



chapter eight

A CASE FARM: PROFIT FARMS

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Profit Farms

Profit Farms is a 1,500-acre dryland grain operation located in the Pacific Northwest. The farm is operated by Max and Marlene Profit. The Profits are both 45 years old, have been married 24 years, and have three children—two sons, ages 22 and 15, and a daughter, age 16. The oldest son is a recent graduate of State University and is employed off the farm. Marlene is a part-time teacher at the nearby elementary school.

The farm includes three adjacent properties. Max and Marlene own the home place (825 acres) and the Peterson place (375 acres). The home place was originally owned by Max's parents, but was willed to Max upon their untimely deaths 15 years ago. The Profits purchased the Peterson place eight years ago and used a Farm Credit loan to help finance the acquisition. The third tract (300 acres) is leased on a crop-share basis with the Profits getting two-thirds of the crop and paying two-thirds of the fertilizer and crop insurance costs and 100 percent of all the remaining operating outlays. A rotation of 500 acres of soft white winter wheat, 500 acres of spring barley, and 500 acres of summer fallow is followed annually. Winter wheat yields have ranged between 37 and 82 bushels per acre over the past 10 years and have averaged about 62 bushels during that period (see Table 1). Barley yields have varied between 2.1 and .7 tons per acre and averaged 1.3 tons (54.2 bushels) over the past 10 years.

Table 1. Annual crop yields last 10 years.

Crop year	Wheat yield		Barley yield (bu.)
	(bu.)	(tons)	
X-7	56.0	0.7	29.2
X-6	73.2	1.4	58.3
X-5	37.2	1.2	50.0
X-4	72.2	0.8	33.3
X-3	48.0	1.3	54.2
X-2	54.9	0.9	37.5
X-1	82.0	2.1	87.5
X0	72.2	1.1	45.8
X1	57.5	1.3	54.2
X2 (most recent)	59.6	1.8	75.0
Mean	61.3	1.3	54.2

Moisture looks very good for the upcoming crop year, and the Profits are planning on a wheat and barley yield of 65 bushels and 1.5 tons (62.5 bushels) per acre, respectively.

The business is operated as a sole proprietorship. Max and Marlene pay taxes on a cash, calendar year basis. High priority, long-term goals shared by Max and Marlene include: (1) operating the business at a profitable level, (2) realizing a comfortable standard of living for the family, (3) providing substantial financial assistance for the kid's or kids' college education, (4) funding a retirement program, and (5) passing the business along to the children, should they want the opportunity to farm.

The current market value of Max and Marlene's business and personal assets is about \$1.33 million. Outstanding debt totals \$408 thousand and includes machinery, vehicle, and real estate loans, plus deferred income taxes on assets. Thus, the Profits have a debt-asset position of about 32 percent and a \$925 thousand net worth.

Payments on term debt scheduled for the upcoming year (X3) are shown in Table 2.

Table 2. Scheduled term debt repayment for year X3.

Loan	Lender	Due date	Payment (principal & interest)
Pickup	Farmers Bank	12/15	\$3,906
Combine	Farmers Bank	10/18	19,210
Cultivator	Farmers Bank	2/26	5,277
Chisel	Farmers Bank	3/10	3,832
Real estate	Farm Credit	10/15	<u>16,062</u>
Total			\$48,287

Net income this past year (X2) totaled \$36,038, which included \$16,500 of off-farm income.

Financial Statement Analysis

A comprehensive year-end financial analysis of Profit Farms appears on the following pages. The analysis is based on accrual-adjusted financial statements and includes:

- 🔗 Balance sheet for 12/31/X1
- 🔗 Balance sheet for 12/31/X2
- 🔗 Balance sheet supporting schedules
- 🔗 Schedule 1: Machinery and Equipment
- 🔗 Schedule 2: Real Estate and Improvements
- 🔗 Schedule 3: Non-current Liabilities
- 🔗 Schedule 4: Deferred Taxes
- 🔗 Income statement for 12/31/X2
- 🔗 Income statement supporting schedules

- Schedule 5: Revenue Accrual Adjustments
- Schedule 6: Cash Operating Expenses
- Schedule 7: Expense Accrual Adjustments
- Schedule 8: Change in Accrued Interest Payable
- Schedule 9: Change in Accrued Taxes
- Statement of owner equity for 12/31/X2
- Statement of cash flows for 12/31/X2
- Financial analysis summary for 12/31/X2
- Trend analysis for 12/31/X2

Projected Whole Farm Cash Flow and Enterprise Budgets

For the year ending 12/31/X3, a monthly cash flow projection for Profit Farms is included as well as projected economic costs and cash expenditures budgets for winter wheat/summer fallow and spring barley. Finally, a whole farm cash flow analysis of a proposed marketing plan is presented. This forward financial planning information appears as:

- Cash flow budget for 12/31/X3
- Projected economic costs for winter wheat/summer fallow for crop year X3
- Projected cash expenditures for winter wheat/summer fallow for crop year X3
- Projected economic costs for spring barley for crop year X3
- Projected cash expenditures for spring barley for crop year X3
- Whole farm cash flow analysis of marketing plan for crop year X3



I. Balance Sheet^a 12/31/X1

ASSETS			LIABILITIES		
	Cost	Market		Cost	Market
<i>Current assets</i>			<i>Current liabilities</i>		
Cash & checking	\$9,610	\$9,610	Accounts payable		\$2,570
Savings	15,325	15,325	Notes due 12 months		31,136
Marketable securities	1,250	2,000	Current portion term debt		24,027
Accounts Receivable	0	0	Accrued interest:		
Inventories:			Account payment & notes due 1 year		913
Wheat (15,000 bu. @ \$3.25)	48,750	48,750	Noncurrent debt		6,401
Barley (150 tons @ \$85)	12,750	12,750	Accrued property taxes		1,944
Supplies	1,027	1,027	Accrued income & social security tax		4,394
Prepaid expenses	1,120	1,120	Deferred tax—current		38,134
Investment in growing crop	41,515	41,515			
Total current assets	\$131,347	\$132,097	Total current liabilities		\$109,519
<i>Noncurrent assets</i>			<i>Noncurrent liabilities</i>		
Machinery & equipment	\$155,278	\$213,500	Noncurrent portion term debt		249,532
Coop. investment	7,500	7,500	Total noncurrent liabilities		\$249,532
Real estate	622,000	937,500			
Total noncurrent assets	\$784,778	\$1,158,500			
Total business assets	\$916,125	\$1,290,597			
Personal assets	XXX	\$65,112			
			Total current & noncurrent liabilities	\$359,051	\$359,051
			Deferred tax noncurrent assets	XXX	59,340
			Total business liabilities	\$359,051	\$418,391
			Personal liabilities	XXX	6,851
			TOTAL LIABILITIES	\$359,051	\$425,242
			OWNER EQUITY		
			Retained earnings	\$557,074	\$557,074
			Contributed capital	0	0
			Personal net worth	XXX	58,261
			Valuation equity	XXX	315,132
			TOTAL OWNER EQUITY	\$557,074	\$930,467
TOTAL ASSETS	\$916,125	\$1,355,709	TOTAL LIABILITIES & OWNER EQUITY	\$916,125	\$1,355,709

^a This balance sheet reflects combined business and personal assets and liabilities.

3. Balance Sheet Supporting Schedules 12/31/X2

Schedule 1: Machinery and Equipment

Item	Description	Cost or basis	Accum. deprec.	Adjusted cost	Market value
Wheel tractor	310 hp used	\$50,000	\$21,440	\$28,560	\$30,000
Chisel	30'	20,000	11,400	8,600	10,000
Field cultivator	40'	24,000	5,968	18,032	18,000
Harrow	80'	12,000	12,000	0	1,500
Rodweeders (2)	50	20,000	20,000	0	5,000
Sprayer	55'	7,000	7,000	0	2,500
Drill	40'	28,000	28,000	0	8,500
Combine	25' used	130,000	91,307	38,693	60,000
Grain trucks (3)	used	39,000	28,250	10,750	15,000
Service truck	used	4,500	4,500	0	1,000
Pick-up	3/4 ton	20,000	3,000	17,000	17,000
Tools	—	15,000	15,000	0	10,000
Total	XXX	\$369,500	\$247,865	\$121,635	\$178,500

Schedule 2: Real Estate and Improvements

Description	Acres	Cost or basis	Accum. deprec.	Adjusted cost	Market value
Home place					
Land	825	\$330,000	—	\$330,000	\$618,750
Residence	—	50,000	—	50,000	—
Service bldgs.	—	35,000	\$35,000	0	—
Grain bins	—	40,000	25,000	15,000	—
Peterson place	375	225,000	—	225,000	318,750
Total	1,200	\$680,000	\$60,000	\$620,000	\$937,500

Schedule 3: Noncurrent Liabilities

To whom	Original date balance	Purpose &/or security	Interest rate(%)	Payment date	Current principal	Accrued interest	Portion of principal	
							Due in 12 mo.	Due beyond 12 mo.
<i>Nonreal estate term debt</i>								
Farmers Bank	3/10/X-4	Chisel	8.75	3/10	\$6,763	\$480	\$3,240	\$3,523
Farmers Bank	2/26/X-2	Cultivator	10.0	2/26	13,124	1,107	3,964	9,160
Farmers Bank	10/18/X-4	Combine	8.75	10/18	62,578	1,110	13,734	48,844
GMAC	12/15/X-1	Pick-up	9.5	12/15	12,518	52	2,717	9,801
Total					\$94,983	\$2,749	\$23,655	\$71,328
<i>Real estate debt</i>								
Farm credit	10/15/X-8	Peterson Place	8.75	10/15	\$154,575	\$2,853	\$2,537	\$152,038
Total noncurrent liabilities					\$249,558	\$5,602	\$26,192	\$223,366

3. Balance Sheet Supporting Schedules 12/21/X2 *continued*

Schedule 4: Deferred Taxes

	<u>Market</u>	<u>Cost</u>	<u>Difference</u>
Section One: Current Portion of Deferred Taxes			
Deferred income items			
Marketable securities	\$2,210	\$1,250	\$960
Accounts receivable	9,000	0	9,000
Stored wheat	17,570	0	17,570
Stored barley	4,350	0	4,350
Supplies	1,365	0	1,365
Prepaid expenses	1,256	0	1,256
Investment in growing crops	42,760	0	42,760
Total deferred income	XXX	XXX	\$77,261
Deferred expense items			
Accounts payable			3,291
Accrued interest			6,542
Accrued property taxes			1,944
Total deferred expenses			\$11,777
Net taxable income on current portion			\$65,484
Estimated deferred income & social security tax on current portion			\$26,694
Section Two: Noncurrent Portion of Deferred Taxes			
Machinery & equipment	\$178,500	\$121,635	\$56,865
Real estate	937,500	620,000	317,500
Total deferred income	XXX	XXX	\$374,365
Less deductions/exclusions (house)			-100,000
Net taxable income on noncurrent portion			\$274,365
Estimated deferred tax on noncurrent portion			\$59,422

4. Income Statement Year Ending 12/31/X2

REVENUES

Cash grain sales	\$190,812	
Inventory change (Schedule 5)	<u>-39,580</u>	\$151,232
Change in accounts receivable (Schedule 5)		9,000
Government payments:AMTA		<u>21,135</u>
Gross revenue		\$181,367

EXPENSES

Cash operating expenses (Schedule 6)	\$95,644	
Accrual adjustments: Unused assets (Schedule 7)	-1,719	
Unpaid items (Schedule7)	721	
Depreciation: Machinery	33,643	
Buildings & improvements	<u>2,000</u>	
Total Operating Expenses		\$130,289
Interest: Cash	\$27,139	
Change in accrued interest (Schedule 8)	<u>-772</u>	26,367
Net farm income from operations		\$24,711
Gain/loss sale of farm capital assets		<u>3,500</u>
NET FARM INCOME		\$28,211

Nonfarm income		
Wages	\$15,780	
Interest & dividends	<u>770</u>	
Total nonfarm income		<u>16,550</u>

NET INCOME, BEFORE TAXES

Income & social security taxes, cash	\$4,394	
Change in accrued tax & deferred tax (Schedule 9)	<u>+4,329</u>	<u>-8,723</u>

NET INCOME, AFTER TAXES

\$36,038

5. Income Statement Supporting Schedules Year Ending 12/31/X2

Schedule 5: Revenue Accrual Adjustments

Item	Beginning balance sheet	Ending balance sheet	Difference
Stored crops			
Winter wheat	-\$48,750	+\$17,570	-\$31,180
Barley	-12,750	+4,350	-8,400
Total			<u>-\$39,580</u>
Accounts receivable	-0	+\$9,000	+\$9,000

Schedule 6: Cash Operating Expenses

Item	\$
Chemicals	\$10,185
Crop insurance	2,325
Fertilizer	31,329
Fuel and lubrication	10,205
Hired labor	5,000
Insurance (property and liability)	2,012
Miscellaneous	10,120
Repairs	3,888
Seed	5,150
Taxes, personal and real estate	15,430
Total	<u>\$95,644</u>

Schedule 7: Expense Accrual Adjustments

Item	Beginning balance sheet	Ending balance sheet	Difference
<i>Unused assets</i>			
Supplies	+ \$1,027	- \$1,365	-\$338
Prepaid expenses	+ 1,120	-1,256	-136
Investment in growing crops	+ 41,515	-42,760	<u>-1,245</u>
Net accrual adjustment—unused assets			<u>-\$1,719</u>
<i>Unpaid items</i>			
Accounts payable	-2,570	+ 3,291	+ 721
Accrued property and employer taxes	-1,944	+ 1,944	<u>0</u>
Net accrual adjustment—unpaid items			<u>+ \$721</u>

5. Income Statement Supporting Schedules
Year Ending 12/31/X2 *continued*

Schedule 8: Change in Accrued Interest Payable

Item	Beginning balance sheet	Ending balance sheet	Difference
Accrued interest on accounts payable and notes due in 1 year	-\$913	+\$940	+\$27
Accrued interest on non-current debt	-6,401	+5,602	-799
Total change in accrued interest payable			-\$772

Schedule 9: Change in Accrued Taxes

Item	Beginning balance sheet	Ending balance sheet	Difference
Accrued income and social security tax	-\$4,394	+\$20,163	+\$15,769
Deferred tax—current portion	-38,134	+26,694	-11,440
Change in accrued & deferred taxes			+\$4,329

6. Statement of Owner Equity Year Ending 12/31/X2

	Cost	Market
TOTAL OWNER EQUITY, BEGINNING BALANCE SHEET	\$557,074	\$930,467
<i>Change in retained earnings & contributed capital</i>		
Net income after taxes	+ \$36,038	
Owner withdrawals	-44,596	
Additions of capital ^a	0	
Distributions of capital, dividends, gifts	0	
Total change in retained earnings & contributed capital	-8,558	-8,558
<i>Change in personal net worth</i>		
Personal net worth, ending balance sheet	\$60,565	
Personal net worth, beginning balance sheet	-58,261	
Total change in personal net worth	XXX	+ 2,304
<i>Change in valuation equity</i>		
Valuation equity, ending balance sheet	+ \$315,903	
Valuation equity, beginning balance sheet	-315,132	
Total change in valuation equity	XXX	771
TOTAL OWNER EQUITY, ENDING BALANCE SHEET (Computed)	\$548,516	\$924,984
TOTAL OWNER EQUITY, ENDING BALANCE SHEET (Reported)	\$548,516	\$924,984

^aGifts, inheritance, personal investments in business.

7. Statement of Cash Flows Year Ending 12/31/X2

CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from farm operations	\$211,947	
Cash received from nonfarm activities	16,550	
Cash paid for operating expenses	-95,644	
Cash paid for interest	-27,139	
Cash paid for income & social security taxes	-4,394	
Cash withdrawals for \$42,596 family living & \$2,000 investment in personal assets	<u>-44,596</u>	
Net cash provided by operating activities		+ \$56,724
CASH FLOWS FROM INVESTING ACTIVITIES		
Cash received from sales of		
Machinery & equipment	\$3,500	
Real estate & buildings	0	
Marketable securities	0	
Cash paid to purchase		
Machinery & equipment	0	
Real estate & buildings	0	
Marketable securities	<u>0</u>	
Net cash provided by investing activities		+ \$3,500
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from operating loans	\$63,215	
Proceeds from term debt financing	0	
Cash received from capital contributions, gifts, inheritance	0	
Principal payments on term debt	-24,027	
Principal payments on operating debt	-62,255	
Cash distributions from dividends, capital, gifts	<u>0</u>	
Net cash provided by financing activities		-\$23,067
NET INCREASE IN CASH		\$37,157
Cash/cash equivalents reported on balance sheet, beginning year	\$24,935	
Cash/cash equivalents reported on balance sheet, ending year	<u>\$62,092</u>	
Change in cash/cash equivalents on balance sheet		\$37,157

8. Financial Analysis Summary Year Ending 12/31/X2 [Market Values]

LIQUIDITY

1. Working capital

Total current farm assets	\$140,603
- Total current farm liabilities	-116,896
= Working capital	= \$23,707

2. Current ratio

Total current farm assets	\$140,603
÷ Total current farm liabilities	÷ 116,896
= Current ratio	= 1.20:1

SOLVENCY

3. Net worth

Total assets	\$1,332,867
- Total liabilities	-407,883
= Net worth	= 924,984

4. Debt/asset ratio

Total farm liabilities	\$399,684
÷ Total farm assets	÷ 1,264,103
= Debt/asset ratio	= 0.32:1

PROFITABILITY

5. Net farm income

Cash sales & government payments	\$211,947
+/- Accrual adjustments	-30,580
- Cash operating expenses	-95,644
+/- Accrual adjustments	+998
- Depreciation	-35,643
- Interest (cash & accrual adjustments)	-26,367
+/- Gain/loss sale of capital assets	+3,500
= Net farm income	= 28,211

6. Return on assets

Net farm income	\$28,211
+ Farm interest expense	+ 26,367
- Value of unpaid labor & management	-37,696
= Return to farm assets	= 16,882
÷ Average total farm assets (= \$1,290,597 + \$1,264,103 / 2)	÷ 1,277,350
= Return on assets : ratio	= 0.013:1
	Percent (x 100)
	= 1.3%

7. Return on equity

Net farm income	\$28,211
- Value of unpaid labor & management	-37,696
= Return to equity	-9,485
÷ Average total farm equity (= \$930,467 - \$58,261 + \$924,984 - \$60,569 / 2)	÷ 868,312
= Return on equity : ratio	= -0.011:1
	Percent (x 100)
	= -1.1%

REPAYMENT CAPACITY

8. Term debt coverage ratio

Net farm income	\$28,211
+ Non-farm income	+ 16,550
+ Depreciation	+ 35,643



8. Financial Analysis Summary *continued* Year Ending 12/31/X2 [Market Values]

+ Interest on term debt	+ 23,155
- Income & social security tax	- 8,723
- Personal withdrawals	- 44,596
= \$ Available for principal & interest on term debt	= 50,240
÷ Annual scheduled principal & interest on term debt	+ 47,182
= Term debt coverage : ratio	= 1.065:1
	Percent (x 100)
	= 106.5 %

9. Capital replacement & term debt repayment margin

Net farm income	\$28,211
+ Non-farm income	+ 16,550
+ Depreciation	+ 35,643
- Income & social security tax	- 8,723
- Personal withdrawals	- 44,596
= Capital replacement & term debt repayment capacity	= 27,085
- Principal payments on term debt	- 24,027
= Capital replacement & term debt repayment margin	= \$3,058

FINANCIAL EFFICIENCY

10. Operating expense ratio

Total farm operating expenses	\$130,289
- Depreciation	- 35,643
÷ Gross farm revenues	+ 181,367
= Operating expense : ratio	= 0.522:1
	Percent (x 100)
	= 52.2 %

9. Trend Analysis Year Ending 12/31/X2 [Market Values]

Item	Year ending			
	12/31/X1	12/31/X2	12/31/X3	12/31/X4
LIQUIDITY				
1. Working capital	\$22,578	\$23,707	_____	_____
2. Current ratio	1.21:1	1.20:1	_____	_____
SOLVENCY				
3. Net worth	\$930,467	\$924,984	_____	_____
4. Debt/asset ratio	0.32 : 1	0.32:1	_____	_____
PROFITABILITY				
5. Net farm income	\$34,912	\$28,211	_____	_____
6. Return on assets (%)	1.6	1.3	_____	_____
7. Return on equity (%)	- 0.7	- 1.1	_____	_____
REPAYMENT CAPACITY				
8. Term debt coverage ratio	1.21:1	1.06:1	_____	_____
9. Capital replacement and Term debt & repayment margin	\$9,029	\$3,058	_____	_____
FINANCIAL EFFICIENCY				
10. Operating expense ratio	0.50:1	0.52:1	_____	_____

10. Cash Flow Budget Year Ending 12/31/X3

Item	Actual 'X2	Projected 'X3	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1. Beginning cash balance	\$9,610	\$21,664	\$21,664	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Operating receipts:														
2. Crops	190,812	147,769	25,315							61,227				
3. Government payments	21,135	19,000									19,000			
4. Other														
5. Capital receipts: Machinery, real estate	3,500	3,500												3,500
6. Non-farm Income: Off-farm wages	15,780	15,777	1,753	1,753	1,753	1,753	1,753				1,753	1,753	1,753	1,753
7. Interest & dividends	770	1,317	152	165	100	100	100	100	100	100	100	100	100	100
8. TOTAL CASH AVAILABLE (add lines 1-7)	241,607	209,027	48,884	6,918	6,853	6,853	6,853	5,100	5,100	66,327	68,080	25,853	6,853	10,353
Operating expenses:														
9. Chemicals	10,185	10,185				8,125		2,060						
10. Custom									10,721					
11. Fertilizer	31,329	31,329				15,623					4,985			
12. Gas, fuel, oil	10,205	10,205	250	250	250	1,800	250	250	1,105	3,100	2,000	250	250	450
13. Insurance	4,337	4,337			709						1,616			2,012
14. Labor hired	5,000	5,000							1,500	3,500				
15. Marketing & transportation	2,106	2,106	720							693	693			
16. Rents & leases														
17. Repairs	15,430	15,430	2,500	2,500	500	1,000	500	250	250	1,500	3,200	250	480	2,500
18. Seed	10,120	10,120			5,950						4,170			
19. Storage														
20. Supplies	850	850	150	50	50	50	50	50	100	100	100	50	50	50
21. Taxes: real estate & personal property	3,888	3,888				1,944						1,944		
22. Misc.	2,194	2,194	183	183	183	183	183	183	183	183	183	183	183	181
23. Total cash operating expenditures (add lines 9-22)	95,644	95,644	3,803	2,983	7,642	28,725	983	2,793	13,859	9,076	16,947	2,677	963	5,193

Item	Actual 'X2	Projected 'X3	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24. Capital expenditures: Machinery & equipment		\$15,000												\$15,000
25. Building & improvements														R. weeder
26. Other expenditures: Family living	42,596	43,000	3,583	3,583	3,583	3,583	3,583	3,583	3,583	3,583	3,583	3,583	3,583	3,587
27. Investments	2,000	2,000		2,000										
28. Income tax & social security	4,394	20,163		20,163										
29. Term debt payments: Principal	24,027	27,395		3,965	3,240									
30. Interest	23,155	20,892		1,312	592									
31. TOTAL CASH REQUIRED (add lines 23-30)	191,816	224,094	7,386	34,006	15,057	32,308	4,566	6,376	17,442	12,659	20,530	22,322	23,756	27,686
32. CASH AVAILABLE LESS CASH REQUIRED (add lines 23-30)	49,791	-15,067	41,498	-27,088	-8,204	-25,455	2,287	-1,276	-12,342	53,668	47,550	3,531	-16,903	-17,333
33. Inflows from savings	0	15,482		15,000							482			
34. Cash position before borrowing	49,791	415	41,498	-12,088	-8,204	-25,455	2,287	-1,276	-12,342	53,668	48,032	3,531	-16,903	-17,333
35. Money to be borrowed: Operating loans		122,783		17,088	13,204	30,455	2,713	6,276	17,342			1,469	21,903	12,333
36. Term debt		10,000												10,000
37. Operating loan payments: Principal		119,148	32,070							44,402	42,676			
38. Interest		4,895	273							4,266		356		
39. Outflows to savings		4,155	4,155											
40. Ending cash balance	21,664	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Loan balances (at end of period):		35,705		17,088	30,292	60,747	63,460	69,736	87,078	42,676		1,469	23,372	35,705
41. Current year's operating loan														
42. Previous year's operating loan	32,070	232,163	249,558	245,593	242,353	242,353	242,353	242,353	242,353	242,353	242,353	239,816	224,880	232,163
43. Term debt loans	249,558	267,868	249,558	262,681	272,645	303,100	305,813	312,089	329,431	285,029	242,353	241,285	248,252	267,868
44. Total loans	281,628													
Consistency check:														
45. Total inflows (8+33+35+36)	48,884	48,884	48,884	39,006	20,057	37,308	9,566	11,376	22,442	66,327	68,562	27,322	28,756	32,686
45. Total outflows (31+37+38+39+40)	48,884	48,884	48,884	39,006	20,057	37,308	9,566	11,376	22,442	66,327	68,562	27,322	28,756	32,686
45. Budgeting error (45-46)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

I I. Projected Economic Costs for Winter Wheat and Summer Fallow Crop Year X3

Item	Cost per acre	
	Owned	Leased
<i>Variable costs</i>		
Seed (60 lbs. @ 13.9¢)	\$8.34	\$8.34
Fertilizers: Nitrogen, Aqua (70 lbs. @ 31.1¢)	21.77	14.59
Nitrogen, Sol. 32 (10 lbs. @ 47.2¢)	4.72	3.16
Phosphorous, 10-34-0 (10 lbs. @ 46.6¢)	4.66	3.12
Sulfur, 12-0-0-26 (10 lbs. @ 24.6¢)	2.46	1.65
Herbicides: Roundup (s.f.) (12 oz. @ 42¢)	5.04	5.04
Harmony Extra (1/3 oz. @ \$16.05)	5.35	5.35
MCPA (1 pt. @ \$2.55)	1.28	1.28
Crop insurance	3.46	2.32
Fuel & lubrication (\$10,205 whole farm x .52 allocation ÷ 500 acres)	10.61	10.61
Repairs (\$15,430 whole farm x .52 allocation ÷ 500 acres)	16.05	16.05
Hired labor (\$5,000 whole farm x .52 allocation ÷ 500 acres)	5.20	5.20
Operator labor (2,500 hrs. x \$10 x .52 allocation ÷ 500 acres)	26.00	26.00
Miscellaneous (\$5,150 whole farm x .52 allocation ÷ 500 acres)	5.36	5.36
Interest on operating capital (total variable costs ÷ 2 x 10%)	6.02	5.41
Total variable costs	\$126.32	\$113.48
<i>Fixed costs</i>		
Depreciation (\$33,643 whole farm x .52 allocation ÷ 500 acres)	\$34.99	\$34.99
Personal property taxes & insurance on machinery (\$5,255 whole farm x .52 allocation ÷ 500 acres)	5.47	5.47
Real estate taxes (\$3.24 per acre x 2 acres)	6.48	0.00
Interest on debt		
Machinery (\$7,367 total interest x .52 allocation ÷ 500 acres)	7.66	7.66
Land (\$13,525 total interest ÷ 1,200 acres x 2 acres)	22.54	0.00
Interest on equity		
Machinery (\$213,500 mkt. – \$116,651 debt x 10% interest x .52 allocation ÷ 500 acres)	10.07	10.07
Land (\$937,500 mkt. real estate – \$150,000 bldgs. – \$154,575 debt x 4% interest ÷ 1,200 acres x 2 acres)	42.20	0.00
Management (65 bu. x \$3.25 mkt. x 7%)	14.79	14.79
Total fixed costs	\$144.20	\$72.98
TOTAL ECONOMIC COSTS PER ACRE	\$270.52	\$186.46
TOTAL ECONOMIC COSTS PER BUSHEL @ 65 bu. owned / 43.3 bu. leased	\$4.16	\$4.31

12. Projected Cash Expenditures for Winter Wheat and Summer Fallow Crop Year X3

Item	\$ per acre	
	Owned	Leased
<i>Variable costs</i>		
Seed	\$8.34	\$8.34
Fertilizer	33.61	22.52
Herbicides	11.67	11.67
Crop insurance	3.46	2.32
Fuel & lubrication (\$10,205 whole farm x .52 allocation ÷ 500 acres)	10.61	10.61
Repairs (\$15,430 whole farm x .52 allocation ÷ 500 acres)	16.05	16.05
Hired labor (\$5,000 whole farm x .52 allocation ÷ 500 acres)	5.20	5.20
Miscellaneous (\$5,150 whole farm x .52 allocation ÷ 500 acres)	5.36	5.36
Interest on operating capital loan	5.18	4.71
Total variable costs	\$99.48	\$86.78
<i>Fixed costs</i>		
Personal property taxes & insurance on machinery (\$5,255 whole farm x .52 allocation ÷ 500 acres)	\$5.47	\$5.47
Real estate taxes	6.48	0
Interest on machinery & land debt	30.20	7.66
Total fixed costs	\$42.15	\$13.13
<i>Other expenditures</i>		
Principal on term debt		
Machinery (\$24,858 whole farm x .52 alloc. ÷ 500 acres)	\$25.85	\$25.85
Land (\$2,537 ÷ 1,200 acres x 2 acres)	4.23	0
Personal withdrawals (\$45,000 whole farm x .52 allocation ÷ 500 acres) ^a	46.80	46.80
Total other expenditures	\$76.88	\$72.65
TOTAL CASH EXPENDITURES PER ACRE	\$218.51	\$172.56
TOTAL CASH EXPENDITURES PER BUSHEL		
@ 65 bu. owned / 43.3 bu. leased	\$3.36	\$3.99

^a Does not include income and social security taxes.

13. Projected Economic Costs for Spring Barley Crop Year X3

Item	Cost per acre	
	Owned	Leased
<i>Variable costs</i>		
Seed (70 lbs. @ 17¢)	\$11.90	\$11.90
Fertilizer:Nitrogen,Aqua (70 lbs. @ 31.1¢)	21.77	14.59
Nitrogen, Sol. 32 (8 lbs. @ 47.2¢)	3.78	2.52
Phosphorous, 10-34-0 (8 lbs. @ 46.6¢)	3.73	2.49
Sulfur, 12-0-0-26 (17 lbs. @ 24.6¢)	4.18	2.79
Herbicides: Buctril (1/3 pt. @ \$8.52)	2.84	2.84
MCPA (_ pt. @ \$2.55)	1.28	1.28
Fargo (1 1/4 qt. x \$10.81 + \$1.75 application x 3 acres)	4.58	4.58
Crop insurance	1.52	1.01
Fuel & lubrication (\$10,205 whole farm x .48 allocation ÷ 500 acres)	9.80	9.80
Repairs (\$15,430 whole farm x .48 allocation ÷ 500 acres)	14.81	14.81
Hired labor (\$5,000 whole farm x .48 allocation ÷ 500 acres)	4.80	4.80
Operator labor (2,500 hrs. x \$10 x .48 allocation ÷ 500 acres)	24.00	24.00
Miscellaneous (\$5,150 whole farm x .48 allocation ÷ 500 acres)	4.91	4.94
Interest on operating capital (total variable costs ÷ 2 x 10%)	5.70	5.12
Total variable costs	\$119.63	\$107.47
<i>Fixed costs</i>		
Depreciation (\$33,643 whole farm x .48 allocation ÷ 500 acres)	\$32.30	\$32.30
Personal property, taxes & insurance on machinery (\$5,255 whole farm x .48 allocation ÷ 500 acres)	5.04	5.04
Real estate taxes	3.24	0.00
Interest on debt		
Machinery (\$7,367 total interest x .48 allocation ÷ 500 acres)	7.07	7.07
Land (\$13,525 total interest ÷ 1,200 acres)	11.27	0.00
Interest on equity		
Machinery (\$213,500 mkt. – \$116,651 debt x 10% interest x .48 allocation ÷ 500 acres)	9.30	9.30
Land (\$937,500 mkt. real estate – \$150,000 bldgs. ÷ \$154,575 debt x 4% interest ÷ 1,200 acres)	21.10	0.00
Management (1.5 tons x \$75 mkt. x 7%)	\$7.88	\$7.88
Total fixed costs	\$97.20	\$61.59
TOTAL ECONOMIC COSTS PER ACRE	\$216.83	\$169.06
TOTAL ECONOMIC COSTS PER TON @ 1.5 tons Owned/1 ton. Leased	\$144.55	\$169.00
TOTAL ECONOMIC COSTS PER CTW. @30 cwt. owned / 20 cwt. leased	\$7.23	\$8.45



I4. Projected Cash Expenditures for Spring Barley Crop Year X3

Item	\$ per acre	
	Owned	Leased
<i>Variable costs</i>		
Seed	\$11.90	\$11.90
Fertilizer	33.46	22.39
Herbicides	8.70	8.70
Crop insurance	1.52	1.01
Fuel & lubrication (\$10,205 whole farm x .48 allocation ÷ 500 acres)	9.80	9.80
Repairs (\$15,430 whole farm x .48 allocation ÷ 500 acres)	14.81	14.81
Hired labor (\$5,000 whole farm x .48 allocation ÷ 500 acres)	4.80	4.80
Miscellaneous (\$5,150 whole farm x .48 allocation ÷ 500 acres)	4.94	4.94
Interest on operating capital loan	4.79	4.35
Total variable costs	\$94.72	\$82.70
<i>Fixed costs</i>		
Personal property taxes & insurance on machinery (\$5,255 whole farm x .48 allocation ÷ 500 acres)	\$5.04	\$5.04
Real estate taxes	3.24	0
Interest on machinery & land debt	18.34	7.07
Total fixed costs	\$26.62	\$12.11
<i>Other Expenditures</i>		
Principal on term debt		
Machinery (\$24,858 whole farm x .48 alloc. ÷ 500 acres)	\$23.86	\$23.86
Land (\$2,537 ÷ 1,200 acres)	2.11	0
Personal withdrawals (\$45,000 whole farm x .48 allocation ÷ 500 acres) ^a	43.20	43.20
Total other expenditures	\$69.17	\$67.06
TOTAL CASH EXPENDITURES PER ACRE	\$190.51	\$161.87
TOTAL CASH EXPENDITURES PER TON @ 1.5 owned / 1 leased	\$127.01	\$161.87
TOTAL CASH EXPENDITURES PER CWT.		
@ 30 cwt. owned / 20 cwt leased	\$6.35	\$8.09

^aDoes not include income and social security taxes.

15. Whole Farm Cash Flow Crop Year X3

	Crop 1: <u>W</u> :Wheat	Crop 2: <u>S</u> :Barley	Crop 3:	FARM TOTAL
1. Quantity of crop in beginning inventory	5,020 bu. (A)	50 tons (B)	_____ (C)	
2. Expected crop production	30,355 bu. (A)	584 tons (B)	_____ (C)	
3. Crop not available for sale ^a	0 (A)	0 (B)	_____ (C)	
4. Crop available for sale ^b (line 1 + line 2 - line 3)	35,375 bu. (A)	634 tons (B)	_____ (C)	\$213,989
5. Total annual cash requirement (from cash flow budget, line 31 + line 38 - line 24)				
6. Crop sales price (\$ per unit)	\$ 3.25 (A)	\$ 75 (B)	\$ _____ (C)	= \$162,519
7. Total annual cash receipts (line 4 x line 6)	\$ 114,969 (A)	\$ 47,550 (B)	+\$ _____ (C)	\$ 60,000
8. Other cash sources ^c				\$ 229,519
9. Total annual cash available from all sources (line 7 + line 8)				\$ 8,530
10. CASH SURPLUS/DEFICIT (line 9 - line 5)				
11. Crop 1: <u>W</u>:Wheat Analysis:				
A. Cash receipts from other crops (line 7B + line 7C + line 8)	\$ 107,550			
B. Net annual cash requirement (line 5 - line 11A)	\$ 106,439			
C. Quantity of crop 1 sales to breakeven (line 11B ÷ line 6A)	32,750 bu.			
D. Quantity of crop 1 available for sale above breakeven sales (line 4A - line 11C)	2,625 bu.			
E. Breakeven price on total available crop 1 (line 11B ÷ line 4A)	\$ 3.01			
12. Crop 2: <u>S</u>:Barley Analysis:				
A. Cash receipts from other crops (line 7A + line 7C + line 8)	\$ 174,969			
B. Net annual cash requirement (line 5 - line 12A)	\$ 39,020			
C. Quantity of crop 2 sales to breakeven (line 12B ÷ line 6B)	520 tons			
D. Quantity of crop 2 available for sale above breakeven sales (line 4B - line 12C)	114 tons			
E. Breakeven price on total available crop 2 (line 12B ÷ line 4B)	\$ 61.55			
13. Crop 3: _____ Analysis:				
A. Cash receipts from other crops (line 7A + line 7B + line 8)			\$ _____	
B. Net annual cash requirement (line 5 - line 13A)			\$ _____	
C. Quantity of crop 3 sales to breakeven (line 13B ÷ line 6C)			_____	
D. Quantity of crop 3 available for sale above breakeven sales (line 4C - line 13C)			_____	
E. Breakeven price on total available crop 3 (line 13B ÷ line 4C)			\$ _____	

^a Fed to livestock &/or ending inventory.
^b Add the amounts on lines 1 and 2 and subtract the amount on line 3.
^c Accounts received, government payments, capital sales, nonfarm income, cash on hand, savings, etc.