 2.17 | 2.13 | 2.23 | 2.34 | 2.41 | 1.94 | 1.95 |
| Hay (1.24 ton) | 22.20 | 25.36 | 29.68 | 37.13 | 38.63 | 28.66 | 26.36 | 24.28 | 26.12 | 34.53 | 35.75 | 32.43 | 36.46 | 37.57 | 28.39 | 26.21 |
| Pasture | 17.94 | 20.60 | 21.25 | 21.27 | 21.75 | 21.62 | 24.05 | 28.46 | 39.12 | 39.90 | 42.11 | 39.14 | 42.42 | 39.64 | 39.03 | 35.88 |
| Public grazing | 1.50 | 1.74 | 2.22 | 2.22 | 3.27 | 3.27 | 2.65 | 2.39 | 1.08 | 1.20 | 1.17 | 0.95 | 1.07 | 1.01 | 1.07 | 1.12 |
| Crop residue | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.23 | 0.22 | 0.20 | 0.22 | 0.22 | 0.22 | 0.25 | 0.26 | 0.23 | 0.27 | 0.23 |
| Total feed costs | 49.12 | 60.90 | 66.95 | 73.13 | 75.81 | 65.93 | 70.89 | 83.87 | 107.57 | 117.70 | 118.47 | 117.86 | 126.19 | 119.49 | 107.16 | 99.09 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 4.09 | 4.26 | 4.06 | 4.23 | 4.03 | 4.19 | 4.73 | 4.82 | 5.36 | 5.81 | 6.23 | 6.43 | 6.67 | 6.76 | 7.06 | 7.16 |
| Livestock hauling | 1.06 | 1.16 | 1.06 | 1.15 | 1.05 | 1.14 | 1.21 | 1.38 | 1.58 | 2.31 | 1.78 | 1.82 | 1.89 | 1.94 | 1.96 | 1.94 |
| Marketing | 2.57 | 2.72 | 2.55 | 2.70 | 2.52 | 2.68 | 3.11 | 3.70 | 3.94 | 3.96 | 3.66 | 3.76 | 3.74 | 3.84 | 3.82 | 3.88 |
| Custom feed mixing | 0.32 | 0.33 | 0.32 | 0.33 | 0.32 | 0.33 | 0.37 | 0.41 | 0.46 | 0.49 | 0.56 | 0.49 | 0.50 | 0.50 | 0.48 | 0.49 |
| Fuel, lube, electricity | 4.61 | 4.87 | 6.75 | 7.52 | 7.96 | 8.55 | 8.97 | 11.72 | 16.07 | 18.12 | 17.69 | 16.45 | 13.93 | 13.42 | 10.65 | 11.30 |
| Machinery and building repairs | 7.26 | 7.68 | 9.36 | 10.73 | 9.77 | 10.52 | 11.37 | 12.47 | 13.68 | 15.11 | 16.83 | 17.64 | 17.28 | 18.12 | 17.98 | 18.05 |
| Hired labor (4.39 hr) | 6.87 | 7.51 | 8.62 | 9.26 | 10.49 | 10.90 | 11.81 | 13.02 | 15.57 | 18.73 | 17.14 | 17.76 | 18.02 | 18.30 | 19.62 | 19.65 |
| Total, variable cash expenses | 75.90 | 89.44 | 99.67 | 109.06 | 111.96 | 104.24 | 112.46 | 131.39 | 164.23 | 182.23 | 182.36 | 182.21 | 188.22 | 182.37 | 168.73 | 161.56 |
| General farm overhead | 4.28 | 5.79 | 5.17 | 5.77 | 7.03 | 7.92 | 14.51 | 23.06 | 22.66 | 21.38 | 20.24 | 19.78 | 24.85 | 23.07 | 30.11 | 38.59 |
| Taxes and insurance | 10.90 | 11.20 | 11.78 | 12.65 | 15.32 | 14.54 | 15.11 | 19.15 | 18.62 | 17.52 | 18.42 | 20.24 | 16.43 | 16.43 | 22.77 | 26.00 |
| Interest | 8.48 | 12.33 | 10.59 | 11.78 | 18.35 | 18.88 | 32.49 | 50.64 | 49.06 | 46.37 | 47.23 | 46.18 | 47.91 | 45.56 | 41.06 | 41.80 |
| Total, fixed cash expenses | 23.66 | 29.32 | 27.54 | 30.19 | 40.70 | 41.33 | 62.11 | 92.85 | 90.34 | 85.27 | 85.89 | 86.20 | 89.18 | 85.05 | 93.95 | 106.39 |
| Total, cash expenses | 99.56 | 118.76 | 127.21 | 139.25 | 152.66 | 145.57 | 174.57 | 224.24 | 254.57 | 267.50 | 268.25 | 268.41 | 277.40 | 267.42 | 262.68 | 267.95 |
| Value of production less cash expenses | 46.88 | 63.20 | 5.01 | -15.09 | -7.89 | 7.65 | 87.68 | 144.02 | 62.41 | 1.93 | -2.63 | -14.53 | -10.91 | -5.81 | 11.08 | 53.62 |
| Capital replacement | 19.79 | 20.91 | 22.75 | 24.86 | 26.14 | 25.68 | 25.30 | 30.84 | 44.14 | 48.45 | 52.13 | 53.45 | 53.23 | 52.83 | 52.44 | 53.31 |
| Value of production less cash expenses and capital replacement | 27.10 | 42.29 | -17.74 | -39.96 | -34.03 | -18.03 | 62.38 | 113.18 | 18.27 | -46.52 | -54.76 | -67.98 | -64.14 | -58.64 | -41.36 | 0.31 |

Continued--

Appendix table 12--U.S. cow-calf production costs, operations with 100-499 cows, 1972-87--Continued

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 75.90 | 89.44 | 99.67 | 109.06 | 111.96 | 104.24 | 112.46 | 131.39 | 164.23 | 182.23 | 182.36 | 182.21 | 188.22 | 182.37 | 168.73 | 161.56 |
| General farm overhead | 4.28 | 5.79 | 5.17 | 5.77 | 7.03 | 7.92 | 14.51 | 23.06 | 22.66 | 21.38 | 20.24 | 19.78 | 24.85 | 23.07 | 30.11 | 38.59 |
| Taxes and insurance | 10.90 | 11.20 | 11.78 | 12.65 | 15.32 | 14.54 | 15.11 | 19.15 | 18.62 | 17.52 | 18.42 | 20.24 | 16.43 | 16.43 | 22.77 | 26.00 |
| Capital replacement | 19.79 | 20.91 | 22.75 | 24.86 | 26.14 | 25.68 | 25.30 | 30.84 | 44.14 | 48.45 | 52.13 | 53.45 | 53.23 | 52.83 | 52.44 | 53.31 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 1.69 | 3.21 | 3.95 | 3.34 | 2.95 | 2.87 | 4.26 | 6.57 | 9.34 | 12.55 | 10.11 | 7.97 | 9.22 | 6.98 | 4.56 | 4.73 |
| Return to other nonland capital | 25.38 | 26.82 | 29.23 | 31.96 | 33.57 | 32.09 | 31.16 | 30.89 | 30.24 | 28.58 | 27.93 | 26.26 | 20.90 | 19.79 | 20.42 | 25.12 |
| Land | 24.48 | 28.98 | 40.91 | 49.46 | 56.19 | 62.81 | 66.39 | 74.35 | 84.50 | 85.98 | 84.41 | 76.11 | 60.14 | 49.88 | 57.99 | 68.22 |
| Unpaid labor (20.68 hr) | 11.16 | 12.51 | 14.68 | 15.57 | 17.38 | 22.93 | 29.04 | 35.89 | 47.74 | 52.44 | 53.46 | 55.72 | 57.90 | 58.71 | 62.74 | 60.50 |
| Total, economic costs | 173.58 | 198.85 | 228.14 | 252.66 | 270.53 | 273.08 | 298.23 | 352.14 | 421.47 | 449.13 | 449.06 | 441.75 | 430.89 | 410.06 | 419.76 | 438.03 |
| Residual returns to management and risk | -27.14 | -16.90 | -95.92 | -128.51 | -125.77 | -119.86 | -35.98 | 16.12 | -104.49 | -179.70 | -183.44 | -187.87 | -164.40 | -148.45 | -146.00 | -116.46 |
| Net returns to owned inputs | 35.58 | 54.62 | -7.15 | -28.18 | -15.68 | 0.84 | 94.87 | 163.82 | 67.33 | -0.15 | -7.53 | -21.80 | -16.24 | -13.09 | -0.29 | 42.11 |

Appendix table 13--U.S. cow-calf production costs, operations with 500 or more cows, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Steer calves (.81 cwt) | 41.13 | 52.83 | 37.63 | 33.69 | 36.30 | 39.92 | 63.49 | 81.51 | 62.11 | 52.43 | 51.65 | 51.76 | 52.97 | 53.82 | 55.25 | 65.24 |
| Heifer calves (.62 cwt) | 26.24 | 33.71 | 24.01 | 21.50 | 23.15 | 25.47 | 40.52 | 52.02 | 39.64 | 33.10 | 33.15 | 32.76 | 33.06 | 34.69 | 36.35 | 38.47 |
| Yearling steers (1.45 cwt) | 32.25 | 41.42 | 29.51 | 26.42 | 38.20 | 31.30 | 60.72 | 101.22 | 107.32 | 92.17 | 91.49 | 82.63 | 91.16 | 82.10 | 89.79 | 110.77 |
| Yearling heifers (.87 cwt) | 16.74 | 21.49 | 15.31 | 13.71 | 19.83 | 16.24 | 31.50 | 52.52 | 55.68 | 49.64 | 50.26 | 43.46 | 48.15 | 45.13 | 49.84 | 60.11 |
| Cull cows (.87 cwt) | 22.36 | 22.68 | 18.71 | 22.45 | 16.20 | 32.64 | 43.80 | 51.79 | 37.84 | 32.12 | 32.27 | 30.17 | 31.92 | 30.30 | 30.62 | 35.30 |
| Total | 138.73 | 172.13 | 125.18 | 117.77 | 133.68 | 145.57 | 240.03 | 339.06 | 302.59 | 259.46 | 258.82 | 240.78 | 257.26 | 246.04 | 261.85 | 309.89 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (.79 cwt) | 1.31 | 2.12 | 3.28 | 3.03 | 2.80 | 2.28 | 2.10 | 2.30 | 3.87 | 4.08 | 3.18 | 3.77 | 3.82 | 3.47 | 3.39 | 2.99 |
| Silage (.14 ton) | 0.78 | 1.26 | 1.94 | 1.80 | 1.66 | 1.35 | 1.24 | 1.26 | 1.77 | 1.93 | 1.76 | 2.22 | 1.96 | 2.06 | 2.67 | 2.51 |
| Protein supplements (1.54 cwt) | 4.09 | 8.89 | 6.55 | 5.37 | 5.37 | 6.58 | 9.14 | 11.60 | 17.58 | 18.65 | 17.44 | 17.68 | 19.23 | 16.35 | 15.73 | 15.46 |
| Salt and minerals (.34 cwt) | 0.99 | 1.06 | 1.19 | 1.35 | 1.46 | 1.66 | 1.68 | 1.69 | 1.67 | 1.94 | 1.92 | 2.19 | 2.24 | 2.31 | 1.98 | 2.00 |
| Hay (.69 ton) | 20.38 | 23.29 | 27.26 | 34.10 | 35.47 | 26.32 | 21.79 | 17.46 | 16.92 | 20.84 | 22.07 | 20.73 | 22.36 | 20.90 | 19.60 | 18.23 |
| Pasture | 19.79 | 22.72 | 23.44 | 23.46 | 23.99 | 23.85 | 24.34 | 25.17 | 48.98 | 52.11 | 54.05 | 50.11 | 54.57 | 51.50 | 48.45 | 44.25 |
| Public grazing | 1.04 | 1.20 | 1.53 | 1.53 | 2.26 | 2.26 | 1.75 | 1.58 | 1.25 | 1.38 | 1.32 | 1.21 | 1.25 | 1.18 | 1.08 | 1.11 |
| Total feed costs | 48.38 | 60.55 | 65.20 | 70.64 | 73.01 | 64.30 | 62.04 | 61.06 | 92.04 | 100.93 | 101.74 | 97.91 | 105.43 | 97.77 | 92.90 | 86.55 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 3.40 | 3.54 | 3.37 | 3.52 | 3.35 | 3.48 | 3.92 | 4.01 | 4.45 | 4.87 | 5.15 | 5.31 | 5.46 | 5.53 | 5.51 | 5.62 |
| Livestock hauling | 1.53 | 1.67 | 1.53 | 1.66 | 1.51 | 1.64 | 1.73 | 1.98 | 2.26 | 2.56 | 2.70 | 2.75 | 2.85 | 2.96 | 2.86 | 2.84 |
| Marketing | 1.50 | 1.59 | 1.49 | 1.58 | 1.48 | 1.57 | 1.82 | 2.17 | 2.31 | 2.45 | 2.60 | 2.67 | 2.75 | 2.88 | 2.98 | 3.06 |
| Custom feed mixing | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.12 | 0.12 |
| Fuel, lube, electricity | 2.51 | 2.66 | 3.68 | 4.10 | 4.34 | 4.66 | 4.89 | 6.39 | 8.76 | 10.17 | 9.92 | 9.12 | 7.70 | 7.50 | 5.76 | 6.08 |
| Machinery and building repairs | 5.84 | 6.17 | 7.53 | 8.63 | 7.86 | 8.46 | 9.14 | 10.03 | 11.00 | 11.89 | 12.26 | 13.01 | 12.73 | 13.21 | 13.36 | 13.31 |
| Hired labor (7.19 hr) | 8.93 | 9.77 | 11.20 | 12.04 | 13.63 | 14.17 | 15.42 | 20.70 | 27.24 | 29.10 | 29.99 | 31.01 | 31.60 | 32.15 | 33.05 | 32.95 |
| Total, variable cash expenses | 72.10 | 85.97 | 94.01 | 102.17 | 105.19 | 98.29 | 98.98 | 106.36 | 148.08 | 161.99 | 164.38 | 161.80 | 168.54 | 162.02 | 156.54 | 150.53 |
| General farm overhead | 4.05 | 5.48 | 4.90 | 5.47 | 6.49 | 7.52 | 13.28 | 21.23 | 21.63 | 20.59 | 19.72 | 18.76 | 23.99 | 21.69 | 28.80 | 37.19 |
| Taxes and insurance | 11.15 | 11.45 | 12.05 | 12.93 | 15.67 | 14.87 | 15.78 | 18.11 | 19.42 | 17.64 | 18.24 | 19.08 | 16.17 | 15.75 | 15.08 | 16.96 |
| Interest | 8.03 | 11.66 | 10.02 | 11.17 | 16.95 | 17.93 | 29.74 | 46.63 | 46.83 | 44.66 | 46.02 | 43.80 | 46.25 | 42.85 | 39.28 | 40.28 |
| Total, fixed cash expenses | 23.24 | 28.59 | 26.97 | 29.57 | 39.10 | 40.33 | 58.80 | 85.97 | 87.88 | 82.88 | 83.99 | 81.64 | 86.41 | 80.29 | 83.16 | 94.43 |
| Total, cash expenses | 95.34 | 114.56 | 120.98 | 131.75 | 144.29 | 138.62 | 157.78 | 192.33 | 235.96 | 244.87 | 248.37 | 243.44 | 254.95 | 242.31 | 239.70 | 244.96 |
| Value of production less cash expenses | 43.39 | 57.57 | 4.20 | -13.98 | -10.62 | 6.95 | 82.25 | 146.73 | 66.63 | 14.59 | 10.45 | -2.66 | 2.31 | 3.73 | 22.15 | 64.93 |
| Capital replacement | 14.54 | 15.36 | 16.72 | 18.27 | 19.21 | 18.87 | 21.20 | 29.34 | 36.83 | 39.60 | 39.86 | 39.78 | 40.70 | 36.76 | 40.49 | 41.34 |
| Value of production less cash expenses and capital replacement | 28.85 | 42.21 | -12.51 | -32.25 | -29.82 | -11.92 | 61.05 | 117.39 | 29.80 | -25.01 | -29.41 | -42.44 | -38.39 | -33.03 | -18.34 | 23.59 |

Continued--

Appendix table 13--U.S. cow-calf production costs, operations with 500 or more cows, 1972-87--Continued

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 72.10 | 85.97 | 94.01 | 102.17 | 105.19 | 98.29 | 98.98 | 106.36 | 148.08 | 161.99 | 164.38 | 161.80 | 168.54 | 162.02 | 156.54 | 150.53 |
| General farm overhead | 4.05 | 5.48 | 4.90 | 5.47 | 6.49 | 7.52 | 13.28 | 21.23 | 21.63 | 20.59 | 19.72 | 18.76 | 23.99 | 21.69 | 28.80 | 37.19 |
| Taxes and insurance | 11.15 | 11.45 | 12.05 | 12.93 | 15.67 | 14.87 | 15.78 | 18.11 | 19.42 | 17.64 | 18.24 | 19.08 | 16.17 | 15.75 | 15.08 | 16.96 |
| Capital replacement | 14.54 | 15.36 | 16.72 | 18.27 | 19.21 | 18.87 | 21.20 | 29.34 | 36.83 | 39.60 | 39.86 | 39.78 | 40.70 | 36.76 | 40.49 | 41.34 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 1.61 | 3.09 | 3.73 | 3.13 | 2.77 | 2.71 | 3.75 | 5.32 | 8.42 | 11.16 | 9.11 | 7.08 | 8.26 | 6.21 | 4.23 | 4.41 |
| Return to other nonland capital | 22.03 | 23.29 | 25.38 | 27.75 | 29.14 | 27.86 | 27.05 | 26.81 | 26.25 | 24.81 | 24.24 | 22.80 | 18.14 | 17.18 | 17.99 | 22.29 |
| Land | 33.22 | 39.32 | 55.51 | 67.11 | 76.24 | 85.23 | 90.09 | 100.88 | 114.66 | 116.66 | 114.54 | 103.28 | 81.60 | 67.68 | 42.37 | 46.68 |
| Unpaid labor (5.76 hr) | 4.46 | 5.00 | 5.87 | 6.23 | 6.95 | 9.17 | 9.17 | 10.99 | 12.65 | 13.58 | 14.03 | 14.49 | 15.46 | 15.75 | 16.90 | 16.48 |
| Total, economic costs | 163.17 | 188.95 | 218.15 | 243.06 | 261.67 | 264.52 | 279.29 | 319.04 | 387.94 | 406.03 | 404.13 | 387.07 | 372.86 | 343.04 | 322.40 | 335.88 |
| Residual returns to management and risk | -24.44 | -16.82 | -92.97 | -125.29 | -127.99 | -118.95 | -39.26 | 20.02 | -85.35 | -146.57 | -145.31 | -146.29 | -115.60 | -97.00 | -60.55 | -25.99 |
| Net returns to owned inputs | 36.88 | 53.87 | -2.49 | -21.08 | -12.88 | 6.02 | 90.79 | 164.02 | 76.63 | 19.64 | 16.62 | 1.36 | 7.86 | 9.82 | 20.94 | 63.87 |

Appendix table 14--Cow-calf production costs, all sizes of operation, Great Plains, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cow | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Steer calves (1.05 cwt) | 38.07 | 48.90 | 34.83 | 31.19 | 33.60 | 36.95 | 67.48 | 97.98 | 82.72 | 70.94 | 69.90 | 71.51 | 72.30 | 75.73 | 72.70 | 85.30 |
| Heifer calves (.82 cwt) | 25.26 | 32.45 | 23.12 | 20.70 | 22.29 | 24.52 | 44.77 | 65.00 | 54.88 | 46.75 | 47.30 | 46.87 | 47.39 | 50.24 | 50.86 | 53.45 |
| Yearling steers (1.22 cwt) | 40.75 | 52.33 | 37.28 | 33.37 | 48.26 | 39.54 | 65.95 | 96.72 | 96.07 | 80.59 | 78.29 | 70.70 | 79.17 | 71.04 | 78.88 | 97.86 |
| Yearling heifers (.85 cwt) | 23.78 | 30.55 | 21.76 | 19.48 | 28.18 | 23.08 | 38.49 | 56.45 | 56.07 | 50.69 | 50.44 | 42.90 | 47.97 | 45.35 | 50.70 | 61.66 |
| Cull cows (.62 cwt) | 20.79 | 21.09 | 17.40 | 20.88 | 15.06 | 30.35 | 41.91 | 43.80 | 26.13 | 22.09 | 22.50 | 20.58 | 22.32 | 21.39 | 21.53 | 24.68 |
| Total | 148.66 | 185.31 | 134.40 | 125.62 | 147.39 | 154.44 | 258.60 | 359.95 | 315.87 | 271.06 | 268.43 | 252.56 | 269.15 | 263.75 | 274.67 | 322.95 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (1.86 cwt) | 1.09 | 1.76 | 2.72 | 2.51 | 2.32 | 1.89 | 3.85 | 6.19 | 7.17 | 7.56 | 6.95 | 9.27 | 9.93 | 8.20 | 6.56 | 5.97 |
| Silage (.38 ton) | 1.49 | 2.40 | 3.71 | 3.44 | 3.17 | 2.58 | 2.95 | 4.00 | 5.97 | 7.08 | 5.97 | 8.05 | 8.37 | 8.92 | 7.66 | 6.89 |
| Protein supplements (2.28 cwt) | 5.50 | 11.96 | 8.81 | 7.22 | 7.22 | 8.85 | 13.23 | 17.78 | 24.80 | 26.77 | 24.83 | 27.10 | 27.79 | 23.21 | 23.78 | 23.25 |
| Salt and minerals (.35 cwt) | 1.07 | 1.14 | 1.28 | 1.45 | 1.58 | 1.79 | 1.91 | 2.07 | 1.44 | 1.72 | 1.44 | 1.68 | 1.90 | 1.93 | 1.94 | 1.95 |
| Hay (1.09 ton) | 18.59 | 21.24 | 24.86 | 31.09 | 32.34 | 24.00 | 21.90 | 20.69 | 23.06 | 32.55 | 33.29 | 32.34 | 33.73 | 42.63 | 26.06 | 24.09 |
| Pasture | 15.38 | 17.66 | 18.21 | 18.23 | 18.64 | 18.53 | 19.96 | 21.71 | 32.62 | 29.60 | 33.90 | 29.43 | 35.13 | 33.23 | 33.52 | 30.29 |
| Public grazing | 1.09 | 1.27 | 1.62 | 1.62 | 2.38 | 2.38 | 1.86 | 1.49 | 0.81 | 0.88 | 0.89 | 0.74 | 0.90 | 0.85 | 0.86 | 0.91 |
| Crop residue | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.20 | 0.18 | 0.17 | 0.19 | 0.19 | 0.19 | 0.21 | 0.22 | 0.20 | 0.22 | 0.18 |
| Total feed costs | 44.37 | 57.60 | 61.38 | 65.73 | 67.82 | 60.22 | 65.84 | 74.10 | 96.06 | 106.35 | 107.46 | 108.82 | 117.97 | 119.17 | 100.60 | 93.53 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 3.57 | 3.71 | 3.54 | 3.69 | 3.51 | 3.65 | 3.94 | 4.38 | 4.97 | 5.43 | 5.85 | 6.04 | 6.30 | 6.38 | 6.57 | 6.68 |
| Livestock hauling | 0.89 | 0.98 | 0.89 | 0.97 | 0.88 | 0.96 | 1.01 | 1.16 | 1.34 | 1.97 | 1.55 | 1.57 | 1.63 | 1.69 | 1.65 | 1.64 |
| Marketing | 3.01 | 3.19 | 2.98 | 3.16 | 2.96 | 3.14 | 3.38 | 3.76 | 4.27 | 4.62 | 4.54 | 4.68 | 4.75 | 4.91 | 5.03 | 5.12 |
| Custom feed mixing | 0.39 | 0.40 | 0.39 | 0.40 | 0.39 | 0.40 | 0.43 | 0.48 | 0.53 | 0.56 | 0.64 | 0.53 | 0.53 | 0.54 | 0.56 | 0.57 |
| Fuel, lube, electricity | 5.76 | 6.08 | 8.43 | 9.39 | 9.93 | 10.67 | 11.19 | 14.62 | 20.06 | 22.61 | 22.21 | 20.67 | 17.69 | 17.08 | 11.97 | 13.31 |
| Machinery and building repairs | 7.75 | 8.19 | 9.99 | 11.45 | 10.43 | 11.23 | 12.13 | 13.31 | 14.60 | 16.28 | 18.67 | 19.54 | 19.23 | 20.38 | 19.72 | 19.78 |
| Hired labor (3.03 hr) | 6.14 | 6.72 | 7.71 | 8.29 | 9.38 | 9.75 | 10.14 | 10.72 | 10.37 | 12.59 | 11.52 | 11.85 | 11.93 | 11.43 | 12.61 | 12.82 |
| Total, variable cash expenses | 71.87 | 86.87 | 95.31 | 103.08 | 105.31 | 100.02 | 108.06 | 122.53 | 152.20 | 170.41 | 172.44 | 173.70 | 180.03 | 181.58 | 158.71 | 153.45 |
| General farm overhead | 4.34 | 5.90 | 5.26 | 5.84 | 7.15 | 7.98 | 14.31 | 22.54 | 22.58 | 21.51 | 20.46 | 19.68 | 25.10 | 23.26 | 30.21 | 38.75 |
| Taxes and insurance | 9.96 | 10.23 | 10.76 | 11.55 | 13.99 | 13.28 | 15.70 | 17.94 | 17.43 | 16.81 | 17.35 | 18.28 | 12.98 | 12.80 | 19.33 | 22.25 |
| Interest | 8.61 | 12.56 | 10.76 | 11.91 | 18.68 | 19.03 | 32.04 | 49.50 | 48.89 | 46.65 | 47.73 | 45.94 | 48.38 | 45.93 | 41.20 | 41.98 |
| Total, fixed cash expenses | 22.91 | 28.68 | 26.78 | 29.30 | 39.83 | 40.29 | 62.05 | 89.98 | 88.90 | 84.97 | 85.54 | 83.90 | 86.46 | 81.99 | 90.74 | 102.98 |
| Total, cash expenses | 94.78 | 115.56 | 122.09 | 132.38 | 145.14 | 140.31 | 170.11 | 212.51 | 241.10 | 255.38 | 257.98 | 257.60 | 266.49 | 263.57 | 249.45 | 256.43 |
| Value of production less cash expenses | 53.88 | 69.75 | 12.30 | -6.76 | 2.25 | 14.13 | 88.49 | 147.44 | 74.77 | 15.68 | 10.45 | -5.04 | 2.66 | 0.18 | 25.22 | 66.52 |
| Capital replacement | 22.87 | 24.16 | 26.29 | 28.74 | 30.21 | 29.68 | 33.30 | 40.72 | 48.47 | 53.67 | 56.90 | 58.25 | 58.11 | 56.88 | 56.12 | 57.45 |
| Value of production less cash expenses and capital replacement | 31.01 | 45.59 | -13.99 | -35.50 | -27.97 | -15.55 | 55.19 | 106.72 | 26.30 | -37.99 | -46.45 | -63.29 | -55.45 | -56.70 | -30.90 | 9.07 |

Continued--

Appendix table 14--Cow-calf production costs, all sizes of operation, Great Plains, 1972-87--Continued

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 71.87 | 86.87 | 95.31 | 103.08 | 105.31 | 100.02 | 108.06 | 122.53 | 152.20 | 170.41 | 172.44 | 173.70 | 180.03 | 181.58 | 158.71 | 153.45 |
| General farm overhead | 4.34 | 5.90 | 5.26 | 5.84 | 7.15 | 7.98 | 14.31 | 22.54 | 22.58 | 21.51 | 20.46 | 19.68 | 25.10 | 23.26 | 30.21 | 38.75 |
| Taxes and insurance | 9.96 | 10.23 | 10.76 | 11.55 | 13.99 | 13.28 | 15.70 | 17.94 | 17.43 | 16.81 | 17.35 | 18.28 | 12.98 | 12.80 | 19.33 | 22.25 |
| Capital replacement | 22.87 | 24.16 | 26.29 | 28.74 | 30.21 | 29.68 | 33.30 | 40.72 | 48.47 | 53.67 | 56.90 | 58.25 | 58.11 | 56.88 | 56.12 | 57.45 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 1.60 | 3.12 | 3.78 | 3.16 | 2.77 | 2.76 | 4.09 | 6.13 | 8.66 | 11.74 | 9.56 | 7.60 | 8.82 | 6.95 | 4.28 | 4.50 |
| Return to other nonland capital | 25.97 | 27.45 | 29.91 | 32.71 | 34.35 | 32.84 | 31.89 | 31.61 | 30.94 | 29.24 | 28.58 | 26.87 | 21.39 | 20.25 | 21.05 | 25.81 |
| Land | 26.71 | 31.38 | 46.37 | 59.11 | 66.87 | 72.36 | 76.23 | 85.89 | 94.69 | 95.17 | 97.02 | 89.56 | 71.94 | 60.00 | 54.68 | 61.78 |
| Unpaid labor (22.69 hr) | 13.33 | 14.95 | 17.54 | 18.61 | 20.77 | 27.40 | 28.15 | 33.42 | 57.93 | 62.82 | 65.08 | 67.11 | 68.41 | 69.53 | 72.75 | 72.51 |
| Total, economic costs | 176.66 | 204.05 | 235.22 | 262.78 | 281.43 | 286.31 | 311.73 | 360.78 | 432.90 | 461.36 | 467.38 | 461.05 | 446.78 | 431.25 | 417.13 | 436.50 |
| Residual returns to management and risk | -28.00 | -18.74 | -100.82 | -137.16 | -134.05 | -131.87 | -53.13 | -0.83 | -117.03 | -190.30 | -198.95 | -208.49 | -177.63 | -167.50 | -142.46 | -113.55 |
| Net returns to owned inputs | 39.62 | 58.15 | -3.23 | -23.58 | -9.28 | 3.48 | 87.23 | 156.22 | 75.19 | 8.66 | 1.28 | -17.35 | -7.07 | -10.77 | 10.30 | 51.05 |

Appendix table 15--Cow-calf production costs, all sizes of operation, North Central, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Steer calves (1.21 cwt) | 46.20 | 59.34 | 42.27 | 37.84 | 40.77 | 44.84 | 70.43 | 112.83 | 96.67 | 79.36 | 79.81 | 81.05 | 82.15 | 79.25 | 84.03 | 98.57 |
| Heifer calves (.74 cwt) | 24.21 | 31.10 | 22.16 | 19.84 | 21.36 | 23.50 | 36.92 | 59.14 | 50.67 | 40.53 | 40.42 | 41.30 | 40.99 | 40.84 | 44.03 | 46.31 |
| Yearling steers (.96 cwt) | 32.79 | 42.11 | 30.00 | 26.86 | 38.84 | 31.82 | 47.40 | 72.19 | 79.07 | 69.02 | 58.19 | 62.55 | 62.75 | 65.88 | 59.93 | 74.63 |
| Yearling heifers (.81 cwt) | 24.76 | 31.80 | 22.66 | 20.29 | 29.34 | 24.03 | 35.81 | 54.54 | 59.73 | 51.91 | 43.41 | 46.66 | 47.05 | 49.34 | 45.03 | 54.87 |
| Cull cows (1 cwt) | 24.30 | 24.65 | 20.33 | 24.40 | 17.60 | 35.47 | 48.53 | 61.63 | 43.66 | 34.80 | 35.14 | 35.64 | 39.77 | 34.46 | 36.70 | 42.35 |
| Total | 152.27 | 189.00 | 137.42 | 129.22 | 147.91 | 159.66 | 239.09 | 360.33 | 329.80 | 275.62 | 256.97 | 267.20 | 272.71 | 269.77 | 269.72 | 316.73 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (2.42 cwt) | 9.00 | 14.55 | 22.48 | 20.77 | 19.15 | 15.62 | 12.76 | 11.88 | 12.27 | 11.89 | 9.50 | 12.23 | 12.36 | 10.42 | 8.12 | 5.93 |
| Silage (.45 ton) | 3.10 | 5.00 | 7.73 | 7.15 | 6.60 | 5.37 | 3.77 | 3.74 | 7.48 | 9.83 | 8.05 | 10.54 | 8.95 | 9.00 | 7.80 | 7.26 |
| Protein supplements (1.02 cwt) | 3.32 | 7.21 | 5.32 | 4.36 | 4.36 | 5.34 | 6.34 | 8.64 | 12.53 | 12.76 | 12.18 | 13.11 | 12.79 | 11.40 | 12.45 | 12.11 |
| Salt and minerals (.32 cwt) | 2.93 | 3.14 | 3.53 | 3.99 | 4.34 | 4.92 | 4.43 | 3.78 | 3.20 | 3.60 | 3.81 | 3.89 | 3.99 | 4.08 | 1.99 | 2.00 |
| Hay (1.46 ton) | 37.62 | 42.98 | 50.30 | 62.92 | 65.46 | 48.57 | 51.41 | 47.15 | 41.16 | 47.00 | 47.38 | 45.21 | 56.48 | 46.07 | 40.33 | 41.26 |
| Pasture | 26.73 | 30.69 | 31.66 | 31.69 | 32.41 | 32.21 | 53.19 | 61.18 | 14.90 | 16.39 | 16.59 | 16.14 | 17.34 | 14.36 | 14.11 | 12.61 |
| Total feed costs | 82.70 | 103.58 | 121.01 | 130.89 | 132.31 | 112.03 | 131.90 | 136.37 | 91.54 | 101.47 | 97.51 | 101.12 | 111.91 | 95.33 | 84.80 | 81.17 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 4.18 | 4.36 | 4.15 | 4.32 | 4.12 | 4.28 | 4.39 | 4.70 | 5.04 | 5.50 | 5.76 | 5.96 | 6.08 | 6.14 | 6.30 | 6.43 |
| Livestock hauling | 1.06 | 1.16 | 1.06 | 1.15 | 1.05 | 1.14 | 1.21 | 1.37 | 1.54 | 1.76 | 1.88 | 1.95 | 2.02 | 2.09 | 2.03 | 2.02 |
| Marketing | 1.57 | 1.67 | 1.56 | 1.65 | 1.55 | 1.64 | 2.33 | 3.29 | 3.10 | 2.71 | 2.57 | 2.67 | 2.75 | 2.72 | 2.71 | 2.77 |
| Custom feed mixing | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.09 | 0.10 | 0.11 | 0.11 | 0.12 | 0.13 | 0.13 | 0.13 | 0.13 |
| Fuel, lube, electricity | 5.18 | 5.47 | 7.58 | 8.45 | 8.93 | 9.60 | 10.07 | 13.16 | 18.05 | 20.48 | 20.66 | 19.24 | 16.04 | 15.37 | 12.02 | 12.29 |
| Machinery and building repairs | 10.91 | 11.54 | 14.07 | 16.13 | 14.69 | 15.81 | 17.07 | 18.73 | 20.55 | 22.20 | 23.37 | 24.25 | 23.60 | 24.12 | 23.12 | 23.28 |
| Hired labor (.85 hr) | 1.68 | 1.83 | 2.10 | 2.26 | 2.56 | 2.66 | 2.70 | 2.81 | 3.19 | 3.58 | 3.26 | 3.56 | 3.70 | 3.82 | 3.69 | 3.86 |
| Total, variable cash expenses | 107.35 | 129.68 | 151.61 | 164.92 | 165.28 | 147.24 | 169.75 | 180.52 | 143.11 | 157.81 | 155.12 | 158.87 | 166.23 | 149.72 | 134.80 | 131.95 |
| General farm overhead | 4.45 | 6.01 | 5.38 | 6.00 | 7.18 | 8.25 | 13.23 | 22.56 | 23.58 | 21.87 | 19.58 | 20.82 | 25.43 | 23.79 | 29.67 | 38.01 |
| Taxes and insurance | 16.76 | 17.21 | 18.11 | 19.44 | 23.55 | 22.35 | 24.30 | 27.98 | 35.41 | 35.50 | 38.75 | 50.24 | 44.47 | 41.08 | 46.00 | 50.03 |
| Interest | 8.82 | 12.81 | 11.00 | 12.26 | 18.75 | 19.67 | 29.62 | 49.55 | 51.04 | 47.44 | 45.69 | 48.60 | 49.02 | 46.98 | 40.46 | 41.17 |
| Total, fixed cash expenses | 30.02 | 36.03 | 34.49 | 37.70 | 49.48 | 50.27 | 67.15 | 100.10 | 110.03 | 104.81 | 104.03 | 119.66 | 118.92 | 111.84 | 116.12 | 129.21 |
| Total, cash expenses | 137.37 | 165.72 | 186.10 | 202.62 | 214.76 | 197.51 | 236.90 | 280.62 | 253.14 | 262.62 | 259.15 | 278.53 | 285.15 | 261.56 | 250.92 | 261.16 |
| Value of production less cash expenses | 14.90 | 23.28 | -48.68 | -73.40 | -66.85 | -37.85 | 2.19 | 79.71 | 76.66 | 13.00 | -2.18 | -11.33 | -12.44 | 8.21 | 18.80 | 55.57 |
| Capital replacement | 36.36 | 38.42 | 41.80 | 45.69 | 48.04 | 47.19 | 51.22 | 50.56 | 61.91 | 67.18 | 70.00 | 72.88 | 71.75 | 73.57 | 72.48 | 72.77 |
| Value of production less cash expenses and capital replacement | -21.46 | -15.13 | -90.48 | -119.09 | -114.89 | -85.04 | -49.03 | 29.15 | 14.75 | -54.18 | -72.18 | -84.21 | -84.19 | -65.36 | -53.68 | -17.20 |

Continued--

Appendix table 15--Cow-calf production costs, all sizes of operation, North Central, 1972-87--Continued

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 107.35 | 129.68 | 151.61 | 164.92 | 165.28 | 147.24 | 169.75 | 180.52 | 143.11 | 157.81 | 155.12 | 158.87 | 166.23 | 149.72 | 134.80 | 131.95 |
| General farm overhead | 4.45 | 6.01 | 5.38 | 6.00 | 7.18 | 8.25 | 13.23 | 22.56 | 23.58 | 21.87 | 19.58 | 20.82 | 25.43 | 23.79 | 29.67 | 38.01 |
| Taxes and insurance | 16.76 | 17.21 | 18.11 | 19.44 | 23.55 | 22.35 | 24.30 | 27.98 | 35.41 | 35.50 | 38.75 | 50.24 | 44.47 | 41.08 | 46.00 | 50.03 |
| Capital replacement | 36.36 | 38.42 | 41.80 | 45.69 | 48.04 | 47.19 | 51.22 | 50.56 | 61.91 | 67.18 | 70.00 | 72.88 | 71.75 | 73.57 | 72.48 | 72.77 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 2.40 | 4.65 | 6.01 | 5.05 | 4.35 | 4.06 | 6.43 | 9.03 | 8.14 | 10.87 | 8.60 | 6.95 | 8.15 | 5.73 | 3.64 | 3.87 |
| Return to other nonland capital | 32.91 | 34.78 | 37.90 | 41.44 | 43.53 | 41.61 | 40.41 | 40.05 | 39.21 | 37.05 | 36.21 | 34.05 | 27.10 | 25.66 | 26.46 | 32.29 |
| Land | 25.10 | 29.64 | 43.82 | 53.44 | 64.33 | 79.71 | 85.22 | 96.53 | 108.99 | 109.73 | 97.16 | 82.66 | 63.00 | 45.05 | 63.23 | 64.59 |
| Unpaid labor (34.82 hr) | 24.82 | 27.83 | 32.65 | 34.64 | 38.67 | 51.01 | 60.79 | 71.58 | 87.60 | 99.13 | 92.62 | 99.09 | 98.73 | 102.51 | 100.30 | 104.13 |
| Total, economic costs | 250.14 | 288.23 | 337.28 | 370.63 | 394.93 | 401.41 | 451.34 | 498.81 | 507.94 | 539.14 | 518.04 | 525.56 | 504.86 | 467.11 | 476.58 | 497.64 |
| Residual returns to management and risk | -97.87 | -99.23 | -199.86 | -241.41 | -247.02 | -241.75 | -212.25 | -138.48 | -178.14 | -263.52 | -261.07 | -258.36 | -232.15 | -197.34 | -206.86 | -180.91 |
| Net returns to owned inputs | -12.64 | -2.33 | -79.48 | -106.83 | -96.14 | -65.37 | -19.41 | 78.71 | 65.79 | -6.74 | -26.48 | -35.61 | -35.17 | -18.39 | -13.23 | 23.97 |

Appendix table 16--Cow-calf production costs, all sizes of operation, South, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Steer calves (1.34 cwt) | 58.05 | 74.55 | 53.11 | 47.55 | 51.23 | 56.34 | 74.94 | 113.79 | 103.21 | 84.81 | 82.30 | 82.89 | 85.79 | 88.49 | 93.80 | 109.94 |
| Heifer calves (.91 cwt) | 32.13 | 41.27 | 29.40 | 26.32 | 28.34 | 31.18 | 41.47 | 62.97 | 57.11 | 46.77 | 45.27 | 45.29 | 46.13 | 48.76 | 51.62 | 54.22 |
| Yearling steers (.54 cwt) | 3.74 | 4.80 | 3.42 | 3.06 | 4.43 | 3.63 | 25.79 | 37.22 | 35.75 | 31.88 | 30.99 | 32.39 | 31.20 | 32.11 | 31.10 | 38.70 |
| Yearling heifers (.41 cwt) | 2.43 | 3.12 | 2.23 | 1.99 | 2.88 | 2.36 | 16.77 | 24.21 | 23.25 | 20.80 | 19.31 | 21.17 | 19.40 | 20.81 | 20.70 | 25.14 |
| Cull cows (.88 cwt) | 20.66 | 20.96 | 17.29 | 20.75 | 14.97 | 30.16 | 49.07 | 57.11 | 42.27 | 35.68 | 34.65 | 33.52 | 35.01 | 32.81 | 32.14 | 37.08 |
| Total | 117.01 | 144.70 | 105.45 | 99.67 | 101.85 | 123.67 | 208.04 | 295.30 | 261.59 | 219.94 | 212.52 | 215.26 | 217.53 | 222.98 | 229.36 | 265.08 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (2.43 cwt) | 3.96 | 6.41 | 9.90 | 9.15 | 8.44 | 6.88 | 7.66 | 13.21 | 11.77 | 11.84 | 9.72 | 11.96 | 12.63 | 10.82 | 9.85 | 7.14 |
| Silage (.22 ton) | 0.42 | 0.68 | 1.05 | 0.97 | 0.90 | 0.73 | 0.96 | 0.84 | 2.89 | 3.41 | 2.91 | 4.20 | 3.43 | 3.40 | 4.07 | 3.77 |
| Protein supplements (.76 cwt) | 4.06 | 8.83 | 6.51 | 5.34 | 5.34 | 6.54 | 7.88 | 12.26 | 13.98 | 14.96 | 13.90 | 14.21 | 14.74 | 13.05 | 8.86 | 8.69 |
| Salt and minerals (.27 cwt) | 1.41 | 1.51 | 1.69 | 1.92 | 2.08 | 2.36 | 2.55 | 2.46 | 2.82 | 3.17 | 3.36 | 3.45 | 3.54 | 3.62 | 1.91 | 1.92 |
| Hay (1.23 ton) | 35.63 | 40.72 | 47.65 | 59.60 | 62.01 | 46.01 | 36.58 | 33.84 | 39.33 | 49.72 | 52.47 | 49.71 | 55.64 | 46.83 | 41.16 | 39.00 |
| Pasture | 41.96 | 48.18 | 49.70 | 49.75 | 50.88 | 50.57 | 53.19 | 61.18 | 50.68 | 57.10 | 57.62 | 54.10 | 56.32 | 49.81 | 49.73 | 47.44 |
| Total feed costs | 87.45 | 106.33 | 116.51 | 126.73 | 129.63 | 113.09 | 108.82 | 123.79 | 121.47 | 140.20 | 139.98 | 137.63 | 146.30 | 127.53 | 115.58 | 107.96 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 4.13 | 4.31 | 4.10 | 4.27 | 4.07 | 4.23 | 4.34 | 4.64 | 4.98 | 5.39 | 5.65 | 5.83 | 5.88 | 5.97 | 6.17 | 6.31 |
| Livestock hauling | 0.51 | 0.56 | 0.51 | 0.56 | 0.51 | 0.55 | 0.58 | 0.66 | 0.74 | 0.85 | 0.91 | 0.95 | 0.98 | 1.01 | 1.00 | 1.00 |
| Marketing | 2.70 | 2.86 | 2.68 | 2.84 | 2.66 | 2.82 | 3.70 | 4.45 | 4.41 | 4.15 | 4.16 | 4.19 | 4.23 | 4.29 | 3.79 | 3.87 |
| Custom feed mixing | 0.62 | 0.64 | 0.62 | 0.64 | 0.62 | 0.64 | 0.70 | 0.78 | 0.86 | 0.92 | 0.98 | 1.04 | 1.07 | 1.07 | 1.24 | 1.26 |
| Fuel, lube, electricity | 6.25 | 6.61 | 9.15 | 10.20 | 10.79 | 11.59 | 12.16 | 15.88 | 21.79 | 24.70 | 23.94 | 20.73 | 17.72 | 16.83 | 12.39 | 13.60 |
| Machinery and building repairs | 11.59 | 12.26 | 14.95 | 17.14 | 15.61 | 16.80 | 18.14 | 19.91 | 21.84 | 23.98 | 25.64 | 26.58 | 25.96 | 26.79 | 25.88 | 25.98 |
| Hired labor (3.31 hr) | 5.20 | 5.69 | 6.53 | 7.02 | 7.95 | 8.26 | 9.67 | 11.32 | 13.34 | 15.23 | 14.52 | 14.92 | 14.91 | 15.31 | 15.62 | 16.41 |
| Total, variable cash expenses | 118.46 | 139.26 | 155.05 | 169.39 | 171.83 | 157.98 | 158.11 | 181.43 | 189.43 | 215.42 | 215.78 | 211.87 | 217.05 | 198.80 | 181.67 | 176.39 |
| General farm overhead | 3.42 | 4.60 | 4.13 | 4.63 | 4.94 | 6.39 | 11.51 | 18.49 | 18.70 | 17.45 | 16.20 | 16.77 | 20.28 | 19.66 | 25.23 | 31.81 |
| Taxes and insurance | 8.53 | 8.76 | 9.22 | 9.90 | 11.99 | 11.38 | 12.22 | 14.15 | 16.95 | 16.81 | 18.57 | 20.14 | 18.73 | 19.45 | 21.76 | 23.06 |
| Interest | 6.78 | 9.81 | 8.44 | 9.45 | 12.91 | 15.24 | 25.78 | 40.61 | 40.49 | 37.85 | 37.79 | 39.15 | 39.10 | 38.83 | 34.40 | 34.46 |
| Total, fixed cash expenses | 18.73 | 23.17 | 21.79 | 23.98 | 29.85 | 33.01 | 49.51 | 73.25 | 76.14 | 72.12 | 72.55 | 76.07 | 78.12 | 77.94 | 81.39 | 89.33 |
| Total, cash expenses | 137.19 | 162.43 | 176.84 | 193.37 | 201.68 | 190.99 | 207.62 | 254.68 | 265.57 | 287.54 | 288.33 | 287.94 | 295.17 | 276.74 | 263.06 | 265.72 |
| Value of production less cash expenses | -20.18 | -17.73 | -71.39 | -93.70 | -99.82 | -67.32 | 0.42 | 40.62 | -3.98 | -67.60 | -75.81 | -72.68 | -77.64 | -53.76 | -33.70 | -0.64 |
| Capital replacement | 27.56 | 29.12 | 31.69 | 34.63 | 36.41 | 35.77 | 39.71 | 49.61 | 64.24 | 71.14 | 74.74 | 77.38 | 77.71 | 79.46 | 80.48 | 80.46 |
| Value of production less cash expenses and capital replacement | -47.73 | -46.85 | -103.08 | -128.33 | -136.23 | -103.09 | -39.29 | -8.99 | -68.22 | -138.74 | -150.55 | -150.06 | -155.35 | -133.22 | -114.18 | -81.10 |

Continued--

Appendix table 16--Cow-calf production costs, all sizes of operation, South, 1972-87--Continued

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 118.46 | 139.26 | 155.05 | 169.39 | 171.83 | 157.98 | 158.11 | 181.43 | 189.43 | 215.42 | 215.78 | 211.87 | 217.05 | 198.80 | 181.67 | 176.39 |
| General farm overhead | 3.42 | 4.60 | 4.13 | 4.63 | 4.94 | 6.39 | 11.51 | 18.49 | 18.70 | 17.45 | 16.20 | 16.77 | 20.28 | 19.66 | 25.23 | 31.81 |
| Taxes and insurance | 8.53 | 8.76 | 9.22 | 9.90 | 11.99 | 11.38 | 12.22 | 14.15 | 16.95 | 16.81 | 18.57 | 20.14 | 18.73 | 19.45 | 21.76 | 23.06 |
| Capital replacement | 27.56 | 29.12 | 31.69 | 34.63 | 36.41 | 35.77 | 39.71 | 49.61 | 64.24 | 71.14 | 74.74 | 77.38 | 77.71 | 79.46 | 80.48 | 80.46 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 2.65 | 5.00 | 6.14 | 5.19 | 4.52 | 4.35 | 5.99 | 9.07 | 10.77 | 14.84 | 11.96 | 9.27 | 10.64 | 7.61 | 4.91 | 5.17 |
| Return to other nonland capital | 33.22 | 35.11 | 38.27 | 41.84 | 43.94 | 42.01 | 40.80 | 40.44 | 39.59 | 37.41 | 36.56 | 34.39 | 27.36 | 25.91 | 27.11 | 32.94 |
| Land | 38.37 | 45.59 | 65.30 | 78.01 | 83.17 | 87.83 | 94.57 | 104.41 | 115.58 | 116.63 | 109.16 | 103.66 | 81.29 | 72.51 | 72.81 | 81.34 |
| Unpaid labor (33.23 hr) | 21.62 | 24.24 | 28.44 | 30.17 | 33.68 | 44.43 | 49.09 | 54.77 | 60.00 | 68.76 | 66.35 | 69.64 | 72.13 | 73.43 | 84.30 | 86.48 |
| Total, economic costs | 253.83 | 291.69 | 338.23 | 373.76 | 390.50 | 390.14 | 412.00 | 472.37 | 515.26 | 558.46 | 549.31 | 543.12 | 525.19 | 496.83 | 498.27 | 517.65 |
| Residual returns to management and risk | -136.82 | -146.99 | -232.79 | -274.09 | -288.65 | -266.47 | -203.96 | -177.07 | -253.67 | -338.52 | -336.79 | -327.86 | -307.66 | -273.85 | -268.91 | -252.57 |
| Net returns to owned inputs | -40.96 | -37.04 | -94.64 | -118.88 | -123.32 | -87.85 | -13.51 | 31.62 | -27.73 | -100.88 | -112.77 | -110.90 | -116.24 | -94.39 | -79.78 | -46.64 |

Appendix table 17--Cow-calf production costs, all sizes of operation, West, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Steer calves (1.02 cwt) | 32.85 | 42.19 | 30.05 | 26.91 | 28.99 | 31.88 | 61.12 | 96.14 | 81.07 | 66.55 | 68.11 | 65.95 | 68.88 | 67.93 | 69.96 | 82.12 |
| Heifer calves (.70 cwt) | 19.60 | 25.17 | 17.93 | 16.05 | 17.29 | 19.02 | 36.46 | 57.36 | 48.37 | 39.22 | 41.03 | 38.96 | 39.88 | 40.66 | 42.53 | 44.77 |
| Yearling steers (1.34 cwt) | 45.95 | 59.01 | 42.04 | 37.63 | 54.43 | 44.59 | 69.17 | 103.44 | 98.01 | 85.26 | 84.41 | 75.71 | 83.44 | 75.36 | 81.12 | 100.92 |
| Yearling heifers (.90 cwt) | 27.70 | 35.58 | 25.35 | 22.69 | 32.81 | 26.88 | 41.70 | 62.35 | 59.08 | 52.72 | 52.61 | 45.54 | 50.46 | 47.18 | 51.49 | 62.68 |
| Cull cows (.93 cwt) | 23.87 | 24.21 | 19.97 | 23.97 | 17.29 | 34.84 | 45.57 | 55.47 | 38.46 | 32.79 | 33.85 | 31.51 | 33.41 | 31.74 | 32.17 | 37.12 |
| Total | 149.96 | 186.15 | 135.35 | 127.25 | 150.81 | 157.21 | 254.02 | 374.76 | 324.99 | 276.54 | 280.01 | 257.67 | 276.07 | 262.87 | 277.27 | 327.61 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (1.77 cwt) | 0.84 | 1.36 | 2.10 | 1.94 | 1.79 | 1.46 | 3.61 | 6.22 | 11.27 | 7.82 | 8.08 | 10.57 | 10.92 | 9.03 | 7.16 | 5.92 |
| Silage (.09 ton) | 0.09 | 0.15 | 0.23 | 0.21 | 0.20 | 0.16 | 0.40 | 0.89 | 1.70 | 1.70 | 1.70 | 1.97 | 2.01 | 2.14 | 1.79 | 1.67 |
| Protein supplements (1.03 cwt) | 2.15 | 4.67 | 3.44 | 2.82 | 2.82 | 3.46 | 4.87 | 7.08 | 12.66 | 11.94 | 12.26 | 11.18 | 12.12 | 10.74 | 11.22 | 10.91 |
| Salt and minerals (.36 cwt) | 0.98 | 1.05 | 1.18 | 1.34 | 1.46 | 1.65 | 1.79 | 1.94 | 1.56 | 1.73 | 1.85 | 1.89 | 1.86 | 1.94 | 2.00 | 2.01 |
| Hay (1.36 ton) | 35.21 | 40.23 | 47.08 | 58.89 | 61.27 | 45.46 | 36.86 | 27.28 | 30.49 | 36.78 | 38.39 | 33.74 | 36.68 | 37.03 | 33.61 | 31.39 |
| Pasture | 7.39 | 8.49 | 8.76 | 8.77 | 8.96 | 8.91 | 9.11 | 9.71 | 40.48 | 45.05 | 44.89 | 44.40 | 43.42 | 42.60 | 38.07 | 34.67 |
| Public grazing | 1.66 | 1.93 | 2.46 | 2.46 | 3.62 | 3.62 | 2.83 | 2.71 | 1.85 | 2.02 | 1.91 | 1.68 | 1.63 | 1.57 | 1.47 | 1.52 |
| Total feed costs | 48.33 | 57.89 | 65.26 | 76.43 | 80.12 | 64.72 | 59.47 | 55.83 | 100.01 | 107.04 | 109.08 | 105.43 | 108.64 | 105.05 | 95.32 | 88.09 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 3.88 | 4.04 | 3.85 | 4.01 | 3.82 | 3.97 | 4.17 | 4.64 | 5.27 | 5.82 | 6.44 | 6.64 | 6.95 | 7.01 | 7.20 | 7.34 |
| Livestock hauling | 1.43 | 1.56 | 1.43 | 1.55 | 1.41 | 1.53 | 1.63 | 1.87 | 2.15 | 2.41 | 2.68 | 2.72 | 2.78 | 2.88 | 2.80 | 2.81 |
| Marketing | 2.07 | 2.19 | 2.05 | 2.18 | 2.03 | 2.16 | 2.31 | 2.57 | 2.92 | 3.22 | 3.59 | 3.70 | 3.86 | 4.01 | 4.09 | 4.18 |
| Fuel, lube, electricity | 8.15 | 8.43 | 8.15 | 8.43 | 8.15 | 8.43 | 8.84 | 11.55 | 15.84 | 17.91 | 17.34 | 16.53 | 13.90 | 13.69 | 11.29 | 11.46 |
| Machinery and building repairs | 6.28 | 6.63 | 9.19 | 10.23 | 10.82 | 11.63 | 12.56 | 13.78 | 15.12 | 16.79 | 18.72 | 19.82 | 19.31 | 20.14 | 20.49 | 20.61 |
| Hired labor (5.06 hr) | 6.67 | 7.06 | 8.61 | 9.86 | 8.98 | 9.67 | 12.57 | 15.88 | 19.48 | 20.82 | 21.63 | 22.17 | 22.45 | 22.86 | 23.93 | 23.23 |
| Total, variable cash expenses | 76.80 | 87.79 | 98.52 | 112.69 | 115.34 | 102.11 | 101.55 | 106.12 | 160.79 | 174.01 | 179.48 | 177.01 | 177.89 | 175.64 | 165.12 | 157.72 |
| General farm overhead | 4.38 | 5.92 | 5.30 | 5.91 | 7.32 | 8.12 | 14.05 | 23.47 | 23.23 | 21.94 | 21.34 | 20.08 | 25.74 | 23.18 | 30.50 | 39.31 |
| Taxes and insurance | 15.50 | 15.92 | 16.74 | 17.98 | 21.78 | 20.67 | 22.20 | 25.25 | 17.05 | 14.62 | 15.24 | 15.40 | 13.74 | 13.31 | 17.84 | 18.94 |
| Interest | 8.68 | 12.62 | 10.84 | 12.07 | 19.12 | 19.37 | 31.47 | 51.54 | 50.30 | 47.60 | 49.79 | 46.87 | 49.63 | 45.78 | 41.59 | 42.59 |
| Total, fixed cash expenses | 28.56 | 34.46 | 32.88 | 35.96 | 48.22 | 48.16 | 67.73 | 100.26 | 90.58 | 84.16 | 86.37 | 82.35 | 89.11 | 82.26 | 89.93 | 100.84 |
| Total, cash expenses | 105.36 | 122.25 | 131.40 | 148.65 | 163.55 | 150.27 | 169.28 | 206.38 | 251.37 | 258.17 | 265.85 | 259.36 | 267.00 | 257.90 | 255.05 | 258.56 |
| Value of production less cash expenses | 44.60 | 63.90 | 3.95 | -21.39 | -12.75 | 6.94 | 84.74 | 168.38 | 73.62 | 18.37 | 14.16 | -1.69 | 9.07 | 4.97 | 22.22 | 69.05 |
| Capital replacement | 21.20 | 22.40 | 24.37 | 26.64 | 28.00 | 27.51 | 32.55 | 42.38 | 44.92 | 48.18 | 53.84 | 53.36 | 55.36 | 53.86 | 54.48 | 55.66 |
| Value of production less cash expenses and capital replacement | 23.41 | 41.51 | -20.42 | -48.03 | -40.75 | -20.57 | 52.19 | 126.00 | 28.70 | -29.81 | -39.68 | -55.05 | -46.29 | -48.89 | -32.26 | 13.39 |

Continued--

Appendix table 17--Cow-calf production costs, all sizes of operation, West, 1972-87--Continued

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cow | | | | | | | | | | | | | | | |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 76.80 | 87.79 | 98.52 | 112.69 | 115.34 | 102.11 | 101.55 | 106.12 | 160.79 | 174.01 | 179.48 | 177.01 | 177.89 | 175.64 | 165.12 | 157.72 |
| General farm overhead | 4.38 | 5.92 | 5.30 | 5.91 | 7.32 | 8.12 | 14.05 | 23.47 | 23.23 | 21.94 | 21.34 | 20.08 | 25.74 | 23.18 | 30.50 | 39.31 |
| Taxes and insurance | 15.50 | 15.92 | 16.74 | 17.98 | 21.78 | 20.67 | 22.20 | 25.25 | 17.05 | 14.62 | 15.24 | 15.40 | 13.74 | 13.31 | 17.84 | 18.94 |
| Capital replacement | 21.20 | 22.40 | 24.37 | 26.64 | 28.00 | 27.51 | 32.55 | 42.38 | 44.92 | 48.18 | 53.84 | 53.36 | 55.36 | 53.86 | 54.48 | 55.66 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 1.71 | 3.15 | 3.90 | 3.45 | 3.04 | 2.81 | 3.84 | 5.31 | 9.14 | 11.99 | 9.95 | 7.74 | 8.72 | 6.73 | 4.46 | 4.62 |
| Return to other nonland capital | 25.26 | 26.70 | 29.09 | 31.81 | 33.41 | 31.94 | 31.02 | 30.75 | 30.10 | 28.45 | 27.80 | 26.14 | 20.80 | 19.70 | 20.51 | 25.14 |
| Land | 17.48 | 20.52 | 28.50 | 32.60 | 35.39 | 36.77 | 38.98 | 44.72 | 53.70 | 54.87 | 56.19 | 51.12 | 41.32 | 35.47 | 40.06 | 41.95 |
| Unpaid labor (25.77 hr) | 15.44 | 17.31 | 20.31 | 21.55 | 24.06 | 31.73 | 41.55 | 52.90 | 64.48 | 69.32 | 72.19 | 74.32 | 79.78 | 80.75 | 84.16 | 79.11 |
| Total, economic costs | 177.76 | 199.71 | 226.74 | 252.61 | 268.33 | 261.67 | 285.75 | 330.89 | 403.42 | 423.38 | 436.03 | 425.17 | 423.35 | 408.64 | 417.13 | 422.45 |
| Residual returns to management and risk | -27.80 | -13.56 | -91.39 | -125.36 | -117.52 | -104.46 | -31.73 | 43.87 | -78.43 | -146.84 | -156.02 | -167.50 | -147.28 | -145.77 | -139.86 | -94.84 |
| Net returns to owned inputs | 32.09 | 54.12 | -9.58 | -35.96 | -21.63 | -1.20 | 83.67 | 177.54 | 79.00 | 17.79 | 10.11 | -8.18 | 3.34 | -3.12 | 9.33 | 55.98 |

Appendix table 18--U.S. feeder pig production costs, all sizes of operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Feeder pigs (81.10 lbs) | 39.88 | 60.22 | 52.52 | 72.26 | 58.87 | 61.42 | 78.83 | 58.43 | 51.28 | 60.87 | 85.67 | 61.73 | 66.60 | 66.48 | 76.77 | 81.50 |
| Cull sows (18.90 lbs) | 4.57 | 7.06 | 5.87 | 8.57 | 6.78 | 7.07 | 8.78 | 7.52 | 6.85 | 7.62 | 9.56 | 7.78 | 8.04 | 7.25 | 8.39 | 8.44 |
| Total | 44.45 | 67.28 | 58.40 | 80.83 | 65.65 | 68.49 | 87.61 | 65.95 | 58.13 | 68.49 | 95.23 | 69.51 | 74.64 | 73.73 | 85.16 | 89.94 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (427.70 lbs) | 9.35 | 15.11 | 23.35 | 21.59 | 19.51 | 16.23 | 16.99 | 19.07 | 21.54 | 23.20 | 18.73 | 23.79 | 24.00 | 19.50 | 15.14 | 11.01 |
| Protein supplements (117.20 lbs) | 9.32 | 20.26 | 14.94 | 12.24 | 12.90 | 15.00 | 14.24 | 15.83 | 17.86 | 18.77 | 17.59 | 18.63 | 17.40 | 14.61 | 15.72 | 15.71 |
| Pasture | 0.14 | 0.16 | 0.17 | 0.17 | 0.21 | 0.17 | 0.18 | 0.20 | 0.22 | 0.22 | 0.22 | 0.19 | 0.17 | 0.15 | 0.13 | 0.12 |
| Total feed costs | 18.81 | 35.54 | 38.46 | 34.00 | 32.62 | 31.40 | 31.41 | 35.10 | 39.62 | 42.19 | 36.54 | 42.61 | 41.57 | 34.26 | 30.99 | 26.84 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.90 | 0.92 | 1.05 | 1.41 | 1.37 | 1.38 | 1.41 | 1.51 | 1.62 | 1.55 | 1.62 | 1.67 | 1.53 | 1.47 | 1.50 | 1.51 |
| Livestock hauling | 0.07 | 0.08 | 0.09 | 0.10 | 0.11 | 0.12 | 0.13 | 0.14 | 0.16 | 0.18 | 0.19 | 0.20 | 0.20 | 0.20 | 0.20 | 0.19 |
| Marketing | 0.88 | 0.93 | 1.03 | 1.13 | 1.29 | 1.27 | 1.46 | 1.36 | 1.35 | 1.49 | 1.59 | 1.48 | 1.62 | 1.51 | 1.63 | 1.66 |
| Bedding (32 lbs) | 0.13 | 0.16 | 0.21 | 0.22 | 0.20 | 0.22 | 0.24 | 0.27 | 0.30 | 0.46 | 0.38 | 0.39 | 0.37 | 0.37 | 0.37 | 0.37 |
| Custom feed mixing | 0.72 | 0.77 | 0.85 | 0.93 | 0.97 | 1.05 | 1.13 | 1.26 | 1.40 | 1.46 | 1.46 | 1.44 | 1.33 | 1.24 | 1.19 | 1.19 |
| Fuel, lube, and electricity | 1.90 | 2.01 | 2.78 | 3.10 | 3.27 | 3.52 | 3.69 | 4.82 | 6.61 | 7.68 | 7.73 | 7.49 | 6.80 | 6.69 | 6.42 | 6.36 |
| Machinery and building repairs | 2.22 | 2.35 | 2.61 | 2.87 | 3.22 | 3.22 | 3.34 | 3.70 | 4.31 | 4.72 | 4.93 | 5.14 | 4.78 | 4.82 | 4.70 | 4.72 |
| Hired labor (.44 hr) | 0.83 | 0.91 | 1.04 | 1.12 | 1.23 | 1.32 | 1.41 | 1.54 | 1.66 | 1.87 | 1.86 | 2.05 | 2.62 | 2.90 | 2.86 | 3.10 |
| Manure credit | -0.07 | -0.07 | -0.08 | -0.09 | -0.11 | -0.10 | -0.10 | -0.11 | -0.14 | -0.15 | -0.15 | -0.15 | -0.16 | -0.15 | -0.14 | -0.13 |
| Total, variable cash expenses | 26.39 | 43.58 | 48.04 | 44.78 | 44.17 | 43.40 | 44.12 | 49.59 | 56.89 | 61.45 | 56.15 | 62.32 | 60.66 | 53.31 | 49.72 | 45.81 |
| General farm overhead | 1.42 | 1.50 | 1.67 | 1.83 | 1.85 | 2.06 | 2.82 | 2.40 | 2.42 | 3.16 | 4.17 | 4.15 | 4.85 | 4.79 | 5.96 | 7.20 |
| Taxes and insurance | 1.02 | 1.05 | 1.10 | 1.18 | 1.20 | 1.36 | 1.47 | 1.71 | 1.63 | 1.77 | 1.89 | 2.10 | 1.88 | 1.88 | 1.88 | 1.89 |
| Interest | 3.08 | 3.61 | 4.26 | 5.05 | 6.47 | 6.56 | 8.44 | 7.05 | 7.00 | 9.17 | 14.56 | 8.43 | 10.84 | 10.84 | 10.22 | 6.30 |
| Total, fixed cash expenses | 5.52 | 6.16 | 7.03 | 8.07 | 9.52 | 9.98 | 12.73 | 11.16 | 11.05 | 14.10 | 20.62 | 14.68 | 17.57 | 17.51 | 18.06 | 15.39 |
| Total, cash expenses | 31.92 | 49.74 | 55.07 | 52.85 | 53.69 | 53.38 | 56.85 | 60.75 | 67.94 | 75.55 | 76.77 | 77.00 | 78.23 | 70.82 | 67.78 | 61.20 |
| Value of production less cash expenses | 12.54 | 17.54 | 3.32 | 27.98 | 11.96 | 15.11 | 30.76 | 5.20 | -9.81 | -7.06 | 18.46 | -7.49 | -3.59 | 2.91 | 17.38 | 28.74 |
| Capital replacement | 5.81 | 6.52 | 4.99 | 9.17 | 9.47 | 10.19 | 11.26 | 13.36 | 10.77 | 11.82 | 12.36 | 13.35 | 11.90 | 11.90 | 11.68 | 11.76 |
| Value of production less cash expenses and capital replacement | 6.73 | 11.02 | -1.67 | 18.81 | 2.49 | 4.92 | 19.50 | -8.16 | -20.58 | -18.88 | 6.10 | -20.84 | -15.49 | -8.99 | 5.70 | 16.98 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 26.39 | 43.58 | 48.04 | 44.78 | 44.17 | 43.40 | 44.12 | 49.59 | 56.89 | 61.45 | 56.15 | 62.32 | 60.66 | 53.31 | 49.72 | 45.81 |
| General farm overhead | 1.42 | 1.50 | 1.67 | 1.83 | 1.85 | 2.06 | 2.82 | 2.40 | 2.42 | 3.16 | 4.17 | 4.15 | 4.85 | 4.79 | 5.96 | 7.20 |
| Taxes and insurance | 1.02 | 1.05 | 1.10 | 1.18 | 1.20 | 1.36 | 1.47 | 1.71 | 1.63 | 1.77 | 1.89 | 2.10 | 1.88 | 1.88 | 1.88 | 1.89 |
| Capital replacement | 5.81 | 6.52 | 4.99 | 9.17 | 9.47 | 10.19 | 11.26 | 13.36 | 10.77 | 11.82 | 12.36 | 13.35 | 11.90 | 11.90 | 11.68 | 11.76 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.29 | 0.78 | 0.95 | 0.69 | 0.58 | 0.60 | 0.84 | 1.24 | 1.62 | 2.12 | 1.56 | 1.36 | 1.49 | 1.02 | 0.67 | 0.67 |
| Return to other nonland capital | 3.24 | 3.42 | 3.72 | 4.07 | 4.39 | 4.20 | 4.08 | 4.04 | 3.96 | 3.74 | 3.66 | 3.44 | 2.74 | 2.74 | 2.62 | 3.03 |
| Land | 0.21 | 0.25 | 0.37 | 0.44 | 0.50 | 0.56 | 0.59 | 0.67 | 0.75 | 0.77 | 0.72 | 0.64 | 0.50 | 0.41 | 0.33 | 0.34 |
| Unpaid labor (3.47 hr) | 8.45 | 9.25 | 10.59 | 11.40 | 12.46 | 13.41 | 14.34 | 15.67 | 16.89 | 18.37 | 16.86 | 17.95 | 16.79 | 16.79 | 16.62 | 17.23 |
| Total, economic costs | 46.83 | 66.36 | 71.43 | 73.57 | 74.62 | 75.78 | 79.52 | 88.68 | 94.93 | 103.19 | 97.36 | 105.32 | 100.80 | 92.84 | 89.48 | 87.93 |
| Residual returns to management and risk | -2.38 | 0.92 | -13.04 | 7.27 | -8.97 | -7.29 | 8.09 | -22.73 | -36.80 | -34.70 | -2.13 | -35.81 | -26.16 | -19.11 | -4.32 | 2.01 |
| Net returns to owned inputs | 9.81 | 14.63 | 2.60 | 23.86 | 8.96 | 11.48 | 27.94 | -1.11 | -13.58 | -9.71 | 20.66 | -12.41 | -4.65 | 1.85 | 15.92 | 23.28 |

Appendix table 19--U.S. feeder pig production costs, 140-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Feeder pigs (80.40 lbs) | 38.77 | 58.54 | 51.05 | 70.24 | 58.62 | 59.70 | 75.82 | 53.91 | 48.39 | 59.60 | 84.80 | 62.86 | 66.40 | 67.24 | 73.34 | 71.08 |
| Cull sows (19.60 lbs) | 5.48 | 8.47 | 7.05 | 10.29 | 8.34 | 8.49 | 10.98 | 7.81 | 7.12 | 7.93 | 9.97 | 8.12 | 8.41 | 7.60 | 8.79 | 8.76 |
| Total | 44.25 | 67.01 | 58.11 | 80.53 | 66.96 | 68.19 | 86.80 | 61.72 | 55.51 | 67.53 | 94.77 | 70.98 | 74.81 | 74.84 | 82.13 | 79.84 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (469 lbs) | 9.69 | 15.65 | 24.18 | 22.36 | 19.19 | 16.81 | 17.89 | 20.04 | 23.34 | 25.14 | 20.38 | 25.98 | 26.50 | 21.60 | 16.91 | 12.34 |
| Protein supplements (119.70 lbs) | 9.50 | 20.65 | 15.23 | 12.48 | 12.75 | 15.29 | 14.46 | 16.20 | 18.14 | 19.29 | 17.80 | 19.01 | 17.79 | 14.69 | 15.73 | 15.80 |
| Pasture | 0.31 | 0.35 | 0.36 | 0.36 | 0.32 | 0.37 | 0.40 | 0.45 | 0.51 | 0.56 | 0.57 | 0.50 | 0.54 | 0.55 | 0.48 | 0.51 |
| Total feed costs | 19.49 | 36.66 | 39.78 | 35.20 | 32.26 | 32.47 | 32.75 | 36.69 | 41.99 | 44.99 | 38.75 | 45.49 | 44.83 | 36.84 | 33.12 | 28.65 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 1.34 | 1.38 | 1.57 | 2.10 | 2.05 | 2.06 | 2.12 | 2.27 | 2.43 | 2.61 | 2.73 | 2.82 | 2.86 | 2.87 | 2.97 | 2.98 |
| Livestock hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Marketing | 0.79 | 0.84 | 0.93 | 1.02 | 1.18 | 1.15 | 1.33 | 1.24 | 1.23 | 1.36 | 1.48 | 1.39 | 1.56 | 1.51 | 1.60 | 1.70 |
| Bedding (32 lbs) | 0.10 | 0.13 | 0.17 | 0.18 | 0.16 | 0.18 | 0.19 | 0.21 | 0.24 | 0.37 | 0.32 | 0.33 | 0.34 | 0.35 | 0.35 | 0.36 |
| Custom feed mixing | 2.32 | 2.45 | 2.72 | 2.99 | 3.09 | 3.36 | 3.61 | 4.03 | 4.47 | 4.90 | 5.17 | 5.36 | 5.53 | 5.51 | 5.44 | 5.64 |
| Fuel, lube, and electricity | 2.08 | 2.19 | 3.04 | 3.39 | 3.58 | 3.85 | 4.04 | 5.28 | 7.24 | 8.53 | 8.52 | 7.90 | 6.83 | 6.15 | 5.82 | 5.80 |
| Machinery and building repairs | 2.48 | 2.62 | 2.91 | 3.20 | 3.59 | 3.59 | 3.73 | 4.13 | 4.81 | 5.30 | 5.71 | 6.03 | 5.74 | 5.95 | 5.75 | 5.81 |
| Hired labor (.13 hr) | 0.18 | 0.19 | 0.22 | 0.24 | 0.26 | 0.28 | 0.30 | 0.32 | 0.35 | 0.37 | 0.35 | 0.36 | 0.44 | 0.47 | 0.46 | 0.54 |
| Manure credit | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total, variable cash expenses | 28.78 | 46.47 | 51.34 | 48.32 | 46.17 | 46.94 | 48.07 | 54.17 | 62.76 | 68.43 | 63.03 | 69.68 | 68.13 | 59.65 | 55.51 | 51.48 |
| General farm overhead | 1.42 | 1.50 | 1.66 | 1.83 | 1.89 | 2.05 | 2.79 | 2.25 | 2.31 | 3.12 | 4.15 | 4.24 | 4.86 | 4.86 | 5.75 | 6.39 |
| Taxes and insurance | 1.12 | 1.15 | 1.21 | 1.30 | 1.23 | 1.49 | 1.65 | 2.03 | 1.56 | 1.70 | 1.83 | 2.07 | 1.90 | 1.93 | 2.03 | 2.03 |
| Interest | 3.07 | 3.59 | 4.24 | 5.03 | 6.60 | 6.53 | 8.36 | 6.60 | 6.68 | 9.04 | 14.49 | 8.61 | 10.86 | 11.00 | 9.86 | 5.59 |
| Total, fixed cash expenses | 5.60 | 6.24 | 7.11 | 8.16 | 9.72 | 10.07 | 12.81 | 10.87 | 10.56 | 13.85 | 20.47 | 14.92 | 17.63 | 17.80 | 17.64 | 14.01 |
| Total, cash expenses | 34.38 | 52.70 | 58.45 | 56.47 | 55.89 | 57.01 | 60.88 | 65.04 | 73.32 | 82.28 | 83.50 | 84.60 | 85.76 | 77.45 | 73.15 | 65.49 |
| Value of production less cash expenses | 9.87 | 14.31 | -0.34 | 24.06 | 11.07 | 11.18 | 25.92 | -3.32 | -17.81 | -14.75 | 11.27 | -13.62 | -10.95 | -2.61 | 8.98 | 14.35 |
| Capital replacement | 5.52 | 6.20 | 4.75 | 8.72 | 9.67 | 9.69 | 10.80 | 13.37 | 11.35 | 12.48 | 13.36 | 14.59 | 13.24 | 13.30 | 13.02 | 13.14 |
| Value of production less cash expenses and capital replacement | 4.35 | 8.10 | -5.09 | 15.34 | 1.40 | 1.49 | 15.12 | -16.69 | -29.16 | -27.23 | -2.09 | -28.21 | -24.19 | -15.91 | -4.04 | 1.21 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 28.78 | 46.47 | 51.34 | 48.32 | 46.17 | 46.94 | 48.07 | 54.17 | 62.76 | 68.43 | 63.03 | 69.68 | 68.13 | 59.65 | 55.51 | 51.48 |
| General farm overhead | 1.42 | 1.50 | 1.66 | 1.83 | 1.89 | 2.05 | 2.79 | 2.25 | 2.31 | 3.12 | 4.15 | 4.24 | 4.86 | 4.86 | 5.75 | 6.39 |
| Taxes and insurance | 1.12 | 1.15 | 1.21 | 1.30 | 1.23 | 1.49 | 1.65 | 2.03 | 1.56 | 1.70 | 1.83 | 2.07 | 1.90 | 1.93 | 2.03 | 2.03 |
| Capital replacement | 5.52 | 6.20 | 4.75 | 8.72 | 9.67 | 9.69 | 10.80 | 13.37 | 11.35 | 12.48 | 13.36 | 14.59 | 13.24 | 13.30 | 13.02 | 13.14 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.32 | 0.83 | 1.02 | 0.74 | 0.61 | 0.65 | 0.91 | 1.36 | 1.78 | 2.36 | 1.75 | 1.52 | 1.67 | 1.14 | 0.75 | 0.75 |
| Return to other nonland capital | 3.54 | 3.74 | 4.07 | 4.44 | 4.80 | 4.59 | 4.46 | 4.42 | 4.32 | 4.09 | 3.99 | 3.76 | 2.99 | 2.83 | 2.90 | 3.36 |
| Land | 0.30 | 0.36 | 0.51 | 0.62 | 0.70 | 0.78 | 0.83 | 0.94 | 1.05 | 1.08 | 1.00 | 0.90 | 0.70 | 0.57 | 0.56 | 0.66 |
| Unpaid labor (7.64 hr) | 13.57 | 14.86 | 17.02 | 18.31 | 20.02 | 21.54 | 23.03 | 25.18 | 27.13 | 29.75 | 28.28 | 30.38 | 31.35 | 32.69 | 31.95 | 33.95 |
| Total, economic costs | 54.56 | 75.10 | 81.57 | 84.27 | 85.09 | 87.73 | 92.54 | 103.72 | 112.27 | 123.00 | 117.39 | 127.14 | 124.84 | 116.97 | 112.47 | 111.76 |
| Residual returns to management and risk | -10.31 | -8.09 | -23.46 | -3.74 | -18.13 | -19.54 | -5.74 | -42.00 | -56.76 | -55.47 | -22.62 | -56.16 | -50.03 | -42.13 | -30.34 | -31.92 |
| Net returns to owned inputs | 7.42 | 11.70 | -0.85 | 20.37 | 8.00 | 8.02 | 23.49 | -10.10 | -22.47 | -18.20 | 12.40 | -19.60 | -13.32 | -4.90 | 5.82 | 6.80 |

Appendix table 20--U.S. feeder pig production costs, 300-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Feeder pigs (79.40 lbs) | 48.71 | 65.71 | 46.19 | 82.34 | 58.10 | 65.10 | 84.95 | 58.23 | 51.99 | 60.00 | 84.13 | 60.55 | 65.52 | 64.96 | 75.32 | 68.91 |
| Cull sows (20.60 lbs) | 4.66 | 7.20 | 5.99 | 8.74 | 6.44 | 7.21 | 9.38 | 6.43 | 7.25 | 8.08 | 10.16 | 8.28 | 8.68 | 7.88 | 9.11 | 9.19 |
| Total | 53.36 | 72.90 | 52.18 | 91.08 | 64.54 | 72.31 | 94.33 | 64.66 | 59.24 | 68.08 | 94.29 | 68.83 | 74.20 | 72.84 | 84.43 | 78.10 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (469.50 lbs) | 9.23 | 14.92 | 23.04 | 21.31 | 19.10 | 16.02 | 16.62 | 18.56 | 22.83 | 24.69 | 20.01 | 25.45 | 26.02 | 21.28 | 16.40 | 11.94 |
| Protein supplements (119.40 lbs) | 9.16 | 19.92 | 14.69 | 12.04 | 12.63 | 14.75 | 14.07 | 15.71 | 18.04 | 19.12 | 17.71 | 18.95 | 17.71 | 14.66 | 15.70 | 15.80 |
| Pasture | 0.20 | 0.23 | 0.24 | 0.24 | 0.22 | 0.24 | 0.26 | 0.30 | 0.34 | 0.36 | 0.37 | 0.34 | 0.33 | 0.32 | 0.28 | 0.26 |
| Total feed costs | 18.59 | 35.07 | 37.97 | 33.58 | 31.95 | 31.01 | 30.95 | 34.57 | 41.21 | 44.17 | 38.09 | 44.74 | 44.06 | 36.26 | 32.38 | 28.00 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 1.62 | 1.67 | 1.89 | 2.54 | 2.47 | 2.49 | 2.55 | 2.73 | 2.93 | 3.16 | 3.30 | 3.42 | 3.52 | 3.59 | 3.69 | 3.74 |
| Livestock hauling | 0.13 | 0.14 | 0.17 | 0.19 | 0.21 | 0.22 | 0.24 | 0.27 | 0.30 | 0.34 | 0.37 | 0.38 | 0.40 | 0.42 | 0.41 | 0.40 |
| Marketing | 0.88 | 0.93 | 1.04 | 1.14 | 1.30 | 1.28 | 1.47 | 1.36 | 1.36 | 1.50 | 1.64 | 1.53 | 1.68 | 1.57 | 1.69 | 1.74 |
| Bedding (76 lbs) | 0.23 | 0.29 | 0.39 | 0.41 | 0.38 | 0.41 | 0.44 | 0.50 | 0.56 | 0.87 | 0.74 | 0.76 | 0.80 | 0.82 | 0.82 | 0.83 |
| Custom feed mixing | 1.09 | 1.15 | 1.28 | 1.41 | 1.45 | 1.58 | 1.70 | 1.89 | 2.10 | 2.30 | 2.42 | 2.52 | 2.62 | 2.62 | 2.62 | 2.65 |
| Fuel, lube, and electricity | 2.73 | 2.88 | 3.99 | 4.44 | 4.70 | 5.05 | 5.30 | 6.92 | 9.49 | 11.10 | 11.29 | 11.02 | 10.70 | 10.81 | 10.45 | 10.29 |
| Machinery and building repairs | 2.57 | 2.72 | 3.02 | 3.32 | 3.73 | 3.73 | 3.88 | 4.29 | 5.00 | 5.53 | 5.81 | 6.06 | 5.87 | 5.97 | 5.81 | 5.87 |
| Hired labor (.10 hr) | 0.17 | 0.19 | 0.21 | 0.23 | 0.25 | 0.27 | 0.29 | 0.32 | 0.34 | 0.36 | 0.33 | 0.34 | 0.37 | 0.35 | 0.33 | 0.38 |
| Manure credit | -0.09 | -0.09 | -0.11 | -0.12 | -0.13 | -0.13 | -0.13 | -0.14 | -0.17 | -0.18 | -0.18 | -0.17 | -0.18 | -0.17 | -0.16 | -0.15 |
| Total, variable cash expenses | 27.93 | 44.95 | 49.86 | 47.14 | 46.31 | 45.91 | 46.69 | 52.71 | 63.12 | 69.15 | 63.81 | 70.60 | 69.84 | 62.24 | 58.04 | 53.75 |
| General farm overhead | 1.71 | 1.63 | 1.49 | 2.07 | 1.82 | 2.17 | 3.04 | 2.35 | 2.47 | 3.14 | 4.13 | 4.11 | 4.82 | 4.73 | 5.91 | 6.25 |
| Taxes and insurance | 1.03 | 1.05 | 1.11 | 1.19 | 1.26 | 1.37 | 1.48 | 1.78 | 2.23 | 2.44 | 2.66 | 2.97 | 2.81 | 2.58 | 2.56 | 2.65 |
| Interest | 3.70 | 3.91 | 3.81 | 5.69 | 6.36 | 6.93 | 9.09 | 6.91 | 7.13 | 9.11 | 14.42 | 8.35 | 10.78 | 10.71 | 10.13 | 5.47 |
| Total, fixed cash expenses | 6.44 | 6.59 | 6.41 | 8.95 | 9.44 | 10.47 | 13.60 | 11.05 | 11.83 | 14.69 | 21.21 | 15.43 | 18.41 | 18.02 | 18.60 | 14.37 |
| Total, cash expenses | 34.37 | 51.54 | 56.27 | 56.09 | 55.75 | 56.38 | 60.29 | 63.76 | 74.95 | 83.84 | 85.02 | 86.03 | 88.25 | 80.26 | 76.64 | 68.12 |
| Value of production less cash expenses | 19.00 | 21.36 | -4.09 | 34.99 | 8.79 | 15.93 | 34.04 | 0.90 | -15.71 | -15.76 | 9.27 | -17.20 | -14.05 | -7.42 | 7.79 | 9.98 |
| Capital replacement | 5.80 | 6.51 | 4.98 | 9.15 | 10.45 | 10.17 | 11.20 | 13.46 | 12.31 | 13.61 | 14.25 | 15.32 | 14.14 | 14.15 | 13.88 | 14.00 |
| Value of production less cash expenses and capital replacement | 13.20 | 14.85 | -9.08 | 25.84 | -1.66 | 5.76 | 22.84 | -12.56 | -28.02 | -29.37 | -4.98 | -32.52 | -28.19 | -21.57 | -6.09 | -4.02 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 27.93 | 44.95 | 49.86 | 47.14 | 46.31 | 45.91 | 46.69 | 52.71 | 63.12 | 69.15 | 63.81 | 70.60 | 69.84 | 62.24 | 58.04 | 53.75 |
| General farm overhead | 1.71 | 1.63 | 1.49 | 2.07 | 1.82 | 2.17 | 3.04 | 2.35 | 2.47 | 3.14 | 4.13 | 4.11 | 4.82 | 4.73 | 5.91 | 6.25 |
| Taxes and insurance | 1.03 | 1.05 | 1.11 | 1.19 | 1.26 | 1.37 | 1.48 | 1.78 | 2.23 | 2.44 | 2.66 | 2.97 | 2.81 | 2.58 | 2.56 | 2.65 |
| Capital replacement | 5.80 | 6.51 | 4.98 | 9.15 | 10.45 | 10.17 | 11.20 | 13.46 | 12.31 | 13.61 | 14.25 | 15.32 | 14.14 | 14.15 | 13.88 | 14.00 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.31 | 0.81 | 0.99 | 0.72 | 0.61 | 0.63 | 0.88 | 1.32 | 1.79 | 2.38 | 1.77 | 1.54 | 1.71 | 1.19 | 0.78 | 0.79 |
| Return to other nonland capital | 3.92 | 4.14 | 4.51 | 4.93 | 5.33 | 5.09 | 4.94 | 4.90 | 4.80 | 4.53 | 4.43 | 4.17 | 3.32 | 3.14 | 3.19 | 3.70 |
| Land | 0.80 | 0.96 | 1.38 | 1.68 | 1.89 | 2.11 | 2.23 | 2.54 | 2.83 | 2.90 | 2.70 | 2.43 | 1.88 | 1.54 | 1.22 | 1.25 |
| Unpaid labor (5.72 hr) | 10.22 | 11.20 | 12.82 | 13.80 | 15.08 | 16.23 | 17.35 | 18.97 | 20.44 | 22.64 | 21.14 | 22.80 | 23.37 | 24.22 | 23.50 | 24.61 |
| Total, economic costs | 51.72 | 71.25 | 77.15 | 80.67 | 82.75 | 83.69 | 87.81 | 98.03 | 109.99 | 120.79 | 114.89 | 123.94 | 121.89 | 113.79 | 109.08 | 107.00 |
| Residual returns to management and risk | 1.64 | 1.65 | -24.97 | 10.41 | -18.21 | -11.38 | 6.52 | -33.37 | -50.75 | -52.71 | -20.60 | -55.11 | -47.69 | -40.95 | -24.65 | -28.90 |
| Net returns to owned inputs | 16.90 | 18.76 | -5.27 | 31.53 | 4.70 | 12.69 | 31.92 | -5.64 | -20.89 | -20.26 | 9.44 | -24.17 | -17.41 | -10.86 | 4.04 | 1.45 |

Appendix table 21--U.S. feeder pig production costs, 650-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Feeder pigs (80.50 lbs) | 44.43 | 59.93 | 42.13 | 75.11 | 54.38 | 59.38 | 76.60 | 60.20 | 52.05 | 61.40 | 85.55 | 61.56 | 66.55 | 66.04 | 76.53 | 83.83 |
| Cull sows (19.50 lbs) | 4.68 | 7.23 | 6.02 | 8.78 | 6.63 | 7.24 | 8.74 | 6.87 | 6.88 | 7.67 | 9.65 | 7.87 | 8.23 | 7.44 | 8.61 | 8.69 |
| Total | 49.10 | 67.16 | 48.14 | 83.88 | 61.01 | 66.62 | 85.34 | 67.07 | 58.93 | 69.07 | 95.20 | 69.43 | 74.78 | 73.48 | 85.14 | 92.52 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (439.50 lbs) | 9.16 | 14.79 | 22.86 | 21.13 | 21.20 | 15.89 | 16.45 | 18.50 | 21.18 | 22.93 | 18.58 | 23.62 | 24.16 | 19.75 | 15.28 | 11.12 |
| Protein supplements (123 lbs) | 9.24 | 20.10 | 14.82 | 12.14 | 14.07 | 14.88 | 14.14 | 15.90 | 18.77 | 19.66 | 18.64 | 19.73 | 18.62 | 16.04 | 17.30 | 17.28 |
| Pasture | 0.11 | 0.12 | 0.13 | 0.13 | 0.15 | 0.13 | 0.13 | 0.14 | 0.16 | 0.17 | 0.18 | 0.16 | 0.15 | 0.15 | 0.13 | 0.13 |
| Total feed costs | 18.51 | 35.02 | 37.81 | 33.41 | 35.42 | 30.90 | 30.72 | 34.54 | 40.11 | 42.76 | 37.40 | 43.51 | 42.93 | 35.94 | 32.71 | 28.53 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.19 | 0.19 | 0.22 | 0.30 | 0.29 | 0.29 | 0.30 | 0.32 | 0.34 | 0.37 | 0.38 | 0.40 | 0.41 | 0.41 | 0.42 | 0.43 |
| Livestock hauling | 0.08 | 0.09 | 0.11 | 0.12 | 0.13 | 0.14 | 0.15 | 0.17 | 0.19 | 0.21 | 0.22 | 0.23 | 0.24 | 0.25 | 0.25 | 0.24 |
| Marketing | 1.52 | 1.61 | 1.78 | 1.96 | 2.24 | 2.20 | 2.54 | 2.35 | 2.34 | 2.59 | 2.83 | 2.63 | 2.93 | 2.77 | 3.02 | 3.07 |
| Bedding (42 lbs) | 0.13 | 0.16 | 0.22 | 0.23 | 0.22 | 0.23 | 0.25 | 0.28 | 0.32 | 0.50 | 0.43 | 0.44 | 0.46 | 0.47 | 0.47 | 0.47 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 1.52 | 1.61 | 2.23 | 2.48 | 2.63 | 2.82 | 2.96 | 3.87 | 5.31 | 6.18 | 6.28 | 6.09 | 5.78 | 5.85 | 5.47 | 5.47 |
| Machinery and building repairs | 2.18 | 2.31 | 2.56 | 2.81 | 3.16 | 3.16 | 3.28 | 3.63 | 4.23 | 4.57 | 4.81 | 5.03 | 4.86 | 4.99 | 4.88 | 4.92 |
| Hired labor (.20 hr) | 0.37 | 0.40 | 0.46 | 0.49 | 0.54 | 0.58 | 0.62 | 0.68 | 0.73 | 0.81 | 0.75 | 0.80 | 0.83 | 0.86 | 0.84 | 0.88 |
| Manure credit | -0.09 | -0.09 | -0.11 | -0.12 | -0.14 | -0.13 | -0.13 | -0.15 | -0.18 | -0.19 | -0.19 | -0.18 | -0.19 | -0.18 | -0.17 | -0.16 |
| Total, variable cash expenses | 24.41 | 41.29 | 45.28 | 41.68 | 44.49 | 40.19 | 40.69 | 45.69 | 53.39 | 57.80 | 52.91 | 58.95 | 58.25 | 51.36 | 47.89 | 43.85 |
| General farm overhead | 1.57 | 1.50 | 1.38 | 1.90 | 1.72 | 2.00 | 2.75 | 2.44 | 2.45 | 3.19 | 4.17 | 4.15 | 4.86 | 4.77 | 5.96 | 7.40 |
| Taxes and insurance | 1.09 | 1.12 | 1.17 | 1.26 | 1.02 | 1.45 | 1.58 | 1.79 | 1.46 | 1.58 | 1.69 | 1.89 | 1.74 | 1.72 | 1.77 | 1.81 |
| Interest | 3.41 | 3.60 | 3.52 | 5.24 | 6.01 | 6.38 | 8.22 | 7.17 | 7.10 | 9.24 | 14.56 | 8.42 | 10.86 | 10.80 | 10.22 | 6.48 |
| Total, fixed cash expenses | 6.06 | 6.22 | 6.07 | 8.41 | 8.75 | 9.83 | 12.55 | 11.40 | 11.01 | 14.01 | 20.41 | 14.46 | 17.46 | 17.30 | 17.95 | 15.69 |
| Total, cash expenses | 30.47 | 47.51 | 51.34 | 50.08 | 53.24 | 50.02 | 53.24 | 57.09 | 64.40 | 71.81 | 73.32 | 73.41 | 75.71 | 68.66 | 65.84 | 59.54 |
| Value of production less cash expenses | 18.63 | 19.65 | -3.20 | 33.80 | 7.77 | 16.60 | 32.10 | 9.98 | -5.47 | -2.74 | 21.88 | -3.98 | -0.93 | 4.82 | 19.30 | 32.98 |
| Capital replacement | 6.22 | 6.98 | 5.35 | 9.82 | 8.46 | 10.91 | 12.08 | 14.51 | 10.05 | 10.84 | 11.35 | 12.29 | 11.26 | 11.31 | 11.20 | 11.28 |
| Value of production less cash expenses and capital replacement | 12.41 | 12.67 | -8.54 | 23.98 | -0.69 | 5.69 | 20.02 | -4.53 | -15.52 | -13.58 | 10.53 | -16.27 | -12.19 | -6.49 | 8.10 | 21.70 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 24.41 | 41.29 | 45.28 | 41.68 | 44.49 | 40.19 | 40.69 | 45.69 | 53.39 | 57.80 | 52.91 | 58.95 | 58.25 | 51.36 | 47.89 | 43.85 |
| General farm overhead | 1.57 | 1.50 | 1.38 | 1.90 | 1.72 | 2.00 | 2.75 | 2.44 | 2.45 | 3.19 | 4.17 | 4.15 | 4.86 | 4.77 | 5.96 | 7.40 |
| Taxes and insurance | 1.09 | 1.12 | 1.17 | 1.26 | 1.02 | 1.45 | 1.58 | 1.79 | 1.46 | 1.58 | 1.69 | 1.89 | 1.74 | 1.72 | 1.77 | 1.81 |
| Capital replacement | 6.22 | 6.98 | 5.35 | 9.82 | 8.46 | 10.91 | 12.08 | 14.51 | 10.05 | 10.84 | 11.35 | 12.29 | 11.26 | 11.31 | 11.20 | 11.28 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.27 | 0.74 | 0.90 | 0.64 | 0.59 | 0.55 | 0.77 | 1.14 | 1.52 | 1.99 | 1.47 | 1.29 | 1.43 | 0.98 | 0.65 | 0.64 |
| Return to other nonland capital | 3.07 | 3.25 | 3.53 | 3.86 | 4.17 | 3.99 | 3.87 | 3.84 | 3.76 | 3.55 | 3.47 | 3.26 | 2.60 | 2.46 | 2.53 | 2.93 |
| Land | 0.21 | 0.25 | 0.36 | 0.43 | 0.49 | 0.54 | 0.58 | 0.66 | 0.73 | 0.75 | 0.70 | 0.63 | 0.48 | 0.40 | 0.32 | 0.34 |
| Unpaid labor (4.44 hr) | 8.05 | 8.81 | 10.09 | 10.85 | 11.87 | 12.77 | 13.65 | 14.92 | 16.08 | 17.86 | 16.61 | 17.99 | 18.37 | 19.09 | 18.62 | 19.44 |
| Total, economic costs | 44.88 | 63.94 | 68.05 | 70.45 | 72.80 | 72.41 | 75.96 | 84.99 | 89.44 | 97.55 | 92.36 | 100.44 | 98.99 | 92.09 | 88.94 | 87.69 |
| Residual returns to management and risk | 4.22 | 3.22 | -19.91 | 13.43 | -11.79 | -5.79 | 9.38 | -17.92 | -30.51 | -28.48 | 2.84 | -31.01 | -24.21 | -18.61 | -3.80 | 4.83 |
| Net returns to owned inputs | 15.82 | 16.27 | -5.03 | 29.22 | 5.32 | 12.07 | 28.24 | 2.64 | -8.42 | -4.34 | 25.08 | -7.85 | -1.33 | 4.32 | 18.32 | 28.18 |

Appendix table 22--U.S. feeder pig production costs, 1,600-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Feeder pigs (80.50 lbs) | 45.68 | 61.62 | 43.31 | 77.22 | 60.58 | 61.05 | 77.09 | 61.82 | 51.78 | 61.26 | 85.63 | 61.52 | 66.45 | 66.03 | 76.62 | 83.94 |
| Cull sows (19.50 lbs) | 3.79 | 5.85 | 4.87 | 7.10 | 5.82 | 5.86 | 7.17 | 5.75 | 6.86 | 7.64 | 9.61 | 7.83 | 8.20 | 7.43 | 8.61 | 8.68 |
| Total | 49.46 | 67.47 | 48.18 | 84.32 | 66.40 | 66.91 | 84.26 | 67.57 | 58.64 | 68.90 | 95.24 | 69.35 | 74.65 | 73.46 | 85.23 | 92.62 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (434.70 lbs) | 9.57 | 15.46 | 23.88 | 22.08 | 21.02 | 16.60 | 17.62 | 19.51 | 21.00 | 22.71 | 18.40 | 23.41 | 23.93 | 19.56 | 15.17 | 11.04 |
| Protein supplements (121.50 lbs) | 9.50 | 20.65 | 15.23 | 12.48 | 13.17 | 15.29 | 14.43 | 15.98 | 18.54 | 19.44 | 18.48 | 19.49 | 18.41 | 15.58 | 16.75 | 16.73 |
| Pasture | 0.03 | 0.04 | 0.04 | 0.04 | 0.05 | 0.04 | 0.04 | 0.05 | 0.06 | 0.07 | 0.07 | 0.06 | 0.06 | 0.06 | 0.05 | 0.05 |
| Total feed costs | 19.10 | 36.15 | 39.15 | 34.60 | 34.24 | 31.93 | 32.09 | 35.54 | 39.60 | 42.22 | 36.95 | 42.96 | 42.40 | 35.20 | 31.97 | 27.82 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.66 | 0.68 | 0.78 | 1.04 | 1.01 | 1.02 | 1.05 | 1.12 | 1.20 | 0.62 | 0.65 | 0.67 | 0.68 | 0.69 | 0.72 | 0.73 |
| Livestock hauling | 0.07 | 0.07 | 0.08 | 0.09 | 0.10 | 0.11 | 0.12 | 0.13 | 0.15 | 0.17 | 0.18 | 0.19 | 0.20 | 0.20 | 0.20 | 0.20 |
| Marketing | 0.67 | 0.71 | 0.79 | 0.86 | 0.99 | 0.97 | 1.12 | 1.03 | 1.03 | 1.14 | 1.24 | 1.16 | 1.28 | 1.21 | 1.31 | 1.34 |
| Bedding (16 lbs) | 0.06 | 0.07 | 0.10 | 0.10 | 0.09 | 0.10 | 0.10 | 0.12 | 0.13 | 0.20 | 0.17 | 0.17 | 0.18 | 0.18 | 0.18 | 0.19 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 1.86 | 1.97 | 2.73 | 3.04 | 3.21 | 3.45 | 3.62 | 4.72 | 6.48 | 7.54 | 7.68 | 7.55 | 7.26 | 7.28 | 6.99 | 6.93 |
| Machinery and building repairs | 2.32 | 2.45 | 2.72 | 2.99 | 3.36 | 3.36 | 3.49 | 3.86 | 4.50 | 4.98 | 5.24 | 5.47 | 5.28 | 5.40 | 5.29 | 5.33 |
| Hired labor (.18 hr) | 0.42 | 0.46 | 0.53 | 0.57 | 0.62 | 0.67 | 0.71 | 0.78 | 0.84 | 0.89 | 0.83 | 0.86 | 0.94 | 0.97 | 0.92 | 1.03 |
| Manure credit | -0.09 | -0.09 | -0.11 | -0.12 | -0.13 | -0.13 | -0.13 | -0.14 | -0.17 | -0.18 | -0.19 | -0.18 | -0.18 | -0.17 | -0.16 | -0.15 |
| Total, variable cash expenses | 25.06 | 42.47 | 46.76 | 43.17 | 43.49 | 41.48 | 42.17 | 47.16 | 53.76 | 57.58 | 52.75 | 58.85 | 58.04 | 50.96 | 47.42 | 43.42 |
| General farm overhead | 1.58 | 1.51 | 1.38 | 1.91 | 1.87 | 2.01 | 2.71 | 2.46 | 2.44 | 3.18 | 4.17 | 4.14 | 4.85 | 4.77 | 5.97 | 7.41 |
| Taxes and insurance | 0.86 | 0.89 | 0.93 | 1.00 | 0.95 | 1.15 | 1.27 | 1.53 | 1.61 | 1.80 | 1.92 | 2.14 | 1.98 | 2.03 | 2.13 | 2.15 |
| Interest | 3.43 | 3.62 | 3.52 | 5.27 | 6.54 | 6.41 | 8.12 | 7.22 | 7.06 | 9.22 | 14.56 | 8.41 | 10.84 | 10.80 | 10.23 | 6.48 |
| Total, fixed cash expenses | 5.87 | 6.01 | 5.83 | 8.18 | 9.37 | 9.57 | 12.10 | 11.21 | 11.11 | 14.20 | 20.65 | 14.69 | 17.67 | 17.60 | 18.33 | 16.04 |
| Total, cash expenses | 30.94 | 48.48 | 52.59 | 51.36 | 52.86 | 51.05 | 54.27 | 58.37 | 64.87 | 71.78 | 73.40 | 73.54 | 75.71 | 68.56 | 65.75 | 59.46 |
| Value of production less cash expenses | 18.52 | 18.99 | -4.40 | 32.97 | 13.54 | 15.86 | 29.99 | 9.20 | -6.23 | -2.88 | 21.84 | -4.19 | -1.06 | 4.90 | 19.48 | 33.16 |
| Capital replacement | 5.04 | 5.66 | 4.34 | 7.97 | 7.96 | 8.85 | 9.82 | 11.83 | 11.32 | 12.54 | 13.13 | 14.09 | 13.22 | 13.35 | 13.19 | 13.28 |
| Value of production less cash expenses and capital replacement | 13.48 | 13.32 | -8.74 | 25.00 | 5.58 | 7.01 | 20.17 | -2.63 | -17.55 | -15.42 | 8.71 | -18.28 | -14.28 | -8.45 | 6.29 | 19.88 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 25.06 | 42.47 | 46.76 | 43.17 | 43.49 | 41.48 | 42.17 | 47.16 | 53.76 | 57.58 | 52.75 | 58.85 | 58.04 | 50.96 | 47.42 | 43.42 |
| General farm overhead | 1.58 | 1.51 | 1.38 | 1.91 | 1.87 | 2.01 | 2.71 | 2.46 | 2.44 | 3.18 | 4.17 | 4.14 | 4.85 | 4.77 | 5.97 | 7.41 |
| Taxes and insurance | 0.86 | 0.89 | 0.93 | 1.00 | 0.95 | 1.15 | 1.27 | 1.53 | 1.61 | 1.80 | 1.92 | 2.14 | 1.98 | 2.03 | 2.13 | 2.15 |
| Capital replacement | 5.04 | 5.66 | 4.34 | 7.97 | 7.96 | 8.85 | 9.82 | 11.83 | 11.32 | 12.54 | 13.13 | 14.09 | 13.22 | 13.35 | 13.19 | 13.28 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.28 | 0.76 | 0.93 | 0.66 | 0.57 | 0.57 | 0.80 | 1.18 | 1.53 | 1.98 | 1.46 | 1.29 | 1.42 | 0.98 | 0.64 | 0.64 |
| Return to other nonland capital | 3.51 | 3.71 | 4.04 | 4.41 | 4.77 | 4.56 | 4.43 | 4.39 | 4.29 | 4.06 | 3.97 | 3.73 | 2.97 | 2.81 | 2.96 | 3.42 |
| Land | 0.07 | 0.08 | 0.12 | 0.14 | 0.16 | 0.18 | 0.19 | 0.22 | 0.24 | 0.25 | 0.23 | 0.21 | 0.16 | 0.13 | 0.11 | 0.12 |
| Unpaid labor (3.06 hr) | 8.05 | 8.81 | 10.09 | 10.85 | 11.87 | 12.77 | 13.65 | 14.92 | 16.08 | 17.86 | 15.73 | 17.05 | 16.09 | 18.05 | 17.64 | 18.41 |
| Total, economic costs | 44.46 | 63.89 | 68.58 | 70.12 | 71.64 | 71.57 | 75.04 | 83.69 | 91.27 | 99.25 | 93.36 | 101.49 | 98.73 | 93.08 | 90.06 | 88.85 |
| Residual returns to management and risk | 5.00 | 3.58 | -20.40 | 14.20 | -5.24 | -4.66 | 9.22 | -16.12 | -32.63 | -30.35 | 1.88 | -32.14 | -24.08 | -19.62 | -4.83 | 3.77 |
| Net returns to owned inputs | 16.91 | 16.94 | -5.22 | 30.27 | 12.13 | 13.42 | 28.29 | 4.59 | -10.49 | -6.20 | 23.27 | -9.87 | -3.44 | 2.35 | 16.52 | 26.36 |

Appendix table 23--U.S. feeder pig production costs, 3,000-head operation, 1980-87

| Item | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|
| | | | | Dollars/cwt | | | | |
| Gross value of production: | | | | | | | | |
| Feeder pigs (81.80 lbs) | 51.56 | 61.61 | 87.08 | 62.22 | 67.04 | 66.96 | 77.83 | 85.29 |
| Cull sows (18.20 lbs) | 6.38 | 7.11 | 8.94 | 7.28 | 7.63 | 6.93 | 8.03 | 8.09 |
| Total | 57.94 | 68.72 | 96.02 | 69.50 | 74.67 | 73.89 | 85.86 | 93.38 |
| Cash expenses: | | | | | | | | |
| Feed-- | | | | | | | | |
| Grain (410 lbs) | 20.09 | 21.66 | 17.56 | 22.38 | 22.82 | 18.63 | 14.54 | 10.59 |
| Protein supplements (114.60 lbs) | 16.93 | 17.84 | 16.92 | 17.86 | 16.89 | 14.22 | 15.30 | 15.29 |
| Pasture | 0.05 | 0.05 | 0.06 | 0.05 | 0.05 | 0.05 | 0.04 | 0.04 |
| Total feed costs | 37.07 | 39.55 | 34.54 | 40.29 | 39.76 | 32.90 | 29.88 | 25.92 |
| Other-- | | | | | | | | |
| Veterinary and medicine | 0.79 | 0.85 | 0.89 | 0.92 | 0.94 | 0.95 | 0.98 | 1.00 |
| Livestock hauling | 0.08 | 0.10 | 0.10 | 0.11 | 0.11 | 0.12 | 0.11 | 0.11 |
| Marketing | 0.95 | 1.05 | 1.15 | 1.08 | 1.19 | 1.13 | 1.22 | 1.25 |
| Bedding (36 lbs) | 0.29 | 0.44 | 0.39 | 0.40 | 0.42 | 0.43 | 0.44 | 0.43 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 4.55 | 5.29 | 5.42 | 5.41 | 5.28 | 5.35 | 5.15 | 5.10 |
| Machinery and building repairs | 3.48 | 3.85 | 4.03 | 4.19 | 4.06 | 4.14 | 4.06 | 4.09 |
| Hired labor (.56 hr) | 3.68 | 4.00 | 3.77 | 4.01 | 4.20 | 4.35 | 4.21 | 4.52 |
| Manure credit | -0.15 | -0.16 | -0.16 | -0.16 | -0.16 | -0.16 | -0.15 | -0.14 |
| Total, variable cash expenses | 50.74 | 54.97 | 50.13 | 56.25 | 55.80 | 49.21 | 45.90 | 42.28 |
| General farm overhead | 2.41 | 3.17 | 4.20 | 4.15 | 4.85 | 4.80 | 6.01 | 7.47 |
| Taxes and insurance | 1.24 | 1.38 | 1.47 | 1.63 | 1.49 | 1.51 | 1.59 | 1.59 |
| Interest | 6.98 | 9.20 | 14.68 | 8.43 | 10.84 | 10.86 | 10.30 | 6.54 |
| Total, fixed cash expenses | 10.63 | 13.75 | 20.36 | 14.21 | 17.19 | 17.17 | 17.90 | 15.60 |
| Total, cash expenses | 61.37 | 68.72 | 70.49 | 70.46 | 72.99 | 66.38 | 63.80 | 57.88 |
| Value of production less cash expenses | -3.43 | 0.00 | 25.53 | -0.96 | 1.68 | 7.51 | 22.06 | 35.50 |
| Capital replacement | 9.44 | 10.45 | 10.92 | 11.89 | 10.72 | 10.76 | 10.66 | 10.75 |
| Value of production less cash expenses and capital replacement | -12.87 | -10.45 | 14.61 | -12.85 | -9.04 | -3.25 | 11.40 | 24.75 |
| Economic (full ownership) costs: | | | | | | | | |
| Variable cash expenses | 50.74 | 54.97 | 50.13 | 56.25 | 55.80 | 49.21 | 45.90 | 42.28 |
| General farm overhead | 2.41 | 3.17 | 4.20 | 4.15 | 4.85 | 4.80 | 6.01 | 7.47 |
| Taxes and insurance | 1.24 | 1.38 | 1.47 | 1.63 | 1.49 | 1.51 | 1.59 | 1.59 |
| Capital replacement | 9.44 | 10.45 | 10.92 | 11.89 | 10.72 | 10.76 | 10.66 | 10.75 |
| Allocated returns to owned inputs-- | | | | | | | | |
| Return to operating capital | 1.44 | 1.89 | 1.39 | 1.23 | 1.37 | 0.94 | 0.62 | 0.62 |
| Return to other nonland capital | 3.45 | 3.26 | 3.19 | 3.00 | 2.39 | 2.26 | 2.32 | 2.69 |
| Land | 0.15 | 0.15 | 0.14 | 0.13 | 0.10 | 0.08 | 0.07 | 0.08 |
| Unpaid labor (1.69 hr) | 10.59 | 11.69 | 11.05 | 11.94 | 12.17 | 12.66 | 12.41 | 12.96 |
| Total, economic costs | 79.46 | 86.97 | 82.50 | 90.22 | 88.89 | 82.22 | 79.58 | 78.44 |
| Residual returns to management and risk | -21.52 | -18.25 | 13.52 | -20.72 | -14.22 | -8.33 | 6.28 | 14.94 |
| Net returns to owned inputs | -5.89 | -1.25 | 29.30 | -4.42 | 1.81 | 7.61 | 21.70 | 31.29 |

Appendix table 24--U.S. feeder pig production costs, 10,000-head operation, 1980-87

| Item | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|
| | | | | Dollars/cwt | | | | |
| Gross value of production: | | | | | | | | |
| Feeder pigs (83.70 lbs) | 51.48 | 62.25 | 89.08 | 63.26 | 67.99 | 68.34 | 79.63 | 87.28 |
| Cull sows (16.30 lbs) | 5.72 | 6.37 | 8.01 | 6.52 | 6.80 | 6.20 | 7.18 | 7.21 |
| Total | 57.20 | 68.62 | 97.09 | 69.78 | 74.79 | 74.54 | 86.81 | 94.49 |
| Cash expenses: | | | | | | | | |
| Feed-- | | | | | | | | |
| Grain (367.40 lbs) | 18.30 | 19.65 | 15.93 | 20.35 | 20.72 | 16.87 | 13.29 | 9.69 |
| Protein supplements (102.60 lbs) | 14.04 | 14.41 | 13.49 | 14.30 | 13.49 | 11.10 | 12.07 | 12.06 |
| Pasture | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total feed costs | 32.34 | 34.06 | 29.42 | 34.65 | 34.21 | 27.97 | 25.36 | 21.75 |
| Other-- | | | | | | | | |
| Veterinary and medicine | 1.67 | 1.80 | 1.88 | 1.94 | 1.99 | 2.00 | 2.06 | 2.11 |
| Livestock hauling | 0.10 | 0.11 | 0.12 | 0.12 | 0.13 | 0.13 | 0.13 | 0.13 |
| Marketing | 0.39 | 0.43 | 0.47 | 0.44 | 0.48 | 0.46 | 0.48 | 0.50 |
| Bedding | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom feed mixing | 2.08 | 2.28 | 2.40 | 2.49 | 2.55 | 2.53 | 2.50 | 2.57 |
| Fuel, lube, and electricity | 3.44 | 4.06 | 4.31 | 4.38 | 4.51 | 4.84 | 4.79 | 4.74 |
| Machinery and building repairs | 2.18 | 2.42 | 2.47 | 2.55 | 2.50 | 2.51 | 2.47 | 2.50 |
| Hired labor (1.47 hr) | 9.84 | 10.77 | 10.36 | 11.11 | 11.33 | 11.78 | 11.59 | 12.17 |
| Manure credit | -0.13 | -0.14 | -0.14 | -0.13 | -0.14 | -0.13 | -0.13 | -0.12 |
| Total, variable cash expenses | 51.91 | 55.79 | 51.29 | 57.55 | 57.56 | 52.09 | 49.25 | 46.35 |
| General farm overhead | 2.38 | 3.17 | 4.25 | 4.17 | 4.86 | 4.84 | 6.08 | 7.56 |
| Taxes and insurance | 0.94 | 1.04 | 1.11 | 1.25 | 1.12 | 1.10 | 1.18 | 1.13 |
| Interest | 6.89 | 9.18 | 14.84 | 8.46 | 10.86 | 10.96 | 10.42 | 6.61 |
| Total, fixed cash expenses | 10.21 | 13.39 | 20.21 | 13.88 | 16.84 | 16.90 | 17.68 | 15.30 |
| Total, cash expenses | 62.12 | 69.18 | 71.50 | 71.43 | 74.40 | 68.99 | 66.93 | 61.65 |
| Value of production less cash expenses | -4.92 | -0.56 | 25.59 | -1.65 | 0.39 | 5.55 | 19.88 | 32.84 |
| Capital replacement | 7.52 | 8.34 | 8.66 | 9.56 | 8.36 | 8.20 | 8.13 | 8.21 |
| Value of production less cash expenses and capital replacement | -12.44 | -8.90 | 16.93 | -11.21 | -7.97 | -2.65 | 11.75 | 24.63 |
| Economic (full ownership) costs: | | | | | | | | |
| Variable cash expenses | 51.91 | 55.79 | 51.29 | 57.55 | 57.56 | 52.09 | 49.25 | 46.35 |
| General farm overhead | 2.38 | 3.17 | 4.25 | 4.17 | 4.86 | 4.84 | 6.08 | 7.56 |
| Taxes and insurance | 0.94 | 1.04 | 1.11 | 1.25 | 1.12 | 1.10 | 1.18 | 1.13 |
| Capital replacement | 7.52 | 8.34 | 8.66 | 9.56 | 8.36 | 8.20 | 8.13 | 8.21 |
| Allocated returns to owned inputs-- | | | | | | | | |
| Return to operating capital | 1.48 | 1.92 | 1.42 | 1.26 | 1.41 | 1.00 | 0.66 | 0.68 |
| Return to other nonland capital | 2.70 | 2.56 | 2.50 | 2.35 | 1.87 | 1.77 | 1.82 | 2.11 |
| Land | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Unpaid labor (.10 hr) | 0.68 | 0.76 | 0.70 | 0.73 | 0.79 | 0.81 | 0.79 | 0.86 |
| Total, economic costs | 67.63 | 73.60 | 69.95 | 76.88 | 75.98 | 69.82 | 67.93 | 66.91 |
| Residual returns to management and risk | -10.43 | -4.98 | 27.14 | -7.10 | -1.19 | 4.72 | 18.88 | 27.58 |
| Net returns to owned inputs | -5.55 | 0.28 | 31.78 | -2.75 | 2.89 | 8.31 | 22.17 | 31.24 |

Appendix table 25--Feeder pig production costs, all sizes of operation, North Central, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Feeder pigs (79.70 lbs) | 47.20 | 63.68 | 44.76 | 79.80 | 66.24 | 63.09 | 82.04 | 58.43 | 52.67 | 61.16 | 83.95 | 61.63 | 66.54 | 65.70 | 75.51 | 80.22 |
| Cull sows (20.30 lbs) | 4.77 | 7.37 | 6.13 | 8.95 | 7.36 | 7.38 | 9.20 | 7.52 | 7.35 | 8.18 | 10.26 | 8.35 | 8.64 | 7.77 | 8.98 | 9.08 |
| Total | 51.97 | 71.04 | 50.89 | 88.74 | 73.60 | 70.47 | 91.24 | 65.95 | 60.02 | 69.34 | 94.21 | 69.98 | 75.18 | 73.47 | 84.49 | 89.30 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (439.80 lbs) | 8.95 | 14.45 | 22.32 | 20.64 | 18.62 | 15.52 | 15.97 | 19.07 | 21.57 | 23.38 | 18.87 | 23.90 | 24.17 | 19.69 | 15.07 | 10.96 |
| Protein supplements (120.60 lbs) | 9.14 | 19.87 | 14.65 | 12.01 | 12.60 | 14.71 | 13.97 | 15.83 | 18.30 | 19.14 | 18.03 | 19.14 | 17.77 | 14.92 | 16.04 | 16.06 |
| Pasture | 0.05 | 0.06 | 0.06 | 0.06 | 0.08 | 0.06 | 0.06 | 0.07 | 0.08 | 0.08 | 0.08 | 0.08 | 0.07 | 0.06 | 0.05 | 0.05 |
| Total feed costs | 18.13 | 34.38 | 37.04 | 32.71 | 31.30 | 30.29 | 30.00 | 34.97 | 39.95 | 42.60 | 36.98 | 43.12 | 42.01 | 34.67 | 31.16 | 27.07 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.98 | 1.01 | 1.14 | 1.53 | 1.49 | 1.50 | 1.54 | 1.65 | 1.77 | 1.67 | 1.74 | 1.78 | 1.61 | 1.54 | 1.56 | 1.58 |
| Livestock hauling | 0.08 | 0.09 | 0.11 | 0.12 | 0.13 | 0.14 | 0.15 | 0.17 | 0.19 | 0.22 | 0.23 | 0.24 | 0.24 | 0.24 | 0.23 | 0.24 |
| Marketing | 0.82 | 0.87 | 0.96 | 1.06 | 1.22 | 1.19 | 1.38 | 1.27 | 1.26 | 1.39 | 1.49 | 1.38 | 1.54 | 1.43 | 1.56 | 1.59 |
| Bedding (3 lbs) | 0.14 | 0.17 | 0.23 | 0.24 | 0.22 | 0.24 | 0.26 | 0.29 | 0.33 | 0.51 | 0.43 | 0.44 | 0.42 | 0.42 | 0.41 | 0.42 |
| Custom feed mixing | 0.67 | 0.71 | 0.79 | 0.86 | 0.89 | 0.97 | 1.04 | 1.16 | 1.29 | 1.36 | 1.35 | 1.35 | 1.19 | 1.08 | 1.04 | 1.03 |
| Fuel, lube, and electricity | 1.99 | 2.10 | 2.91 | 3.24 | 3.42 | 3.68 | 3.86 | 5.04 | 6.91 | 8.04 | 8.05 | 7.76 | 7.05 | 6.86 | 6.67 | 6.57 |
| Machinery and building repairs | 2.18 | 2.31 | 2.56 | 2.81 | 3.16 | 3.16 | 3.28 | 3.63 | 4.23 | 4.62 | 4.85 | 5.05 | 4.73 | 4.77 | 4.66 | 4.68 |
| Hired labor (.30 hr) | 0.55 | 0.61 | 0.70 | 0.75 | 0.82 | 0.88 | 0.94 | 1.03 | 1.11 | 1.30 | 1.27 | 1.42 | 1.87 | 2.10 | 2.08 | 2.19 |
| Manure credit | -0.09 | -0.09 | -0.11 | -0.12 | -0.13 | -0.13 | -0.13 | -0.14 | -0.17 | -0.19 | -0.19 | -0.18 | -0.19 | -0.18 | -0.17 | -0.16 |
| Total, variable cash expenses | 25.45 | 42.14 | 46.32 | 43.20 | 42.52 | 41.92 | 42.32 | 49.07 | 56.87 | 61.52 | 56.20 | 62.36 | 60.47 | 52.93 | 49.20 | 45.21 |
| General farm overhead | 1.66 | 1.59 | 1.45 | 2.01 | 2.07 | 2.12 | 2.94 | 2.40 | 2.50 | 3.20 | 4.13 | 4.18 | 4.89 | 4.77 | 5.91 | 7.14 |
| Taxes and insurance | 1.07 | 1.09 | 1.15 | 1.24 | 1.19 | 1.42 | 1.53 | 1.83 | 1.65 | 1.81 | 1.93 | 2.15 | 1.91 | 1.83 | 1.87 | 1.92 |
| Interest | 3.60 | 3.81 | 3.72 | 5.55 | 7.25 | 6.75 | 8.79 | 7.05 | 7.23 | 9.28 | 14.40 | 8.49 | 10.92 | 10.80 | 10.14 | 6.25 |
| Total, fixed cash expenses | 6.33 | 6.49 | 6.32 | 8.79 | 10.52 | 10.29 | 13.26 | 11.28 | 11.38 | 14.29 | 20.46 | 14.82 | 17.71 | 17.40 | 17.92 | 15.31 |
| Total, cash expenses | 31.78 | 48.63 | 52.64 | 51.99 | 53.04 | 52.21 | 55.58 | 60.35 | 68.25 | 75.81 | 76.66 | 77.18 | 78.18 | 70.33 | 67.12 | 60.52 |
| Value of production less cash expenses | 20.19 | 22.42 | -1.75 | 36.75 | 20.56 | 18.26 | 35.66 | 5.60 | -8.23 | -6.47 | 17.55 | -7.20 | -3.00 | 3.14 | 17.37 | 28.78 |
| Capital replacement | 5.91 | 6.63 | 5.08 | 9.32 | 9.69 | 10.36 | 11.47 | 13.77 | 10.68 | 11.72 | 12.29 | 13.30 | 11.88 | 11.86 | 11.70 | 11.77 |
| Value of production less cash expenses and capital replacement | 14.28 | 15.79 | -6.82 | 27.43 | 10.87 | 7.90 | 24.19 | -8.17 | -18.91 | -18.19 | 5.26 | -20.50 | -14.88 | -8.72 | 5.67 | 17.01 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 25.45 | 42.14 | 46.32 | 43.20 | 42.52 | 41.92 | 42.32 | 49.07 | 56.87 | 61.52 | 56.20 | 62.36 | 60.47 | 52.93 | 49.20 | 45.21 |
| General farm overhead | 1.66 | 1.59 | 1.45 | 2.01 | 2.07 | 2.12 | 2.94 | 2.40 | 2.50 | 3.20 | 4.13 | 4.18 | 4.89 | 4.77 | 5.91 | 7.14 |
| Taxes and insurance | 1.07 | 1.09 | 1.15 | 1.24 | 1.19 | 1.42 | 1.53 | 1.83 | 1.65 | 1.81 | 1.93 | 2.15 | 1.91 | 1.83 | 1.87 | 1.92 |
| Capital replacement | 5.91 | 6.63 | 5.08 | 9.32 | 9.69 | 10.36 | 11.47 | 13.77 | 10.68 | 11.72 | 12.29 | 13.30 | 11.88 | 11.86 | 11.70 | 11.77 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.28 | 0.76 | 0.92 | 0.66 | 0.56 | 0.58 | 0.80 | 1.23 | 1.62 | 2.12 | 1.56 | 1.36 | 1.48 | 1.01 | 0.66 | 0.66 |
| Return to other nonland capital | 3.21 | 3.39 | 3.69 | 4.04 | 4.36 | 4.17 | 4.05 | 4.01 | 3.93 | 3.71 | 3.63 | 3.41 | 2.71 | 2.57 | 2.63 | 3.04 |
| Land | 0.18 | 0.21 | 0.30 | 0.38 | 0.45 | 0.53 | 0.57 | 0.65 | 0.73 | 0.75 | 0.69 | 0.60 | 0.46 | 0.34 | 0.31 | 0.32 |
| Unpaid labor (3.43 hr) | 8.35 | 9.14 | 10.47 | 11.26 | 12.32 | 13.25 | 14.17 | 15.49 | 16.69 | 18.44 | 16.59 | 17.85 | 16.74 | 17.26 | 16.62 | 17.12 |
| Total, economic costs | 46.10 | 64.95 | 69.39 | 72.11 | 73.16 | 74.35 | 77.85 | 88.45 | 94.67 | 103.27 | 97.01 | 105.21 | 100.53 | 92.57 | 88.90 | 87.18 |
| Residual returns to management and risk | 5.87 | 6.09 | -18.49 | 16.63 | 0.44 | -3.88 | 13.39 | -22.50 | -34.65 | -33.93 | -2.80 | -35.23 | -25.35 | -19.10 | -4.41 | 2.12 |
| Net returns to owned inputs | 17.89 | 19.60 | -3.11 | 32.97 | 18.13 | 14.65 | 32.98 | -1.12 | -11.68 | -8.91 | 19.66 | -12.01 | -3.97 | 2.08 | 15.81 | 23.26 |

Appendix table 26--Feeder pig production costs, all sizes of operation, Southeast, 1972-87

| Item | 1972 | 1972 | 1972 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Feeder pigs (86.70 lbs) | 42.59 | 57.46 | 40.39 | 72.01 | 59.78 | 56.93 | 69.96 | 58.43 | 45.28 | 59.61 | 93.07 | 62.17 | 66.89 | 69.84 | 82.75 | 87.08 |
| Cull sows (13.30 lbs) | 4.00 | 6.18 | 5.14 | 7.50 | 6.17 | 6.19 | 7.61 | 7.52 | 4.70 | 5.23 | 6.51 | 5.26 | 5.38 | 5.01 | 5.60 | 5.67 |
| Total | 46.59 | 63.64 | 45.53 | 79.51 | 65.95 | 63.12 | 77.57 | 65.95 | 49.98 | 64.84 | 99.58 | 67.43 | 72.27 | 74.85 | 88.35 | 92.75 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (379.10 lbs) | 10.67 | 17.24 | 26.64 | 24.63 | 20.72 | 18.52 | 20.19 | 22.90 | 21.39 | 22.42 | 18.13 | 23.32 | 23.27 | 18.66 | 15.46 | 11.25 |
| Protein supplements (103.60 lbs) | 9.85 | 21.42 | 15.80 | 12.94 | 12.96 | 15.86 | 15.02 | 17.04 | 15.97 | 17.17 | 15.70 | 16.42 | 15.82 | 13.20 | 14.20 | 14.22 |
| Pasture | 0.51 | 0.58 | 0.60 | 0.60 | 0.83 | 0.61 | 0.61 | 0.70 | 0.79 | 0.83 | 0.80 | 0.67 | 0.60 | 0.56 | 0.49 | 0.46 |
| Total feed costs | 21.03 | 39.25 | 43.04 | 38.18 | 34.51 | 34.99 | 35.82 | 40.64 | 38.15 | 40.42 | 34.63 | 40.41 | 39.69 | 32.42 | 30.15 | 25.93 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.55 | 0.57 | 0.65 | 0.87 | 0.84 | 0.85 | 0.87 | 0.93 | 1.00 | 1.06 | 1.10 | 1.15 | 1.18 | 1.19 | 1.22 | 1.24 |
| Livestock hauling | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 |
| Marketing | 1.10 | 1.17 | 1.30 | 1.42 | 1.62 | 1.60 | 1.84 | 1.74 | 1.77 | 1.93 | 2.04 | 1.91 | 1.95 | 1.82 | 1.95 | 1.97 |
| Bedding (14 lbs) | 0.07 | 0.08 | 0.11 | 0.12 | 0.11 | 0.12 | 0.13 | 0.14 | 0.16 | 0.24 | 0.19 | 0.19 | 0.17 | 0.16 | 0.16 | 0.15 |
| Custom feed mixing | 0.97 | 1.02 | 1.13 | 1.25 | 1.29 | 1.40 | 1.51 | 1.68 | 1.87 | 1.94 | 1.91 | 1.86 | 1.96 | 1.92 | 1.85 | 1.85 |
| Fuel, lube, and electricity | 1.52 | 1.61 | 2.23 | 2.48 | 2.63 | 2.82 | 2.96 | 3.87 | 5.31 | 6.09 | 6.33 | 6.34 | 5.69 | 5.93 | 5.22 | 5.42 |
| Machinery and building repairs | 2.41 | 2.55 | 2.83 | 3.11 | 3.49 | 3.49 | 3.63 | 4.02 | 4.68 | 5.14 | 5.31 | 5.50 | 5.02 | 5.03 | 4.89 | 4.91 |
| Hired labor (1 hr) | 2.02 | 2.21 | 2.54 | 2.73 | 2.98 | 3.21 | 3.43 | 3.75 | 4.04 | 4.36 | 4.93 | 5.32 | 5.91 | 6.40 | 6.54 | 7.07 |
| Manure credit | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total, variable cash expenses | 29.68 | 48.47 | 53.83 | 50.16 | 47.48 | 48.49 | 50.20 | 56.78 | 56.99 | 61.19 | 56.45 | 62.69 | 61.59 | 54.89 | 52.00 | 48.56 |
| General farm overhead | 1.49 | 1.42 | 1.30 | 1.80 | 1.86 | 1.90 | 2.50 | 2.40 | 2.08 | 2.99 | 4.36 | 4.03 | 4.70 | 4.86 | 6.18 | 7.42 |
| Taxes and insurance | 0.92 | 0.95 | 1.00 | 1.07 | 1.24 | 1.23 | 1.36 | 1.64 | 1.48 | 1.62 | 1.72 | 1.93 | 1.74 | 1.71 | 1.92 | 1.76 |
| Interest | 3.23 | 3.41 | 3.32 | 4.97 | 6.50 | 6.05 | 7.47 | 7.05 | 6.02 | 8.68 | 15.23 | 8.18 | 10.50 | 11.00 | 10.60 | 6.49 |
| Total, fixed cash expenses | 5.64 | 5.78 | 5.62 | 7.84 | 9.60 | 9.17 | 11.33 | 11.09 | 9.58 | 13.29 | 21.31 | 14.13 | 16.93 | 17.58 | 18.70 | 15.67 |
| Total, cash expenses | 35.32 | 54.25 | 59.45 | 58.00 | 57.08 | 57.66 | 61.53 | 67.87 | 66.57 | 74.48 | 77.76 | 76.82 | 78.52 | 72.47 | 70.70 | 64.23 |
| Value of production less cash expenses | 11.27 | 9.39 | -13.92 | 21.51 | 8.87 | 5.46 | 16.04 | -1.92 | -16.59 | -9.64 | 21.82 | -9.39 | -6.25 | 2.38 | 17.65 | 28.52 |
| Capital replacement | 5.26 | 5.91 | 4.52 | 8.31 | 9.80 | 9.23 | 10.16 | 12.30 | 11.17 | 12.29 | 12.68 | 13.59 | 12.00 | 11.76 | 11.61 | 11.68 |
| Value of production less cash expenses and capital replacement | 6.01 | 3.48 | -18.44 | 13.20 | -0.93 | -3.77 | 5.88 | -14.22 | -27.76 | -21.93 | 9.14 | -22.98 | -18.25 | -9.38 | 6.04 | 16.84 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 29.68 | 48.47 | 53.83 | 50.16 | 47.48 | 48.49 | 50.20 | 56.78 | 56.99 | 61.19 | 56.45 | 62.69 | 61.59 | 54.89 | 52.00 | 48.56 |
| General farm overhead | 1.49 | 1.42 | 1.30 | 1.80 | 1.86 | 1.90 | 2.50 | 2.40 | 2.08 | 2.99 | 4.36 | 4.03 | 4.70 | 4.86 | 6.18 | 7.42 |
| Taxes and insurance | 0.92 | 0.95 | 1.00 | 1.07 | 1.24 | 1.23 | 1.36 | 1.64 | 1.48 | 1.62 | 1.72 | 1.93 | 1.74 | 1.71 | 1.92 | 1.76 |
| Capital replacement | 5.26 | 5.91 | 4.52 | 8.31 | 9.80 | 9.23 | 10.16 | 12.30 | 11.17 | 12.29 | 12.68 | 13.59 | 12.00 | 11.76 | 11.61 | 11.68 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.33 | 0.87 | 1.07 | 0.77 | 0.63 | 0.67 | 0.95 | 1.42 | 1.62 | 2.11 | 1.56 | 1.37 | 1.51 | 1.05 | 0.70 | 0.71 |
| Return to other nonland capital | 3.18 | 3.36 | 3.66 | 4.00 | 4.33 | 4.13 | 4.02 | 3.98 | 3.90 | 3.68 | 3.60 | 3.38 | 2.69 | 2.55 | 2.60 | 3.00 |
| Land | 0.25 | 0.30 | 0.43 | 0.52 | 0.56 | 0.58 | 0.61 | 0.68 | 0.76 | 0.78 | 0.73 | 0.68 | 0.54 | 0.48 | 0.43 | 0.47 |
| Unpaid labor (3.68 hr) | 8.90 | 9.75 | 11.16 | 12.01 | 13.13 | 14.13 | 15.10 | 16.51 | 17.79 | 18.61 | 18.98 | 19.04 | 17.00 | 16.83 | 16.63 | 17.66 |
| Total, economic costs | 50.02 | 71.03 | 76.97 | 78.63 | 79.02 | 80.36 | 84.90 | 95.71 | 95.79 | 103.26 | 100.09 | 106.71 | 101.76 | 94.14 | 92.07 | 91.26 |
| Residual returns to management and risk | -3.43 | -7.39 | -31.44 | 0.88 | -13.07 | -17.24 | -7.33 | -29.76 | -45.81 | -38.42 | -0.51 | -39.28 | -29.49 | -19.29 | -3.72 | 1.49 |
| Net returns to owned inputs | 9.24 | 6.89 | -15.11 | 18.17 | 5.57 | 2.27 | 13.35 | -7.17 | -21.74 | -13.25 | 24.37 | -14.81 | -7.76 | 1.63 | 16.64 | 23.33 |

Appendix table 27--U.S. farrow-to-finish production costs, all sizes of operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (94.40 lbs) | 24.16 | 36.48 | 31.81 | 43.77 | 40.16 | 37.20 | 43.81 | 39.99 | 37.62 | 41.67 | 51.70 | 44.66 | 45.79 | 42.10 | 48.00 | 52.46 |
| Cull sows (5.60 lbs) | 1.73 | 2.67 | 2.23 | 3.25 | 2.89 | 2.68 | 3.30 | 2.75 | 1.98 | 2.20 | 2.77 | 2.26 | 2.35 | 2.12 | 2.46 | 2.48 |
| Total | 25.89 | 39.15 | 34.04 | 47.02 | 43.05 | 39.88 | 47.11 | 42.74 | 39.60 | 43.87 | 54.47 | 46.92 | 48.14 | 44.22 | 50.46 | 54.94 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (348.20 lbs) | 7.42 | 11.99 | 18.53 | 17.13 | 15.87 | 12.88 | 13.28 | 15.01 | 16.94 | 18.32 | 14.83 | 18.85 | 19.22 | 15.69 | 12.15 | 8.86 |
| Protein supplements (81.20 lbs) | 6.94 | 15.10 | 11.14 | 9.12 | 9.35 | 11.18 | 10.56 | 11.67 | 11.68 | 12.27 | 11.40 | 12.19 | 11.26 | 9.13 | 9.88 | 9.89 |
| Pasture | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.05 | 0.05 | 0.05 | 0.04 | 0.04 | 0.03 | 0.03 | 0.03 |
| Total feed costs | 14.39 | 27.12 | 29.69 | 26.28 | 25.25 | 24.09 | 23.87 | 26.71 | 28.67 | 30.64 | 26.28 | 31.08 | 30.52 | 24.85 | 22.06 | 18.78 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.26 | 0.27 | 0.30 | 0.41 | 0.40 | 0.40 | 0.41 | 0.44 | 0.47 | 0.50 | 0.51 | 0.53 | 0.54 | 0.53 | 0.55 | 0.56 |
| Livestock hauling | 0.04 | 0.04 | 0.05 | 0.06 | 0.07 | 0.07 | 0.08 | 0.09 | 0.10 | 0.12 | 0.12 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| Marketing | 0.19 | 0.21 | 0.23 | 0.25 | 0.29 | 0.28 | 0.33 | 0.30 | 0.30 | 0.33 | 0.36 | 0.33 | 0.35 | 0.33 | 0.35 | 0.36 |
| Bedding (12 lbs) | 0.05 | 0.06 | 0.09 | 0.09 | 0.08 | 0.09 | 0.09 | 0.11 | 0.12 | 0.18 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.51 | 0.54 | 0.74 | 0.83 | 0.88 | 0.94 | 0.99 | 1.29 | 1.77 | 2.06 | 2.06 | 1.96 | 1.81 | 1.74 | 1.67 | 1.64 |
| Machinery and building repairs | 1.06 | 1.13 | 1.25 | 1.37 | 1.54 | 1.54 | 1.60 | 1.77 | 2.06 | 2.25 | 2.35 | 2.45 | 2.34 | 2.38 | 2.33 | 2.34 |
| Hired labor (.19 hr) | 0.42 | 0.46 | 0.53 | 0.57 | 0.63 | 0.67 | 0.72 | 0.79 | 0.85 | 0.99 | 0.98 | 1.08 | 1.23 | 1.34 | 1.19 | 1.26 |
| Manure credit | -0.10 | -0.10 | -0.11 | -0.12 | -0.14 | -0.14 | -0.14 | -0.15 | -0.19 | -0.20 | -0.20 | -0.19 | -0.21 | -0.20 | -0.19 | -0.17 |
| Total, variable cash expenses | 16.83 | 29.73 | 32.78 | 29.73 | 29.00 | 27.94 | 27.95 | 31.35 | 34.15 | 36.87 | 32.61 | 37.52 | 36.86 | 31.25 | 28.24 | 25.05 |
| General farm overhead | 0.87 | 0.92 | 1.03 | 1.12 | 1.27 | 1.26 | 1.59 | 1.63 | 1.72 | 2.12 | 2.66 | 2.47 | 2.37 | 2.14 | 3.53 | 4.39 |
| Taxes and insurance | 0.39 | 0.40 | 0.42 | 0.45 | 0.54 | 0.52 | 0.56 | 0.65 | 0.61 | 0.67 | 0.69 | 0.78 | 0.70 | 0.83 | 0.73 | 0.74 |
| Interest | 1.79 | 2.10 | 2.48 | 2.93 | 4.23 | 3.81 | 4.52 | 4.55 | 4.75 | 5.85 | 8.28 | 5.65 | 7.00 | 5.41 | 6.05 | 3.85 |
| Total, fixed cash expenses | 3.05 | 3.42 | 3.92 | 4.51 | 6.04 | 5.59 | 6.67 | 6.83 | 7.08 | 8.64 | 11.63 | 8.90 | 10.07 | 8.38 | 10.31 | 8.98 |
| Total, cash expenses | 19.88 | 33.15 | 36.70 | 34.24 | 35.04 | 33.53 | 34.62 | 38.18 | 41.23 | 45.51 | 44.24 | 46.42 | 46.93 | 39.63 | 38.55 | 34.03 |
| Value production less cash expenses | 6.00 | 6.00 | -2.66 | 12.78 | 8.01 | 6.35 | 12.49 | 4.56 | -1.63 | -1.64 | 10.23 | 0.50 | 1.21 | 4.59 | 11.91 | 20.91 |
| Capital replacement | 2.66 | 2.99 | 2.29 | 4.20 | 5.10 | 4.67 | 5.12 | 5.98 | 5.15 | 5.59 | 5.81 | 6.19 | 5.68 | 5.65 | 5.60 | 5.61 |
| Value of production less cash expenses and capital replacement | 3.34 | 3.01 | -4.95 | 8.58 | 2.91 | 1.68 | 7.37 | -1.42 | -6.78 | -7.23 | 4.42 | -5.69 | -4.47 | -1.06 | 6.31 | 15.30 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 16.83 | 29.73 | 32.78 | 29.73 | 29.00 | 27.94 | 27.95 | 31.35 | 34.15 | 36.87 | 32.61 | 37.52 | 36.86 | 31.25 | 28.24 | 25.05 |
| General farm overhead | 0.87 | 0.92 | 1.03 | 1.12 | 1.27 | 1.26 | 1.59 | 1.63 | 1.72 | 2.12 | 2.66 | 2.47 | 2.37 | 2.14 | 3.53 | 4.39 |
| Taxes and insurance | 0.39 | 0.40 | 0.42 | 0.45 | 0.54 | 0.52 | 0.56 | 0.65 | 0.61 | 0.67 | 0.69 | 0.78 | 0.70 | 0.83 | 0.73 | 0.74 |
| Capital replacement | 2.66 | 2.99 | 2.29 | 4.20 | 5.10 | 4.67 | 5.12 | 5.98 | 5.15 | 5.59 | 5.81 | 6.19 | 5.68 | 5.65 | 5.60 | 5.61 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.19 | 0.53 | 0.65 | 0.46 | 0.38 | 0.38 | 0.53 | 0.79 | 0.97 | 1.27 | 0.90 | 0.82 | 0.90 | 0.60 | 0.38 | 0.37 |
| Return to other nonland capital | 1.39 | 1.47 | 1.59 | 1.74 | 1.88 | 1.80 | 1.75 | 1.73 | 1.70 | 1.60 | 1.57 | 1.47 | 1.17 | 1.11 | 1.14 | 1.32 |
| Land | 0.04 | 0.05 | 0.07 | 0.09 | 0.10 | 0.11 | 0.12 | 0.13 | 0.15 | 0.15 | 0.14 | 0.13 | 0.10 | 0.08 | 0.07 | 0.07 |
| Unpaid labor (.91 hr) | 2.21 | 2.42 | 2.77 | 2.98 | 3.25 | 3.50 | 3.74 | 4.09 | 4.41 | 4.90 | 4.48 | 4.78 | 4.50 | 4.52 | 4.36 | 4.50 |
| Total, economic costs | 24.58 | 38.51 | 41.59 | 40.77 | 41.52 | 40.19 | 41.36 | 46.35 | 48.86 | 53.17 | 48.87 | 54.16 | 52.28 | 46.18 | 44.05 | 42.05 |
| Residual returns to management and risk | 1.31 | 0.64 | -7.56 | 6.25 | 1.53 | -0.31 | 5.75 | -3.61 | -9.26 | -9.30 | 5.60 | -7.24 | -4.14 | -1.96 | 6.41 | 12.89 |
| Net returns to owned inputs | 5.13 | 5.11 | -2.47 | 11.51 | 7.14 | 5.49 | 11.89 | 3.13 | -2.03 | -1.38 | 12.70 | -0.04 | 2.53 | 4.35 | 12.36 | 19.15 |

Appendix table 28--U.S. farrow-to-finish production costs, 140-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (94.70 lbs) | 23.33 | 35.23 | 30.72 | 42.27 | 39.58 | 35.93 | 42.02 | 39.05 | 37.79 | 41.51 | 51.73 | 44.43 | 45.72 | 42.27 | 47.82 | 47.00 |
| Cull sows (5.30 lbs) | 2.54 | 3.93 | 3.27 | 4.78 | 4.34 | 3.94 | 5.03 | 4.67 | 1.87 | 2.08 | 2.61 | 2.13 | 2.21 | 2.01 | 2.31 | 2.33 |
| Total | 25.88 | 39.16 | 34.00 | 47.05 | 43.92 | 39.87 | 47.05 | 43.72 | 39.66 | 43.59 | 54.34 | 46.56 | 47.93 | 44.28 | 50.13 | 49.33 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (354.50 lbs) | 7.45 | 12.04 | 18.60 | 17.20 | 15.76 | 12.93 | 13.36 | 15.01 | 17.35 | 18.72 | 15.17 | 19.32 | 19.74 | 16.12 | 12.56 | 9.18 |
| Protein supplements (80.40 lbs) | 6.97 | 15.17 | 11.19 | 9.17 | 9.81 | 11.23 | 10.58 | 11.88 | 12.09 | 12.84 | 11.87 | 12.69 | 11.86 | 9.80 | 10.51 | 10.59 |
| Pasture | 0.03 | 0.04 | 0.04 | 0.04 | 0.05 | 0.04 | 0.04 | 0.04 | 0.14 | 0.15 | 0.16 | 0.14 | 0.15 | 0.15 | 0.13 | 0.13 |
| Total feed costs | 14.46 | 27.25 | 29.83 | 26.40 | 25.62 | 24.20 | 23.98 | 26.93 | 29.58 | 31.71 | 27.20 | 32.15 | 31.75 | 26.07 | 23.20 | 19.90 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.27 | 0.28 | 0.32 | 0.43 | 0.41 | 0.42 | 0.43 | 0.46 | 0.49 | 0.52 | 0.55 | 0.57 | 0.58 | 0.59 | 0.60 | 0.61 |
| Livestock hauling | 0.05 | 0.06 | 0.07 | 0.08 | 0.08 | 0.09 | 0.09 | 0.11 | 0.12 | 0.14 | 0.15 | 0.15 | 0.15 | 0.16 | 0.16 | 0.15 |
| Marketing | 0.27 | 0.29 | 0.32 | 0.35 | 0.40 | 0.39 | 0.46 | 0.42 | 0.42 | 0.47 | 0.51 | 0.48 | 0.53 | 0.50 | 0.54 | 0.56 |
| Bedding (16 lbs) | 0.06 | 0.07 | 0.10 | 0.10 | 0.09 | 0.10 | 0.10 | 0.12 | 0.13 | 0.20 | 0.17 | 0.18 | 0.18 | 0.20 | 0.19 | 0.19 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.60 | 0.64 | 0.88 | 0.99 | 1.04 | 1.12 | 1.17 | 1.53 | 2.10 | 2.46 | 2.49 | 2.32 | 2.07 | 1.97 | 1.84 | 1.84 |
| Machinery and building repairs | 1.21 | 1.28 | 1.42 | 1.55 | 1.75 | 1.75 | 1.82 | 2.01 | 2.34 | 2.59 | 2.73 | 2.86 | 2.75 | 2.81 | 2.74 | 2.76 |
| Hired labor (.12 hr) | 0.20 | 0.21 | 0.24 | 0.26 | 0.29 | 0.31 | 0.33 | 0.36 | 0.39 | 0.42 | 0.41 | 0.43 | 0.46 | 0.48 | 0.47 | 0.52 |
| Manure credit | -0.08 | -0.09 | -0.10 | -0.11 | -0.12 | -0.12 | -0.12 | -0.13 | -0.16 | -0.18 | -0.18 | -0.17 | -0.17 | -0.16 | -0.15 | -0.14 |
| Total, variable cash expenses | 17.04 | 29.99 | 33.08 | 30.05 | 29.56 | 28.26 | 28.26 | 31.81 | 35.41 | 38.33 | 34.03 | 38.97 | 38.30 | 32.62 | 29.59 | 26.39 |
| General farm overhead | 0.87 | 0.92 | 1.02 | 1.12 | 1.30 | 1.26 | 1.59 | 1.67 | 1.72 | 2.11 | 2.65 | 2.45 | 2.36 | 2.14 | 3.51 | 3.95 |
| Taxes and insurance | 0.52 | 0.53 | 0.56 | 0.60 | 0.76 | 0.69 | 0.74 | 0.88 | 0.75 | 0.80 | 0.86 | 0.93 | 0.88 | 0.88 | 0.90 | 0.92 |
| Interest | 1.79 | 2.10 | 2.47 | 2.94 | 4.32 | 3.81 | 4.51 | 4.65 | 4.76 | 5.81 | 8.26 | 5.61 | 6.97 | 5.42 | 6.02 | 3.45 |
| Total, fixed cash expenses | 3.18 | 3.55 | 4.06 | 4.66 | 6.37 | 5.76 | 6.84 | 7.20 | 7.23 | 8.72 | 11.77 | 8.99 | 10.21 | 8.44 | 10.43 | 8.32 |
| Total, cash expenses | 20.21 | 33.54 | 37.14 | 34.70 | 35.93 | 34.02 | 35.10 | 39.01 | 42.64 | 47.05 | 45.80 | 47.96 | 48.51 | 41.06 | 40.02 | 34.71 |
| Value production less cash expenses | 5.66 | 5.62 | -3.14 | 12.34 | 7.99 | 5.85 | 11.95 | 4.71 | -2.98 | -3.46 | 8.54 | -1.40 | -0.58 | 3.22 | 10.11 | 14.62 |
| Capital replacement | 3.37 | 3.78 | 2.90 | 5.32 | 6.71 | 5.91 | 6.49 | 7.75 | 5.93 | 6.51 | 6.87 | 7.30 | 6.88 | 6.94 | 6.85 | 6.86 |
| Value of production less cash expenses and capital replacement | 2.29 | 1.84 | -6.04 | 7.02 | 1.28 | -0.06 | 5.46 | -3.04 | -8.91 | -9.97 | 1.67 | -8.70 | -7.46 | -3.72 | 3.26 | 7.76 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 17.04 | 29.99 | 33.08 | 30.05 | 29.56 | 28.26 | 28.26 | 31.81 | 35.41 | 38.33 | 34.03 | 38.97 | 38.30 | 32.62 | 29.59 | 26.39 |
| General farm overhead | 0.87 | 0.92 | 1.02 | 1.12 | 1.30 | 1.26 | 1.59 | 1.67 | 1.72 | 2.11 | 2.65 | 2.45 | 2.36 | 2.14 | 3.51 | 3.95 |
| Taxes and insurance | 0.52 | 0.53 | 0.56 | 0.60 | 0.76 | 0.69 | 0.74 | 0.88 | 0.75 | 0.80 | 0.86 | 0.93 | 0.88 | 0.88 | 0.90 | 0.92 |
| Capital replacement | 3.37 | 3.78 | 2.90 | 5.32 | 6.71 | 5.91 | 6.49 | 7.75 | 5.93 | 6.51 | 6.87 | 7.30 | 6.88 | 6.94 | 6.85 | 6.86 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.19 | 0.54 | 0.66 | 0.46 | 0.39 | 0.39 | 0.53 | 0.80 | 1.01 | 1.32 | 0.94 | 0.85 | 0.94 | 0.62 | 0.40 | 0.39 |
| Return to other nonland capital | 1.70 | 1.80 | 1.96 | 2.14 | 2.31 | 2.21 | 2.14 | 2.12 | 0.21 | 1.96 | 1.92 | 1.80 | 1.44 | 1.36 | 1.41 | 1.62 |
| Land | 0.16 | 0.20 | 0.28 | 0.34 | 0.39 | 0.43 | 0.46 | 0.52 | 0.58 | 0.59 | 0.55 | 0.50 | 0.39 | 0.31 | 0.28 | 0.31 |
| Unpaid labor (2.23 hr) | 4.03 | 4.42 | 5.06 | 5.44 | 5.95 | 6.40 | 6.84 | 7.48 | 8.06 | 8.93 | 8.50 | 9.21 | 9.21 | 9.55 | 9.33 | 9.72 |
| Total, economic costs | 27.88 | 42.18 | 45.51 | 45.47 | 47.36 | 45.55 | 47.05 | 53.02 | 53.67 | 60.55 | 56.33 | 62.01 | 60.39 | 54.43 | 52.27 | 50.16 |
| Residual returns to management and risk | -2.01 | -3.02 | -11.52 | 1.58 | -3.44 | -5.68 | 0.00 | -9.30 | -14.01 | -16.96 | -1.99 | -15.45 | -12.46 | -10.15 | -2.14 | -0.83 |
| Net returns to owned inputs | 4.08 | 3.93 | -3.56 | 9.96 | 5.59 | 3.75 | 9.97 | 1.61 | -4.15 | -4.16 | 9.93 | -3.09 | -0.49 | 1.70 | 9.28 | 11.21 |

Appendix table 29--U.S. farrow-to-finish production costs, 300-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (94 lbs) | 24.65 | 37.22 | 32.46 | 44.66 | 41.20 | 37.96 | 44.47 | 41.21 | 37.91 | 41.65 | 51.39 | 44.82 | 45.66 | 42.10 | 48.04 | 47.95 |
| Cull sows (6 lbs) | 1.51 | 2.33 | 1.94 | 2.82 | 2.53 | 2.33 | 2.97 | 2.75 | 2.09 | 2.33 | 2.94 | 2.39 | 2.50 | 2.27 | 2.63 | 2.65 |
| Total | 26.16 | 39.55 | 34.40 | 47.49 | 43.73 | 40.29 | 47.44 | 43.96 | 40.00 | 43.98 | 54.33 | 47.21 | 48.16 | 44.37 | 50.67 | 50.60 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (353.70 lbs) | 7.39 | 11.95 | 18.45 | 17.06 | 15.74 | 12.83 | 13.22 | 14.69 | 17.04 | 18.45 | 14.95 | 19.00 | 19.40 | 15.85 | 12.24 | 8.92 |
| Protein supplements (80.40 lbs) | 6.98 | 15.18 | 11.20 | 9.17 | 9.92 | 11.24 | 10.61 | 11.79 | 12.08 | 12.80 | 11.86 | 12.70 | 11.83 | 9.78 | 10.51 | 10.59 |
| Pasture | 0.05 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.07 | 0.08 | 0.07 | 0.08 | 0.08 | 0.07 | 0.07 | 0.07 | 0.06 | 0.06 |
| Total feed costs | 14.42 | 27.19 | 29.71 | 26.30 | 25.72 | 24.13 | 23.90 | 26.56 | 29.19 | 31.33 | 26.89 | 31.77 | 31.30 | 25.70 | 22.81 | 19.57 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.31 | 0.32 | 0.36 | 0.49 | 0.47 | 0.48 | 0.49 | 0.52 | 0.56 | 0.60 | 0.63 | 0.65 | 0.67 | 0.67 | 0.69 | 0.71 |
| Livestock hauling | 0.07 | 0.07 | 0.08 | 0.09 | 0.10 | 0.11 | 0.12 | 0.13 | 0.15 | 0.17 | 0.19 | 0.19 | 0.20 | 0.21 | 0.21 | 0.20 |
| Marketing | 0.21 | 0.22 | 0.24 | 0.27 | 0.31 | 0.30 | 0.35 | 0.32 | 0.32 | 0.35 | 0.39 | 0.36 | 0.40 | 0.38 | 0.41 | 0.42 |
| Bedding (22 lbs) | 0.07 | 0.08 | 0.11 | 0.12 | 0.11 | 0.12 | 0.13 | 0.14 | 0.16 | 0.25 | 0.22 | 0.22 | 0.23 | 0.24 | 0.24 | 0.24 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.49 | 0.52 | 0.72 | 0.80 | 0.85 | 0.91 | 0.95 | 1.25 | 1.71 | 2.02 | 2.02 | 1.89 | 1.69 | 1.54 | 1.53 | 1.48 |
| Machinery and building repairs | 1.11 | 1.18 | 1.31 | 1.43 | 1.61 | 1.61 | 1.68 | 1.85 | 2.16 | 2.34 | 2.46 | 2.57 | 2.48 | 2.53 | 2.48 | 2.50 |
| Hired labor (.09 hr) | 0.17 | 0.19 | 0.21 | 0.23 | 0.25 | 0.27 | 0.29 | 0.32 | 0.34 | 0.38 | 0.36 | 0.39 | 0.39 | 0.41 | 0.40 | 0.41 |
| Manure credit | -0.09 | -0.10 | -0.11 | -0.12 | -0.14 | -0.13 | -0.13 | -0.15 | -0.18 | -0.19 | -0.19 | -0.18 | -0.19 | -0.18 | -0.17 | -0.16 |
| Total, variable cash expenses | 16.76 | 29.67 | 32.66 | 29.61 | 29.28 | 27.80 | 27.78 | 30.94 | 34.41 | 37.25 | 32.97 | 37.86 | 37.17 | 31.50 | 28.60 | 25.37 |
| General farm overhead | 0.88 | 0.93 | 1.04 | 1.13 | 1.29 | 1.27 | 1.60 | 1.68 | 1.74 | 2.13 | 2.65 | 2.49 | 2.37 | 2.15 | 3.55 | 4.05 |
| Taxes and insurance | 0.38 | 0.39 | 0.41 | 0.44 | 0.55 | 0.51 | 0.55 | 0.65 | 0.65 | 0.70 | 0.75 | 0.81 | 0.76 | 0.76 | 0.77 | 0.79 |
| Interest | 1.81 | 2.12 | 2.50 | 2.96 | 4.30 | 3.85 | 4.55 | 4.68 | 4.80 | 5.86 | 8.26 | 5.68 | 7.00 | 5.43 | 6.08 | 3.54 |
| Total, fixed cash expenses | 3.07 | 3.44 | 3.95 | 4.54 | 6.14 | 5.63 | 6.70 | 7.00 | 7.19 | 8.69 | 11.66 | 8.98 | 10.13 | 8.34 | 10.40 | 8.38 |
| Total, cash expenses | 19.83 | 33.12 | 36.61 | 34.15 | 35.42 | 33.43 | 34.48 | 37.94 | 41.60 | 45.94 | 44.63 | 46.84 | 47.30 | 39.84 | 39.00 | 33.75 |
| Value production less cash expenses | 6.32 | 6.43 | -2.21 | 13.34 | 8.31 | 6.86 | 12.96 | 6.02 | -1.60 | -1.96 | 9.70 | 0.37 | 0.86 | 4.53 | 11.67 | 16.85 |
| Capital replacement | 2.43 | 2.73 | 2.09 | 3.84 | 4.69 | 4.27 | 4.70 | 5.62 | 5.86 | 6.32 | 6.64 | 7.10 | 6.65 | 6.71 | 6.66 | 6.70 |
| Value of production less cash expenses and capital replacement | 3.89 | 3.70 | -4.30 | 9.50 | 3.62 | 2.59 | 8.26 | 0.40 | -7.46 | -8.28 | 3.06 | -6.73 | -5.79 | -2.18 | 5.01 | 10.15 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 16.76 | 29.67 | 32.66 | 29.61 | 29.28 | 27.80 | 27.78 | 30.94 | 34.41 | 37.25 | 32.97 | 37.86 | 37.17 | 31.50 | 28.60 | 25.37 |
| General farm overhead | 0.88 | 0.93 | 1.04 | 1.13 | 1.29 | 1.27 | 1.60 | 1.68 | 1.74 | 2.13 | 2.65 | 2.49 | 2.37 | 2.15 | 3.55 | 4.05 |
| Taxes and insurance | 0.38 | 0.39 | 0.41 | 0.44 | 0.55 | 0.51 | 0.55 | 0.65 | 0.65 | 0.70 | 0.75 | 0.81 | 0.76 | 0.76 | 0.77 | 0.79 |
| Capital replacement | 2.43 | 2.73 | 2.09 | 3.84 | 4.69 | 4.27 | 4.70 | 5.62 | 5.86 | 6.32 | 6.64 | 7.10 | 6.65 | 6.71 | 6.66 | 6.70 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.19 | 0.53 | 0.65 | 0.45 | 0.39 | 0.38 | 0.53 | 0.77 | 0.98 | 1.28 | 0.91 | 0.83 | 0.91 | 0.60 | 0.39 | 0.37 |
| Return to other nonland capital | 1.57 | 1.66 | 1.81 | 1.97 | 2.14 | 2.04 | 1.98 | 1.97 | 1.93 | 1.82 | 1.78 | 1.67 | 1.33 | 1.26 | 1.30 | 1.50 |
| Land | 0.09 | 0.10 | 0.15 | 0.18 | 0.21 | 0.23 | 0.24 | 0.28 | 0.31 | 0.32 | 0.30 | 0.27 | 0.21 | 0.17 | 0.14 | 0.14 |
| Unpaid labor (1.58 hr) | 2.82 | 3.08 | 3.53 | 3.80 | 4.15 | 4.47 | 4.78 | 5.22 | 5.63 | 6.27 | 5.86 | 6.35 | 6.44 | 6.69 | 6.52 | 6.80 |
| Total, economic costs | 25.12 | 39.11 | 42.33 | 41.44 | 42.69 | 40.98 | 42.16 | 47.13 | 51.51 | 56.09 | 51.86 | 57.37 | 55.84 | 49.84 | 47.93 | 45.72 |
| Residual returns to management and risk | 1.04 | 0.43 | -7.94 | 6.05 | 1.04 | -0.69 | 5.28 | -3.17 | -11.51 | -12.11 | 2.47 | -10.16 | -7.68 | -5.47 | 2.74 | 4.88 |
| Net returns to owned inputs | 5.70 | 5.81 | -1.80 | 12.46 | 7.92 | 6.44 | 12.81 | 5.08 | -2.66 | -2.42 | 11.32 | -1.05 | 1.21 | 3.25 | 11.09 | 13.69 |

Appendix table 30--U.S. farrow-to-finish production costs, 650-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (94.20 lbs) | 24.35 | 36.77 | 32.07 | 44.12 | 39.51 | 37.50 | 44.40 | 39.37 | 37.37 | 41.62 | 51.67 | 44.56 | 45.75 | 41.98 | 47.90 | 53.69 |
| Cull sows (5.80 lbs) | 1.63 | 2.52 | 2.09 | 3.05 | 2.65 | 2.52 | 3.07 | 2.72 | 2.03 | 2.26 | 2.84 | 2.32 | 2.42 | 2.19 | 2.54 | 2.56 |
| Total | 25.98 | 39.28 | 34.16 | 47.17 | 42.16 | 40.02 | 47.47 | 42.09 | 39.40 | 43.88 | 54.51 | 46.88 | 48.17 | 44.17 | 50.44 | 56.25 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (353.20 lbs) | 7.45 | 12.03 | 18.58 | 17.18 | 16.32 | 12.92 | 13.30 | 14.91 | 16.97 | 18.38 | 14.89 | 18.93 | 19.34 | 15.82 | 12.20 | 8.89 |
| Protein supplements (80.70 lbs) | 6.90 | 15.01 | 11.07 | 9.07 | 8.12 | 11.11 | 10.47 | 11.73 | 11.94 | 12.66 | 11.75 | 12.80 | 11.93 | 9.66 | 10.39 | 10.48 |
| Pasture | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.04 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| Total feed costs | 14.35 | 27.05 | 29.66 | 26.26 | 24.45 | 24.04 | 23.78 | 26.65 | 28.95 | 31.09 | 26.69 | 31.77 | 31.31 | 25.52 | 22.63 | 19.41 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.34 | 0.36 | 0.40 | 0.54 | 0.52 | 0.53 | 0.54 | 0.58 | 0.62 | 0.66 | 0.69 | 0.72 | 0.73 | 0.74 | 0.77 | 0.78 |
| Livestock hauling | 0.04 | 0.04 | 0.05 | 0.06 | 0.07 | 0.07 | 0.08 | 0.09 | 0.10 | 0.11 | 0.12 | 0.12 | 0.13 | 0.13 | 0.13 | 0.13 |
| Marketing | 0.20 | 0.21 | 0.24 | 0.26 | 0.30 | 0.29 | 0.34 | 0.31 | 0.31 | 0.35 | 0.38 | 0.35 | 0.39 | 0.37 | 0.40 | 0.41 |
| Bedding (18 lbs) | 0.06 | 0.07 | 0.10 | 0.10 | 0.09 | 0.10 | 0.11 | 0.12 | 0.14 | 0.22 | 0.19 | 0.19 | 0.20 | 0.21 | 0.21 | 0.21 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.58 | 0.61 | 0.85 | 0.94 | 1.00 | 1.07 | 1.13 | 1.47 | 2.02 | 2.35 | 2.35 | 2.23 | 2.01 | 1.87 | 1.80 | 1.76 |
| Machinery and building repairs | 1.04 | 1.11 | 1.23 | 1.34 | 1.51 | 1.51 | 1.57 | 1.73 | 2.02 | 2.20 | 2.33 | 2.44 | 2.35 | 2.40 | 2.35 | 2.36 |
| Hired labor (.12 hr) | 0.23 | 0.25 | 0.28 | 0.31 | 0.33 | 0.36 | 0.38 | 0.42 | 0.45 | 0.49 | 0.46 | 0.49 | 0.51 | 0.56 | 0.51 | 0.54 |
| Manure credit | -0.09 | -0.10 | -0.11 | -0.12 | -0.14 | -0.13 | -0.13 | -0.15 | -0.18 | -0.20 | -0.20 | -0.19 | -0.20 | -0.19 | -0.17 | -0.16 |
| Total, variable cash expenses | 16.76 | 29.60 | 32.70 | 29.69 | 28.13 | 27.84 | 27.80 | 31.22 | 34.43 | 37.27 | 33.01 | 38.12 | 37.43 | 31.61 | 28.63 | 25.44 |
| General farm overhead | 0.87 | 0.93 | 1.03 | 1.12 | 1.24 | 1.26 | 1.60 | 1.61 | 1.71 | 2.12 | 2.66 | 2.47 | 2.37 | 2.14 | 3.53 | 4.50 |
| Taxes and insurance | 0.32 | 0.33 | 0.35 | 0.37 | 0.48 | 0.43 | 0.47 | 0.57 | 0.58 | 0.63 | 0.66 | 0.73 | 0.66 | 0.68 | 0.71 | 0.73 |
| Interest | 1.80 | 2.10 | 2.49 | 2.94 | 4.14 | 3.82 | 4.55 | 4.48 | 4.73 | 5.85 | 8.29 | 5.65 | 7.00 | 5.40 | 6.05 | 3.94 |
| Total, fixed cash expenses | 2.99 | 3.36 | 3.86 | 4.44 | 5.87 | 5.52 | 6.63 | 6.66 | 7.02 | 8.60 | 11.61 | 8.84 | 10.04 | 8.22 | 10.29 | 9.17 |
| Total, cash expenses | 19.75 | 32.96 | 36.57 | 34.13 | 34.00 | 33.36 | 34.43 | 37.88 | 41.45 | 45.87 | 44.62 | 46.96 | 47.47 | 39.83 | 38.92 | 34.61 |
| Value production less cash expenses | 6.23 | 6.32 | -2.41 | 13.04 | 8.16 | 6.66 | 13.04 | 4.21 | -2.05 | -1.99 | 9.89 | -0.08 | 0.70 | 4.34 | 11.52 | 21.64 |
| Capital replacement | 2.09 | 2.34 | 1.79 | 3.29 | 4.04 | 3.66 | 4.06 | 4.88 | 5.05 | 5.46 | 5.77 | 6.20 | 5.78 | 5.86 | 5.79 | 5.83 |
| Value of production less cash expenses and capital replacement | 4.15 | 3.98 | -4.20 | 9.75 | 4.12 | 3.00 | 8.98 | -0.67 | -7.10 | -7.45 | 4.12 | -6.28 | -5.08 | -1.52 | 5.73 | 15.81 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 16.76 | 29.60 | 32.70 | 29.69 | 28.13 | 27.84 | 27.80 | 31.22 | 34.43 | 37.27 | 33.01 | 38.12 | 37.43 | 31.61 | 28.63 | 25.44 |
| General farm overhead | 0.87 | 0.93 | 1.03 | 1.12 | 1.24 | 1.26 | 1.60 | 1.61 | 1.71 | 2.12 | 2.66 | 2.47 | 2.37 | 2.14 | 3.53 | 4.50 |
| Taxes and insurance | 0.32 | 0.33 | 0.35 | 0.37 | 0.48 | 0.43 | 0.47 | 0.57 | 0.58 | 0.63 | 0.66 | 0.73 | 0.66 | 0.68 | 0.71 | 0.73 |
| Capital replacement | 2.09 | 2.34 | 1.79 | 3.29 | 4.04 | 3.66 | 4.06 | 4.88 | 5.05 | 5.46 | 5.77 | 6.20 | 5.78 | 5.86 | 5.79 | 5.83 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.19 | 0.53 | 0.65 | 0.45 | 0.37 | 0.38 | 0.53 | 0.78 | 0.98 | 1.28 | 0.91 | 0.83 | 0.92 | 0.61 | 0.39 | 0.37 |
| Return to other nonland capital | 1.36 | 1.44 | 1.57 | 1.71 | 1.85 | 1.77 | 1.72 | 1.70 | 1.67 | 1.57 | 1.54 | 1.45 | 1.15 | 1.09 | 1.13 | 1.30 |
| Land | 0.06 | 0.07 | 0.10 | 0.12 | 0.13 | 0.15 | 0.16 | 0.18 | 0.20 | 0.20 | 0.19 | 0.17 | 0.13 | 0.11 | 0.09 | 0.09 |
| Unpaid labor (1.02 hr) | 1.80 | 1.97 | 2.26 | 2.43 | 2.66 | 2.86 | 3.06 | 3.34 | 3.60 | 4.02 | 3.74 | 4.06 | 4.12 | 4.28 | 4.17 | 4.34 |
| Total, economic costs | 23.45 | 37.21 | 40.45 | 39.20 | 38.91 | 38.36 | 39.40 | 44.28 | 48.22 | 52.56 | 48.49 | 54.03 | 52.56 | 46.37 | 44.44 | 42.60 |
| Residual returns to management and risk | 2.53 | 2.07 | -6.29 | 7.97 | 3.25 | 1.66 | 8.07 | -2.19 | -8.82 | -8.68 | 6.02 | -7.15 | -4.39 | -2.20 | 6.00 | 13.65 |
| Net returns to owned inputs | 5.94 | 6.08 | -1.71 | 12.69 | 8.27 | 6.83 | 13.54 | 3.81 | -2.37 | -1.60 | 12.41 | -0.64 | 1.93 | 3.88 | 11.78 | 19.75 |

Appendix table 31--U.S. farrow-to-finish production costs, 1,600-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (94.40 lbs) | 24.69 | 37.28 | 32.51 | 44.73 | 40.37 | 38.02 | 44.82 | 39.72 | 37.43 | 41.70 | 51.77 | 44.64 | 45.82 | 42.06 | 48.00 | 53.80 |
| Cull sows (5.60 lbs) | 1.30 | 2.01 | 1.67 | 2.44 | 2.13 | 2.01 | 2.44 | 2.16 | 1.98 | 1.80 | 2.76 | 2.25 | 2.35 | 2.12 | 2.46 | 2.49 |
| Total | 25.99 | 39.29 | 34.18 | 47.17 | 42.50 | 40.03 | 47.26 | 41.88 | 39.41 | 43.50 | 54.53 | 46.89 | 48.17 | 44.18 | 50.46 | 56.29 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (345.80 lbs) | 7.40 | 11.95 | 18.47 | 17.08 | 15.50 | 12.84 | 13.31 | 14.92 | 16.61 | 18.03 | 14.61 | 18.57 | 18.97 | 15.51 | 11.98 | 8.73 |
| Protein supplements (85 lbs) | 6.96 | 15.14 | 11.17 | 9.15 | 9.97 | 11.21 | 10.60 | 11.88 | 11.78 | 12.39 | 11.74 | 12.43 | 11.62 | 9.63 | 10.44 | 10.46 |
| Pasture | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 |
| Total feed costs | 14.37 | 27.11 | 29.65 | 26.24 | 25.48 | 24.06 | 23.92 | 26.81 | 28.40 | 30.43 | 26.36 | 31.01 | 30.60 | 25.15 | 22.42 | 19.19 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.14 | 0.14 | 0.16 | 0.21 | 0.21 | 0.21 | 0.22 | 0.23 | 0.25 | 0.27 | 0.28 | 0.29 | 0.30 | 0.30 | 0.30 | 0.31 |
| Livestock hauling | 0.03 | 0.03 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | 0.09 | 0.09 | 0.11 | 0.11 | 0.11 |
| Marketing | 0.19 | 0.21 | 0.23 | 0.25 | 0.29 | 0.28 | 0.33 | 0.30 | 0.30 | 0.32 | 0.35 | 0.33 | 0.37 | 0.35 | 0.38 | 0.38 |
| Bedding (12 lbs) | 0.05 | 0.06 | 0.08 | 0.08 | 0.07 | 0.08 | 0.09 | 0.10 | 0.11 | 0.16 | 0.14 | 0.14 | 0.15 | 0.15 | 0.15 | 0.15 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.44 | 0.47 | 0.65 | 0.72 | 0.77 | 0.82 | 0.86 | 1.13 | 1.55 | 1.81 | 1.82 | 1.75 | 1.62 | 1.56 | 1.51 | 1.49 |
| Machinery and building repairs | 1.06 | 1.13 | 1.25 | 1.37 | 1.54 | 1.54 | 1.60 | 1.77 | 2.06 | 2.28 | 2.37 | 2.47 | 2.40 | 2.44 | 2.40 | 2.42 |
| Hired labor (.23 hr) | 0.50 | 0.55 | 0.62 | 0.67 | 0.74 | 0.79 | 0.85 | 0.93 | 1.00 | 1.27 | 1.18 | 1.28 | 1.30 | 1.35 | 1.32 | 1.38 |
| Manure credit | -0.09 | -0.10 | -0.11 | -0.12 | -0.14 | -0.13 | -0.13 | -0.15 | -0.18 | -0.20 | -0.20 | -0.18 | -0.19 | -0.18 | -0.17 | -0.16 |
| Total, variable cash expenses | 16.69 | 29.59 | 32.57 | 29.47 | 29.01 | 27.70 | 27.79 | 31.18 | 33.56 | 36.42 | 32.39 | 37.18 | 36.64 | 31.23 | 28.42 | 25.27 |
| General farm overhead | 0.87 | 0.93 | 1.03 | 1.12 | 1.25 | 1.26 | 1.60 | 1.60 | 1.71 | 2.10 | 2.66 | 2.47 | 2.37 | 2.14 | 3.53 | 4.50 |
| Taxes and insurance | 0.39 | 0.40 | 0.42 | 0.45 | 0.61 | 0.52 | 0.58 | 0.69 | 0.61 | 0.69 | 0.73 | 0.80 | 0.76 | 0.76 | 0.80 | 0.81 |
| Interest | 1.80 | 2.10 | 2.49 | 2.94 | 4.18 | 3.82 | 4.53 | 4.46 | 4.73 | 5.80 | 8.29 | 5.65 | 7.00 | 5.41 | 6.06 | 3.94 |
| Total, fixed cash expenses | 3.06 | 3.43 | 3.94 | 4.52 | 6.04 | 5.61 | 6.71 | 6.75 | 7.05 | 8.59 | 11.68 | 8.91 | 10.14 | 8.30 | 10.39 | 9.25 |
| Total, cash expenses | 19.75 | 33.02 | 36.51 | 33.98 | 35.05 | 33.31 | 34.50 | 37.93 | 40.61 | 45.01 | 44.07 | 46.09 | 46.78 | 39.53 | 38.81 | 34.52 |
| Value production less cash expenses | 6.24 | 6.27 | -2.32 | 13.18 | 7.45 | 6.72 | 12.76 | 3.95 | -1.20 | -1.51 | 10.46 | 0.80 | 1.39 | 4.65 | 11.65 | 21.77 |
| Capital replacement | 2.57 | 2.88 | 2.21 | 4.05 | 5.06 | 4.50 | 4.99 | 5.95 | 4.92 | 5.44 | 5.64 | 6.00 | 5.64 | 5.70 | 5.67 | 5.70 |
| Value of production less cash expenses and capital replacement | 3.67 | 3.39 | -4.53 | 9.13 | 2.39 | 2.22 | 7.77 | -2.00 | -6.12 | -6.95 | 4.82 | -5.20 | -4.25 | -1.05 | 5.98 | 16.07 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 16.69 | 29.59 | 32.57 | 29.47 | 29.01 | 27.70 | 27.79 | 31.18 | 33.56 | 36.42 | 32.39 | 37.18 | 36.64 | 31.23 | 28.42 | 25.27 |
| General farm overhead | 0.87 | 0.93 | 1.03 | 1.12 | 1.25 | 1.26 | 1.60 | 1.60 | 1.71 | 2.10 | 2.66 | 2.47 | 2.37 | 2.14 | 3.53 | 4.50 |
| Taxes and insurance | 0.39 | 0.40 | 0.42 | 0.45 | 0.61 | 0.52 | 0.58 | 0.69 | 0.61 | 0.69 | 0.73 | 0.80 | 0.76 | 0.76 | 0.80 | 0.81 |
| Capital replacement | 2.57 | 2.88 | 2.21 | 4.05 | 5.06 | 4.50 | 4.99 | 5.95 | 4.92 | 5.44 | 5.64 | 6.00 | 5.64 | 5.70 | 5.67 | 5.70 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.19 | 0.53 | 0.65 | 0.45 | 0.38 | 0.38 | 0.53 | 0.78 | 0.95 | 1.25 | 0.90 | 0.81 | 0.90 | 0.60 | 0.38 | 0.37 |
| Return to other nonland capital | 1.46 | 1.55 | 1.68 | 1.84 | 1.98 | 1.90 | 1.84 | 1.83 | 1.79 | 1.69 | 1.65 | 1.55 | 1.24 | 1.17 | 1.21 | 1.40 |
| Land | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.02 | 0.02 | 0.01 | 0.01 |
| Unpaid labor (.74 hr) | 1.56 | 1.70 | 1.95 | 2.10 | 2.30 | 2.47 | 2.64 | 2.89 | 3.11 | 3.96 | 3.69 | 4.01 | 4.06 | 4.22 | 4.12 | 4.29 |
| Total, economic costs | 23.73 | 37.59 | 40.52 | 39.50 | 40.62 | 38.76 | 39.98 | 44.94 | 46.69 | 51.59 | 47.69 | 52.85 | 51.63 | 45.83 | 44.14 | 42.35 |
| Residual returns to management and risk | 2.26 | 1.70 | -6.34 | 7.67 | 1.88 | 1.27 | 7.28 | -3.06 | -7.28 | -8.09 | 6.84 | -5.96 | -3.46 | -1.65 | 6.32 | 13.94 |
| Net returns to owned inputs | 5.47 | 5.49 | -2.04 | 12.08 | 6.57 | 6.05 | 12.30 | 2.46 | -1.39 | -1.15 | 13.11 | 0.44 | 2.76 | 4.35 | 12.04 | 20.01 |

Appendix table 32--U.S. farrow-to-finish production costs, 3,000-head operation, 1980-87

| Item | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|
| | | | | Dollars/cwt | | | | |
| Gross value of production: | | | | | | | | |
| Slaughter hogs (94.60 lbs) | 37.56 | 41.83 | 51.95 | 44.73 | 45.90 | 42.17 | 48.10 | 53.91 |
| Cull sows (5.40 lbs) | 1.88 | 2.10 | 2.64 | 2.15 | 2.25 | 2.04 | 2.36 | 2.38 |
| Total | 39.44 | 43.93 | 54.59 | 46.88 | 48.15 | 44.21 | 50.46 | 56.29 |
| Cash expenses: | | | | | | | | |
| Feed-- | | | | | | | | |
| Grain (348.10 lbs) | 16.92 | 18.28 | 14.81 | 18.86 | 19.24 | 15.71 | 12.19 | 8.89 |
| Protein supplements (79.90 lbs) | 10.74 | 11.03 | 10.24 | 10.96 | 10.16 | 8.07 | 8.84 | 8.79 |
| Pasture | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total feed costs | 27.66 | 29.31 | 25.05 | 29.82 | 29.40 | 23.78 | 21.03 | 17.68 |
| Other-- | | | | | | | | |
| Veterinary and medicine | 0.30 | 0.33 | 0.34 | 0.36 | 0.36 | 0.36 | 0.37 | 0.38 |
| Livestock hauling | 0.05 | 0.06 | 0.06 | 0.06 | 0.07 | 0.07 | 0.07 | 0.07 |
| Marketing | 0.17 | 0.19 | 0.21 | 0.20 | 0.22 | 0.20 | 0.22 | 0.23 |
| Bedding (4 lbs) | 0.03 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 1.47 | 1.70 | 1.75 | 1.73 | 1.65 | 1.69 | 1.58 | 1.59 |
| Machinery and building repairs | 1.91 | 2.09 | 2.19 | 2.29 | 2.26 | 2.33 | 2.30 | 2.31 |
| Hired labor (.23 hr) | 1.52 | 1.66 | 1.56 | 1.67 | 1.73 | 1.79 | 1.73 | 1.85 |
| Manure credit | -0.17 | -0.18 | -0.18 | -0.17 | -0.18 | -0.17 | -0.16 | -0.15 |
| Total, variable cash expenses | 32.94 | 35.21 | 31.03 | 36.01 | 35.56 | 30.10 | 27.19 | 24.01 |
| General farm overhead | 1.71 | 2.12 | 2.67 | 2.47 | 2.37 | 2.14 | 3.53 | 4.50 |
| Taxes and insurance | 0.51 | 0.59 | 0.60 | 0.68 | 0.64 | 0.63 | 0.66 | 0.67 |
| Interest | 4.73 | 5.86 | 8.30 | 5.65 | 7.00 | 5.41 | 6.06 | 3.94 |
| Total, fixed cash expenses | 6.95 | 8.57 | 11.56 | 8.79 | 10.01 | 8.18 | 10.25 | 9.11 |
| Total, cash expenses | 39.89 | 43.78 | 42.59 | 44.80 | 45.57 | 38.28 | 37.44 | 33.12 |
| Value production less cash expenses | -0.45 | 0.15 | 12.00 | 2.08 | 2.58 | 5.93 | 13.02 | 23.17 |
| Capital replacement | 4.16 | 4.59 | 4.78 | 5.08 | 4.82 | 4.84 | 4.82 | 4.86 |
| Value of production less cash expenses and capital replacement | -4.61 | -4.44 | 7.22 | -3.00 | -2.24 | 1.09 | 8.20 | 18.31 |
| Economic (full ownership) costs: | | | | | | | | |
| Variable cash expenses | 32.94 | 35.21 | 31.03 | 36.01 | 35.56 | 30.10 | 27.19 | 24.01 |
| General farm overhead | 1.71 | 2.12 | 2.67 | 2.47 | 2.37 | 2.14 | 3.53 | 4.50 |
| Taxes and insurance | 0.51 | 0.59 | 0.60 | 0.68 | 0.64 | 0.63 | 0.66 | 0.67 |
| Capital replacement | 4.16 | 4.59 | 4.78 | 5.08 | 4.82 | 4.84 | 4.82 | 4.86 |
| Allocated returns to owned inputs-- | | | | | | | | |
| Return to operating capital | 0.94 | 1.21 | 0.86 | 0.79 | 0.87 | 0.58 | 0.37 | 0.35 |
| Return to other nonland capital | 1.50 | 1.42 | 1.38 | 1.30 | 1.03 | 0.98 | 1.01 | 1.17 |
| Land | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Unpaid labor (.43 hr) | 2.89 | 3.21 | 3.03 | 3.28 | 3.31 | 3.44 | 3.36 | 3.51 |
| Total, economic costs | 44.67 | 48.38 | 44.36 | 49.62 | 48.61 | 42.72 | 40.95 | 39.08 |
| Residual returns to management and risk | -5.23 | -4.45 | 10.23 | -2.74 | -0.46 | 1.49 | 9.51 | 17.21 |
| Net returns to owned inputs | 0.12 | 1.42 | 15.51 | 2.64 | 4.76 | 6.50 | 14.26 | 22.25 |

Appendix table 33--U.S. farrow-to-finish production costs, 10,000-head operation, 1980-87

| Item | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|
| | | | | Dollars/cwt | | | | |
| Gross value of production: | | | | | | | | |
| Slaughter hogs (94.70 lbs) | 37.60 | 41.88 | 52.02 | 44.72 | 45.87 | 42.21 | 48.09 | 53.91 |
| Cull sows (5.30 lbs) | 1.87 | 2.08 | 2.62 | 2.14 | 2.23 | 2.02 | 2.35 | 2.36 |
| Total | 39.47 | 43.96 | 54.64 | 46.86 | 48.10 | 44.23 | 50.44 | 56.27 |
| Cash expenses: | | | | | | | | |
| Feed-- | | | | | | | | |
| Grain (336.50 lbs) | 16.55 | 17.84 | 14.46 | 18.43 | 18.79 | 15.32 | 11.98 | 8.74 |
| Protein supplements (77.80 lbs) | 10.06 | 10.31 | 9.57 | 10.25 | 9.52 | 7.51 | 8.25 | 8.21 |
| Pasture | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total feed costs | 26.61 | 28.15 | 24.03 | 28.68 | 28.31 | 22.83 | 20.23 | 16.95 |
| Other-- | | | | | | | | |
| Veterinary and medicine | 0.54 | 0.58 | 0.60 | 0.62 | 0.64 | 0.64 | 0.66 | 0.67 |
| Livestock hauling | 0.10 | 0.11 | 0.12 | 0.12 | 0.13 | 0.14 | 0.13 | 0.13 |
| Marketing | 0.17 | 0.19 | 0.21 | 0.20 | 0.22 | 0.20 | 0.22 | 0.23 |
| Bedding (2 lbs) | 0.03 | 0.04 | 0.03 | 0.04 | 0.04 | 0.03 | 0.04 | 0.04 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 1.60 | 1.86 | 1.90 | 1.92 | 1.90 | 1.96 | 1.88 | 1.87 |
| Machinery and building repairs | 1.52 | 1.67 | 1.74 | 1.81 | 1.78 | 1.83 | 1.81 | 1.82 |
| Hired labor (.33 hr) | 3.13 | 3.44 | 3.31 | 3.56 | 3.59 | 3.73 | 2.70 | 2.76 |
| Manure credit | -0.32 | -0.35 | -0.35 | -0.33 | -0.35 | -0.33 | -0.31 | -0.29 |
| Total, variable cash expenses | 33.38 | 35.69 | 31.59 | 36.62 | 36.26 | 31.03 | 27.36 | 24.18 |
| General farm overhead | 1.71 | 2.12 | 2.67 | 2.47 | 2.37 | 2.14 | 3.53 | 4.50 |
| Taxes and insurance | 0.47 | 0.52 | 0.56 | 0.61 | 0.58 | 0.57 | 0.60 | 0.60 |
| Interest | 4.73 | 5.86 | 8.31 | 5.64 | 6.99 | 5.41 | 6.05 | 3.94 |
| Total, fixed cash expenses | 6.92 | 8.51 | 11.53 | 8.72 | 9.94 | 8.12 | 10.18 | 9.04 |
| Total, cash expenses | 40.30 | 44.20 | 43.12 | 45.34 | 46.20 | 39.15 | 37.54 | 33.22 |
| Value production less cash expenses | -0.83 | -0.24 | 11.52 | 1.52 | 1.90 | 5.08 | 12.90 | 23.05 |
| Capital replacement | 3.73 | 4.13 | 4.29 | 4.61 | 4.25 | 4.22 | 4.21 | 4.24 |
| Value of production less cash expenses and capital replacement | -4.56 | -4.37 | 7.23 | -3.09 | -2.35 | 0.86 | 8.69 | 18.81 |
| Economic (full ownership) costs: | | | | | | | | |
| Variable cash expenses | 33.38 | 35.69 | 31.59 | 36.62 | 36.26 | 31.03 | 27.36 | 24.18 |
| General farm overhead | 1.71 | 2.12 | 2.67 | 2.47 | 2.37 | 2.14 | 3.53 | 4.50 |
| Taxes and insurance | 0.47 | 0.52 | 0.56 | 0.61 | 0.58 | 0.57 | 0.60 | 0.60 |
| Capital replacement | 3.73 | 4.13 | 4.29 | 4.61 | 4.25 | 4.22 | 4.21 | 4.24 |
| Allocated returns to owned inputs-- | | | | | | | | |
| Return to operating capital | 0.95 | 1.23 | 0.88 | 0.80 | 0.89 | 0.59 | 0.37 | 0.35 |
| Return to other nonland capital | 1.31 | 1.24 | 1.21 | 1.14 | 0.91 | 0.86 | 0.89 | 1.03 |
| Land | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Unpaid labor (.13 hr) | 0.87 | 0.97 | 0.93 | 1.00 | 1.00 | 1.04 | 1.02 | 1.07 |
| Total, economic costs | 42.44 | 45.92 | 42.14 | 47.27 | 46.27 | 40.47 | 37.99 | 35.98 |
| Residual returns to management and risk | -2.97 | -1.96 | 12.50 | -0.41 | 1.83 | 3.76 | 12.45 | 20.29 |
| Net returns to owned inputs | 0.18 | 1.50 | 15.53 | 2.55 | 4.64 | 6.27 | 14.74 | 22.75 |

Appendix table 34--Farrow-to-finish production costs, all sizes of operation, North Central, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (94.20 lbs) | 24.14 | 36.46 | 31.79 | 43.74 | 39.03 | 37.18 | 43.97 | 39.99 | 37.50 | 41.52 | 51.50 | 44.59 | 45.75 | 41.98 | 47.91 | 52.28 |
| Cull sows (5.80 lbs) | 1.80 | 2.78 | 2.32 | 3.38 | 2.78 | 2.79 | 3.47 | 2.75 | 2.05 | 2.29 | 2.88 | 2.34 | 2.44 | 2.20 | 2.55 | 2.59 |
| Total | 25.95 | 39.24 | 34.11 | 47.13 | 41.81 | 39.97 | 47.44 | 42.74 | 39.55 | 43.81 | 54.38 | 46.93 | 48.19 | 44.18 | 50.46 | 54.87 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (348.50 lbs) | 7.41 | 11.96 | 18.48 | 17.09 | 16.03 | 12.85 | 13.22 | 15.01 | 16.65 | 18.08 | 14.63 | 18.56 | 18.96 | 15.52 | 11.90 | 8.66 |
| Protein supplements (80.80 lbs) | 6.99 | 15.21 | 11.22 | 9.19 | 9.37 | 11.26 | 10.60 | 11.67 | 11.66 | 12.21 | 11.38 | 12.20 | 11.22 | 9.07 | 9.82 | 9.83 |
| Pasture | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 |
| Total feed costs | 14.42 | 27.19 | 29.72 | 26.30 | 25.42 | 24.13 | 23.83 | 26.72 | 28.34 | 30.32 | 26.04 | 30.79 | 30.21 | 24.61 | 21.74 | 18.51 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.25 | 0.26 | 0.30 | 0.40 | 0.39 | 0.39 | 0.40 | 0.43 | 0.46 | 0.49 | 0.51 | 0.53 | 0.53 | 0.52 | 0.54 | 0.55 |
| Livestock hauling | 0.05 | 0.06 | 0.07 | 0.08 | 0.08 | 0.09 | 0.09 | 0.11 | 0.12 | 0.13 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 |
| Marketing | 0.19 | 0.21 | 0.23 | 0.25 | 0.29 | 0.28 | 0.33 | 0.30 | 0.30 | 0.32 | 0.35 | 0.32 | 0.35 | 0.32 | 0.35 | 0.36 |
| Bedding (14 lbs) | 0.06 | 0.07 | 0.10 | 0.10 | 0.09 | 0.10 | 0.10 | 0.12 | 0.13 | 0.19 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.50 | 0.53 | 0.73 | 0.82 | 0.87 | 0.93 | 0.98 | 1.28 | 1.75 | 2.04 | 2.02 | 1.92 | 1.78 | 1.69 | 1.64 | 1.61 |
| Machinery and building repairs | 1.08 | 1.15 | 1.28 | 1.39 | 1.57 | 1.57 | 1.63 | 1.80 | 2.10 | 2.29 | 2.39 | 2.49 | 2.39 | 2.42 | 2.38 | 2.39 |
| Hired labor (.18 hr) | 0.36 | 0.39 | 0.45 | 0.48 | 0.53 | 0.57 | 0.61 | 0.67 | 0.72 | 0.87 | 0.83 | 0.92 | 1.04 | 1.13 | 1.11 | 1.17 |
| Manure credit | -0.11 | -0.12 | -0.13 | -0.14 | -0.17 | -0.16 | -0.16 | -0.18 | -0.22 | -0.23 | -0.23 | -0.22 | -0.24 | -0.23 | -0.21 | -0.20 |
| Total, variable cash expenses | 16.81 | 29.75 | 32.74 | 29.68 | 29.07 | 27.90 | 27.81 | 31.25 | 33.70 | 36.42 | 32.21 | 37.05 | 36.36 | 30.76 | 27.85 | 24.69 |
| General farm overhead | 0.87 | 0.93 | 1.03 | 1.12 | 1.23 | 1.26 | 1.60 | 1.63 | 1.72 | 2.12 | 2.66 | 2.47 | 2.37 | 2.14 | 3.53 | 4.39 |
| Taxes and insurance | 0.38 | 0.39 | 0.41 | 0.44 | 0.53 | 0.51 | 0.55 | 0.65 | 1.65 | 1.81 | 0.72 | 0.77 | 0.71 | 0.70 | 0.73 | 0.75 |
| Interest | 1.79 | 2.10 | 2.48 | 2.94 | 4.11 | 3.82 | 4.55 | 4.55 | 4.74 | 5.84 | 8.27 | 5.65 | 7.01 | 5.41 | 6.06 | 3.84 |
| Total, fixed cash expenses | 3.05 | 3.42 | 3.92 | 4.51 | 5.87 | 5.59 | 6.70 | 6.83 | 8.11 | 9.77 | 11.64 | 8.89 | 10.09 | 8.24 | 10.32 | 8.98 |
| Total, cash expenses | 19.86 | 33.16 | 36.66 | 34.18 | 34.94 | 33.49 | 34.51 | 38.08 | 41.81 | 46.19 | 43.85 | 45.94 | 46.45 | 39.00 | 38.17 | 33.67 |
| Value production less cash expenses | 6.09 | 6.08 | -2.55 | 12.94 | 6.87 | 6.48 | 12.93 | 4.66 | -2.26 | -2.38 | 10.53 | 0.99 | 1.74 | 5.18 | 12.29 | 21.20 |
| Capital replacement | 2.47 | 2.77 | 2.12 | 3.90 | 4.69 | 4.33 | 4.77 | 5.66 | 5.32 | 5.75 | 5.97 | 6.35 | 5.82 | 5.79 | 5.72 | 5.75 |
| Value of production less cash expenses and capital replacement | 3.62 | 3.30 | -4.67 | 9.04 | 2.18 | 2.15 | 8.16 | -1.00 | -7.58 | -8.13 | 4.56 | -5.36 | -4.08 | -0.61 | 6.57 | 15.45 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 16.81 | 29.75 | 32.74 | 29.68 | 29.07 | 27.90 | 27.81 | 31.25 | 33.70 | 36.42 | 32.21 | 37.05 | 36.36 | 30.76 | 27.85 | 24.69 |
| General farm overhead | 0.87 | 0.93 | 1.03 | 1.12 | 1.23 | 1.26 | 1.60 | 1.63 | 1.72 | 2.12 | 2.66 | 2.47 | 2.37 | 2.14 | 3.53 | 4.39 |
| Taxes and insurance | 0.38 | 0.39 | 0.41 | 0.44 | 0.53 | 0.51 | 0.55 | 0.65 | 1.65 | 1.81 | 0.72 | 0.77 | 0.71 | 0.70 | 0.73 | 0.75 |
| Capital replacement | 2.47 | 2.77 | 2.12 | 3.90 | 4.69 | 4.33 | 4.77 | 5.66 | 5.32 | 5.75 | 5.97 | 6.35 | 5.82 | 5.79 | 5.72 | 5.75 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.19 | 0.53 | 0.65 | 0.45 | 0.38 | 0.38 | 0.53 | 0.78 | 0.96 | 1.25 | 0.89 | 0.81 | 0.89 | 0.59 | 0.38 | 0.36 |
| Return to other nonland capital | 1.41 | 1.49 | 1.62 | 1.77 | 1.92 | 1.83 | 1.78 | 1.76 | 1.73 | 1.63 | 1.59 | 1.50 | 1.19 | 1.13 | 1.17 | 1.34 |
| Land | 0.03 | 0.04 | 0.06 | 0.07 | 0.09 | 0.10 | 0.11 | 0.13 | 0.14 | 0.14 | 0.13 | 0.12 | 0.09 | 0.06 | 0.05 | 0.05 |
| Unpaid labor (.92 hr) | 2.21 | 2.42 | 2.77 | 2.98 | 3.26 | 3.51 | 3.75 | 4.10 | 4.42 | 5.01 | 4.49 | 4.82 | 4.58 | 4.60 | 4.42 | 4.54 |
| Total, economic costs | 24.37 | 38.32 | 41.41 | 40.42 | 41.17 | 39.83 | 40.90 | 45.96 | 49.64 | 54.14 | 48.66 | 53.89 | 52.01 | 45.77 | 43.85 | 41.87 |
| Residual returns to management and risk | 1.57 | 0.92 | -7.29 | 6.70 | 0.64 | 0.14 | 6.54 | -3.22 | -10.09 | -10.33 | 5.72 | -6.96 | -3.82 | -1.59 | 6.61 | 13.00 |
| Net returns to owned inputs | 5.42 | 5.40 | -2.19 | 11.99 | 6.29 | 5.97 | 12.71 | 3.55 | -2.84 | -2.29 | 12.82 | 0.29 | 2.93 | 4.79 | 12.63 | 19.29 |

Appendix table 35--Farrow-to-finish production costs, all sizes of operation, Southeast, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (95.90 lbs) | 24.20 | 36.53 | 31.86 | 43.84 | 39.11 | 37.26 | 42.41 | 39.99 | 38.46 | 42.76 | 53.17 | 45.18 | 46.08 | 42.96 | 48.65 | 53.71 |
| Cull sows (4.10 lbs) | 1.23 | 1.90 | 1.58 | 2.30 | 1.90 | 1.90 | 2.17 | 2.75 | 1.46 | 1.62 | 2.01 | 1.62 | 1.66 | 1.54 | 1.72 | 1.74 |
| Total | 25.42 | 38.43 | 33.44 | 46.14 | 41.01 | 39.16 | 44.58 | 42.74 | 39.92 | 44.38 | 55.18 | 46.80 | 47.74 | 44.50 | 50.37 | 55.45 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (346 lbs) | 7.69 | 12.42 | 19.19 | 17.74 | 15.06 | 13.34 | 13.82 | 16.07 | 19.03 | 20.01 | 16.25 | 20.96 | 21.06 | 16.95 | 14.09 | 10.26 |
| Protein supplements (83.60 lbs) | 6.65 | 14.47 | 10.67 | 8.74 | 9.12 | 10.71 | 10.21 | 11.87 | 11.89 | 12.70 | 11.56 | 12.12 | 11.59 | 9.54 | 10.29 | 10.31 |
| Pasture | 0.07 | 0.08 | 0.08 | 0.08 | 0.09 | 0.08 | 0.09 | 0.10 | 0.18 | 0.18 | 0.17 | 0.14 | 0.12 | 0.11 | 0.10 | 0.09 |
| Total feed costs | 14.41 | 26.96 | 29.94 | 26.56 | 24.27 | 24.13 | 24.12 | 28.04 | 31.10 | 32.89 | 27.98 | 33.22 | 32.77 | 26.60 | 24.48 | 20.66 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.27 | 0.28 | 0.32 | 0.43 | 0.41 | 0.42 | 0.43 | 0.46 | 0.49 | 0.53 | 0.56 | 0.59 | 0.60 | 0.61 | 0.62 | 0.64 |
| Livestock hauling | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.06 | 0.06 | 0.06 |
| Marketing | 0.22 | 0.23 | 0.26 | 0.28 | 0.32 | 0.32 | 0.36 | 0.34 | 0.35 | 0.37 | 0.39 | 0.36 | 0.37 | 0.34 | 0.36 | 0.37 |
| Bedding (4 lbs) | 0.02 | 0.03 | 0.04 | 0.04 | 0.03 | 0.04 | 0.04 | 0.04 | 0.05 | 0.07 | 0.06 | 0.05 | 0.05 | 0.05 | 0.04 | 0.04 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.53 | 0.56 | 0.78 | 0.87 | 0.92 | 0.99 | 1.04 | 1.36 | 1.86 | 2.16 | 2.24 | 2.20 | 2.01 | 2.09 | 1.84 | 1.92 |
| Machinery and building repairs | 0.93 | 0.98 | 1.09 | 1.19 | 1.34 | 1.34 | 1.39 | 1.54 | 1.79 | 1.95 | 2.04 | 2.12 | 2.02 | 2.05 | 2.01 | 2.01 |
| Hired labor (.30 hr) | 0.88 | 0.97 | 1.11 | 1.19 | 1.30 | 1.40 | 1.49 | 1.63 | 1.76 | 1.90 | 2.18 | 2.30 | 2.57 | 2.80 | 1.77 | 1.91 |
| Manure credit | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total, variable cash expenses | 17.27 | 30.03 | 33.54 | 30.57 | 28.60 | 28.65 | 28.89 | 33.43 | 37.42 | 39.89 | 35.47 | 40.86 | 40.42 | 34.60 | 31.18 | 27.61 |
| General farm overhead | 0.85 | 0.91 | 1.01 | 1.10 | 1.21 | 1.24 | 1.50 | 1.63 | 1.73 | 2.14 | 2.69 | 2.46 | 2.35 | 2.15 | 3.53 | 4.44 |
| Taxes and insurance | 0.42 | 0.43 | 0.45 | 0.49 | 0.60 | 0.56 | 0.66 | 0.79 | 0.57 | 0.62 | 0.65 | 0.73 | 0.68 | 0.68 | 0.76 | 0.72 |
| Interest | 1.76 | 2.06 | 2.43 | 2.88 | 4.03 | 3.74 | 4.28 | 4.55 | 4.79 | 5.92 | 8.39 | 5.64 | 6.94 | 5.44 | 6.04 | 3.88 |
| Total, fixed cash expenses | 3.03 | 3.40 | 3.89 | 4.46 | 5.84 | 5.54 | 6.44 | 6.97 | 7.09 | 8.68 | 11.73 | 8.83 | 9.97 | 8.28 | 10.33 | 9.04 |
| Total, cash expenses | 20.30 | 33.42 | 37.44 | 35.04 | 34.44 | 34.19 | 35.33 | 40.40 | 44.51 | 48.57 | 47.20 | 49.69 | 50.39 | 42.88 | 41.51 | 36.65 |
| Value production less cash expenses | 5.12 | 5.01 | -3.99 | 11.10 | 6.57 | 4.97 | 9.25 | 2.34 | -4.59 | -4.19 | 7.98 | -2.89 | -2.65 | 1.62 | 8.86 | 18.80 |
| Capital replacement | 2.68 | 3.01 | 2.31 | 4.24 | 5.24 | 4.71 | 5.20 | 6.23 | 4.11 | 4.51 | 4.72 | 5.04 | 4.68 | 4.70 | 4.65 | 4.68 |
| Value of production less cash expenses and capital replacement | 2.44 | 1.99 | -6.30 | 6.86 | 1.33 | 0.26 | 4.05 | -3.89 | -8.70 | -8.70 | 3.26 | -7.93 | -7.33 | -3.08 | 4.21 | 14.12 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 17.27 | 30.03 | 33.54 | 30.57 | 28.60 | 28.65 | 28.89 | 33.43 | 37.42 | 39.89 | 35.47 | 40.86 | 40.42 | 34.60 | 31.18 | 27.61 |
| General farm overhead | 0.85 | 0.91 | 1.01 | 1.10 | 1.21 | 1.24 | 1.50 | 1.63 | 1.73 | 2.14 | 2.69 | 2.46 | 2.35 | 2.15 | 3.53 | 4.44 |
| Taxes and insurance | 0.42 | 0.43 | 0.45 | 0.49 | 0.60 | 0.56 | 0.66 | 0.79 | 0.57 | 0.62 | 0.65 | 0.73 | 0.68 | 0.68 | 0.76 | 0.72 |
| Capital replacement | 2.68 | 3.01 | 2.31 | 4.24 | 5.24 | 4.71 | 5.20 | 6.23 | 4.11 | 4.51 | 4.72 | 5.04 | 4.68 | 4.70 | 4.65 | 4.68 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.19 | 0.54 | 0.66 | 0.47 | 0.38 | 0.39 | 0.55 | 0.84 | 1.06 | 1.37 | 0.98 | 0.89 | 0.99 | 0.66 | 0.42 | 0.40 |
| Return to other nonland capital | 1.20 | 1.27 | 1.38 | 1.51 | 1.63 | 1.56 | 1.51 | 1.50 | 1.47 | 1.39 | 1.35 | 1.27 | 1.01 | 0.96 | 0.98 | 1.13 |
| Land | 0.09 | 0.11 | 0.16 | 0.19 | 0.20 | 0.21 | 0.22 | 0.25 | 0.28 | 0.29 | 0.27 | 0.25 | 0.20 | 0.18 | 0.15 | 0.17 |
| Unpaid labor (.84 hr) | 2.00 | 2.19 | 2.51 | 2.70 | 2.96 | 3.18 | 3.40 | 3.72 | 4.01 | 4.07 | 4.31 | 4.35 | 3.94 | 3.93 | 3.91 | 4.16 |
| Total, economic costs | 24.72 | 38.49 | 42.03 | 41.27 | 40.82 | 40.51 | 41.94 | 48.39 | 50.66 | 54.28 | 50.45 | 55.86 | 54.27 | 47.86 | 45.58 | 43.31 |
| Residual returns to management and risk | 0.70 | -0.06 | -8.59 | 4.87 | 0.19 | -1.35 | 2.64 | -5.65 | -10.74 | -9.90 | 4.73 | -9.06 | -6.53 | -3.36 | 4.79 | 12.14 |
| Net returns to owned inputs | 4.19 | 4.05 | -3.87 | 9.74 | 5.36 | 4.00 | 8.33 | 0.66 | -3.91 | -2.78 | 11.65 | -2.29 | -0.39 | 2.37 | 10.25 | 18.00 |

Appendix table 36--U.S. feeder pig finishing production costs, all sizes of operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (100 lbs) | 26.02 | 39.29 | 34.26 | 47.14 | 47.98 | 40.07 | 47.82 | 46.92 | 39.30 | 43.86 | 54.53 | 47.34 | 48.42 | 44.61 | 50.49 | 55.19 |
| Total | 26.02 | 39.29 | 34.26 | 47.14 | 47.98 | 40.07 | 47.82 | 46.92 | 39.30 | 43.86 | 54.53 | 47.34 | 48.42 | 44.61 | 50.49 | 55.19 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feeders-- | | | | | | | | | | | | | | | | |
| Feeder pigs (22.70 lbs) | 10.34 | 13.95 | 9.81 | 17.48 | 23.71 | 13.82 | 19.31 | 23.18 | 13.16 | 17.54 | 22.40 | 20.05 | 17.33 | 18.76 | 19.94 | 20.79 |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (239.20 lbs) | 6.66 | 10.75 | 16.61 | 15.36 | 12.79 | 11.55 | 10.47 | 11.33 | 11.65 | 12.59 | 10.19 | 12.97 | 13.21 | 10.79 | 8.37 | 6.10 |
| Protein supplements (56.80 lbs) | 5.61 | 12.21 | 9.01 | 7.38 | 6.98 | 9.04 | 8.08 | 9.04 | 6.55 | 6.89 | 6.38 | 6.81 | 6.31 | 5.17 | 5.58 | 5.61 |
| Pasture | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 |
| Total feed costs | 12.28 | 22.97 | 25.63 | 22.75 | 19.78 | 20.60 | 18.56 | 20.38 | 18.22 | 19.50 | 16.59 | 19.80 | 19.54 | 15.97 | 13.96 | 11.72 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.22 | 0.23 | 0.26 | 0.35 | 0.34 | 0.34 | 0.35 | 0.37 | 0.40 | 0.43 | 0.44 | 0.46 | 0.46 | 0.46 | 0.47 | 0.48 |
| Livestock hauling | 0.05 | 0.06 | 0.07 | 0.08 | 0.08 | 0.09 | 0.09 | 0.11 | 0.12 | 0.14 | 0.15 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| Marketing | 0.23 | 0.25 | 0.28 | 0.30 | 0.35 | 0.34 | 0.39 | 0.36 | 0.36 | 0.39 | 0.42 | 0.39 | 0.42 | 0.39 | 0.42 | 0.43 |
| Bedding (8 lbs) | 0.03 | 0.04 | 0.06 | 0.06 | 0.05 | 0.06 | 0.06 | 0.07 | 0.08 | 0.11 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| Custom feed mixing | 0.06 | 0.06 | 0.07 | 0.07 | 0.07 | 0.08 | 0.08 | 0.09 | 0.10 | 0.10 | 0.09 | 0.09 | 0.08 | 0.07 | 0.06 | 0.07 |
| Fuel, lube, and electricity | 0.39 | 0.42 | 0.58 | 0.64 | 0.68 | 0.73 | 0.77 | 1.01 | 1.38 | 1.50 | 1.49 | 1.38 | 1.15 | 1.05 | 0.99 | 0.98 |
| Machinery and building repairs | 0.70 | 0.74 | 0.82 | 0.90 | 1.01 | 1.01 | 1.05 | 1.16 | 1.35 | 1.50 | 1.59 | 1.66 | 1.58 | 1.63 | 1.58 | 1.60 |
| Hired labor (.07 hr) | 0.17 | 0.19 | 0.21 | 0.23 | 0.25 | 0.27 | 0.29 | 0.32 | 0.34 | 0.38 | 0.36 | 0.39 | 0.40 | 0.42 | 0.41 | 0.43 |
| Manure credit | -0.07 | -0.07 | -0.08 | -0.09 | -0.11 | -0.10 | -0.10 | -0.11 | -0.14 | -0.15 | -0.16 | -0.15 | -0.16 | -0.15 | -0.14 | -0.13 |
| Total, variable cash expenses | 24.41 | 38.83 | 37.69 | 42.77 | 46.21 | 37.24 | 40.85 | 46.94 | 35.37 | 41.44 | 43.47 | 44.33 | 41.06 | 38.86 | 37.95 | 36.63 |
| General farm overhead | 0.86 | 0.91 | 1.01 | 1.10 | 1.39 | 1.24 | 1.58 | 1.76 | 1.68 | 2.08 | 2.68 | 1.99 | 2.74 | 2.44 | 3.53 | 4.42 |
| Taxes and insurance | 1.28 | 1.32 | 1.39 | 1.49 | 1.54 | 1.71 | 1.93 | 3.18 | 0.32 | 0.36 | 0.39 | 0.42 | 0.40 | 0.43 | 0.46 | 0.47 |
| Interest | 1.74 | 2.04 | 2.41 | 2.85 | 4.55 | 3.70 | 4.50 | 4.94 | 4.63 | 5.90 | 8.27 | 5.73 | 7.03 | 5.45 | 6.06 | 3.86 |
| Total, fixed cash expenses | 3.88 | 4.26 | 4.80 | 5.44 | 7.48 | 6.65 | 8.01 | 9.88 | 6.63 | 8.34 | 11.34 | 8.14 | 10.17 | 8.32 | 10.05 | 8.75 |
| Total, cash expenses | 28.29 | 43.09 | 42.49 | 48.20 | 53.69 | 43.89 | 48.86 | 56.82 | 42.00 | 49.78 | 54.81 | 52.47 | 51.23 | 47.18 | 48.00 | 45.38 |
| Value of production less cash expenses | -2.27 | -3.80 | -8.23 | -1.06 | -5.71 | -3.82 | -1.04 | -9.90 | -2.70 | -5.92 | -0.28 | -5.13 | -2.81 | -2.57 | 2.49 | 9.81 |
| Capital replacement | 1.41 | 1.59 | 1.22 | 2.23 | 2.65 | 2.48 | 2.47 | 2.91 | 2.51 | 2.77 | 2.92 | 3.04 | 2.93 | 3.00 | 2.97 | 2.99 |
| Value of production less cash expenses and capital replacement | -3.68 | -5.39 | -9.44 | -3.29 | -8.36 | -6.30 | -3.51 | -12.81 | -5.21 | -8.69 | -3.20 | -8.17 | -5.74 | -5.57 | -0.48 | 6.82 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 24.41 | 38.83 | 37.69 | 42.77 | 46.21 | 37.24 | 40.85 | 46.94 | 35.37 | 41.44 | 43.47 | 44.33 | 41.06 | 38.86 | 37.95 | 36.63 |
| General farm overhead | 0.86 | 0.91 | 1.01 | 1.10 | 1.39 | 1.24 | 1.58 | 1.76 | 1.68 | 2.08 | 2.68 | 1.99 | 2.74 | 2.44 | 3.53 | 4.42 |
| Taxes and insurance | 1.28 | 1.32 | 1.39 | 1.49 | 1.54 | 1.71 | 1.93 | 3.18 | 0.32 | 0.36 | 0.39 | 0.42 | 0.40 | 0.43 | 0.46 | 0.47 |
| Capital replacement | 1.41 | 1.59 | 1.22 | 2.23 | 2.65 | 2.48 | 2.47 | 2.91 | 2.51 | 2.77 | 2.92 | 3.04 | 2.93 | 3.00 | 2.97 | 2.99 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.18 | 0.46 | 0.50 | 0.44 | 0.41 | 0.34 | 0.52 | 0.78 | 0.67 | 0.95 | 0.80 | 0.65 | 0.67 | 0.50 | 0.34 | 0.36 |
| Return to other nonland capital | 0.75 | 0.79 | 0.86 | 0.94 | 1.02 | 0.97 | 0.94 | 0.94 | 0.92 | 0.87 | 0.85 | 0.80 | 0.63 | 0.60 | 0.61 | 0.70 |
| Land | 0.01 | 0.02 | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.04 | 0.03 | 0.03 | 0.02 | 0.02 |
| Unpaid labor (.29 hr) | 0.67 | 0.73 | 0.84 | 0.90 | 0.99 | 1.06 | 1.14 | 1.24 | 1.34 | 1.46 | 1.34 | 1.42 | 1.37 | 1.38 | 1.33 | 1.39 |
| Total, economic costs | 29.57 | 44.64 | 43.52 | 49.89 | 54.24 | 45.08 | 49.46 | 57.80 | 42.86 | 49.98 | 52.50 | 52.69 | 49.83 | 47.23 | 47.21 | 46.98 |
| Residual returns to management and risk | -3.55 | -5.36 | -9.26 | -2.75 | -6.26 | -5.01 | -1.64 | -10.88 | -3.56 | -6.12 | 2.03 | -5.35 | -1.41 | -2.62 | 3.28 | 8.21 |
| Net returns to owned inputs | -1.94 | -3.35 | -7.04 | -0.44 | -3.81 | -2.60 | 0.99 | -7.87 | -0.58 | -2.79 | 5.07 | -2.44 | 1.29 | -0.12 | 5.58 | 10.68 |

Appendix table 37--U.S. feeder pig finishing production costs, 140-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (100 lbs) | 25.29 | 38.18 | 33.30 | 45.81 | 48.42 | 38.94 | 48.02 | 53.89 | 38.03 | 42.95 | 52.52 | 49.46 | 47.94 | 45.40 | 47.84 | 50.22 |
| Total | 25.29 | 38.18 | 33.30 | 45.81 | 48.42 | 38.94 | 48.02 | 53.89 | 38.03 | 42.95 | 52.52 | 49.46 | 47.94 | 45.40 | 47.84 | 50.22 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feeders-- | | | | | | | | | | | | | | | | |
| Feeder pigs (23.30 lbs) | 9.51 | 12.83 | 9.02 | 16.08 | 26.37 | 12.71 | 19.14 | 25.55 | 13.31 | 17.77 | 23.97 | 18.16 | 17.34 | 19.48 | 20.78 | 18.00 |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (241.30 lbs) | 6.77 | 10.93 | 16.89 | 15.61 | 12.34 | 11.74 | 9.85 | 10.78 | 11.83 | 12.76 | 10.34 | 13.18 | 13.46 | 10.99 | 8.60 | 6.26 |
| Protein supplements (44.70 lbs) | 5.48 | 11.91 | 8.79 | 7.20 | 6.41 | 8.82 | 8.17 | 8.94 | 6.70 | 7.12 | 6.58 | 7.03 | 6.58 | 5.44 | 5.84 | 5.88 |
| Pasture | 0.08 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.11 | 0.11 | 0.11 | 0.12 | 0.10 | 0.11 | 0.11 | 0.10 | 0.10 |
| Total feed costs | 12.33 | 22.94 | 25.77 | 22.91 | 18.85 | 20.66 | 18.12 | 19.83 | 18.64 | 19.99 | 17.04 | 20.31 | 20.15 | 16.54 | 14.54 | 12.24 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.34 | 0.35 | 0.40 | 0.53 | 0.51 | 0.52 | 0.53 | 0.57 | 0.61 | 0.66 | 0.69 | 0.71 | 0.72 | 0.73 | 0.75 | 0.77 |
| Livestock hauling | 0.03 | 0.03 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.06 | 0.07 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| Marketing | 0.36 | 0.38 | 0.42 | 0.46 | 0.53 | 0.52 | 0.60 | 0.55 | 0.55 | 0.61 | 0.67 | 0.62 | 0.69 | 0.66 | 0.71 | 0.72 |
| Bedding (18 lbs) | 0.06 | 0.07 | 0.10 | 0.10 | 0.09 | 0.10 | 0.10 | 0.12 | 0.13 | 0.20 | 0.18 | 0.18 | 0.18 | 0.19 | 0.19 | 0.19 |
| Custom feed mixing | 0.32 | 0.34 | 0.37 | 0.41 | 0.42 | 0.46 | 0.49 | 0.55 | 0.61 | 0.67 | 0.70 | 0.73 | 0.78 | 0.80 | 0.77 | 0.80 |
| Fuel, lube, and electricity | 0.43 | 0.46 | 0.63 | 0.70 | 0.75 | 0.80 | 0.84 | 1.10 | 1.51 | 1.75 | 1.78 | 1.66 | 1.44 | 1.39 | 1.21 | 1.25 |
| Machinery and building repairs | 0.81 | 0.87 | 0.96 | 1.05 | 1.18 | 1.18 | 1.23 | 1.36 | 1.58 | 1.76 | 1.86 | 1.94 | 1.87 | 1.92 | 1.87 | 1.89 |
| Hired labor (.04 hr) | 0.07 | 0.08 | 0.09 | 0.09 | 0.10 | 0.11 | 0.12 | 0.13 | 0.14 | 0.16 | 0.15 | 0.16 | 0.16 | 0.16 | 0.16 | 0.17 |
| Manure credit | -0.06 | -0.07 | -0.07 | -0.08 | -0.09 | -0.09 | -0.09 | -0.10 | -0.12 | -0.13 | -0.13 | -0.12 | -0.13 | -0.12 | -0.11 | -0.11 |
| Total, variable cash expenses | 24.19 | 38.27 | 37.72 | 42.30 | 48.76 | 37.02 | 41.13 | 49.72 | 37.03 | 43.52 | 46.99 | 44.43 | 43.28 | 41.83 | 40.95 | 36.00 |
| General farm overhead | 0.83 | 0.88 | 0.98 | 1.07 | 1.40 | 1.21 | 1.59 | 2.02 | 1.63 | 2.04 | 2.58 | 2.08 | 2.71 | 2.48 | 3.35 | 4.02 |
| Taxes and insurance | 0.26 | 0.27 | 0.28 | 0.30 | 0.39 | 0.35 | 0.36 | 0.42 | 0.40 | 0.43 | 0.46 | 0.50 | 0.50 | 0.52 | 0.53 | 0.55 |
| Interest | 1.69 | 1.98 | 2.34 | 2.77 | 4.59 | 3.60 | 4.52 | 5.67 | 4.48 | 5.78 | 7.97 | 5.99 | 6.96 | 5.55 | 5.74 | 3.52 |
| Total, fixed cash expenses | 2.78 | 3.13 | 3.60 | 4.14 | 6.38 | 5.15 | 6.47 | 8.12 | 6.51 | 8.24 | 11.01 | 8.57 | 10.17 | 8.55 | 9.62 | 8.09 |
| Total, cash expenses | 26.98 | 41.40 | 41.32 | 46.44 | 55.14 | 42.17 | 47.60 | 57.84 | 43.54 | 51.76 | 58.00 | 53.00 | 53.45 | 50.38 | 50.57 | 44.09 |
| Value of production less cash expenses | -1.69 | -3.22 | -8.03 | -0.62 | -6.72 | -3.23 | 0.42 | -3.95 | -5.51 | -8.81 | -5.48 | -3.54 | -5.51 | -4.98 | -2.73 | 6.13 |
| Capital replacement | 1.81 | 2.03 | 1.55 | 2.85 | 3.69 | 3.17 | 3.48 | 4.16 | 3.16 | 3.53 | 3.70 | 3.84 | 3.76 | 3.83 | 3.78 | 3.81 |
| Value of production less cash expenses and capital replacement | -3.50 | -5.25 | -9.58 | -3.48 | -10.41 | -6.40 | -3.06 | -8.11 | -8.67 | -12.34 | -9.18 | -7.38 | -9.27 | -8.81 | -6.51 | 2.32 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 24.19 | 38.27 | 37.72 | 42.30 | 48.76 | 37.02 | 41.13 | 49.72 | 37.03 | 43.52 | 46.99 | 44.43 | 43.28 | 41.83 | 40.95 | 36.00 |
| General farm overhead | 0.83 | 0.88 | 0.98 | 1.07 | 1.40 | 1.21 | 1.59 | 2.02 | 1.63 | 2.04 | 2.58 | 2.08 | 2.71 | 2.48 | 3.35 | 4.02 |
| Taxes and insurance | 0.26 | 0.27 | 0.28 | 0.30 | 0.39 | 0.35 | 0.36 | 0.42 | 0.40 | 0.43 | 0.46 | 0.50 | 0.50 | 0.52 | 0.53 | 0.55 |
| Capital replacement | 1.81 | 2.03 | 1.55 | 2.85 | 3.69 | 3.17 | 3.48 | 4.16 | 3.16 | 3.53 | 3.70 | 3.84 | 3.76 | 3.83 | 3.78 | 3.81 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.18 | 0.46 | 0.50 | 0.43 | 0.43 | 0.34 | 0.52 | 0.83 | 0.70 | 1.00 | 0.87 | 0.65 | 0.71 | 0.53 | 0.37 | 0.35 |
| Return to other nonland capital | 0.97 | 1.03 | 1.12 | 1.22 | 1.32 | 1.26 | 1.23 | 1.22 | 1.19 | 1.13 | 1.10 | 1.04 | 0.82 | 0.78 | 0.81 | 0.93 |
| Land | 0.06 | 0.07 | 0.10 | 0.12 | 0.14 | 0.16 | 0.17 | 0.19 | 0.21 | 0.22 | 0.20 | 0.18 | 0.14 | 0.11 | 0.11 | 0.13 |
| Unpaid labor (.78 hr) | 1.27 | 1.39 | 1.60 | 1.72 | 1.87 | 2.02 | 2.16 | 2.36 | 2.54 | 2.79 | 2.66 | 2.86 | 2.94 | 3.07 | 3.01 | 3.16 |
| Total, economic costs | 29.58 | 44.40 | 43.85 | 50.02 | 58.00 | 45.52 | 50.63 | 60.92 | 46.86 | 54.65 | 58.56 | 55.58 | 54.86 | 53.16 | 52.91 | 48.95 |
| Residual returns to management and risk | -4.29 | -6.22 | -10.55 | -4.20 | -9.58 | -6.58 | -2.61 | -7.03 | -8.83 | -11.70 | -6.04 | -6.12 | -6.92 | -7.76 | -5.07 | 1.27 |
| Net returns to owned inputs | -1.81 | -3.27 | -7.24 | -0.71 | -5.82 | -2.81 | 1.46 | -2.44 | -4.19 | -6.57 | -1.21 | -1.39 | -2.31 | -3.26 | -0.77 | 5.84 |

Appendix table 38--U.S. feeder pig finishing production costs, 300-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (100 lbs) | 25.85 | 39.03 | 34.04 | 46.84 | 48.50 | 39.81 | 47.27 | 48.55 | 39.18 | 43.55 | 54.69 | 46.47 | 48.31 | 44.38 | 50.17 | 49.34 |
| Total | 25.85 | 39.03 | 34.04 | 46.84 | 48.50 | 39.81 | 47.27 | 48.55 | 39.18 | 43.55 | 54.69 | 46.47 | 48.31 | 44.38 | 50.17 | 49.34 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feeders-- | | | | | | | | | | | | | | | | |
| Feeder pigs (22.60 lbs) | 9.81 | 13.23 | 9.30 | 16.58 | 23.45 | 13.11 | 18.39 | 24.07 | 12.97 | 17.74 | 22.43 | 20.46 | 17.36 | 18.76 | 20.15 | 17.92 |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (241.80 lbs) | 6.77 | 10.94 | 16.90 | 15.63 | 12.78 | 11.75 | 10.35 | 11.32 | 11.68 | 12.63 | 10.24 | 13.02 | 13.28 | 10.85 | 8.39 | 6.11 |
| Protein supplements (44.60 lbs) | 5.64 | 12.27 | 9.05 | 7.41 | 7.08 | 9.08 | 7.99 | 8.73 | 6.70 | 7.10 | 6.58 | 7.04 | 6.57 | 5.43 | 5.84 | 5.88 |
| Pasture | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 | 0.03 | 0.03 | 0.03 | 0.02 | 0.02 |
| Total feed costs | 12.43 | 23.22 | 25.97 | 23.06 | 19.88 | 20.85 | 18.36 | 20.08 | 18.41 | 19.77 | 16.86 | 20.09 | 19.88 | 16.31 | 14.25 | 12.01 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.23 | 0.23 | 0.27 | 0.36 | 0.35 | 0.35 | 0.36 | 0.38 | 0.41 | 0.44 | 0.46 | 0.48 | 0.48 | 0.49 | 0.50 | 0.51 |
| Livestock hauling | 0.08 | 0.09 | 0.11 | 0.12 | 0.13 | 0.14 | 0.15 | 0.17 | 0.19 | 0.22 | 0.23 | 0.24 | 0.25 | 0.26 | 0.26 | 0.25 |
| Marketing | 0.24 | 0.26 | 0.28 | 0.31 | 0.35 | 0.35 | 0.40 | 0.37 | 0.37 | 0.41 | 0.45 | 0.42 | 0.46 | 0.44 | 0.48 | 0.49 |
| Bedding (8 lbs) | 0.02 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.06 | 0.10 | 0.08 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.53 | 0.56 | 0.77 | 0.86 | 0.92 | 0.98 | 1.03 | 1.35 | 1.85 | 1.80 | 1.78 | 1.61 | 1.35 | 1.12 | 1.13 | 1.08 |
| Machinery and building repairs | 0.72 | 0.77 | 0.85 | 0.93 | 1.05 | 1.05 | 1.09 | 1.21 | 1.41 | 1.57 | 1.68 | 1.78 | 1.70 | 1.77 | 1.71 | 1.72 |
| Hired labor (.11 hr) | 0.21 | 0.23 | 0.26 | 0.28 | 0.31 | 0.33 | 0.36 | 0.39 | 0.42 | 0.47 | 0.43 | 0.47 | 0.48 | 0.50 | 0.48 | 0.50 |
| Manure credit | -0.07 | -0.07 | -0.08 | -0.09 | -0.11 | -0.10 | -0.10 | -0.11 | -0.14 | -0.15 | -0.15 | -0.14 | -0.15 | -0.14 | -0.13 | -0.12 |
| Total, variable cash expenses | 24.20 | 38.55 | 37.77 | 42.45 | 46.37 | 37.10 | 40.09 | 47.96 | 35.95 | 42.37 | 44.25 | 45.49 | 41.90 | 39.60 | 38.92 | 34.45 |
| General farm overhead | 0.85 | 0.90 | 1.00 | 1.09 | 1.41 | 1.23 | 1.56 | 1.82 | 1.67 | 2.07 | 2.69 | 1.95 | 2.73 | 2.43 | 3.51 | 3.95 |
| Taxes and insurance | 0.19 | 0.19 | 0.20 | 0.22 | 0.29 | 0.25 | 0.29 | 0.34 | 0.34 | 0.36 | 0.39 | 0.43 | 0.41 | 0.45 | 0.48 | 0.50 |
| Interest | 1.73 | 2.02 | 2.39 | 2.83 | 4.60 | 3.68 | 4.45 | 5.11 | 4.62 | 5.86 | 8.29 | 5.62 | 7.01 | 5.42 | 6.02 | 3.45 |
| Total, fixed cash expenses | 2.77 | 3.12 | 3.59 | 4.14 | 6.29 | 5.16 | 6.30 | 7.27 | 6.63 | 8.28 | 11.37 | 8.01 | 10.16 | 8.30 | 10.01 | 7.90 |
| Total, cash expenses | 26.97 | 41.67 | 41.37 | 46.60 | 52.66 | 42.26 | 46.39 | 55.23 | 42.58 | 50.65 | 55.62 | 53.50 | 52.06 | 47.90 | 48.93 | 42.35 |
| Value of production less cash expenses | -1.12 | -2.63 | -7.32 | 0.24 | -4.16 | -2.45 | 0.88 | -6.68 | -3.40 | -7.10 | -0.93 | -7.03 | -3.75 | -3.52 | 1.24 | 6.99 |
| Capital replacement | 1.33 | 1.49 | 1.14 | 2.10 | 2.63 | 2.33 | 2.58 | 3.07 | 2.42 | 2.70 | 2.88 | 3.03 | 2.94 | 3.06 | 3.01 | 3.02 |
| Value of production less cash expenses and capital replacement | -2.45 | -4.12 | -8.47 | -1.85 | -6.79 | -4.78 | -1.70 | -9.75 | -5.82 | -9.80 | -3.81 | -10.06 | -6.69 | -6.58 | -1.77 | 3.97 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 24.20 | 38.55 | 37.77 | 42.45 | 46.37 | 37.10 | 40.09 | 47.96 | 35.95 | 42.37 | 44.25 | 45.49 | 41.90 | 39.60 | 38.92 | 34.45 |
| General farm overhead | 0.85 | 0.90 | 1.00 | 1.09 | 1.41 | 1.23 | 1.56 | 1.82 | 1.67 | 2.07 | 2.69 | 1.95 | 2.73 | 2.43 | 3.51 | 3.95 |
| Taxes and insurance | 0.19 | 0.19 | 0.20 | 0.22 | 0.29 | 0.25 | 0.29 | 0.34 | 0.34 | 0.36 | 0.39 | 0.43 | 0.41 | 0.45 | 0.48 | 0.50 |
| Capital replacement | 1.33 | 1.49 | 1.14 | 2.10 | 2.63 | 2.33 | 2.58 | 3.07 | 2.42 | 2.70 | 2.88 | 3.03 | 2.94 | 3.06 | 3.01 | 3.02 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.18 | 0.46 | 0.50 | 0.43 | 0.41 | 0.34 | 0.51 | 0.80 | 0.68 | 0.97 | 0.82 | 0.66 | 0.68 | 0.51 | 0.35 | 0.34 |
| Return to other nonland capital | 0.75 | 0.79 | 0.86 | 0.94 | 1.02 | 0.97 | 0.94 | 0.94 | 0.92 | 0.87 | 0.85 | 0.80 | 0.63 | 0.60 | 0.61 | 0.70 |
| Land | 0.02 | 0.03 | 0.04 | 0.05 | 0.05 | 0.06 | 0.06 | 0.07 | 0.08 | 0.08 | 0.08 | 0.07 | 0.05 | 0.04 | 0.04 | 0.04 |
| Unpaid labor (.43 hr) | 0.76 | 0.83 | 0.96 | 1.03 | 1.13 | 1.21 | 1.30 | 1.42 | 1.53 | 1.70 | 1.59 | 1.72 | 1.74 | 1.81 | 1.77 | 1.84 |
| Total, economic costs | 28.28 | 43.25 | 42.47 | 48.31 | 53.31 | 43.49 | 47.33 | 56.42 | 43.59 | 51.12 | 53.54 | 54.16 | 51.09 | 48.50 | 48.69 | 44.84 |
| Residual returns to management and risk | -2.43 | -4.21 | -8.43 | -1.47 | -4.81 | -3.68 | -0.06 | -7.87 | -4.41 | -7.57 | 1.15 | -7.69 | -2.78 | -4.12 | 1.48 | 4.50 |
| Net returns to owned inputs | -0.72 | -2.10 | -6.08 | 0.98 | -2.20 | -1.10 | 2.75 | -4.64 | -1.20 | -3.95 | 4.48 | -4.43 | 0.33 | -1.16 | 4.25 | 7.42 |

Appendix table 39--U.S. feeder pig finishing production costs, 650-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (100 lbs) | 26.09 | 39.40 | 34.36 | 47.27 | 48.96 | 40.18 | 48.10 | 48.85 | 39.63 | 44.14 | 54.84 | 47.24 | 48.54 | 44.54 | 50.83 | 56.38 |
| Total | 26.09 | 39.40 | 34.36 | 47.27 | 48.96 | 40.18 | 48.10 | 48.85 | 39.63 | 44.14 | 54.84 | 47.24 | 48.54 | 44.54 | 50.83 | 56.38 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feeders-- | | | | | | | | | | | | | | | | |
| Feeder pigs (22.40 lbs) | 9.59 | 12.94 | 9.10 | 16.22 | 23.85 | 12.82 | 19.01 | 24.11 | 13.24 | 17.40 | 21.89 | 20.10 | 17.24 | 18.57 | 19.64 | 21.17 |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (242 lbs) | 6.97 | 11.27 | 17.40 | 16.09 | 12.83 | 12.10 | 10.63 | 11.51 | 11.65 | 12.61 | 10.22 | 12.99 | 13.27 | 10.85 | 8.38 | 6.11 |
| Protein supplements (44.70 lbs) | 5.97 | 12.98 | 9.57 | 7.84 | 6.95 | 9.61 | 8.42 | 9.11 | 6.65 | 7.04 | 6.53 | 6.99 | 6.50 | 5.36 | 5.77 | 5.81 |
| Pasture | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total feed costs | 12.94 | 24.25 | 26.98 | 23.94 | 19.78 | 21.71 | 19.05 | 20.62 | 18.30 | 19.65 | 16.75 | 19.98 | 19.77 | 16.21 | 14.15 | 11.92 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.20 | 0.21 | 0.24 | 0.32 | 0.30 | 0.31 | 0.31 | 0.34 | 0.36 | 0.38 | 0.40 | 0.41 | 0.42 | 0.43 | 0.44 | 0.45 |
| Livestock hauling | 0.03 | 0.03 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.06 | 0.07 | 0.08 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| Marketing | 0.21 | 0.23 | 0.25 | 0.28 | 0.32 | 0.31 | 0.36 | 0.33 | 0.33 | 0.36 | 0.40 | 0.37 | 0.41 | 0.39 | 0.42 | 0.43 |
| Bedding (14 lbs) | 0.05 | 0.06 | 0.08 | 0.08 | 0.07 | 0.08 | 0.09 | 0.10 | 0.11 | 0.16 | 0.14 | 0.14 | 0.15 | 0.16 | 0.16 | 0.16 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.41 | 0.43 | 0.60 | 0.67 | 0.70 | 0.76 | 0.79 | 1.04 | 1.42 | 1.67 | 1.66 | 1.52 | 1.31 | 1.14 | 1.12 | 1.08 |
| Machinery and building repairs | 0.62 | 0.66 | 0.73 | 0.80 | 0.90 | 0.90 | 0.93 | 1.03 | 1.20 | 1.33 | 1.44 | 1.52 | 1.44 | 1.50 | 1.45 | 1.46 |
| Hired labor (.07 hr) | 0.14 | 0.15 | 0.17 | 0.19 | 0.21 | 0.22 | 0.24 | 0.26 | 0.28 | 0.31 | 0.29 | 0.31 | 0.32 | 0.33 | 0.32 | 0.33 |
| Manure credit | -0.07 | -0.07 | -0.08 | -0.09 | -0.11 | -0.10 | -0.10 | -0.11 | -0.14 | -0.15 | -0.15 | -0.14 | -0.15 | -0.14 | -0.13 | -0.12 |
| Total, variable cash expenses | 24.13 | 38.88 | 38.10 | 42.43 | 46.07 | 37.06 | 40.73 | 47.78 | 35.17 | 41.19 | 42.90 | 44.30 | 41.00 | 38.68 | 37.66 | 36.97 |
| General farm overhead | 0.86 | 0.91 | 1.01 | 1.10 | 1.42 | 1.24 | 1.59 | 1.83 | 1.69 | 2.09 | 2.70 | 1.99 | 2.75 | 2.44 | 3.56 | 4.51 |
| Taxes and insurance | 0.20 | 0.20 | 0.21 | 0.23 | 0.25 | 0.26 | 0.28 | 0.34 | 0.27 | 0.30 | 0.32 | 0.35 | 0.35 | 0.36 | 0.39 | 0.41 |
| Interest | 1.74 | 2.04 | 2.41 | 2.86 | 4.64 | 3.71 | 4.53 | 5.14 | 4.67 | 5.94 | 8.32 | 5.72 | 7.05 | 5.44 | 6.10 | 3.95 |
| Total, fixed cash expenses | 2.80 | 3.15 | 3.63 | 4.19 | 6.31 | 5.21 | 6.40 | 7.31 | 6.63 | 8.33 | 11.33 | 8.05 | 10.14 | 8.24 | 10.05 | 8.87 |
| Total, cash expenses | 26.92 | 42.03 | 41.74 | 46.62 | 52.38 | 42.27 | 47.13 | 55.09 | 41.80 | 49.52 | 54.23 | 52.35 | 51.14 | 46.92 | 47.71 | 45.84 |
| Value of production less cash expenses | -0.83 | -2.64 | -7.38 | 0.65 | -3.42 | -2.09 | 0.97 | -6.24 | -2.17 | -5.38 | 0.61 | -5.11 | -2.60 | -2.38 | 3.12 | 10.54 |
| Capital replacement | 1.27 | 1.42 | 1.09 | 2.00 | 2.44 | 2.22 | 2.48 | 3.00 | 1.99 | 2.21 | 2.36 | 2.49 | 2.42 | 2.52 | 2.47 | 2.49 |
| Value of production less cash expenses and capital replacement | -2.10 | -4.06 | -8.47 | -1.34 | -5.86 | -4.31 | -1.51 | -9.24 | -4.16 | -7.59 | -1.75 | -7.60 | -5.02 | -4.90 | 0.65 | 8.05 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 24.13 | 38.88 | 38.10 | 42.43 | 46.07 | 37.06 | 40.73 | 47.78 | 35.17 | 41.19 | 42.90 | 44.30 | 41.00 | 38.68 | 37.66 | 36.97 |
| General farm overhead | 0.86 | 0.91 | 1.01 | 1.10 | 1.42 | 1.24 | 1.59 | 1.83 | 1.69 | 2.09 | 2.70 | 1.99 | 2.75 | 2.44 | 3.56 | 4.51 |
| Taxes and insurance | 0.20 | 0.20 | 0.21 | 0.23 | 0.25 | 0.26 | 0.28 | 0.34 | 0.27 | 0.30 | 0.32 | 0.35 | 0.35 | 0.36 | 0.39 | 0.41 |
| Capital replacement | 1.27 | 1.42 | 1.09 | 2.00 | 2.44 | 2.22 | 2.48 | 3.00 | 1.99 | 2.21 | 2.36 | 2.49 | 2.42 | 2.52 | 2.47 | 2.49 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.18 | 0.47 | 0.50 | 0.43 | 0.40 | 0.34 | 0.51 | 0.80 | 0.67 | 0.95 | 0.79 | 0.65 | 0.67 | 0.49 | 0.34 | 0.36 |
| Return to other nonland capital | 0.61 | 0.64 | 0.70 | 0.76 | 0.83 | 0.79 | 0.77 | 0.76 | 0.75 | 0.71 | 0.69 | 0.65 | 0.52 | 0.49 | 0.49 | 0.57 |
| Land | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Unpaid labor (.37 hr) | 0.62 | 0.68 | 0.77 | 0.83 | 0.92 | 0.98 | 1.05 | 1.15 | 1.24 | 1.38 | 1.29 | 1.39 | 1.42 | 1.48 | 1.44 | 1.51 |
| Total, economic costs | 27.86 | 43.21 | 42.40 | 47.80 | 52.35 | 42.91 | 47.43 | 55.67 | 41.80 | 48.85 | 51.07 | 51.83 | 49.14 | 46.47 | 46.36 | 46.83 |
| Residual returns to management and risk | -1.76 | -3.81 | -8.04 | -0.53 | -3.39 | -2.73 | 0.67 | -6.82 | -2.17 | -4.71 | 3.77 | -4.59 | -0.60 | -1.93 | 4.47 | 9.55 |
| Net returns to owned inputs | -0.35 | -2.02 | -6.05 | 1.51 | -1.22 | -0.60 | 3.02 | -4.10 | 0.51 | -1.65 | 6.56 | -1.89 | 2.02 | 0.54 | 6.75 | 12.00 |

Appendix table 40--U.S. feeder pig finishing production costs, 1,600-head operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/cwt | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (100 lbs) | 26.44 | 39.92 | 34.81 | 47.90 | 43.02 | 40.71 | 47.94 | 42.07 | 39.67 | 44.18 | 54.85 | 47.28 | 48.53 | 44.55 | 50.85 | 56.99 |
| Total | 26.44 | 39.92 | 34.81 | 47.90 | 43.02 | 40.71 | 47.94 | 42.07 | 39.67 | 44.18 | 54.85 | 47.28 | 48.53 | 44.55 | 50.85 | 56.99 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feeders-- | | | | | | | | | | | | | | | | |
| Feeder pigs (22.50 lbs) | 11.84 | 15.97 | 11.22 | 20.01 | 22.18 | 15.82 | 20.06 | 20.46 | 13.25 | 17.42 | 22.00 | 20.15 | 17.30 | 18.58 | 19.68 | 21.58 |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (240.80 lbs) | 6.10 | 9.86 | 15.23 | 14.09 | 13.06 | 10.59 | 10.52 | 11.86 | 11.62 | 12.58 | 10.19 | 12.96 | 13.24 | 10.82 | 8.37 | 6.10 |
| Protein supplements (48.30 lbs) | 5.33 | 11.59 | 8.55 | 7.00 | 7.19 | 8.58 | 7.92 | 8.93 | 6.53 | 6.96 | 6.46 | 6.91 | 6.44 | 5.30 | 5.71 | 5.76 |
| Pasture | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total feed costs | 11.43 | 21.45 | 23.78 | 21.09 | 20.25 | 19.17 | 18.44 | 20.79 | 18.15 | 19.54 | 16.65 | 19.87 | 19.68 | 16.12 | 14.08 | 11.86 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.20 | 0.21 | 0.24 | 0.32 | 0.31 | 0.31 | 0.32 | 0.34 | 0.37 | 0.40 | 0.42 | 0.43 | 0.44 | 0.45 | 0.46 | 0.47 |
| Livestock hauling | 0.07 | 0.07 | 0.08 | 0.09 | 0.10 | 0.11 | 0.12 | 0.13 | 0.15 | 0.17 | 0.18 | 0.18 | 0.19 | 0.20 | 0.19 | 0.19 |
| Marketing | 0.21 | 0.22 | 0.24 | 0.27 | 0.31 | 0.30 | 0.35 | 0.32 | 0.32 | 0.36 | 0.39 | 0.36 | 0.40 | 0.38 | 0.41 | 0.42 |
| Bedding (6 lbs) | 0.02 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.06 | 0.09 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.33 | 0.35 | 0.49 | 0.55 | 0.57 | 0.62 | 0.65 | 0.85 | 1.16 | 1.36 | 1.37 | 1.28 | 1.15 | 1.11 | 1.02 | 1.02 |
| Machinery and building repairs | 0.72 | 0.76 | 0.85 | 0.92 | 1.04 | 1.04 | 1.08 | 1.19 | 1.39 | 1.55 | 1.63 | 1.71 | 1.65 | 1.71 | 1.67 | 1.68 |
| Hired labor (.08 hr) | 0.21 | 0.23 | 0.26 | 0.28 | 0.31 | 0.33 | 0.36 | 0.39 | 0.42 | 0.47 | 0.43 | 0.47 | 0.48 | 0.50 | 0.49 | 0.51 |
| Manure credit | -0.07 | -0.07 | -0.08 | -0.09 | -0.11 | -0.10 | -0.10 | -0.11 | -0.14 | -0.15 | -0.15 | -0.14 | -0.15 | -0.14 | -0.13 | -0.12 |
| Total, variable cash expenses | 24.96 | 39.21 | 37.12 | 43.47 | 45.00 | 37.64 | 41.33 | 44.41 | 35.13 | 41.21 | 43.00 | 44.39 | 41.22 | 38.99 | 37.95 | 37.69 |
| General farm overhead | 0.87 | 0.92 | 1.03 | 1.12 | 1.25 | 1.26 | 1.58 | 1.58 | 1.70 | 2.10 | 2.70 | 1.99 | 2.75 | 2.44 | 3.56 | 4.56 |
| Taxes and insurance | 0.14 | 0.15 | 0.15 | 0.17 | 0.20 | 0.19 | 0.20 | 0.25 | 0.35 | 0.38 | 0.42 | 0.46 | 0.46 | 0.47 | 0.51 | 0.52 |
| Interest | 1.77 | 2.07 | 2.44 | 2.89 | 4.08 | 3.76 | 4.51 | 4.43 | 4.67 | 5.94 | 8.32 | 5.72 | 7.05 | 5.44 | 6.10 | 3.99 |
| Total, fixed cash expenses | 2.78 | 3.14 | 3.62 | 4.18 | 5.53 | 5.21 | 6.30 | 6.25 | 6.72 | 8.42 | 11.43 | 8.17 | 10.25 | 8.35 | 10.17 | 9.07 |
| Total, cash expenses | 27.74 | 42.35 | 40.74 | 47.65 | 50.53 | 42.85 | 47.63 | 50.66 | 41.85 | 49.63 | 54.43 | 52.56 | 51.47 | 47.34 | 48.12 | 46.76 |
| Value of production less cash expenses | -1.30 | -2.43 | -5.93 | 0.24 | -7.51 | -2.14 | 0.31 | -8.59 | -2.18 | -5.45 | 0.42 | -5.28 | -2.94 | -2.79 | 2.73 | 10.23 |
| Capital replacement | 1.01 | 1.13 | 0.87 | 1.59 | 1.90 | 1.77 | 1.95 | 2.29 | 2.85 | 3.16 | 3.30 | 3.44 | 3.38 | 3.50 | 3.46 | 3.47 |
| Value of production less cash expenses and capital replacement | -2.31 | -3.57 | -6.80 | -1.35 | -9.41 | -3.91 | -1.64 | -10.88 | -5.03 | -8.61 | -2.88 | -8.72 | -6.32 | -6.29 | -0.73 | 6.76 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 24.96 | 39.21 | 37.12 | 43.47 | 45.00 | 37.64 | 41.33 | 44.41 | 35.13 | 41.21 | 43.00 | 44.39 | 41.22 | 38.99 | 37.95 | 37.69 |
| General farm overhead | 0.87 | 0.92 | 1.03 | 1.12 | 1.25 | 1.26 | 1.58 | 1.58 | 1.70 | 2.10 | 2.70 | 1.99 | 2.75 | 2.44 | 3.56 | 4.56 |
| Taxes and insurance | 0.14 | 0.15 | 0.15 | 0.17 | 0.20 | 0.19 | 0.20 | 0.25 | 0.35 | 0.38 | 0.42 | 0.46 | 0.46 | 0.47 | 0.51 | 0.52 |
| Capital replacement | 1.01 | 1.13 | 0.87 | 1.59 | 1.90 | 1.77 | 1.95 | 2.29 | 2.85 | 3.16 | 3.30 | 3.44 | 3.38 | 3.50 | 3.46 | 3.47 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.19 | 0.47 | 0.49 | 0.44 | 0.39 | 0.35 | 0.52 | 0.74 | 0.67 | 0.95 | 0.79 | 0.65 | 0.67 | 0.50 | 0.34 | 0.37 |
| Return to other nonland capital | 0.85 | 0.90 | 0.97 | 1.06 | 1.15 | 1.10 | 1.07 | 1.06 | 1.04 | 0.98 | 0.96 | 0.90 | 0.72 | 0.68 | 0.70 | 0.81 |
| Land | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Unpaid labor (.19 hr) | 0.43 | 0.47 | 0.54 | 0.58 | 0.63 | 0.68 | 0.73 | 0.80 | 0.86 | 0.96 | 0.89 | 0.97 | 0.99 | 1.02 | 1.00 | 1.04 |
| Total, economic costs | 28.44 | 43.26 | 41.18 | 48.45 | 50.53 | 43.00 | 47.40 | 51.14 | 42.61 | 49.75 | 52.08 | 52.81 | 50.20 | 47.61 | 47.53 | 48.47 |
| Residual returns to management and risk | -2.01 | -3.34 | -6.37 | -0.55 | -7.51 | -2.29 | 0.54 | -9.07 | -2.94 | -5.57 | 2.77 | -5.53 | -1.67 | -3.06 | 3.32 | 8.52 |
| Net returns to owned inputs | -0.54 | -1.50 | -4.36 | 1.55 | -5.33 | -0.15 | 2.88 | -6.45 | -0.36 | -2.67 | 5.43 | -3.00 | 0.72 | -0.85 | 5.37 | 10.75 |

Appendix table 41--U.S. feeder pig finishing production costs, 3,000-head operation, 1980-87

| Item | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|
| | | | | Dollars/cwt | | | | |
| Gross value of production: | | | | | | | | |
| Slaughter hogs (100 lbs) | 39.70 | 44.21 | 54.90 | 47.26 | 48.49 | 44.57 | 50.84 | 56.97 |
| Total | 39.70 | 44.21 | 54.90 | 47.26 | 48.49 | 44.57 | 50.84 | 56.97 |
| Cash expenses: | | | | | | | | |
| Feeders-- | | | | | | | | |
| Feeder pigs (22.80 lbs) | 13.16 | 17.42 | 22.22 | 20.35 | 17.36 | 18.73 | 19.90 | 21.83 |
| Feed-- | | | | | | | | |
| Grain (235.80 lbs) | 11.51 | 12.42 | 10.07 | 12.82 | 13.08 | 10.67 | 8.30 | 6.06 |
| Protein supplements (79.30 lbs) | 6.25 | 6.41 | 5.99 | 6.37 | 5.95 | 4.87 | 5.32 | 5.33 |
| Pasture | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total feed costs | 17.76 | 18.83 | 16.06 | 19.19 | 19.03 | 15.54 | 13.62 | 11.39 |
| Other-- | | | | | | | | |
| Veterinary and medicine | 0.27 | 0.29 | 0.30 | 0.31 | 0.32 | 0.32 | 0.33 | 0.34 |
| Livestock hauling | 0.13 | 0.15 | 0.16 | 0.17 | 0.17 | 0.18 | 0.18 | 0.18 |
| Marketing | 0.31 | 0.35 | 0.38 | 0.35 | 0.39 | 0.37 | 0.41 | 0.41 |
| Bedding (4 lbs) | 0.04 | 0.06 | 0.05 | 0.05 | 0.05 | 0.06 | 0.06 | 0.06 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.97 | 1.12 | 1.13 | 1.06 | 0.94 | 0.89 | 0.80 | 0.81 |
| Machinery and building repairs | 1.27 | 1.41 | 1.49 | 1.57 | 1.51 | 1.57 | 1.53 | 1.54 |
| Hired labor (.04 hr) | 0.29 | 0.32 | 0.30 | 0.32 | 0.33 | 0.34 | 0.33 | 0.35 |
| Manure credit | -0.13 | -0.14 | -0.14 | -0.13 | -0.14 | -0.13 | -0.12 | -0.11 |
| Total, variable cash expenses | 34.07 | 39.81 | 41.95 | 43.24 | 39.96 | 37.87 | 37.04 | 36.80 |
| General farm overhead | 1.70 | 2.10 | 2.70 | 1.99 | 2.74 | 2.44 | 3.56 | 4.56 |
| Taxes and insurance | 0.29 | 0.33 | 0.36 | 0.40 | 0.40 | 0.42 | 0.44 | 0.45 |
| Interest | 4.68 | 5.95 | 8.33 | 5.72 | 7.04 | 5.45 | 6.10 | 3.99 |
| Total, fixed cash expenses | 6.66 | 8.37 | 11.38 | 8.11 | 10.18 | 8.30 | 10.10 | 9.00 |
| Total, cash expenses | 40.73 | 48.18 | 53.33 | 51.35 | 50.14 | 46.17 | 47.14 | 45.80 |
| Value of production less cash expenses | -1.03 | -3.97 | 1.57 | -4.09 | -1.65 | -1.60 | 3.70 | 11.17 |
| Capital replacement | 2.31 | 2.56 | 2.67 | 2.79 | 2.73 | 2.80 | 2.77 | 2.80 |
| Value of production less cash expenses and capital replacement | -3.34 | -6.53 | -1.10 | -6.88 | -4.38 | -4.40 | 0.93 | 8.37 |
| Economic (full ownership) costs: | | | | | | | | |
| Variable cash expenses | 34.07 | 39.81 | 41.95 | 43.24 | 39.96 | 37.87 | 37.04 | 36.80 |
| General farm overhead | 1.70 | 2.10 | 2.70 | 1.99 | 2.74 | 2.44 | 3.56 | 4.56 |
| Taxes and insurance | 0.29 | 0.33 | 0.36 | 0.40 | 0.40 | 0.42 | 0.44 | 0.45 |
| Capital replacement | 2.31 | 2.56 | 2.67 | 2.79 | 2.73 | 2.80 | 2.77 | 2.80 |
| Allocated returns to owned inputs-- | | | | | | | | |
| Return to operating capital | 0.65 | 0.91 | 0.77 | 0.63 | 0.65 | 0.48 | 0.33 | 0.36 |
| Return to other nonland capital | 0.87 | 0.82 | 0.80 | 0.76 | 0.60 | 0.57 | 0.59 | 0.68 |
| Land | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Unpaid labor (.14 hr) | 0.88 | 0.97 | 0.91 | 0.99 | 1.00 | 1.04 | 1.02 | 1.07 |
| Total, economic costs | 40.78 | 47.52 | 50.18 | 50.81 | 48.10 | 45.63 | 45.76 | 46.73 |
| Residual returns to management and risk | -1.08 | -3.31 | 4.72 | -3.55 | 0.39 | -1.06 | 5.08 | 10.24 |
| Net returns to owned inputs | 1.33 | -0.59 | 7.22 | -1.16 | 2.66 | 1.04 | 7.03 | 12.36 |

Appendix table 42--U.S. feeder pig finishing production costs, 10,000-head operation, 1980-87

| Item | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|
| | | | | Dollars/cwt | | | | |
| Gross value of production: | | | | | | | | |
| Slaughter hogs (100 lbs) | 39.73 | 44.25 | 54.97 | 47.23 | 48.44 | 44.59 | 50.82 | 56.95 |
| Total | 39.73 | 44.25 | 54.97 | 47.23 | 48.44 | 44.59 | 50.82 | 56.95 |
| Cash expenses: | | | | | | | | |
| Feeders-- | | | | | | | | |
| Feeder pigs (23.10 lbs) | 13.05 | 17.43 | 22.52 | 20.60 | 17.45 | 18.95 | 20.20 | 22.18 |
| Feed-- | | | | | | | | |
| Grain (232.10 lbs) | 11.48 | 12.35 | 10.02 | 12.78 | 13.02 | 10.60 | 8.31 | 6.07 |
| Protein supplements (76.90 lbs) | 5.91 | 6.06 | 5.64 | 6.01 | 5.62 | 4.52 | 4.96 | 4.95 |
| Pasture | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total feed costs | 17.39 | 18.41 | 15.66 | 18.79 | 18.64 | 15.12 | 13.27 | 11.02 |
| Other-- | | | | | | | | |
| Veterinary and medicine | 0.40 | 0.43 | 0.45 | 0.47 | 0.48 | 0.48 | 0.50 | 0.51 |
| Livestock hauling | 0.11 | 0.12 | 0.13 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 |
| Marketing | 0.17 | 0.19 | 0.21 | 0.20 | 0.22 | 0.20 | 0.22 | 0.23 |
| Bedding (2 lbs) | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.70 | 0.82 | 0.90 | 0.78 | 0.71 | 0.69 | 0.66 | 0.67 |
| Machinery and building repairs | 1.15 | 1.27 | 1.38 | 1.40 | 1.36 | 1.41 | 1.42 | 1.44 |
| Hired labor (.08 hr) | 0.52 | 0.57 | 0.55 | 0.58 | 0.59 | 0.62 | 0.60 | 0.64 |
| Manure credit | -0.24 | -0.26 | -0.26 | -0.24 | -0.26 | -0.24 | -0.23 | -0.21 |
| Total, variable cash expenses | 33.27 | 39.01 | 41.57 | 42.75 | 39.36 | 37.40 | 36.81 | 36.65 |
| General farm overhead | 1.70 | 2.10 | 2.70 | 1.99 | 2.74 | 2.44 | 3.56 | 4.56 |
| Taxes and insurance | 0.29 | 0.32 | 0.36 | 0.38 | 0.37 | 0.39 | 0.41 | 0.42 |
| Interest | 4.68 | 5.95 | 8.34 | 5.72 | 7.03 | 5.45 | 6.10 | 3.99 |
| Total, fixed cash expenses | 6.67 | 8.37 | 11.40 | 8.08 | 10.14 | 8.28 | 10.07 | 8.97 |
| Total, cash expenses | 39.94 | 47.38 | 52.97 | 50.83 | 49.50 | 45.68 | 46.88 | 45.62 |
| Value of production less cash expenses | -0.21 | -3.13 | 2.00 | -3.60 | -1.06 | -1.09 | 3.94 | 11.33 |
| Capital replacement | 2.18 | 2.41 | 2.55 | 2.59 | 2.56 | 2.60 | 2.63 | 2.66 |
| Value of production less cash expenses and capital replacement | -2.39 | -5.54 | -0.55 | -6.19 | -3.62 | -3.69 | 1.31 | 8.67 |
| Economic (full ownership) costs: | | | | | | | | |
| Variable cash expenses | 33.27 | 39.01 | 41.57 | 42.75 | 39.36 | 37.40 | 36.81 | 36.65 |
| General farm overhead | 1.70 | 2.10 | 2.70 | 1.99 | 2.74 | 2.44 | 3.56 | 4.56 |
| Taxes and insurance | 0.29 | 0.32 | 0.36 | 0.38 | 0.37 | 0.39 | 0.41 | 0.42 |
| Capital replacement | 2.18 | 2.41 | 2.55 | 2.59 | 2.56 | 2.60 | 2.63 | 2.66 |
| Allocated returns to owned inputs-- | | | | | | | | |
| Return to operating capital | 0.63 | 0.90 | 0.77 | 0.62 | 0.64 | 0.48 | 0.33 | 0.36 |
| Return to other nonland capital | 0.86 | 0.81 | 0.79 | 0.74 | 0.59 | 0.56 | 0.54 | 0.63 |
| Land | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Unpaid labor (.09 hr) | 0.55 | 0.61 | 0.58 | 0.63 | 0.63 | 0.66 | 0.65 | 0.67 |
| Total, economic costs | 39.50 | 46.17 | 49.34 | 49.72 | 46.91 | 44.54 | 44.94 | 45.96 |
| Residual returns to management and risk | 0.23 | -1.92 | 5.63 | -2.49 | 1.53 | 0.05 | 5.88 | 10.99 |
| Net returns to owned inputs | 2.29 | 0.41 | 7.79 | -0.48 | 3.41 | 1.76 | 7.41 | 12.66 |

Appendix table 43--Feeder pig finishing production costs, all sizes of operation, North Central, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (100 lbs) | 26.10 | 39.41 | 34.37 | 47.28 | 42.20 | 40.19 | 48.27 | 46.92 | 39.16 | 43.77 | 54.40 | 47.40 | 48.50 | 44.58 | 50.49 | 55.37 |
| Total | 26.10 | 39.41 | 34.37 | 47.28 | 42.20 | 40.19 | 48.27 | 46.92 | 39.16 | 43.77 | 54.40 | 47.40 | 48.50 | 44.58 | 50.49 | 55.37 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feeders-- | | | | | | | | | | | | | | | | |
| Feeder pigs (22.10 lbs) | 10.31 | 13.91 | 9.78 | 17.43 | 24.70 | 13.78 | 19.92 | 23.18 | 13.34 | 17.55 | 21.94 | 19.67 | 17.20 | 18.41 | 19.52 | 20.35 |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (239.60 lbs) | 6.78 | 10.95 | 16.92 | 15.64 | 13.03 | 11.76 | 10.68 | 11.33 | 11.42 | 12.40 | 10.04 | 12.74 | 13.02 | 10.65 | 8.17 | 5.95 |
| Protein supplements (55.10 lbs) | 5.79 | 12.60 | 9.29 | 7.61 | 7.15 | 9.33 | 8.31 | 9.04 | 6.55 | 6.88 | 6.39 | 6.84 | 6.30 | 5.16 | 5.58 | 5.61 |
| Pasture | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total feed costs | 12.57 | 23.55 | 26.21 | 23.26 | 20.18 | 21.09 | 18.99 | 20.37 | 17.97 | 19.28 | 16.43 | 19.58 | 19.32 | 15.81 | 13.75 | 11.56 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.23 | 0.23 | 0.27 | 0.36 | 0.35 | 0.35 | 0.36 | 0.38 | 0.41 | 0.44 | 0.46 | 0.47 | 0.47 | 0.47 | 0.48 | 0.49 |
| Livestock hauling | 0.06 | 0.06 | 0.08 | 0.09 | 0.10 | 0.10 | 0.11 | 0.12 | 0.14 | 0.16 | 0.17 | 0.17 | 0.17 | 0.18 | 0.17 | 0.17 |
| Marketing | 0.24 | 0.26 | 0.28 | 0.31 | 0.36 | 0.35 | 0.40 | 0.37 | 0.37 | 0.40 | 0.43 | 0.40 | 0.43 | 0.40 | 0.43 | 0.44 |
| Bedding (10 lbs) | 0.03 | 0.04 | 0.06 | 0.06 | 0.05 | 0.06 | 0.06 | 0.07 | 0.08 | 0.13 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| Custom feed mixing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel, lube, and electricity | 0.41 | 0.43 | 0.59 | 0.66 | 0.70 | 0.75 | 0.79 | 1.03 | 1.41 | 1.53 | 1.52 | 1.38 | 1.15 | 1.02 | 1.00 | 0.97 |
| Machinery and building repairs | 0.70 | 0.74 | 0.82 | 0.90 | 1.01 | 1.01 | 1.06 | 1.17 | 1.36 | 1.51 | 1.61 | 1.68 | 1.58 | 1.62 | 1.58 | 1.59 |
| Hired labor (.07 hr) | 0.16 | 0.18 | 0.21 | 0.22 | 0.24 | 0.26 | 0.28 | 0.31 | 0.33 | 0.38 | 0.35 | 0.38 | 0.38 | 0.40 | 0.39 | 0.41 |
| Manure credit | -0.09 | -0.10 | -0.11 | -0.12 | -0.13 | -0.13 | -0.13 | -0.14 | -0.17 | -0.18 | -0.18 | -0.17 | -0.19 | -0.18 | -0.16 | -0.15 |
| Total, variable cash expenses | 24.62 | 39.31 | 38.19 | 43.16 | 47.56 | 37.62 | 41.84 | 46.86 | 35.24 | 41.20 | 42.84 | 43.67 | 40.62 | 38.24 | 37.27 | 35.94 |
| General farm overhead | 0.86 | 0.91 | 1.01 | 1.10 | 1.22 | 1.24 | 1.59 | 1.76 | 1.67 | 2.08 | 2.67 | 1.99 | 2.74 | 2.44 | 3.53 | 4.43 |
| Taxes and insurance | 0.35 | 0.36 | 0.38 | 0.41 | 0.50 | 0.47 | 0.51 | 0.47 | 0.32 | 0.35 | 0.39 | 0.42 | 0.40 | 0.42 | 0.45 | 0.46 |
| Interest | 1.74 | 2.04 | 2.41 | 2.86 | 4.00 | 3.71 | 4.54 | 4.94 | 4.61 | 5.89 | 8.25 | 5.74 | 7.04 | 5.45 | 6.06 | 3.88 |
| Total, fixed cash expenses | 2.96 | 3.32 | 3.81 | 4.37 | 5.72 | 5.42 | 6.65 | 7.17 | 6.61 | 8.31 | 11.31 | 8.15 | 10.19 | 8.30 | 10.04 | 8.77 |
| Total, cash expenses | 27.58 | 42.63 | 41.99 | 47.53 | 53.28 | 43.04 | 48.49 | 54.03 | 41.85 | 49.51 | 54.15 | 51.82 | 50.81 | 46.54 | 47.31 | 44.71 |
| Value of production less cash expenses | -1.48 | -3.22 | -7.62 | -0.25 | -11.08 | -2.85 | -0.22 | -7.11 | -2.69 | -5.74 | 0.25 | -4.42 | -2.31 | -1.96 | 3.18 | 10.66 |
| Capital replacement | 1.23 | 1.38 | 1.06 | 1.94 | 2.52 | 2.16 | 2.37 | 2.79 | 2.48 | 2.75 | 2.90 | 3.01 | 2.90 | 3.01 | 2.94 | 2.96 |
| Value of production less cash expenses and capital replacement | -2.71 | -4.60 | -8.68 | -2.19 | -13.60 | -5.01 | -2.59 | -9.90 | -5.17 | -8.49 | -2.65 | -7.43 | -5.21 | -4.97 | 0.24 | 7.70 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 24.62 | 39.31 | 38.19 | 43.16 | 47.56 | 37.62 | 41.84 | 46.86 | 35.24 | 41.20 | 42.84 | 43.67 | 40.62 | 38.24 | 37.27 | 35.94 |
| General farm overhead | 0.86 | 0.91 | 1.01 | 1.10 | 1.22 | 1.24 | 1.59 | 1.76 | 1.67 | 2.08 | 2.67 | 1.99 | 2.74 | 2.44 | 3.53 | 4.43 |
| Taxes and insurance | 0.35 | 0.36 | 0.38 | 0.41 | 0.50 | 0.47 | 0.51 | 0.47 | 0.32 | 0.35 | 0.39 | 0.42 | 0.40 | 0.42 | 0.45 | 0.46 |
| Capital replacement | 1.23 | 1.38 | 1.06 | 1.94 | 2.52 | 2.16 | 2.37 | 2.79 | 2.48 | 2.75 | 2.90 | 3.01 | 2.90 | 3.01 | 2.94 | 2.96 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.18 | 0.47 | 0.50 | 0.44 | 0.42 | 0.35 | 0.53 | 0.78 | 0.67 | 0.95 | 0.79 | 0.64 | 0.66 | 0.49 | 0.34 | 0.35 |
| Return to other nonland capital | 0.75 | 0.79 | 0.86 | 0.94 | 1.02 | 0.97 | 0.94 | 0.94 | 0.92 | 0.87 | 0.85 | 0.80 | 0.63 | 0.60 | 0.61 | 0.70 |
| Land | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Unpaid labor (.29 hr) | 0.66 | 0.72 | 0.83 | 0.89 | 0.97 | 1.05 | 1.12 | 1.22 | 1.32 | 1.45 | 1.30 | 1.40 | 1.36 | 1.37 | 1.32 | 1.37 |
| Total, economic costs | 28.66 | 43.96 | 42.84 | 48.90 | 54.22 | 43.87 | 48.92 | 54.84 | 42.64 | 49.66 | 51.76 | 51.95 | 49.33 | 46.58 | 46.46 | 46.22 |
| Residual returns to management and risk | -2.56 | -4.55 | -8.47 | -1.62 | -12.02 | -3.68 | -0.65 | -7.92 | -3.48 | -5.89 | 2.64 | -4.55 | -0.83 | -2.00 | 4.03 | 9.15 |
| Net returns to owned inputs | -0.96 | -2.56 | -6.27 | 0.67 | -9.60 | -1.30 | 1.96 | -4.96 | -0.55 | -2.61 | 5.60 | -1.69 | 1.84 | 0.47 | 6.30 | 11.58 |

Appendix table 44--Feeder pig finishing production costs, all sizes of operation, Southeast, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Dollars/cwt | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter hogs (100 lbs) | 25.49 | 38.49 | 33.56 | 46.18 | 41.20 | 39.25 | 45.27 | 43.64 | 40.09 | 44.33 | 55.23 | 46.98 | 47.98 | 44.80 | 50.51 | 54.19 |
| Total | 25.49 | 38.49 | 33.56 | 46.18 | 41.20 | 39.25 | 45.27 | 43.64 | 40.09 | 44.33 | 55.23 | 46.98 | 47.98 | 44.80 | 50.51 | 54.19 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feeders-- | | | | | | | | | | | | | | | | |
| Feeder pigs (25.70 lbs) | 10.45 | 14.10 | 9.91 | 17.67 | 23.26 | 13.97 | 16.43 | 18.88 | 12.17 | 17.51 | 25.09 | 22.22 | 18.12 | 20.82 | 22.57 | 23.37 |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (236.80 lbs) | 6.29 | 10.17 | 15.71 | 14.52 | 11.88 | 10.92 | 9.57 | 10.94 | 12.97 | 13.64 | 11.08 | 14.30 | 14.40 | 11.60 | 9.65 | 7.02 |
| Protein supplements (66.00 lbs) | 4.72 | 10.27 | 7.57 | 6.20 | 5.78 | 7.60 | 6.94 | 7.94 | 6.53 | 6.96 | 6.34 | 6.67 | 6.36 | 5.21 | 5.61 | 5.62 |
| Pasture | 0.09 | 0.10 | 0.11 | 0.11 | 0.10 | 0.11 | 0.13 | 0.16 | 0.17 | 0.17 | 0.16 | 0.13 | 0.11 | 0.10 | 0.09 | 0.08 |
| Total feed costs | 11.10 | 20.54 | 23.39 | 20.83 | 17.76 | 18.63 | 16.64 | 19.04 | 19.67 | 20.77 | 17.58 | 21.10 | 20.87 | 16.91 | 15.35 | 12.72 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.20 | 0.20 | 0.23 | 0.31 | 0.30 | 0.30 | 0.30 | 0.33 | 0.35 | 0.37 | 0.38 | 0.40 | 0.40 | 0.40 | 0.41 | 0.42 |
| Livestock hauling | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.06 | 0.06 | 0.08 | 0.08 | 0.09 | 0.09 |
| Marketing | 0.20 | 0.21 | 0.24 | 0.26 | 0.29 | 0.29 | 0.33 | 0.32 | 0.32 | 0.35 | 0.37 | 0.35 | 0.37 | 0.35 | 0.38 | 0.38 |
| Bedding (2 lbs) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Custom feed mixing | 0.34 | 0.36 | 0.40 | 0.44 | 0.45 | 0.49 | 0.53 | 0.59 | 0.65 | 0.66 | 0.62 | 0.58 | 0.53 | 0.50 | 0.47 | 0.45 |
| Fuel, lube, and electricity | 0.35 | 0.36 | 0.51 | 0.56 | 0.59 | 0.64 | 0.67 | 0.87 | 1.20 | 1.36 | 1.38 | 1.33 | 1.16 | 1.21 | 0.93 | 1.04 |
| Machinery and building repairs | 0.66 | 0.70 | 0.77 | 0.84 | 0.95 | 0.95 | 0.99 | 1.10 | 1.28 | 1.42 | 1.51 | 1.59 | 1.56 | 1.64 | 1.62 | 1.63 |
| Hired labor (.09 hr) | 0.18 | 0.20 | 0.23 | 0.25 | 0.27 | 0.29 | 0.31 | 0.33 | 0.36 | 0.39 | 0.44 | 0.47 | 0.49 | 0.52 | 0.53 | 0.58 |
| Manure credit | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total, variable cash expenses | 23.50 | 36.71 | 35.71 | 41.20 | 43.91 | 35.61 | 36.26 | 41.52 | 36.07 | 42.91 | 47.46 | 48.12 | 43.60 | 42.45 | 42.37 | 40.70 |
| General farm overhead | 0.84 | 0.89 | 0.99 | 1.08 | 1.19 | 1.21 | 1.50 | 1.64 | 1.71 | 2.10 | 2.71 | 1.97 | 2.72 | 2.45 | 3.54 | 4.34 |
| Taxes and insurance | 0.19 | 0.19 | 0.20 | 0.22 | 0.34 | 0.25 | 0.27 | 0.35 | 0.35 | 0.38 | 0.41 | 0.44 | 0.45 | 0.47 | 0.50 | 0.52 |
| Interest | 1.70 | 1.99 | 2.36 | 2.79 | 3.91 | 3.62 | 4.26 | 4.59 | 4.72 | 5.96 | 8.38 | 5.69 | 6.97 | 5.47 | 6.06 | 3.79 |
| Total, fixed cash expenses | 2.73 | 3.08 | 3.55 | 4.09 | 5.44 | 5.09 | 6.03 | 6.58 | 6.79 | 8.45 | 11.50 | 8.10 | 10.13 | 8.39 | 10.10 | 8.65 |
| Total, cash expenses | 26.23 | 39.78 | 39.26 | 45.29 | 49.35 | 40.70 | 42.29 | 48.10 | 42.86 | 51.36 | 58.96 | 56.22 | 53.73 | 50.84 | 52.47 | 49.35 |
| Value of production less cash expenses | -0.75 | -1.30 | -5.69 | 0.89 | -8.15 | -1.45 | 2.98 | -4.46 | -2.77 | -7.03 | -3.73 | -9.24 | -5.75 | -6.04 | -1.96 | 4.84 |
| Capital replacement | 1.36 | 1.53 | 1.17 | 2.15 | 3.14 | 2.39 | 2.65 | 3.37 | 2.67 | 2.91 | 3.06 | 3.18 | 3.09 | 3.16 | 3.16 | 3.17 |
| Value of production less cash expenses and capital replacement | -2.11 | -2.83 | -6.86 | -1.26 | -11.29 | -3.84 | 0.33 | -7.83 | -5.44 | -9.94 | -6.79 | -12.42 | -8.84 | -9.20 | -5.12 | 1.67 |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 23.50 | 36.71 | 35.71 | 41.20 | 43.91 | 35.61 | 36.26 | 41.52 | 36.07 | 42.91 | 47.46 | 48.12 | 43.60 | 42.45 | 42.37 | 40.70 |
| General farm overhead | 0.84 | 0.89 | 0.99 | 1.08 | 1.19 | 1.21 | 1.50 | 1.64 | 1.71 | 2.10 | 2.71 | 1.97 | 2.72 | 2.45 | 3.54 | 4.34 |
| Taxes and insurance | 0.19 | 0.19 | 0.20 | 0.22 | 0.34 | 0.25 | 0.27 | 0.35 | 0.35 | 0.38 | 0.41 | 0.44 | 0.45 | 0.47 | 0.50 | 0.52 |
| Capital replacement | 1.36 | 1.53 | 1.17 | 2.15 | 3.14 | 2.39 | 2.65 | 3.37 | 2.67 | 2.91 | 3.06 | 3.18 | 3.09 | 3.16 | 3.16 | 3.17 |
| Allocated returns to owned inputs-- | | | | | | | | | | | | | | | | |
| Return to operating capital | 0.17 | 0.44 | 0.47 | 0.42 | 0.39 | 0.33 | 0.46 | 0.69 | 0.68 | 0.99 | 0.88 | 0.70 | 0.71 | 0.54 | 0.38 | 0.40 |
| Return to other nonland capital | 0.74 | 0.78 | 0.85 | 0.93 | 1.00 | 0.96 | 0.93 | 0.92 | 0.90 | 0.85 | 0.83 | 0.78 | 0.62 | 0.59 | 0.62 | 0.71 |
| Land | 0.05 | 0.06 | 0.08 | 0.10 | 0.10 | 0.11 | 0.11 | 0.13 | 0.14 | 0.14 | 0.14 | 0.13 | 0.10 | 0.09 | 0.08 | 0.08 |
| Unpaid labor (.32 hr) | 0.75 | 0.82 | 0.94 | 1.01 | 1.11 | 1.19 | 1.27 | 1.39 | 1.50 | 1.51 | 1.57 | 1.56 | 1.43 | 1.42 | 1.41 | 1.49 |
| Total, economic costs | 27.60 | 41.42 | 40.41 | 47.10 | 51.18 | 42.05 | 43.45 | 50.01 | 44.03 | 51.79 | 57.06 | 56.88 | 52.72 | 51.17 | 52.06 | 51.41 |
| Residual returns to management and risk | -2.11 | -2.93 | -6.85 | -0.93 | -9.98 | -2.80 | 1.82 | -6.37 | -3.94 | -7.46 | -1.83 | -9.90 | -4.74 | -6.37 | -1.55 | 2.78 |
| Net returns to owned inputs | -0.40 | -0.83 | -4.51 | 1.53 | -7.38 | -0.21 | 4.59 | -3.24 | -0.71 | -3.97 | 1.59 | -6.73 | -1.88 | -3.73 | 0.94 | 5.46 |

Table 45--U.S. sheep production costs, all sizes of operation, 1972-87

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/ewe | | | | | | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | | | | | | | |
| Slaughter lambs (31.90 lbs) | 9.85 | 12.00 | 13.00 | 14.53 | 15.65 | 17.46 | 19.91 | 21.03 | 20.46 | 16.03 | 16.60 | 16.39 | 19.93 | 21.58 | 20.84 | 22.89 |
| Feeder lambs (26.60 lbs) | 6.99 | 8.58 | 8.06 | 9.27 | 11.35 | 12.57 | 17.72 | 18.41 | 15.74 | 13.30 | 13.49 | 12.30 | 15.02 | 18.48 | 18.76 | 22.04 |
| Cull ewes (29.10 lbs) | 1.72 | 3.30 | 2.63 | 2.56 | 3.30 | 3.45 | 4.70 | 5.52 | 3.55 | 3.43 | 3.05 | 2.17 | 3.20 | 6.06 | 5.97 | 5.76 |
| Wool (10 lbs) | 2.60 | 6.15 | 4.39 | 3.32 | 4.88 | 5.35 | 5.54 | 6.42 | 6.55 | 7.45 | 6.28 | 6.72 | 8.81 | 6.84 | 7.34 | 10.05 |
| Wool payment | 3.88 | 0.00 | 1.35 | 2.86 | 0.66 | 2.83 | 3.09 | 3.29 | 3.52 | 4.61 | 6.28 | 7.75 | 9.47 | 10.99 | 11.78 | 11.94 |
| Unshorn lamb payment | 0.75 | 0.00 | 0.26 | 0.55 | 0.13 | 0.55 | 0.66 | 0.71 | 0.76 | 0.88 | 1.50 | 1.56 | 1.81 | 2.21 | 2.40 | 1.92 |
| Total | 25.80 | 30.03 | 29.71 | 33.09 | 35.97 | 42.22 | 51.62 | 55.37 | 50.58 | 45.70 | 47.20 | 46.89 | 58.24 | 66.16 | 67.09 | 74.60 |
| Cash expenses: | | | | | | | | | | | | | | | | |
| Feed-- | | | | | | | | | | | | | | | | |
| Grain (.74 bu) | 1.11 | 1.79 | 2.77 | 2.56 | 2.36 | 1.92 | 1.99 | 2.24 | 2.56 | 2.13 | 2.14 | 2.38 | 2.52 | 2.01 | 1.60 | 1.35 |
| Protein supplements (0.38 cwt) | 1.76 | 3.82 | 2.82 | 2.31 | 2.31 | 2.83 | 2.85 | 3.21 | 3.64 | 3.38 | 3.16 | 3.60 | 3.39 | 3.40 | 3.68 | 3.68 |
| Salt and minerals (7 lbs) | 0.13 | 0.14 | 0.15 | 0.17 | 0.19 | 0.21 | 0.23 | 0.26 | 0.32 | 0.35 | 0.37 | 0.38 | 0.38 | 0.40 | 0.40 | 0.40 |
| Hay (.10 ton) | 2.24 | 2.55 | 2.99 | 3.74 | 3.89 | 2.89 | 2.69 | 2.45 | 2.93 | 3.53 | 3.71 | 3.65 | 3.74 | 3.90 | 2.93 | 2.85 |
| Pasture | 1.81 | 2.07 | 2.14 | 2.14 | 2.19 | 2.18 | 2.41 | 2.70 | 3.05 | 3.19 | 3.11 | 3.16 | 3.43 | 3.31 | 3.29 | 2.89 |
| Public grazing (AUM) 1/ | 1.25 | 1.31 | 1.41 | 1.41 | 1.65 | 0.73 | 0.73 | 0.93 | 1.13 | 1.11 | 0.91 | 0.70 | 0.71 | 0.67 | 0.63 | 0.67 |
| Crop residue | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.04 | 0.05 | 0.06 | 0.05 | 0.06 | 0.06 | 0.05 | 0.05 | 0.05 |
| Total feed costs | 8.34 | 11.74 | 12.34 | 12.39 | 12.64 | 10.82 | 10.95 | 11.84 | 13.68 | 13.75 | 13.45 | 13.93 | 14.23 | 13.74 | 12.63 | 11.89 |
| Other-- | | | | | | | | | | | | | | | | |
| Veterinary and medicine | 0.60 | 0.62 | 0.59 | 0.62 | 0.59 | 0.61 | 0.66 | 0.73 | 0.83 | 0.91 | 0.98 | 0.99 | 1.04 | 1.05 | 1.08 | 1.10 |
| Livestock hauling | 0.66 | 0.73 | 0.66 | 0.72 | 0.66 | 0.71 | 0.76 | 0.87 | 1.00 | 1.12 | 1.18 | 1.20 | 1.25 | 1.28 | 1.25 | 1.23 |
| Marketing | 0.15 | 0.16 | 0.15 | 0.16 | 0.15 | 0.16 | 0.17 | 0.19 | 0.22 | 0.24 | 0.26 | 0.27 | 0.28 | 0.29 | 0.29 | 0.30 |
| Ram death loss | 0.13 | 0.14 | 0.15 | 0.17 | 0.18 | 0.19 | 0.26 | 0.34 | 0.33 | 0.31 | 0.29 | 0.28 | 0.27 | 0.27 | 0.27 | 0.31 |
| Shearing and tagging | 0.58 | 0.62 | 0.68 | 0.75 | 0.79 | 0.84 | 0.90 | 0.98 | 1.06 | 1.14 | 1.18 | 1.21 | 1.23 | 1.24 | 1.30 | 1.28 |
| Fuel, lube, and electricity | 0.50 | 0.53 | 0.74 | 0.82 | 0.87 | 0.93 | 0.98 | 1.28 | 1.75 | 1.98 | 1.93 | 1.82 | 1.49 | 1.53 | 1.12 | 1.17 |
| Machinery and building repairs | 2.57 | 2.62 | 2.82 | 2.98 | 2.87 | 1.22 | 1.32 | 1.45 | 1.59 | 1.74 | 2.19 | 2.29 | 2.26 | 2.39 | 2.32 | 2.35 |
| Hired labor (1.42 hr) | 2.72 | 2.98 | 3.41 | 3.67 | 4.15 | 4.32 | 4.62 | 5.05 | 5.44 | 5.83 | 6.05 | 6.22 | 6.34 | 6.49 | 6.78 | 6.76 |
| Miscellaneous | 0.44 | 0.47 | 0.52 | 0.57 | 0.60 | 0.64 | 0.69 | 0.77 | 0.87 | 0.96 | 1.02 | 1.04 | 1.08 | 1.12 | 1.15 | 1.17 |
| Total, variable cash expenses | 16.71 | 20.61 | 22.07 | 22.84 | 23.49 | 20.44 | 21.31 | 23.51 | 26.77 | 27.98 | 28.53 | 29.25 | 29.47 | 29.40 | 28.19 | 27.56 |
| General farm overhead | 1.05 | 1.42 | 1.27 | 1.41 | 1.67 | 1.94 | 2.54 | 3.08 | 3.21 | 3.22 | 4.47 | 2.86 | 3.74 | 3.25 | 3.35 | 4.48 |
| Taxes and insurance | 0.90 | 0.92 | 0.97 | 1.04 | 1.26 | 1.19 | 1.20 | 1.45 | 1.55 | 1.57 | 1.80 | 1.82 | 1.70 | 1.82 | 2.42 | 2.66 |
| Interest | 1.11 | 1.62 | 1.39 | 1.55 | 2.34 | 2.48 | 4.17 | 5.91 | 6.13 | 6.73 | 6.55 | 5.32 | 5.99 | 6.87 | 7.38 | 6.71 |
| Total, fixed cash expenses | 3.06 | 3.96 | 3.63 | 4.00 | 5.27 | 5.61 | 7.92 | 10.45 | 10.89 | 11.52 | 12.82 | 10.00 | 11.43 | 11.94 | 13.15 | 13.85 |
| Total, cash expenses | 19.76 | 24.57 | 25.70 | 26.84 | 28.76 | 26.05 | 29.22 | 33.96 | 37.66 | 39.50 | 41.35 | 39.25 | 40.90 | 41.34 | 41.34 | 41.41 |
| Value of production less cash expenses | 6.03 | 5.46 | 4.01 | 6.26 | 7.21 | 16.17 | 22.40 | 21.41 | 12.92 | 6.20 | 5.85 | 7.64 | 17.34 | 24.82 | 25.75 | 33.19 |
| Capital replacement | 2.19 | 2.32 | 2.52 | 2.75 | 2.90 | 2.84 | 3.89 | 4.90 | 5.12 | 5.69 | 6.58 | 6.95 | 7.38 | 7.61 | 7.55 | 7.87 |
| Value of production less cash expenses and capital replacement | 3.84 | 3.14 | 1.49 | 3.50 | 4.32 | 13.32 | 18.51 | 16.51 | 7.80 | 0.51 | -0.73 | 0.69 | 9.96 | 17.21 | 18.20 | 25.32 |

See footnote at end of table.

Continued--

Table 45--U.S. sheep production costs, all sizes of operation, 1972-87--Continued

| Item | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dollars/ewe | | | | | | | | | | | | | | | |
| Economic (full ownership) costs: | | | | | | | | | | | | | | | | |
| Variable cash expenses | 16.71 | 20.61 | 22.07 | 22.84 | 23.49 | 20.44 | 21.31 | 23.51 | 26.77 | 27.98 | 28.53 | 29.25 | 29.47 | 29.40 | 28.19 | 27.56 |
| General farm overhead | 1.05 | 1.42 | 1.27 | 1.41 | 1.67 | 1.94 | 2.54 | 3.08 | 3.21 | 3.22 | 4.47 | 2.86 | 3.74 | 3.25 | 3.35 | 4.48 |
| Taxes and insurance | 0.90 | 0.92 | 0.97 | 1.04 | 1.26 | 1.19 | 1.20 | 1.45 | 1.55 | 1.57 | 1.80 | 1.82 | 1.70 | 1.82 | 2.42 | 2.66 |
| Capital replacement | 2.19 | 2.32 | 2.52 | 2.75 | 2.90 | 2.84 | 3.89 | 4.90 | 5.12 | 5.69 | 6.58 | 6.95 | 7.38 | 7.61 | 7.55 | 7.87 |
| Allocated returns to owned inputs: | | | | | | | | | | | | | | | | |
| Returns to operating capital | 0.37 | 0.74 | 0.87 | 0.70 | 0.62 | 0.56 | 0.81 | 1.18 | 1.52 | 1.93 | 1.58 | 1.28 | 1.44 | 1.13 | 0.76 | 0.81 |
| Returns to other nonland capital | 1.58 | 1.67 | 1.82 | 1.99 | 2.09 | 2.05 | 2.81 | 3.54 | 4.63 | 4.11 | 4.52 | 4.36 | 4.95 | 2.72 | 2.86 | 3.55 |
| Land | 3.10 | 3.76 | 4.86 | 5.59 | 6.07 | 6.44 | 6.87 | 7.95 | 9.44 | 9.75 | 10.13 | 9.26 | 8.86 | 6.56 | 5.84 | 6.12 |
| Unpaid labor (2.10 hr) | 4.12 | 4.62 | 5.42 | 5.75 | 6.42 | 6.58 | 6.75 | 7.38 | 6.40 | 6.97 | 7.14 | 7.33 | 7.70 | 7.77 | 8.13 | 7.96 |
| Total, economic costs | 30.02 | 36.05 | 39.79 | 42.07 | 44.52 | 42.05 | 46.16 | 52.98 | 58.64 | 61.23 | 64.75 | 63.11 | 65.24 | 60.26 | 59.10 | 61.01 |
| Residual returns to management and risk | -4.23 | -6.02 | -10.09 | -8.97 | -8.55 | 0.17 | 5.45 | 2.38 | -8.06 | -15.53 | -17.55 | -16.22 | -7.00 | 5.90 | 7.99 | 13.59 |
| Net returns to owned inputs | 4.96 | 4.76 | 2.88 | 5.05 | 6.66 | 15.80 | 22.68 | 22.43 | 13.93 | 7.23 | 5.82 | 6.01 | 15.95 | 24.08 | 25.58 | 32.03 |

1/ AUM = animal unit month, 1 animal unit for 1 month.

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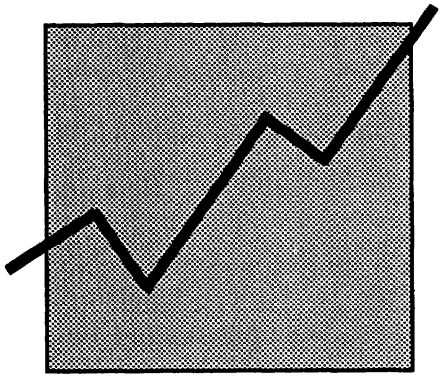

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