

# Five Ways to Improve Dairy Farm Economic Profitability in Difficult Times



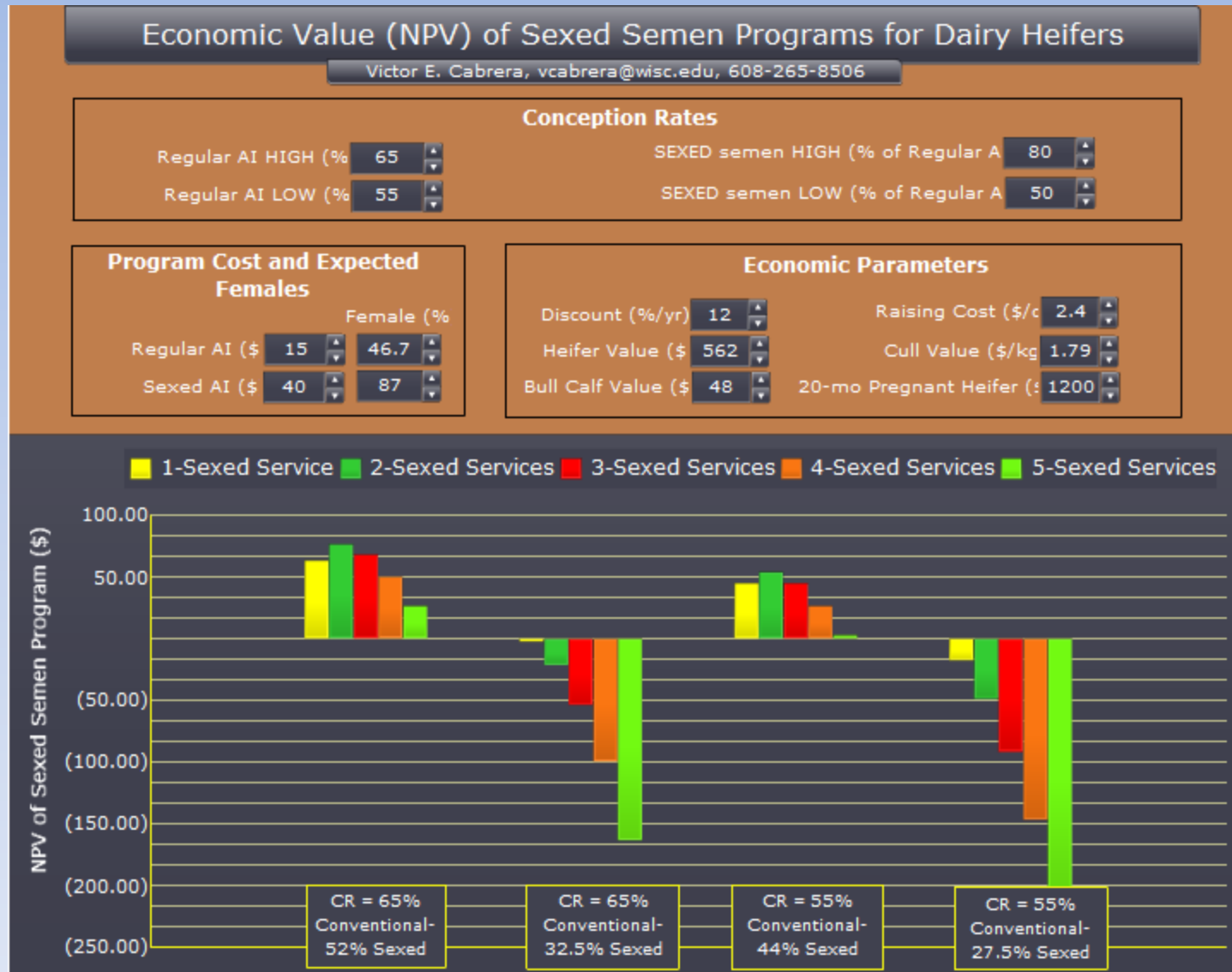
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# 1. Should I Use Sexed Semen with Heifers?

- Sexed semen increases the conception of female calves (+)
- Female calves are more valuable than male calves (+)
- Sexed semen results in lower conception rates than regular semen (-)
- Sexed semen is more expensive than regular semen (-)

# 1. Net Present Value of Sexed Semen



## 2. Should I Switch to 3X Milking?

- Higher milking frequency increases milk production (+)
- Higher milking frequency requires additional labor (-)
- Higher milking frequency incurs in additional costs of feed (-)

## 2. Economic Analysis of Higher Milk Frequency

### Economic Analysis of Switching from 2X to 3X Milking

Calculates the economic benefit (or loss) of a change in the milking frequency from 2 times a day (2X) to 3 times a day (3X) based on user-input parameters

Show Instructions

Milking Cows 100

(\$/cwt)

Milk price 12

(\$/hr)

Cost of Labor 14

(lb/cow/d)

Expected Increase in Milk 8

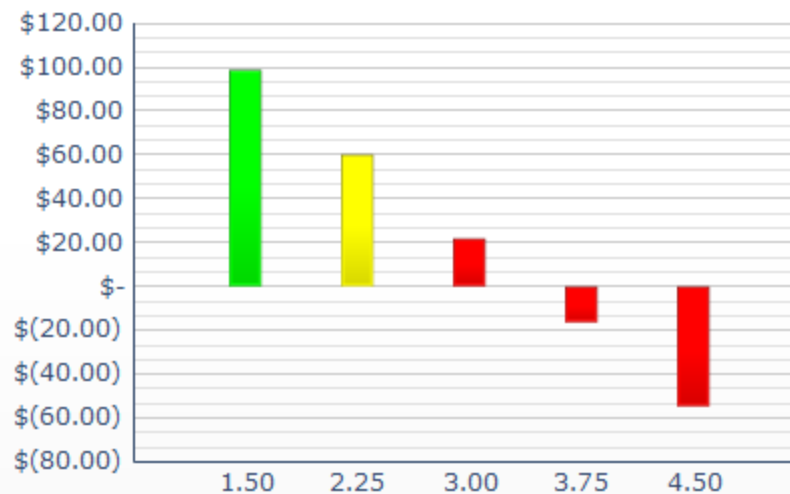
(hr labor/d)

Additional labor required 3

(\$/cwt milk)

Estimated Feed Cost 6

Gain of 3X Milking (\$/cow/yr)



Additional labor required (hr labor/d)

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### 3. Should I Sell/Buy Cows?

- Cows in herd produce milk (+)
- Cows in herd incur in a series of costs (-)
- Net margin  $>$  market value = buy
- Market value of a replacement  $<$   
expected value = buy
- Market value of a replacement  $>$   
expected value = sell

# 3. The Value of a Cow

## Calculate the Value of a Cow

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What is it? How to use it? **APPLICATION**

### CONTROLS

Feed Costs (\$/cwt milk)  
\$6.50

Labor Costs (\$/cwt milk)  
\$2.50

Other Exp. (\$/cwt milk)  
\$1.50

Cull Value (\$/cow)  
\$350

Calf Value (\$/calf)  
\$100

[Save Scenario](#)

Milk Price (\$/cwt) 12.5

		\$11.50	\$12.00	\$12.50	\$13.00	\$13.50
Milk	18,000	\$1,017	\$1,283	\$1,510	\$1,757	\$2,003
Sales	19,000	\$1,044	\$1,305	\$1,585	\$1,825	\$2,085
lb	20,000	\$1,072	\$1,348	\$1,620	\$1,894	\$2,167
cow	21,000	\$1,099	\$1,387	\$1,674	\$1,962	\$2,250
yr	22,000	\$1,127	\$1,428	\$1,729	\$2,030	\$2,332






Productive Life (months) 36

		30	33	36	39	42
Milk	18,000	\$1,374	\$1,442	\$1,510	\$1,577	\$1,642
Sales	19,000	\$1,420	\$1,493	\$1,565	\$1,638	\$1,705
lb	20,000	\$1,468	\$1,543	\$1,620	\$1,695	\$1,768
cow	21,000	\$1,513	\$1,594	\$1,674	\$1,753	\$1,831
yr	22,000	\$1,559	\$1,645	\$1,729	\$1,812	\$1,894

Milk Price (\$/cwt) 12.5

		\$11.50	\$12.00	\$12.50	\$13.00	\$13.50
Cow	30	\$1,003	\$1,235	\$1,468	\$1,698	\$1,930
Life	33	\$1,038	\$1,291	\$1,543	\$1,798	\$2,049
in	36	\$1,072	\$1,348	\$1,620	\$1,894	\$2,167
months	39	\$1,105	\$1,400	\$1,695	\$1,989	\$2,284
	42	\$1,138	\$1,453	\$1,768	\$2,083	\$2,398

Milk Sales (lb per cow/year) 20000

## 4. Should I Fine-Tune my Diet?

- Milk production respond differently to different diet components (+/-)
- Milk production greatly depends on the stage of lactation (+/-)
- Milk has frequent price variations (+/-)
- Feed components have frequent price variations (+/-)



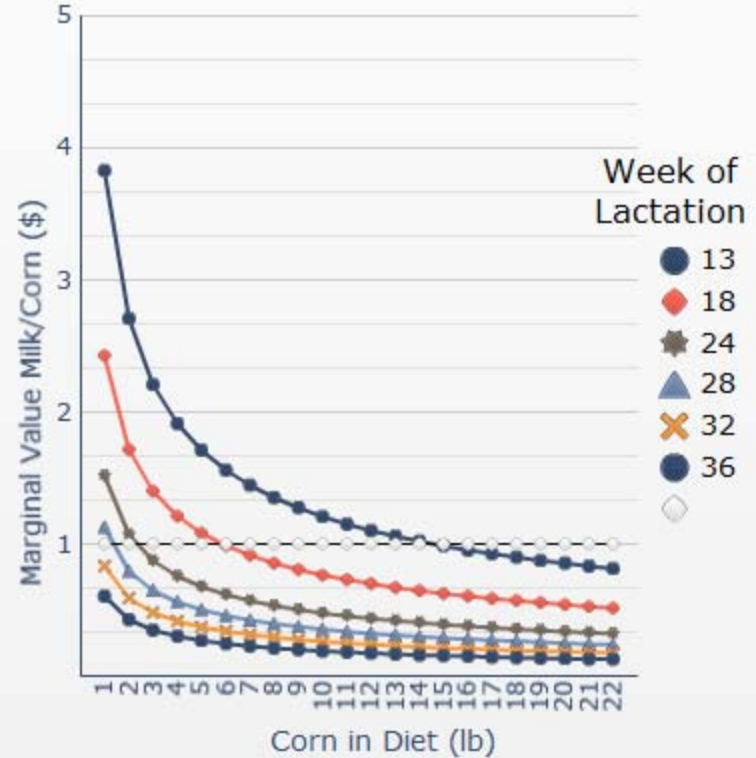
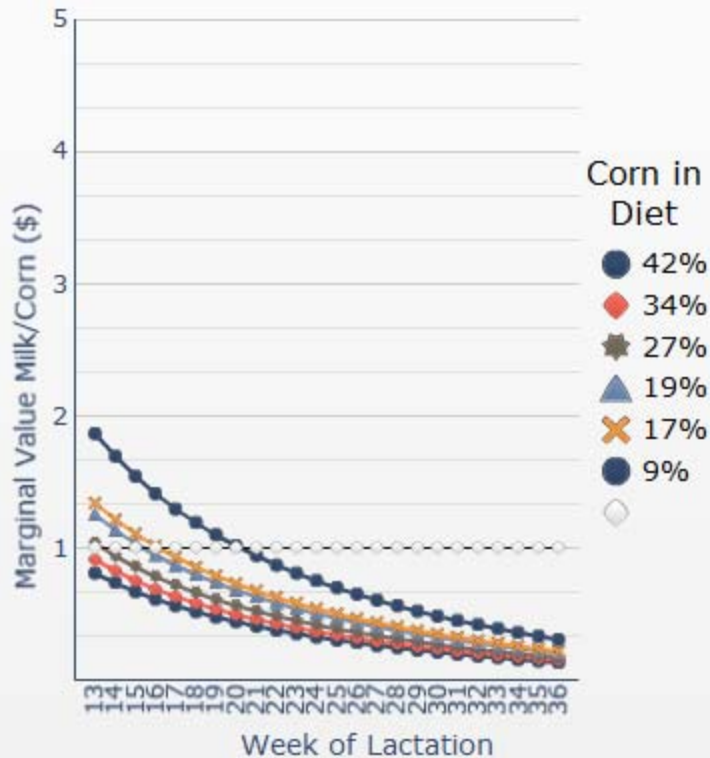
# 4. Corn Break-Even

## Strategic Alternatives to Corn Grain Feeding

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<http://www.uwex.edu/ces/dairymgt/>

Milk Price (\$/cwt)

Corn Price (\$/bu)



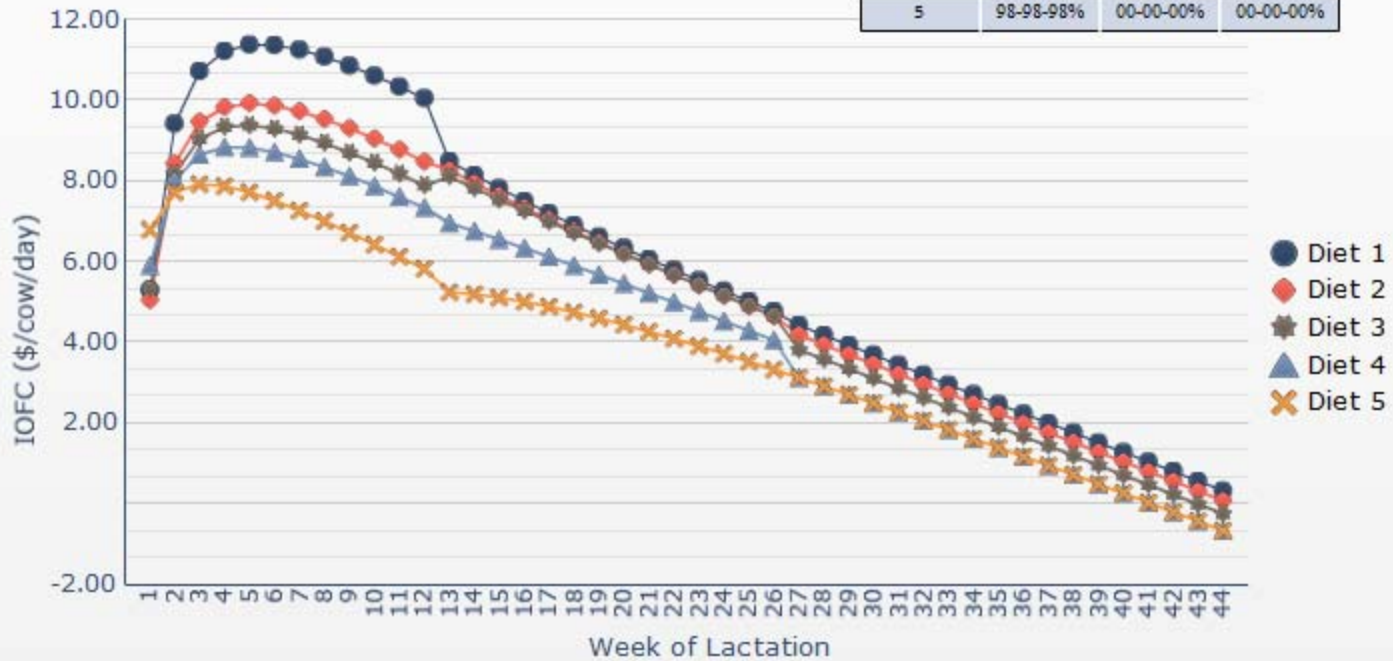
# 4. Income Over Feed Cost

## Income Over Feed Cost

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Milk (\$/cwt)	18
Alfalfa (\$/ton)	177
Corn (\$/bu)	6
SBM (\$/ton)	358


Diet	Alfalfa hay	Corn grain	Soybean
1	38-48-68%	42-40-25%	18-10-05%
2	48-58-78%	34-33-17%	16-7-3%
3	58-68-88%	27-25-9%	13-05-01%
4	68-88-98%	19-09-00%	11-01-00%
5	98-98-98%	00-00-00%	00-00-00%



<http://www.uwex.edu/ces/dairymgt/>

# 4. Income Over Feed Supplement Cost

**Income Over Feed Supplement Cost (IOFSC)<sup>®</sup>**

	Overwrite <b>yellow</b> cells and make appropriate selections. Click on <b>blue button</b> to optimize IOFSC: results appear in <b>blue</b> cells. Click on <b>red button</b> to substitute between feed supplements; results appear in <b>figures</b> and <b>table</b> .	Units <input type="radio"/> Metric <input checked="" type="radio"/> <b>English</b>
V.E. Cabrera, R.D. Shaver, and M.A. Wattiaux		

1 Calculate Dry Matter Intake (DMI)				
1.1	Milk Production (MP)	lb/cow/day	80	
1.2	Body Weight (BW)	lb/cow	1400	
1.3	Days in Milk (DIM)	day	100	100
1.4	Dry Matter Intake (DMI)	lb/cow/day		<b>53.66</b>

2 Set the Sources and Proportion of Forage in the Diet				
2.1	Proportion of Forage in Diet	% of Diet	50%	26.8297
2.2	35-Corn Silage-CoSi	% of Forage	50%	
2.3	83-Alf. Silage-ALSi	% of Forage	50%	
2.4	35-Corn Silage-CoSi <span style="float: right;">Edit</span>	% of Forage	0%	
2.4	Crude Protein in Diet Provided by Forage	lb/cow/day		<b>4.12</b>

3 Set Source of Energy Supplements and Prices					
		Price (\$/bu)	Current Diet (lb)	Upper Limit (lb)	Optimal (lb)
3.1	27-Corn-CGG	3.54	20.88	25	<b>17.62</b>
3.2	8-Barley-BGR	4.8		0	<b>0.00</b>
3.3	116-Wheat-WGR	7.4		0	<b>0.00</b>

4 Set the Source of Protein, Byproduct Supplements and Prices					
		Price (\$/ton)	Current Diet (lb)	Upper Limit (lb)	Optimal (lb)
4.1	106-Soybean Meal-SBM	300.00	5.95	25	<b>4.21</b>

## 5. Should I Enroll in LGM-Dairy?

- Do you need a target income over feed costs to cover other variable costs?
- Do you have payment obligations?
- How important is the stability of your net margin?
- Are you more concerned with the risk of losing money?

# 5. UW LGM-Dairy Premium Calculator

When do you want to purchase insurance?	<b>Jan-2009</b> ▾	Where is your dairy herd located?	<b>WI</b> ▾		
	<b>Months of Coverage</b>	<b>Monthly Prod. (Cwt)</b>	<b>Corn Equiv (Ton)</b>	<b>Soybean Meal Equiv (Ton)</b>	<b>% of Production to be covered</b>
	Mar-09	4213	98.1	21.7	100.0%
	Apr-09	4113	95.8	21.1	100.0%
	May-09	4340	101.1	22.3	100.0%
	Jun-09	4188	97.6	21.5	100.0%
	Jul-09	4240	98.8	21.8	100.0%
	Aug-09	4188	97.6	21.5	100.0%
	Sep-09	4023	93.7	20.7	100.0%
	Oct-09	4075	94.9	20.9	100.0%
	Nov-09	4038	94.1	20.8	100.0%
	Dec-09	4063	94.7	20.9	100.0%
	<b>Weighted Totals:</b>	<b>41481</b>	<b>966.4</b>	<b>213.2</b>	

Deductible= **1.5** ▾

**Make sure you have downloaded the monthly data files for the months for which you want to analyze.**

**After All Farm Data is Entered, Click to Run Your Analysis**

**Do You Need Help With Converting Your Feed to Corn and SBM Equivalentents?**

=user supplied input

=given data

# http://www.uwex.edu/ces/dairymgt/ Management Tools

Dairy Cattle Management - Cooperative Extension - University of Wisconsin-Extension - Mozilla Firefox

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**Cooperative Extension**

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### Welcome to Dairy Management UW-Extension

This site is designed to support dairy farming decision-making focusing on model-based scientific research. The ultimate goal is to provide user-friendly computerized decision support systems to help dairy farms improve their economic performance.

Dr. Cabrera focuses on model-based decision support in dairy cattle and in dairy farm production systems. Dr. Cabrera's primary interest is to improve cost-efficiency and profitability along with environmental stewardship in dairy farms by using simulation techniques, artificial intelligence and expert systems. Dr. Cabrera's research and Extension programs involve interdisciplinary and participatory approaches towards the creation of user-friendly decision support systems. As an Extension Specialist, Dr. Cabrera works in close relationships with county-based Extension faculty, dairy producers, consultants, and related industries.

### Highlighted Works of Interest

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Thanks  
Questions?

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