**A Perspective on 2018 Dairy Financial Performance**

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Dairy producers have experienced financial stress the last four years with 2018 being compared to 2009. The Extension Dairy Business Management team has been working intensively with a group of farms for the past three years to summarize their financial information. The farms were divided into groups based on their Net Return over Labor and Management (profit per cow). Table 1 illustrates why many dairy operations are experiencing hardships. The market offered an average $16.79/cwt gross milk price to these dairy operations. On average the farms had a cost of production of $19.12/cwt. with an average loss of $588 per cow including the value of labor and management. Unlike other data summaries for 2018, the most profitable farms in this group practiced stringent cost control even though they didn't market the highest quantity of milk or have the highest milk income. This is not the typical scenario since revenue is a key driver of profitability on dairy farms. The second observation follows the expected outcome with the most profitable group showing $500 less feed cost per cow per year. Combining this advantage in feed cost with their $168 lower than average hired labor per cow they achieved higher profit (less loss) per cow.

**Table 1. Dairy Enterprise Analysis, Farms sorted by Net Return over Labor and Management, 2018**

| N = 14 | **Average** | **Low 33%** | **33-66%** | **High 34%** |
|---|---|---|---|---|
| Milk sold per cow | 25,224 | 23,506 | 27,057 | 23,170 |
| Gross margin per cow | $4,590 | $4,541 | $4,759 | $4,261 |
| Total direct expenses per cow | $3,473 | $3,992 | $3,425 | $2,930 |
| Total overhead expenses per cow | $1,509 | $1,308 | $1,689 | $1,347 |
| Total direct & overhead per cow | $4,982 | $5,300 | $5,115 | $4,277 |
| Net return over labor & mgt. per cow | -$588 | -$959 | -$536 | -$240 |
| **Cost of production per cwt. (with labor and mgt.)** | **$19.12** | **$21.39** | **$18.41** | **$18.14** |
| Feed cost per cow per day[1] | $6.81 | $7.04 | $7.20 | $5.65 |
| Feed cost per cow per year[1] | $2,487 | $2,569 | $2,627 | $2,061 |
| Feed cost per cwt. | $9.86 | $10.93 | $9.71 | $8.89 |
| Hired labor per cow per year | $497 | $582 | $525 | $329 |
| Avg. gross milk price per cwt. | $16.79 | $17.31 | $16.43 | $17.12 |
| **Milk price / feed margin (cwt.)** | **$6.94** | **$6.38** | **$6.72** | **$8.23** |

[1]Feed costs reflect total feed costs including the lactating cows, dry cows and heifers.

Comparing year-to-year performance for the past four years, the trend in dairy finances has been challenging. Table 2 illustrates that for these farms, 2018 was the most difficult year. Gross margin was lowest at $4,590 per cow and profit per cow was lowest at -$588 per cow. However, these dairies have been struggling throughout that time since the average Net Return over Labor and Management for all years was a loss of $350 per cow. Part of the issue in 2018 was higher feed cost per cow per year. At $2,487, feed cost was at least $200 per cow higher than the previous two years. The corn silage production cost was included in the table because 2018 was also a challenging crop year due to excessive rainfall. Yields averaged 16.23 tons/acre for the 2018 farms compared to the 18.13 ton/acre average and cost per unit was at a high of $40.56/ton, the highest for the three-year period. Excessive moisture at planting and harvest meant many producers experienced yield reductions, harvest losses

and inventory shortages during 2018. This resulted in all corn acreage going for silage with no corn to shell for grain. This may result in higher feed costs in 2019 to purchase both forages and grains to compensate for limited inventories.

**Table 2. Dairy Enterprise Analysis, Farms sorted by year, 2016--2018**

| | Average N = 63 | 2018 N = 14 | 2017 N = 26 | 2016 N = 23 |
|---|---|---|---|---|
| Milk sold per cow | 24,758 | 25,224 | 24,669 | 24,580 |
| Gross margin per cow | $4,744 | $4,590 | $4,912 | $4,655 |
| Net return over labor & mgt. per cow | -$350 | -$588 | -$192 | -$381 |
| Cost of production per cwt. (with labor and mgt.) | $19.11 | $19.12 | $19.36 | $18.84 |
| Feed cost per cow per year[1] | $2,339 | $2,487 | $2,297 | $2,296 |
| Feed cost per cwt.[1] | $9.45 | $9.86 | $9.31 | $9.34 |
| Avg. gross milk price per cwt. | $17.70 | $16.79 | $18.58 | $17.29 |
| Milk price / feed margin per cwt. | $8.25 | $6.94 | $9.27 | $7.95 |
| **Corn Silage** | | | | |
| Yield per acre (tons) | 18.13 | 16.23 | 21.11 | 16.42 |
| Total direct & overhead per acre | $590 | $641 | $598 | $549 |
| Cost of production per ton with labor & mgt. | $33.57 | $40.56 | $29.37 | $34.53 |

[1]Feed costs reflect total feed costs including the lactating cows, dry cows and heifers.

The financial standards measures are an objective way to assess the financial health of farms regardless of size or type. Table 3 compares the financial standards for these farms over the three-year window. While the current ratio falls below the 1.7 standard with a 1.19 average, these farms had a least $1.19 available to pay $1 in bills. At 1.19, they are tracking favorably from year-to-year without accumulating additional accounts payable. However, as the national trend shows, these farms increased their total farm debt by 5% over the previous two years. Restructuring debt may have kept the current ratio stable, but total farm debt increased. Large slippage in the market value of breeding livestock and a reduction in feed inventory amount both eroded the asset side on many balance sheets. This also caused the Debt to Asset measure to increase.

For the first time in the three years, the farms experienced a loss of $66,991 on Net farm income compared to the three-year average $80,035 profit. Profit must pay principal payments and owner draw (family living expense) on farms, so the average $80,000 profit would still be inadequate for many farms. The root cause of the poor financial performance is shown in the 95.3% operating expense ratio on these farms. That means 95 cents of every dollar went to pay operating expenses without covering interest and depreciation. The farms had a -4.2% Net farm income ratio for the year. In a low revenue year when milk prices are low, costs remain the same or increase and it takes nearly all the income simply to cover operating costs. The financial standards suggest 60% as a goal for farm operations. Because of the large cost of purchased feed, many dairy operations need to achieve a 70% ratio first, but at 95% our profit measures and all other efficiency and repayment indicators were challenged in 2018.

**Table 3. Financial Standards Measures, Farms sorted by year, 2016--2018**

| | Goal Comfort Benchmark | Average N = 64 | 2018 N = 15 | 2017 N = 26 | 2016 N = 23 |
|---|---|---|---|---|---|
| Current ratio | > 1.7 | 1.17 | 1.19 | 1.17 | 1.15 |
| Farm debt to asset ratio | < 30% | 40% | 44% | 39% | 39% |
| Rate of return on farm assets | > 8% | 1.6% | -3.0% | 4.6% | 1.3% |
| Net farm income | | $80,035 | -$66,991 | $173,776 | $69,954 |
| Term debt coverage ratio | > 1.5 | .86 | -.02 | 1.51 | .65 |
| Operating expense ratio | < 60% | 88.1% | 95.3% | 84.0% | 89.0% |
| Net farm income ratio | > 20% | 4.3% | -4.2% | 8.9% | 3.6% |

This assessment of 2018 paints a sobering picture of the dairy financial situation. It reinforces the reason for the high rate of farm liquidations. Hopefully the market will show continued strength in 2019 and offer milk prices that are closer to a breakeven level. A major challenge for many farms is to look hard at the breakeven cost the farm requires. The goal is to aim for breakeven costs below $17/cwt as a starting point and getting them below $16/cwt would be even better. The first step is to calculate the operation's breakeven costs and make a realistic assessment of opportunities for improvement. The areas to work on will be different for each farm, but it's an ongoing process of continuous improvement that is necessary for the dairy business to succeed.