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Dairy Expansion

“The Reason, the Process”

Agricultural Outlook Forum 1999
Arlington, VA
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Dairy Expansion

“The Reason, the Process”

- National Industry Changes
- Regional Industry Changes
- Dairy Development



National Industry Changes

- Elimination of Price Support
 - Price Volatility
 - Greater Profit Potential
 - Greater Transition



National Industry Changes

- Knowledge and Technology
 - Productivity
 - Profitability
 - Specialization



Regional Industry Changes

- Lifestyle Expectations
 - Quality of Life
 - Profit
 - Retooling



Regional Industry Changes

- Understanding the Value of Cows
 - Non-Dairy Entrants
 - Economic Development
 - Movement of Western Dairywomen



Advantages of Midwest Dairy

- Inexpensive Land
- Excess Forage
- Low Grain Prices
- Abundant Water
- Abundant Land for Nutrient Management
- Good Weather for Cows
- High Milk Prices



DAIRY DEVELOPMENT

Mission

Provide producers with professional business support services to improve their profitability and national competitiveness.



DAIRY DEVELOPMENT

Key Program Concepts

- Provide support in facility design, technology, finance and business economics.
- Provide quality business planning and project management services for dairy producers
- Provide a personal and family goal-driven process
- Proactively coordinate resources
- Extend and compliment existing internal/external support services



DAIRY DEVELOPMENT

History

- Pilot program initiated in 1989
- 1990 Implemented program
- 146 Producer projects through 1998
- Range 150-1500 cows
- Average -- 550



DAIRY DEVELOPMENT

Program Process

Stage 1

Initial Planning & Design

Phase I

Strategic Planning

Phase II

Operational Planning

Phase III

Site Development & Final Design

Stage 2

Bid Securement & Construction

Phase IV

Bid & Loan Securement

Phase V

Construction

Stage 3

Implementation & Monitoring

Phase VI

Management Implementation

Phase VII

Consultation & Monitoring of
business performance



DAIRY DEVELOPMENT

Phase I Planning

Actions

- Defining personal and business objectives
- Outline potential models.
- Study existing dairies.
- Evaluate financial capabilities.



DAIRY DEVELOPMENT

Phase I Planning

Outcomes

- Strategic Plan
 - Focus
 - Direction
- Profit Analysis
- Clarify Expectations
 - Communications



DAIRY DEVELOPMENT

Phase II Planning

Actions

Develop Operational Plan

- Technology Planning
- Animal Planning
- Labor Planning
- Manure Storage / Nutrient Use
- Feed Planning
- Facility Planning
- Equipment Plan



DAIRY DEVELOPMENT

Phase II Planning

Outcomes

Complete Business Plan

- Strategic Plan
- Expansion Budget
- Feed Plan Model
- Animal Flow Model
- Labor Model
- Manure Nutrient Model
- Financial Proforma



DAIRY DEVELOPMENT

Phase III Planning

Actions

- Survey, Borings, Testing
- Manure Storage Design and Permit Application
- Logistical Planning



DAIRY DEVELOPMENT

Phase III Planning

Outcomes

- Site Plan
- Manure Management Plan
- Facility Plans and Blueprints



DAIRY DEVELOPMENT

Phase IV Bid Securement

Actions

- Develop bid proposals
- Secure bids
- Analyze bids
- Update financials



DAIRY DEVELOPMENT

Phase IV Bid Securement

Outcomes

- Secure Permits
- Secure Contractors
- Secure Financing
- Establish Timelines



DAIRY DEVELOPMENT

Phase V Construction

Actions

- Review Project Protocol
- Weekly Project Visits
- Update Project Tracker
- Review Change Orders
- Consult on Feed, Labor, Animal, Record implementation process



DAIRY DEVELOPMENT

Phase V Construction

Outcomes

- Project on budget
- Construction per design
- Implement new record system
- Implement labor plan
- Secure forage supply
- Implement animal expansion



DAIRY DEVELOPMENT

Phase VI Implementation

Actions

- Establish herd management
calving, care, culling, milking, feeding,
breeding
- Labor Training
activity flows, s.o.p.
- Implement process & controls
anticipate issues, propose options, measure
results, follow-through on adjustments.



DAIRY DEVELOPMENT

Phase VI Implementation

Outcomes

- Performance to Budget
- Management of Business
 - People, Cows, Money Monitoring,
System Updates & Plans
 - Financial
 - Production
 - Labor
- Business Analysis & Budgeting



Factors Impacting Dairy Expansions

- Building Ordinances
- Permitting Requirements
- Increasing Cost for Assets
- Lending Requirements



Dairy Expansion Summary

- National Impacts
- Regional Impacts
- Process for Success
- Resources

CHART A

Number of Dairy Operations by Size Group in U.S.

<u>Year</u>	<u>1-29 Head</u>	<u>30-49 Head</u>	<u>50-99 Head</u>	<u>100-299 Head</u>	<u>200 + Head</u>	<u>Total</u>
1993	59,250	35,390	42,920	14,900	6,990	159,450
1994	53,300	32,760	41,130	14,680	6,820	148,720
1995	46,400	30,710	38,440	14,570	6,910	137,030
1996	39,780	28,410	36,930	14,740	6,940	126,800
1997	33,420	26,300	34,810	14,900	7,250	116,680
93-97 change	-25,830	-9,090	-8,110	---	+260	-42,770
93-97% change	-43.6%	-25.7%	-18.9%	---	+3.7%	-26.8%

Source: USDA Milk Production

CHART B

Number of Dairy Operations by Size Group in U.S.

<u>Year</u>	<u>1-29 Head</u>	<u>30-49 Head</u>	<u>50-99 Head</u>	<u>100-299 Head</u>	<u>200 + Head</u>	<u>Total</u>
1993	4.1	13.1	27.6	18.9	36.3	100.0
1994	3.4	12.0	26.0	19.2	39.4	100.0
1995	3.1	11.3	26.1	19.8	39.7	100.0
1996	2.7	10.2	24.8	20.0	42.3	100.0
1997	2.4	9.5	23.4	20.0	44.7	100.0
93-97 change	-1.7	-3.6	-4.2	+1.1	+8.4	-

Source: USDA Milk Production

CHART C

Costs and Returns of Milk Production on FCRS Farms with Alternative Sizes of Dairy Operations, Per Cow 1993

	Fewer than <u>60 Cows</u>	60-119 <u>Milk Cows</u>	120-299 <u>Milk Cows</u>	300 + <u>Milk Cows</u>
Gross Return	\$2,092	\$2,143	\$2,355	\$2,319
Variable Cash Expenses	1,629	1,735	1,724	1,668
Overhead Expenses	<u>658</u>	<u>577</u>	<u>519</u>	<u>446</u>
Residual Return to Labor, Management And Risk	\$(195)	\$(169)	\$112	\$205
Ave. No. of Cows	34	78	166	818
Net Return to the Milk Cow Enterprise	\$(6,630)	\$(13,182)	\$12,544	\$167,690

CHART D

Minnesota Statewide Farm Business Management Records – 1997

	<u>Milk Cow Enterprise – Per Cow</u>		
	<u>Ave. for All Farms</u>	<u>Ave. for Low 20%</u>	<u>Ave. for High 20%</u>
No. of Farms	688	138	138
Gross Return	\$2,220	\$1,722	\$2,647
Total Direct Expenses	685	152	1,131
Total Overhead Expenses	<u>420</u>	<u>342</u>	<u>503</u>
Residual Return to Labor Management and Risk	\$264	-\$190	\$629
Ave. No. of Cows	67.3	58.0	80.1
Net Return to the Milk Cow Enterprise	\$17,767	\$(11,020)	\$50,383

CHART E

Impact of Herd Size on Value Added

Expressed on a per cow basis

	HERD SIZE			
	<u>Fewer than 60 milk cows</u>	<u>60 - 119 milk cows</u>	<u>120 - 299 milk cows</u>	<u>300 or more milk cows</u>
Hired Labor	\$39.22	\$110.25	\$152.58	\$138.30
Interest Paid	117.54	110.12	122.53	97.95
Imputed returns to Unpaid family labor & family owned capital	458.04	239.07	112.31	47.21
Imputed land rent	1.39	.85	.66	.56
Residual Return to Management & Risk	<u>(609.54)</u>	<u>(371.86)</u>	<u>9.21</u>	<u>180.51</u>
Value Added	\$6.65	\$88.43	\$397.31	\$464.53