Factors affecting profitability on Wisconsin dairy farms.

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Introduction

Objectives

Assess the impact of feeding strategies associated with organic (ORG), grazier (GRA) or conventional (CON) practices on farm profitability

Materials and Methods

- **A survey questionnaire with 10 parts:**
  - Part A: Farm business structure
  - Part B: People on the farm
  - Part C: Dairy herd
  - Part D: Feeding
  - Part E: Pasture
  - Part F: Crops
  - Part G: Manure and nutrient management
  - ~~(Part H: Farmer-farmer interactions)~~ Removed
  - Part I: Economic
  - Part J: Satisfaction

Materials and Methods

- Farm selection:

  Farms were selected from Wisconsin's official lists of certified milk producers and organic producers as well as a list of graziers compiled from extension agents from the University of Wisconsin.

Materials and Methods

- Profitability was defined as the Income Over Feed Cost (IOFC)

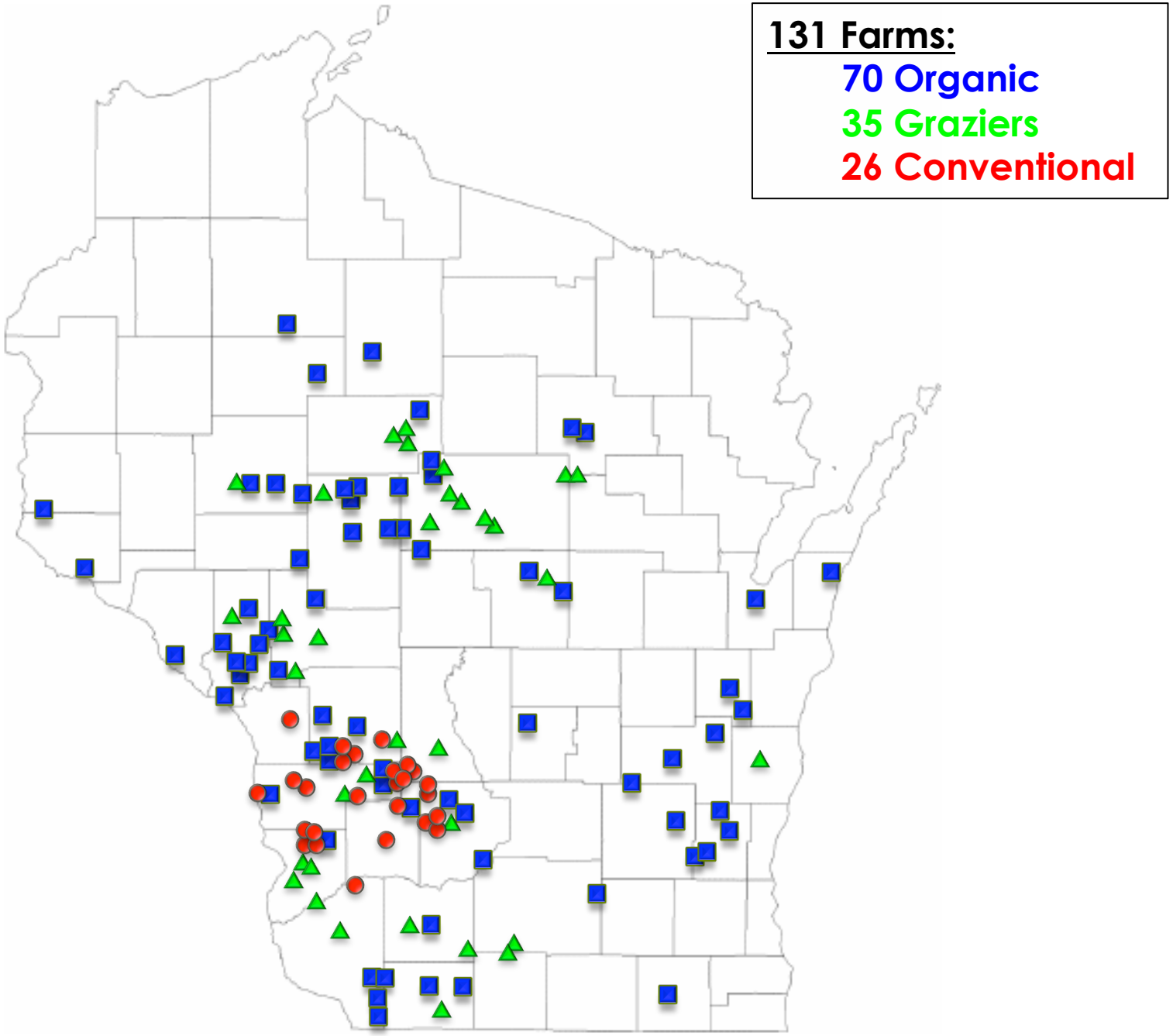
IOFC = income from milk sales – feed costs

- Data was analyzed using cluster analysis by complete linkage.

Results

- 131 farms were surveyed between October 2010 and January 2012.

- Farms were divided into 3 feeding systems: Organic, Conventional and Graziers.

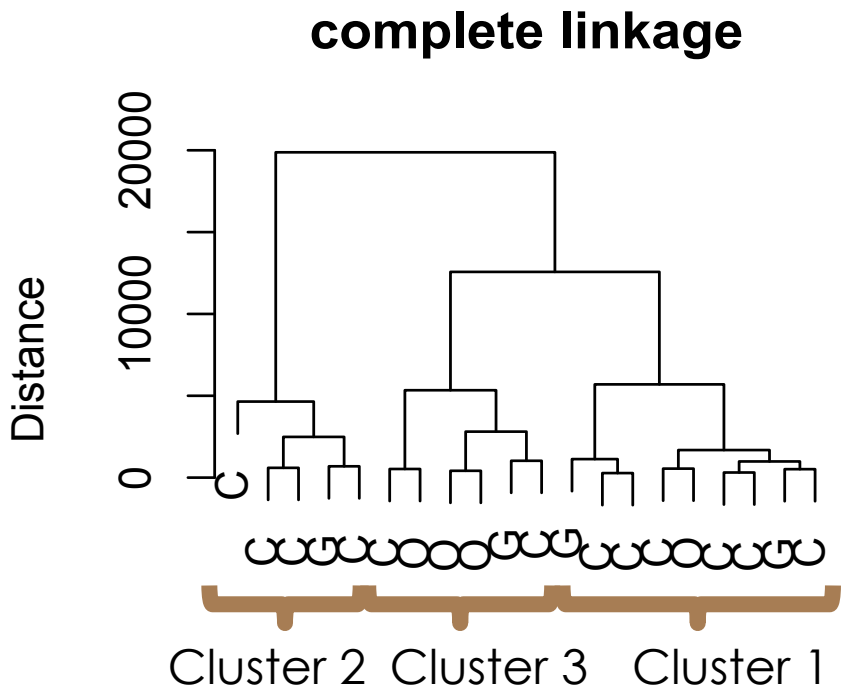

131 Farms:
70 Organic
35 Graziers
26 Conventional

Preliminary results

- Results from 20 farms are presented here.
  - 4 ORG
  - 4 GRA
  - 12 CON.

Preliminary results

C: Conventional
O: Organic
G: Grazier



Preliminary results

	Cluster 1	Cluster 2	Cluster 3
# Organic farms	1	0	3
# Grazing farms	2	1	1
# Conventional farms	6	4	2

	Cluster 1	Cluster 2	Cluster 3
Total acres	287		
Age of the respondent	49		
Number of cows	72		
Milk production (lbs/cow per year)	15,517		
Fat content (%)	3.78		
Protein content (%)	3.00		
SCC (x1,000 cells/ml)	287		
Milk price ($/cwt)	16.77		
% milk not sold	1.65		
Total DMI in winter (lbs/cow per day)	52.8		
% grass/legume silage in winter	19.3		
% hay in winter	37.8		
% corn silage in winter	12.0		
% concentrates in winter	30.0		
% vitamins and minerals in winter	0.9		
IOFC in winter ($/cow per day)	5.97		

	Cluster 1	Cluster 2	Cluster 3
Total acres	287	236	
Age of the respondent	49	44	
Number of cows	72	71	
Milk production (lbs/cow per year)	15,517	23,630	
Fat content (%)	3.78	3.56	
Protein content (%)	3.00	3.03	
SCC (x1,000 cells/ml)	287	204	
Milk price ($/cwt)	16.77	15.86	
% milk not sold	1.65	0.49	
Total DMI in winter (lbs/cow per day)	52.8	44.4	
% grass/legume silage in winter	19.3	37.8	
% hay in winter	37.8	0.9	
% corn silage in winter	12.0	18.2	
% concentrates in winter	30.0	42.4	
% vitamins and minerals in winter	0.9	0.7	
IOFC in winter ($/cow per day)	5.97	8.09	

	Cluster 1	Cluster 2	Cluster 3
Total acres	287	236	134
Age of the respondent	49	44	49
Number of cows	72	71	48
Milk production (lbs/cow per year)	15,517	23,630	9,104
Fat content (%)	3.78	3.56	4.36
Protein content (%)	3.00	3.03	3.25
SCC (x1,000 cells/ml)	287	204	317
Milk price ($/cwt)	16.77	15.86	21.88
% milk not sold	1.65	0.49	3.08
Total DMI in winter (lbs/cow per day)	52.8	44.4	39.6
% grass/legume silage in winter	19.3	37.8	15.0
% hay in winter	37.8	0.9	61.8
% corn silage in winter	12.0	18.2	4.6
% concentrates in winter	30.0	42.4	16.2
% vitamins and minerals in winter	0.9	0.7	2.4
IOFC in winter ($/cow per day)	5.97	8.09	5.22

Preliminary results

- Cluster 1:
  - Largest land base but intermediate milk production, composition and price.
  - Highest DMI but intermediate percentages of each diet ingredients compared with farms in clusters 2 and 3.

"intermediate farms" with an IOFC of $5.97/cow/day.

Preliminary results

- Cluster 2:
  - Similar in size to cluster 1 (# cows and acres).
  - Highest milk production and percentage of concentrate in the diet but lowest milk composition and price.

→ "*productive efficient farms*" with an IOFC of $8.09/cow per day

Preliminary results

- Cluster 3:
  - Smallest land base and smallest number of cows.
  - Highest milk composition and price but lowest milk production and estimated dry matter intake.

"low input farms" with an IOFC of $5.22/cow/day.

CONCLUSION

- The 3 clusters contained farms from different systems suggesting that the farm system is not a good indicator of farm profitability.
- The scope of inference from this analysis should be restricted to the sample population from which the data was collected. Results presented here reflect only a small portion of all the data collected with the 131 surveys.
- Detailed impact of feeding management strategies on production variables, environmental outcomes and economics performances will emerge from the analysis of the entire survey results.