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**New York Organic Dairy Cost of  
Production: Benchmarks  
and Financial Performance  
2023**

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# New York Organic Dairy Cost of Production: 2023 Benchmarks and Financial Performance

Mary Kate MacKenzie and Jason Karszes<sup>1</sup>

With 509 certified organic dairy farms producing 409 million pounds of milk in 2021, New York has more organic dairies than any other state and ranks third in the nation for organic milk production (NASS, 2022). Yet information about the financial performance of organic dairies in New York is difficult to find. Detailed financial benchmarks for the state's organic dairy sector have not been published by Cornell University since the 2011 financial year due to low participation by organic dairies in the Cornell Dairy Farm Business Summary and Analysis Program (DFBS) (Knoblauch et al., 2012). However, a growing interest in financial analysis and benchmarking among organic producers has driven up participation in recent years.

The DFBS is open to any farm that wishes to participate, and participation is free, voluntary, and confidential. PRO-DAIRY and Cornell Cooperative Extension farm business management educators work closely with dairy operators to complete the DFBS on an annual basis. Farms contribute detailed financial, production, and labor information. Farm revenues and expenses are calculated and reported on an accrual basis. Participating farms receive a set of financial statements and comparison reports useful for benchmarking their performance against other farms.

This report aggregates DFBS data from 15 organic dairy collaborators to provide production and financial benchmarks for 2023 (Table 1 and Table 2). The average (mean) and the 50th percentile (median) are used to describe the central tendency of the data. To protect the confidentiality of individual farms, Tables 1 and 2 share the 20th and 80th percentiles for each measure rather than the minimum and maximum values. The range between the 20th and 80th percentiles, called the percentile range, is used to describe variation in the data. All ranges reported here refer to this percentile range, which contains the middle 60 percent of values for each measure, representing nine values for a sample of 15 farms. The report also divides the farms into two groups based on their rate of return on assets before appreciation to compare characteristics of lower profit versus higher profit farms (Table 3 and Table 4).

As a voluntary sample, participating farms are not representative of all organic dairies in New York. Census data suggest that New York organic dairies managed 69 cows and produced 11,610 pounds of milk per cow, on average, in 2021 (NASS, 2022). DFBS collaborators tend to have larger herds and higher milk production than the state average. Yet the production and financial benchmarks reported here are useful for organic dairies that wish to compare their own performance against a group of farms with similar characteristics and certification requirements.

## Farm Size and Production

15 certified organic dairies across nine counties in New York completed the DFBS for 2023. These farms managed a combined total of 2,395 cows and 10,615 crop acres, and produced 39.8 million pounds of milk. None of the participating farms held a grass-fed certification; they all included grain in their lactating cow ration to varying degrees. The percentile range in herd size was 93 to 226 cows, with an

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average of 160 cows per farm. Farms raised 0.69 replacement heifers per cow. The average cull rate was 25 percent, yet some farms had annual cull rates below 13 percent and above 37 percent.

Farms managed an average of 708 crop acres, including tillable cropland and permanent pasture, resulting in 4.8 acres per cow. Farms grazed an average of 1.6 pasture acres per cow, yet pasture use ranged from less than 0.9 to more than 2.3 acres per cow. Farms harvested 2.5 dry matter tons per acre of hay, on average, although this yield includes acres used for both hay and pasture without accounting for pasture production. Nine of the 15 farms grew corn silage in 2023, with an average yield of 14.7 tons per acre. Total forage production was 6.5 tons of dry matter per cow, on average, excluding pasture. Seven of the 15 farms grew corn for grain, with an average yield of 118 dry shelled bushels per acre. Most raised forages and grain crops were utilized on the farm, with 60 percent of farms reporting little or no cash crop sales, 20 percent of farms reporting modest cash crop sales of \$99 to \$161 per cow, and the remaining 20 percent of farms reporting higher cash crop sales of \$750 or more per cow.

Average milk sold in 2023 was 2.62 million pounds per farm, which equated to 16,189 pounds per cow. Yet half of the farms in our sample produced more than 19,136 pounds per cow. Organic dairies reported a large percentile range in milk per cow, from 10,250 to 20,923 pounds. This variation reflects differences across farms in cattle breeds and management practices. Of the 2,395 total dairy cows managed across the 15 farms, most were Holstein (68.3 percent), with the remainder split between Jersey (15.3 percent), and crossbred cows (16.4 percent). Farms used a variety of milking systems, including pipelines, parlors, and robots. Most farms milked twice daily. Four farms milked more than twice a day, using automated milking systems or milking some groups three times per day in the parlor.

### **Labor Cost and Efficiency**

Smaller dairies tend to use a greater percentage of family labor relative to hired labor, and the organic dairies in our sample were no exception. Hired labor comprised 55.0 percent of total labor hours, on average. Yet hired labor was less than 18.8 percent of the total labor hours on some farms, while on others it exceeded 80.9 percent. The average cost of hired labor was \$18.66 per hired labor hour, or \$51,495 per hired full-time worker equivalent (FTE)<sup>2</sup>. With a percentile range from \$42,676 to \$62,458 per FTE, the hired labor cost per FTE was 46 percent greater for the 80th percentile than the 20th percentile. Organic dairies managed 38 cows per FTE, on average, and shipped 604,938 pounds of milk per FTE. Older facilities and equipment constrain labor efficiency on some farms, as one-third of dairies in our sample used tiestall barns to house some or all lactating cows, and 20 percent used pipeline systems to harvest milk.

### **Milk Price and Income Generation**

Gross milk revenue on organic dairies was positively skewed in 2023, so median values provide a better indicator of the center point. Median gross milk revenue was \$35.68 per hundredweight (cwt), with a percentile range from \$34.66 to \$40.40. On a per cow basis, median gross milk revenue was \$6,970, and ranged from \$3,645 to \$7,680. Gross milk revenue includes all income from the sale of milk, plus milk cooperative patronage payments and income from milk price risk management programs, including the Dairy Margin Coverage (DMC) program. Although DMC payments are determined by conventional milk prices and feed costs, organic dairies are eligible to enroll. In 2023, median income from milk price risk

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<sup>2</sup> One full-time worker equivalent equals 2,760 hours per year.

management efforts was \$2.95 per cwt, comprised mostly if not entirely of the net DMC payments for 2023.

Total accrual farm operating receipts averaged \$45.94 per cwt or \$7,149 per cow in 2023. Milk revenue comprised 82.1 percent of the total, on average. Crop revenue averaged \$3.60 per cwt or \$462 per cow and made up 7.8 percent of the total. Dairy cattle sales averaged \$1.97 per cwt or \$293 per cow, while dairy calf sales averaged \$0.44 per cwt or \$76 per cow. Other livestock income, which includes the sale of non-dairy livestock and other livestock products, averaged \$0.10 per cwt or \$13 per cow. Combined revenue from dairy cattle, calves, and other livestock made up 5.5 percent of total farm revenue. Miscellaneous receipts, which include government receipts, custom hire income, and other sources of farm income, averaged \$2.10 per cwt or \$297 per cow, making up 4.6 percent of the total revenue. In 2023, government receipts included income from the Organic Dairy Marketing Assistance Program (ODMAP), which provided up to \$1.10 per cwt based on an organic dairy's actual 2022 milk production or projected 2023 milk production (FSA, 2023). The DFBS classifies income from milk price risk management programs under gross milk revenue, so DMC program payments are not included with other government program payments in the miscellaneous receipts category.

### **Production Cost Benchmarks**

The total operating expense before depreciation averaged \$38.75 per cwt in 2023, with a percentile range from \$30.19 to \$45.03. After accounting for depreciation costs and expansion livestock purchases, the total farm expense rose to \$43.77 per cwt, on average, and ranged from \$34.61 to \$48.51. This represents the total accrual cost to run the farm before any accounting of operator and family contributions of labor, management, and equity capital.

Feed was the largest single cost on organic dairies, with average spending equal to \$9.66 per cwt on grain and concentrates, and \$1.48 per cwt on forages. Purchased grain and forages comprised 28.7 percent of the farm operating expense, on average, yet spending on feed varied widely across farms. The percentile range for grain and concentrate was \$5.45 to \$14.70 per cwt, while spending on forages ranged from \$0.00 to \$3.23 per cwt. This variation reflects differences in feeding practices and feed efficiency, as well as feed prices and cropping strategies.

Despite the relatively high proportion of operator labor on organic dairies, hired labor was the second largest expense. Farms spent \$5.59 per cwt on hired labor, or 14.4 percent of the total operating expense, on average. The percentile range for hired labor was \$1.57 to \$10.13 per cwt, reflecting large differences across farms in the amount of hired labor used and the cost per hired labor hour.

Machinery repair was the third largest expense, averaging \$3.49 per cwt, followed by machinery rent and custom hire at \$2.23 per cwt. Together these two categories comprised 14.8 percent of the total operating expense. Interest was the fifth largest expense, averaging \$2.12 per cwt with a percentile range from \$0.17 to \$3.87 per cwt. Interest accounted for 5.5 percent of the farm operating expense.

Total spending on crop inputs, including seed, fertilizer, lime, and other organic inputs, was \$2.83 per cwt, on average, while spending on fuel averaged \$1.78 per cwt. On a per acre basis, organic farms spent an average of \$51.30 on seed, \$38.64 on fertilizer and lime, and \$3.27 on other crop inputs, for a total crop input cost of \$93.21 per acre.

Organic milk producers benefited from relatively low milk marketing costs in 2023. The average cost of marketing organic milk was \$0.52 per cwt, with a percentile range from \$0.18 to \$1.08 per cwt. Milk

marketing comprised 1.3 percent of the total operating expense, on average, and 1.4 percent of the gross milk revenue. In contrast, 110 conventional dairies that completed the DFBS in 2023 spent \$1.89 per cwt to market their milk, on average, which accounted for 8.3 percent of their total operating expense and 8.3 percent of their gross milk revenue (Karszes and MacKenzie, 2024).

### **Breakeven Costs of Milk Production**

The DFBS calculates several cost of production measures that farms can use to evaluate breakeven points that can be compared to gross milk revenue (Karszes, 2018). In 2023, the median operating cost to produce milk was \$30.48 per cwt, the median purchased input cost to produce milk was \$33.56, and the median total cost to produce milk was \$45.34. The total cost to produce milk includes opportunity costs associated with operator and family contributions of labor, management, and equity capital to the business. In 2023, the median value of all operator and family contributions was \$7.93 per cwt, ranging from \$5.76 to \$14.27 per cwt.

The median gross milk revenue of \$35.68 per cwt exceeded the operating cost to produce milk by \$5.20, and it surpassed the purchased input cost to produce milk by \$2.12, yet it was \$9.66 less than the total cost to produce milk. This suggests that earnings from the sale of organic milk in 2023 were sufficient to cover annual operating expenses and capital replacement costs, on average, but they did not cover all opportunity costs associated with operator labor, management, and capital. However, organic dairies would not have achieved this level of performance without income from risk management programs, primarily the DMC program. If organic dairies had received no milk price risk management payments in 2023, then median gross milk revenue would have fallen short of the purchased input cost to produce milk by \$0.78 per cwt. In future years, organic dairies may receive considerably less or no revenue from the DMC program, depending on conventional milk income over feed cost margins.

### **Investment Levels and Returns**

Total capital investment on organic dairies averaged \$21,652 per cow, while debt averaged \$6,114 per cow. Most farms held a strong solvency position, with the debt to asset ratio averaging 0.29 and ranging from 0.05 to 0.49. For comparison, 110 conventional dairies that completed the DFBS in 2023 reported a similar debt to asset ratio of 0.30, on average, yet their total capital investment was 33 percent lower at just \$14,416 per cow (Karszes and MacKenzie, 2024). With one measure of profitability being farm profit divided by the total investment, farms with greater capital investment must achieve higher farm profits to reach the same level of profitability.

Farm profit, measured by the net farm income, is the return to the family for working, managing, and investing in the business. Median net farm income in 2023 was \$610 per cow or \$4.35 per cwt before appreciation. The percentile range for net farm income before appreciation was -\$1,139 to \$1,643 per cow or -\$5.95 to \$10.34 per cwt. After accounting for changes in market values of cattle, equipment, and real estate assets, median net farm income with appreciation was \$1,435 per cow, which amounts to \$10.23 per cwt.

Profitability is measured by the rate of return on equity (ROE) and rate of return on all assets (ROA) with and without appreciation. Without appreciation, median ROE was -3.9 percent and ranged from -11.4 percent to 3.4 percent; median ROA was -2.1 percent and ranged from -5.2 percent to 3.5 percent. With more than half of farms showing negative rates of return to equity capital and to all capital before appreciation, the majority of organic dairies in our sample did not generate positive returns on their

investment through farm operations. However, most farms did show a positive return after accounting for appreciation of farm assets. With appreciation, median ROE was 4.3 percent and median ROA was 4.6 percent.

### **Higher Profit versus Lower Profit Farms**

Grouping organic dairies based on their rate of return on assets allows for a comparison of farm characteristics for lower profit versus higher profit farms. Tables 3 and 4 display average production and financial measures for a lower profit group of eight farms with a negative ROA before appreciation compared to a higher profit group of seven farms with a positive ROA before appreciation. For the lower profit group, net farm income before appreciation averaged -\$4.29 per cwt or -\$689 per cow, while ROA before appreciation averaged -4.6 percent. In contrast, the higher profit group achieved an average net farm income before appreciation of \$9.54 per cwt or \$1,444 per cow, with an average ROA before appreciation of 4.6 percent.

Farms in the higher profit group had 33 percent more dairy cows and shipped 16 percent more milk per cow, on average. The resulting difference in total milk shipped per farm averaged 1.08 million pounds, with higher profit farms shipping 51 percent more milk than lower profit farms in 2023.

Higher profit farms used land more efficiently. Both profit groups harvested an average of 6.5 dry matter tons of forage per cow, yet the higher profit group accomplished this with larger yields per acre and fewer acres per cow. The higher profit group averaged 4.3 acres per cow compared to 5.2 acres per cow for the lower profit group. Hay yielded nine percent more per acre and corn silage yielded 56 percent more per acre, on average, for the higher profit farms. Despite achieving higher yields, higher profit farms spent 39 percent less on crop inputs, with an average cost of \$69.44 per acre for fertilizer, seed, and other inputs compared to \$114.02 per acre for the lower profit group.

Higher profit farms also used labor more efficiently, managing five percent more cows per full-time equivalent (FTE) and shipping 26 percent more milk per FTE than the lower profit farms. Higher profit farms spent \$8,876 more per hired FTE, on average, yet their labor efficiency advantage resulted in a 20 percent lower hired labor cost per cwt. The proportion of hired labor was similar for both groups.

Average net farm income before appreciation was \$13.83 per cwt higher for the higher profit group, driven by both higher revenues and lower costs. Higher profit farms generated \$5.50 per cwt more in total operating receipts, on average, driven by a \$3.09 per cwt difference in average milk revenue and a \$2.68 per cwt difference in average crop revenue. Accrual crop revenue includes both cash crop sales and changes in raised crop inventories. Within a single crop season, differences in crop revenues across farms may reflect variation in crop management practices, crop marketing decisions, crop conditions, or all three.

On the cost side, higher profit farms spent \$7.80 less per cwt on operating expenses, on average. Higher profit farms spent \$2.26 less per cwt on purchased grain, \$1.68 less per cwt on purchased forages, and \$1.23 less per cwt on hired labor. Together, these three cost categories totaled \$5.17 per cwt and accounted for two-thirds of the difference in operating expenses between higher profit and lower profit farms. Higher profit farms also spent \$1.57 less per cwt on crop inputs and \$0.10 less per cwt on fuel, which may reflect their use of fewer acres per cow. Higher profit farms spent \$1.20 more per cwt on custom hire and machinery rent, yet this difference was partially offset by their spending \$0.36 less per cwt on machinery repairs and \$0.45 less per cwt on machinery depreciation. Higher profit farms spent

\$0.49 more per cwt on real estate rent, yet they spent \$0.36 less per cwt on real estate taxes and \$0.93 less per cwt on real estate repairs. Higher profit farms also spent \$0.52 more per cwt on interest, despite having 16 percent less debt per cow.

## Conclusions

While some organic dairies in New York generated positive returns on their investment through farm operations in 2023, more than half of DFBS participants did not. Higher profit farms tended to have larger herds and higher milk production per cow, and to use land and labor more efficiently. Yet most of the participating farms were profitable only after accounting for asset appreciation. Although appreciation represents a true source of earnings, it cannot be converted into cash without liquidating farm assets. To maintain a viable business over time, a farm must achieve adequate earnings from operations. Payments from the Dairy Margin Coverage (DMC) and ODMAP programs significantly boosted earnings for organic dairies in 2023, yet farms cannot rely on consistent income from these programs in future years. It is difficult to draw conclusions about long-term farm viability from a single year of financial data. Ultimately, ongoing participation by organic dairies in the DFBS will help provide better insights into the health and sustainability of New York's organic dairy sector.

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**Table 1. Dairy Farm Business Summary Selected Factors**  
15 New York State Organic Dairy Farms, DFBS, 2023

<b>Selected Factors</b>	<b>Average</b>	<b>20th Percentile</b>	<b>50th Percentile</b>	<b>80th Percentile</b>
<b><i>Size of Business</i></b>				
Average number of cows	160	93	140	226
Percent heifers to cows	69%	54%	66%	90%
Total milk sold (lbs)	2,620,549	1,125,493	2,715,966	3,546,212
Full-time worker equivalents (FTE) <sup>3</sup>	4.4	2.7	3.5	6.0
Total crop and pasture acres	708	430	735	898
Acres of corn for grain	34	0	0	79
<b><i>Rates of Production</i></b>				
Milk sold per cow (lbs)	16,189	10,250	19,136	20,923
Hay yield per acre (dry matter tons)	2.5	1.3	2.2	4.0
Corn silage yield per acre (tons harvested) <sup>4</sup>	14.7	10.0	14.9	20.0
Corn grain yield per acre (dry shelled bu) <sup>5</sup>	118.0	59.0	132.7	169.1
Total forage yield per cow (dry matter tons)	6.5	4.1	6.8	9.1
Total crop and pasture acres per cow	4.8	3.5	4.3	6.3
Total pasture acres per cow	1.6	0.9	1.3	2.3
Cull rate	25%	13%	26%	37%
<b><i>Labor Efficiency and Costs</i></b>				
Cows per worker	38	31	37	47
Milk sold per worker (lbs)	604,938	357,343	627,739	855,456
Hired labor cost per cwt	\$5.59	\$1.57	\$5.43	\$10.13
Hired labor cost per FTE	\$51,495	\$42,676	\$52,716	\$62,458
Hired labor cost as % of milk sales	14.9%	4.1%	14.3%	25.4%
Hired labor hours as % of total labor hours	55.0%	18.8%	59.3%	80.9%
<b><i>Income Generation</i></b>				
Gross milk receipts per cwt	\$37.73	\$34.66	\$35.68	\$40.40
Net milk receipts per cwt	\$37.21	\$33.58	\$35.39	\$40.23
Milk price risk management per cwt <sup>6</sup>	\$2.78	\$1.87	\$2.95	\$3.26
Gross milk receipts per cow	\$6,008	\$3,645	\$6,970	\$7,680
Dairy cattle receipts per cow	\$293	\$101	\$312	\$411
Dairy calf receipts per cow	\$76	\$16	\$96	\$133
Other livestock receipts per cow	\$13	\$0	\$2	\$14
Crop receipts per cow	\$462	\$1	\$299	\$1,009
Miscellaneous receipts per cow	\$297	\$101	\$262	\$506
Total operating receipts per cow	\$7,149	\$4,985	\$7,268	\$8,519

<sup>3</sup> One full-time worker equivalent equals 2,760 hours per year.

<sup>4</sup> Corn silage yield data is reported for nine farms that grew corn silage in 2023.

<sup>5</sup> Corn grain yield data is reported for seven farms that grew corn grain in 2023.

<sup>6</sup> Milk price risk management revenue includes net payments from the Dairy Margin Coverage program.

**Table 1. Dairy Farm Business Summary Selected Factors (continued)**

15 New York State Organic Dairy Farms, DFBS, 2023

<b>Selected Factors</b>	<b>Average</b>	<b>20th Percentile</b>	<b>50th Percentile</b>	<b>80th Percentile</b>
<b><i>Cost Control</i></b>				
Grain and concentrate as % of milk sales	26%	16%	23%	40%
Dairy feed and crop expense per cwt	\$14.02	\$10.51	\$14.47	\$18.95
Labor and machinery costs per cow	\$3,426	\$2,613	\$3,528	\$4,190
Fertilizer cost per acre	\$38.64	\$0.00	\$15.55	\$83.82
Seed cost per acre	\$51.30	\$12.09	\$44.44	\$86.74
Other crop input cost per acre	\$3.27	\$0.00	\$0.00	\$7.20
Operating cost to produce milk per cwt	\$30.69	\$23.82	\$30.48	\$39.85
Purchased input cost to produce milk per cwt	\$35.56	\$27.82	\$33.56	\$43.99
Total costs to produce milk per cwt	\$46.24	\$39.33	\$45.34	\$52.23
Operator and family contributions per cwt	\$10.68	\$5.76	\$7.93	\$14.27
<b><i>Capital Efficiency (average for the year)</i></b>				
Farm capital per cow	\$21,652	\$13,646	\$21,977	\$31,992
Machinery and equipment per cow	\$4,647	\$2,323	\$4,259	\$7,314
Asset turnover ratio	0.46	0.26	0.48	0.62
<b><i>Profitability</i></b>				
Net farm income (NFI) without appreciation	\$47,446	-\$199,643	\$76,888	\$236,130
NFI per cow without appreciation	\$306	-\$1,139	\$610	\$1,643
NFI with appreciation	\$247,956	-\$33,756	\$262,679	\$528,036
NFI per cow with appreciation	\$1,911	-\$187	\$1,435	\$4,297
Labor & management income per operator	-\$52,338	-\$180,215	\$13,584	\$60,595
Labor & mgt. income per operator per cow	-\$436	-\$1,648	\$108	\$435
Rate of return on equity without appreciation	-4.6%	-11.4%	-3.9%	3.4%
Rate of return on all capital without appreciation	-0.3%	-5.2%	-2.1%	3.5%
Rate of return on equity with appreciation	5.2%	-5.7%	4.3%	16.1%
Rate of return on all capital with appreciation	6.7%	0.0%	4.6%	14.5%
<b><i>Financial Summary</i></b>				
Farm net worth, end year	\$2,424,952	\$1,104,944	\$2,072,379	\$3,697,175
Debt to asset ratio	0.29	0.05	0.21	0.49
Farm debt per cow	\$6,114	\$1,091	\$5,920	\$10,761

**Table 2. Accrual Receipts and Expenses per Cwt**  
15 New York State Organic Dairy Farms, DFBS, 2023

<b>Accrual Operating Receipts</b>	<b>Average</b>	<b>20<sup>th</sup> Percentile</b>	<b>50<sup>th</sup> Percentile</b>	<b>80<sup>th</sup> Percentile</b>
Milk	\$37.73	\$34.66	\$35.68	\$40.40
Dairy cattle	\$1.97	\$0.96	\$1.70	\$3.67
Dairy calves	\$0.44	\$0.11	\$0.53	\$0.68
Other livestock	\$0.10	\$0.00	\$0.01	\$0.11
Crops	\$3.60	\$0.01	\$1.43	\$5.77
Miscellaneous receipts	\$2.10	\$0.54	\$1.64	\$3.79
<b>Total Operating Receipts</b>	<b>\$45.94</b>	<b>\$38.17</b>	<b>\$42.23</b>	<b>\$55.14</b>
<b>Accrual Operating Expenses</b>				
Hired labor	\$5.59	\$1.57	\$5.43	\$10.13
Dairy grain and concentrate	\$9.66	\$5.45	\$9.52	\$14.70
Dairy roughage	\$1.48	\$0.00	\$0.21	\$3.23
Nondairy feed	\$0.01	\$0.00	\$0.00	\$0.00
Professional nutritional services	\$0.01	\$0.00	\$0.00	\$0.00
Machine hire, rent, and lease	\$2.23	\$0.27	\$2.73	\$3.49
Machine repair and vehicle expense	\$3.49	\$2.14	\$2.87	\$4.72
Fuel, oil, and grease	\$1.78	\$1.07	\$1.50	\$2.39
Replacement livestock	\$0.23	\$0.00	\$0.00	\$0.66
Breeding	\$0.22	\$0.06	\$0.20	\$0.32
Veterinary and medicine	\$0.53	\$0.31	\$0.49	\$0.67
Milk marketing	\$0.52	\$0.18	\$0.29	\$1.08
Bedding	\$0.48	\$0.07	\$0.42	\$0.77
Milking supplies	\$0.83	\$0.60	\$0.76	\$1.06
Cattle lease	\$0.03	\$0.00	\$0.00	\$0.00
Custom boarding	\$0.00	\$0.00	\$0.00	\$0.00
Livestock professional fees	\$0.15	\$0.00	\$0.13	\$0.33
Other livestock expense	\$0.29	\$0.04	\$0.23	\$0.58
Fertilizer and lime	\$1.09	\$0.00	\$0.31	\$2.29
Seeds and plants	\$1.63	\$0.32	\$0.88	\$2.53
Spray and other crop expense	\$0.11	\$0.00	\$0.00	\$0.18
Crop professional fees	\$0.06	\$0.00	\$0.00	\$0.05
Land, building, and fence repair	\$0.96	\$0.18	\$0.51	\$1.95
Taxes	\$1.08	\$0.32	\$0.73	\$1.12
Real estate rent and lease	\$1.35	\$0.24	\$0.80	\$2.36
Insurance	\$0.77	\$0.47	\$0.55	\$1.12
Utilities	\$1.07	\$0.43	\$0.89	\$1.61
Interest paid	\$2.12	\$0.17	\$1.87	\$3.87
Other professional fees	\$0.45	\$0.12	\$0.25	\$0.57
Miscellaneous	\$0.55	\$0.18	\$0.42	\$0.84
<b>Total Operating Expenses</b>	<b>\$38.75</b>	<b>\$30.19</b>	<b>\$39.61</b>	<b>\$45.03</b>
Expansion livestock	\$0.15	\$0.00	\$0.00	\$0.34
Extraordinary expense	\$0.00	\$0.00	\$0.00	\$0.00
Machinery depreciation	\$3.38	\$1.61	\$2.67	\$4.85
Real estate depreciation	\$1.48	\$0.06	\$1.29	\$2.17
<b>Total Expenses</b>	<b>\$43.77</b>	<b>\$34.61</b>	<b>\$44.70</b>	<b>\$48.51</b>
Net Farm Income without Appreciation	\$2.16	-\$5.95	\$4.35	\$10.34
Net Farm Income with Appreciation	\$13.46	-\$0.73	\$10.23	\$20.81

**Table 3. DFBS Selected Factors for Lower Profit vs. Higher Profit Farms**

15 New York State Organic Dairy Farms, DFBS, 2023

<b>Selected Factors</b>	<b>Lower Profit (ROA w/o appr. &lt; 0%)</b>	<b>Higher Profit (ROA w/o appr. &gt; 0%)</b>	<b>Difference</b>	<b>% Difference</b>
Number of farms	8	7		
<b>Size of Business</b>				
Average number of cows	138	184	46	33%
Percent heifers to cows	65%	73%	9%	13%
Total milk sold (lbs)	2,118,811	3,193,965	1,075,154	51%
Full-time worker equivalents (FTE) <sup>7</sup>	3.8	5.0	1.3	33%
Total crop and pasture acres	656	767	111	17%
Acres of corn for grain	36	32	-4	-12%
<b>Rates of Production</b>				
Milk sold per cow (lbs)	15,059	17,479	2,420	16%
Hay yield per acre (dry matter tons)	2.4	2.6	0.2	9%
Corn silage yield per acre (tons harvested) <sup>8</sup>	11.8	18.3	6.6	56%
Corn grain yield per acre (dry shelled bu) <sup>9</sup>	85.2	142.6	57.4	67%
Total forage yield per cow (dry matter tons)	6.5	6.5	0.0	0%
Total crop and pasture acres per cow	5.2	4.3	-0.9	-18%
Total pasture acres per cow	2.0	1.1	-0.8	-42%
Cull rate	21%	30%	9%	45%
<b>Labor Efficiency &amp; Costs</b>				
Cows per worker	37	39	2	5%
Milk sold per worker (lbs)	539,773	679,413	139,641	26%
Hired labor cost per cwt	\$6.16	\$4.93	-\$1.23	-20%
Hired labor cost per FTE	\$47,353	\$56,229	\$8,876	19%
Hired labor cost as % of milk sales	17.1%	12.5%	-4.6%	-27%
Hired labor hours as % of total labor hours	55.5%	54.4%	-1.1%	-2%
<b>Income Generation</b>				
Gross milk receipts per cwt	\$36.28	\$39.37	\$3.09	9%
Net milk receipts per cwt	\$35.69	\$38.94	\$3.25	9%
Milk price risk management per cwt <sup>10</sup>	\$2.57	\$3.03	\$0.47	18%
Gross milk receipts per cow	\$5,384	\$6,720	\$1,336	25%
Dairy cattle receipts per cow	\$235	\$361	\$126	54%
Dairy calf receipts per cow	\$76	\$76	\$0	-1%
Other livestock receipts per cow	\$21	\$4	-\$17	-81%
Crop receipts per cow	\$312	\$633	\$321	103%
Miscellaneous receipts per cow	\$252	\$349	\$97	38%
Total operating receipts per cow	\$6,280	\$8,143	\$1,863	30%

<sup>7</sup> One full-time worker equivalent equals 2,760 hours per year.<sup>8</sup> Corn silage yield data is reported for nine farms that grew corn silage in 2023.<sup>9</sup> Corn grain yield data is reported for seven farms that grew corn grain in 2023.<sup>10</sup> Milk price risk management revenue includes net payments from the Dairy Margin Coverage program.

**Table 3. DFBS Selected Factors for Lower Profit versus Higher Profit Farms (continued)**

15 New York State Organic Dairy Farms, DFBS, 2023

<b>Selected Factors</b>	<b>Lower Profit (ROA w/o appr. &lt; 0%)</b>	<b>Higher Profit (ROA w/o appr. &gt; 0%)</b>	<b>Difference</b>	<b>% Difference</b>
<b><i>Cost Control</i></b>				
Grain and concentrate as % of milk sales	30%	22%	-7%	-24%
Dairy feed and crop expense per cwt	\$16.64	\$11.03	-\$5.61	-34%
Labor and machinery costs per cow	\$3,289	\$3,582	\$292	9%
Fertilizer cost per acre	\$49.47	\$26.27	-\$23	-47%
Seed cost per acre	\$59.47	\$41.97	-\$18	-29%
Other crop input cost per acre	\$5.08	\$1.20	-\$4	-76%
Operating cost to produce milk per cwt	\$35.54	\$25.16	-\$10.38	-29%
Purchased input cost to produce milk per cwt	\$40.57	\$29.83	-\$10.74	-26%
Total costs to produce milk per cwt	\$50.11	\$41.82	-\$8.29	-17%
Operator and family contributions per cwt	\$9.54	\$11.99	\$2.45	26%
<b><i>Capital Efficiency (average for the year)</i></b>				
Farm capital per cow	\$19,418	\$24,204	\$4,786	25%
Machinery and equipment per cow	\$4,451	\$4,870	\$419	9%
Asset turnover ratio	0.48	0.42	-0.06	-12%
<b><i>Profitability</i></b>				
Net farm income (NFI) without appreciation	-\$118,090	\$236,629	\$354,719	-300%
NFI per cow without appreciation	-\$689	\$1,444	\$2,133	-310%
NFI with appreciation	\$76,766	\$443,602	\$366,836	478%
NFI per cow with appreciation	\$1,143	\$2,789	\$1,646	144%
Labor and management income per operator	-\$157,999	\$68,418	\$226,416	-143%
Labor and mgt. income per operator per cow	-\$1,157	\$388	\$1,545	-133%
Rate of return on equity capital without appreciation	-12.4%	4.3%	16.7%	-135%
Rate of return on all capital without appreciation	-4.6%	4.6%	9.2%	-200%
Rate of return on equity with appreciation	0.4%	10.7%	10.3%	2291%
Rate of return on all capital with appreciation	4.4%	9.3%	4.9%	111%
<b><i>Financial Summary</i></b>				
Farm net worth, end year	\$1,702,869	\$3,250,191	\$1,547,322	91%
Debt to asset ratio	0.33	0.24	-0.10	-29%
Farm debt per cow	\$6,612	\$5,545	-\$1,067	-16%

**Table 4. Accrual Receipts and Expenses per cwt for Lower Profit versus Higher Profit Farms**

15 New York State Organic Dairy Farms, DFBS, 2023

	Lower Profit (ROA w/o appr. < 0%)	Higher Profit (ROA w/o appr. > 0%)	Difference	% Difference
<b>Accrual Operating Receipts</b>				
Milk	\$36.28	\$39.37	\$3.09	9%
Dairy cattle	\$1.96	\$1.99	\$0.04	2%
Dairy calves	\$0.51	\$0.37	-\$0.14	-27%
Other livestock	\$0.18	\$0.01	-\$0.17	-92%
Crops	\$2.35	\$5.03	\$2.68	114%
Miscellaneous receipts	\$2.09	\$2.10	\$0.01	0%
<b>Total Operating Receipts</b>	<b>\$43.37</b>	<b>\$48.87</b>	<b>\$5.50</b>	<b>13%</b>
<b>Accrual Operating Expenses</b>				
Hired labor	\$6.16	\$4.93	-\$1.23	-20%
Dairy grain and concentrate	\$10.71	\$8.45	-\$2.26	-21%
Dairy roughage	\$2.26	\$0.59	-\$1.68	-74%
Nondairy feed	\$0.02	\$0.00	-\$0.02	-100%
Professional nutritional services	\$0.01	\$0.00	-\$0.01	-100%
Machine hire, rent, and lease	\$1.67	\$2.87	\$1.20	72%
Machine repair and vehicle expense	\$3.66	\$3.30	-\$0.36	-10%
Fuel, oil, and grease	\$1.83	\$1.73	-\$0.10	-6%
Replacement livestock	\$0.32	\$0.13	-\$0.19	-60%
Breeding	\$0.18	\$0.25	\$0.07	37%
Veterinary and medicine	\$0.66	\$0.37	-\$0.28	-43%
Milk marketing	\$0.59	\$0.43	-\$0.16	-27%
Bedding	\$0.67	\$0.28	-\$0.39	-59%
Milking supplies	\$0.80	\$0.87	\$0.07	8%
Cattle lease	\$0.05	\$0.00	-\$0.05	-100%
Custom boarding	\$0.00	\$0.00	\$0.00	0%
Livestock professional fees	\$0.18	\$0.11	-\$0.07	-37%
Other livestock expense	\$0.31	\$0.28	-\$0.03	-10%
Fertilizer and lime	\$1.52	\$0.59	-\$0.92	-61%
Seeds and plants	\$1.86	\$1.37	-\$0.49	-26%
Spray and other crop expense	\$0.18	\$0.02	-\$0.16	-87%
Crop professional fees	\$0.10	\$0.00	-\$0.10	-99%
Land, building, and fence repair	\$1.40	\$0.47	-\$0.93	-67%
Taxes	\$1.25	\$0.89	-\$0.36	-29%
Real estate rent and lease	\$1.12	\$1.62	\$0.49	44%
Insurance	\$0.70	\$0.85	\$0.15	22%
Utilities	\$1.27	\$0.84	-\$0.42	-33%
Interest paid	\$1.88	\$2.40	\$0.52	28%
Other professional fees	\$0.63	\$0.26	-\$0.37	-59%
Miscellaneous	\$0.42	\$0.70	\$0.27	65%
<b>Total Operating Expenses</b>	<b>\$42.39</b>	<b>\$34.60</b>	<b>-\$7.80</b>	<b>-18%</b>
Expansion livestock	\$0.23	\$0.06	-\$0.17	-74%
Extraordinary expense	\$0.00	\$0.00	\$0.00	0%
Machinery depreciation	\$3.59	\$3.14	-\$0.45	-13%
Real estate depreciation	\$1.44	\$1.53	\$0.09	6%
<b>Total Expenses</b>	<b>\$47.66</b>	<b>\$39.33</b>	<b>-\$8.32</b>	<b>-17%</b>
Net Farm Income without Appreciation	-\$4.29	\$9.54	\$13.83	-322%
Net Farm Income with Appreciation	\$6.47	\$21.45	\$14.98	231%

## OTHER A.E.M. EXTENSION BULLETINS

EB No	Title	Fee (if applicable)	Author(s)
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