

# PFB Exhibit 2

## 2020 Dairy Profitability Comparison



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Specially Prepared for:



## Management Study Comparison 2020

	My Farm			Comparable Size Farms			Top 10%		
	Avg # Cows			Avg # Cows			Avg # Cows		
	104.60			104.05			201.65		
	Milk Sold /Cow			Milk Sold /Cow			Milk Sold /Cow		
	24,157			21,253			24,654		
	Dollars	\$/Cow	\$/CWT	Dollars	\$/Cow	\$/CWT	Dollars	\$/Cow	\$/CWT
<b>Revenue</b>									
Milk, Sold	\$438,137	\$4,189	\$17.34	\$407,295	\$3,914	\$18.42	\$928,010	\$4,602	\$18.67
Ag Program Payments	91,335	873	3.61	81,984	788	3.71	172,707	856	3.47
Livestock Income	45,952	439	1.82	26,808	258	1.21	65,332	324	1.31
Crop Income	2,701	26	0.11	9,859	95	0.45	47,262	234	0.95
Miscellaneous	3,251	31	0.13	1,936	19	0.09	6,973	35	0.14
Custom Hire	0	0	0.00	2,611	25	0.12	5,723	28	0.12
Other Income	16,263	155	0.64	18,813	181	0.85	18,812	93	0.38
<b>Total Revenue</b>	<b>\$597,639</b>	<b>\$5,713</b>	<b>\$23.65</b>	<b>\$549,306</b>	<b>\$5,280</b>	<b>\$24.85</b>	<b>\$1,244,819</b>	<b>\$6,172</b>	<b>\$25.04</b>
<b>Production Costs</b>									
Feed Expenses	\$63,792	\$610	\$2.52	\$146,181	\$1,405	\$6.61	\$227,308	\$1,127	\$4.57
Labor Expenses	27,999	268	1.11	26,635	256	1.20	77,200	383	1.55
Rent - Lease of Real Estate	42,083	402	1.67	16,002	154	0.72	56,154	278	1.13
Repairs (Machinery)	36,907	353	1.46	28,514	274	1.29	43,760	217	0.88
Supply Expenses	12,981	124	0.51	26,467	254	1.20	42,044	208	0.85
Fertilizer	20,200	193	0.80	12,105	116	0.55	37,291	185	0.75
Machine Hire (Custom Work)	49,618	474	1.96	24,695	237	1.12	37,143	184	0.75
Seeds & Plants	22,937	219	0.91	19,779	190	0.89	29,616	147	0.60
Chemicals (Sprays or Pestic.)	0	0	0.00	8,659	83	0.39	21,751	108	0.44
Gasoline, Fuel, Oil (Business)	8,681	83	0.34	11,527	111	0.52	19,081	95	0.38
Vet and Medicine	8,075	77	0.32	9,481	91	0.43	17,301	86	0.35
Utilities (Business)	15,245	146	0.60	14,358	138	0.65	15,568	77	0.31
Repairs (Real Estate)	14,110	135	0.56	6,080	58	0.27	12,201	61	0.25
Other Production Costs	23,806	228	0.94	28,304	272	1.28	39,381	195	0.79
<b>Total Production Costs</b>	<b>\$346,434</b>	<b>\$3,312</b>	<b>\$13.70</b>	<b>\$378,787</b>	<b>\$3,639</b>	<b>\$17.12</b>	<b>\$675,799</b>	<b>\$3,351</b>	<b>\$13.60</b>
<b>Administrative Costs</b>									
Management Labor	\$57,929	\$554	\$2.29	\$58,247	\$560	\$2.63	\$95,294	\$473	\$1.92
Economic Depreciation	19,000	182	0.75	47,082	452	2.13	81,218	403	1.63
Marketing Expenses	51,025	488	2.02	34,985	336	1.58	71,117	353	1.43
Insurance (Business)	9,427	90	0.37	11,595	111	0.52	19,946	99	0.40
Other Administrative Costs	2,655	25	0.11	12,142	117	0.55	18,973	94	0.38
<b>Total Administrative Costs</b>	<b>\$140,036</b>	<b>\$1,339</b>	<b>\$5.54</b>	<b>\$164,051</b>	<b>\$1,576</b>	<b>\$7.41</b>	<b>\$286,548</b>	<b>\$1,422</b>	<b>\$5.76</b>
<b>Interest Expense</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0.00</b>	<b>\$13,701</b>	<b>\$132</b>	<b>\$0.62</b>	<b>\$21,567</b>	<b>\$107</b>	<b>\$0.43</b>
<b>Net Margin</b>	<b>\$111,169</b>	<b>\$1,062</b>	<b>\$4.41</b>	<b>(\$7,233)</b>	<b>(\$67)</b>	<b>(\$0.30)</b>	<b>\$260,905</b>	<b>\$1,292</b>	<b>\$5.25</b>

Disclaimer:

Numerous factors, many beyond the scope of the data in this summary, influence individual results. All data reported reflects past performance and does not predict or forecast future results. The data reported is believed to be accurate, but Pennsylvania Farm Bureau, MSC Business Services makes no warranty or representation, expressed or implied, as to its suitability or fitness for any purpose. The user of this data is cautioned to utilize the data at their own risk, recognizing that Pennsylvania Farm Bureau, MSC Business Services disclaim all liability for any damages, however occurring, to any person or entity as a result of such use.

## Analytical Study Comparison 2020

	My Farm			Comparable Size Farms			Top 10%		
	Total # Milk Shipped (CWTs)			Total # Milk Shipped (CWTs)			Total # Milk Shipped (CWTs)		
	2,526,811			2,211,407			4,971,418		
<b>Dairy Productivity Factors</b>									
Somatic Cells (1,000s)	224			199			177		
Cow Cull Rate	42%			34%			36%		
Dairy Animal Inventory Change	\$10,600			\$469			(\$1,437)		
Internal Herd Growth	4.85%			0.09%			-1.85%		
Replacements per Cow	0.96			0.83			0.76		
Purchased Feed & Crop Exp / CWT	\$4.43			\$8.09			\$7.36		
Net Milk Price / CWT	\$15.32			\$16.81			\$17.32		
Total Cost Prod Milk / CWT	\$12.94			\$19.37			\$13.52		
Pur Feed / Milk Income	16%			28%			20%		
Milk Shipped / Man	1,263,406			1,032,757			1,226,343		
Total Feed Fed / CWT	\$10.00			\$11.46			\$8.07		
Milk Inc. over T. Feed / Cow	\$1,767			1,048			1,487		
Return per \$100 Feed Fed	\$192			\$140			\$151		
<b>Ratios</b>									
Return on Assets	14.02%			1.11%			10.60%		
Current Ratio	6.75:1			10.12:1			4.45:1		
EBITD / Cow	\$1,791			\$1,111			\$2,328		
Percent Net Worth	80%			57%			61%		
Operating Expense %	81%			102%			80%		
Interest Expense %	0%			3%			2%		
Asset Turnover (years)	1.33			3.15			2.76		
Total Business Prod / Man	\$301,380			\$251,285			\$328,805		
Labor Productivity Ratio	7.01:1			6.95:1			7.94:1		
Total Man Equivalents	2.00			2.47			4.32		
Dairy Debt per Cow	\$0			\$3,330			\$3,720		
Cows / Man	53			49			53		
<b>Other Cost Analysis</b>									
Total Fixed Costs / CWT	\$7.10			\$9.47			\$8.60		
Total Variable Costs / CWT	\$12.15			\$17.11			\$13.71		
Direct Crop Expense / Acre	\$138			\$128			\$115		
Crop Margin / Acre	\$113			\$49			\$118		
Value Forage Harv / For Acre	\$681			\$442			\$459		
Value Grain Harv / Grain Acre	\$550			\$338			\$410		
Machine Op Cost / Acre	\$316			\$207			\$146		
Total Mach Op Cost / Acre	\$361			\$302			\$224		

\* Comparable Size Farms

The data in the Comparable Size Farms column is designed to average, as closely as possible, farms with roughly the same number of cows milked as your farm. The data is not from all farms in the MSC Business Services database, but is only from those utilizing conventional feeding systems that have been designated as included in this summary by their Account Supervisor.

\* Top 10%

The Top 10% Farms were chosen based on Net Margin per cwt within the MSC Business Services database. These farms utilize conventional feeding systems and have been designated as included in this summary by their Account Supervisor.

### PFB Exhibit 3

**TABLE 1**

**MSC Business Services  
Key Dairy Benchmarks per CWT**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	Avg
<b>Income</b>										
Milk	\$19.77	\$21.40	\$25.57	\$18.14	\$16.97	\$18.66	\$17.10	\$19.34	\$18.56	<b>\$19.50</b>
Livestock Income*	\$1.50	\$1.48	\$1.87	\$2.27	\$1.61	\$1.46	\$1.02	\$1.23	\$1.08	<b>\$1.50</b>
Other**	\$2.06	\$1.59	\$1.28	\$1.25	\$1.55	\$1.31	\$1.94	\$2.26	\$4.86	<b>\$2.01</b>
<b>Total Income</b>	<b>\$23.33</b>	<b>\$24.47</b>	<b>\$28.72</b>	<b>\$21.66</b>	<b>\$20.13</b>	<b>\$21.43</b>	<b>\$20.06</b>	<b>\$22.83</b>	<b>\$24.50</b>	<b>\$23.01</b>
<b>Expenses</b>										
Management Labor	\$2.20	\$2.10	\$2.19	\$1.92	\$1.84	\$1.86	\$1.77	\$1.75	\$1.74	<b>\$1.93</b>
Feed*	\$6.60	\$6.20	\$6.97	\$6.17	\$6.02	\$5.40	\$6.09	\$6.23	\$6.82	<b>\$6.28</b>
Hired Labor	\$1.84	\$1.97	\$2.06	\$1.99	\$2.03	\$2.00	\$2.11	\$2.11	\$2.09	<b>\$2.02</b>
Interest	\$0.69	\$0.63	\$0.63	\$0.55	\$0.59	\$0.58	\$0.68	\$0.71	\$0.58	<b>\$0.63</b>
Rent	\$0.69	\$0.77	\$0.84	\$0.84	\$0.91	\$0.90	\$0.91	\$1.06	\$1.01	<b>\$0.88</b>
Milk Marketing	\$1.09	\$1.11	\$1.14	\$1.22	\$1.24	\$1.27	\$1.31	\$1.31	\$1.44	<b>\$1.24</b>
Dairy Expenses	\$2.30	\$2.23	\$2.47	\$2.10	\$2.11	\$2.07	\$2.01	\$2.05	\$2.00	<b>\$2.15</b>
Crops (Seed, Chem, Fert, Fuel)	\$2.85	\$2.74	\$2.89	\$2.22	\$1.95	\$2.05	\$2.04	\$2.29	\$2.20	<b>\$2.36</b>
Depreciation	\$1.63	\$1.55	\$1.62	\$1.63	\$1.69	\$1.67	\$1.65	\$1.67	\$1.63	<b>\$1.64</b>
Other	\$3.43	\$3.77	\$4.33	\$3.86	\$3.43	\$3.67	\$3.66	\$3.75	\$4.11	<b>\$3.78</b>
<b>Total Expenses</b>	<b>\$23.32</b>	<b>\$23.07</b>	<b>\$25.14</b>	<b>\$22.50</b>	<b>\$21.81</b>	<b>\$21.47</b>	<b>\$22.23</b>	<b>\$22.93</b>	<b>\$23.62</b>	<b>\$22.90</b>
<b>Net Margin</b>	<b>\$0.01</b>	<b>\$1.40</b>	<b>\$3.58</b>	<b>-\$0.84</b>	<b>-\$1.68</b>	<b>-\$0.04</b>	<b>-\$2.17</b>	<b>-\$0.10</b>	<b>\$0.88</b>	<b>\$0.12</b>

\*Adjusted for Inventory Change (Livestock Inventory for Livestock Income and Crop Inventory for Feed)

\*\* 2020 other income includes \$3.15 in Government payments due to the Covid pandemic.

<b>Avg # Cows</b>	134	149	164	161	160	169	180	210	213	
<b>Milk Sold per Cow</b>	20,036	20,466	20,909	20,970	21,236	21,248	21,095	21,163	21,893	
<b>Yearly Net Margin</b>	\$268	\$42,997	\$122,761	-\$30,321	-\$61,802	-\$515	-\$89,442	-\$4,062	\$45,102	Total <b>-\$20,116</b>
										Avg. <b>\$2,776</b>

## PFB Exhibit 4

### Table 2

#### MSC Business Services

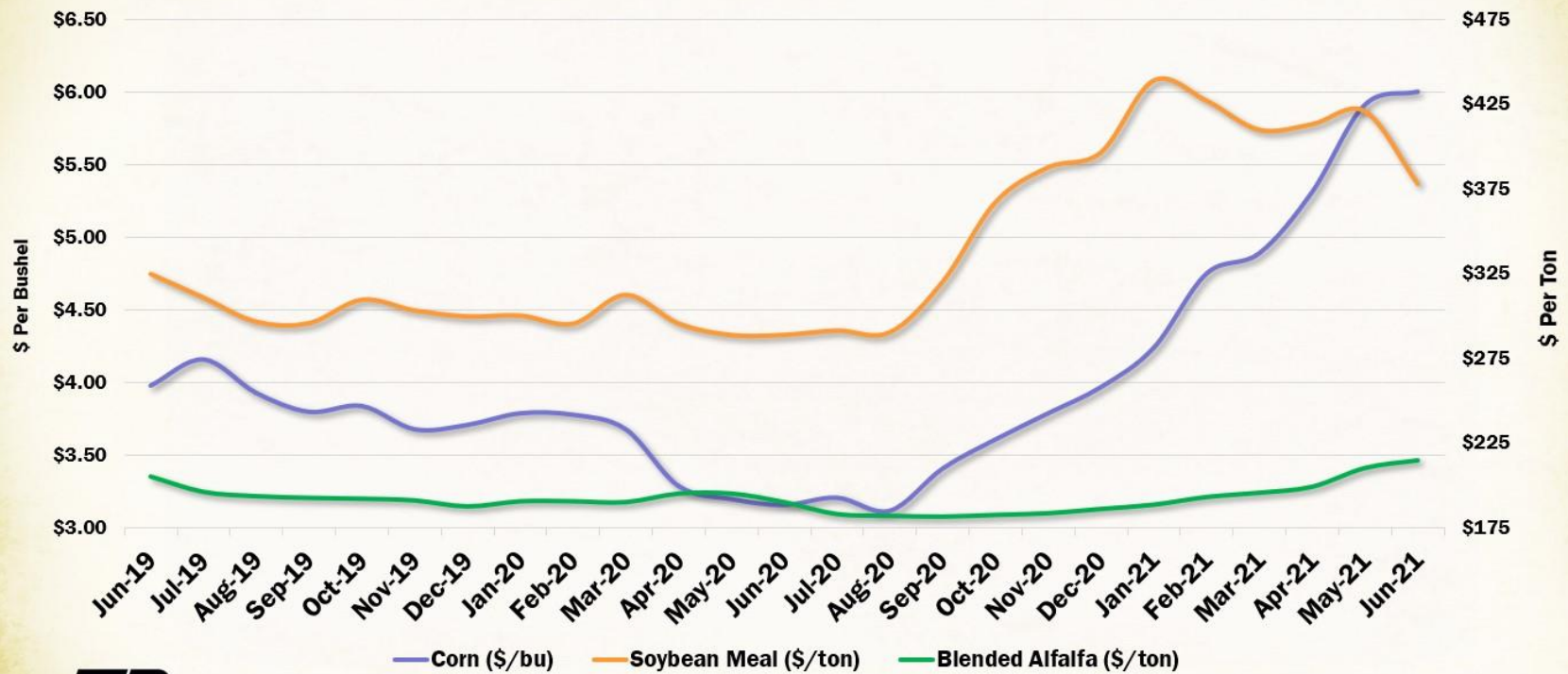
##### Key Dairy Benchmarks - Purchased Feed and Crop Expense to Milk Price

<b>Year</b>	<b>Purchased Feed &amp; Crop Expense (Per CWT)</b>	<b>Avg. Milk Price (Per CWT)</b>	<b>Percent of Feed &amp; Crop Expense to Milk Price</b>
2010	\$7.69	\$18.05	43%
2011	\$9.50	\$21.87	43%
2012	\$9.45	\$19.77	48%
2013	\$8.94	\$21.40	42%
2014	\$9.86	\$25.57	39%
2015	\$8.39	\$18.14	46%
2016	\$7.97	\$16.97	47%
2017	\$7.45	\$18.66	40%
2018	\$8.13	\$17.10	48%
2019	\$8.52	\$19.34	44%
2020	\$8.51	\$18.56	46%

## PFB Exhibit 5

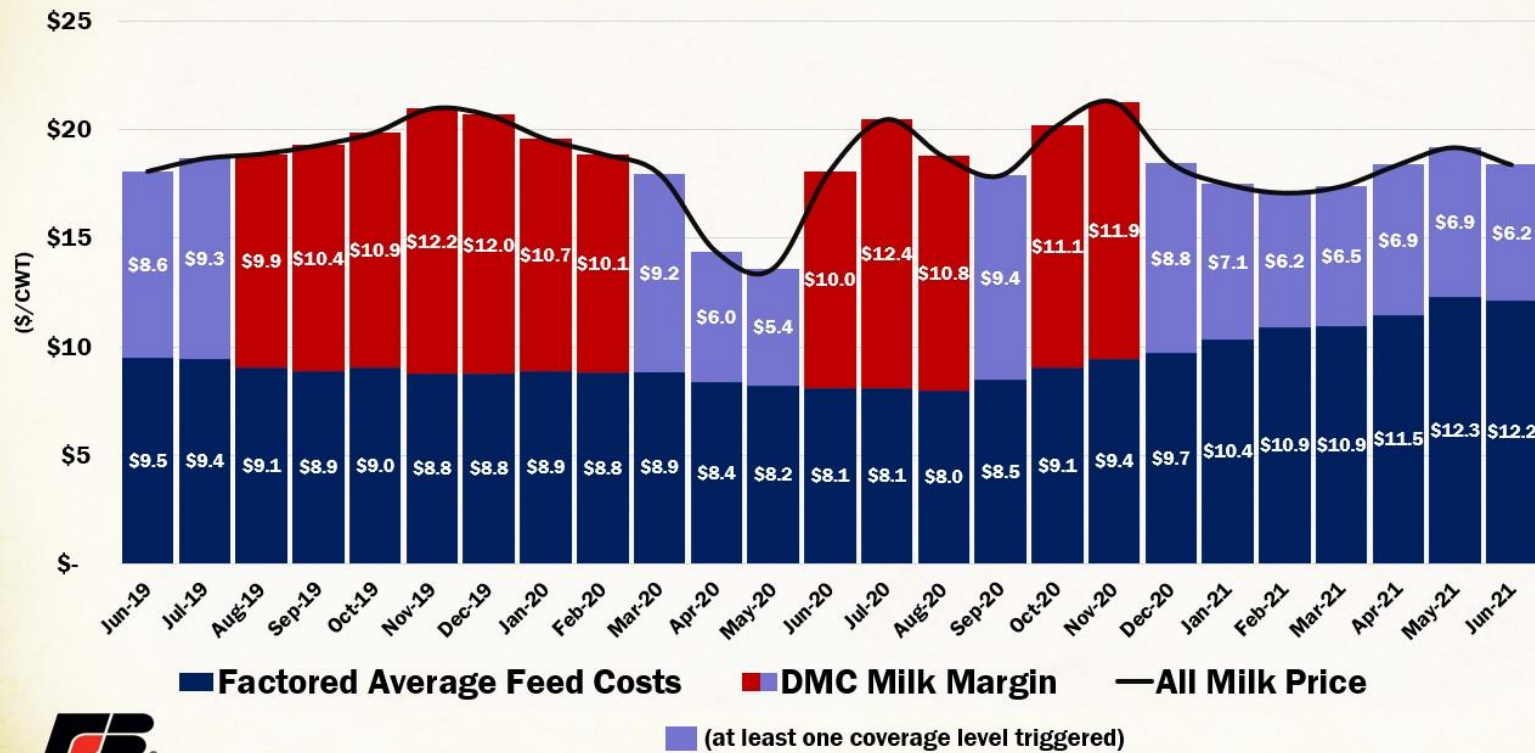
### FIGURE 2: CORN AND SOYBEAN MEAL PRICES REMAIN HIGH – ALFALFA ON THE RISE

Feed Costs: Price Received



# PFB Exhibit 6

## FIGURE 1: HIGHER THAN AVERAGE FEED COSTS SQUEEZE MILK MARGINS



## **PFB Exhibit 7**

**Wayne Brubaker, Consultant  
MSC Business Services**

**Wayne Brubaker has served PA Farm Bureau members since 1978. Beginning as an Account Supervisor in Bradford County, moving to Franklin County in 1980 and assuming the position of Consultant in 2008. He has worked extensively with over 200 farms helping with financial planning, farm management, tax planning and preparation, business planning and transition planning. During his tenure, he has helped numerous farms transition from one generation to the next. He has been around so long that he is now helping the third generation take over grandpa's farm.**

**Wayne has a BS degree in Business Administration with a minor in Accounting from Messiah College and is an IRS Enrolled Agent.**

**He is married, has three married children and nine grandchildren. He is actively involved in his church where he leads worship and teaches Sunday School.**