The 4-State Dairy Extension Feed Cost Evaluator

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What is benchmarking?

- Continuous process of measuring a variable and comparing it against same farm or other farms
  - PDCA: Plan, Do, Check, Act
- Evaluation of farm performance against own history or industry performance

Why benchmarking?

- Knowledge gained by benchmarking helps to build operational plans of improvement
- The search for industry's better practices leads to achieve superior performance
- Helps farmer to learn from own and other's strenghts and weaknesses

Why IOFC?

- Most of the dairy revenues and costs are contained in the IOFC
- IOFC responds greatly to market conditions
- IOFC indirectly assesses other farm conditions: health, reproduction, culling, etc.
- Management decisions directly impact IOFC

Why IOFC?

- Proven method to evaluate dairy profitability
- Indicates when a farm:
  - Is profitable
  - Is not profitable
  - Needs improvements
  - Has opportunities of improvement
- Producers perform decision-making based on the IOFC

Why IOFC?

- Enables producers to make informed decisions regarding
  - Purchase feed stuffs
  - Price risk management
  - Ration adjustment
  - Productivity enhancers
  - Breeding schemes
  - Culling protocols
  - Etc.

Why IOFC?

- Other farm revenues and expenses are less variable than IOFC
  - Less variable revenues and expenses can be assumed fixed
  - Farm needs to operate at least to a break-even level
  - A target IOFC can be defined:
    - E.g., $5/cwt milk: That should be the farm minimum IOFC to remain profitable

Challenges of benchmarking IOFC

- IOFC = Milk Value – Feed Cost

  (Very Simple Concept)

- Who really know their farm's IOFC?
  - By groups of cows
  - By months (or seasons of the year)

- How to estimate meaningful IOFC?

Challenges of benchmarking IOFC

- Even if a farm has historical IOFC, not as much value if it can't be compared with peers
- Who maintains a systematic approach to collect IOFC?
- Who performs IOFC benchmarking permanently and consistently?
- What is the protocol/framework to estimate, collect, and analyze dairy farm's IOFC?

How to Benchmark IOFC?

Collect Farm Data

Analyze Farm Data

Compare Farm Data

How to Collect Data?

Collector 1

- Farm 1
- Farm 2

Collector 2

- Farm 1
- Farm 2
- Farm 3
- Farm 4
- Farm 5

Collector 3

- Farm 1
- Farm 2
- Farm 3

4-STATE DAIRY EXTENSION FEED COST EVALUATOR

UWEX-DAIRY MANAGEMENT

Farms | Ingredients | Rations | Summary | Analysis

4-STATE DAIRY EXTENSION FEED COST EVALUATOR

UWEX-Dairy Management

Username

Password

Login

Create New Account

Change Password

©Dairy Management

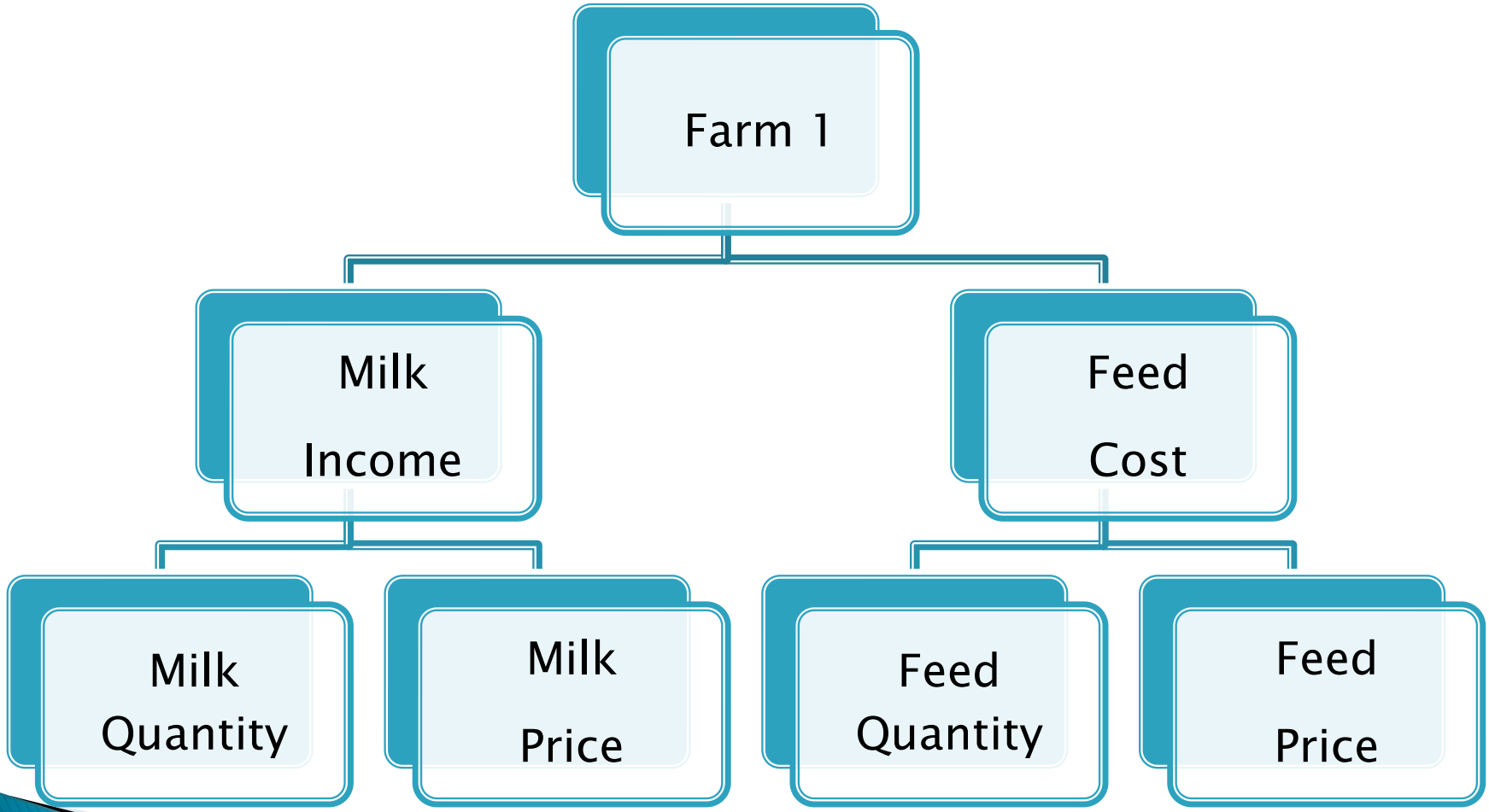
IOFC

Income Over Feed Supplement Cost Database is a novel Application to allow agents/farm owners to enter farm details and perform analysis on individual as well as multiple farms depending on herd size, month and year

UWEX

DairyMGT Home

How to Collect Data?



4-STATE DAIRY EXTENSION FEED COST EVALUATOR

UWEX-DAIRY MANAGEMENT

Farms | Ingredients | Rations | Summary | Analysis LOGOUT

FARMS

View & Edit Farms

Farm Name	
	Add Farm

Farm Name

- Farm1
- Farm2
- Farm3
- Farm4
- Farm5
- Farm6
- Farm7
- Farm8
- Farm9
- Farm10

Save

FARMS
(View existing farms, add new farms, and delete farms)

IOFC DATABASE

Welcome to IOFC Database. These are the suggested steps for using the system.

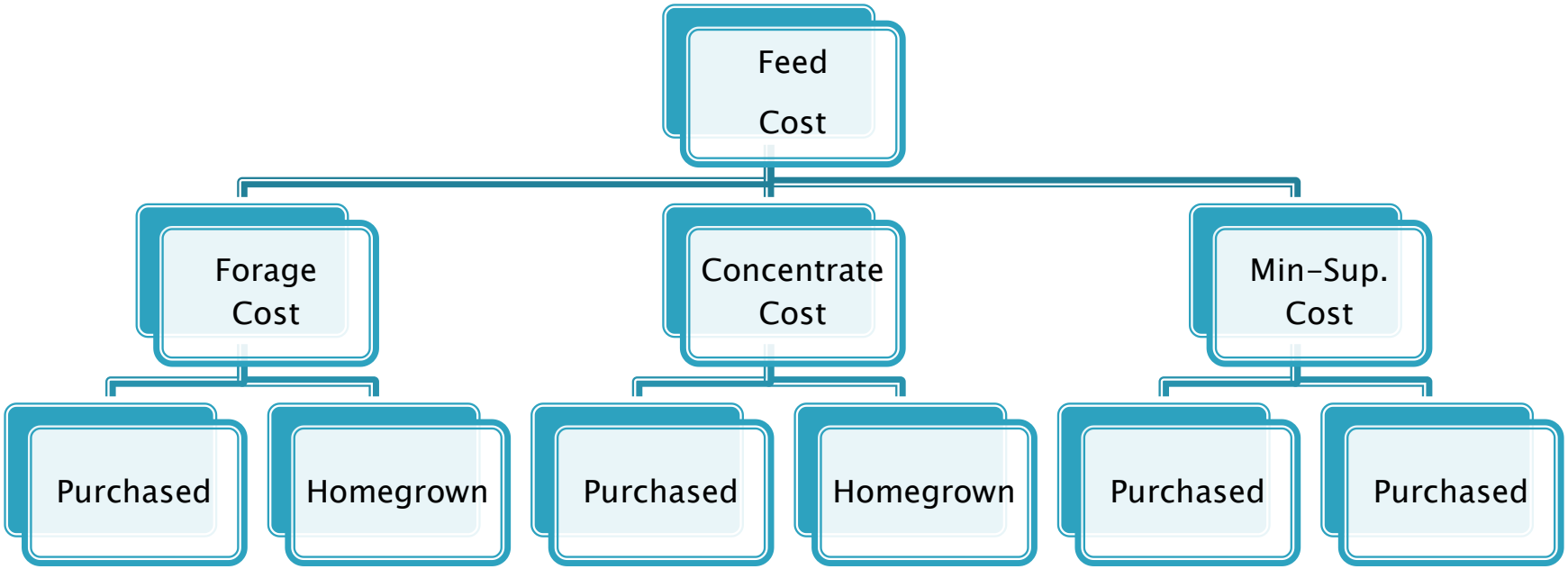
1. In this page, you can add or delete farms. To add a farm enter a farm name and select the county where the farm is located and click "Add Farms". To delete a farm, delete the farm name and click save.

2. Once the farms are defined, you can start defining the "Ingredients" on the ingredients page, their DM composition, and prices used on each particular farm.

3. Once the ingredients are entered, you can define the rations for different group of cows in the "Ration" page.

4. Once you have defined all ingredients and rations, you can see the IOFC summary at the "Summary" page. On this page, you would first need to enter the milk production and price.

How to Collect Data?



Forages

INGREDIENTS

Add/Edit Ingredients in the Farm

Farm Name: Superior Farm

Month: April 2010

Forage	%DM	Price As Fed $/ton	Price DM $/ton
Corn Silage-Cosi	33		130
Hay Forage	85	140	
Hay Forage-	85	145	
Hoekstra hay	84	120	
Canary hay	84	55	
Bagged Haylage	38	62	
Straw	92	75	
Alf Silage-Alsi	38		174
Hay Forage	38		128

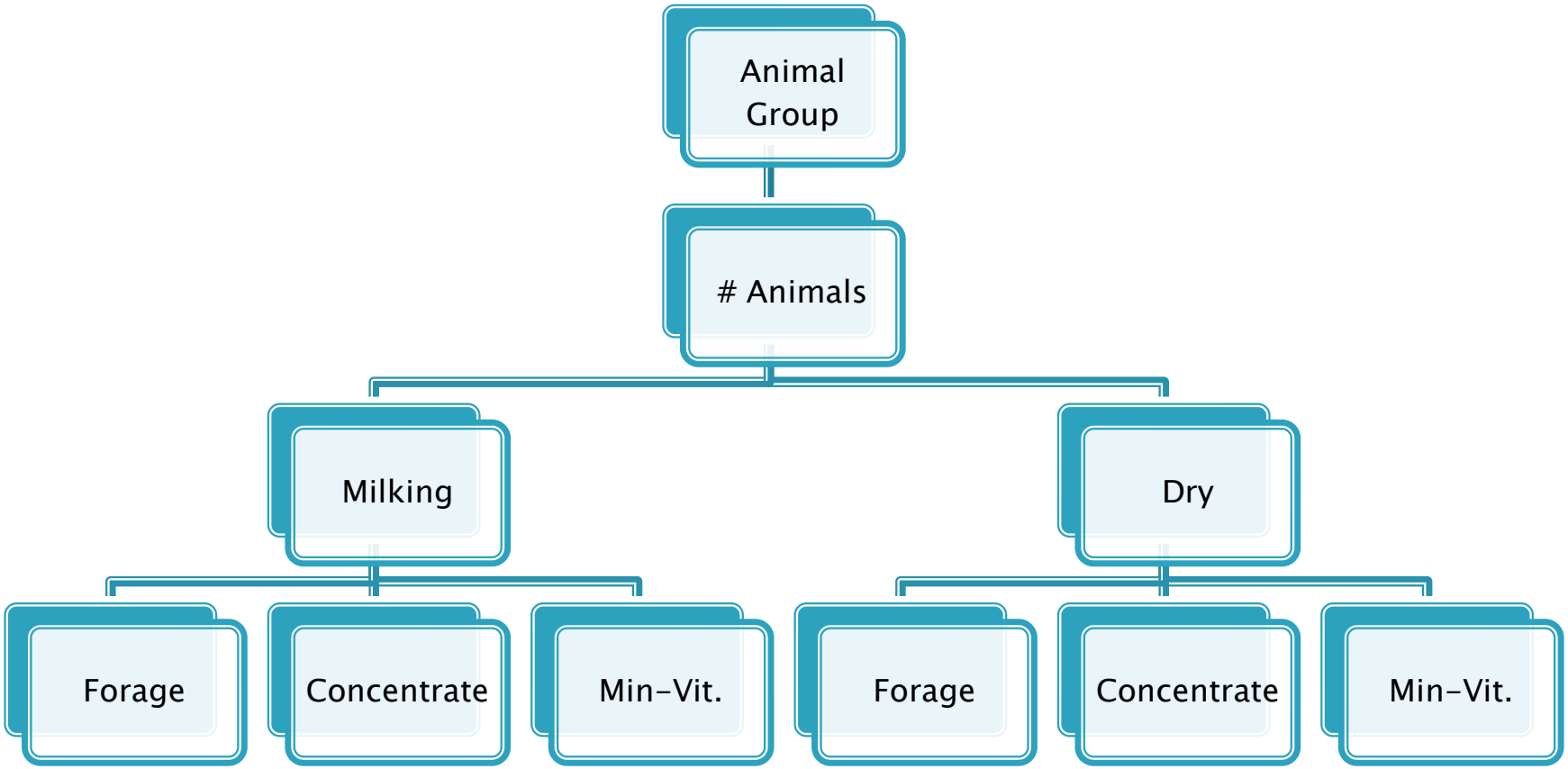
Concentrates

Energy Protein Supplements	%DM	Price As Fed $/ton	Price DM $/ton
Corn-CGG	85		169.41
SoybeanMeal SBM			
Dry corn	85	207	
Prefresh conc	90.2	145.8	
Lactating Protein	90.9	260	
TMR Weighback	50	35	
Energy Booster	98	1450	
Bran Syrup	60	41.6	

Min-Vit., Byproduct

Min-Vit Supplement & ByProduct	%DM	$/cwt
Calcium Carbonate		
Urea	99	28
DC Mineral	98	58.2
Lactating Mineral	95.5	41.5
Yeast	98	49.1

How to Collect Data?



Milk Value

Farm Name
Superior Farm
Month
April 2010

Farm Information		
Farm Name	Superior Farm	
Person Reporting	Reporter1	
Farm Owner/UserName	Dairy	
Last Updated	2010-04-26	
Number of Cows	1051	*Milking*
	242	*Dry*
Milk Bulk Tank Production(lb/cow/day)	81	
Milk ButterFat(%)	3.5	
Milk Protein(%)	3.1	
Milk Price($/cwt)	14.75	
Milk Revenue ($/cow/day)	11.95	

Rations

RATIONS

Edit Rations of the Farm

Farm Name

Superior Farm 2

Ration Group Information	Name	Number	Milking
Ration Group 1	Lactation 1	459	☑
Ration Group 2	Lactation 2	715	☑
Ration Group 3	Postfresh	112	☑
Ration Group 4	Dry	156	☐
Ration Group 5	Prefresh	91	☐
Ration Group 6	Ration 6	0	☐
Ration Group 7	Ration 7	0	☐
Ration Group 8	Ration 8	0	☐
Ration Group 9	Ration 9	0	☐

Rations

Farm Name: Farm3 | **Month**: April 2010

Forage — Ration Group (lb/cow/d): As Fed

	P	Ration1	Ration2	Ration3	Ration4	Ration5	Ration6	Ration7	Ration8	Ration9
Hay	☐		4	4.259	1.6	1.48	1.48			
Wheat Straw	☐	3.7	1	0.48	0.41	0.37	0.37			
Wheat Straw Purch	☑	3.7	1	0.48	0.41	0.37	0.37			
Hay Forage	☐	15.76	4.89	6.522	18.36	17.6	17.6			
Corn Silage-Cosi	☐	30.33	30.33	30.33	57.2	48.42	48.42			

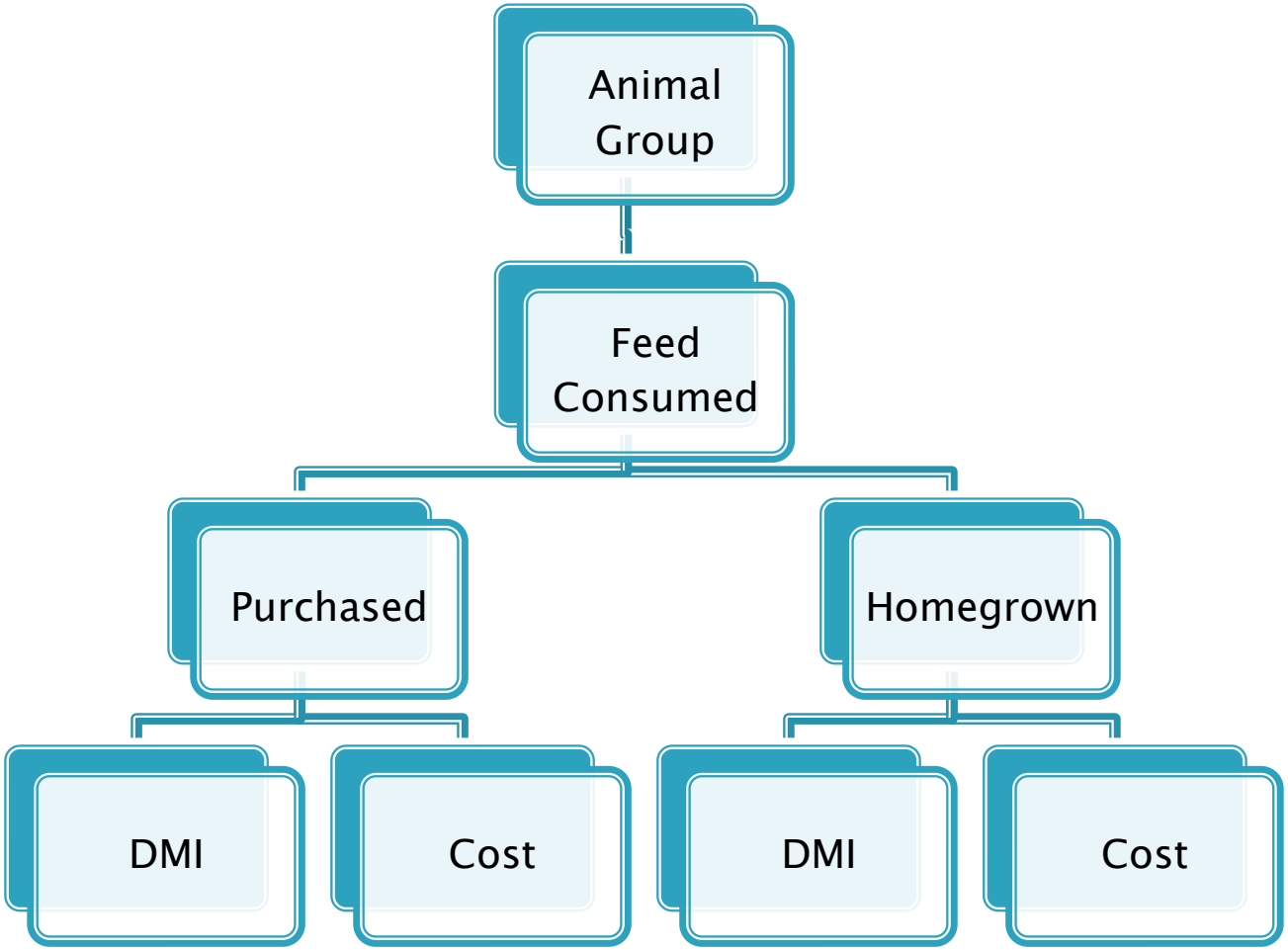
Energy/Protein Supplements — Ration Group (lb/cow/d): As Fed

	P	Ration1	Ration2	Ration3	Ration4	Ration5	Ration6	Ration7	Ration8	Ration9
Corn-CGG	☐				6.33	5.84	5.84			
Wet Gluten	☑	2.94		6.38	10.82	9.99	9.99			
Protein	☑				13.68	12.6	12.6			
Permeate	☑			4	9	7.75	7.75			
Post Supplement	☑			15.6						
Closeup mix	☑		7.3							
SoybeanMeal SBM	☐									

Min-Vit & Additive Supplements — Ration Group (lb/cow/d)

	Ration1	Ration2	Ration3	Ration4	Ration5	Ration6	Ration7	Ration8	Ration9
Calcium Carbonate									
Dry cow Mineral	0.6								
lactating mineral				0.75	0.69	0.69			

How to Summarize Data by Farm Animal Groups ?



Group Summary

	Dry			Dry
	Purchased		Home-Grown	
	DMI	Cost	DMI	Cost
Forage	3.29	0.19	21.46	1.28
Energy/Protein Supplemer	1.59	0.05	0	0
Min-Vit & Additive Supplen	0.6	0.16	-	-
Total Feed	5.48	0.4	21.46	1.28
DMI (lb/cow/d)	26.94			
Feed Costs ($/cow/d)	1.69			
Number of Cows (#)	60			

	CU			Dry
	Purchased		Home-Grown	
	DMI	Cost	DMI	Cost
Forage	0.89	0.05	17.46	1.05
Energy/Protein Supplemer	6.64	1.2	0	0
Min-Vit & Additive Supplen	0	0	-	-
Total Feed	7.53	1.25	17.46	1.05
DMI (lb/cow/d)	24.99			
Feed Costs ($/cow/d)	2.3			
Number of Cows (#)	60			

	Fresh			Lact
	Purchased		Home-Grown	
	DMI	Cost	DMI	Cost
Forage	0.43	0.02	17.97	1.08
Energy/Protein Supplemer	18.13	2.04	0	0
Min-Vit & Additive Supplen	0	0	-	-
Total Feed	18.56	2.06	17.97	1.08
DMI (lb/cow/d)	36.53			
Feed Costs ($/cow/d)	3.14			
Number of Cows (#)	33			

	main			Lact
	Purchased		Home-Grown	
	DMI	Cost	DMI	Cost
Forage	0.36	0.02	30.76	1.77
Energy/Protein Supplemer	20.44	2.1	4.81	0.41
Min-Vit & Additive Supplen	0.75	0.38	-	-
Total Feed	21.55	2.5	35.57	2.17
DMI (lb/cow/d)	57.13			
Feed Costs ($/cow/d)	4.68			
Number of Cows (#)	477			

	2 year			Lact
	Purchased		Home-Grown	
	DMI	Cost	DMI	Cost
Forage	0.33	0.02	27.11	1.57
Energy/Protein Supplemer	18.71	1.93	4.44	0.38
Min-Vit & Additive Supplen	0.69	0.35	-	-
Total Feed	19.73	2.3	31.55	1.95
DMI (lb/cow/d)	51.28			
Feed Costs ($/cow/d)	4.25			
Number of Cows (#)	259			

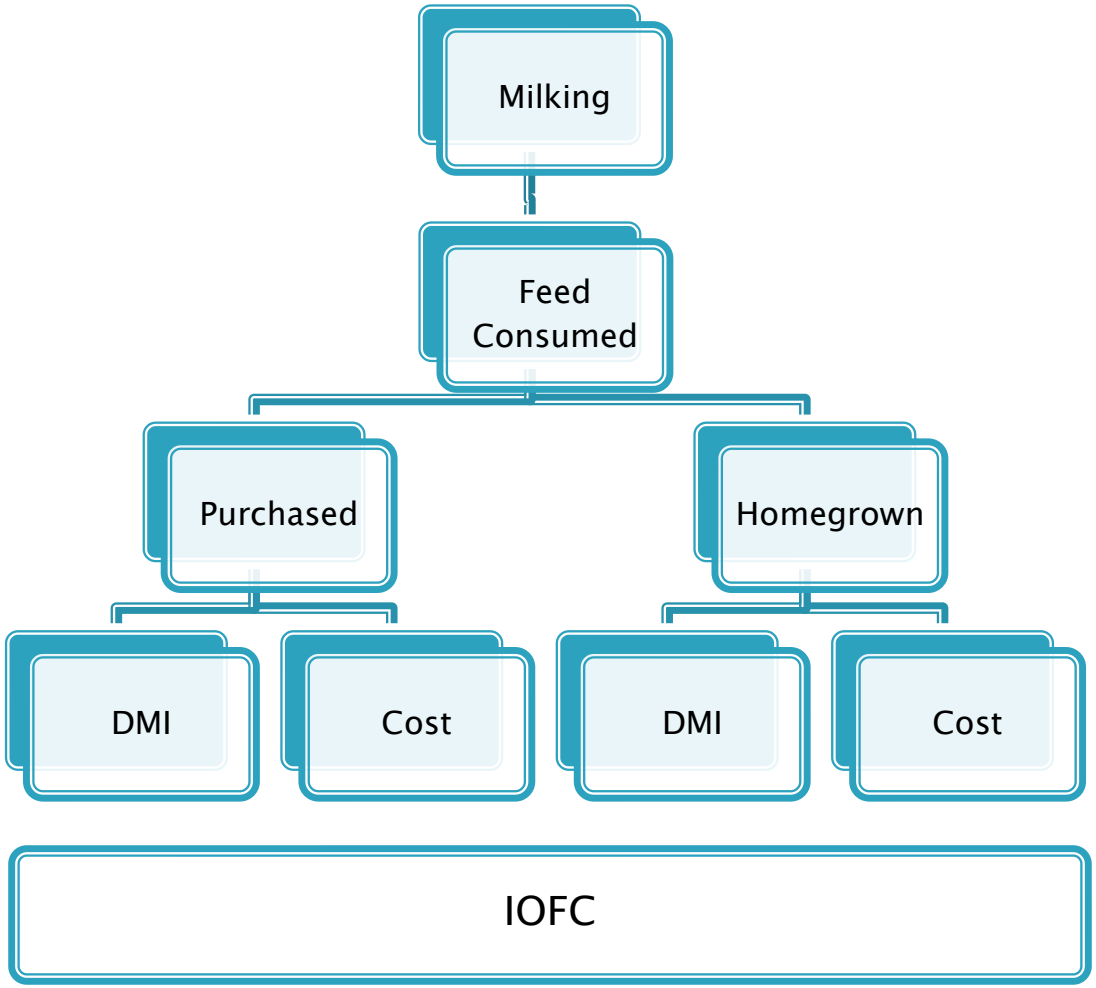
	hospital			Lact
	Purchased		Home-Grown	
	DMI	Cost	DMI	Cost
Forage	0.33	0.02	27.11	1.57
Energy/Protein Supplemer	18.71	1.93	4.44	0.38
Min-Vit & Additive Supplen	0.69	0.35	-	-
Total Feed	19.73	2.3	31.55	1.95
DMI (lb/cow/d)	51.28			
Feed Costs ($/cow/d)	4.25			
Number of Cows (#)	18			

	Ration 7			Dry
	Purchased		Home-Grown	
	DMI	Cost	DMI	Cost
Forage	0	0	0	0
Energy/Protein Supplemer	0	0	0	0
Min-Vit & Additive Supplen	0	0	-	-
Total Feed	0	0	0	0
DMI (lb/cow/d)	0			
Feed Costs ($/cow/d)	0			
Number of Cows (#)	0			

	Ration 8			Dry
	Purchased		Home-Grown	
	DMI	Cost	DMI	Cost
Forage	0	0	0	0
Energy/Protein Supplemer	0	0	0	0
Min-Vit & Additive Supplen	0	0	-	-
Total Feed	0	0	0	0
DMI (lb/cow/d)	0			
Feed Costs ($/cow/d)	0			
Number of Cows (#)	0			

	Ration 9			Dry
	Purchased		Home-Grown	
	DMI	Cost	DMI	Cost
Forage	0	0	0	0
Energy/Protein Supplemer	0	0	0	0
Min-Vit & Additive Supplen	0	0	-	-
Total Feed	0	0	0	0
DMI (lb/cow/d)	0			
Feed Costs ($/cow/d)	0			
Number of Cows (#)	0			

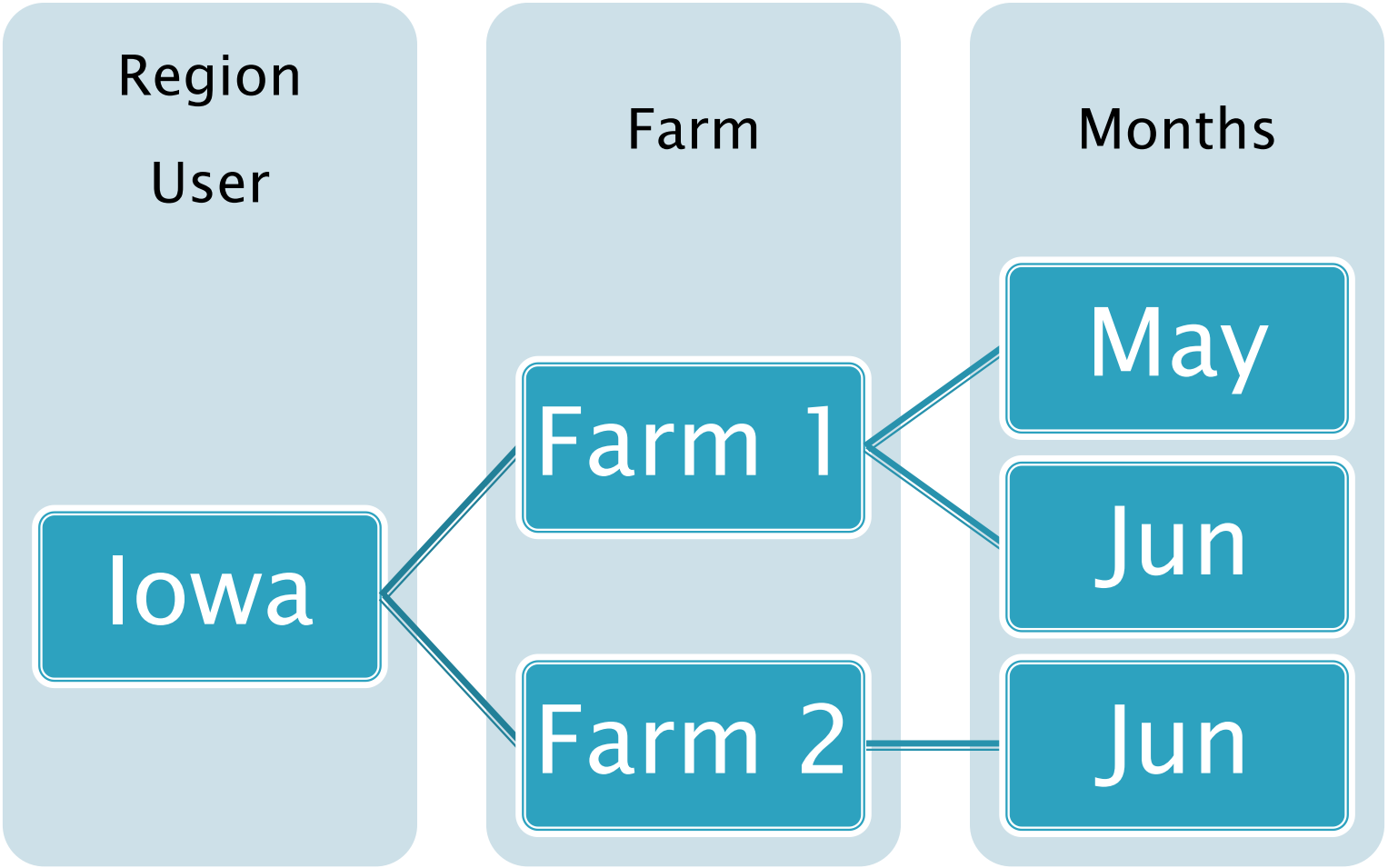
How to Summarize Data by Farm ?



Farm Summary

Summary	Milking	Dry
DMI (lb/cow/day)	54.2	25.97
MILK/DMI	1.75	
FCM/DMI	1.64	
ECM/DMI	1.74	
PURCHASED FEED COST ($/cow/day)	2.41	0.83
HOME GROWN FEED COST ($/cow/day)	2.05	1.17
SUPPLEMENT FEED COST ($/cow/day)	0.01	
TOTAL FEED COSTS ($/cow/d)	4.46	1.99
INCOME OVER PURCHASED SUPPLEMENT COST (IOPSC) ($/cow/day)	15.21	
INCOME OVER PURCHASED FEED COSTS (IOPFC) ($/cow/day)	12.81	
INCOME OVER FEED COSTS (IOFC) ($/cow/day)	10.76	

How to Analyze Data Geographically and Temporarily?



Analyses

4-STATE DAIRY EXTENSION FEED COST EVALUATOR

UWEX-DAIRY MANAGEMENT

Farms | Ingredients | Rations | Summary | Analysis

ANALYSIS

(Perform Analysis on Multiple Farms)

Farm	Milking Cows	Month
Farm1	Less than 100	April 2010
Farm2	100 to 350	
Farm3	350-500	
Farm4	Greater than 500	
Farm5		

(Ctrl + Click to Make Multiple Selection)

Include in Analysis	Ingredient	%DM	Effective Price As Fed ($/ton)	Price As Fed ($/ton)	Price DM ($/ton)
☐	Corn Silage Cosi		0		
☐	Hay Forage		0		
☐	Corn CGG		0		
☐	SoybeanMeal SBM		0		
		$/cwt			
☐	Milk Price	15			

Analyze | Clear Selections

Analyses

Farm	Milking Cows	Month
Farm1 Farm2 Farm3 Farm4 Farm5	Less than 100 100 to 350 350-500 Greater than 500	April 2010

(Ctrl + Click to Make Multiple Selection)

Standardized Farm/Mailbox

Analyze Clear Selections

Download Summary

Net Summary

Farms Analyzed 10

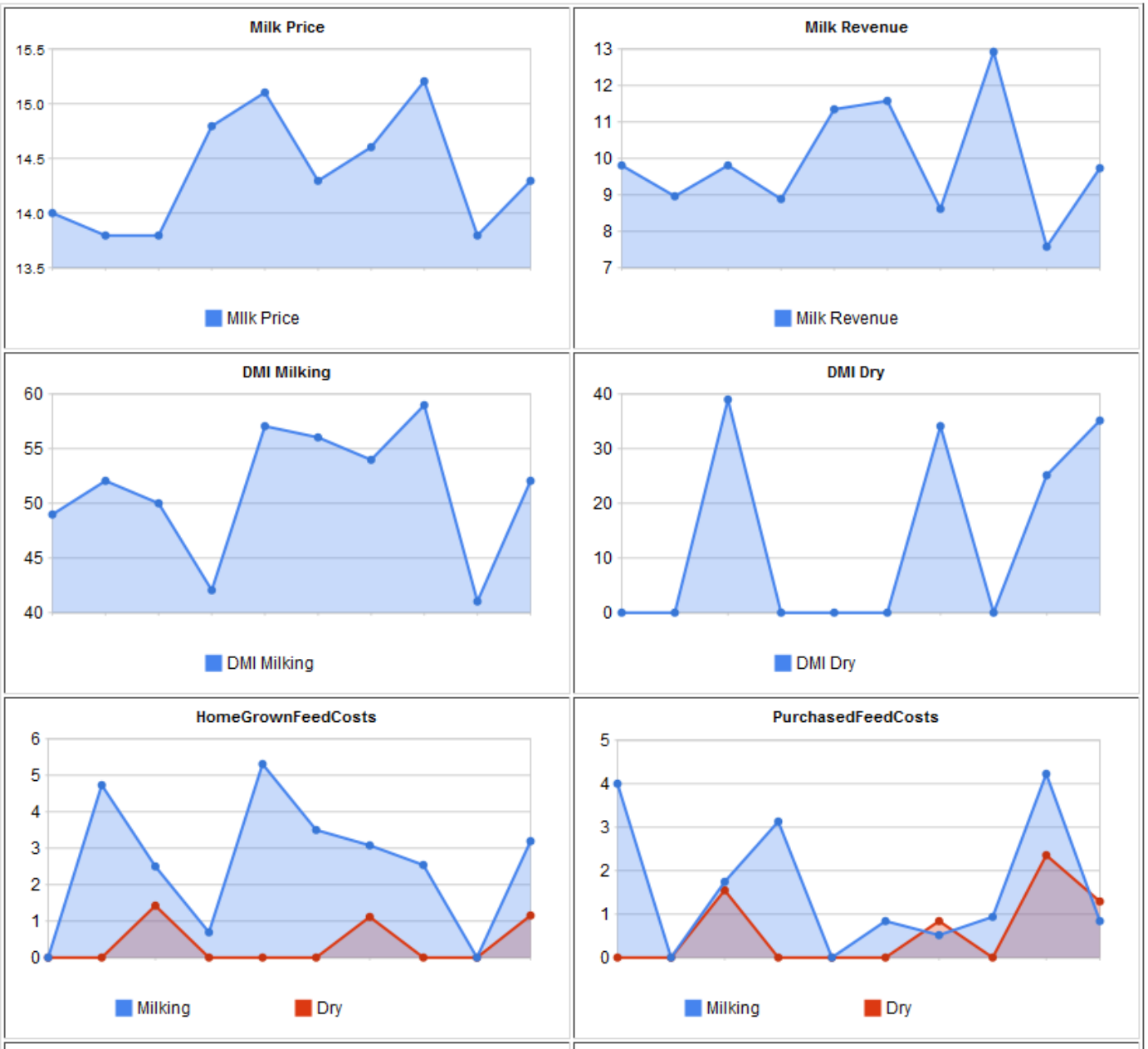
Farm Statistics

Farm Parameters	Min	25%Tile	Mean	75%Tile	Max
Milk Bulk Tank(lb/cow/day)	55	60	68.9	75	85
Milk Butterfat(%)	3.4	3.5	3.53	3.6	3.6
Milk Protein(%)	3	3.1	3.16	3.2	3.3
Milk Price($/cwt)	13.8	13.8	14.37	14.8	15.2
Milk Revenue($/cow/day)	7.59	8.88	9.92	11.33	12.92

Summary	Milking					Dry				
	Min	25%Tile	Mean	75%Tile	Max	Min	25%Tile	Mean	75%Tile	Max
DMI (lb/cow/day)	41	49	51.2	56	59	25		33.25		39
MILK/DMI	1.09	1.31	1.35	1.43	1.45					
FCM/DMI	1.01	1.01	1.25	1.33	1.35					
ECM/DMI	1.08	1.32	1.35	1.45	1.46					
FORAGE COSTS ($/cow/day)	1.81	2.32	2.62	2.99	3.53	0	0	2.39	2.35	2.79
ENERGY COSTS ($/cow/day)	1.26	1.44	1.56	1.67	1.79	0	0	0.05	0	0.19
MINERAL COSTS ($/cow/day)	0	0	0	0	0	0	0	0	0	0
PURCHASED FEED COST ($/cow/day)	0	0.51	1.62	3.13	4.22	0.85		1.51		2.35
HOME GROWN FEED COST ($/cow/day)	0	0.69	2.55	3.5	5.32	0		0.93		1.44
SUPPLEMENT COSTS ($/cow/day)	0	0.01	0.03		0.09					
TOTAL FEED COSTS ($/cow/d)	3.48	3.84	4.2	4.35	5.32	1.95		2.43		2.98
INCOME OVER PURCHASED SUPPLEMENT COSTS (IOPSC) ($/cow/day)	7.5	5.79	9.9	11.32	12.9					
INCOME OVER PURCHASED FEED COSTS (IOPFC) ($/cow/day)	3.37	5.79	8.3	10.74	11.99					
INCOME OVER FEED COSTS (IOFC) ($/cow/day)	3.37	5.03	5.74	6	9.46					
INCOME OVER FEED COSTS per CWT (IOFC/cwt) ($/cwt)	6.13	8.38	8.34	8	12.61					

Analyses

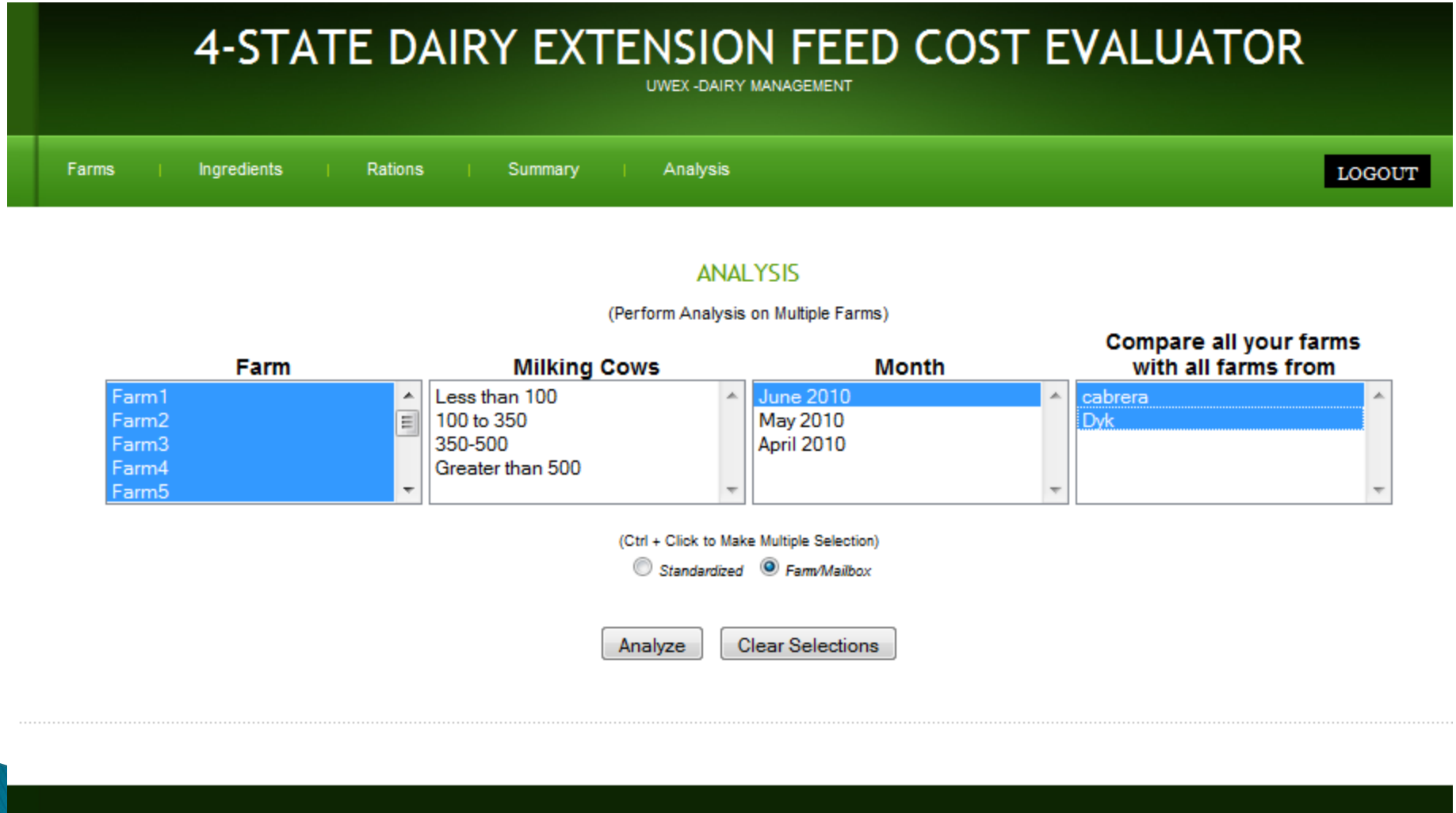
Graphical Representation
(Click on the Data Point for mroe information)



Analyses


IOFC
10
8
6
4
2
IOFC
IOPFC
12
10
8
6
4
2
IOPFC
IOPSC
13
12
11
10
9
8
7
IOPSC
Supplement Costs
0.10
0.08
0.06
0.04
0.02
0.00
Supplement Cost

Analyses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ANALYSIS
(Perform Analysis on Multiple Farms)
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Milking Cows
Less than 100
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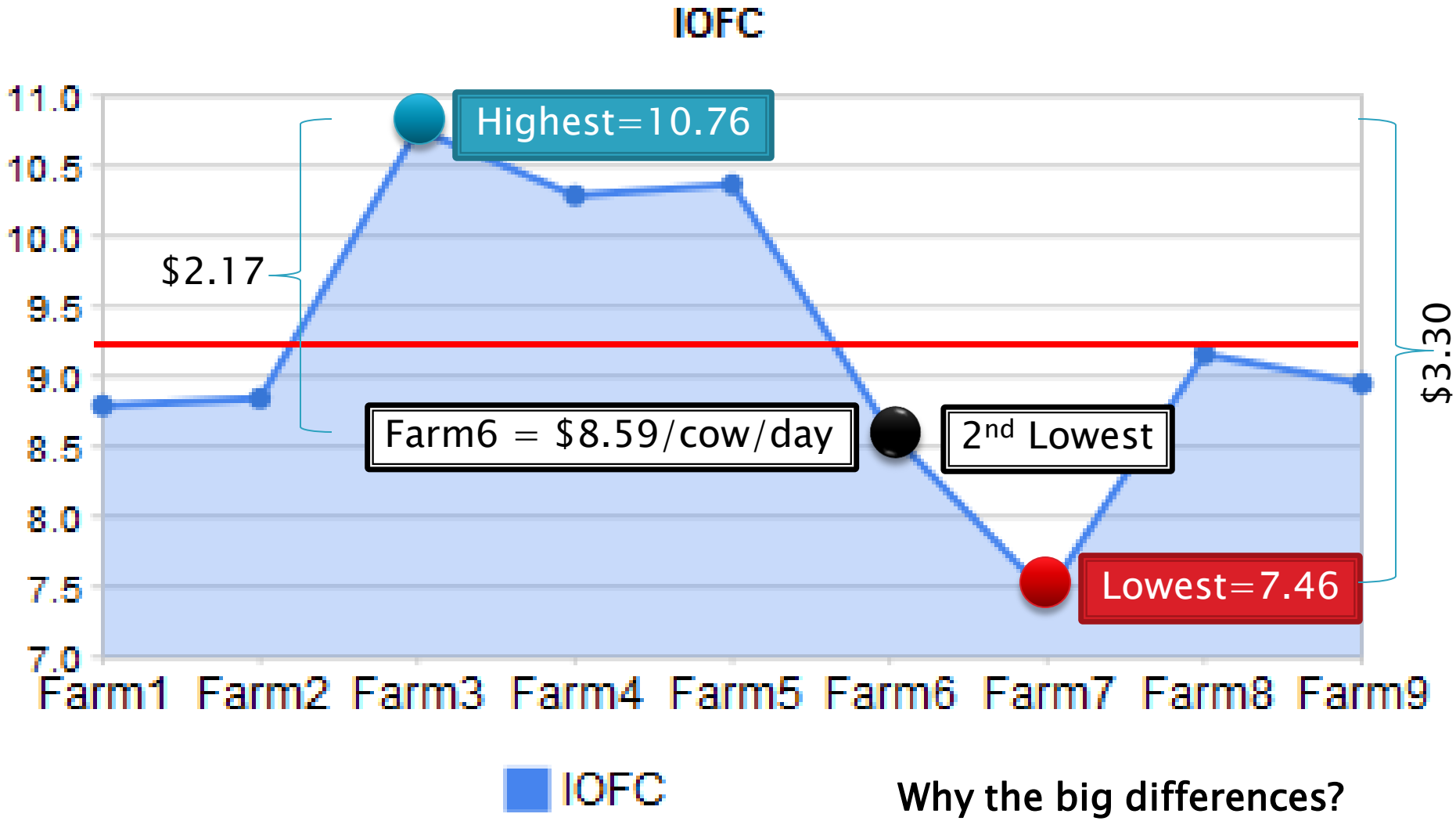
Greater than 500
Month
June 2010
May 2010
April 2010
Compare all your farms with all farms from
cabrera
Dyk
(Ctrl + Click to Make Multiple Selection)
Standardized
Farm/Mailbox
Analyze
Clear Selections
Farms Ingredients Ration Summary Analysis

A Case Study

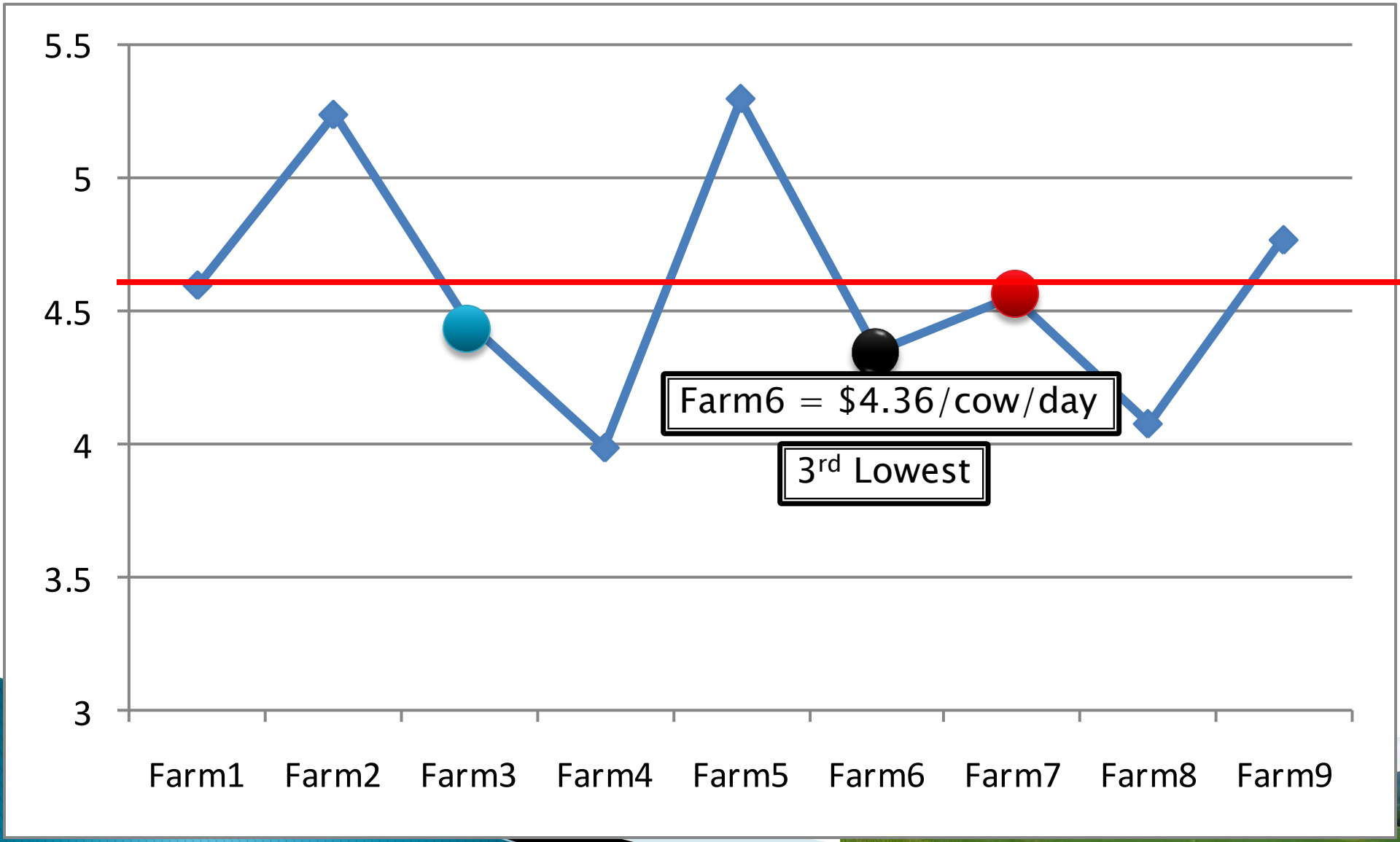
- 9 Wisconsin farms
- April Data
- Same Geographical Area
  - Fond Du Lac
  - ~ 12,000 cows
  - 25% cows in County
- Collected by: Paul Dyk

Income over Feed Cost ($/cow/d)

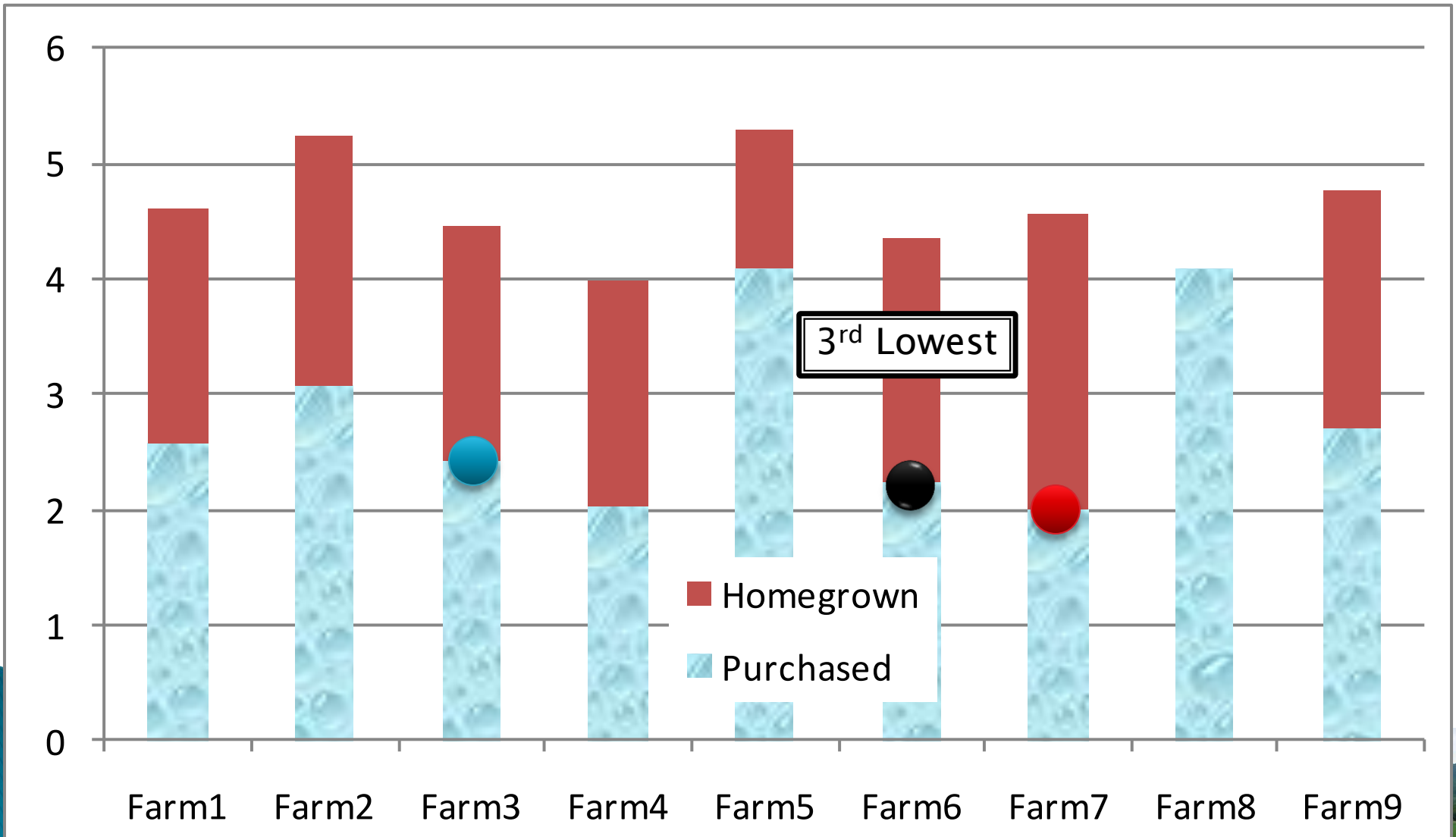


Why the big differences?

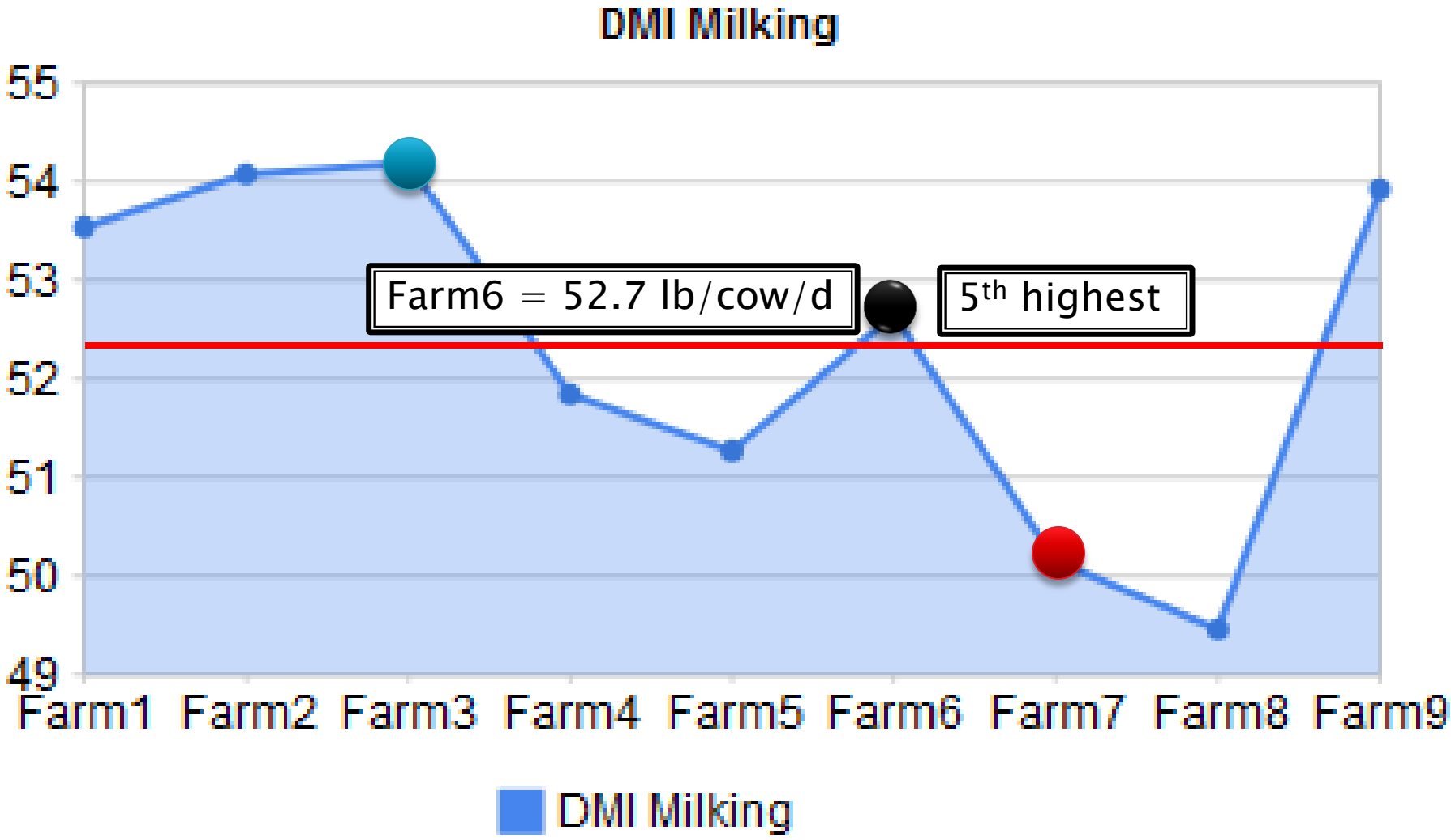
Feed Costs (Milking) ($/cow/d)



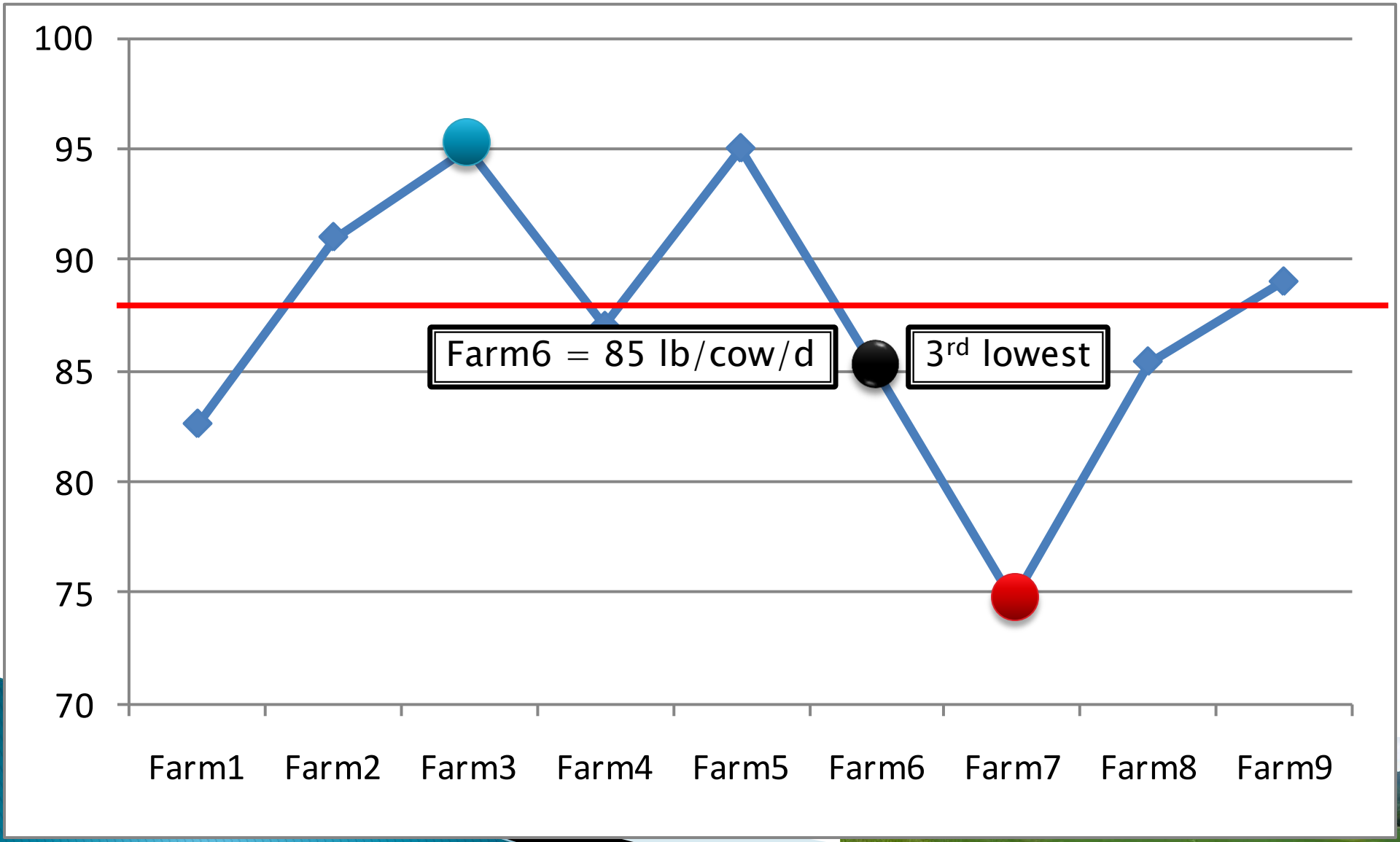
Feed Costs (Milking) ($/cow/d)



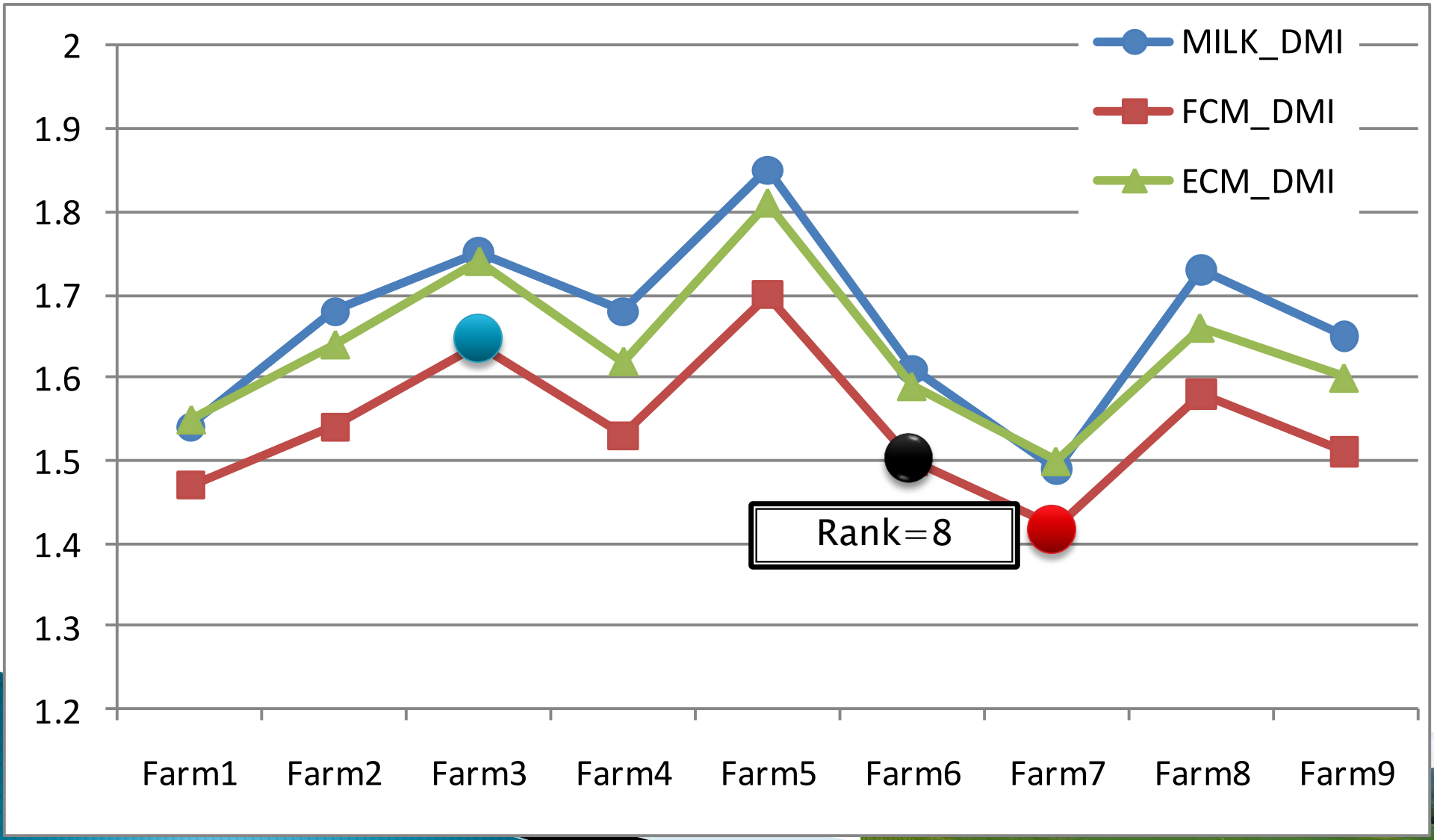
Dry Matter Intake (Milking) (lb/cow/d)



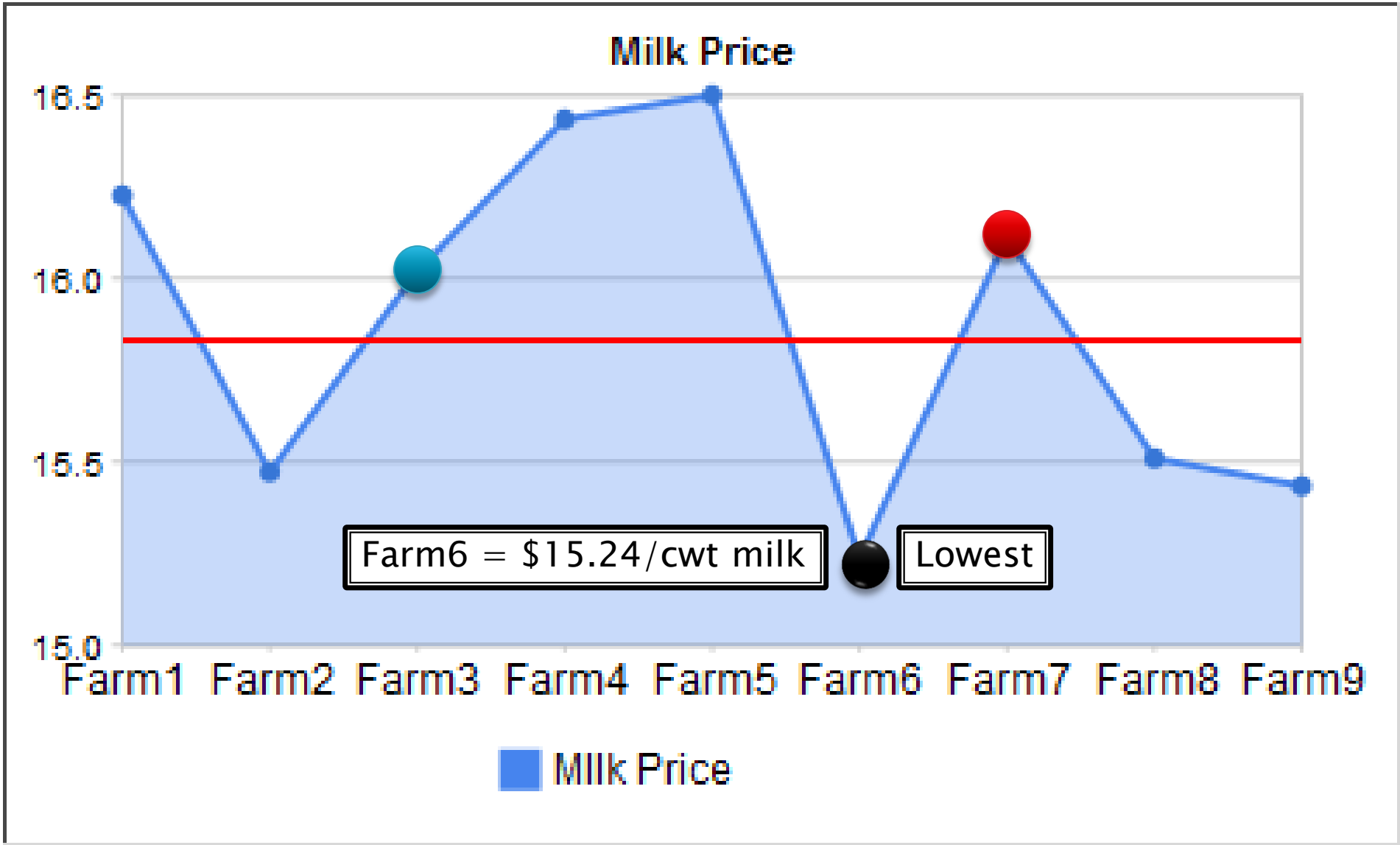
Milk Bulk Tank (lb/cow/d)



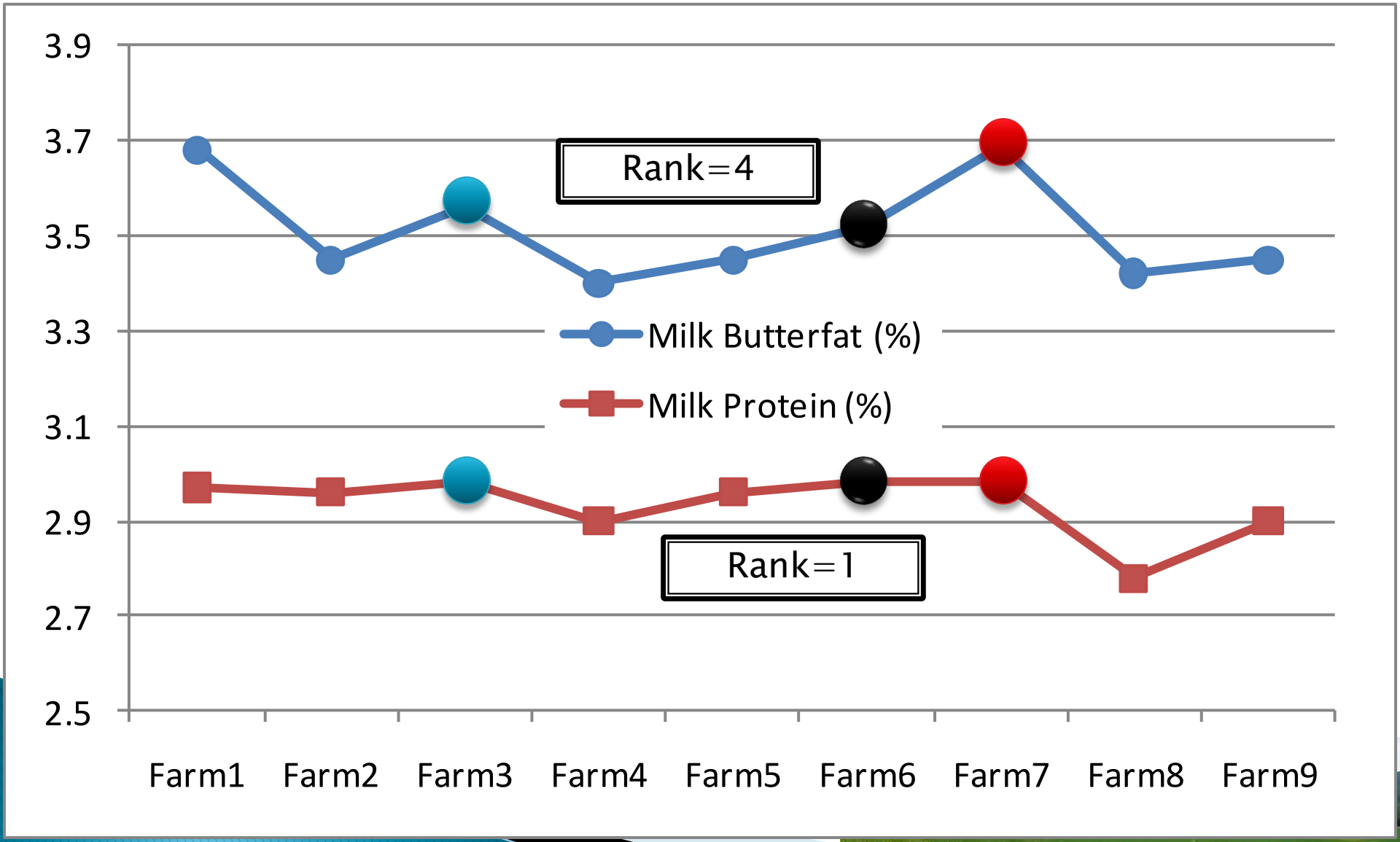
Feed Efficiency



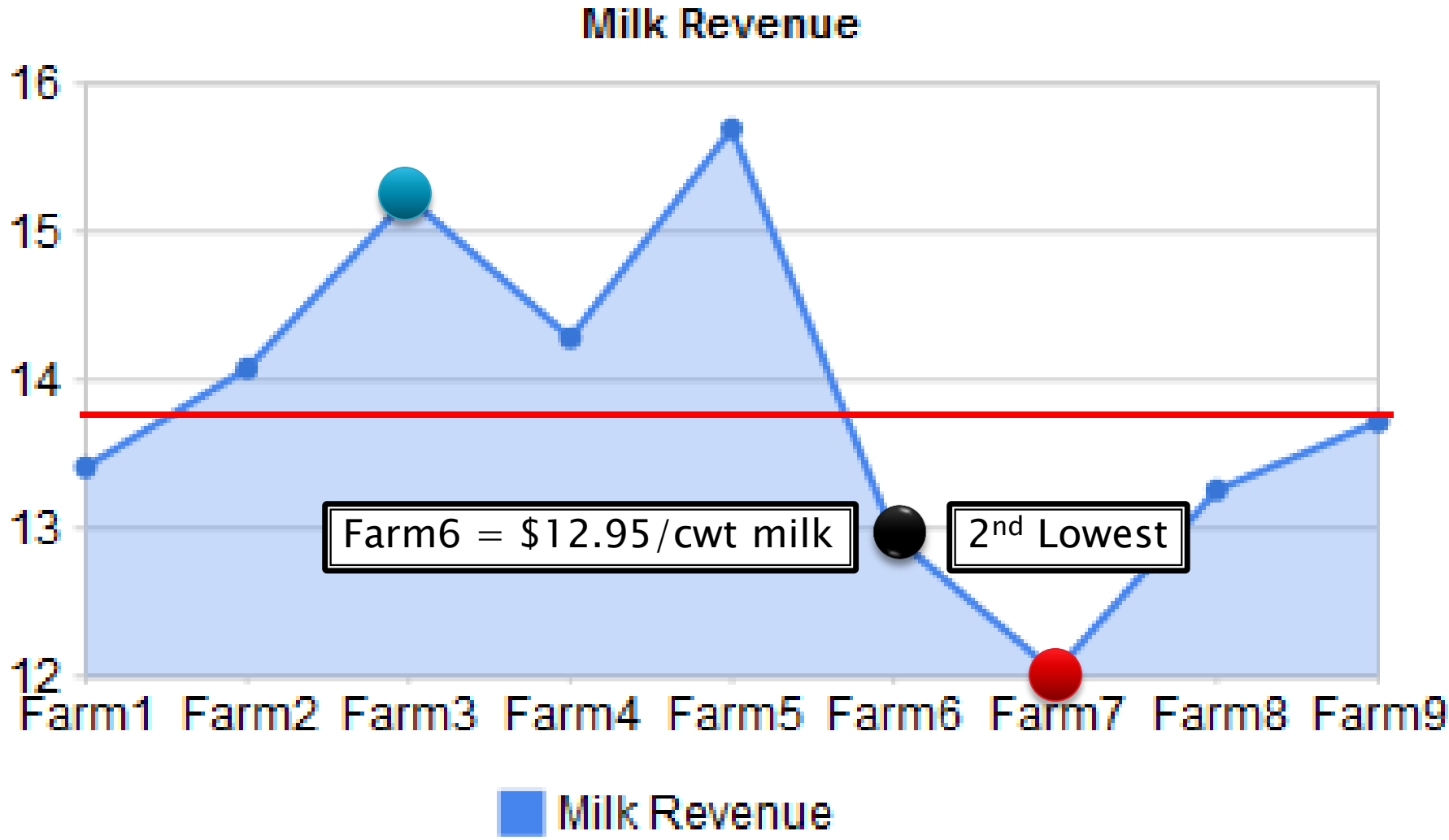
Milk Price ($/cwt milk)



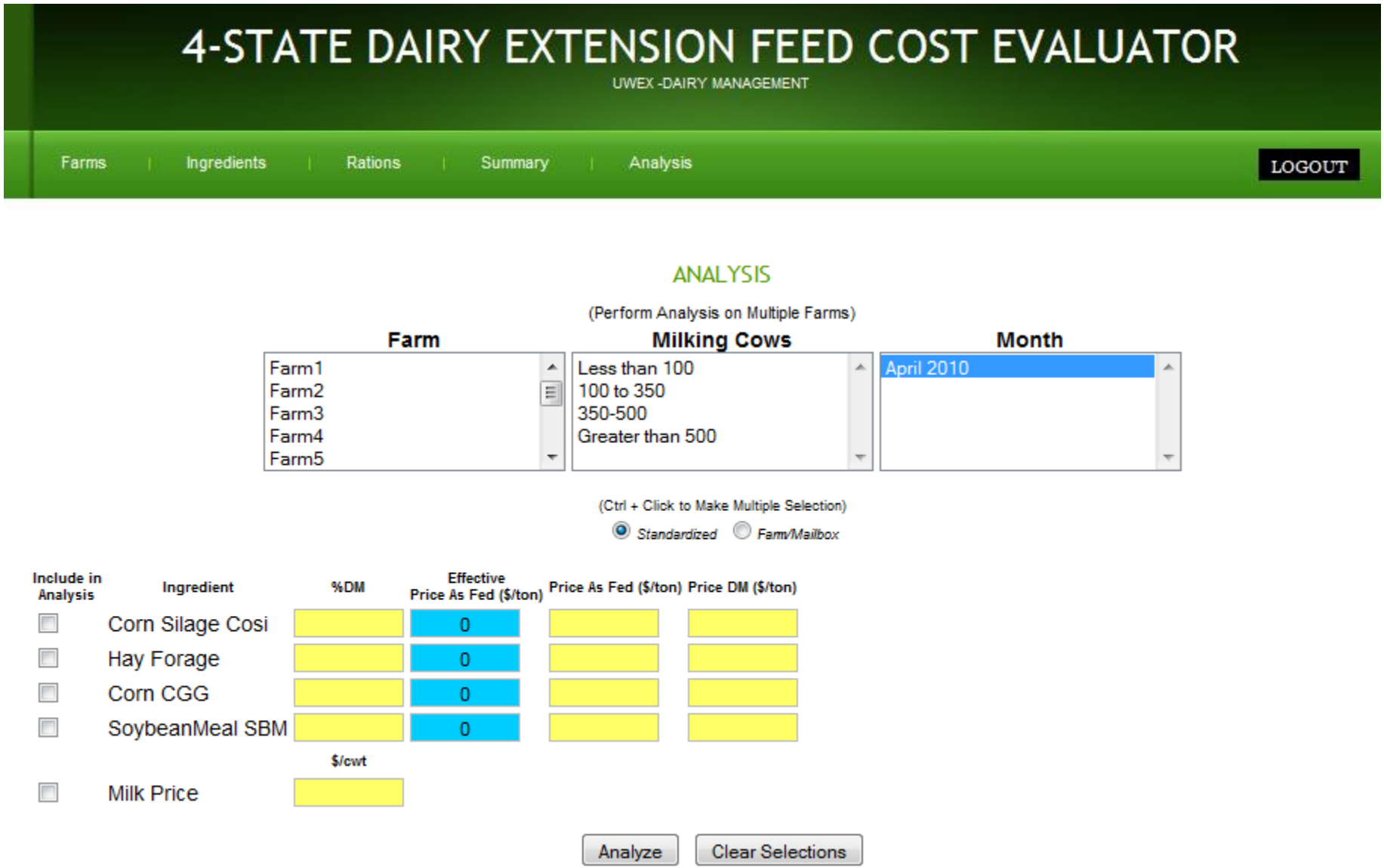
Milk Components



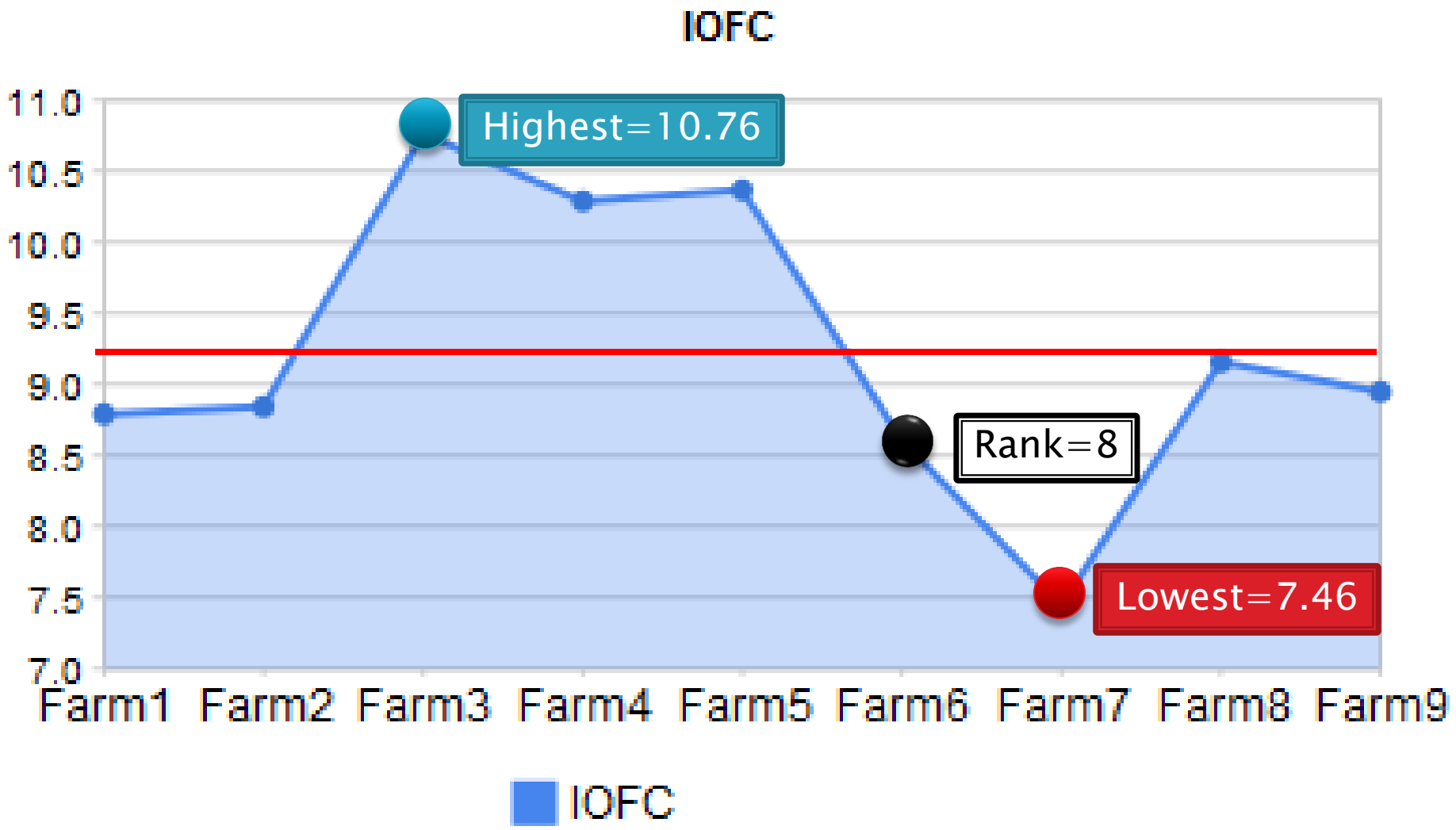
Milk Revenue ($/cow/d)



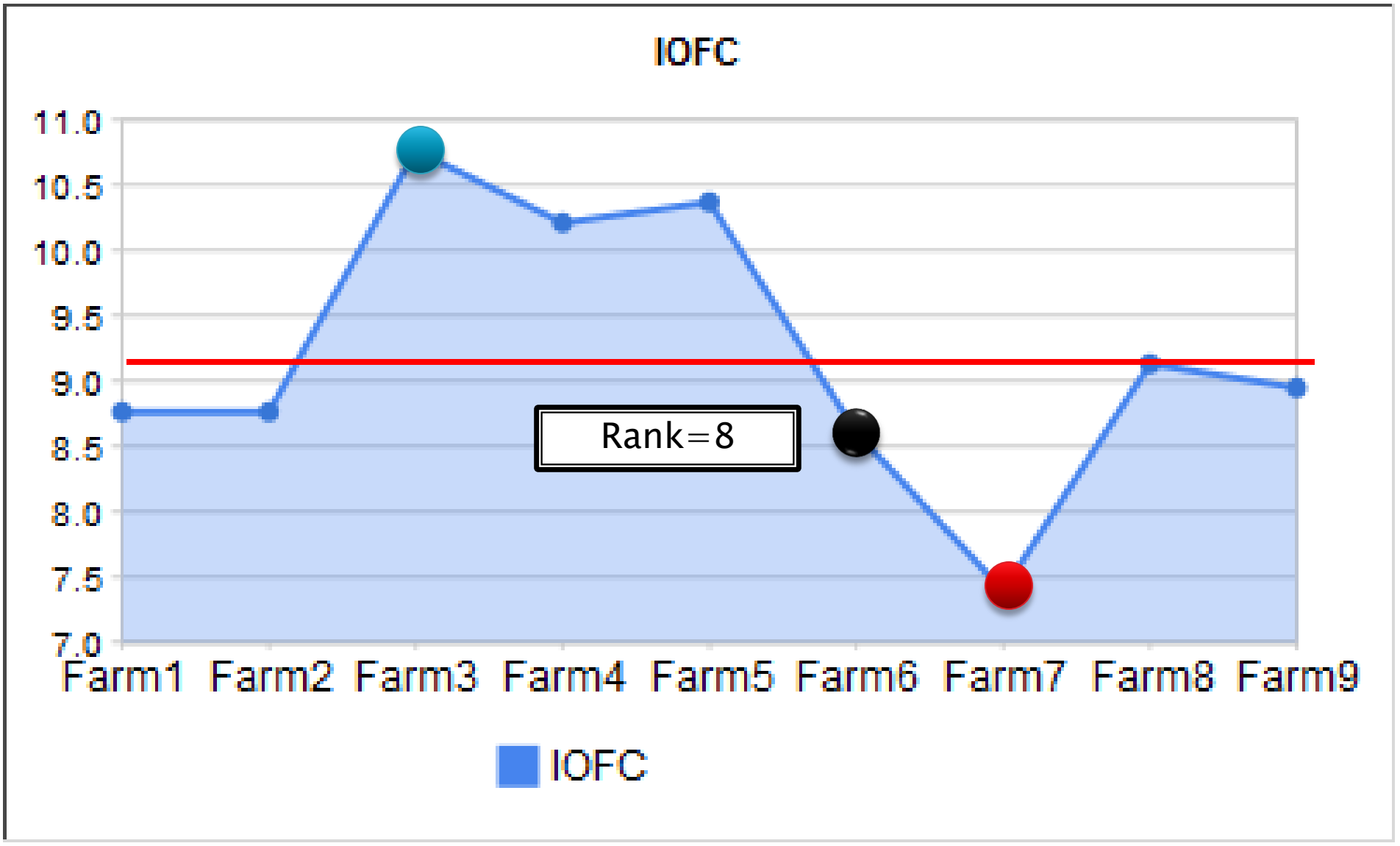
Standardized Price Analyses



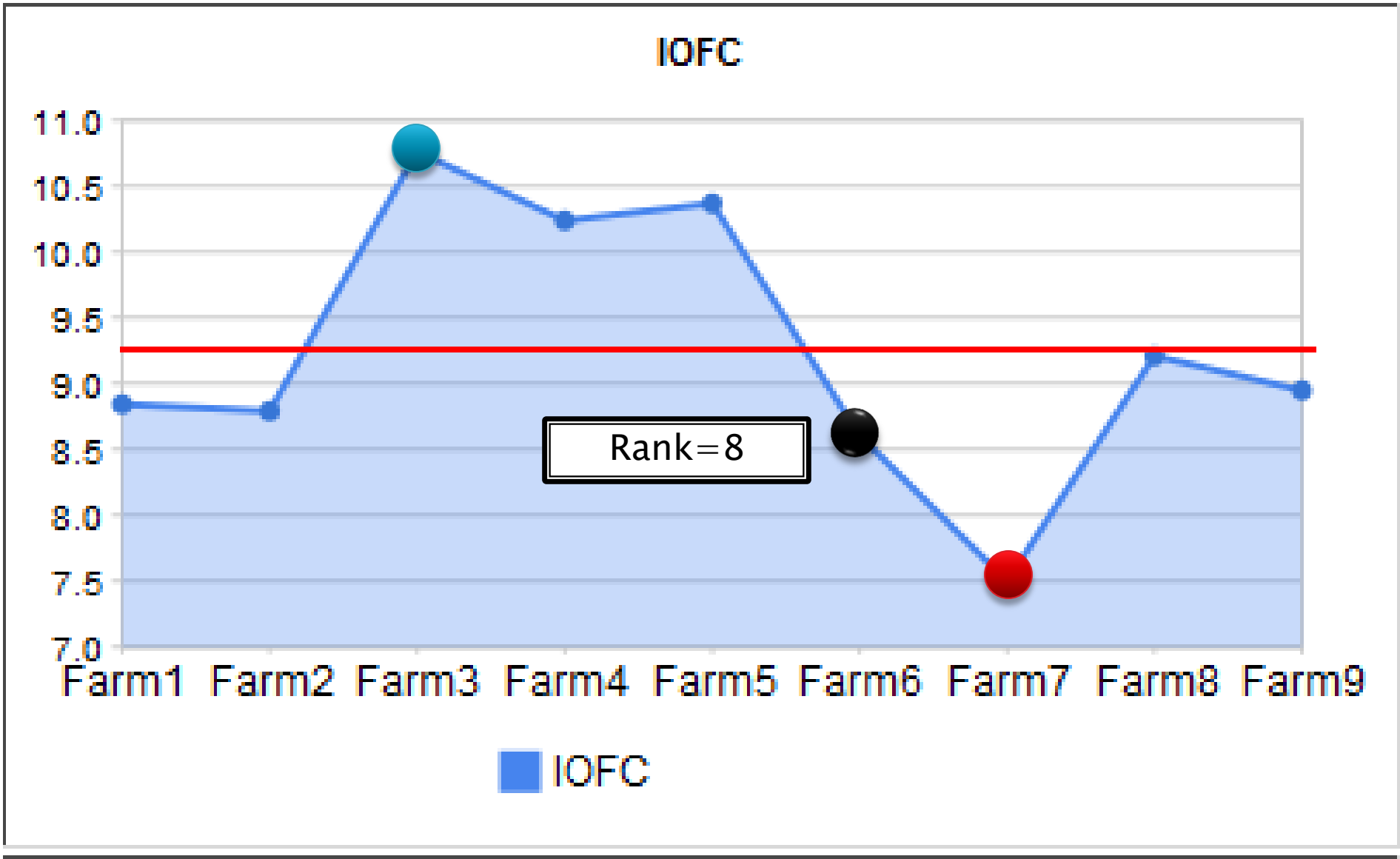
Farm Reported Prices



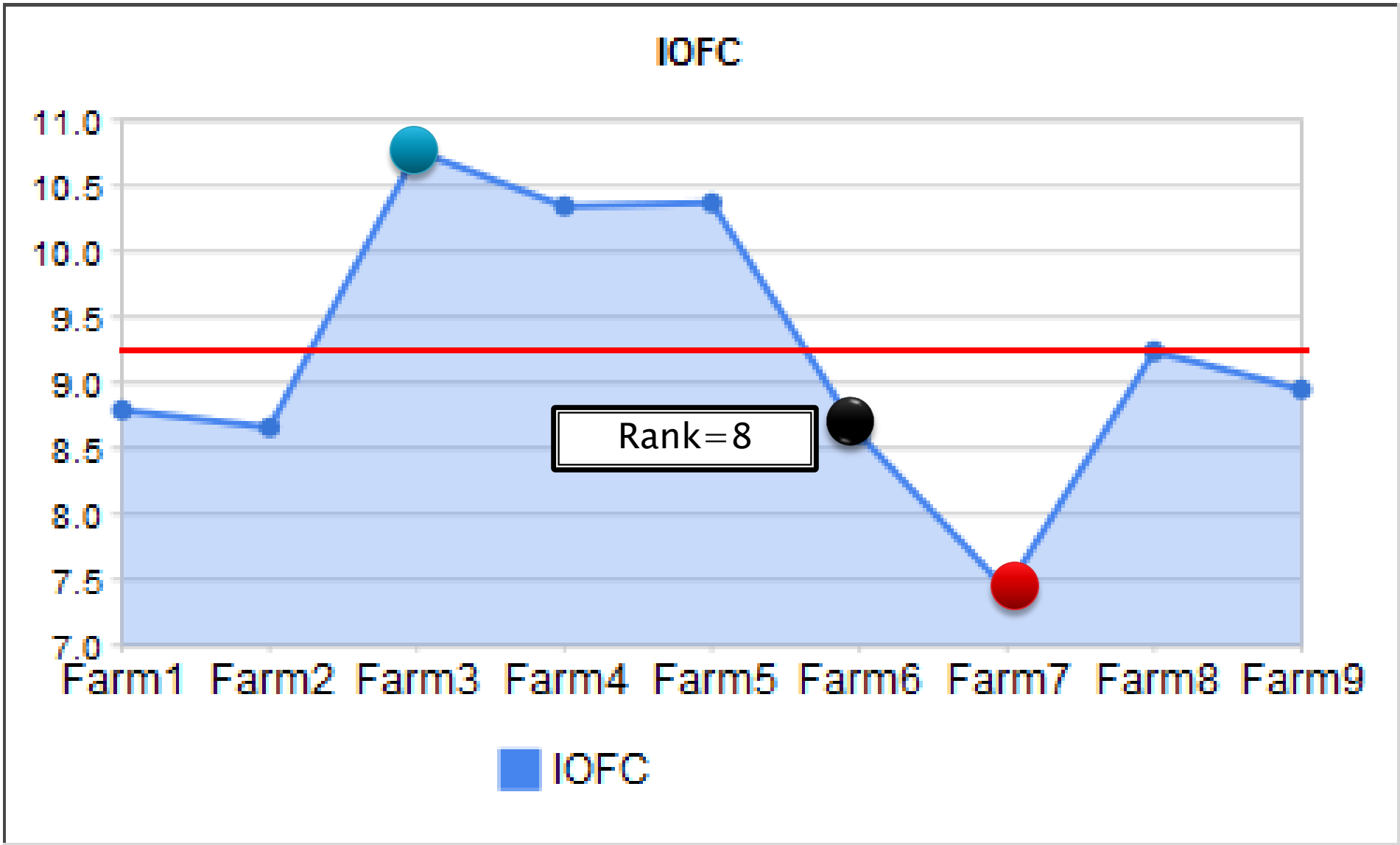
Corn Silage=36%, $103.14/t DM



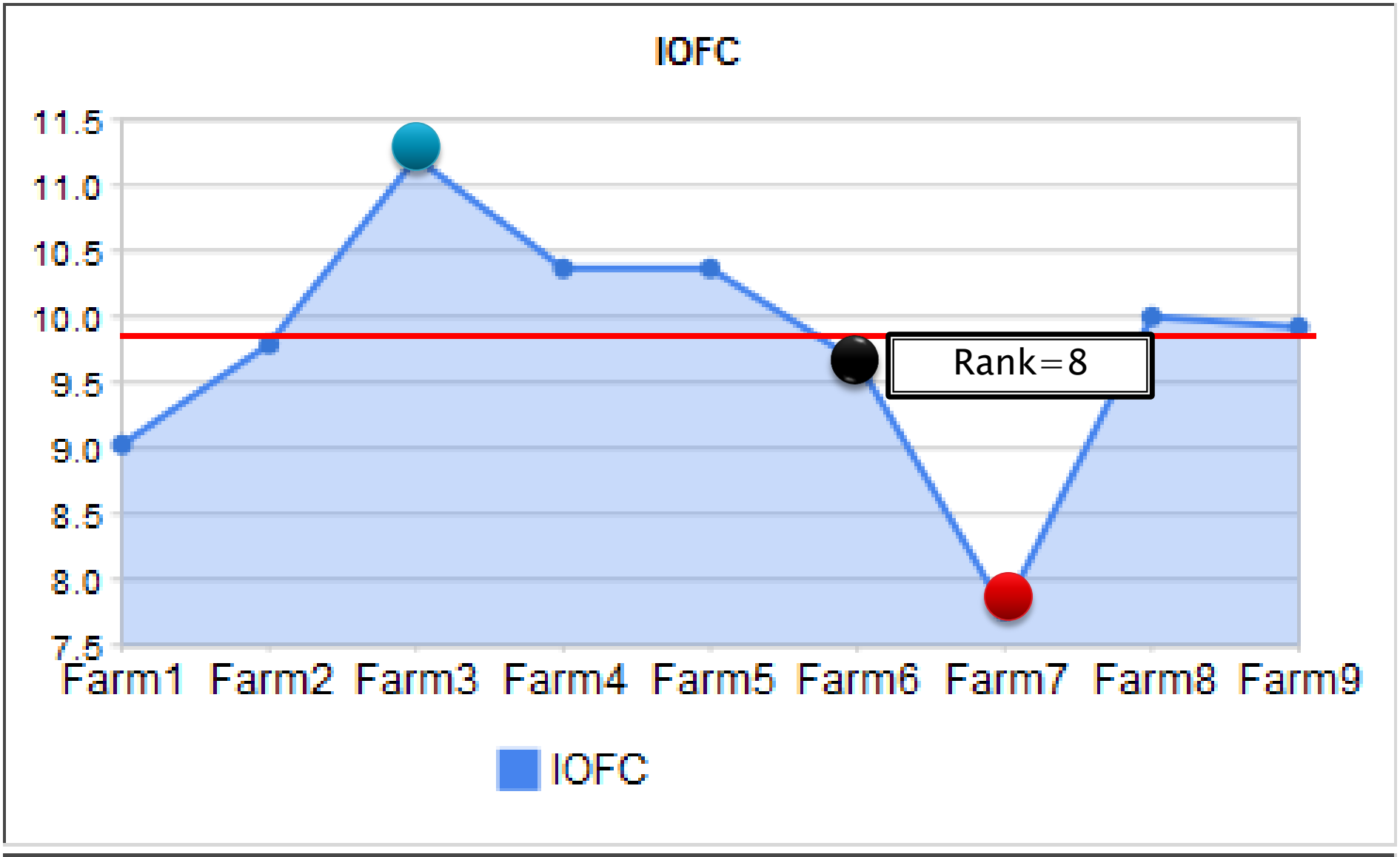
Hay Forage=46%, $135.36/t DM



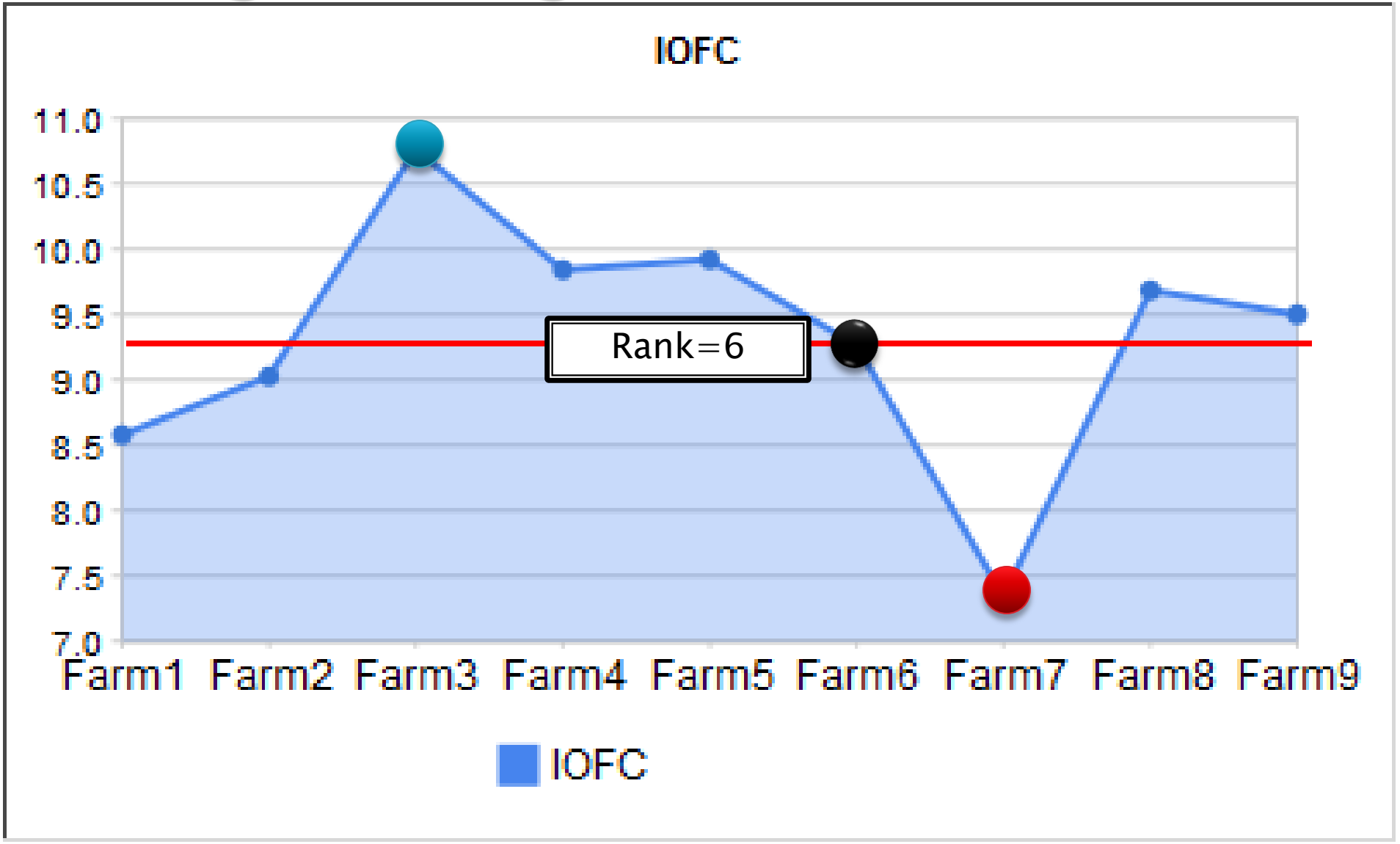
Corn Grain=76%, $169.41/t DM



Milk Price=$16.5/cwt milk



Best Prices (milk, corn silage, hay forage, corn grain)



Farm6 Improvement Plan

- Look for better milk price
  - Negotiate a better price
    - Good milk components relatively and lowest price received
- Improve feed efficiency
  - Look ways to enhance production at the DMI level
  - Maintain milk production reducing DMI
  - Check feed quality
- Reduce feed costs
  - Homegrown and Purchased
  - Forages and Concentrates

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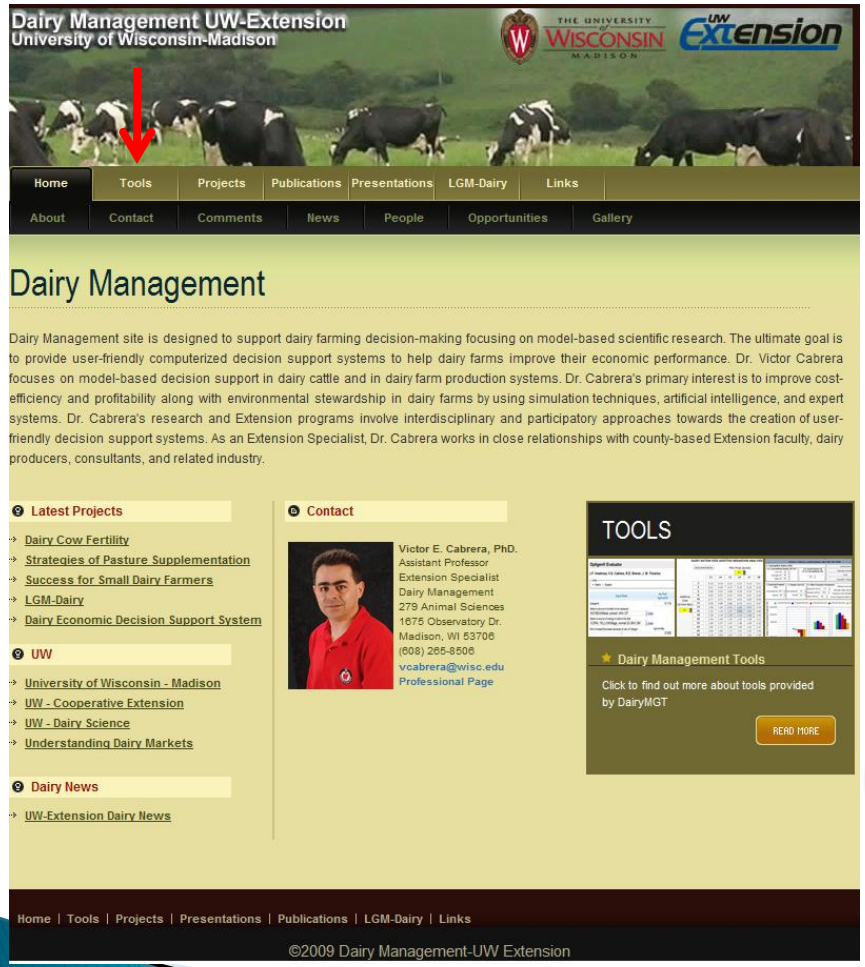

Wisconsin Dairy Feed Cost Evaluator

- Available to anyone interested in evaluate Feed Costs and IOFC:
  - Track farm trends over time
  - Compare farms in a region
  - Compare across regions
  - ***Contribute to database → Use available data***

Thanks