

Harnessing the Power of Excel: Example Applications and Exercises Using Microsoft Excel

Financial Statements

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For use at:

**Kansas State University Excel Workshops
2016-2017**

Kansas State University

**Using Excel
Spreadsheets
Effectively**

Using Excel for:

- Estimating Machinery Costs
- Budgeting and Enterprise Analysis
- Calculating Principal and Interest Payments
- Analysis of Livestock Economics

As well as:

- Tips and Tricks for Using Excel
- Other Decision Tools on AgManager.info

**Kansas State University
Department of Agricultural Economics**

Exercise 1a – Creating a Balance Sheet for Your Farm

Create a balance sheet for your farm as shown on the next page. Some specific instructions include:

- 1) Format the spreadsheet to look like sheet on the next page, including borders, font size, boldface and color of fonts and backgrounds.
- 2) Blue cells represent numbers (not formulas). The number used for this exercise are clearly not realistic for your farm, but enter these numbers into your spreadsheet to check formulas.
- 3) Black number represent formulas (not numbers). Do NOT enter number in these cells, but rather create a formula. You will use “=AVERAGE()” and “=SUM()” formulas as well as the mathematics operators: +, -, *, and /.
- 4) After creating the balance sheet, create formulas for financial ratios to the side, formatted as shown (gray background, black font for labels and red font for ratios). The ratios are formulas to be calculated based on the numbers in the balance sheet.
- 5) After completing balance sheet and confirming that your formulas are all correct, enter your own numbers for your operation and evaluate the financial health of your farm.



A1 : fx BALANCE SHEET

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	BALANCE SHEET	Farm Business Name Here	Year:	2016										
2														
3	ASSETS:													
4	Current Assets	January 1	December 31	Average		Notes								
5	1) Cash	\$500	\$1,000	\$750										
6	2) Marketable Securities	\$1,000	\$2,000	\$1,500										
7	3) Accounts Receivable	\$2,000	\$4,000	\$3,000										
8	4) Fertilizer and Supplies	\$5,000	\$8,000	\$6,500										
9	5) Investment in Growing Crops	\$10,000	\$12,000	\$11,000										
10	6) Crops Held for Sale and Feed	\$8,000	\$15,000	\$11,500										
11	7) Market Livestock	\$15,000	\$25,000	\$20,000										
12														
13	8) TOTAL CURRENT ASSETS	\$41,500	\$67,000	\$54,250		(Add lines 1 through 7)								
14														
15	Non-Current Assets													
16	9) Breeding Livestock	\$24,000	\$36,000	\$30,000										
17	10) Machinery and Equipment	\$60,000	\$70,000	\$65,000										
18	11) Buildings	\$75,000	\$75,000	\$75,000										
19	12) Investments in Cooperatives	\$2,500	\$2,500	\$2,500										
20	13) Land	\$400,000	\$420,000	\$410,000										
21														
22	14) TOTAL NONCURRENT ASSETS	\$561,500	\$603,500	\$582,500		(Add Lines 9 through 13)								
23														
24	15) TOTAL ASSETS	\$603,000	\$670,500	\$636,750		(Add Lines 8 and 14)								
25														
26	LIABILITIES AND OWNER EQUITY:													
27	Current Liabilities	January 1	December 31	Average		Notes								
28	16) Accounts Payable	\$800	\$1,400	\$1,100										
29	17) Taxes Payable	\$2,000	\$2,000	\$2,000										
30	18) Accrued Expenses	\$3,600	\$4,200	\$3,900										
31	19) Current Portion: Deferred Taxes	\$0	\$0	\$0										
32	20) Notes Due Within One Year	\$9,000	\$9,000	\$9,000										
33	21) Current Portion of Term Debt	\$12,000	\$12,000	\$12,000										
34	22) Accrued Interest	\$4,500	\$5,000	\$4,750										
35														
36	23) TOTAL CURRENT LIABILITIES	\$31,900	\$33,600	\$32,750		(Add Lines 16 through 22)								
37														
38	Non-Current Liabilities													
39	24) Noncurrent Portion: Deferred Taxes	\$0	\$0	\$0										
40	25) Noncurrent Portion: Notes Payable	\$22,000	\$25,000	\$23,500										
41	26) Noncurrent Portion: Real Estate Debt	\$220,000	\$240,000	\$230,000										
42														
43	27) TOTAL NONCURRENT LIABILITIES	\$242,000	\$265,000	\$253,500		(Add Lines 24 through 26)								
44														
45	28) TOTAL LIABILITIES	\$273,900	\$298,600	\$286,250		(Add Lines 23 and 27)								
46														
47	29) OWNER EQUITY	\$329,100	\$371,900	\$350,500		(Subtract Line 28 from Line 15)								
48														
49	30) TOTAL LIABILITIES AND OWNER EQUITY	\$603,000	\$670,500	\$636,750		(Add Lines 28 and 29)								
50														
51														

Financial Ratios	
Current Ratio :	1.656
= Total Current Farm Assets/Total current Farm Liabilities	
Working Capital:	\$21,500
= Total Current Farm Assets - Total current Farm Liabilities	
Debt to Asset Ratio	0.450
= Total Farm Liabilities/Total Farm Assets	
Debt to Equity Ratio	0.817
= Total Farm Liabilities/Total Farm Equity	

Exercise 1b – Creating a Personal Balance Sheet

Create a personal balance sheet as shown on the next page. Some specific instructions include:

- 1) Format the spreadsheet to look like sheet on the next page, including borders, font size, boldface and color of fonts and backgrounds.
- 2) Blue cells represent numbers (not formulas). The number used for this exercise are clearly not realistic for your situation, but enter these numbers into your spreadsheet to check formulas.
- 3) Black number represent formulas (not numbers). Do NOT enter number in these cells, but rather create a formula. You will use “=AVERAGE()” and “=SUM()” formulas as well as the mathematics operators: +, -, *, and /. Use “=TODAY()” to enter the date (instead of manually entering it).
- 4) After creating the balance sheet, create formulas for financial ratios to the side, formatted as shown (gray background, black font for labels and red font for ratios). The ratios are formulas to be calculated based on the numbers in the balance sheet.
- 5) After completing balance sheet and confirming that your formulas are all correct, enter your own numbers for your situation and evaluate your financial health.

BalanceSheet_Personal.xlsx - Excel

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A1 Balance Sheet

Balance Sheet		Date: June 28, 2016	
Current Assets		Current Liabilities	
Cash	\$140	Credit cards	\$1,840
Checking Account	\$3,600	Accounts payable	\$660
Savings Account	\$8,000	Taxes/Insurance due	\$2,800
Accounts due	\$1,875	Other	\$500
Other	\$4,050		
TOTAL:	\$17,665	TOTAL:	\$5,800
Current surplus	\$11,865		
Non-Current Assets		Non-Current Liabilities	
Cars	\$8,000	Mortgage	\$85,000
Retirement Accounts	\$68,500	Car loan	\$2,000
Personal property	\$2,000	Student loan	\$14,000
House	\$140,000	Other	\$0
Other	\$0		
TOTAL:	\$218,500	TOTAL:	\$101,000
TOTAL ASSETS	\$236,165	TOTAL LIABILITIES	\$106,800
		NET WORTH:	\$129,365

Financial Ratios

Current Ratio : 3.046
= Total Current Assets/Total Current Liabilities

Debt to Asset Ratio 0.452
= Total Liabilities/Total Assets

Debt to Equity Ratio 0.826
= Total Liabilities/Total Net Worth

Exercise 2 – Creating an Income Statement for Your Farm

Create an income statement for your farm as shown on the next page. Specific instructions include:

- 1) Format the spreadsheet to look like sheet on the next page, including borders, font size, boldface and color of fonts and backgrounds.
- 2) Blue cells represent numbers (not formulas). The number used for this exercise are clearly not realistic for your farm, but enter these numbers into your spreadsheet to check formulas.
- 3) Black number represent formulas (not numbers). Do NOT enter number in these cells, but rather create a formula. You will use “=SUM()” formulas as well as the mathematics operators: +, -, *, and /.
- 4) After completing the income statement and confirming that your formulas are all correct, enter your own numbers for your operation and calculate the net farm income for your farm.

FILE

HOME

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PAGE LAYOUT

FORMULAS

DATA

REVIEW

VIEW

DEVELOPER

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A1

Income Statement

	A	B	C	D	E	F	G	H	I
1	Income Statement	Farm Business Name Here							
2	Farm Business Receipts:	Line:							
3	Crop Cash Sales	(1A)	\$127,000						
4	Ending Crop Inventory	(1B)	\$42,000						
5	Beginning Crop Inventory	(1C)	\$36,000						
6	Accrual Gross Revenue from Crops	(1)		\$133,000					
7	(Line 1A + Line 1B - Line 1C)								
8									
9	Livestock and Milk Cash Sales	(2A)	\$45,000						
10	Ending Livestock Inventory	(2B)	\$89,000						
11	Beginning Livestock Inventory	(2C)	\$84,500						
12	Accrual Gross Revenue from Livestock and Milk	(2)		\$49,500					
13	(Line 2A + Line 2B - Line 2C)								
14									
15	Gain/Loss on Sale of Breeding Livestock Sales	(3)							
16	Agricultural Program Payments	(4)		\$6,500					
17	Crop Insurance Proceeds	(5)							
18	Other Farm Income	(6)							
19									
20	GROSS REVENUE (Add Lines 1 through 6)	(7)		\$189,000					
21									
22	Livestock Purchases	(8)		\$12,000					
23	Cost of Purchased Feed/Grain	(9)		\$23,200					
24									
25	VALUE OF FARM PRODUCTION (Line 7 - Line 8 - Line 9)	(10)		\$153,800					
26									
27	Farm Business Expenses:								
28	Labor Hired	(11)		\$13,300					
29	Repairs	(12)		\$16,200					
30	Seed	(13)		\$6,500					
31	Fertilizer	(14)		\$9,750					
32	Machine Hire	(15)							
33	Veterinarian Expense	(16)		\$2,800					
34	Marketing	(17)							
35	Fuel and Utilities	(18)		\$9,150					
36	Property Tax	(19)		\$4,500					
37	General Farm Insurance	(20)		\$2,600					
38	Cash Rent	(21)		\$17,500					
39	Herbicide and Insecticide	(22)		\$9,000					
40	Miscellaneous	(23)		\$3,600					
41									
42	TOTAL CASH OPERATING EXPENSE	(24)		\$94,900					
43	(Add Lines 11 through 23)								
44									
45	Expense Inventory Adjustment	(25)		\$2,000					
46	Depreciation	(26)		\$26,000					
47									
48	TOTAL OPERATING EXPENSES (Line 24 + Line 25 + Line 26)	(27)		\$122,900					
49									
50	Interest	(28)		\$4,800					
51									
52	TOTAL EXPENSES (Line 27 + Line 28)	(29)		\$127,700					
53									
54	NET FARM INCOME FROM OPERATIONS (Line 10 - Line 29)	(30)		\$26,100					
55									
56	Gain/Loss on Sale of Capital Assets	(31)							
57									
58	NET FARM INCOME (Line 30 + Line 31)	(32)		\$26,100					
59									

IncomeStatement

Sheet2

Sheet3

...

+

READY



70%

Exercise 3 – Creating a Cash Flow Sheet for Your Farm

Create a cash flow sheet for your farm as shown on the next page. Some specific instructions include:

- 1) Format the spreadsheet to look like sheet on the next page, including borders, font size, boldface and color of fonts and backgrounds.
- 2) Blue cells represent numbers (not formulas). The number used for this exercise are clearly not realistic for your farm, but enter these numbers into your spreadsheet to check formulas.
- 3) Black number represent formulas (not numbers). Do NOT enter number in these cells, but rather create a formula. You will use “=SUM()” formulas as well as the mathematics operators: +, -, *, and /. This includes the operation loan balance at the bottom.
- 4) After completing cash flow sheet and confirming that your formulas are all correct, enter your own numbers for your operation and evaluate the cash flow situation of your operation.

CASH FLOW PROJECTION FOR OPERATION LOAN DETERMINATION														
	Annual Estimate	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
CASH FLOW PROJECTION FOR OPERATION LOAN DETERMINATION														
CASH INFLOW ITEMS														
Livestock:														
Beef	(1)	\$45,000		\$40,000						\$5,000				
Swine	(2)	\$0												
Dairy	(3)	\$0												
Crops:														
Wheat	(4)	\$50,000		\$10,000					\$15,000		\$10,000		\$15,000	
Corn and Grain Sorghum	(5)	\$65,000			\$5,000						\$25,000	\$20,000	\$15,000	
Soybeans	(6)	\$8,000				\$8,000								
Hay and Forage	(7)	\$4,000							\$4,000					
Agricultural Program Payments	(8)	\$6,500									\$6,500			
Crop Insurance Proceeds	(9)	\$0												
Miscellaneous Income	(10)	\$0												
Capital Asset Sales	(11)	\$0												
Off-Farm Income	(12)	\$28,800	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400
TOTAL CASH INFLOW (Add Lines 1 through 12)	(13)	\$207,300	\$2,400	\$52,400	\$7,400	\$10,400	\$2,400	\$2,400	\$17,400	\$6,400	\$17,400	\$33,900	\$37,400	\$17,400
CASH OUTFLOW ITEMS														
Feed	(14)	\$23,200	\$2,000	\$2,000	\$5,800	\$6,400				\$500	\$1,000	\$1,500	\$2,000	\$2,000
Hired Labor	(15)	\$13,300					\$2,000	\$3,000	\$1,800		\$1,000	\$3,500	\$2,000	
Repairs	(16)	\$16,200	\$2,000			\$3,000	\$3,000				\$2,000	\$2,700	\$3,500	
Seed	(17)	\$6,500			\$4,500						\$2,000			
Fertilizer	(18)	\$9,750				\$2,000					\$1,750			\$6,000
Machine Hire	(19)	\$0												
Veterinarian Expense	(20)	\$2,800	\$500		\$500		\$1,200				\$600			
Marketing	(21)	\$0												
Fuel and Utilities	(22)	\$9,150	\$250	\$250	\$400	\$750	\$800	\$900	\$900	\$800	\$750	\$800	\$550	\$2,000
Property Tax	(23)	\$4,500					\$2,250							\$2,250
General Farm Insurance	(24)	\$2,600						\$2,600						
Cash Rent	(25)	\$17,500			\$4,000			\$4,000			\$4,000			\$5,500
Herbicide and Insecticide	(26)	\$9,000			\$2,000		\$1,000				\$2,000			\$4,000
Miscellaneous Expense	(27)	\$3,600	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300
Interest	(28)	\$4,800	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400
Beef Purchases	(29)	\$12,000				\$12,000								
Swine Purchases	(30)	\$0												
Dairy Purchases	(31)	\$0												
Capital Asset Purchases	(32)	\$0												
Family Living Withdrawals	(33)	\$36,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Estimated Taxes	(34)	\$4,800	\$1,200			\$1,200		\$1,200			\$1,200			
TOTAL CASH OUTFLOWS (Add Lines 14 through 34)	(35)	\$175,700	\$9,650	\$5,950	\$20,900	\$29,050	\$13,950	\$15,400	\$6,400	\$5,000	\$20,000	\$12,200	\$11,750	\$25,450
NET CASH FLOW (Line 13 - Line 35)	(35)	\$31,600	-\$7,250	\$46,450	-\$13,500	-\$18,650	-\$11,550	-\$13,000	\$11,000	\$1,400	-\$2,600	\$21,700	\$25,650	-\$8,050
PROJECTED OPERATING LOAN BALANCE (Operating Loan Carried Over from Last Period =)	(36)	\$50,000	\$57,250	\$10,800	\$24,300	\$42,950	\$54,500	\$67,500	\$56,500	\$55,100	\$57,700	\$36,000	\$10,350	\$18,400