The Need for Applied Research and Decision Support Tools in Dairy Farm Management and Decision-Making

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Outline

1. Brief Professional Background
2. Disconnection between Research and Extension
3. The Need for Decision Support Tools
4. Decision Support Tools Examples
5. Tools Usage Statistics

Professional Background

a. Education

1991	BS	Agronomy-Sciences	La Molina, Lima
1993	Engineer	Agricultural Production	La Molina, Lima
1995	Diploma	Ag. Schools Management	Madrid – Paris
1999	MS	Farming Systems / Extension	Univ. of Florida
2004	PhD	Ecology / Economics	Univ. of Florida
2006	PostDoc	Farm Risk Decision-Making	Univ. of Miami

Professional Background

b. Work Experience

1993-94	Limatambo Farm, Peru	Farm Manager
1994-97	Valle Grande Rural Institute, Peru	Extension Agent
1999-01	Inter-American Development Bank, Peru	Extension Program Planner
2006-08	New Mexico State University	Assistant Professor, Extension Dairy Specialist
2008-Present	University of Wisconsin-Madison	Assistant Professor, Extension Dairy Specialist

Professional Background

d. Career Highlights

- Highly Interdisciplinary Research and Extension
- Participatory and Inclusive Work
- Integrated Farm Systems Approaches
- Applied Research Built on Fundamental Research
- Product and Impact Oriented
- Practical and Customizable Decision Support Tools

Research/Extension Disconnection

a. A New (Old) Paradigm

- **Basic/fundamental research may not address current farm needs**
- **Cutting edge research may not be ready to be directly used on-farm decision-making**

Need for better integration

Research/Extension Disconnection

b. Systems Approach

- Application of latest discoveries in one area of management will have impacts in other areas of management
- Fundamental research is highly specific

Need for integrated system approach

Research/Extension Disconnection

c. Wealth of Scientific Information and Low and Slow Level of Adoption

- Highly valuable scientific information exists and it's being updated permanently
- Not all this information is being applied for dairy farm decision-making

Need for feedback from each other to have improved on-farm impact

Research/Extension Disconnection

d. Skepticism about Improved Management Technologies and Overall Farm Impacts

- Most basic research is performed in experimental facilities
- Research results not always could be replicated on-farm
- Farmers look for “validation” and on-farm results

Need for continued and increased on-farm research

Research/Extension Disconnection

e. Practical Commercial Farm Conditions

- Farm-level decisions are usually based on:
  - Economics
  - Regulations
  - Overall farmers' goals…
- Management technologies have different value depending on farm and market conditions

Messages need to be custom-tailored to farm, policy, and market conditions

Need for Decision Support Tools

a. Dairy Farms are Complex Integrated Systems

- Multiple, complex, and variable relationships among multiple components of dairy farm systems are dynamic
- Every component of a dairy farm system affects and it is affected for multiple other components

DST can greatly help projecting multiple impacts of selected management strategies

Need for Decision Support Tools

b. Dairy Farms are Unique Farm Systems

- Each dairy farm is unique and different
- Management strategies have different impacts for different farms

DST can assess the impacts according to specific farm conditions

Need for Decision Support Tools

c. Prices are more Variable than ever

- Milk and feed prices as well as other dairy farm prices are highly variable
- Management strategies have completely different impacts under different market conditions

DST can evaluate the impacts under projected market and prices conditions

Need for Decision Support Tools

d. Changes in Rules and Regulations

- Farm management strategies are not isolated from changing rules and regulations
- Government policy, industry regulations, and even consumer perceptions are important to shape farmers decisions

DST can include rules, regulations, and changing business environment for optimal farm management strategies

Decision Support Tools Examples

Management Tools

DairyMGT.info

A collection of state-of-the-art dairy management tool that are: user-friendly, interactive, robust, visually attractive, and self contained. All these tools have clear or self-explanatory instructions and technical support available.

Click on the Tool title to learn more.

Feeding

- Optigen® Evaluator
- Income Over Feed Supplement Cost
- The 4-State Dairy Extension Feed Cost Evaluator
- Corn Feeding Strategies
- Income Over Feed Cost
- Dairy Ration Feed Additive Break-Even Analysis

Heifers

Documento **(Descargar)**

Spanish Version (Colombia)
Herramienta **(Abrir)**
Documento **(Descargar)**

Chinese Version
Gongjù **(Kaifàng)**
Wéndàng **(Xiàzài)**

Heifer Replacement

Calculates the number of heifers needed as replacement to maintain constant the herd size in the long-term

Excel SpreadSheet **(Download)**
Online **(Open)**
Documentation **(Download)**
Demo **(Click to View/Hide the Video)**

Calculates the total cost of raising heifers in three points in time: at 12 months, 24 months, and after 24 months

Excel SpreadSheet **(Download)**
Online **(Open)**
Documentation **(Download)**
Demo **(Click to View/Hide the Video)**

Reproduction

Economic Value of Sexed Semen Programs for Dairy Heifers

Estimates the difference of the net present value of various sexed semen reproductive programs and a conventional semen reproductive program for dairy heifers

Flash Online Tool **(Play)**
Flash Offline Tool **(Download)**
Instructions **(Download)**
Documentation **(Download)**

Decision Support Tools Examples

a. Nutrition and Feeding

- The most important economic factors in a dairy farm system are milk value and feed costs
- Therefore, managing and optimizing the Income Over Feed Cost (IOFC) is critical
- Beyond established farm rations, farmers need to permanently adjust feeding strategic decisions
  - Marginal value of corn in the diet
  - Evaluation of diet protein supplementation
  - Benchmarking IOFC …

5 Set the Upper Limits for RUP and RDP, and Milk Price

					Upper Limit	Amount in Diet
5.1	RUP	Rumen Undegradable Protein		% of Diet DM	6.50%	5.93%
5.2	RDP	Rumen Degradable Protein		% of Diet DM	11.50%	11.50%
5.3	CP	Crude Protein		% of Diet DM	18.00%	17.44%
5.4	Milk Price		$/cwt	9.4		

6 Perform Optimization, Maximize IOFSC

6.1 Click the button to maximize the Income Over Feed Supplement Cost (IOFSC)

Maximize IOFSC

			Current	Optimal
6.2	Expected Milk Producion (E-MP)	lb/cow/day	78.84	81.19
6.3	Maximum Income Over Feed Supplement Cost (IOFSC)	$/cow/day	5.20	5.54

Print this Page

7 Perform a Substitution Analysis

7.1	Select an ENERGY supplement	27-Corn-CGG
7.2	Select a PROTEIN/BYPRODUCT supplement	106-Soybean Meal-SBM
7.3.a	Select one of the following to change its price	Energy / Protein / Milk
7.3.b	Define the upper (↑) and lower (↓) limit in the price	↑ 51% ↓ 50%
7.4	Click the button to update the results of sections 8, 9, and 10	Perform a Substitution

8 IOFSC and Milk Production when Substituting Energy for Protein/Byproducts

(Ctrl + Click to Make Multiple Selection)

Standardized Farm/Mailbox

Analyze Clear Selections

Download Summary

Net Summary

Farms Analyzed	10

Farm Statistics

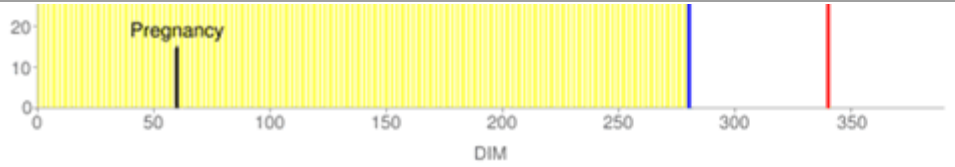
Farm Parameters	Min	25% Tile	Mean	75% Tile	Max
Milk Bulk Tank(lb/cow/day)	55	60	68.9	75	85
Milk Butterfat(%)	3.4	3.5	3.53	3.6	3.6
Milk Protein(%)	3	3.1	3.16	3.2	3.3
Milk Price($/cwt)	13.8	13.8	14.37	14.8	15.2
Milk Revenue($/cow/day)	7.59	8.88	9.92	11.33	12.92

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	51.7	51.7	64.03	69.38	79.9					
ECM	55.32	61.19	68.97	75	86.09					
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

Decision Support Tools Examples

b. Reproductive Efficiency

- Reproductive efficiency plays a critical role in the economics of a dairy herd
- Evaluate the economic value of reproductive programs is difficult and complex
- More important than the investment in reproductive programs is the economic benefit of having cows pregnant at the right time
- Normally, better reproductive efficiency is associated with greater economic benefit, but it needs to be quantified

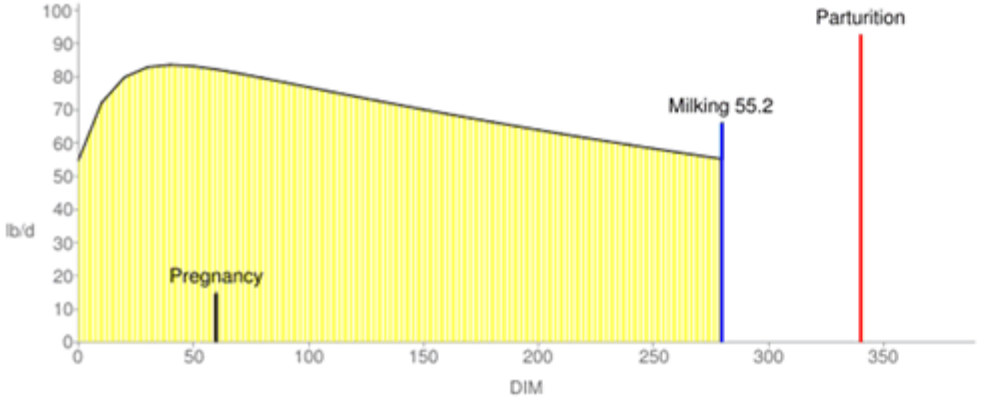


Decay 0.00077 0.001061

IOFC($) 1241.792

Total Milk (lb) 17945

Lactation II



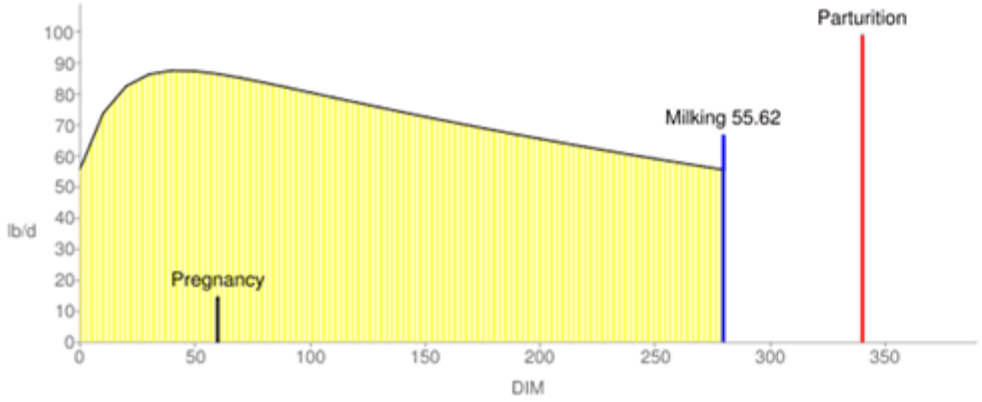
Lactation Curve Parameters

		Suggested Parameters
Pregnancy	60	
Scale	92.5724669603	92.57
Ramp	14.636	14.636
Offset	-2.0528	-2.0528
Decay	0.00184	0.00184

IOFC($) 1454.435

Total Milk (lb) 19685

Lactation III



Lactation Curve Parameters

		Suggested Parameters
Pregnancy	60	
Scale	99.2405286343	99.24
Ramp	16.7439	16.7439
Offset	-1.3311	-1.3311
Decay	0.002061	0.002061

IOFC($) 1538.532

Total Milk (lb) 20372

UW-Dairy Repro$

Victor E. Cabrera & Julio O. Giordano
Department of Dairy Science

THE UNIVERSITY of WISCONSIN MADISON

UW Extension
University of Wisconsin–Extension

Farm Name | **Location** Wisconsin

USDA United States Department of Agriculture | National Institute of Food and Agriculture

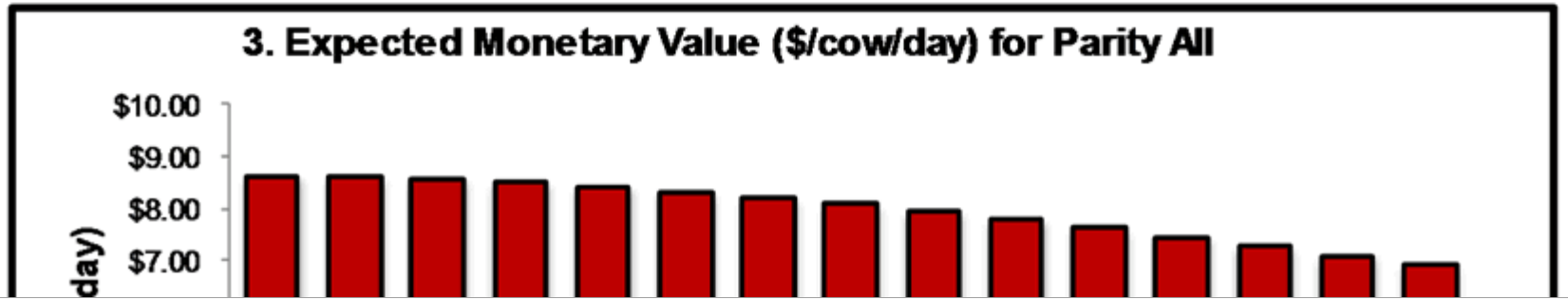
1. Productive Parameters

Lactating Cows	(#)	1,000
Rolling Herd Average (RHA)	(lb/cow/y)	28000
Involuntary Culling Rate	(%/y)	14.3%
Mortality Rate	(%/y)	7.0%
Stillbirth Rate	(%)	8.5%

2. Lactation Curves

		Lact. 1	Lact. 2	Lact. > 2
Cow Number		383	254	363
Body Weight (lb/cow)		1,350	1,400	1,450
Test	DIM	☑ Define Lactation Curves Below		
1	15	77	105	107
2	45	91	120	126
3	75	94	120	128
4	105	94	116	125
5	135	93	112	120
6	165	91	107	112
7	195	89	98	104
8	225	87	91	94
9	255	83	82	86
10	285	79	75	81
11	315	76	68	71
12	345	72	61	61

2nd and Following Services	Ovsynch	Ovsynch	Heat Breeding
Voluntary Waiting Period	50d	50d	50d
Maximum DIM for Breeding	270d		
DIM 1st TAI	70d	72d	
Interbreeding Interval	49d	42d	21d
Heat Bred Before 1st TAI	50%	60%	53%
CR Heat Bred Before 1st TAI	33%	35%	33%
Heat Bred After 1st TAI	50%	60%	53%
CR Heat Bred After 1st TAI	30%	30%	30%
CR 1st Service TAI	32%	35%	
CR 2nd+ Services TAI	28%	28%	
21d-Pregnancy Rate	18%	22%	16%
21d-Service Rate	59%	71%	53%
Average CR all breedings	31%	32%	32%
Days Open (d)	121	120	135
Projected Calving Interval (mo)	14.1	13.8	14.4
Cost 1st Service Breeding	$28.69	$37.00	
Cost Resynch Breedings	$28.69	$31.40	
Cost Heat Breedings	$21.05	$23.00	$22.00
Pregnancy Diagnosis Method	Palpation	Ultrasound	Palpation
Pregnancy Diagnosis Cost	6.00	8.00	7.00



13	0.01			0.11	0.13	0.16	0.19	0.23	0.27	0.33	0.03		13.03	-6.91	0.00	66.52
14	0.01				0.11	0.13	0.16	0.19	0.22	0.27	0.02		0.47	-5.37	0.00	54.08
15	0.00					0.11	0.13	0.15	0.19	0.22	0.01		-8.44	-4.10	0.00	44.37
16	0.00						0.11	0.13	0.15	0.18	0.01		-14.17	-3.05	0.00	36.57
17	0.00							0.10	0.13	0.15	0.00		-17.51	-2.18	0.00	30.16
18	0.00								0.10	0.12	0.00		-19.11	-1.41	0.00	24.85
19	0.00									0.10	0.00		-8.57	-0.68	0.00	20.41
20											0.00		0.00	0.00	0.00	0.00
21											0.00		0.00	0.00	0.00	0.00
22											0.00		0.00	0.00	0.00	0.00
23											0.00		0.00	0.00	0.00	0.00
24											0.00		0.00	0.00	0.00	0.00
25											0.00		0.00	0.00	0.00	0.00
	Lactation 2										Cull Cows		IOFC	Cull	Repro	Calves
1	2.28										0.05		511.49	-25.50	0.00	0.00
2	2.23										0.06		600.82	-28.99	55.76	0.00
3	1.78	0.39									0.05		565.30	-22.00	44.50	0.00
4	1.43	0.31	0.39								0.05		518.88	-22.03	35.63	0.00
5	1.15	0.25	0.31	0.37							0.04		473.22	-21.72	28.75	0.00
6	0.93	0.20	0.25	0.30	0.36						0.04		430.58	-21.15	23.33	0.00
7	0.76	0.16	0.20	0.24	0.29	0.35					0.04		387.76	-20.92	18.99	0.00
8	0.62	0.13	0.16	0.19	0.23	0.28	0.34				0.05		345.93	-22.27	15.44	0.00
9	0.50	0.11	0.13	0.15	0.18	0.22	0.27	0.33			0.05		305.46	-25.16	12.48	0.00
10	0.40	0.08	0.11	0.12	0.15	0.18	0.22	0.27	0.33		0.06		198.64	-28.42	9.96	0.00
11	0.31	0.07	0.08	0.10	0.12	0.14	0.18	0.21	0.26	0.32	0.06		117.31	-29.75	7.79	63.33
12	0.24	0.05	0.07	0.08	0.10	0.12	0.14	0.17	0.21	0.25	0.05		81.97	-25.54	0.00	50.70
13	0.22		0.05	0.06	0.08	0.09	0.11	0.14	0.17	0.20	0.05		55.90	-23.83	0.00	40.43
14	0.20			0.05	0.06	0.08	0.09	0.11	0.14	0.16	0.05		36.16	-21.98	0.00	32.48
15	0.17				0.05	0.06	0.07	0.09	0.11	0.13	0.04		21.43	-19.54	0.00	26.26
16	0.14					0.05	0.06	0.07	0.09	0.11	0.15		10.84	-16.82	0.00	21.30
17	0.00						0.04	0.06	0.07	0.09	0.01		-5.93	-3.45	0.00	17.20

Economic Value of Sexed Semen Programs for Dairy Heifers

Victor E. Cabrera, vcabrera@wisc.edu, 608-265-8506

1. Conception Rates (CR)

1.a. Conventional Semen CR (%)

Low CR	34
Average CR	60
High CR	83

1.b. Sexed Semen CR (% of Conventional CR)

80

Instructions

Manage Scenarios

Print

DairyMGT Webpage

2. Expected

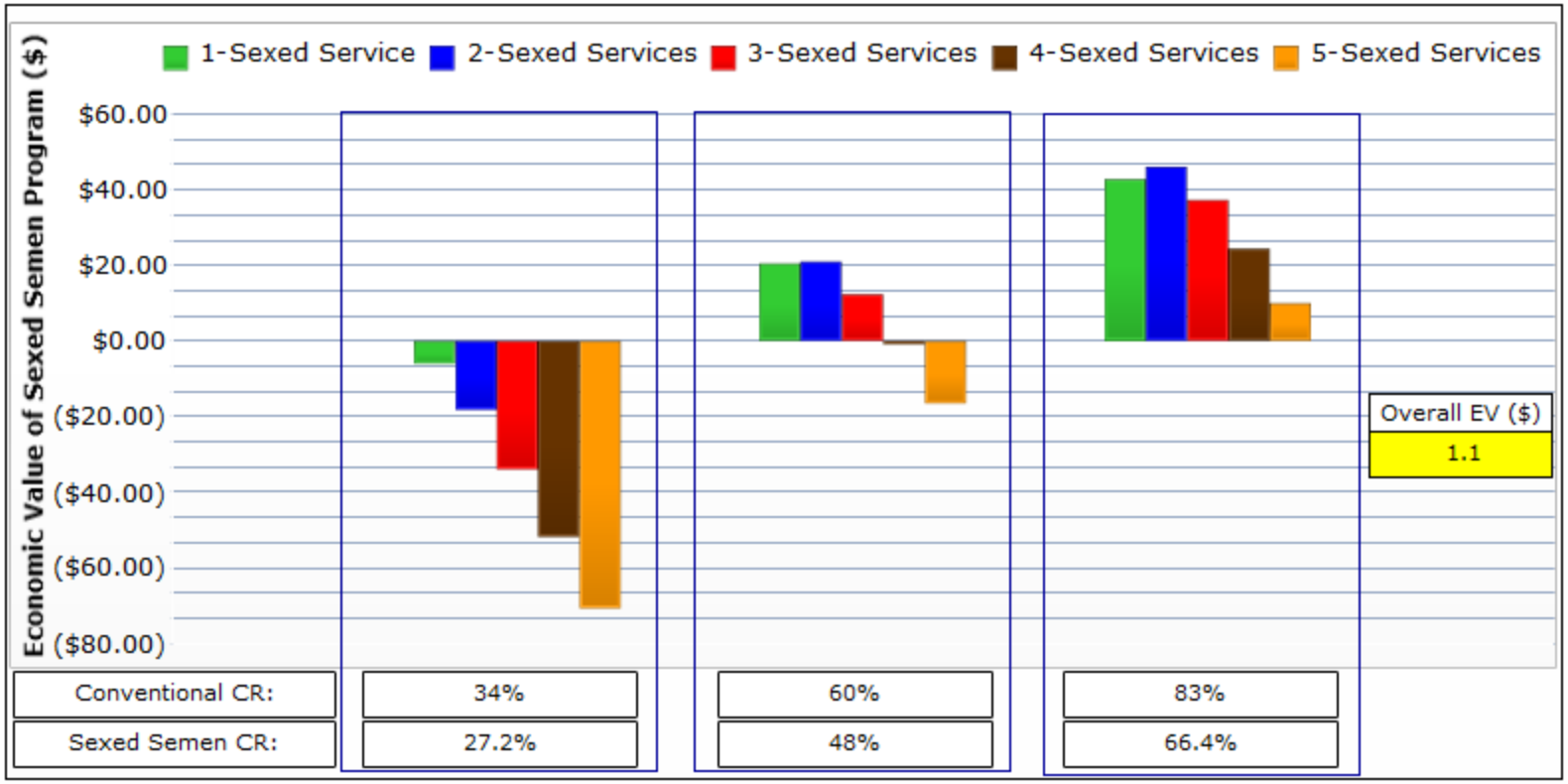
Conventional	46.7
Sexed	89

3. Semen Cost ($)

Conventional	15
Sexed	30

4. Other Economic Parameters

Discount (%/yr)	12
Female Calf ($)	300
Male Calf ($)	48
Raising Cost ($/d)	2.4
Salvage Value ($/cwt	81.3
Dystocia Cost ($/heifer	28.53
20-mo Pregnant Heifer ($	1200



Decision Support Tools Examples

c. Heifer Mgt. and Cow Replacement

- Heifers and replacement decisions are also essential for successful dairy farming
- Whether farmers raise their heifers on-farm or not, they need to make decisions regarding heifer rearing
  - Cost of raising heifers
  - Heifer alternative feeding systems
- Farmers want to know the required and projected supply of heifers as well as the value to sell or buy a replacement

Heifer Breakeven Tool

Overview | Input Costs | Cost 0-12 Months | **Cost 12-24 Months** | Cost for >24 Months

Heifer Raising Cost 12-24 Months

	Amount	Price in $	
Forage (ton)	5.5	1100	Min(0) Max(9.99)
Corn (bu)	4	28	Min(0) Max(99.9)
Soybean Meal (lb)	50	9	Min(0) Max(999)
Other Feed Supplements ($)		10	Min(0) Max(500)
Other Livestock Costs ($)		147	Min(0) Max(500)
Total Feed and Livestock Costs($)		1294	
Cost at 12 Months($)		1099	
Total Costs ($)		2393	
Cost Per Day ($)		3.55	

Restore Default Values

Click on the slider and use direction keys to change input values or click and drag the slider handle. You can enter inputs directly for values outside the ranges provided by the sliders.

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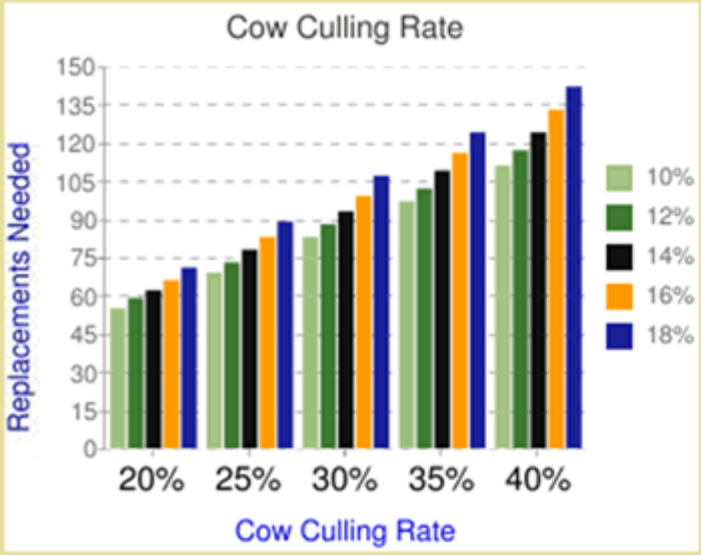
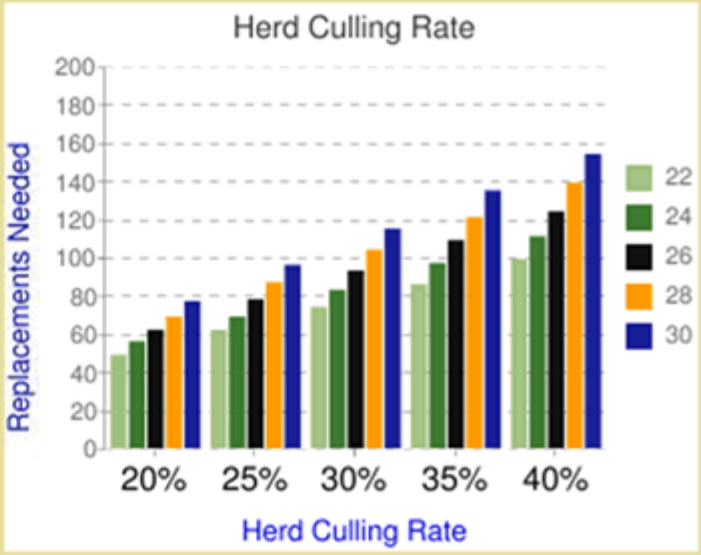
Graphs

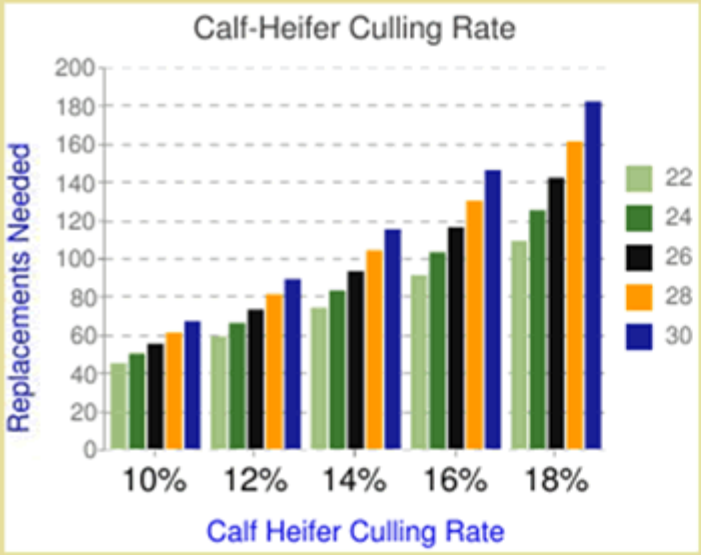
Graphs displayed below are continuously updated with changes in the inputs.

Required Replacement Animals **93**

Overview | Graphical Representation | Tabular Representation







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) 13.5

		$12.50	$13.00	$13.50	$14.00	$14.50
Milk	18.000	$1.596	$1.861	$2.126	$2.391	$2.656
Sales	19.000	$1.655	$1.934	$2.214	$2.494	$2.774
lb	20.000	$1.714	$2.008	$2.303	$2.597	$2.892
cow	21.000	$1.772	$2.082	$2.391	$2.700	$3.010
yr	22.000	$1.831	$2.155	$2.480	$2.804	$3.128

Productive Life (months) 39

		33	36	39	42	45
Milk	18.000	$1.917	$2.022	$2.126	$2.228	$2.329
Sales	19.000	$1.993	$2.105	$2.214	$2.323	$2.429
lb	20.000	$2.069	$2.187	$2.303	$2.417	$2.530
cow	21.000	$2.145	$2.269	$2.391	$2.512	$2.630
yr	22.000	$2.221	$2.351	$2.480	$2.606	$2.731

Milk Price ($/cwt) 13.5

		$12.50	$13.00	$13.50	$14.00	$14.50
Cow	33	$1.563	$1.816	$2.069	$2.322	$2.575
Life	36	$1.639	$1.913	$2.187	$2.461	$2.735
in	39	$1.714	$2.008	$2.303	$2.597	$2.892
month	42	$1.787	$2.102	$2.417	$2.732	$3.047
	45	$1.860	$2.195	$2.530	$2.865	$3.200

Milk Sales (lb per cow/year) 20000

DairyMGT

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Decision Support Tools Examples

d. Production

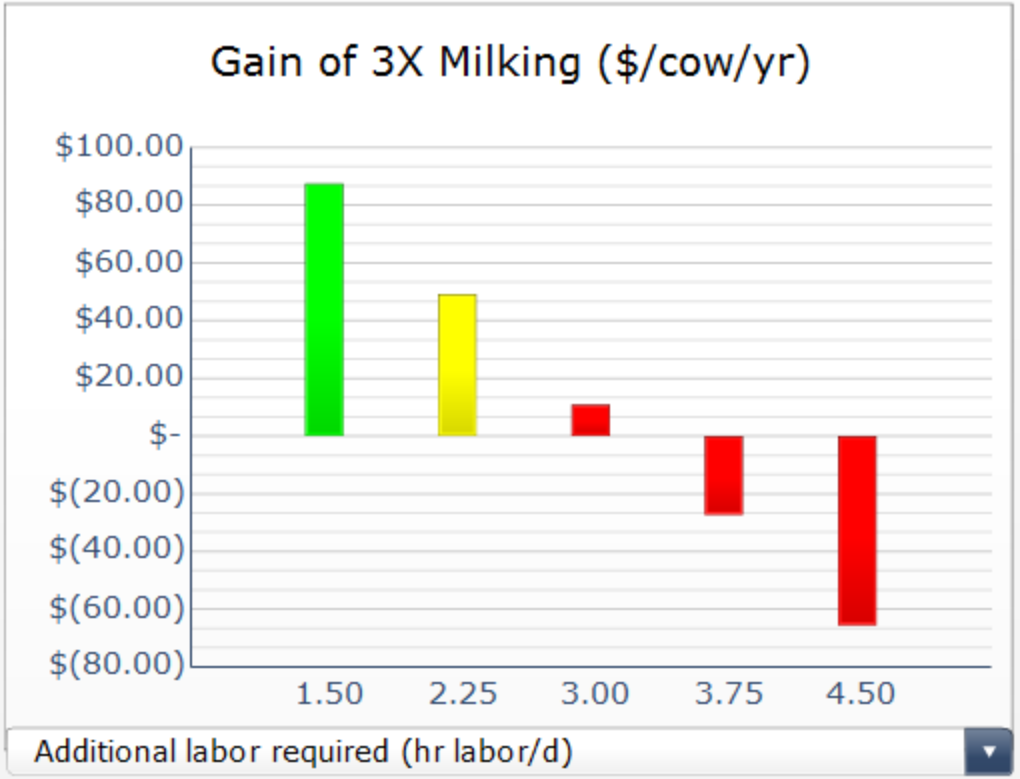
- Production benchmarking could lead to understand strengths and weaknesses of dairy farm systems
- Decision support tools can greatly help to evaluate strategic decisions aimed to enhance productivity or production:
  - Increasing the frequency of milking
  - Using bST
  - Modernize or expand the herd

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	
Milk price	12	($/cwt)
Cost of Labor	14	($/hr)
Expected Increase in Milk	7.5	(lb/cow/d)
Additional labor required	3	(hr labor/d)
Estimated Feed Cost	6	($/cwt milk)



UW-DairyManagement

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Inputs

Milk Price ($ per cwt)	$15.00
Feed Cost ($ per lb of DM)	$0.09
Labor Cost ($ per Hour)	$12.00
Bulk Tank Butterfat (%)	3.6%
Average Body Weight per Cow (lbs)	1500
Miscellaneous Enterprise Expenses ($ per Year)	$200,000.00
Percentage of Heifer Calves	49%

Cattle Purchasing & Sales

Decision Support Tools Examples

e. Financial Assessment and Price Risk Mgt.

- Farm financial benchmarking is critical to assess the financial health of a farm and decide on measures of improvement
- Large economic uncertainty due to prices variability threatens long term sustainability of dairy farm business

Wisconsin Dairy Farm Ratio Benchmarking

Victor E. Cabrera & Jenny Vanderlin

Year 2000

Herd Size <50

Inc/Cow <4000

Milk/Cow <16000

Overview | Liquidity | Solvency | Profitablility | Repayment | Efficiency | Du Pont | Summary | Definitions

Ratio	Wisconsin Ratio	Your Ratio	Percentile
Current Ratio (CR)	5.56	1.5	22
Net Working Capital (NWC)	141797.08	50000	26
Debt/Asset Ratio (D/A)	24.16	35	28
Equity Asset Ratio (E/A)	77.86	65	24
Net Farm Income (NFI)	28614.42	50000	86
Return on Farm Assets (ROROA)	5.14	6	74
Return on Farm Equity (ROROE)	1.6	5	76
Operating Profit Margin (OPM)	5.92	15	70
Term Debt Coverage Ratio (TDCR)	152.34	140	58
Replacement Margin (RM)	18381.32	50000	84
Asset Turnover Ratio (ATO)	36.9	40	80
Operating Expenses Ratio (OER)	67.7	70	38
Depreciation Expenses Ratio (DER)	11.1	10	60
Interest Expense Ratio (IER)	3.48	8	16
Net Farm Income Ratio (NFIR)	18.94	15	36

LGM Analyzer

Software Overview | Premium Estimator | Least Cost Optimizer | Bundled Options (Beta)

If you have saved CSV data from a previous run, you can upload it instead of typing in your farm's data again

Upload a file

Input

Insurance contract month: 2011 Jul

Choose your deductible level $ 1.0 /cwt

Feed Values: Enter Manually | Lowest Allowed | Default | Highest Allowed

The prices we use for the Gross Margin Calculation correspond to future and option prices retrieved on the trade dates: **2011-06-22, 2011-06-23, 2011-06-24**

Coverage Month	Production (cwt)		Corn Equiv (tons)		Soybean Meal Equiv (tons)		% covered	Monthly Gross Margin		
Month Year	Milk Qty.	Covered Milk × Expected Price = Milk Revenue	Corn Qty.	Covered Corn × Expected Price = Corn Cost	SBM Qty.	Covered SBM × Expected Price = SBM Cost		Milk Revenue - Corn Cost - SBM Cost - (Deductible × Milk Qty.)	$/cwt of Farm Milk	$/cwt of Covered Milk
Sep 2011	**4113**	4,113 cwt × $18.30/cwt = $75,266	**95.8**	95.8 tons × $6.66/bu = $22,785	**21.1**	21.1 tons × $341.96/ton = $7,215	**100**	41,152	10.01	10.01
Oct 2011	**4340**	4,340 cwt × $17.63/cwt = $76,511	**101.1**	101.1 tons × $6.58/bu = $23,769	**22.3**	22.3 tons × $339.16/ton = $7,563	**100**	40,839	9.41	9.41
Nov 2011	**4188**	4,188 cwt × $17.24/cwt = $72,198	**97.6**	97.6 tons × $6.51/bu = $22,678	**21.5**	21.5 tons × $339.64/ton = $7,302	**100**	38,029	9.08	9.08
Dec 2011	**4240**	4,240 cwt × $16.97/cwt = $71,949	**98.8**	98.8 tons × $6.43/bu = $22,686	**21.8**	21.8 tons × $340.12/ton = $7,414	**100**	37,608	8.87	8.87
Jan 2012	**4188**	4,188 cwt × $16.63/cwt = $69,642	**97.6**	97.6 tons × $6.47/bu = $22,550	**21.5**	21.5 tons × $341.79/ton = $7,348	**100**	35,556	8.49	8.49

Insurance contract month: 2011 Jun

Choose your deductible level $ 1.0 /cwt

Feed Values: Enter Manually | Lowest Allowed | Default | Highest Allowed

Target NIOFC: $ 5.0 /cwt

Coverage Month	Production (cwt)		Corn Equiv (tons)		Soybean Meal Equiv (tons)		% covered	Monthly Gross Margin		
Month Year	Milk Qty.	Covered Milk × Expected Price = Milk Revenue	Corn Qty.	Covered Corn × Expected Price = Corn Cost	SBM Qty.	Covered SBM × Expected Price = SBM Cost		Milk Revenue - Corn Cost - SBM Cost - (Deductible × Milk Qty.)	$/cwt of Farm Milk	$/cwt of Covered Milk
Aug 2011	4113	4,113 cwt × $19.02/cwt = $78,229	95.8	95.8 tons × $6.71/bu = $22,957	21.1	21.1 tons × $343.50/ton = $7,247	100	43,910	10.68	10.68
Sep 2011	4340	4,340 cwt × $18.30/cwt = $79,421	101.1	101.1 tons × $6.66/bu = $24,047	22.3	22.3 tons × $341.96/ton = $7,625	100	43,408	10.00	10.00
Oct 2011	4188	4,188 cwt × $17.63/cwt = $73,834	97.6	97.6 tons × $6.58/bu = $22,935	21.5	21.5 tons × $339.16/ton = $7,291	100	39,418	9.41	9.41
Nov 2011	4240	4,104 cwt × $17.24/cwt = $70,758	98.8	95.6 tons × $6.51/bu = $22,235	21.8	21.1 tons × $339.64/ton = $7,167	96.8	37,251	8.79	9.08
Dec 2011	4188	1,846 cwt × $16.97/cwt = $31,342	97.6	43.0 tons × $6.43/bu = $9,884	21.5	9.5 tons × $340.12/ton = $3,224	44.1	16,386	3.91	8.87
Jan 2012	4023	0 cwt × $16.63/cwt = $0	93.7	0.0 tons × $6.47/bu = $0	20.7	0.0 tons × $341.79/ton = $0	0	0	NA	NA
Feb 2012	4075	146 cwt × $16.41/cwt = $2,407	94.9	3.4 tons × $6.51/bu = $794	20.9	0.8 tons × $342.82/ton = $257	3.6	1,208	0.30	8.24
Mar 2012	4038	1,158 cwt × $16.43/cwt = $19,040	94.1	27.0 tons × $6.55/bu = $6,317	20.8	5.0 tons × $343.85/ton = $2,052	28.7	9,511	2.36	8.21
Apr 2012	4063	495 cwt × $16.29/cwt = $8,074	94.7	11.6 tons × $6.58/bu = $2,715	20.9	2.5 tons × $343.62/ton = $876	12.2	3,987	0.98	8.05
May 2012	4149	2,319 cwt × $16.24/cwt = $37,665	96.7	54.1 tons × $6.62/bu = $12,780	21.3	11.9 tons × $343.38/ton = $4,088	55.9	18,477	4.45	7.97
Total Farm	41,417 cwt		965 tons		212 tons		54.84%	GMG 213,560	5.16	9.40
Covered	22,712 cwt		529 tons		116 tons					

Save Input | Calculate LGM Premium | Calculate Options Cost | Save GMG Calculations | Optimize Coverages for Least Cost Premium

Some Statistics of Tools Usage

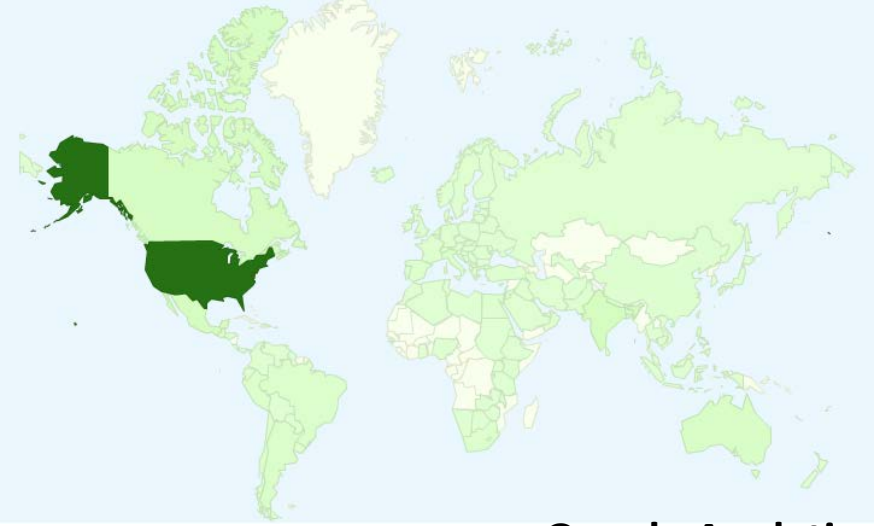
- Visitors Since March 2, 2011 = 9,227

- Tools Downloads Since March 2, 2011 ~ 5,516 (~60%)

Financial Benchmark	848	Heifer Breakeven	398
Heifer Replacement	282	LGM Related Tools	780
Repro Analysis	638	Optigen	290
Pregnancy	139	Expansion	176
Corn Feeding	150	IOFC	57
Accelerated Feeding	44	UW Dairy Repro	423
Lactation Benchmark	248	bST	30
Sexed Semen	85	Others	928

Some Statistics of Tools Usage

Country	%
United States	61.12
India	3.36
Mexico	3.23
Canada	2.89
Australia	2.12
Argentina	1.59
Philippines	1.40
Italy	1.28
Peru	1.25
Brazil	1.24
Other 114 Countries	20.52



Google Analytics

9,061 Visits from 123 Countries

Page/Visit: 3.53

% New Visits: 61.59%

Thanks



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