

Minnesota FFA State Farm Management Practicum

The Dick and Jane Black operate the Northern Dairy and Crop Farm in North Central Minnesota. The Blacks are enrolled in the Adult Farm Management Program at their local College. They would like you to look at their farm analysis records prepared with the assistance of their instructor in the MNSCU system. The farm, while profitable, is carrying a high debt load, which they would like to reduce. That said, they will need to purchase a tractor next year to replace their undersized tractor. They are interested in ways they can improve their dairy and crops enterprises to make the farm more profitable.

Terminology & Definitions

Bu = Bushels (Corn = 56 pounds per bushel) (Wheat = 60 pounds/bushel) (Barley = 48 pounds/bushel) (Edible Beans = 60

pounds/bushel) CWT = 100 pounds of product T = Ton (2,000 pounds)

Yield: Total volume of product per acre, generally expressed in bushels, tons, or cwt.

Liquidity: The ability to meet cash obligations when needed.

Solvency: The ability to pay off all debt when the business is sold.

Enterprise: Income and Expense center for the business (Ex: Corn, Dairy)

Cash Flow: Statement showing when & where cash moves through the operation.

Balance Sheet: Statement listing Assets and Liabilities for the business at a point in time.

Direct Costs: Expenses, which vary depending on enterprise (variable costs).

Overhead Costs: Expenses that are incurred even if no production takes place. (Fixed costs)

Contribution to Overhead: Net dollars available after covering Direct Costs.

Value of Farm Production: Measure of Farm Income used to compare different operations on a more equal basis.

Balance Sheet Category: Type of Asset or Liability, including: Current, Intermediate, Long Term, or Non-Farm.

Current Ratio Balance Sheet ratio calculated by dividing the Current Assets by the Current Liabilities.

Working Capital: A dollar amount calculated by subtracting total Current Liabilities from total Current Assets.

Debt to Asset Ratio: Balance Sheet ratio calculated by dividing the total Debt by the total Assets.

Net Capital Ratio: Balance Sheet Ratio calculated by taking the total Assets and dividing by total Liabilities.

Asset Turnover Rate: The Value of Farm Production divided by the dollar of investment (assets), as a percentage.

Rate of Return on Farm Assets: A percentage, calculated by dividing the dollars of Return by the Total Farm Assets.

Market Value: Placing a value on all assets in the Balance Sheet, based on current market value.

Cost Value: Placing a value on capital assets in the Balance sheet, based on cost less depreciation.

Term Debt: Debt that has scheduled principal payments due over more than one year, which includes intermediate and long term loans.

Equity: Portion of assets that is owned, without a loan outstanding. (Net Worth)

Rounding Answers

Unless otherwise instructed, round answers in the following manner:

Dollar Amounts – to the nearest dollar unless otherwise instructed.

Percentages – 1 decimal – 85.4%.

General Numbers – 1 decimal – 123.6

Their records are furnished below for your observation.

Part I Farm Income Statement	Northern Acres	Area Average
Cash Farm Income		
Corn	102,329	51,522
Soybeans	116,155	72,213
Other crops		90,152
Beef		21,502
Dairy Milk	904,958	171,380
Dairy Cull	60,917	1,034
Dairy Finish		6,021
Other Livestock		23,487
Contract livestock income		2,916
Misc. Livestock income	16,035	592
CCC market loan gain		
Direct, CCP & ACRE payments	8,483	8,072
CRP payments		823
Livestock government payments		92
Other government payments	59,590	4,934
Custom work income	9,033	7,629
Patronage dividends, cash	1,047	3,907
Insurance income	8,402	12,839
Other farm income	104	10,033
Gross Cash Farm Income	1,287,053	489,148
Cash Farm Expense		
Seed	49,079	29,460
Fertilizer	56,724	45,507
Crop chemicals	17,851	15,468
Crop insurance	9,552	11,308
Drying expense	6,050	818
Crop hauling	16,514	
Packaging Supplies	5,715	
Crop miscellaneous	7,717	4,160
Total Direct Crop Expense	169,202	106,721
Livestock Expenses		
Feeder livestock purchased		11,711
Purchased feed	204,760	63,865
Breeding fees	13,510	1,722
Veterinary	34,601	6,451
Supplies	29,071	8,392
Contract Production Exp.		2,626
Livestock Marketing	15,633	4,323
Bedding	42,305	3,207
Livestock Hauling	5,650	
Total Direct Livestock Expense	345,530	102,297
Interest	110,786	22,934
CCC Buybacks		5,718
Fuel and Oil	59,129	29,525
Repairs	50,920	33,772
Custom hire		10,541
Hired labor	119,862	23,667
Land rent	14,355	23,317
Machinery & Building leases	22,501	5,029
Real estate taxes	10,000	3,357
Farm insurance	13,935	5,751
Utilities	17,613	8,793
Miscellaneous	22,707	8,149
Total Other Farm Expense	441,808	180,553
Total cash expense	956,540	389,571
Net cash farm income	330,513	99,577
Inventory Changes		
Prepays and supplies	5,902	9,222
Growing Crops	(7,980)	
Accounts receivable	(31,550)	3,501
Hedging accounts	(7,100)	74
Crops and feed	13,840	24,010
Market livestock		7,106
Breeding livestock	(1,500)	(676)
Other Assets	305	
Accounts payable	5,500	(285)
Accrued interest	(541)	2,331
Total inventory change	(23,124)	45,283
Net operating profit	307,389	144,860
Depreciation		
Machinery and equipment	(79,547)	(22,661)
Titled vehicles		(1,865)
Buildings and improvements	(50,194)	(4,658)
Total depreciation	(129,741)	(29,184)
Net farm income from operations	177,648	115,676
Gain or loss on capital sales		1,197
Net farm income	177,648	116,873

Part II Profitability Measures Gross farm income		Northern Acres		Area Average	
		Cost	Market	Cost	Market
(A)	Net farm income from operations	177,647	292,380	115,675	139,435
	Rate of return on assets (E/F)	8.2%	???	9.6%	9.7%
	Rate of return on equity (G/H)	16.4%	18.1%	14.4%	15.2%
	Operating profit margin (E/I)	23.1%	???	22.1%	27.4%
	Asset turnover ratio (I/F)	35.6%	???	43.7%	35.4%
(B)	Change in market valuation	-	114,733		
(C)	Interest expense	111,327	111,327	23,275	23,275
(D)	Value of operator labor & mgt (A+C-D)	45,000	45,000	39,712	39,712
(E)	Return on farm assets	243,974	358,707	99,239	122,999
(F)	Average farm assets (A-D)	2,965,073	4,066,357	1,028,478	1,268,208
(G)	Return on farm equity	132,647	247,380	75,963	99,723
(H)	Average farm net worth	807,474	1,368,304	526,383	655,431
(I)	Value of farm production	1,056,288	1,056,288	449,301	449,301
Liquidity Measures		Begin	End	End of Year	
(J)	Current assets J	450,091	439,802	298,668	
(K)	Current liabilities K	298,265	224,325	151,495	
	Current ratio (J/K)	1.51	1.96	1.97	
	Working capital (J-K)	151,825	215,477	147,173	
	Working capital to gross revenue	12.0%	17.1%	28.0%	
Solvency Measures (Market)		Begin	End		
(L)	Total assets	4,085,565	4,412,097	1,480,387	
(M)	Total liabilities	2,660,570	2,735,535	670,483	
	Net worth (L-M)	1,424,994	???	809,904	
	Net worth change		???	116,594	
	Current debt to assets (K/J)	66.3%	51.0%	51.0%	
	Intermediate debt to assets	56.6%	49.5%	30.0%	
	Long term debt to assets	50.7%	53.1%	39.0%	
	Total debt to assets ratio (M/L)	65.1%	???	45.3%	
Repayment Capacity					
	Net farm income from operations	292,380		115,675	
	Depreciation (+)	129,741		29,184	
	Personal income (+)	0		27,828	
	Family living expense (-)	45,762		44,653	
	Payments on personal debt (-)			3,912	
	Income taxes (-)	1,611		5,035	
	Interest on term debt (+)	108,708		21,312	
(N)	Capital debt repayment capacity (=)	368,723		140,399	
(O)	Scheduled term debt payments	300,889		56,956	
(P)	Capital debt repayment margin (N-O)	67,834		83,443	
(Q)	Cash replacement allowance	-		9,991	
	Replacement margin (P-Q)	67,834		73,452	
	Term debt coverage ratio (N/O)	1.23		2.47	
	Replacement coverage ratio (N/0+Q)	1.23		2.10	

Part III Financial Summary	Northern Acres	Area Average	
Income Statement			
Gross cash farm income	1,287,053	489,148	
Total cash farm expense	956,540	389,571	
Net cash farm income	330,513	99,577	
Inventory change	(23,125)	45,283	
Depreciation	(129,741)	(29,184)	
Net farm income from operations	177,647	115,676	
Profitability (cost)			
Rate of return on assets	8.2%	9.6%	
Rate of return on equity	16.4%	14.4%	
Operating profit margin	23.1%	22.1%	
Asset turnover ratio	35.6%	43.7%	
Profitability (market)			
Rate of return on assets	8.8%	8.7%	
Rate of return on equity	18.1%	14.4%	
Operating profit margin	34.0%	22.1%	
Asset turnover ratio	26.0%	44.9%	
	2010	2011	
Liquidity & Repayment (end of year)			
Current assets	450,091	439,802	298,668
Current liabilities	298,265	224,325	151,495
Current ratio	1.51	1.96	1.97
Working capital	151,826	215,477	147,173
Working capital to gross income	12.0%	17.1%	28.0%
Term debt coverage ratio		1.23	2.47
Replacement coverage ratio		1.23	2.1
Solvency (end of year at cost)			
Total farm assets	2,882,948	3,047,199	1,089,771
Total farm liabilities	2,140,391	2,174,808	519,267
Total assets	3,061,922	3,233,173	1,208,039
Total liabilities	2,140,391	2,174,808	545,746
Net worth	921,531	1,058,365	662,293
Net worth change		136,834	91,675
Farm debt to asset ratio		71%	48%
Total debt to asset ratio		67%	45%
Solvency (end of year at market)			
Total farm assets	3,906,591	4,226,123	1,349,766
Total farm liabilities	2,140,391	2,174,808	640,333
Total assets	4,085,565	4,412,097	1,480,387
Total liabilities	2,660,570	2,735,535	670,483
Net worth	1,424,995	1,676,562	809,903
Net worth change		251,567	116,594
Farm debt to asset ratio	55%	51%	47%
Total Debt to Equity Ratio	1.87	1.63	0.83
Nonfarm information			
Net non farm income			27,828
Total family living expense	45,762		40,784
Total living, investment & capital purchases. purchases.	45,762		50,363
Crop Acres			
Total acres owned	700		348
Total crop acres	807		712
Total crop acres owned	585		251
Total crop acres rented	222		452
Total crop acres share rented	0		9
Pasture acres	0		0

Part IV Balance Sheet At Market Assets	Northern Acres		Area Average
	2010	2011	
Current Farm Assets			
Cash and checking balance	12,200	24,000	16,542
Prepaid expenses & supplies	22,850	28,752	28,978
Growing crops	27,930	19,950	1,312
Accounts receivable	97,550	66,000	19,468
Hedging accounts	3,300	1,000	466
Crops held for sale or feed	165,261	228,100	187,039
Crops under government loan	121,000	72,000	5,926
Market livestock held for sale	0	0	35,620
Other current assets	0	0	3,318
Total current farm assets	450,091	439,802	298,669
Intermediate Farm Assets			
Breeding livestock	361,550	360,050	105,080
Machinery and equipment	1,178,409	1,309,425	255,708
Other intermediate assets	510	815	34,157
Total intermediate farm assets	1,540,469	1,670,290	394,945
Long Term Farm Assets			
Farm land	597,941	797,941	253,002
Buildings and improvements	1,318,090	1,318,090	124,821
Other long-term assets			18,335
Total long-term farm assets	1,916,031	2,116,031	396,158
Total Farm Assets	3,906,591	4,226,123	1,089,772
Total Nonfarm Assets	178,974	185,974	118,268
Total Assets	4,085,565	4,412,097	1,208,040
Liabilities			
Current Farm Liabilities			
Accrued interest	3,424	3,966	5,237
Accounts payable	21,500	16,000	17,274
Current notes	42,000	0	86,073
Government crop loans	39,160	21,360	2,411
Principal due on term debt	192,181	182,999	40,500
Total current farm liabilities	298,265	224,325	151,495
Total intermediate farm liabilities	871,559	827,240	137,262
Total long term farm liabilities	970,567	1,123,243	230,509
Total farm liabilities	2,140,391	2,174,808	519,266
Total nonfarm liabilities	0	0	26,479
Total liabilities excluding deferreds	2,140,391	2,174,808	545,746
Total deferred liabilities	520,179	560,727	124,738
Total liabilities	2,660,570	2,735,535	670,483
Retained earnings	921,531	1,058,365	662,293
Market valuation equity	503,464	618,197	147,610
Net worth (farm and nonfarm)	1,424,995	1,676,562	809,903
Net worth excluding deferreds	1,945,174	2,237,289	934,641
Net worth change		251,567	116,594
Percent net worth change		18%	17%
Ratio Analysis			
Current farm liabilities / assets	66%	51%	51%
Intermediate farm liabilities. / assets	57%	50%	30%
Long term farm liabilities. / assets	51%	53%	39%
Total debt to asset ratio	65%	62%	45%
Debt to assets excluding deferreds	52%	49%	45%

Part V Balance Sheet**Northern Acres
At Cost****Area Average**

Assets	2010	2011	
Current Farm Assets			
Cash and checking balance	12,200	24,000	16,542
Prepaid expenses & supplies	22,850	28,752	28,978
Growing crops	27,930	19,950	1,312
Accounts receivable	97,550	66,000	19,468
Hedging accounts	3,300	1,000	466
Crops held for sale or feed	165,261	228,100	187,039
Crops under government loan	121,000	72,000	5,926
Market livestock held for sale			35,620
Other current assets			3,318
Total current farm assets	450,091	439,802	298,669
Intermediate Farm Assets			
Breeding livestock	361,550	360,050	105,080
Machinery and equipment	799,064	824,993	255,708
Other intermediate assets	510	815	34,157
Total intermediate farm assets	1,161,124	1,185,858	394,945
Long Term Farm Assets			
Farm land	267,851	467,851	253,002
Buildings and improvements	1,003,882	953,688	124,821
Other long-term assets			18,335
Total long-term farm assets	1,271,733	1,421,539	396,158
Total Farm Assets	2,882,948	3,047,199	1,089,772
Total Nonfarm Assets	178,974	185,974	118,268
Total Assets	3,061,922	3,233,173	1,208,040
Liabilities			
Current Farm Liabilities			
Accrued interest	3,424	3,966	5,237
Accounts payable	21,500	16,000	17,274
Current notes	42,000 -		86,073
Government crop loans	39,160	21,360	2,411
Principal due on term debt	192,181	182,999	40,500
Total current farm liabilities	298,265	224,325	151,495
Total intermediate farm liabilities	871,559	827,240	137,262
Total long term farm liabilities	970,567	1,123,243	230,509
Total farm liabilities	2,140,391	2,174,808	519,266
Total nonfarm liabilities	0	0	26,479
Total liabilities	2,140,391	2,174,808	545,745
Net worth (farm and nonfarm)	921,531	1,058,365	662,295
Net worth change		136,834	91,675
Percent net worth change		13%	16%
Ratio Analysis			
Current farm liabilities / assets	66%	51%	51%
Intermediate farm liab. / assets	75%	70%	35%
Long term farm liab. / assets	76%	79%	58%
Total debt to asset ratio	70%	67%	45%

Part VI Projected Cash Flow													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Beg cash bal	24000	9732	34157	11582	11007	14432	19857	20882	25907	36032	40557	32732	24000
Corn Sold		90000									0		90000
Soybeans Sold	60000										60000		120000
Milk Sold	75000	75000	75000	75000	75000	75000	75000	75000	75000	75000	75000	75000	900000
Cull breeding Lvstk	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	60000
Misc. lvtk income	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	16800
Govern. Payments		10000	10000	10000					10000	10000	10000		60000
Custom Work						3000	3000	3000					9000
Pat Dividends										1000			1000
Other Income													0
Total inflow	165400	191132	125557	102982	92407	98832	104257	105282	117307	128432	191957	114132	1256800
Cash Outflows													
Seed		50000											50000
Fertilizer			55000										55000
Chemicals					9000		9000						18000
Crop insurance		18000											18000
Drying fuel									1900	1900	1900		5700
Irrigation energy							400	400	400				1200
Packaging/supplies	500	500	500	500	500	500	500	500	500	500	500	500	6000
Hauling & trucking	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	24000
Misc.	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	30000
Feed Purchased	18500	18500	18500	18500	18500	18500	18500	18500	18500	18500	18500	18500	222000
Breeding fees	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	12600
Veterinary expenses	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	36000
Supplies	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	33600
Marketing	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	16800
Bedding	10000	10000	10000	10000									40000
Fuel & oil	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	60000
Repairs	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	54000
Hired labor	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	120000
Land rent				16000									16000
R E Taxes					5000						5000		
Farm insurance				7000						7000			14000
Utilities	1475	1475	1475	1475	1475	1475	1475	1475	1475	1475	1475	1475	17700
Living/Draw	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	51000
													0
Min end bal	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Total outflow	68975	136975	123975	91975	72975	58975	68375	59375	61275	67875	65875	58975	903600
Oper surplus	96425	54157	1582	11007	19432	39857	35882	45907	56032	60557	126082	55157	602073
Tot Cap purch.													0
New Tractor	220000												
Total Cap Sale													0
New Credit	182000												182000
Loan Payments													
Principle	15000	22000	22000	22000	22000	22000	22000	22000	22000	22000	22000	25000	260000
Interest	14333	14333	14333	14333	14333	14333	14333	14333	14333	14333	14333	14333	172000
Govt loan payment	21360												
Surp or def	7732	32157	-20418	-10993	-2568	17857	13882	23907	34032	38557	104082	30157	
Operating Loan													
Beg AO bal	0	0	0	30000	50000	65000	65000	70000	70000	70000	70000	0	
AO Borrowing			30000	20000	15000		5000						70000
AO Int Pay											3350		3350
AO Prin Pay											70000		70000
End AO loan	0	0	30000	50000	65000	65000	70000	70000	70000	70000	0	0	
Accrued int													0
End cash bal	9732	34157	11582	11007	14432	19857	20882	25907	36032	40557	32732	32157	

Part VII Crops

Northern Acres

Alfalfa

	Corn Silage Dryland Owned	Corn Dryland Owned	Corn Irrigated Owned	Corn Dryland Rented	Soybeans Dryland Owned	Soybeans Dryland Rented	Alfalfa Haylage Irrigated Owned
Acres	100	112	28	83	130	139	105
Unit	ton	bu.	bu.	bu.	bu.	bu.	ton
Yield per acre	18.00	107.14	200.00	108.43	31.54	30.40	5.71
Share of Production	100	100	100	100	100	100	100
Value per unit	40.00	6.00	6.00	6.00	12.00	12.00	45.00
Total Product Value	720.00	642.86	1200.00	650.60	378.46	364.75	257.14
Crop Insurance							16.00
Other crop income	73.84	73.84	73.84	73.84	73.84	73.84	73.84
Total product return per acre	793.84	716.70	1273.84	724.44	452.30	438.59	346.98
Direct Expenses							
Seed	68.99	68.99	68.99	68.99	63.38	63.38	
Fertilizer	111.40	111.40	111.40	111.40	77.10	77.10	
Crop chemicals	29.42	29.42	29.42	29.42	16.70	16.70	8.15
Crop insurance	8.01	8.01	8.01	8.01	16.71	16.71	23.53
Drying expense		17.28	32.25	17.49			
Packaging and supplies	27.16						19.05
Hauling & trucking		37.64			9.27	9.27	
Custom Hire							
Marketing							
Operating Interest							
Land rent				54.48		54.48	
Irrigation energy			8.45				8.45
Fuel and oil	61.57	52.10	52.10	52.10	42.62	28.42	52.10
Repairs	50.74	42.94	42.94	42.94	35.13	23.42	42.94
Miscellaneous	9.74	9.74	9.74	9.74		9.74	9.74
Total direct expenses per acre	367.03	377.52	363.30	394.57	260.91	299.22	163.95
Return over direct exp per acre	426.81	339.18	910.54	329.87	191.39	139.37	183.03
Overhead Expenses							
Hired labor	41.14	34.81	34.81	34.81	28.48	18.99	34.8
Machinery leases	11.21	9.49	9.49	9.49	7.76	5.17	9.49
Real Estate Taxes	11.97	11.96	11.96		11.97		11.97
Farm insurance	5.79	4.89	4.89	4.89	4.01	2.67	4.89
Utilities	7.31	6.19	6.19	6.19	5.06	3.38	6.19
Dues & Professional fees							
Interest on interm. Debt	49.81	42.15	42.15	42.15	34.48	22.99	42.15
Interest on long term debt	31.48	31.48	31.48		31.48		31.48
Machinery depreciation	79.27	67.08	67.08	67.08	54.88	36.59	67.08
Building depreciation	20.84	17.64	17.64	17.64	14.43	9.62	17.64
Miscellaneous	26.4	22.34	22.34	22.34	18.28	12.18	22.34
Total overhead expenses per acre	285.22	248.03	248.03	204.59	210.83	111.59	248.03
Total dir & ovhd expenses per acre	652.25	625.55	611.33	599.16	471.74	410.81	411.98
Net return per acre	141.59	91.15	662.51	125.28	-19.44	27.78	-65.01
Government payments	12.53	12.53	12.53	12.53		12.53	12.53
Net return with govt pmts	154.12	103.68	675.04	137.81	-19.44	40.31	-52.48
Labor & management charge	37.37	31.62	31.62	61.62	25.87	17.25	31.62
Net return over lbr & mgt	116.75	72.06	643.42	76.19	-45.31	23.06	-84.10
Cost of Production							
Total direct expenses	20.39	3.52	1.82	3.64	8.27	9.84	28.69
Total dir & ovhd expense	36.24	5.84	3.06	5.53	14.96	13.52	72.1
Less govt & other income	31.44	5.03	2.62	4.73	12.62	10.67	54.18
With labor & management	33.51	72.06	643.42	106.19	-45.31	23.06	-84.09
Net value per unit	40	6	6	6	12	12	45
Machinery cost per acre	252.61	213.75	213.75	213.75	174.88	116.59	213.75
Est. labor hours per acre	10.8	9.14	9.14	9.14	7.47	4.98	9.14

Part VII Crops

Area Average

	Corn Silage		Corn		Soybeans	Soy beans	Alf Haylage
	Corn Silage	Corn Dryland	Irrigated	Corn Dryland	Dryland	Dryland	Irrigated
	Ow n	Ow ned	Ow ned	Rent	Ow ned	Rent	Ow ned
Acres	50.93	76.49	101.79	129.06	155.46	254.88	
Unit	ton	ton	bu,	bu.	bu.	bu.	
Yield per acre (bu.)	15.24	121.64	141.94	119.38	31.51	30.81	
Share of production	100	100	100	100	100	100	
Value per unit	39.05	5.72	5.94	5.80	11.41	11.38	
Total product return per acre	595.20	695.76	843.12	692.40	359.53	350.62	
Crop insurance per acre	16.35	1.82		10.12	8.75	15.24	
Other crop income per acre	4.29	16.92	41.58	7.64	3.00	3.60	
Total product return per acre	615.84	714.50	884.70	710.16	371.28	369.46	
Direct Expenses							
Seed	67.80	73.13	78.66	76.26	50.94	51.38	
Fertilizer	67.66	99.65	144.88	111.42	26.05	27.38	
Crop chemicals	22.96	24.36	22.19	19.80	18.71	18.74	
Crop insurance	18.51	20.38	26.80	21.31	18.13	19.34	
Drying expense & storage	0.45	5.38	5.88	5.61	0.14		
Packaging and supplies	2.48	0.24	2.48	0.79			
Hauling & trucking	0.14	3.24	3.70	4.77	0.57		
Custom Hire	36.47	13.84	13.51	12.00	8.81	6.44	
Marketing		1.05		1.35		0.87	
Operating Interest	4.09	5.71	12.87	10.16	3.45	4.10	
Land rent			44.42	60.16		54.27	
Irrigation energy			14.4				
Fuel and oil	45.40	40.70	48.12	37.85	23.50	21.38	
Repairs	53.53	46.43	55.3	45.83	25.53	24.18	
Miscellaneous	5.61	2.03	8.81	1.48	1.25	1.48	
Total direct expenses per acre	325.10	336.14	482.02	408.79	177.08	229.56	
Return over direct exp per acre	290.74	378.36	402.68	301.37	194.20	139.90	
Overhead Expenses							
Hired labor	20.18	12.30	20.16	16.68	6.63	8.20	
Machinery/building leases	4.22	3.53	13.51	7.05	1.95	2.99	
Real estate taxes	10.58	10.69	5.08		8.73		
Farm insurance	5.36	7.12	5.45	4.79	4.66	3.88	
Utilities	4.97	5.87	4.85	4.61	3.49	3.10	
Dues & professional fees	1.87	2.16	3.93	2.46	1.91	1.87	
Interest on interm. debt	0.00	42.64	28.09	7.94	25.81	4.11	
Interest on long term debt	43.10						
Machinery depreciation	37.97	38.80	64.29	35.00	25.17	21.28	
Miscellaneous	5.27	6.84	5.59	5.80	4.01	3.08	
Total ovhd expenses per acre	133.52	129.95	150.95	84.33	82.36	48.51	
Total dir/ovhd expenses per acre	458.62	466.09	632.97	493.12	259.44	278.07	
Net return per acre	157.22	248.41	251.73	217.04	111.84	91.39	
Government payments		11.68	13.30	13.53	12.83	12.56	
Net return with govt pmts	157.22	260.09	265.03	230.57	124.67	103.95	
Labor & management charge		46.55	41.65	41.27	29.07	28.98	
Net return over lbr & mgt	157.22	213.54	223.38	189.30	95.60	74.97	
Cost of Production							
Total direct expenses	21.33	2.77	3.52	3.46	5.53	7.46	
Total dir & ovhd expense	30.09	3.83	4.46	4.13	8.23	9.03	
Less govt & other income	28.05	3.58	4.07	3.85	7.45	8.01	
With labor & management	31.25	3.96	4.37	4.20	8.38	8.95	
Net value per unit	39.05	5.72	5.94	5.80	11.41	11.38	
Machinery cost per acre	184.16	148.42	201.19	142.64	87.20	79.34	
Est. labor hours per acre	5.68	4.27	5.37	3.40	1.74	1.68	

DATA NOT AVAILABLE

Part VIII Dairy Enterprise	Per CWT. Of Milk				Per Cow			
	Northern Acres		Area Average		Northern Acres		Area Average	
Returns	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Milk sold (lb.)-	99.74	20.56	99.36	19.72	22512.32	4640.81	22171.60	4399.88
Milk fed (lb.)	0.26	0.04			59.54	8.93		
Cull sales	0.00 head	1.38	0.00 head	1.05	0.32head	312.39	0.3 head	215.54
Inventory change	0.00 head	0.16	0.00 head	0.14	0.04head	35.90	0.00 head	50.89
Hedging gain/loss		-0.16				-36.41		
Other income		0.10		0.10		-		22.07
Gross return		21.98		21.01		4,961.62		4,688.38
Dairy Replac net cost		-3.13		-2.39		(706.57)		(532.85)
Gross margin		18.85		18.62		4,255.05		4,155.53
Direct Expenses								
Corn Silage(lb.)	73.16	1.28	71.41	1.39	16,512.82	288.97	15,934.60	309.69
Corn (bu.)			0.26	1.34			57.60	298.59
Haylage, Alfalfa(lb.)	59.93	1.20	23.57	0.66	13,528.21	270.56	5,258.70	146.29
Hay, Alfalfa (lb.)			12.99	0.74			2,989.80	165.53
Complete Ration (lb.)			7.54	1.45			1,683.30	322.72
Other feeds (lb.)			11.11	0.52			2,479.00	115.66
Protein Vit Minerals (lb.)	20.81	4.16	14.26	2.74	4,697.44	939.95	3,183.00	611.76
Breeding fees		0.20		0.20		46.06		45.13
Veterinary		0.71		0.50		160.58		111.53
BST								36.63
Supplies		0.59		0.98		134.17		181.69
Utilities				0.15				32.38
Hauling and trucking		0.13		0.19		28.97		42.73
Custom hire				0.25				55.70
Hired labor				1.01				224.51
Marketing		0.36		0.20		80.17		51.05
Bedding		0.84		0.30		189.74		66.71
Fuel & oil		0.39		0.45		87.01		99.69
Repairs		0.39		0.62		88.78		137.64
Total direct expenses		10.26		13.69		2,314.98		3,055.63
Return over direct expenses		8.60		4.93		1,940.07		1,099.90
Overhead Expenses								
Hired labor		1.91		0.64		431.93		143.39
Machinery/building leases		0.30		0.19		68.66		42.18
Real estate taxes		0.06				13.08		
Farm insurance		0.20				45.56		
Utilities		0.26		0.26		57.58		57.28
Miscellaneous		0.13		0.45		29.69		100.80
Interest on interm. debt		0.39		0.43		87.15		94.90
Interest on lng term debt		0.83				187.28		
Mach & Bldg depreciation		1.34		0.61		302.80		137.17
Building depreciation		0.73				164.10		
Total overhead expenses		5.42		2.58		1,387.83		575.72
Total dir & ovhd expense		15.68		16.27		3,538.71		3,631.35
Net return		3.17		2.35		716.34		524.18
Labor & mgt charge		0.43		0.91		98.08		203.53
Net return over lbr & mgt		2.74		1.44		618.27		320.65
Est. labor hours per unit		0.13		0.18		28.33		
Cost of Prod Per Cwt. of Milk								
Total direct expenses	10.26		13.69		10.26		13.69	
Total dir & ovhd expenses	15.68		16.27		15.68		16.27	
With other revenue adj.	17.43		17.47		17.43		17.47	
With labor & management	17.86		18.39		17.86		18.39	
Other Information								
Number of cows	195		159.8		195		159.8	
Milk produced per cow	22,572		22,315		22,572		22,315	
Total milk sold	4,389,903		3,543,946		4,389,903		3,543,946	
Lb. of milk sold per FTE	2,224,747		1,521,195		2,224,747		1,521,195	
Culling percentage	32.3		28.2		32.3		28.2	
Turnover rate	35.9		36.4		35.9		36.4	
Cow death loss percent	3.6		7.7		3.6		7.7	
Percent of barn capacity	101.6		108.4		101.6		108.4	
Feed cost per day	4.11		5.40		4.11		5.40	
Feed cost per cwt. of milk	6.64		8.83		6.64		8.83	
Feed cost per cow	1,499.49		1,970.25		1,499.49		1,970.25	
Avg. milk price per cwt.	20.61		19.84		20.61		19.84	

Part IX Dairy Replacement Heifers

	Northern Acres		Area Average	
Replacements sold	0.50head	96.6	0.1	38.38
Transferred out	0.46head	556.63	0.4	523.98
Cull sales			0	3.76
Other income				1.20
Purchased			0	-22.43
Transferred In	-1.07head	-102.41	0.6	-101.07
Inventory Change	0.02head	-51.2	0.1	42.95
Gross margin	-0.08head	499.61		480.78

Direct Expenses

Protein Vit Minerals (lbs)	421.69	84	272.3	60.68
Milk Replacer (lbs.)	30.12	42.08	11	11.92
Milk (lbs.)	69.94	10.49	104.6	15.70
Creep/Starter (lbs.)			68.1	8.85
Complete ration (lbs.)			233.3	43.86
Corn (bu.)	7.23	43.37	6.7	34.79
Corn Silage (lbs.)	8,313.25	145.48	4,121.70	76.47
Hay, Alfalfa (lbs.)			1,061.40	54.77
Hay, Grass (lbs.)			537.90	20.13
Haylage, Alfalfa (lbs.)	4,578.31	103.01	988.40	26.36
Oatlage (lbs.)	4,204.82	63.07		
Other feed stuffs (lbs.)			1,169.80	26.94
Breeding fees		27.28		11.24
Veterinary		19.81		16.50
Supplies		17.51		19.75
Contract prod. Exp.				103.94
Fuel and oil		18.04		16.95
Repairs		18.4		23.70
Hired labor				24.15
Bedding		8.84		14.43
Total direct expenses		601.38		611.15
Return over direct expense		-101.77		-130.38
Overhead expense				
Hired labor		89.54		24.24
Leases		14.23		7.96
Real estate taxes		2.71		
Farminsurance		9.44		
Utilities		11.94		10.83
Interest		56.89		16.77
Mach & Bldg depreciation		62.77		25.11
Misc.		6.16		17.51
Total overhead expenses		253.68		102.41
Total dir & ovhd expenses		855.06		713.56
Net Return		-355.45		-232.79
Labor & mgy charge		20.33		37.48
Net return over lbr & mgt		-375.78		-270.27
Cost of production per pound				
Total direct expense per unit		2.07		1.90
Total dir & ovhd expense per unit		2.76		2.18
With other revenue adjustments		2.76		2.18
With labor and management		2.82		2.28
Ext. labor hours per unit		5.87		7.32
Other information				
No. purchased or trans in		177		91.00
Number sold or trans out		160		72.00
Percentage death loss		7.9%		8.5%
Feed cost per head/day		1.35		1.04
Feed cost per average head		491.51		380.49
Avg sales price /head		193.19		404.10
Feed cost/headsold/trans		509.94		742.28
Total cost/head sold/trans		1,067.60		1,624.35

Part X Family Living	Northern Acres	Area Average
Average family size	2	3.3
Family Living Expenses		
Food and meals expense	4,337	7,636
Medical care		2,823
Health insurance	11,523	3,456
Cash donations	1,121	1,790
Household supplies	1,245	2,460
Clothing	468	1,169
Personal care	1,651	2,559
Child / Dependent care		308
Alimony and child support		456
Gifts	363	1,109
Education	600	532
Recreation	1,875	1,936
Utilities (household share)	1,000	2,732
Personal vehicle operating exp	2,152	3,382
Household real estate taxes	662	162
Dwelling rent		38
Household repairs	526	1,112
Personal interest		2,152
Disability / Long term care ins		209
Life insurance payments	2,686	1,159
Personal property insurance		129
Miscellaneous	1,247	3,071
Total cash family living expense		40,380
Family living from the farm		404
Total family living	31,456	40,784
Other Nonfarm Expenditures		
Income taxes	1,611	5,262
Furnishing & appliance purchases		231
Nonfarm vehicle purchases		2,262
Nonfarm real estate purchases		628
Other nonfarm capital purchases		304
Nonfarm savings & investments	12,695	1,296
Total other nonfarm expenditures	14,306	9,983
Total cash family living investment & non farm capital purchases	45,762	50,363

2013 Minnesota FFA State Farm Management Practicum (200 points)

Part I Farm Income Statement

- 1) Review the Cash Farm Expenses for both Northern Acres and the Area Average. What three expenses are the largest for Northern Acres and what three are the largest for the Area Average?

Northern Farm

_____ (1)
_____ (1)
_____ (1)

Area Average

_____ (1)
_____ (1)
_____ (1)

- 2) For expenses that have an amount listed, which two expense items on Northern Acres are less than the amount on the Area Average?

_____ (1)
_____ (1)

- 3) For the inventory changes that have an amount listed for both Northern Acres and the Area Average, which change is more positive for Northern Acres?

_____ (1)

- 4) What percent of Gross Cash Farm Income are these items listed on Northern Acres Income Statement?

A) Dairy Milk _____ (2)
B) Net Cash Farm Income _____ (2)
C) Net Farm Income _____ (2)

- 5) On the Farm Income Statement, what item calculates the difference between Net Farm Income Farm Operations and the Net Farm Income?

_____ (1)

- 6) The Financial Standards identify 4 efficiency factors that are calculated from the Farm Income Statement. They are as a percent of Gross Cash Farm Income and must equal 100% when added together. Calculate three of those factors listed below and indicate if that percentage is more or less than the average.

A) Depreciation Expense Ratio _____ (2)
B) More or Less _____ (2)
C) Interest Expense Ratio _____ (2)
D) More or Less _____ (2)
E) Net Farm Income Ratio _____ (2)
F) More or Less _____ (2)

- 7) Depreciation appears as a negative number on the Income Statement because it is a reduction to income. Using the Machinery and Equipment Depreciation for Northern Acres, calculate the percent depreciation is of the average machinery and equipment value on the Balance Sheet. First calculate the average depreciation and then calculate the percent of the average.

A) Average Mach and Equip Invest. _____ (2)
B) Depreciation as % of Ave Invest. _____ (2)
C) What is the approximate life of the machinery and equipment on Northern Acres with that depreciation percentage? _____ (2)

- 8) Based on the number of units listed on the appropriate table, calculate the following numbers. (\$xx.xx)

A) Mach/Equip Depr. per Crop Acre _____ (2)
B) Milk Income per Ave No of Cows _____ (2)

II) Profitability

- 1) What is the Northern Acres Rate of Return on Assets at Market? (Percentage 1 decimal)(2)
2) Is their rate of return on assets better or worse than the Area Average at Market?(2)
3) What is the Northern Acres Operating Profit Margin at Market? (Percentage 1 decimal)(2)
4) What is the Northern Acres Asset Turnover Ratio at Market? (Percentage 1 decimal)(2)

- 5) Is this ratio more or less desirable than the Area Average?(2)
- 6) What is the Northern Farms Net Worth at Market (End)?(2)
- 7) How much did the Net Worth Change during the year?(2)
- 8) What is the Northern Farms Total Debt to Asset Ratio (End)? (Percentage 1 decimal)(2)

III) Financial Summary

Which farm has the larger amount for the following items, Northern Acres or Area Average?

- 1) Total acres owned?(1)
- 2) Total crop acres?(1)
- 3) Total crop acres rented?(1)

From a financial standpoint, did the Northern Farm or the Area Average have a better figure for the following items?

- 4) Net Farm Income From Operations? Northern Farms or Area Average(1)
- 5) Operating Profit Margin? Northern Farms or Area Average(1)
- 6) Replacement Coverage Ratio? Northern Farms or Area Average(1)
- 7) Farm Debt to Asset Ratio? Northern Farms or Area Average(1)

IV) Balance Sheet at Market and Cost- All answers to two decimals if possible.

The Northern Acres Farm Balance Sheet information consists of 2 pages. One page includes the 2010 and 2011 Balance Sheet at Market for Northern Acres and the Area Average Balance Sheet at Market, the other page includes the 2010 and 2011 Balance Sheet at Cost for Northern Acres and the Area Average Balance Sheet at Cost.

- 1) Which farm (NA 2010, NA 2011 or Area Average) has the best at market debt to asset ratio? _____ (1 pt.)
- 2) What is the difference between the 2011 Northern Acres Machinery Equipment Market Value versus 2011 Northern Acres Machinery Equipment Cost Value? _____ (2 pts.)
- 3) Which farm had a greater percent net worth change at cost? Area Average or Northern Acres _____ (1 pt.)
- 4) Which farm had a great percent net worth change at market? Area Average or Northern Acres _____ (1 pt.)
- 5) Which farm, NA 2010 Market or Area Average has a greater percentage of total liabilities listed as a deferred liability? _____ (2 pts.)
- 6) What is the net worth change difference between 2011 Northern Acres at Market versus 2011 Northern Acres at Cost? _____ (2 pts.)
- 7) What is the net worth change difference between 2011 Area Average at Market versus 2011 Area Average at Cost? _____ (2 pts.)
- 8) How much does the Area average owe to the government in current liabilities for crop loans? _____ (1 pt.)
- 9) How much accrued interest does the Northern Acres farm have for 2011? _____ (1 pt.)
- 10) Using the Market Balance Sheet only, which of the three columns has the highest values for each of the following lines?
 - A) Farm Land (2010, 2011, Area Average) _____ (1 pt.)
 - B) Market Livestock held for sale (2010, 2011, Area Average) _____ (1 pt.)
 - C) Prepaid expenses (2010, 2011, Area Average) _____ (1 pt.)
 - D) Retained earnings (2010, 2011, Area Average) _____ (1 pt.)
 - E) Growing Crops (2010, 2011, Area Average) _____ (1 pt.)
- 11) Which ratio is the only ratio that is not lower for the area average farm compared to the 2011 Northern Acres Farm? _____ (1 pt.)
- 12) What is the difference in the prepaid expenses for the Northern Acres farm from 2010 to 2011? _____ (2 pts.)
- 13) What is the difference in the crops under government loan for the Northern Acres farm from 2010 to 2011? _____ (2 pts.)
- 14) What is the difference in the current notes due for the Northern Acres farm from 2010 to 2011? _____ (2 pts.)
- 15) What is the difference in the total farm liabilities for the Northern Acres farm from 2010 to 2011? _____ (2 pts.)

- 16) Which farm has nonfarm liabilities listed on their balance sheet? _____ (1 pt.)-30 pts.
- 17) How much has the Northern Acres Farm land appreciated from cost balance value in 2011 to the market balance sheet value in 2011? _____ (2 pts.)
- 18) Based on the Total debt to asset ratio at cost, did Northern Acres become more, less, or equally solvent between 2010 and 2011? _____ (1 pt.)
- 19) Based on 348 acres owned for the Area Average farm, what is the current market value per acre? _____ (2 pts.)

V) Cash Flow

- 1) How much money does the Northern Farm expect from crop sales? _____ (2 pts.)
- 2) What is the item that produces the largest cash inflow? _____ (1 pt.)
- 3) What is the total expected inflow? _____ (1 pt.)
- 4) The Northern Farm plans to rent 250 acres of land. How much per acre do they expect the rent to be? _____ (2 pts.)
- 5) What do they anticipate will be their total outflow? _____ (1 pt.)
- 6) What per cent of the total outflow comes from feed purchased?
- 7) They were recently told that the prices for seed will be 8% higher than they had anticipated. What will the adjusted seed expense be if that happens? _____ (2 pts.)
- 8) How much do they plan to pay down on the new tractor they plan to buy? _____ (2 pts.)
- 9) Which month does the Northern Farm borrow the most for their annual operating loan? _____ (1 pt.)

VI) Crops

- 1) What was the most expensive item per acre for all crops for Northern Acres?(1)
 - A) Seed
 - B) Fertilizer
 - C) Fuel
 - D) Rent
- 2) Which crop had the highest total product return per acre for the Northern Farm?(1)
 - A) Corn Silage Dryland Owned
 - B) Corn Irrigated Owned
 - C) Corn Dryland Rented
 - D) Soybeans Dryland Rented
 - E) Alfalfa Haylage Irrigated Owned
- 3) Which crop had the highest total direct expense per acre for the Northern Farm?(1)
 - A) Corn Silage Dryland Owned
 - B) Corn Irrigated Owned
 - C) Corn Dryland Rented
 - D) Soybeans Dryland Rented
 - E) Alfalfa Haylage Irrigated Owned
- 4) Which crop had the highest total overhead expense per acre for the Northern Farm?(1)
 - A) Corn Silage Dryland Owned
 - B) Corn Irrigated Owned
 - C) Corn Dryland Rented
 - D) Soybeans Dryland Rented
 - E) Alfalfa Haylage Irrigated Owned
- 5) Which crop had the highest net return over labor and management for the Northern Farm?(1)
 - A) Corn Silage Dryland Owned
 - B) Corn Irrigated Owned
 - C) Corn Dryland Rented
 - D) Soybeans Dryland Rented
 - E) Alfalfa Haylage Irrigated Owned
- 6) Which crop had the lowest net return over labor and management for the Northern Farm?(1)
 - A) Corn Silage Dryland Owned
 - B) Corn Irrigated Owned
 - C) Corn Dryland Rented
 - D) Soybeans Dryland Rented
 - E) Alfalfa Haylage Irrigated Owned

Was the Northern Farms Net Return Over Labor and Management better or worse than the Area Average for the following crops?

- 7) Corn Silage Dryland Owned (1)
- 8) Corn Irrigated Owned(1)
- 9) Corn Dryland Rented(1)
- 10) Soybeans Dryland Rented(1)

The Northern Farms see a need to increase their efficiency in their cropping program. They are especially interested in the silage and alfalfa areas. One option they are looking at is increasing their silage acreage and cutting back on their alfalfa haylage acreage. They would convert 50 acres of the irrigated alfalfa to corn and 50 acres from dryland owned soybeans to corn silage Dryland. They feel they can do the change without purchasing new equipment. Help them compute the effects of the changes they have had suggested to them.

- 11) When you compare their silage results to the Area Average, which of the following statements is true?(1)
 - A) Their yield is lower and their expenses are lower
 - B) Their yield is lower and their expenses are higher
 - C) Their yield is higher and their expenses are lower
 - D) Their yield is higher and their expenses is higher
- 12) The effect of spreading the machinery depreciation for silage land over more acreage would be to (1)?
 - A) Increase total depreciation
 - B) Decrease total depreciation
 - C) Increase depreciation cost per acre
 - D) Decrease depreciation cost per acre
- 13) Which crop gave the Northern Farm the greatest total product return?(2)
- 14) If they planted 50 of the irrigated alfalfa haylage acres into corn and assuming the same expenses, yield and prices, how much would the fifty acres give in return over labor and management?(2)
- 15) What would the Net Return Over Labor and Management that they wouldn't be getting from the Alfalfa not grown?(2)

VII) Dairy

- 1) Northern Acres production per cow is greater than or less than the comparative average farm. (1 pt.)
 - A) Greater than
 - B) Less than
- 2) How many contracts would it take if Northern Acres Dairy was to purchase a Put to cover 50% of their milk production for one year? (2 pts.)
- 3) The legal limit of SCC to sell milk is: (1 pt.)
 - A) Under 100,000
 - B) 200,000
 - C) 400,000
 - D) 700,000
- 4) What would be the total breeding cost for the entire Northern Acres herd? (2 pts.)
- 5) The annual bedding cost for the area average farm is: (2 pts.)
- 6) What is the value of 'cull cows' to the Northern Acres Dairy on a per cow basis?
- 7) In comparison, the area averages farm sell their cull cows at: (1pt)
 - A) An improved value over Northern Acres
 - B) Equal value to Northern Acres
 - C) Less value than Northern Acres
- 8) The average milk price per cwt. for Northern Acres is not as good as the Area Averages. T or F (1 pt.)
- 9) Purchasing a herd of 50 cows would be a depreciable asset. T or F (2 pts.)

- 10) EQIP is a federal program funding conservation projects that can be used to? (2 pts.)
- A) Build a manure lagoon
 - B) Purchase a manure spreader
 - C) Improve conservation practices
 - D) More than one of the above
- 11) As a herd manager you notice that on your DHIA summary sheet your Dairy heifers are freshening with an average of 2 – 4. What is the average age of your first calf heifers? (1 pt.)
- A) 24 months
 - B) 26 months
 - C) 28 months
 - D) 30 months
- 12) Net Return for the area average farm per cow is: (1 pt.)
- A) \$3.17
 - B) \$2.35
 - C) \$716.34
 - D) \$524.18
- 13) Is the Northern Acres Net return (1 pt.)
- A) Better than the area average
 - B) Equal to the area average
 - C) Not as good as the area average
 - D) Unable to determine with the data listed
- 14) As a herd manager, you are asked to evaluate many factors that may improve profitability. If you were manager of the Northern Acres dairy, and were able to increase your production by 10% with the decision to use BST, what would be your approximated expected production per cow? (2 pts.)
- A) 22,700
 - B) 23,000
 - C) 24,800
 - D) 26,400
- 15) If all other factors remained the same, what would be the net return per cwt., for the Northern Acres dairy, if the milk price were to average \$22.00 / cwt. for the year? (3 pts.)
- 16) When looking at a DHIA Summary sheet, the column heading entitled “DIM” refers to: (1 pt.)
- A) Dairy Improving Management
 - B) Dairy Info Management
 - C) Days In Milk
 - D) Dairy Insurance Money
- 17) LGM is the abbreviation for: (1 pt.)
- A) Large Group Management
 - B) Livestock Gross Margin
 - C) Lingering Group Milk
 - D) Long Grouping Milk

- 18) In review of the Northern Acres dairy in comparison to the area averages, the Northern Acres feed cost per cow is: (1pt)
- A) Higher than the averages
 - B) About the same as the averages
 - C) Lower than the area averages
 - D) The information is incomplete and unavailable
- 19) What does it cost to feed a cow per day on the Northern Acres Dairy?(1 pt.)
- 20) Which is more profitable – Northern Acres Dairy or the Area Average? (1 pt.)

VIII) Household

- 1) How much did the Northern Acres Farm spend per person for food and meals? _____ (2 pts.)
- 2) Was this more or less than the Area Average? _____ (2 pts.)
- 3) What per cent of the total family living for Northern Acres was spent on health insurance? _____ (2 pts.)
- 4) Was their health insurance expense per cent higher or lower than the Area Average? _____ (2 pts)
- 5) What was the Area Average total family living expense per person? _____ (2 pts.)
- 6) Was this higher or lower than for the Northern Farm? _____ (2 pts.)

IX) Taxes All questions 1 pt. each

- 1. The most important point in sound tax planning is
 - A. Just minimize the obligation
 - B. Maximize after tax income
 - C. Final line on the tax form to zero
 - D. Always have large depreciation

- 2. Income Tax planning looks at financial effects of
 - A. Farm production
 - B. Marketing
 - C. Time of the year
 - D. Both A & B

- 3. Income tax planning falls into one of two categories
_____ of tax and saving of tax
 - A. Minimizing
 - B. Deferral
 - C. Maximizing
 - D. Delaying

- 4. Effective tax planning requires
 - A. Personal financial goals
 - B. Up-to-date records
 - C. Reliable long-range projections
 - D. All of the above

- 5. The farm income and expenses are reported on
 - A. Schedule a
 - B. Schedule c
 - C. Schedule d
 - D. Schedule f

6. People have to start to pay income taxes when
 - A. They are 18 years old
 - B. They are 21 years old
 - C. They are out of school
 - D. They are any age with income
7. Farmers who have a large income year can reduce taxes due by
 - A. Deferring income
 - B. Pre-pay expenses
 - C. Purchase machinery
 - D. All of the above
8. Based on Part I – Farm Income Statement, the Browns would have taxable income
 - A. Above the area average
 - B. Below the area average
 - C. Equal to the area average
 - D. None of the above
9. Based on Part I - Income Statement the Brown Farms farm schedule would show the bottom line of
 - A. \$707,438
 - B. \$630,457
 - C. \$330,513
 - D. \$210,072
10. For an operation that is having a bad year and needs more taxable income they should
 - A. Delay selling crops
 - B. Buy feed ahead
 - C. Delay all expenses
 - D. Delay remodeling of the house
11. With the purchase of a used tractor the farmer would get the most depreciation with
 - A. Straight line
 - B. Double declining balance
 - C. Purchase in January
 - D. Section 179 expensing
12. Farmers must file their tax by what date if they do not get an extension or the IRS changes it
 - A. January 15th
 - B. February 1st
 - C. February 15th
 - D. March 1st
13. The purchase of a group feeder cattle are deducted
 - A. When they are purchased
 - B. When they are sold
 - C. Not a deductible expenses
 - D. They have to be depreciated

14. Good sound tax management is complete best by
- Planning all year
 - Planning mid-year
 - Planning in November & December
 - Planning in January after year ends
15. If a farmer is planning on using section 179 expensing
- There is no limit to the amount
 - There is a limit to the amount
 - Has to be purchased before 4th quarter of year
 - There is no limit and can be carried over
16. If the \$8,402 insurance income is farm crop insurance it can be
- Only reported in year received
 - May be reported in the year received or the next year
 - May be split two years income
 - Insurance income is not taxable
17. The highest percent of farmer use _____ for taxes.
- Cash records
 - Accrual records
 - Combination of cash and accrual records
 - None of the above

X) **Marketing** If the Northern Farm expands their corn acreage next year by renting additional land, their banker expects them to hedge $\frac{1}{2}$ of their corn available for sale to ensure they are able to repay their loan on the corn crop. They expect to have 60,000 bushels of corn available to sell. The December corn futures is \$5.38 per bushel. The expected basis is \$0.30 per bushel.

- How many bushels would they hedge to meet the requirement of selling $\frac{1}{2}$ of available corn bushels?
- How many contracts would they be required to hedge?
- They would be _____ the futures contracts on a temporary substitute for selling corn in the local cash market.
- If they obtain a hedge at the listed price, what final corn price would they be expecting (ignoring cost of the hedge)? If in December they find the local selling price is \$4.99 and the basis is \$0.25.
- What would the futures price be?
- At that time the farm would need to _____ A _____ their corn on the local market at ___ B ___ and offset by _____ C _____ on the futures market at \$ _____ D _____.
- What would the realized price per bushel be for the farm?

Contestant Number _____ Contestant Name _____ FFA Chapter _____				
No.	Description	Answer	Pts.	
Part I Farm Income Statement				
			38	
1	Northern Farm three largest farm expenses	Purchased feed, Interest and Hired Labor	1	
			1	
			1	
	Area Average three largest farm expenses	Fertilizer, Purchased Feed & Repairs	1	
			1	
			1	
2	Which two expense items on Northern Acres are less than the Area Average?	Crops Insurance and Land Rent	1	
			1	
3	Which inventory change is positive for Northern Acres	Accounts Payable	1	
4	What % of gross income are? A. Dairy Milk B. Net Farm Cash Income C. Net Farm Income	70.3%	2	
		25.7%	2	
		13.8%	2	
5	What item calculates difference between Net Incomes?	Gain or Loss on Capital Sales	1	
6	Calculate Factors	A. Depreciation Expense Ratio?	10.1%	2
		B. More or Less?	More	2
		C. Interest Expense Ratio?	8.6%	2
		D. More or Less?	More	2
		E. Net Farm Income Ratio?	13.8%	2
		F. More or Less?	Less	2
7	A. Average Mach and Equip Invest.?	\$1,243,917	2	
	B. Depreciation as % of Ave Invest.?	6.40%	2	
	C. Approximate life of machinery & equipment Northern?	16 years	2	
8	A. Mach/Equip Depr. Per Crop Acre?	98.57 or -98.57	2	
	B. Milk Income per Ave. No of Cows?	\$4,640.81	2	
Part II Profitability				
			16	
1	Northern Acres rate of return on assets at market?	8.8%	2	
2	Rate of return on assets better or worse?	Worse	2	
3	Northern Acres operating profit margin?	34.0%	2	
4	Northern Acres asset turnover ratio?	26.0%	2	
5	Ratio more or less desirable?	Less desirable	2	
6	Northern Farms Net Worth?	\$1,676,562	2	
7	Net worth change during the year?	\$251,568	2	
8	Northern farm total debt to asset ratio?	62.0%	2	
Part III Financial Summary				
			7	
1	Total acres owned?	Northern Acres	1	
2	Total crop acres?	Northern Acres	1	

3	Total crop acres rented?	Area Average		1
4	Net income from operations?	Northern Farm Better		1
5	Operating profit margin?	Northern Farm Better		1
6	Replacement coverage ratio?	Area Average Better		1
7	Farm debt to asset ratio?	Northern Farm Better		1
Part IV Balance Sheet at Market and Cost				33
1	The best market debt to asset ratio?	Area Average		1
2	Difference between machinery equipment value?	\$484,432		2
3	Which farm had a greater net worth change at cost?	Area Average		1
4	Which farm had a greater net worth change at market?	Northern Acres		1
5	Which farm had a greater % of total liabilities a deferred?	Northern Acres 2010 Market		2
6	Net worth change difference?	\$114,733		2
7	Net worth chagne difference?	\$24,919		2
8	How much does the Area Average owe for crop loans/	\$2,411		1
9	Accrued interest for Northern Acres?	\$3,966		1
10	A. Highest value in farm land?	2011		1
	B. Highest value in livestock held for sale?	Area Average		1
	C. Highest value in prepaid expenses?	Area Average		1
	D. Highest value in retained earnings?	2011		1
	E. Highest value in growing crops?	2010		1
11	Which ratio is not lower for Area Average?	Current Farm Liabilitie/Assets		1
12	Difference in prepaid expenses from 2010 to 2011?	\$5,902		2
13	Difference in crops under government loan 2010 to 2011?	-\$49,000		2
14	Difference I current notes due from 2010 to 2011?	-\$42,000		2
15	Difference in total liabilities from 2010 to 2011?	\$34,417		2
16	Which farm has nonfarm liabilities listed?	Area Average		1
17	How much has the Northern Farm land appreciated in value?	\$330,090		2
18	Northern farm become more, less or equally solvent?	More		1
19	Current market value per acre of Area Average land?	\$727		2
Part V Cash Flow				14
1	Northern money from crop sales?	\$210,000		2
2	Which item produces larest cash inflow?	Milk Sold		1
3	Total expected inflow?	\$1,256,800		1
4	Rent per acre?	\$64.00		2
5	Total outflow?	\$903,600		1
6	Percent of total outflow for feed?	24.6%		2
7	Adjusted seed cost?	\$54,000		2
8	Down payment on tractor?	\$38,000		2
9	Month that they borrow the most on their operating loan?	March		1

Part VI Crop Enterprise Analysis			18
1	Most expensive crop expense?	B Fertilizer	1
2	Highest total product return per acre?	B Corn Irrigated Owned	1
3	Highest total direct expense per acre?	C Corn Dryland Rented	1
4	Highest total overhead expense per acre?	A Corn Silage Dryland Owned	1
5	Highest net return over labor and management oer acre?	B Corn Irrigated Owned	1
6	Lowest net return over labor and management?	E Alfalfa Haylage Irrigated Owned	1
7	Corn silage dryland owned-better or worse?	Worse	1
8	Corn irrigated owned - better or worse?	Better	1
9	Corn dryland rented - better or worse?	Worse	1
10	Soybeans dryland rented - better or worse?	Worse	1
11	Which statement is true?	D	1
12	Effect of spreading spreading themachinery depreciation?	D	1
13	Greatest total product return?	Corn Dryland Owned	2
14	Return of labor and management from change?	\$32,171	2
15	Net return over labor and managment lost from alfalfa?	(\$4,205)	2
Part VII Dairy			28
1	Production per cow greater than or less than?	A) Greater	1
2	Contracts to purchase a put to cover 50% of milk production?	10 or 11	2
3	Legal limit of SCC to sell milk?	C) 400000	1
4	What would the total breeding cost for Northern herd?	\$8,982	2
5	Annual bedding cost for the area average?	\$10,660	2
6	Value of cull cows per cow?	\$312	1
7	Area average cull cows?	C) Less value than Northern Acres	1
8	Average milk price per cwt is not as good as area average?	FALSE	1
9	Purchasing a herd of 50 cows would be depreciable?	TRUE	2
10	EQIP isa federal program that can be used for?	D) More than one of the above	2
11	Average age of your first calf heifers?	C) 28 months	1
12	Net return for area average farm per cow?	D) \$524.18	1
13	Is Northern Farm net return?	A) Better than the area average	1
14	Expected production per cow?	C) 24,800	2
15	What would be the net return per cow?	\$4.56/cwt (\$4.51-\$4.61)	3
16	"DIM" refers to?	C) Days in Milk	1
17	LGM is the abbreviation for?	B) Livestock Gross Margin	1
18	The Northern Acres feed cost per cow is?	C) Lower than the area averages	1
19	Cost to feed a cow per day?	\$4.11	1
20	Hich is more profitable?	Northern Acres	1

Part VIII Household			12
1	Northern Acres spends per person for food and meals?	\$2,169	2
2	More or less than the Area Average?	Less	2
3	Per cent of total family living spent on health insurance?	36.6%	2
4	Higher or lower than the Area Average?	Higher	2
5	Area Average total family living expense per person?	\$12,359	2
6	Northern Farm higher or lower?	Lower	2
Part IX Taxes			17
1	Most important point in sound tax management?	B. Maximize after tax income	1
2	Income tax planning looks at?	D. Both A and B	1
3	Income tax planning falls into two categories?	B. Deferral	1
4	Effect tax planning requires?	D. All of the above	1
5	Farm income and expense are reported on?	D. Schedule F	1
6	People have to start paying taxes when they are?	D. They are any age with income	1
7	Farmers can reduce their income by:	A. All of the above	1
8	The Brown's would have taxable income?	A. Above the area average	1
9	Brown Farms farm schedule would show the bottom line of?	B. \$200,772	1
10	An operation that needs more taxable income should?	C. delay all expenses	1
11	Farmer would get most depreciation with?	D. Section 179 expensing	1
12	Farmers must file by?	D. March 1	1
13	The purchase of feeder cattle are deducted when?	B When they are sold	1
14	Good sound tax management is completed best by?	A. Planning all year	1
15	If farmer is using section 179 expensing?	B. There is a limit to the amount	1
16	Farm crop insurance income can be?	B Year received or next year	1
17	The highest percent of farmers use?	A. Cash records	1
Part X Marketing			17
1	How many bushels?	30,000 bushels	1
2	How many contracts?	6 contracts	1
3	They would be _____ the futures contracts.	Selling	1
4	Expected final corn price?	\$5.08	2
5	The futures price would be?	\$5.24	2
6A	The farm would need to _____ ?	Sell	2
6B	At a local price of?	\$4.99	2
6C	and offset by	Buying	2
6D	on the futures market at	\$5.24 per bushel	2
7	What would the realized price per bushel be?	\$5.13	2