



UNIVERSITY OF MINNESOTA  
EXTENSION

# Building Resilient Dairy Farms

## Extension Program Overview



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“ Agricultural resilience is about equipping farmers to absorb and recover from shocks and stresses to their agricultural production and livelihoods. ”

- FARMING FIRST

*Minnesota*

POST  
CARD

PLACE  
STAMP HERE  
DOMESTIC  
ONE CENT  
FOREIGN  
TWO CENTS



*Home to  
2,700  
dairy farms*



# MN DAIRY FARMERS NEEDS



Stay in  
Business



Improve their  
profit margins



Empirical  
Reccomendations

# STUDY GOAL

To identify the characteristics of resilient farms that impact farm financial health



# DEFINITION OF RESILIENT

- Top 25% adjusted net farm income ratio for the majority of years
  - Adjusted net farm income ratio = after-tax income ratio modified for reduced costs associated with farm producing feed
- Resilient Farm:
  - 3 out of the 6 years

# PARTNERS



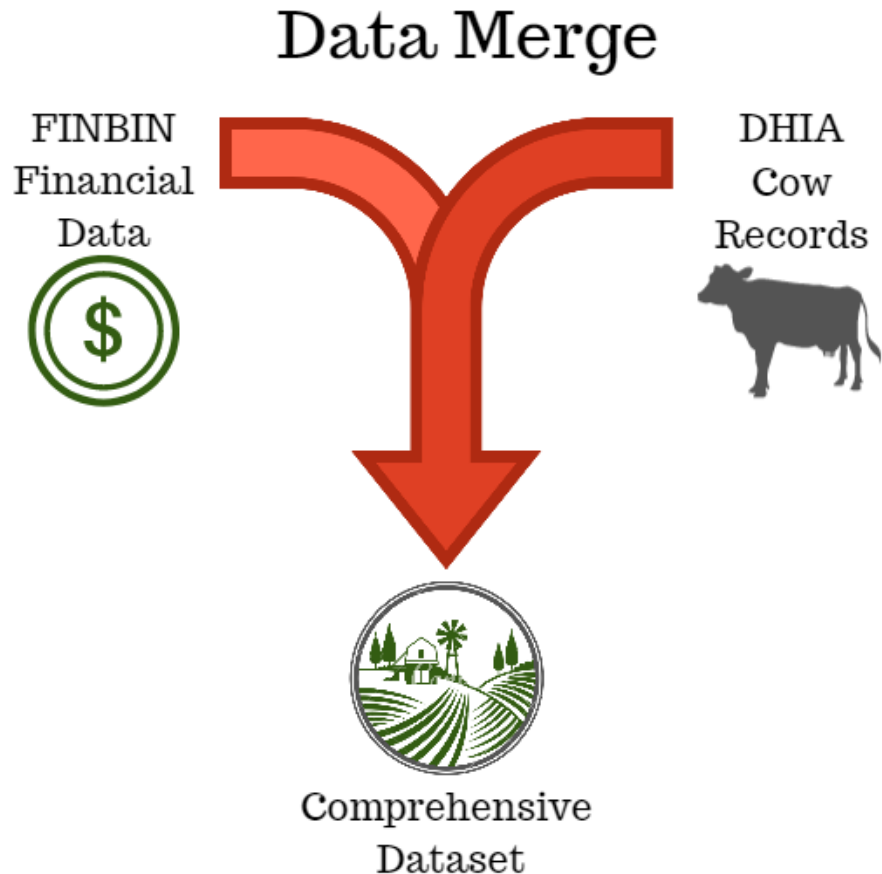
# PARTNERS

## FINBIN Dairy Farmers





# DATA SOURCE



- Data was provided by the Center for Farm Financial Management for 90 farms
- Herds were based in Minnesota
  - Data collected from 2012 to 2018

# THE DATA



- 90** Minnesota dairies
- .....
- 30** counties
- .....
- 2123** total variables
- .....
- 7** years, 2012 to 2018
- .....
- 198** average dairy cows per farm (range 22 to 1115)

# THE FARM



**52** age of farmer



**28** years of experience



**\$9.12** feed costs per cwt

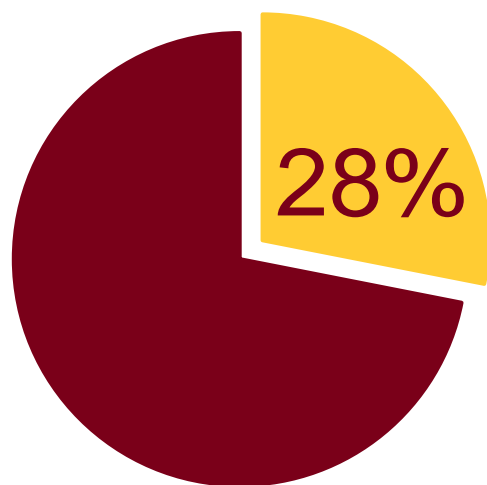


**\$18.32** milk price



**21,297** total milk per lactation

# RESILIENT FARMS



25 of 90 farms  
were resilient

**\$93,066**

Average cost net  
farm income



Mixture of herd size,  
more small herds



Age of principle farmer  
was 10 years younger

**0.29**

Average net farm  
income ratio



# DATA ANALYSIS

Relationship between ...



Creating financial  
weighing mechanism



Animal Health  
Culling Decisions



Farm Finances  
Financial Leverage



Adaption

... and farm resiliency

# RECOMMENDATIONS



Milk quality  
premiums over  
volume



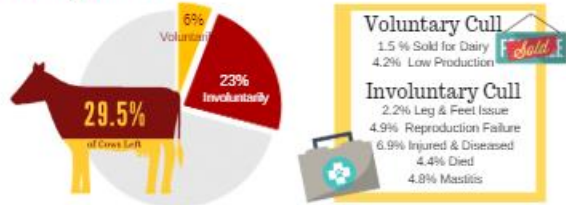
Have a plan and stick  
to it regardless of  
milk prices



Younger farmers and  
value educational  
opportunities



### Culling Reasons



### Why Culling Decision Matter



FINBIN Update  
July 2019 | Minneapolis, MN

Developed and Presented by:  
Amber Roberts | Master's Candidate  
Dr. Joleen Hadrich | Extension Economist



It's no secret that dairy farmers have favorites, but do favorite cows perform better than the rest of the herd?

**HELLO**  
my name is

### Definition

- Cows whose names were included in the database as opposed to a number ID
- Every herd had favorite cows listed
- 8.5% of cows were favorite cows



### In Conclusion

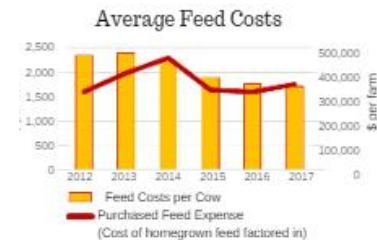
The decision to name a cow is a farmer's personal choice. Named cows did not perform differently from their herdmates and there were no financial advantages associated with these cows. Farmer continued to make rational management decisions towards their favorite cows, culling at the same rate as non-favorite cows.

### Favorite Cows

- No statistically significant difference between favorite and non-favorite cows:
  - Total Milk
  - Total Butterfat or Protein
  - Average SCC score
  - % Culled
  - Length of Time in Herd
  - Heifer survival rate
  - Financial Measures

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Feed costs are the largest variable expense for dairies. Accounting for an average of 47% of total expenses of the studied dairy farms. However, this percentage can range from 40-60% for dairy farms in Minnesota.

### Resilient Farms

Resilient farms had higher milk price to feed margin. While there was no statistically significant difference between resilient and non-resilient farm average feed cost per cows, being a resilient farm was associated with a \$0.52 per cwt increase in milk price received.



Resilient farms own  
5% more  
pastureland

**10.1**  
Average milk price to feed margin

**\$132,549**  
Average cost of purchased feed

More info coming soon...

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**AND MORE COMING SOON!**

# PROGRAMS GOALS

- Increase knowledge of resilient dairy practices
  - Producers can recognize recommendations that can benefit their operation
- Improve financial benchmarks
  - Implement of recommendations to be included into FINBIN reports
- Farmers implement recommended practices
  - Increase the average adjusted net farm income for Midwest dairy producers



# EDUCATIONAL OUTPUTS

Shared with Farm Business Professionals



Presentations



Webinars



Journal Articles

# EDUCATIONAL OUTPUTS

Shared with Farmers



Presentations



Extension Publications



Social Media



FINBIN reports

# EVALUATION

- Written survey at the end of presentation
- Questions in the Q&A for the Webinars
- Feedback from Farm Business Management Educators
- Questions added to FINBIN



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Driven to Discover<sup>SM</sup>

# Thank You!

## Any Questions?

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