



OHIO STATE UNIVERSITY EXTENSION

## Dairy Economic Update

### 2019 Agriculture Outlook and Policy Meeting

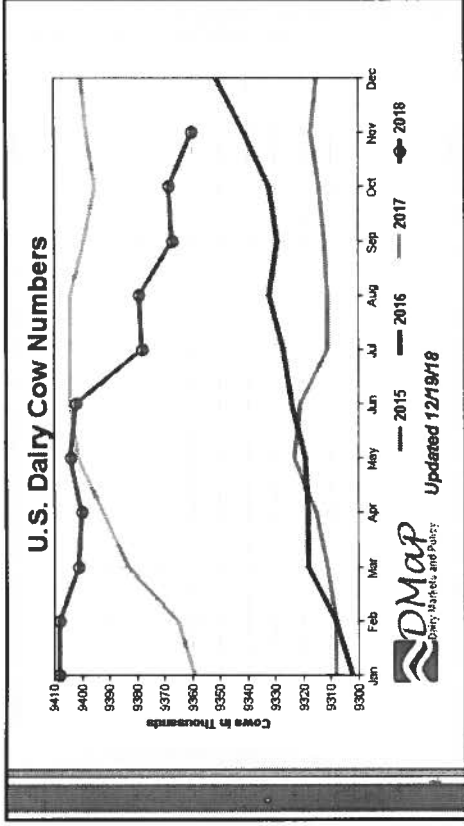


**Dianne Shoemaker**  
Field Specialist, Dairy Production Economics  
dshoemaker.3@osu.edu



**The Ohio State University**  
College of Food, Agricultural, and Environmental Sciences

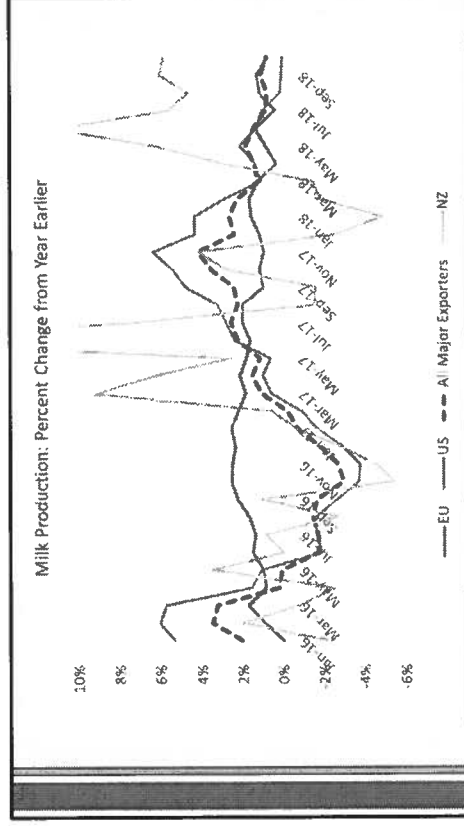
**Ohio Farm Business Analysis Program**

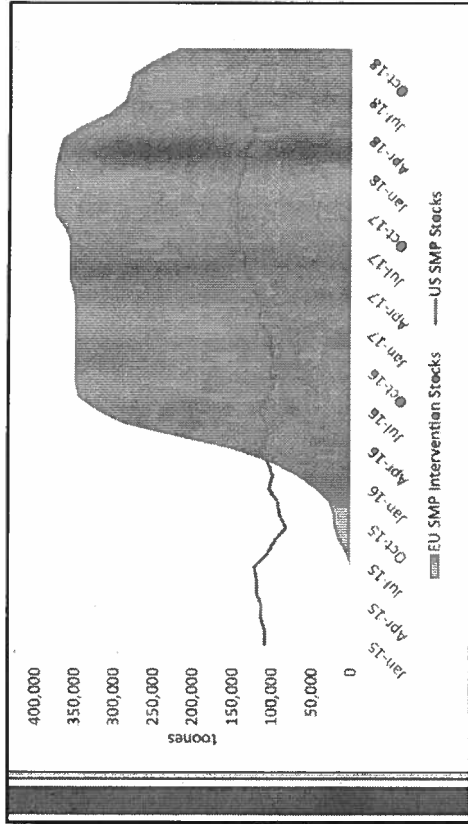


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## The Plan

- Cows, milk, prices
- Ohio Farm Business Analysis Program
- 2017 Ohio dairy farm performance
- A look back

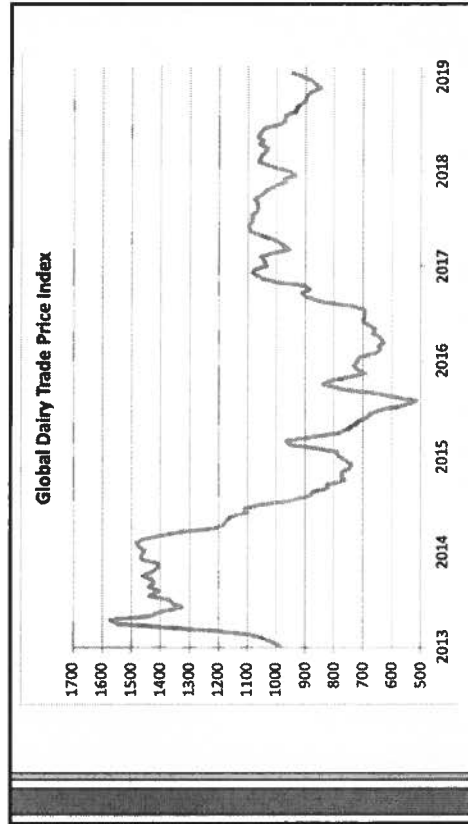





Midwest Marketing Area, Federal Order 33 Statistics, 1999 - 2018  
<http://www.farmers.gov>

Class # @ 3.0% BP = Class #  
 Producer Price Differential = PPD  
 Margin = PPD - Milk Price  
 Margin Projection Program = MPP  
 Milk Income Loss Contract = MILC

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Avg
2018	14.00	13.40	14.22	14.47	15.18	15.21	14.10	14.96	18.09	15.33	14.44	15.78	14.61
Class #	14.84	14.01	14.24	14.03	15.33	15.94	15.22	15.36	15.83	15.30	15.88	16.26	15.21
MPP	8.117000	8.883400	8.788970	8.816850	8.780830	7.365210	8.718160	7.408620	8.207690	8.857400			
Item 6.0% acquisition deduction													
2017	18.77	16.88	15.81	15.22	15.67	16.44	15.46	16.37	18.36	16.08	16.88	15.44	16.17
Class #	0.98	0.04	0.62	0.39	0.10	0.27	1.86	0.90	0.64	-0.12	-0.64	0.36	0.39
PPD	17.35	16.82	16.43	15.61	15.67	16.71	17.01	17.47	17.00	16.87	16.24	15.80	16.87
MPP	11.656180	10.884200	9.351920	8.849200	8.814200	8.287800	8.077150	10.263500	9.980500	10.003300	10.388000	9.906900	9.710750
Item 7.25% acquisition deduction													
2-month avg	10.828225						9.971200						9.874650



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# The Plan

- Cows, Milk, Prices

## - 2017 Ohio Farm Business Analysis Program

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Ohio Farm Business Analysis & Benchmarking Program

**Helping Ohio's farm families achieve financial success in today's challenging marketplace**

- Whole farm analysis
- Personalized reports
- How did the farm perform compared to previous years?

Whole Farm and Enterprise Analysis – A Look Into Your Farm's Financial Health

Financial Standards Graphics

Page 1

Current Ratio  
The ratio of a farm's current farm assets, if liquidated, would cover current liabilities

Total current farm assets divided by total current farm liabilities

Strong Greater than 2  
Satisfactory 1.5 to 2.0  
Vulnerable Less than 1.3

Working Capital to Gross Revenue  
Measures working capital available against the cost of the harvest

Working capital divided by gross revenue

Strong Greater than 50  
Satisfactory 30 to 50  
Vulnerable Less than 10

Current Ratio: 2.5 (2018), 2.2 (2017), 2.0 (2016), 1.8 (2015), 1.5 (2014), 1.2 (2013), 1.0 (2012), 0.8 (2011), 0.6 (2010), 0.4 (2009), 0.2 (2008)

Working Capital to Gross Revenue: 60 (2018), 55 (2017), 50 (2016), 45 (2015), 40 (2014), 35 (2013), 30 (2012), 25 (2011), 20 (2010), 15 (2009), 10 (2008)

Legend:  FARMER  My Farm

Source: 2018 Farm Financial Report

**FINPACK**

Enterprise Summary

Item	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Revenue	1,124,100	1,050,000	1,000,000	950,000	900,000	850,000	800,000	750,000	700,000	650,000	600,000
Operating Expenses	(850,000)	(800,000)	(750,000)	(700,000)	(650,000)	(600,000)	(550,000)	(500,000)	(450,000)	(400,000)	(350,000)
Operating Income	274,100	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
Net Income	200,000	180,000	160,000	140,000	120,000	100,000	80,000	60,000	40,000	20,000	0
Equity	1,200,000	1,100,000	1,000,000	900,000	800,000	700,000	600,000	500,000	400,000	300,000	200,000
Debt	400,000	350,000	300,000	250,000	200,000	150,000	100,000	50,000	0	0	0
Current Ratio	3.0	3.1	3.3	3.6	4.0	4.7	5.0	5.0	5.0	5.0	5.0
Working Capital to Gross Revenue	60	55	50	45	40	35	30	25	20	15	10

Legend:  FARMER  My Farm

Enterprise Summary

Financial Standards

Current Ratio: 3.0 (2018), 3.1 (2017), 3.3 (2016), 3.6 (2015), 4.0 (2014), 4.7 (2013), 5.0 (2012), 5.0 (2011), 5.0 (2010), 5.0 (2009), 5.0 (2008)

Working Capital to Gross Revenue: 60 (2018), 55 (2017), 50 (2016), 45 (2015), 40 (2014), 35 (2013), 30 (2012), 25 (2011), 20 (2010), 15 (2009), 10 (2008)

Legend:  FARMER  My Farm

- Enterprise summaries
- Benchmark reports
- Farms by size
- Farms by profitability groups

**Benchmark Reports  
Identifying Opportunities!**

Dairy Per Cow of Milk, 2014  
Benchmark Report, 15 Farms

Farm	Cows	Milk		Butterfat		Protein		Solids		Rank
		100 lbs	100 lbs	100 lbs	100 lbs	100 lbs	100 lbs	100 lbs	100 lbs	
1. ...	...	...	...	...	...	...	...	...	...	...
2. ...	...	...	...	...	...	...	...	...	...	...
3. ...	...	...	...	...	...	...	...	...	...	...
4. ...	...	...	...	...	...	...	...	...	...	...
5. ...	...	...	...	...	...	...	...	...	...	...
6. ...	...	...	...	...	...	...	...	...	...	...
7. ...	...	...	...	...	...	...	...	...	...	...
8. ...	...	...	...	...	...	...	...	...	...	...
9. ...	...	...	...	...	...	...	...	...	...	...
10. ...	...	...	...	...	...	...	...	...	...	...
11. ...	...	...	...	...	...	...	...	...	...	...
12. ...	...	...	...	...	...	...	...	...	...	...
13. ...	...	...	...	...	...	...	...	...	...	...
14. ...	...	...	...	...	...	...	...	...	...	...
15. ...	...	...	...	...	...	...	...	...	...	...

Source: Benchmark Report, available through benchmarking.com

**Tools for management and benchmarking**

**CFAES**

**2017 Ohio Farm Business Summary**

Ohio Enterprise Analysis and Benchmarking Reports






**CFAES**

**2017 Ohio Farm Business Summary**


Ohio Enterprise Analysis and Benchmarking Reports



**2018 Farm Business Analysis Staff**

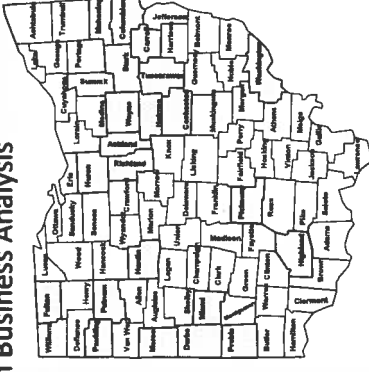




**Analysis Technicians**  
 Dellance - Clint Schroeder  
 Mahoning - Chris Benton  
 Miami - Haley Shoemaker  
 Pickaway - Sharon Harris  
 Pickaway - Trish Levering

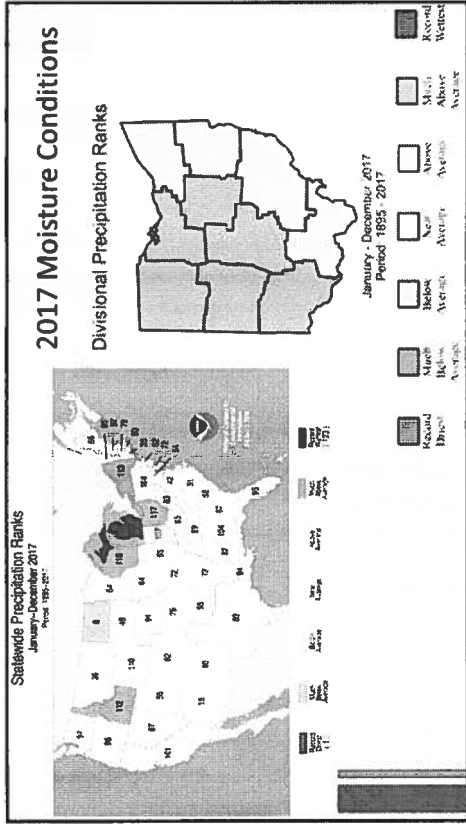


**2017 Ohio Farm Business Analysis**

- 43 crop and crop/livestock farms
- 32,626 crop acres
- Whole farm analysis



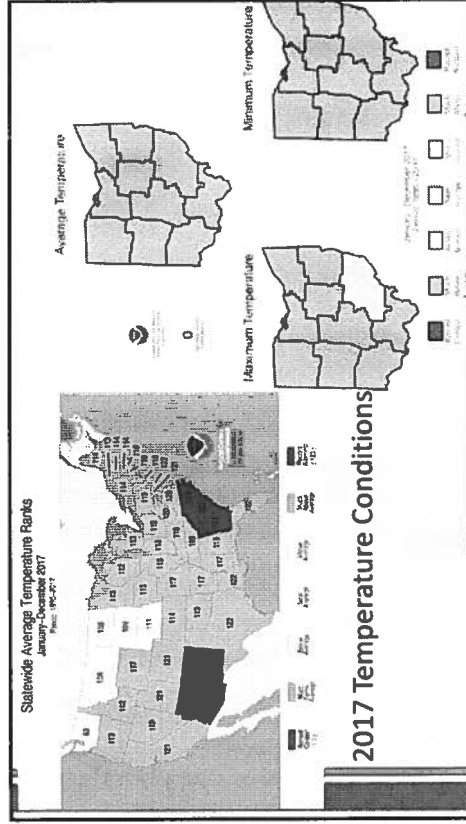
53 started



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## The Plan

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## 2017 Ohio Farm Business Analysis Program

43 Crop & Livestock Farms  
32,626 crop acres

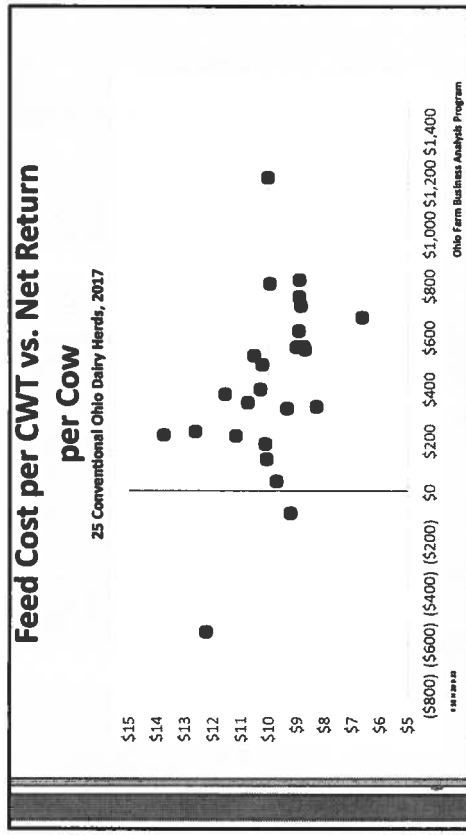
27 Dairy Farms, 25 w/ Enterprise Analysis

56x started, 48 completed, 7 Whole Farm, 56 w/ Enterprise Analysis

### 25 Conventional Ohio Dairy Farms, 2017

2017	Average of 25 farms	Range	High 20% Average
Number of Cows	340	42 - 1,100+	287
Milk sold Per cow	24,810	15,168 - 32,513	24,297
Feed cost per cwt of milk*	\$9.58	\$ 6.65 - \$13.75	\$9.33

\*Praised feed valued at cost of production (COP)  
Ohio Farm Business Analysis Program



### Context: Crop Yields and Prices

Ohio Crop Yields and Marketing Year Prices as reported by the USDA National Agricultural Statistics Service in the Ohio Annual Bulletin (September 2017)

	Corn Yield bu/acre	Corn Price \$/bu <sup>1</sup>	Soybean Yield bu/acre	Soybean Price \$/bu <sup>1</sup>	Wheat Yield bu/acre	Wheat Price \$/bu <sup>1</sup>	Alfalfa Hay tons/ac	Alfalfa Hay \$/ton <sup>1</sup>
2012	120	7.09	45	14.60	68	7.94	2.8	231
2013	174	4.41	49.5	13.00	70	6.54	3.5	194
2014	176	3.78	52.5	10.30	74	5.60	3.5	175
2015	153	3.80	50	9.16	67	4.57	2.9	158
2016	159	3.90	54.5	9.65	80	4.20	3.4	180
2017	177	3.55	49.5	9.50	74	4.90	3.2	134

<sup>1</sup>Marketing year average price <http://quicksats.nass.usda.gov/>

2017 \$9.58  
2016 \$10.02  
2015 \$11.88

Average Feed Cost per cwt:

### 25 Conventional Ohio Dairy Farms, 2017

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Number of Cows	340	42 - 1,100+	287
Milk sold Per cow	24,810	15,168 - 32,513	24,297
Feed cost per cwt of milk*	\$9.58	\$ 6.65 - \$13.75	\$9.33
Total cost per cwt. *	\$16.78	\$14.07 - \$21.00	\$15.72

\*Praised feed valued at cost of production (COP)  
\*\* Including revenue adjustments; cull cows, calves, etc.  
Ohio Farm Business Analysis Program

### Enterprise Analysis:



*Accrual adjusted!*

- Income
  - +/- Inventory change
  - Direct Expenses
  - Overhead Expenses
  - Machinery depreciation
  - Building depreciation
- Net Return**

### A look at 2016 and 2017...Conventionally

	2016 31 Herds	2017 25 Herds	2015 High 20%	2017 High 20%
Number of Cows	329	340	396	287
Milk sold Per cow	25,010	24,810	27,216	24,297
Feed cost per cwt of milk	\$9.87	\$9.58	\$9.20	\$9.33
Total cost per cwt	\$16.73	\$16.78	\$14.40	\$15.72
Net return per COW*	\$34	\$424	\$645	\$802

\*Before Labor and Management

Ohio Farm Business Analysis Program

### 25 Conventional Ohio Dairy Farms, 2017

2017	Average of 25 farms	Range	High 20% Average
Number of Cows	340	42 - 1,100+	287
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Feed cost per cwt of milk*	\$9.58	\$ 6.65 - \$13.75	\$9.33
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Net return per cow	\$424	(\$547) - \$1,216	\$802

\*Raised feed valued at cost of production (COP)

\*\* Including revenue adjustments; cull cows, calves, etc.

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Ohio Farm Business Analysis Program



### Trends in Ohio Net Return per Cow

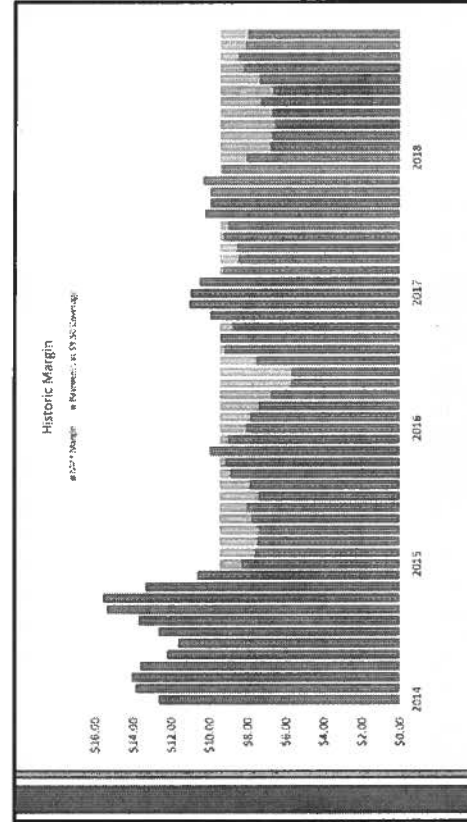
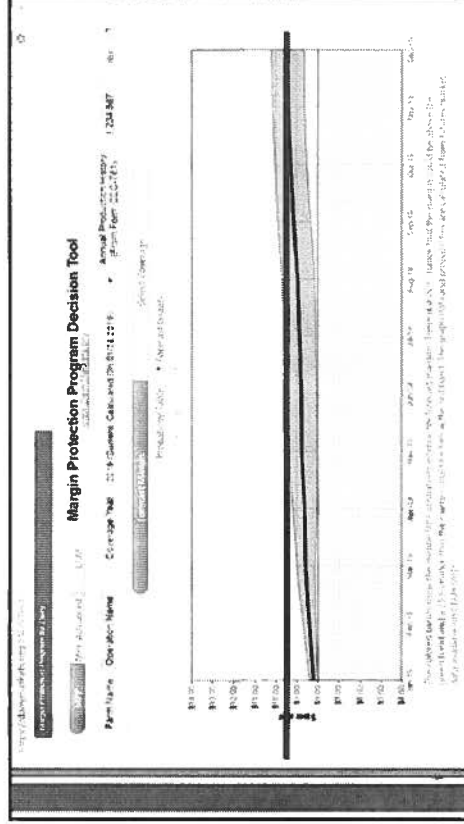
Conventional and Organic Herds

Feed cost/ cwt of milk	\$12.68	\$11.78	\$12.10	\$13.03	\$11.88	\$10.02	\$9.70
Net return per cow**	\$317	\$231	\$544	\$1,266	\$36	\$95	\$475
High 20% Average	2011	2012	2013	2014	2015	2016	2017
Feed cost/ cwt of milk	\$11.18	\$10.45	\$11.31	\$11.36	\$10.42	\$10.26	\$10.46
Net return per cow**	\$1,290	\$1,145	\$1,501	\$1,976	\$905	\$949	\$1,141

\*\* Before labor and management charge

Ohio Farm Business Analysis Program

	Avg of All Farms	Crop Farms	Dairy Farms
<b>Liquidity</b>	42	11	24
<b>Current Ratio</b>	1.67	1.79	1.51
<b>Working Capital / Gross Revenues</b>	17.3%	45.7%	10.4%
<b>Solvency</b>			
<b>Debt to Asset Ratio</b>	30%	25%	33%
<b>Profitability</b>			
<b>Rate of Return on Assets</b>	2.6%	(0.1%)	3.3%
<b>Repayment Capacity</b>			
<b>Term Debt Coverage Ratio</b>	1.46	0.84	1.56



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**For More Information About Farm Business Analysis :**

Visit: <http://farmprofitability.osu.edu/>

**Dianne Shoemaker**  
Field Specialist  
Dairy Production Economics  
330-533-5538  
shoemaker.2@osu.edu

**Hailey Shoemaker**  
Program Coordinator  
Farm Business Analysis  
330-533-5538  
shoemaker.362@osu.edu

@OhioFarmBusinessAnalysisandBenchmarking

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THE UNIVERSITY OF COLUMBIA  
AND THE UNIVERSITY OF MICHIGAN

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