DAIRY STRATEGIES

"Living on a Roller Coaster"

Production Management Strategies with Volatile Feed Prices

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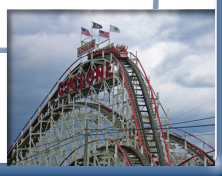
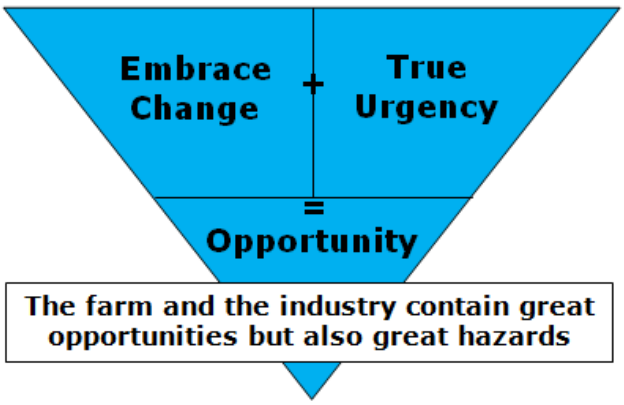


Strategy for Turbulence



DAIRY STRATEGIES

*Management Strategies and Volatile **FEED** Costs*

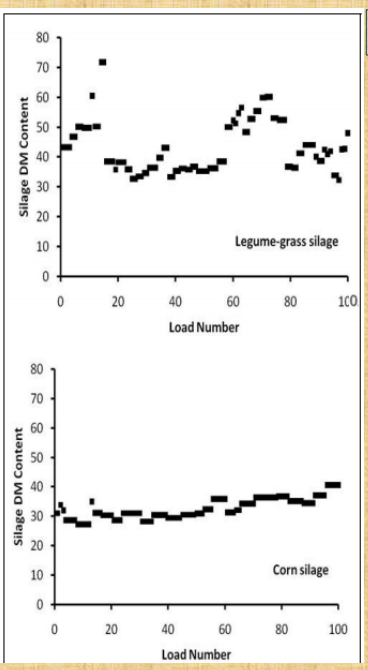
- ***F**orages*
- ***E**conomics*
- ***E**nvironment*
- ***D**ecision Support*

DAIRY STRATEGIES

FORAGES

- **<u>Quality Forages – Priority #1</u>**
  - Producing/purchasing high quality forage
  - Managing/minimizing dry matter (DM) losses from field to feedbunk
  - Allocating forage and other feed nutrients to optimize herd performance (production and health)
  - 60-70% dry matter intakes as high quality forage results in high production efficiencies

DAIRY STRATEGIES



Monitoring Forage Dry Matter
Hoffman, P., et. al., Univ. WI-Madison

Monitoring Forage/Feed Quality

Table 1. Forage sampling frequency optimized by herd size.

	No. of Milking Cows in Herd					
	50	100	200	400	800	1600
Interval between sampling, days	30	16	11	7	5	4
No. of sampling days per month	1	2	3	4	6	7
No. of samples per sampling day per forage	1	2	3	3	3	3
No. of samples per month per forage	1	4	9	12	18	21

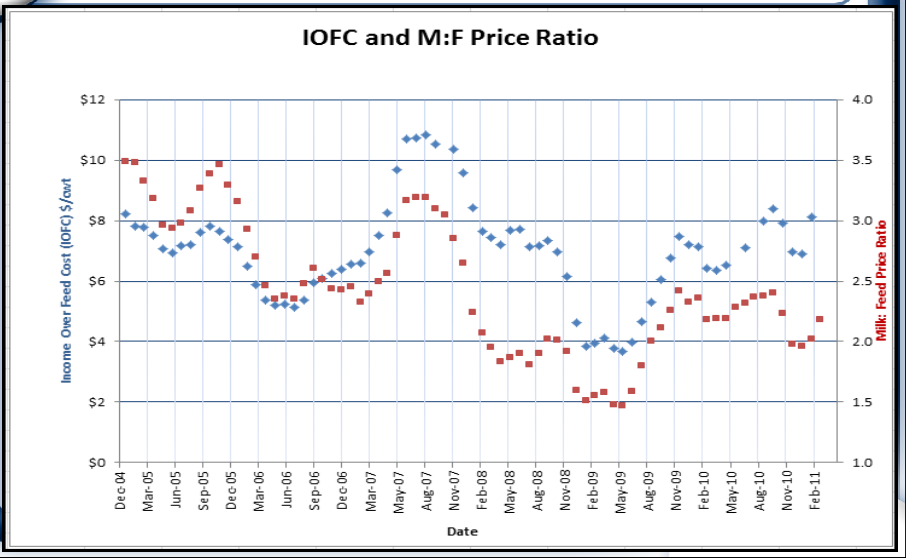
St-Pierre, N., and W.P. Weiss. 2007. Understanding feed analysis variation and minimizing its impact on ration formulation. Proc. Cornell Nutr. Conf. Syracuse, NY.

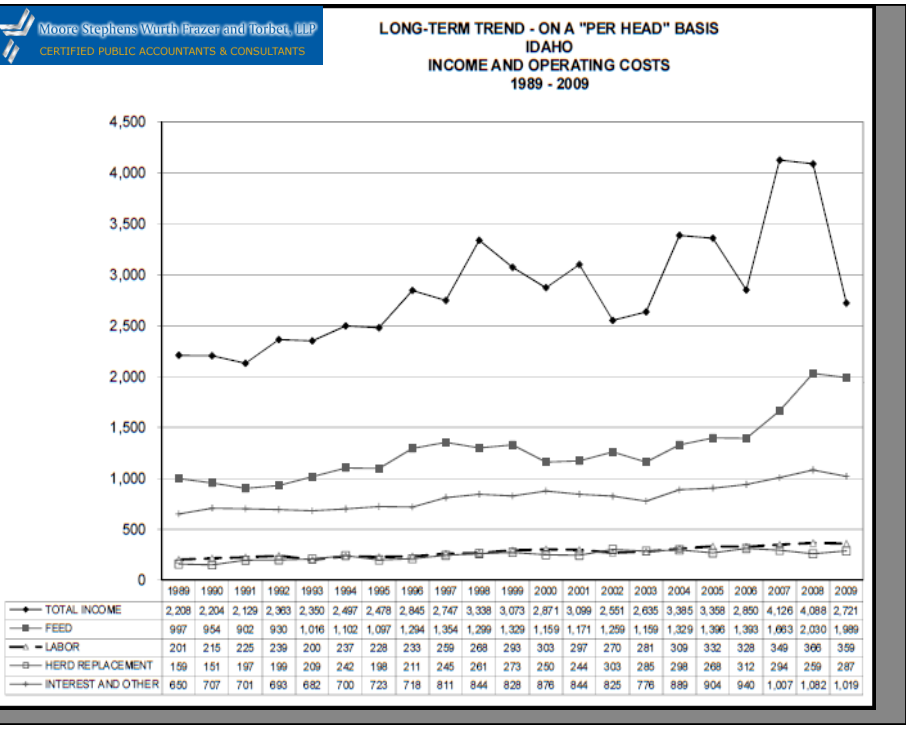
Feed Economics

- Routinely monitoring cost and returns
- Minimize shrink
- Optimizing feed efficiencies (high quality forages + commodities/by-products/concentrates and additives)
  - Grouping strategies
  - Replacement management/acquisition strategies, herd turnover
- Routine evaluation of alternative feeds and formulations
  - Cropping and purchase decisions
- Maintain adequate working capital

DAIRY STRATEGIES

Feed Economics





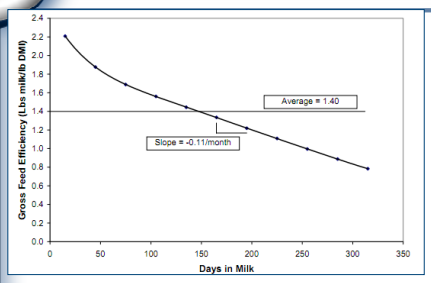
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
TOTAL INCOME	2,208	2,204	2,129	2,363	2,350	2,497	2,478	2,845	2,747	3,338	3,073	2,871	3,099	2,551	2,635	3,385	3,358	2,850	4,126	4,088	2,721
FEED	997	954	902	930	1,016	1,102	1,097	1,294	1,354	1,299	1,329	1,159	1,171	1,259	1,159	1,329	1,396	1,393	1,663	2,030	1,989
LABOR	201	215	225	239	200	237	228	233	259	268	293	303	297	270	281	309	332	328	349	366	359
HERD REPLACEMENT	159	151	197	199	209	242	198	211	245	261	273	250	244	303	285	298	268	312	294	259	287
INTEREST AND OTHER	650	707	701	693	682	700	723	718	811	844	828	876	844	825	776	889	904	940	1,007	1,082	1,019

Feed Economics

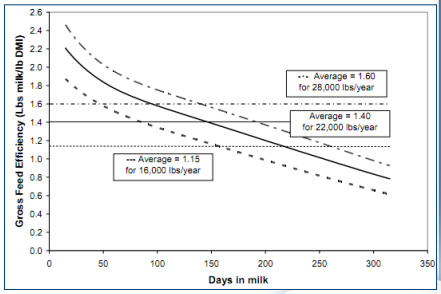
- Minimize shrink (+ 15-20+% increase in feed cost)
  - Forages (field, transport, packing, covering, feeding, refusals)
  - Commodities/grains/additives (storage, mixing, birds/rodents, refusals)

DAIRY STRATEGIES

Feed Efficiencies



St. Pierre, N. 2009. *Feeding $10 Corn for Fun and Profits*. Proc. Western Dairy Conf.



DAIRY STRATEGIES

"Cow-Jones" Index

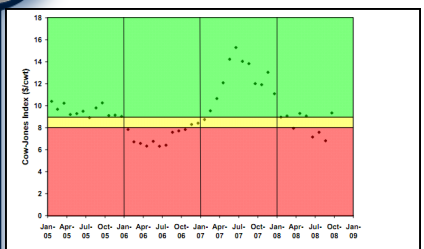


Figure 8. The Cow-Jones Index between January 2005 and October 2008. The average dairy producer loses money when the index falls below $8.00/cwt, makes money when it exceeds $9.00/cwt, and experiences variable and marginal profitability when the index falls between $8.00 and $9.00/cwt.

St. Pierre, N.,
Ohio State U.

THE OHIO STATE UNIVERSITY EXTENSION

Feed: Bakery Mix

ENTRIES

Dry Matter (%)	90	*Unit Values (from Sesame)*	
Crude Protein (% of DM)	14	Energy ($/Mcal)	0.067
Rumen Undegradable Protein (% of CP)	40	RDP ($/lb)	0.122
RUP Digestibility (% of RUP)	80	D-RUP ($/lb)	0.202
Neutral Detergent Fiber (% of DM)	20	ne-NDF ($/lb)	-0.012
NDF Effectiveness (% of NDF)	10	e-NDF ($/lb)	0.052
Net Energy lactation (Mcal/cwt)	82.6		

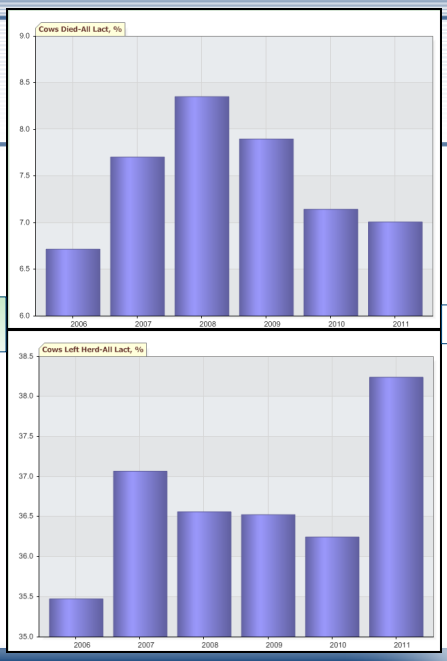
Feed Value Comparisons

- **Dry matter intake vs. milk price**
  - 2 pounds of milk per pound of DMI
  - 40 to 44 cents income vs. 12 cents expense
- **Comparison of forages vs. grain vs. fat**
  - Corn silage ($60/t) = 12.5 cents per Mcal
  - Corn grain ($7/bu) = 20.3 cents per Mcal
  - Oil (49 cents/lb) = 21.8 cents per Mcal

Source: Hutjens, M. Univ. of IL

DAIRY STRATEGIES

Deaths & Herd Turnover (Total)



Source: DairyMetrics, DRMS, Raleigh, NC (>1000 cows)

DAIRY STRATEGIES

Dairy Replacements

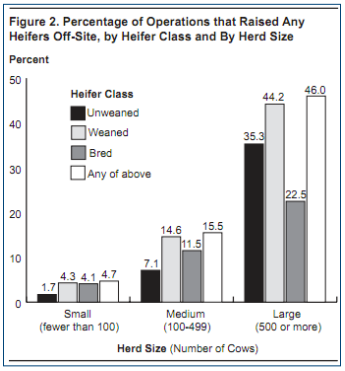
- On-site and/or off-site – risks/rewards
- Custom raise v. Home-raise v. Sell calves/ purchase springers
- Sexed semen
- Role of pasture (U. MO - $200/heifer savings)

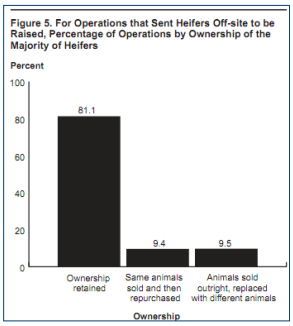
Dairy Heifer Raiser 2011

Off-site heifer-raising operations are becoming more common and are now used by about 1 of 10 U.S. dairy operations. Almost one-half of dairy operations with 500 or more cows raise at least some heifers off-site. The USDA's National Animal Health Monitoring System (NAHMS) is conducting the Nation's first study of this growing segment of the U.S. dairy industry. This important study will describe current management practices used on heifer-raising facilities and identify future challenges facing industry. Dairy operations from 21 States* will participate in the

DAIRY STRATEGIES

Dairy Replacements





APHIS Info Sheet
Veterinary Services
Centers for Epidemiology and Animal Health
November 2007

Dairy Heifer Raiser 2011

Off-site heifer-raising operations are becoming more common and are not used by about 1 of 10 U.S. dairy operations. Almost one-half of dairy operations with 500 or more cows raise at least some heifers off-site. T USDA's National Animal Health Monitoring System (NAHMS) is conducting the Nation's first study of this growing segment of the U.S. dairy industry. This important study will describe current management practices used on heifer-raising facilities and identify future challenges facing industry. Dairy operations from 21 States* will participate in the

DAIRY STRATEGIES

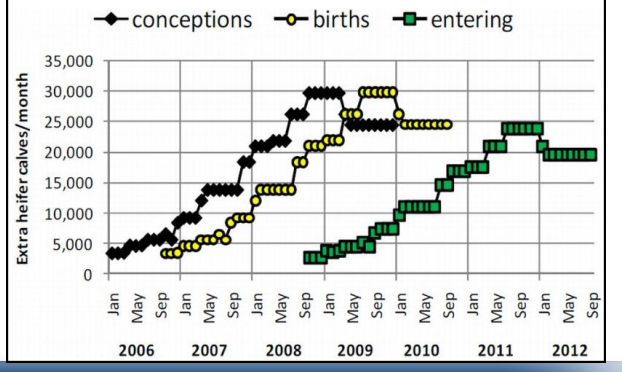
Sexed Semen

UF UNIVERSITY of FLORIDA
IFAS Extension

Effect of Sexed Semen on Dairy Heifer Supply from 2006 to 2012[1]

Albert De Vries[2]

Figure 4. Number of extra heifer calves in the national population (heifers and cows) that resulted from inseminations (conceptions) with sexed semen from January 2006 to December 2009. These heifer calves are born (births) 9 months after conception and enter herds 24 months after they are born (entering).



DAIRY STRATEGIES

Feed Economics
Access to Capital

- Access to working capital
  - Feed production and/or acquisition
  - Herd replacements
- Move by some major dairy lenders to lower LTV (loan-to-value) lending standards
  - Impact of combined feed/herd LOC at:
    - 75% LTV versus 60-65% LTV
    - Decline in asset value of herd

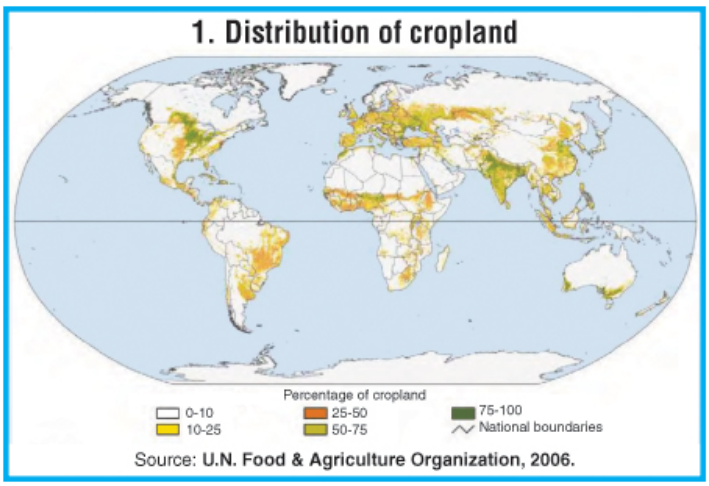
DAIRY STRATEGIES

Feed and the Environment

- Cropping and/or forage acquisition strategy
- Manure nutrient management
  - Dust, odor, flies, run-off, nutrient accumulation (P)
- Forage/Feed production agreements
- Carbon footprint (and other measures) and Image

DAIRY STRATEGIES

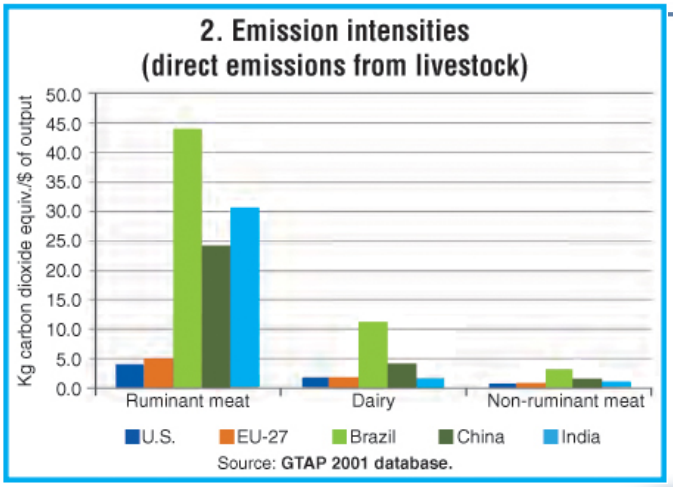
Environment



From: Feedstuffs FooodLink: Rod Smith, April 25, 2011 (based on presentation: F. Mitloeher, UC-Davis)

DAIRY STRATEGIES

Environment



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DAIRY STRATEGIES

Environment

INNOVATION CENTER FOR U.S. DAIRY
HEALTHY PEOPLE • HEALTHY PRODUCTS • HEALTHY PLANET

Feed Production

Feed Production: 20.3 percent – 3.56 lbs CO_2e/gallon – 7.2 Tg

Environmental

Dairy farms and businesses have a heritage of advancing their operations in a way that makes good economic and environmental sense. According to Cornell University, the dairy industry has already reduced its carbon footprint by more than 60 percent between 1944 and 2007 due to production efficiencies, improved cow nutrition and comfort, nutrition management and other improvements.[6]

U.S. dairy GHG emissions are approximately 2 percent of total U.S. emissions.

The carbon footprint of a gallon of milk – from farm to table – is 17.6 pounds of carbon dioxide equivalents (CO_2e) per gallon of milk consumed (or 2.05 kg CO_2e per kg of milk consumed).[7]

Milk performed better than other beverages in the new Nutrient Density to Climate Impact (NDCI) Index, which establishes the relation of beverage nutrient density to climate impact.[8]

DAIRY STRATEGIES

Image

BARE certified

Just BARE® is one of the first U.S. food brands and the only U.S. poultry brand working with the Carbon Trust to gain approval to use the Carbon Reduction Label.

Working with UK-based Carbon Trust, we've certified a select range of our products. And the Carbon Reduction Label - that is displayed on every Just BARE package - demonstrates our commitment to getting better.

400,000 Somatic Cell Count Proposal Fails

MAY 4, 2011
By: **Jim Dickrell**, Dairy Today Editor

Ads by Google
My Milk is Worth What?

In a stunning turn of events, delegates to the National Conference on Interstate Milk Shipments (NCIMS) voted 25 for, 26 against a proposal to lower the U.S. Grade A standard to 400,000 cells/ml yesterday.

DAIRY STRATEGIES

Decision Support
Feed Management

- Monitoring costs and returns – as "real-time" as possible
- Maintain flexibility with feed purchase decisions
- Develop overall business risk management strategy with a focus on margins
  - Cash forward contracts, futures, options, LGM-insurance, etc.
- Professional nutritionist support

DAIRY STRATEGIES

Decision Support
Feed Management

- Tools (some examples):
  - Feed Value Comparison applications:
    - FEEDVAL (UW)
    - SESAME (OSU)
  - Feed inventory management
    - FeedWatch (Valley Ag Software)
    - EZ-Feed (DHI-Provo)
    - TMR-Tracker (Digi-Star)

DAIRY STRATEGIES

Decision Support
Nutrient Management

Cornell University
University of Wisconsin-Madison
USDA-Agricultural Research Service, Dairy Forage Research Center

April 30, 2004

Final Report to the National Center for Manure and Animal Waste Management

Cornell University Crop and Soil Sciences Research Series R04-1
University of Wisconsin Extension Publication A3794

VII. Comparing Nutrient Management Software Tools

	DAFOSYM	PALMS	Yardstick	N-CyCLE	CNCPS	Cropware	SNAP +	WI PI	NY PI
Environmental outputs									
Phosphorus loss/balance	■	■	■	■	■	■	■	■	■
Nitrogen loss/balance	■	■	■	■	■	■	■		
Other nutrient balances	■		■	■		■	■		
Sediment loss		■					■	■	
Manure timing/application				■		■	■		
Economic inputs/outputs									
Income	■			■	■				
Manure/fertilizer costs	■					■			
Feed costs	■			■	■				
Production inputs/outputs									
Crop production	■	■		■					
Crop nutrient requirements				■		■			
Animal products	■			■	■				
Feed requirements	■			■	■		■		
Labor requirements	■			■					
Management decisions		■			■	■	■	■	■
Regulatory output			■			■	■		■
Record keeping output						■	■		
GIS capabilities		■							
Data transferability		*	***			■	■	■	
Tool documentation available	■	■	■	*	■	■	*	■	■
Field validation	■	*	■		■	■	*	*	■
Targeted audience									
Farmer			■		■	■	■	■	■
Research	■	■	■	■	■			■	■
Agricultural industry	■	■	■	■	■	■	■	■	■
Policy	■				■	■	■		■
Teaching, Extension	■		■	■	■	■	■		■

DAIRY STRATEGIES

Summary

- Focus on Quality Forages
- Focus on Margins - Routinely evaluate alternative feed “buys” and feeding strategies
- Focus on Reducing Herd Turnover and corresponding herd replacement costs and evaluate alternative acquisition strategies
- Focus on implementing appropriate Decision Support Tools to optimize animal performance and health and improved returns

DAIRY STRATEGIES