



Livestock Farm Management Update

November 2, 2001

Prepared By Rodney Jones, Associate Professor / Extension Livestock Production Economist,
Kansas State University, November 2, 2001.

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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 October placements remained consistent with projections of the previous few months. The projected break-evens, for cattle expected to finish in about March, are in the \$73.50 to \$74.50 per cwt. for steers and heifers.

Average traditional weight feeder cattle prices have changed little over the past month. Feed ingredient prices declined from last month, while performance expectations continue to decline for October placements. Feed conversions and average daily gains of October placed cattle are expected to be 8.5% to 9% worse than annual averages, and remain below annual averages for November placements as well.

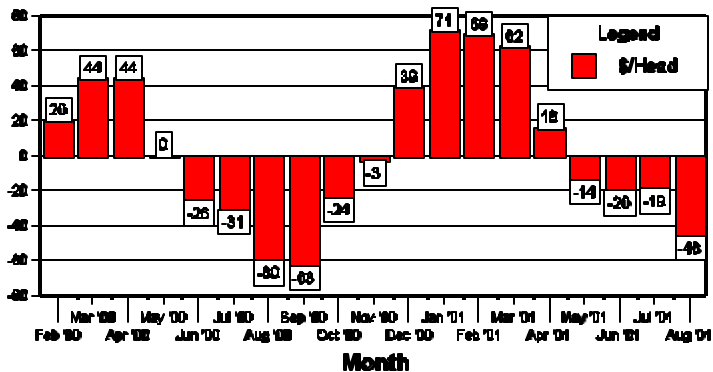
Combining the ration charge projection with late October placement performance expectations results in a feeding cost of gain projection of \$52.56 per cwt. for traditional weight October steer placements, and \$55.17 per cwt. for traditional weight October heifer placements. The feeding cost of gain estimates depicted in the accompanying budgets are based on current feed prices and seasonal average performance. 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 Fall performance estimates, each \$0.10 per bushel change in corn price changes feeding cost of gain by \$1.40 per cwt. Each \$10.00 per ton change in hay prices changes feeding cost of gain by \$0.55 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. The significant increase in the feeding cost of gain projections relative to recent months, is due primarily to the lower performance expectations.

Severe financial losses are accruing to Kansas cattle finishers. The average August steer closeout returned about \$-45.91 per head, and losses have worsened significantly in September and October. Preliminary estimates suggest average returns of \$-80.00 to \$-95.00 per head on September and October closeouts. Losses this week could average in the \$130.00 to \$150.00 per head range, and feeders will continue to suffer severe losses through early next year unless prices recover. Current average break-even's are around \$77.00 per cwt., and will remain high for the next several months based on average feeder cattle purchase prices over the summer.

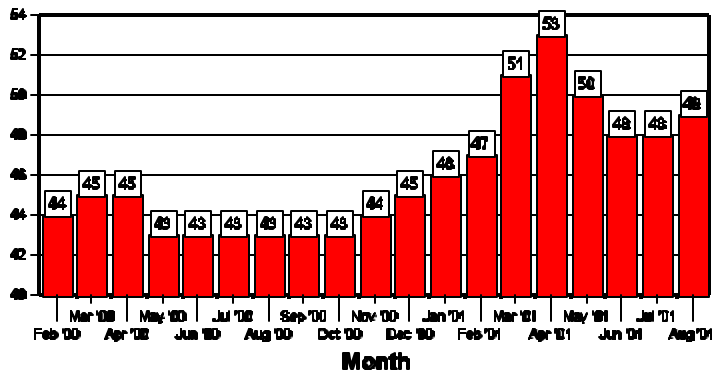
As projected last month, the continued weakness in fed cattle prices, and the increasing supplies of calves at Kansas auctions, has resulted in a softening in the calf market. Once again, budget projections and sensitivity tables are included to project break-evens for calf finishing programs. Break-even projections have come down significantly from last month due to lower calf prices going into the program, and somewhat better performance expectations for late fall placed calves relative to early fall placed calves. The budgets currently suggest that 550 lb. Calves placed directly into a calf finishing program in early November have a projected break-even around \$70.00 to \$70.50 per cwt. These calves would be expected to finish around June of 2002.

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.

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

| Assumptions | Steers | Heifers |
|--|---------------|----------------|
| Cost of feeder (\$/cwt.) ¹ | \$85.00 | \$82.00 |
| Interest rate | 9.0% | 9.0% |
| Ration charge (\$/ton) ² | \$104.37 | \$104.37 |
| 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 | 168 days | 165 days |
| Shrink | 4.0% | 4.0% |
| Pay weight to pay weight: | | |
| average daily gain | 2.98 lbs. | 2.58 lbs. |
| Feed conversion (as fed) | 9.01 lbs. | 9.36 lbs. |
| Death loss (in conversion) | 0.50% | 0.50% |
| Cost Budgets | Steers | Heifers |
| Feeder | | |
| 1. Cost of feeder: | \$637.50 | \$533.00 |
| 2. Interest on feeder: | \$ 26.37 | \$ 21.65 |
| Feed | | |
| 3. Total feed cost: | \$235.09 | \$207.59 |
| 4. Interest on feed: | \$ 4.86 | \$ 4.22 |
| Other Costs | | |
| 5. Yardage Charge: | \$ 8.39 | \$ 8.24 |
| 6. Processing Charge: | \$ 7.00 | \$ 7.00 |
| 8. Vet, drugs, supplies: | \$ 7.00 | \$ 7.00 |
| 9. Interest on other V.C.: | \$.46 | \$.45 |
| | | |
| Breakeven selling price: | \$ 74.13 | \$ 73.41 |
| Total cost of gain/cwt: | \$ 57.87 | \$ 60.27 |
| Feeding cost of gain/cwt: ³ | \$ 52.56 | \$ 55.17 |

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

²Ration charge of \$104.37 based on corn price of \$2.27/bu., milo price of \$3.47/cwt., alfalfa hay price of \$114.00/ton, supplement price of \$191.50/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.

³Excludes interest on feeder.

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 750 lb. Steers

| | Feeder purchase price | | | | |
|--------------------------------------|--|---------|---------|---------|---------|
| | \$81.00 | \$83.00 | \$85.00 | \$87.00 | \$89.00 |
| Feeding Cost of Gain (\$/cwt.) | -----Breakeven Price----- (\$/cwt.) | | | | |
| \$49.00 | 70.21 | 71.46 | 72.71 | 73.96 | 75.21 |
| \$50.00 | 70.61 | 71.86 | 73.11 | 74.36 | 75.61 |
| \$51.00 | 71.01 | 72.26 | 73.51 | 74.76 | 76.01 |
| \$52.00 | 71.41 | 72.66 | 73.91 | 75.16 | 76.41 |
| \$53.00 | 71.81 | 73.06 | 74.31 | 75.56 | 76.81 |
| \$54.00 | 72.21 | 73.46 | 74.71 | 75.96 | 77.21 |
| \$55.00 | 72.61 | 73.86 | 75.11 | 76.36 | 77.61 |

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 650 lb. Heifers

| | Feeder purchase price | | | | |
|--------------------------------------|--|---------|---------|---------|---------|
| | \$78.00 | \$80.00 | \$82.00 | \$84.00 | \$86.00 |
| Feeding Cost of Gain (\$/cwt.) | -----Breakeven Price----- (\$/cwt.) | | | | |
| \$52.00 | 69.64 | 70.90 | 72.15 | 73.41 | 74.67 |
| \$53.00 | 70.03 | 71.29 | 72.55 | 73.81 | 75.07 |
| \$54.00 | 70.43 | 71.69 | 72.94 | 74.20 | 75.46 |
| \$55.00 | 70.82 | 72.08 | 73.34 | 74.60 | 75.86 |
| \$56.00 | 71.22 | 72.48 | 73.73 | 74.99 | 76.25 |
| \$57.00 | 71.61 | 72.87 | 74.13 | 75.39 | 76.65 |
| \$58.00 | 72.01 | 73.27 | 74.53 | 75.78 | 77.04 |

Commercial Feedlot Calf Finishing Budget
Late October 2001 Placements (550 lb steers, 550 lb hfrs)

| Assumptions | Steers | Heifers |
|--|---------------|----------------|
| Cost of feeder (\$/cwt.) ⁴ | \$92.25 | \$83.75 |
| Interest rate | 9.0% | 9.0% |
| Ration charge (\$/ton) ⁵ | \$104.37 | \$104.37 |
| Yardage charge | \$0.05 | \$0.05 |
| Beginning weight | 550 lbs. | 550 lbs. |
| Pay weight | 1200 lbs. | 1100 lbs. |
| Gain | 650 lbs. | 550 lbs. |
| Days on feed | 235 days | 215 days |
| Shrink | 4.0% | 4.0% |
| Pay weight to pay weight: | | |
| average daily gain | 2.77 lbs. | 2.56 lbs. |
| Feed conversion (as fed) | 8.11 lbs. | 8.51 lbs. |
| Death loss (in conversion) | 0.50% | 0.50% |
| Cost Budgets | Steers | Heifers |
| Feeder | | |
| 1. Cost of feeder: | \$507.38 | \$460.63 |
| 2. Interest on feeder: | \$ 29.36 | \$ 26.57 |
| Feed | | |
| 3. Total feed cost: | \$275.09 | \$244.25 |
| 4. Interest on feed: | \$ 7.96 | \$ 7.04 |
| Other Costs | | |
| 5. Yardage Charge: | \$ 11.73 | \$ 10.74 |
| 6. Processing Charge: | \$ 7.00 | \$ 7.00 |
| 8. Vet, drugs, supplies: | \$ 7.00 | \$ 7.00 |
| 9. Interest on other V.C.: | \$.74 | \$.71 |
| | | |
| Breakeven selling price: | \$ 70.52 | \$ 69.45 |
| Total cost of gain/cwt: | \$ 52.14 | \$ 55.15 |
| Feeding cost of gain/cwt: ⁶ | \$ 47.62 | \$ 50.32 |

⁴Steer and heifer calf prices based on recent auction results at Winter Auction, Dodge City, Kansas.

⁵Ration charge of \$104.37 based on corn price of \$2.27/bu., milo price of \$3.47/cwt., alfalfa hay price of \$114.00/ton, supplement price of \$191.50/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.

⁶Excludes interest on feeder.

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 550 lb. Steer Calves

| | Feeder purchase price | | | | |
|--------------------------------|--|---------|---------|---------|---------|
| | \$89.00 | \$91.00 | \$93.00 | \$95.00 | \$97.00 |
| Feeding Cost of Gain (\$/cwt.) | -----Breakeven Price----- (\$/cwt.) | | | | |
| \$46.00 | 68.07 | 69.04 | 70.01 | 70.98 | 71.95 |
| \$47.00 | 68.61 | 69.58 | 70.55 | 71.52 | 72.49 |
| \$48.00 | 69.15 | 70.12 | 71.09 | 72.06 | 73.03 |
| \$49.00 | 69.69 | 70.66 | 71.63 | 72.60 | 73.57 |
| \$50.00 | 70.24 | 71.20 | 72.17 | 73.14 | 74.11 |
| \$51.00 | 70.78 | 71.75 | 72.72 | 73.69 | 74.66 |
| \$52.00 | 71.32 | 72.29 | 73.26 | 74.23 | 75.20 |

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 550 lb. Heifer Calves

| | Feeder purchase price | | | | |
|--------------------------------|--|---------|---------|---------|---------|
| | \$80.00 | \$82.00 | \$84.00 | \$86.00 | \$88.00 |
| Feeding Cost of Gain (\$/cwt.) | -----Breakeven Price----- (\$/cwt.) | | | | |
| \$49.00 | 66.81 | 67.87 | 68.92 | 69.98 | 71.04 |
| \$50.00 | 67.31 | 68.37 | 69.42 | 70.48 | 71.54 |
| \$51.00 | 67.81 | 68.87 | 69.92 | 70.98 | 72.04 |
| \$52.00 | 68.31 | 69.37 | 70.42 | 71.48 | 72.54 |
| \$53.00 | 68.81 | 69.87 | 70.92 | 71.98 | 73.04 |
| \$54.00 | 69.31 | 70.37 | 71.42 | 72.48 | 73.54 |
| \$55.00 | 69.81 | 70.87 | 71.92 | 72.98 | 74.04 |

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

| | % Change Previous Year | 2001 | 2000 | 1999 | 1990-1999 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 | +12.6 | 48.42 | 43.01 | 42.30 | 50.24 |
| August | +12.5 | 48.88 | 43.43 | 43.15 | 50.82 |
| September | | 48.00 ^P | 43.10 | 42.41 | 51.09 |
| October | | 48.00 ^P | 43.24 | 42.19 | 51.15 |
| November | | 49.00 ^P | 44.05 | 42.04 | 51.69 |
| December | | 50.00 ^P | 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 Previous Year | 2001 | 2000 | 1999 | 1990-1999 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 | + 3.5 | 72.47 | 69.99 | 63.05 | 69.67 |
| August | + 5.4 | 73.48 | 69.69 | 61.90 | 68.61 |
| September | | 74.93 ^P | 69.82 | 61.29 | 68.48 |
| October | | 75.12 ^P | 69.92 | 60.70 | 68.68 |
| November | | 77.18 ^P | 72.56 | 64.73 | 70.52 |
| December | | 76.81 ^P | 73.62 | 65.02 | 71.26 |

^P 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 October would be expected to finish in April 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 October increased slightly from last month, to \$31.24 per pig. Iowa direct weaned pig transfer prices also increased somewhat over the past month, and are currently averaging slightly 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 late October is \$41.81 per cwt. on a live weight basis, nearly identical to 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 (\$32.57) results in a projected break-even to cover all costs of \$42.41 per cwt. Our projections indicate that average weaned pig producers need about \$30.70 per 10 lb. Pig to cover all costs, so both formula prices and average reported market transfer prices are generating small profits for average weaned pig producers.

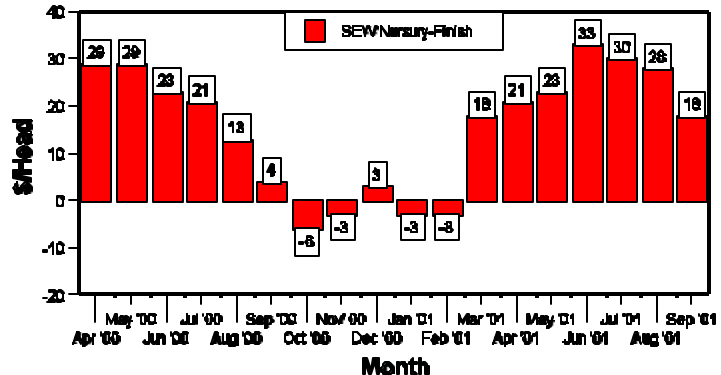
The example hog finishing budgets are calculated using a milo based feeding ration. Projected feed costs, based on current milo and supplement prices, are currently at

\$17.49 per cwt. of pork produced in the SEW nursery finish program. This is a slight decrease 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 milo and soybean meal prices have decreased slightly over the past month, resulting in the lower feed cost projections.

Calculated average returns to labor and management remained somewhat positive for hogs exiting Kansas SEW nursery-finishing barns in September, averaging about \$17.75 per head. This is a decline from earlier summer profits, but still an attractive positive return. Returns are declining as we enter the fall months. Break-even prices to cover all costs for average producers are expected to be in the \$40.00 to \$41.50 per cwt. range on a live weight basis for the next several months. Combining these break-even projections with futures based price forecasts indicates that nursery-finish producers may suffer modest losses relative to total costs for the next few months.

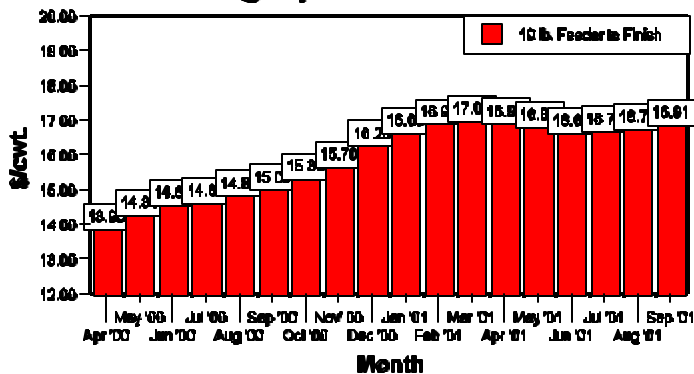
The near term profit outlook is very similar for average farrow-to-finish producers. Our projections suggest current break-evens around \$41.80 per cwt. on a live weight basis, suggesting slight losses relative to total costs for winter production. Current projections suggest that prices will, however, remain above levels needed to cover variable costs for average producers.

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

October, 2001

| Assumptions | Barrows and Gilts |
|---------------------------------|-------------------|
| Initial weight of weaned pig | 10 lbs. |
| Cost of weaned pig ¹ | \$31.24 |
| Interest rate | 10.0 % |
| Feed conversion | 3.00 lbs. |
| Death loss | 5.00 % |
| Milo price | \$3.47 / cwt. |
| Soybean meal price | \$166.50 / ton. |

¹ Weaned pig prices based on KSU formula.

COST BUDGET FOR FINISHING PIGS

FEEDER

| | |
|---------------------------|---------|
| 1. Cost of weaned pig | \$31.24 |
| 2. Interest on weaned pig | \$ 1.45 |

FEED

| | |
|--------------------------|----------|
| 3. Grain | \$17.37 |
| 4. Soybean meal | \$ 10.74 |
| 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 | \$36.67 |
| Sale Price Needed to Cover Total Costs | \$41.81 |

| | |
|-------------------------------------|---------|
| Feed Cost Per Cwt. of Pork Produced | \$17.49 |
|-------------------------------------|---------|

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 |