



## **Livestock Farm Management Update**

**August 29, 2001**

Prepared By Rodney Jones, Associate Professor / Extension Livestock Production Economist,  
Kansas State University, August 29, 2001.

### **In This Issue....**

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## **Cattle Production Budgets and Returns**

### **By Rodney Jones, Extension Livestock Production Economics**

Based on this month's traditional cattle finishing budgets for 750 pound steers and 650 pound heifers, the expected break-even prices for late August placements remained about the same as the projections of the previous few months. The projected break-evens, for cattle expected to finish in about January, are around \$75.50 per cwt. for both heifers and steers. Feeder cattle prices have backed off slightly, and feed ingredient prices remained essentially unchanged from last month. Producers need to be aware that performance expectations decline quickly as we get into the early fall months. Feed conversions and average daily gains of August placed cattle are expected to be only slightly better than annual averages, and decline to below annual averages for September and October placements. Because of reduced performance expectations, 550 lb. Calves placed directly in a calf finishing program in early September have a projected break-even slightly above \$76.00 per cwt. based on recent calf prices.

Combining the ration charge projection with August placement performance expectations results in a feeding cost of gain projection of \$47.92 per cwt. for August steer placements, and \$50.47 per cwt. for August heifer placements. The feeding cost of gain estimates depicted in the accompanying budgets are based on current feed prices and seasonal average performance, and are slightly lower than "futures based" feeding cost of gain projections that assume feed is purchased as needed throughout the feeding period. This observation reflects the uncertainty that is now priced into deferred feedgrain futures, and suggests that risk averse feeders may want to consider forward pricing feed needs. In addition to feed ingredients, yardage, processing, medication, and death loss are accounted for. Estimates are sensitive to changes in feed conversions,

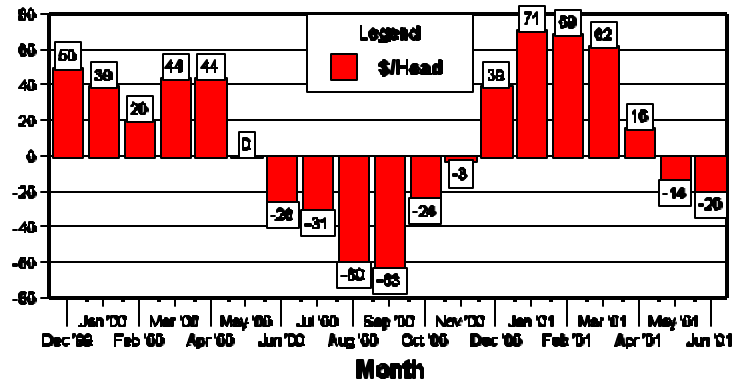
daily gains, grain prices, and hay prices. Feed conversions, grain prices, and hay prices are positively related to feeding cost of gains. Based on late summer performance estimates, each \$0.10 per bushel change in corn price changes feeding cost of gain by \$1.24 per cwt. Each \$10.00 per ton change in hay prices changes feeding cost of gain by \$0.50 per cwt. Feeding cost of gain changes by \$0.53 per cwt. for each 0.10 pound change in feed conversions and \$0.08 per cwt. for each 0.10 pound change in daily gains.

Kansas cattle finishers suffered an average return of \$-19.83 per head on June steer closeouts. Losses of \$15.00 to \$40.00 per head are projected throughout the fall based on current futures based price forecasts compared to break-even projections that range from around \$74.50 per cwt. for September closeouts to nearly \$77.00 per cwt. for November and December closeouts.

As was the case for early intensive summer grazing programs, producers with cattle coming off of full season summer stocking programs need to carefully weigh the current bids for their grass cattle against their ability and willingness to endure the risk of a retained ownership program. At this point, the feeding program appears to be a "break-even" proposition at best. In order for the feeding program to be profitable it appears that performance will need to be better than average, or fed cattle prices will need to rebound more than futures based price forecasts currently suggest.

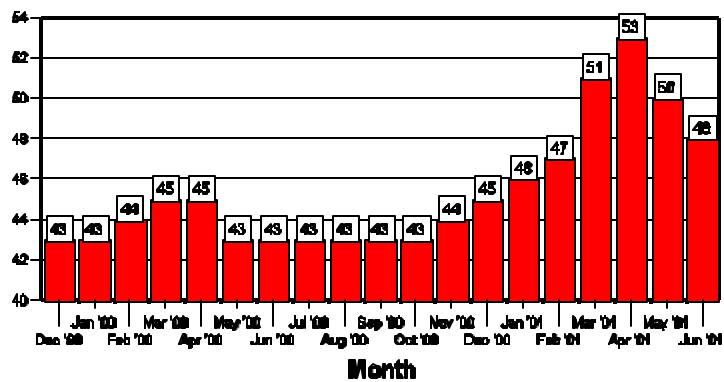
Forages are in tight supply in many areas of the state, and pasture conditions have declined due to a second dry summer. Cow-calf producers may need to consider early weaning, and alternative cow feeding strategies to take the pressure off of forage supplies.

### Monthly Returns for Finishing 700 to 800 Lb. Steers in Kansas



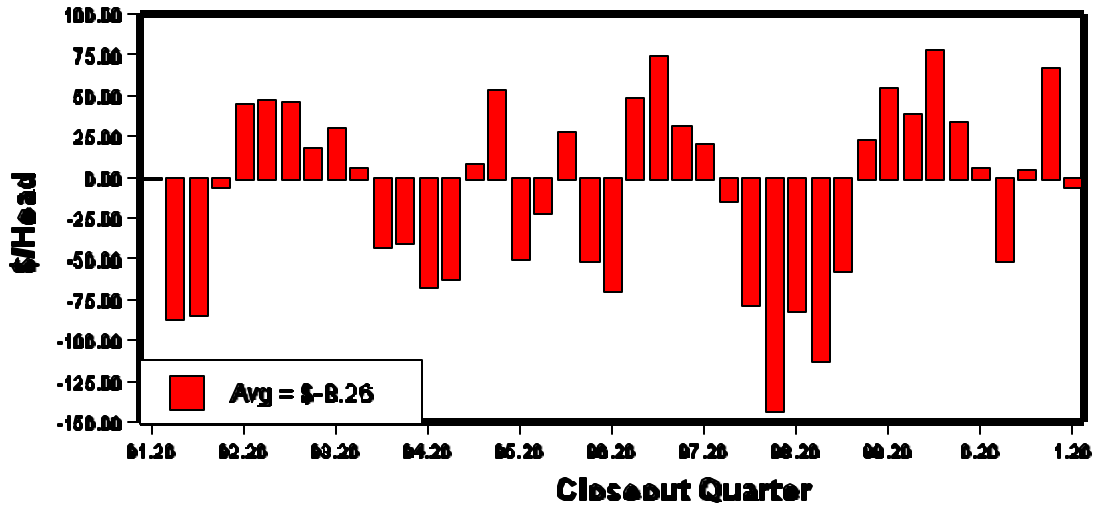
Source: KSU Cattle Return Series.

### Monthly Feeding Cost of Gain 700 to 800 Lb. Steers in Kansas



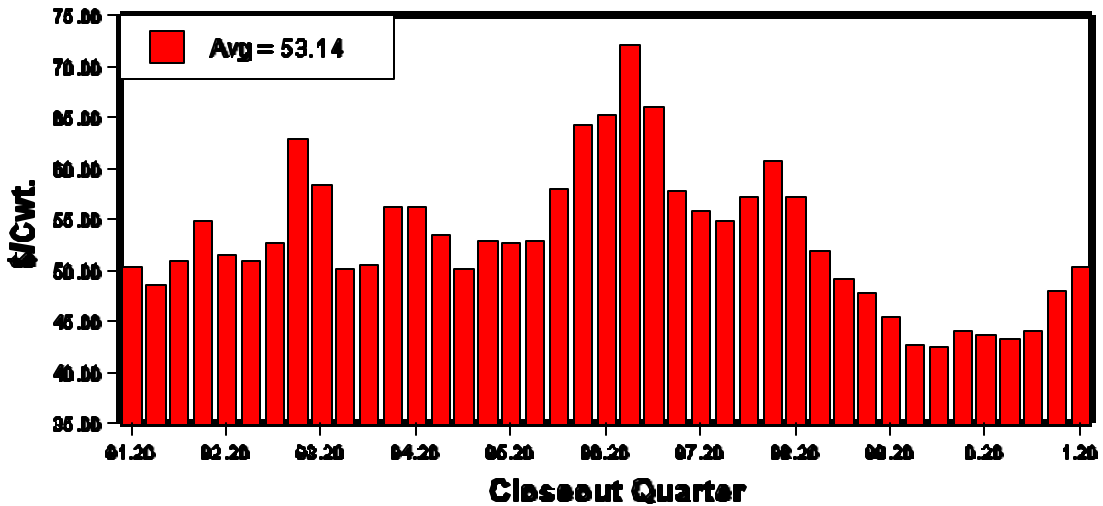
Source: KSU Cattle Return Series.

## Quarterly Net Return for Finishing 700-800 Lb. Steers in Kansas



Source: KSU Cattle Return Series.

## Quarterly Feeding Cost of Gain 700-800 Lb. Steers in Kansas



Source: KSU Cattle Return Series.

**Commercial Feedlot Cattle Finishing Budget**  
**August 2001 Placements (750 lb steers, 650 lb hfrs)**

| Assumptions                            | Steers        | Heifers        |
|--|---------------|----------------|
| Cost of feeder (\$/cwt.) <sup>1</sup>  | \$90.75       | \$88.60        |
| Interest rate                          | 9.0%          | 9.0%           |
| Ration charge (\$/ton) <sup>2</sup>    | \$105.00      | \$105.00       |
| Yardage charge                         | \$0.05        | \$0.05         |
| Beginning weight                       | 750 lbs.      | 650 lbs.       |
| Pay weight                             | 1250 lbs.     | 1075 lbs.      |
| Gain                                   | 500 lbs.      | 425 lbs.       |
| Days on feed                           | 148 days      | 143 days       |
| Shrink                                 | 4.0%          | 4.0%           |
| Pay weight to pay weight:              |               |                |
| average daily gain                     | 3.38 lbs.     | 2.98 lbs.      |
| Feed conversion (as fed)               | 8.15 lbs.     | 8.50 lbs.      |
| Death loss (in conversion)             | 0.50%         | 0.50%          |
| <b>Cost Budgets</b>                    | <b>Steers</b> | <b>Heifers</b> |
| <b>Feeder</b>                          |               |                |
| 1. Cost of feeder:                     | \$680.63      | \$575.90       |
| 2. Interest on feeder:                 | \$ 24.83      | \$ 20.25       |
| <b>Feed</b>                            |               |                |
| 3. Total feed cost:                    | \$213.93      | \$189.65       |
| 4. Interest on feed:                   | \$ 3.90       | \$ 3.33        |
| <b>Other Costs</b>                     |               |                |
| 5. Yardage Charge:                     | \$ 7.40       | \$ 7.13        |
| 6. Processing Charge:                  | \$ 7.00       | \$ 7.00        |
| 8. Vet, drugs, supplies:               | \$ 7.00       | \$ 7.00        |
| 9. Interest on other V.C.:             | \$ .39        | \$ .37         |
| <br>                                   |               |                |
| Breakeven selling price:               | \$ 75.61      | \$ 75.41       |
| Total cost of gain/cwt:                | \$ 52.89      | \$ 55.23       |
| Feeding cost of gain/cwt: <sup>3</sup> | \$ 47.92      | \$ 50.47       |

<sup>1</sup>Feeder steer and heifer prices based on recent auction results at Winter Auction, Dodge City, Kansas.

<sup>2</sup>Ration charge of \$105.00 based on corn price of \$2.32/bu., milo price of \$3.57/cwt., alfalfa hay price of \$107.00/ton, supplement price of \$187.50/ton, and feed markup of \$20/ton. Corn price change of \$0.10/bu. changes ration cost \$1.80/ton. Milo price change of \$0.10/cwt. changes ration cost \$0.70/ton. Alfalfa hay price change of \$10/ton changes ration cost \$1.20/ton. Supplement price change of \$25/ton changes ration cost \$0.75/ton.

<sup>3</sup>Excludes interest on feeder.

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 750 lb. Steers

|                                      | Feeder purchase price                  |         |         |         |         |
|--------------------------------------|--|---------|---------|---------|---------|
|                                      | \$87.00                                | \$89.00 | \$91.00 | \$93.00 | \$95.00 |
| Feeding Cost<br>of Gain<br>(\$/cwt.) | -----Breakeven Price-----<br>(\$/cwt.) |         |         |         |         |
| \$45.00                              | 72.10                                  | 73.35   | 74.59   | 75.84   | 77.08   |
| \$46.00                              | 72.50                                  | 73.75   | 74.99   | 76.24   | 77.48   |
| \$47.00                              | 72.90                                  | 74.15   | 75.39   | 76.64   | 77.88   |
| \$48.00                              | 73.30                                  | 74.55   | 75.79   | 77.04   | 78.28   |
| \$49.00                              | 73.70                                  | 74.95   | 76.19   | 77.44   | 78.68   |
| \$50.00                              | 74.10                                  | 75.35   | 76.59   | 77.84   | 79.08   |
| \$51.00                              | 74.50                                  | 75.75   | 76.99   | 78.24   | 79.48   |

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 650 lb. Heifers

|                                      | Feeder purchase price                  |         |         |         |         |
|--------------------------------------|--|---------|---------|---------|---------|
|                                      | \$85.00                                | \$87.00 | \$89.00 | \$91.00 | \$93.00 |
| Feeding Cost<br>of Gain<br>(\$/cwt.) | -----Breakeven Price-----<br>(\$/cwt.) |         |         |         |         |
| \$48.00                              | 72.18                                  | 73.73   | 74.68   | 75.93   | 77.19   |
| \$49.00                              | 72.57                                  | 73.83   | 75.08   | 76.33   | 77.58   |
| \$50.00                              | 72.97                                  | 74.22   | 75.47   | 76.73   | 77.98   |
| \$51.00                              | 73.37                                  | 74.62   | 75.87   | 77.12   | 78.37   |
| \$52.00                              | 73.76                                  | 75.01   | 76.26   | 77.52   | 78.77   |
| \$53.00                              | 74.16                                  | 75.41   | 76.66   | 77.91   | 79.16   |
| \$54.00                              | 74.55                                  | 75.80   | 77.06   | 78.31   | 79.56   |

**FEEDING COST OF GAIN FOR STEERS BY CLOSEOUT MONTH (\$/cwt.)**

|           | % Change<br>Previous<br>Year | 2001               | 2000  | 1999  | 1990-1999<br>Average |
|-----------|------------------------------|--------------------|-------|-------|----------------------|
| January   | + 7.7                        | 46.44              | 43.11 | 47.65 | 53.10                |
| February  | + 7.3                        | 46.97              | 43.76 | 47.94 | 55.35                |
| March     | +12.7                        | 50.69              | 44.97 | 47.66 | 55.99                |
| April     | +18.2                        | 52.64              | 44.55 | 47.94 | 53.86                |
| May       | +15.7                        | 50.08              | 43.29 | 45.56 | 53.26                |
| June      | +11.6                        | 48.20              | 43.20 | 42.62 | 51.19                |
| July      |                              | 47.00 <sup>P</sup> | 43.01 | 42.30 | 50.24                |
| August    |                              | 47.00 <sup>P</sup> | 43.43 | 43.15 | 50.82                |
| September |                              | 47.00 <sup>P</sup> | 43.10 | 42.41 | 51.09                |
| October   |                              | 47.50 <sup>P</sup> | 43.24 | 42.19 | 51.15                |
| November  |                              | 48.50 <sup>P</sup> | 44.05 | 42.04 | 51.69                |
| December  |                              | 49.50 <sup>P</sup> | 44.65 | 43.37 | 52.48                |

Source: Focus on Feedlots Newsletter, KSU Extension Animal Science and Cooperating Feedyards.

**BREAKEVEN PRICES FOR FINISHING 700 TO 800 LB. STEERS (\$/cwt.)**

|           | % Change<br>Previous<br>Year | 2001               | 2000  | 1999  | 1990-1999<br>Average |
|-----------|------------------------------|--------------------|-------|-------|----------------------|
| January   | +11.0                        | 72.93              | 65.68 | 61.92 | 72.34                |
| February  | + 8.1                        | 72.93              | 67.47 | 60.39 | 72.48                |
| March     | + 9.9                        | 74.90              | 68.15 | 61.51 | 72.03                |
| April     | +10.2                        | 76.74              | 69.61 | 61.63 | 71.63                |
| May       | + 6.9                        | 76.16              | 71.27 | 59.71 | 71.28                |
| June      | + 4.4                        | 74.85              | 71.72 | 62.21 | 69.67                |
| July      |                              | 72.13 <sup>P</sup> | 69.99 | 63.05 | 69.67                |
| August    |                              | 73.21 <sup>P</sup> | 69.69 | 61.90 | 68.61                |
| September |                              | 74.53 <sup>P</sup> | 69.82 | 61.29 | 68.48                |
| October   |                              | 74.92 <sup>P</sup> | 69.92 | 60.70 | 68.68                |
| November  |                              | 76.98 <sup>P</sup> | 72.56 | 64.73 | 70.52                |
| December  |                              | 76.61 <sup>P</sup> | 73.62 | 65.02 | 71.26                |

<sup>P</sup> Values for this month are projected

## Hog Production Budgets and Returns

The hog finishing budget projects the economic outcome of taking a 10 pound early weaned pig through a combination nursery and finishing phase. The total feeding time is projected to be 170 days, so pigs started in August would be expected to finish in February of 2002. Ten pound weaned pigs are priced into the nursery using a formula based on current milo prices, current soybean meal prices, and 6 month out hog futures prices. The calculated price for 10 lb. pigs in late August decreased slightly from last month, to \$30.72 per pig. Conversely, Iowa direct weaned pig transfer prices increased somewhat over the past month, and are averaging somewhat above the formula price. Alternative budget projections and sensitivity tables are included to assess the impact of alternative weaned pig prices on break-even projections.

The projected sale price needed to cover all costs associated with finishing formula priced early weaned pigs started on feed in August is \$41.69 per cwt. on a live weight basis, down slightly from the projection of last month. Pricing the weaned pig into the nursery-finish program at the mid-point of the recent Iowa reported cash transfer price (\$33.25) results in a projected break-even to cover all costs of \$42.82 per cwt.

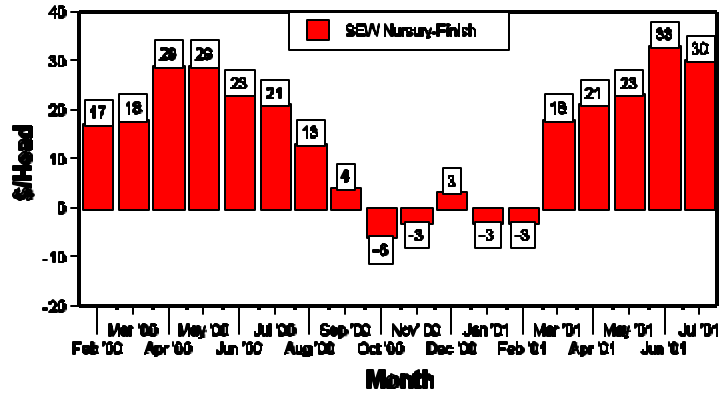
The example hog finishing budgets are calculated using a milo based feeding ration. Projected feed costs, based on current milo and supplement prices, are currently at \$17.60 per cwt. of pork produced in the SEW nursery finish program. This is a decline from the feed

cost projection of last month. Feed costs are sensitive to changes in milo and soybean meal prices. For example, a milo price change of \$0.10 per cwt. changes feed costs per cwt. by \$0.22. A soybean meal price change of \$10 per ton changes feed costs by \$0.28 per cwt. Both Feedgrain prices and soybean meal prices have declined over the past month, resulting in the lower feed cost projection, and ultimately in the lower break-even projections.

Calculated average returns to labor and management remained very positive for hogs exiting Kansas SEW nursery-finishing barns in July, averaging about \$29.77 per head. Returns are expected to remain positive, but decline over the next few months. Projected break-even prices to cover all costs for average producers are around \$42.50 per cwt. on a live weight basis. Current projections suggest that returns above all costs may turn negative by the end of the year.

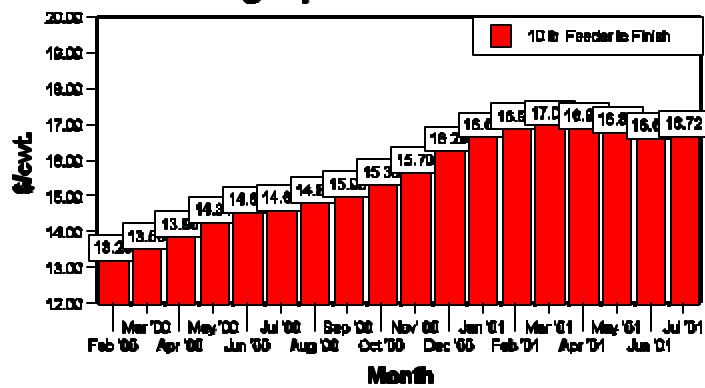
Weakness in soybean meal and milo prices over the past month have lowered break-even projections for farrow-to-finish producers as well. Average producers currently need about \$41.80 per cwt. on a live basis to cover all costs. Break-evens are expected to remain in the low \$40's for the foreseeable future. As with the nursery-finish producers, profits will be squeezed as hog prices decline later in the year.

## Returns to Labor and Management Finishing Operations in Kansas



Source: KSU Swine Return Series.

## Feed Costs Per Cwt. SEW Nursery Finishing Operations in Kansas



Source: KSU Swine Return Series.

SEW NURSERY- FINISHING BUDGET

August, 2001

| Assumptions                     | Barrows and Gilts |
|---------------------------------|-------------------|
| Initial weight of weaned pig    | 10 lbs.           |
| Cost of weaned pig <sup>1</sup> | \$30.72           |
| Interest rate                   | 10.0 %            |
| Feed conversion                 | 3.00 lbs.         |
| Death loss                      | 5.00 %            |
| Milo price                      | \$3.57 / cwt.     |
| Soybean meal price              | \$162.50 / ton.   |

<sup>1</sup> Weaned pig prices based on KSU formula.

COST BUDGET FOR FINISHING PIGS

FEEDER

|                           |         |
|---------------------------|---------|
| 1. Cost of weaned pig     | \$30.72 |
| 2. Interest on weaned pig | \$ 1.43 |

FEED

|                          |          |
|--------------------------|----------|
| 3. Grain                 | \$17.87  |
| 4. Soybean meal          | \$ 10.48 |
| 5. Vitamins and minerals | \$ 8.41  |
| 6. Starter               | \$ 2.45  |
| 7. Interest on feed      | \$ 0.91  |

OTHER VARIABLE COSTS

|                                      |         |
|--------------------------------------|---------|
| 8. Feed processing                   | \$ 2.99 |
| 9. Labor                             | \$ 2.88 |
| 10. Veterinary, drugs, and supplies  | \$ 1.30 |
| 11. Utilities                        | \$ 0.50 |
| 12. Repairs                          | \$ 1.57 |
| 13. Miscellaneous                    | \$ 3.25 |
| 14. Interest on other variable costs | \$ 0.29 |

FIXED COSTS

|                             |         |
|-----------------------------|---------|
| 15. Buildings and equipment | \$11.97 |
|-----------------------------|---------|

|   |         |
|---|---------|
| Sale Price Needed to Cover Variable Costs | \$36.54 |
| Sale Price Needed to Cover Total Costs    | \$41.69 |

|                                     |         |
|-------------------------------------|---------|
| Feed Cost Per Cwt. of Pork Produced | \$17.60 |
|-------------------------------------|---------|

SEW Nursery-Finishing

Sensitivity Analysis of Break-even Sale Price

|                    | Purchase Price for 10 Lb. Weaned Pig           |         |         |         |         |
|--------------------|--|---------|---------|---------|---------|
|                    | \$28.00  | \$30.00 | \$32.00 | \$34.00 | \$36.00 |
| Feed Cost Per Cwt. | Break-even Sale Price for Market Hog (\$/cwt.) |         |         |         |         |
| \$16.00            | 38.91  | 39.81   | 40.71   | 41.61   | 42.51   |
| \$17.00            | 39.89  | 40.79   | 41.69   | 42.59   | 43.49   |
| \$18.00            | 40.87  | 41.77   | 42.67   | 43.56   | 44.46   |
| \$19.00            | 41.84  | 42.74   | 43.64   | 44.54   | 45.44   |
| \$20.00            | 42.82  | 43.72   | 44.62   | 45.52   | 46.42   |
| \$21.00            | 43.80  | 44.70   | 45.60   | 46.50   | 47.40   |
| \$22.00            | 44.78  | 45.68   | 46.58   | 47.48   | 48.38   |

SEW Nursery-Finishing

Sensitivity Analysis of Maximum Weaned Pig Price

|                    | Expected Sale Price for Market Hogs          |         |         |         |         |
|--------------------|--|---------|---------|---------|---------|
|                    | \$38.00                                      | \$40.00 | \$42.00 | \$44.00 | \$46.00 |
| Feed Cost Per Cwt. | Maximum Purchase Price for 10 lb. Weaned Pig |         |         |         |         |
| \$16.00            | 25.98  | 30.44   | 34.90   | 39.34   | 43.78   |
| \$17.00            | 23.80  | 28.26   | 32.72   | 37.16   | 41.60   |
| \$18.00            | 21.62  | 26.08   | 30.54   | 34.98   | 39.42   |
| \$19.00            | 19.44  | 23.90   | 28.36   | 32.80   | 37.24   |
| \$20.00            | 17.26  | 21.72   | 26.18   | 30.62   | 35.06   |
| \$21.00            | 15.08  | 19.54   | 24.00   | 28.44   | 32.88   |
| \$22.00            | 12.90  | 17.36   | 21.82   | 26.26   | 30.70   |