DAIRY TRANS 4.0

DAIRY Total Return ANalysis System

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Iowa State University Extension, Dairy Team

Translating Financial Data into Knowledge

and

"Bringing Profits to Life"

Helping Dairies Attain Higher Profit Performance with Minimal Input!

- ** #1 Balance Sheet -- Snapshot of Beginning and Ending Values on a Fair Market Value and/or Cost "tax" Value Basis.
- #2 Schedule F -- Cash I ncomes and Expenses taken directly from the tax form with a few changes.

Helping Dairies Attain Higher Profit Performance with Minimal Input!

#3 Cash Flow I ssues

 Non-farm income, income taxes paid, principal payments, family living expenses, capital purchases and sales (- cull cows) and new monies from savings, loans, etc.

Helping Dairies Attain Higher Profit Performance with Minimal Input!

#4 Production Data --

• Milk hundredweights, cows, productive crop/pasture acres, opportunity costs of labor and equity, unpaid labor hours and full-time labor equivalents FTE's.

Dairy TRANS Output

Cash basis records are adjusted for inventory changes to attain a true income and cost picture.



Cash Income/Expense



-per cow, cwt eq. And goals

Labor and capital are fully accounted for to better gain a handle on intensity of resource use.



Net Worth Statement



Fair Market and Cost Basis

Generates a very detailed and useful profit performance analysis.



Cash Flow Summary



Cash Flow Ratio



Dairy TRANS Output

The uses are many--yearend analysis, budget projections, financial comparisons, farm record groups, etc.



Net Farm Income

- -- per cow, cwt eq. and goals
- -- inventory adjustments
- -- equity charge



-- labor return



Many users report generating data to use the program in one hour or less.



-- per cow, cwt. eq., acre and unpaid labor hour

Cost Return Analysis



Profit Performance Rating System



Net Worth	r Stat	tement-	Curre	ent A	Assets
CURRENT		Begi	n	End	
Current Cash on	Hand	\$0		\$61,17	78
Prepaid Expense	eS	\$19,	745	\$21,8	88
Account Receiva	bles	\$0		\$0	
Inventories Qu	uantity				Quantity
Corn 2	2,000	\$48,400	\$48,40	00	22,000
Dry Hay	150	\$11,250	\$10,87	7 5	145
Haylage	880	\$30,800	\$30,10	00	860
Corn Silage	600	\$15,000	\$15,50	00	620
Soybeans	0	\$0	\$0		0
Resale Lystck	0	\$0	\$0		0
Resale Lystck	0	\$0	\$0		0
Small Tools/Supp	lies	\$3,000	\$3,000)	
Other		\$0	\$0		
Total (Current)		\$128,195	\$190,9	941	

Net Worth Statement--Current Assets Notes Checking Account/Investments Property Taxes for year following January milk check for December Price Unit \$2.20 Bushel \$75.00 ton \$35.00 ton \$25.00 ton \$6.00 bushel \$0.00 head \$0.00 head Shop Tools, Milk House Supplies

Net Worth Statement--Non-Current

NON-CURRENT		Cost (Tax)	Basis	
Breeding Stock Q	<mark>uantity</mark>	Begin	End	Quantity
Dairy Cows	112	\$67,200	\$74,400	124
Dairy Heifers	35	\$7,000	\$6,800	34
Dairy Calves	34	\$0	\$0	50
OtherBull	1	\$600	\$600	1
Machinery		\$0	\$0	
Dairy Equipment		\$0	\$0	
Buildings		\$0	\$0	
Land Acres	137	\$260,300	\$260,300	137
Other (coop stock)	(\$0	\$0	
Total(Non-Curren	t)	\$335,100	\$342,100	
TOTAL ASSETS		\$463,295	\$533,041	

Net Worth Statement--Non-Current

Non-Current Unit Unit	Fair Market Value (FMV)
Breeding Stk Cost FMV Dairy Cows \$600 \$1,000 Dairy Heifer\$200 \$800 Dairy Calves \$0 \$600 Otherbull \$600 \$600 Machinery Dairy Equipment Buildings Land \$1900 \$1900 Other (coop stock) Total Non-current Assets Total Assets	Begin End \$112,000 \$124,000 \$28,000 \$27,200 \$20,400 \$30,000 \$600 \$600 \$61,000 \$56,000 \$0 \$0 \$260,300 \$260,300 \$0 \$0 \$482,300 \$498,100 \$610,495 \$689,041

Net Worth StatementLiabilities						
LI	IABILITIES					
Accounts Payable	Begin	End				
# 1	\$0	\$0	Feed	Bill		
#2	\$0	\$0				
#3	\$0	\$0				
Current Loans	\$0	\$0				
Current Portion-Non-Cu	rr\$1	\$1	Due 1	this year		
Total (Current)	\$1	\$1				
Loan #1	\$0	\$0				
Loan #2	\$0	\$0	Mach	ninery		
Loan #3	\$0	\$0		Cattle		
Loan #4	\$234,300	\$216	,812	Land		
Total (Non-Current)	\$234,300	\$216	,812			
Total Liabilities	\$234,301	\$216	,813			

Net Worth Sta	owner's EQ		s Equity
Owner's Equity Earnings Equity (cost)	Begin \$228,994 \$147,200 \$376,194	End \$316,228 \$156,000	\$87,234 \$8,800

Schedule F Input Form DAIRY TRANS 4.0 Schedule F and Cash Flow Statements INCOME Sales of Livestock/other items bought for resale.....\$0 2 Cost basis of items bought for resale......\$0 3 Subtract Line 2 from Line 1 Sales of Livestock and other products you raised......\$240,001 \$226,364 Cwts. of Milk Sold 19,395 annually Milk..... \$7,300 Crops..... \$6,337 Calves..... From Form 4797.......Cull Cows... \$11,494 Other....\$0 Total Cooperative Distributions (Form 1099-PATR).....\$0 5 6 8 Crop insurance proceeds and disaster payments.....\$0 Custom hire (machine work) income......\$0 10 Other income, including gas or fuel tax credit......\$0 11 Add amounts in right column for Lines 3 through 10.....\$258,406

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	Schedule F Input F	orm
	The State of the S	1
12	Car & Truck Expenses	\$975
13	Chemicals	\$4,366
14	Conservation Expenses	\$0
15	Custom Hire	\$830
16	Depreciation	\$20,645
	\$20,645 Cost \$5,000 Fair Market	
17	Employee benefits	\$0
18	Feed Purchased	\$30,647
	\$30,647 Dairy \$0 Other	
	\$0 Dairy \$0 Other	
19	Fertilizers and Lime	\$7,965
20	Freight and Trucking	\$1,160
21	Gasoline, Fuel and Oil	\$5,775
22	Insurance (not health)	\$7,057
23	Interest	
a	Mortgage	\$14,736
b	Other	\$0

17				1
	Schedule I	- Input F	orm /	
	The State of the S			ASS.
24	Labor hired		\$20,317	
25	Pension/profit sharing		\$0	
26	Rent or Lease			
a	Machinery & Equipment		\$0	
b	Other (Land, animal, etc)		\$21,000	
27	Repairs & maintenance		\$5,010	
28	Seeds&plants purchased		\$8,892	
29	Storage/warehousing		\$ 0	
30	Supplies purchased		\$12,900	
31	Taxes		\$6,000	
32	Utilities		\$3,118	
33	a. Vet & Medicine		\$3,433	
33	b. Breeding fees		\$2,373	
34	Other Expenses		\$4,670	
	Accounting/Legal	\$640		
	DHI A/Marketing	\$0		
	Misc Farm Supplies	\$4,030		
	These are your to		\$181,869	
	Schedule F P	rofit or Loss	\$76,537	

Dairy TRANS Cash Flow	
Beginning Cash Balance	\$0
Non-farm income	\$0
Income taxes paid	\$15,382
Principal payments	\$17,488
Family living expenses	\$30,000
Capital purchases	\$0
Capital sales (exclude cull cows)	\$0
New Monies (from loans/savings, etc)	\$0

The Dairy TRANS Analysis

Now for the Output!

Page 1: Net Worth Summary

Cash Flow Summary

Net Farm Income Statement

--Adjusted for Inventory --Minus Equity Charge

--Return to Labor Earnings

Page 2: DAIRY TRANS Return Summary

--Cost of Production Analysis

--Production Efficiency Ratios

-- "Sweet 16" Financial Ratios

Dairy TRANS Net Worth Summary Have the Net Worth Stalement for details						
Д	SSETS					
COST Current NonCurrent Total MARKET Current	Begin \$128,195 \$335,100 \$463,295 Begin \$128,195	End \$190,941 \$342,100 \$533,041 End \$190,941	Earnings Equity is the equity on a cost or "tax" basis. Valuation Equity			
NonCurrent Total LI/	\$482,300 \$610,495 ABILITIES Begin \$1	\$498,100 \$689,041 End \$1	equals Total FMV equity minus earnings (cost or tax) equity			
NonCurrent Total	\$234,300 \$234,301 VER'S EQUITY Begin \$228,994 \$147,200 \$376,194	\$216,812 \$216,813 End \$316,228 E \$156,000 V \$472,228 T	Total Equity is total Fair Market Value (FMV) equity or earnings plus valuation equity			

Dairy TRANS-Cash Flow Summary **CASH FLOW STATEMENT** Beginning Cash Balance \$0 Non-farm Income \$0 Income Taxes Paid \$15,382 Principal Payments \$17,488 Family Living Expenses \$30,000 Capital Purchases \$0 Capital Sales (exclude cull cows sales) \$0 New Monies (from loans, savings, ect.) \$0 Net Farm Cash Income \$108,676 **Ending Cash Flow** 20.44% \$45,806 >10%

Dairy TRANS--Net Farm Income

NET FARM INCOME STATEMENT

Goal

Farm Cash Incomes	Yours	/Cwt.Eq.	/Cow	/Cow
Milk Sales	\$226,364	19,395	\$1,968	\$2,400
Cull Cow Sales	\$11,494	985	\$100	\$200
Calf Sales	\$7,300	625	\$63	\$80
Crop Sales	\$6,337	543	\$55	\$0
Other Income	\$18,405	1,577	\$160	\$375
Total Cash Income	\$269,900	\$11.67	\$2,347	\$3,055

Note: non-milk sales and inventory income adjustments are divided by milk price to calculate hundredweight equivalents. Thus, the hundredweights that the expenses are divided by are the sum or 24,858 cwt. Eq.

Dairy TRANS--Net Farm Income

Farm Cash Expenses	Yours	/Cwt.Eq. /Cow	/Cow Goal
Veterinary, Medicine	\$3,433	\$0.14 \$30	\$75
Dairy Supplies	\$12,900	\$0.52 \$112	\$45
Breeding Fees	\$2,373	\$0.10 \$21	\$25
Feed Purchased	\$30,647	\$1.23 \$266	\$400
Repairs	\$5,010	\$0.20 \$44	\$100
Seed, Chemical, Fertilizer	\$21,223	\$0.85 \$185	\$150
Fuel, Gas, and Oil	\$5,775	\$0.23 \$50	\$45
Utilities	\$3,118	\$0.13 \$27	\$45
Interest Paid	\$14,736	\$0.59 \$128	\$200
Labor Hired	\$20,317	\$0.82 \$177	\$225
Rent, Lease and Hire	\$21,830	\$0.88 \$190	\$50
Property Taxes	\$6,000	\$0.24 \$52	\$75
Farm Insurance	\$7,057	\$0.28 \$61	\$40
Other Cash Expense	\$6,805	\$0.27 \$59	\$50
Total Cash Expense	\$161,224	\$6.49 \$1,40	2 \$1,525

Dairy TRANS-Inventory Adjustment

INVENTORY CHANGES Ending minus Beginning

Accounts Receivable \$0
Feed Inventory (\$575)
Supplies and Other \$0
Resale Livestock \$0

Breeding Livestock \$20,800
Income Change \$20,225
Prepaid Expenses \$2,143
Accounts Payable \$0

Machinery & Equipment (\$5,000)

Land and Buildings \$0
Other Adjustments \$0
Expense Change \$2,857

Capital Purchases Minus Sales Adjustment \$0

Dairy TRANS--Net Farm Income

	Yours	Cwt.Ed	./Cow	Goal
Net Cash Income	\$108,676	\$5.19	\$945	\$1,530
Inventory Change	\$17,368	\$0.70	\$151	
	4107.011	ΦΕ 00	44.00 /	Φ000
Net Farm Income	\$126,044		\$1,096	
-Equity@ 6.0%	\$25,453	\$1.02	\$221	\$300
=Return to Labor	\$100,591	\$4.86	\$875	\$500
Dannaciation COCT	#20	/ 4 F		

Depreciation COST \$20,645
Depreciation FM Value \$5,000
Unpaid Labor Cost \$50,000
Unpaid Labor Hours 5,000 hours

Labor FTE's 2.50 (x 3,000 = 7,500 hours paid&unpaid)

Dairy TRANS--Cost of Production

Page 2
Labor Earnings
\$20.12 Per Hour

Break-Even Cost per cwt. equivalent

\$11.67 Income \$9.64 Expense \$2.04 Net

Dairy TRANS--Cost of Production

DAIRY TRANS	Returns Summary	/Cwt.Eq	/Cow	/Crop Acre
Cash Income	\$269,900	23125	\$2,347	\$760
Adjusted Income	\$20,225	1733	\$176	\$57
Total Income	\$290,125	\$11.67	\$2,523	\$817
Cash Costs	\$161,224	\$6.49	\$1,402	\$454
Adjusted Costs	\$2,857	\$0.11	\$25	\$8
Overhead Costs	\$75,453	\$3.04	\$656	\$213
Total Costs	\$239,534	\$9.64	\$2,083	\$675
RETURN OVER (COSTS \$50,591	\$2.04	\$440	\$143

^{*}adjusted costs equal change in asset inventories, accounts payable, prepaid expenses, depreciation, capital purchases and sales..

^{*}overhead costs are opportunity costs of labor and equity.

Dairy TRANS--Profit Analysis

DAIRY TRANS Profit Performance Yours	Goal	Average	Rank		
Labor Efficiency					
Adjusted Gross Return per FTE Labor\$116,050	\$125,000	\$70,000	84%		
Return to All Labor per FTE Labor\$48,363	\$36,000	\$18,000	100%		
Number of Cows per FTE Labor46	60	35	44%		
Cwts. of Milk Sold per FTE Labor	10,000	5,000	55%		
Per Cow Efficiency					
Pounds of Milk Sold per Cow16,865	20,000	16,000	22%		
Total Debt per Cow\$1,961	\$2,500	\$4,000	100%		
Productive Crop Acres per Cow 3.1	2.5	3.9	58%		
Capital Cost per Cow\$4,263I nvested\$393	\$400	\$800	100%		
All Labor Costs per Cow\$611	\$450	\$700	35%		
Fixed Cost per Cow(depreciation, interest, repair, taxes, insurance)					
\$550	\$600	\$1,000	100%		

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Dairy TRANSProfit Analys	S		\$
The state of the s	: 1 k		
Per Acre Efficiencies			
Net Farm Income per Crop Acre\$355	\$600	\$125	48%
Pounds of Milk Produced per Crop Acre5,463	8,000	4,500	28%
Adjusted Gross Cash Income per Crop Acre\$817	\$1,000	\$600	54%
Machinery FMV per Crop Acre\$165	\$350	\$500	100%
Fuel, Gas and Oil Cost per Crop Acre\$16	\$20	\$25	100%
Repair Cost per Crop Acre\$14	\$25	\$40	100%
Fert/Lime/Chem/Seed Cost per Crop Acre\$60	\$40	\$65	21%
Miscellaneous Ratios			
Livestock over Total Investment Percent26%	35%	25%	14%
Cash Expense/Cash Income w/o Labor&Interest47%	45%	60%	88%
All Labor as a Percent of Total Costs29%	20%	30%	6%
Fixed Cost as a Percent of Total Cost26%	35%	45%	100%

Dairy TRANSProfit Ana	alvsis		
Control of the Control		To See	
The "Sweet 16" of Financial Ratios as determined by the Nation	al Farm Financ	cial Standards Task	Force
**Net Farm Income From Operations \$126,044	\$50,000	\$20,000	100%
**Rate of Return on Assets6.5%.Paid. 13.97%	12.0%	5.0%	128%
**Rate of Return on EquityPROFI T 17.93%	15.0%	5.0%	100%
**Operating Profit Margin31.29%	25.0%	15.0%	100%
**Asset Turnover Ratio2.2 years45%	45%	30%	98%
**Operating Expense RatioEfficiency50%	50%	60%	100%
**Depreciation Expense Ratio2%	10%	15%	100%
**Interest Expense Ratio5%	10%	15%	100%
**Net Farm Income Ratio100%43%	35%	25%	100%
**Current Ratio[2 Liquidity Ratios]128195.00	1.75	1.25	100%
**Working Capital\$190,940	\$47,488	\$23,744	100%
**Debt/Asset RatioBegin38%End 31%	40%	50%	100%
**Equity/Asset RatioBegin62%End 69%	60%	50%	100%
**Debt/Equity RatioBegin62%End46%	67%	80%	100%
**Debt & Capital Lease Coverage Ratio3.12	P	rofit Status is	
**Debt & Capital Replacement Margin\$68,174	\$85,662	SUPERB!	103%









