Farm Records Book For Management

Extension Bulletin E-1144

Prepared by Florencia Colella

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MICHIGAN STATE UNIVERSITY | Extension

Farm Records Book For Management

MICHIGAN STATE UNIVERSITY | Extension

Farm name _____ Year _____

The intent of this “Farm Records Book for Management” is to assist you in collecting and organizing your farm's data.
Collecting your farm's data is a preemptive necessity to analyze your farm's financial performance, and therefore improve management decisions; and to comply with the Internal Revenue Service while decreasing your tax liability.
By making good decisions for your farm, we hope that your business will succeed, therefore improving your own life and the lives of those around you and building a strong agricultural industry in Michigan.

We suggest that you:
1. Keep the income and expense accounts current as the year progresses. Estimate and adjust your tax liabilty before the end of the year.
2. Close the accounting year by summarizing the income and expenses and file taxes with a knowledgeable farm tax specialist.
3. Take inventory of assets and liabilities to prepare an end-of-year Net Worth Statement.
4. Identify the strengths and weaknesses of your farm business by comparing your performance to your historical performance, to your goals, and to the performance of other farm businesses. Find business analysis reports for various types of farms at www.finbin.umn.edu or www.canr.msu.edu/telfarm/business-analysis-summaries. Sections 9 and 10 of this book will guide you as you develop your own farm analysis.
5. Maintain or expand the strong enterprises or profit centers of your farm business and improve or eliminate the weak areas. Your MSU Extension agent can help tailor your financial information so you can analyze the farm as a whole or by enterprise.
6. Get assistance and additional evaluation on your financial situation from an objective resource person; e.g., MSU Extension, a paid consultant, and other sources including your creditor.
7. Use your own farm records as a basis when budgeting and planning credit needs.

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Find this book online at http://bit.ly/farmrecordsbook

- Use it in Google sheets by going to "File" and "Make a Copy".
- Use it in Excel by going to "File" and then "Download". Once in Excel, press the ctrl key and while keeping it pressed, click on all the sheets at the bottom. Then click on the corner square left of the A column heading and above the first row. Then right click on one of the columns and change the column width to 2.8. Do the same on any row, and change the row height to 13.5.
- You may also print this at home using normal Letter paper by going to "File" and "Print".
- Other sample recordkeeping spreadsheet systems available at bit.ly/farmcashtrack, bit.ly/personalcashtrack and bit.ly/recordkeepingform.

Suggestions? Questions? Call or message Florencia Colella at 231-224-6439 or colellaf@msu.edu.

Thank you to the Good Food Fund and Keina Megginson for their work on making this book accessible to more Michigan producers.

Farm description

ADDRESS _____ FARM ID NO. _____

OPERATOR'S NAME _____ SOC.SEC.NO _____

SPOUSE'S NAME _____ SOC.SEC.NO _____

FARM ACREAGE	Crops	Pasture	Woods	Other	Total
Acres Owned:					
Description					
Total Acres Owned:					

Acres Rented: (Your Share Only)

Land Rental Arrangement (cash, crop share, etc.) - Description					
Total Acres Rented:					

1. A. Farm expenditures. Cash farm expenses

Introduction

The Farm Records Book is designed so you can easily file taxes with the US Internal Revenue Service (IRS). The tables on Section 1.A include items which can be reported in Schedule F part 2 as deductible, cash operating expenses. Operating, tax deductible expenses are ordinary and necessary costs for purchased inputs and services used for operating a farm for profit. These items are normally used up within a year of purchase. The cost of feeder livestock bought is included in this group. Schedule F line numbers are specified under these columns' headings for your convenience.
On another hand, the cost of capital purchases such as dairy, breeding and work stock, machinery, tile and buildings, on another hand, is recovered through annual depreciation and must be handled separately. Secion 1.C. may be used for this purpose. These transactions may be reported in IRS Form 4562 but other forms may apply. To learn more about farm taxes see the IRS "Farmers' Tax Guide".

Instructions

Column 1 is to be used for recording quantities and dollar amounts in journal fashion. The total of column 1 can be used as a cross-check of the totals of all other columns to guard against posting errors. Also, it can be used for initial recording during rush, and the figures posted to the proper itemized column when more time is available. Space is provided on Section 1. A. II. to record monthly totals for each kind of expense.

The quantities of some items in **columns 2 and 3** are necessary for business analysis and planning. This is especially true of purchased feed and feeder livestock. Space is provided on Section 1.A.II to record monthly totals of quantities for each kind of expense.

Column 4 - Record the cost of the purchased feeder livestock which, when sold, will be entered in **column 5** of the "Cash Farm Receipts" section. Since some of these animals may have been purchased in the previous tax year, special care should be taken with the costs recorded here. One way is to keep a separate record of feeder livestock when purchased and then record the cost in this book at the time sold.
Where it is difficult to keep the identity of animals straight, it is possible to use a first in, first out method of reporting. This column should also include the cost of any other items purchased for resale. Use the "Explanation" column to identify if the expenseis for livestock or other iems.

Column 5 - The farm business share of automobile expense and truck expense is entered here. Form 4562 has to be attached when filing taxes.

Column 6 - Enter all chemicals used in crop production.

Column 7 - Enter conservation expenses and land clearing expenses.

Column 8 - Record any custom work hired such as trucking, combining, silo filling, or planting.

Column 9 - Enter employee benefit plans (accident and health plans, group-term life insurance, dependent care assistance), plus any amount you contributed into retirement plans which qualify for deduction from taxable income for your employees. These expenses will be reported on lines 15 or 23 of Schedule F, and/or other tax forms.

Column 10 - List all feed purchased, including grain, hay, pellet feed and supplements. Commonly included is the cost of grinding and minerals.

1. A. Farm expenditures. Cash farm expenses

Column 11 - Record the cost of fertilizer and lime, as well as the cost of soil testing.

Column 12 - Enter all trucking costs.

Column 13 - Record the cost of gasoline, oil, diesel fuel, and other farm fuel.

Columns 14, 22, and 23 include only the farm share of these costs. Any reasonable division which can be defended in a tax review is satisfactory. Taxes, insurance, and utilities for the personal residence of the taxpayer cannot be included.

Column 15 - All interest paid on farm business debts is a deductible operating expense and should be kept separate from principal payments and recorded in this column. This includes interest on real estate debt. Refer to Section 1.D for space to record more detailed loan information.

Column 16 - Record lease payments for machinery and equipment used on farm.

Column 17 - Cash rent paid for use of land, buildings, and facilities.

Column 18 - Record repairs to buildings, tile, and fence, which do not materially lengthen the useful life. This includes paint, minor repairs and upkeep. The same rules apply for machinery repairs. Small tools, which have a short useful life, are also commonly included here.

Column 19 - Include all purchases of seed and plants used for farm production.

Column 20 - Record grain storage costs here.

Column 21 - Schedule F part II provides a line for supplies. For good business analysis, specify which enterprise the expense corresponds to in the "Explanation" column whenever possible.

Column 22 and 23 - (See **column 14.**)

Column 24 - Combine all items of livestock expenses in this column. Included are veterinary, medicine, breeding fees, milkhouse supplies, registration, and identification chips.

Column 25 can be used as a catch-all for expense items not previously categorized. The "Explanation" column can be used to identify the expense item in column 25 or for entering other general notes. (e.g., livestock marketing, crop marketing, drying expense, bees, dues and professional fees, IPM scouting, bin rent, packaging, replacement trees, irrigation energy, grazing fees, expenses from government payments, entertainment and gifts, and hedging losses).

1. A. I. Farm expenditures. Cash farm expenses. Detail

							SCHEDULE F PART II ITEMS						
Date	Paid to (vendor)	Check no.	Total dollar amount 1	No. or head 2	Quantity 3	Feeder livestock bought Sch. F Pt.1 Line 1.b 4	Car, truck Line 10 5	Chemicals Line 11 6	Conservation Line 12 7	Custom hire Line 13 8	Employee benefits Lines 15, 23 9	Feed purchased Line 16 10	Fertilizer and lime Line 17 11
TOTALS													

1. A. I. Farm expenditures. Cash farm expenses. Detail

SCHEDULE F PART II ITEMS (cont.)														
Freight, trucking Line 18	Gas, oil, fuel Line 19	Insurance (other than health) Line 20	Interest Line 21	Machine lease Line 24a	Rent or lease Line 24b	Repairs, maintenance Line 25	Seeds, plants Line 26	Storage Line 27	Supplies Line 28	Taxes Line 29	Utilities Line 30	Veterinary, breeding, medicine Line 31	Other Line 32	Explanation
12	13	14	15	16	17	18	19	20	21	22	23	24	25	

1. A. I. Farm expenditures. Cash farm expenses. Detail

							SCHEDULE F PART II ITEMS						
Date	Paid to (vendor)	Check no.	Total dollar amount	No. or head	Quantity	Feeder livestock bought Sch. F Pt.1 Line 1.b	Car, truck Line 10	Chemicals Line 11	Conservation Line 12	Custom hire Line 13	Employee benefits Lines 15, 23	Feed purchased Line 16	Fertilizer and lime Line 17
			1	2	3	4	5	6	7	8	9	10	11
TOTALS													

1. A. I. Farm expenditures. Cash farm expenses. Detail

SCHEDULE F PART II ITEMS (cont.)														
Freight, trucking Line 18	Gas, oil, fuel Line 19	Insurance (other than health) Line 20	Interest Line 21	Machine lease Line 24a	Rent or lease Line 24b	Repairs, maintenance Line 25	Seeds, plants Line 26	Storage Line 27	Supplies Line 28	Taxes Line 29	Utilities Line 30	Veterinary, breeding, medicine Line 31	Other Line 32	Explanation
12	13	14	15	16	17	18	19	20	21	22	23	24	25	

1. A. I. Farm expenditures. Cash farm expenses. Detail

							SCHEDULE F PART II ITEMS						
Date	Paid to (vendor)	Check no.	Total dollar amount	No. or head	Quantity	Feeder livestock bought Sch. F Pt.1 Line 1.b	Car, truck Line 10	Chemicals Line 11	Conservation Line 12	Custom hire Line 13	Employee benefits Lines 15, 23	Feed purchased Line 16	Fertilizer and lime Line 17
			1	2	3	4	5	6	7	8	9	10	11
TOTALS													

1. A. I. Farm expenditures. Cash farm expenses. Detail

SCHEDULE F PART II ITEMS (cont.)

Freight, trucking Line 18	Gas, oil, fuel Line 19	Insurance (other than health) Line 20	Interest Line 21	Machine lease Line 24a	Rent or lease Line 24b	Repairs, maintenance Line 25	Seeds, plants Line 26	Storage Line 27	Supplies Line 28	Taxes Line 29	Utilities Line 30	Veterinary, breeding, medicine Line 31	Other Line 32	Explanation
12	13	14	15	16	17	18	19	20	21	22	23	24	25	

1. A. I. Farm expenditures. Cash farm expenses. Detail

							SCHEDULE F PART II ITEMS						
Date	Paid to (vendor)	Check no.	Total dollar amount	No. or head	Quantity	Feeder livestock bought Sch. F Pt.1 Line 1.b	Car, truck Line 10	Chemicals Line 11	Conservation Line 12	Custom hire Line 13	Employee benefits Lines 15, 23	Feed purchased Line 16	Fertilizer and lime Line 17
			1	2	3	4	5	6	7	8	9	10	11
TOTALS													

1. A. I. Farm expenditures. Cash farm expenses. Detail

SCHEDULE F PART II ITEMS (cont.)														
Freight, trucking Line 18	Gas, oil, fuel Line 19	Insurance (other than health) Line 20	Interest Line 21	Machine lease Line 24a	Rent or lease Line 24b	Repairs, maintenance Line 25	Seeds, plants Line 26	Storage Line 27	Supplies Line 28	Taxes Line 29	Utilities Line 30	Veterinary, breeding, medicine Line 31	Other Line 32	Explanation
12	13	14	15	16	17	18	19	20	21	22	23	24	25	

1. A. II. Farm expenditures. Cash farm expenses. Summary - Part 1

					SCHEDULE F PART II ITEMS						
Month	Total dollar amount	No. or head	Quantity	Feeder livestock bought Sch. F Pt.1 Line 1.b	Car, truck Line 10	Chemicals Line 11	Conservation Line 12	Custom hire Line 13	Employee benefits Lines 15, 23	Feed purchased Line 16	Fertilizer and lime Line 17
	1	2	3	4	5	6	7	8	9	10	11
JANUARY											
FEBRUARY											
MARCH											
1ST QUARTER											
APRIL											
MAY											
JUNE											
2ND QUARTER											
JULY											
AUGUST											
SEPTEMBER											
3RD QUARTER											
OCTOBER											
NOVEMBER											
JANUARY-NOVEMBER TOTALS for Income Tax Management											
DECEMBER											
4TH QUARTER (OCT., NOV., DEC.)											
TOTAL FOR YEAR											

1. A. II. Farm expenditures. Cash farm expenses. Summary - Part 1

SCHEDULE F PART II ITEMS (cont.)														
Freight, trucking Line 18	Gas, oil, fuel Line 19	Insurance (other than health) Line 20	Interest Line 21	Machine lease Line 24a	Rent or lease Line 24b	Repairs, maintenance Line 25	Seeds, plants Line 26	Storage Line 27	Supplies Line 28	Taxes Line 29	Utilities Line 30	Veterinary, breeding, medicine Line 31	Other Line 32	Explanation
12	13	14	15	16	17	18	19	20	21	22	23	24	25	

1. A. II. Farm expenditures. Cash farm expenses. Summary - Part 2

Month	Total amount
JANUARY	
FEBRUARY	
MARCH	
1ST QUARTER	
APRIL	
MAY	
JUNE	
2ND QUARTER	
JULY	
AUGUST	
SEPTEMBER	
3RD QUARTER	
OCTOBER	
NOVEMBER	
JANUARY-NOVEMBER TOTALS for Income Tax Management	
DECEMBER	
4TH QUARTER (OCT., NOV., DEC.)	
TOTAL FOR YEAR	

1. B. Farm expenditures. Labor record

Hired labor and management can be a major cost item for today's farms. The entire amount of reasonable wages (salary) paid before withholding is a tax-deductible expense for the employer.

Because of the importance and the number of data entries associated with hiring employees, a separate recording location distinct and separate from the other cash farm expenses is provided.

The form is designed to have a separate page for each employee.

On another hand, for a complete financial analysis of the business, the value of unpaid family labor and management must be accounted for. There is space to enter family or other unpaid labor in Section 1.B.II, Summary. You may also keep records of the hours worked by family on the first two columns of the labor tables and leave the rest blank.

Column 1 is used to reflect the gross dollar amount of the wage (salary) for the specified time period.

Column 2 can be used to recognize the elective decision by the employee to contribute part of his/her before-tax wages to his/her retirement, flexible spending account (FSA), health saving account (HSA), child care, health, accident or dental insurance and other provisions allowed by the IRS.

Column 3 is the taxable earnings to the employee, which may or may not be different from gross wages, depending on the elective decisions recognized in column 2.

Column 4 is used to recognize the withholding for federal income tax.

Column 5 is used to record the withholding for the Federal Insurance Contribution Act (FICA); i.e. Social Security and Medicare.

Column 6 is used to record the withholding for state income tax.

Column 7 represents the net amount received by the employee. This amount reflects the deductions due to his/her elective contributions plus the mandated withholding for income tax and FICA.

1. B. I. Farm expenditures. Labor record. Detail

Name:								Date hired:	
Address:									
Social security number:								Rate of pay:	
					Withholding				
Period Covered	Hours	Gross Earnings	Employee Contribution (FSA, retirement)	Taxable Earnings	Federal Taxes	FICA (social security & medicare)	State Taxes	Net amount Paid	Date Paid
		1	2	3 = 1 - 2	4	5	6	7 = 3 - (4+5+6)	
TOTALS									

1. B. I. Farm expenditures. Labor record. Detail

Name:								Date hired:	
Address:									
Social security number:								Rate of pay:	
					Withholding				
Period Covered	Hours	Gross Earnings	Employee Contribution (FSA, retirement)	Taxable Earnings	Federal Taxes	FICA (social security & medicare)	State Taxes	Net amount Paid	Date Paid
		1	2	3 = 1 - 2	4	5	6	7 = 3 - (4+5+6)	
TOTALS									

1. B. I. Farm expenditures. Labor record. Detail

Name:								Date hired:	
Address:									
Social security number:								Rate of pay:	
					Withholding				
Period Covered	Hours	Gross Earnings	Employee Contribution (FSA, retirement)	Taxable Earnings	Federal Taxes	FICA (social security & medicare)	State Taxes	Net amount Paid	Date Paid
		1	2	3 = 1 - 2	4	5	6	7 = 3 - (4+5+6)	
TOTALS									

1. B. II. Farm expenditures. Labor record. Summary

Month	Number of Hours		
	Unpaid operator	Unpaid family and others	Employees
JANUARY			
FEBRUARY			
MARCH			
1ST QUARTER			
APRIL			
MAY			
JUNE			
2ND QUARTER			
JULY			
AUGUST			
SEPTEMBER			
3RD QUARTER			
OCTOBER			
NOVEMBER			
DECEMBER			
4TH QUARTER			
TOTAL FOR YEAR			

1. C. I. Farm expenditures. Purchases of business property

In these tables you should record purchases of dairy, breeding, and working livestock which are held and used in the farm business for production of income. Do not include market livestock. Additionally, record the purchase of any new or used machinery or equipment, buildings, land and capital improvements to buildings or the land that were purchased by the farm business for production of income. Improvements include drainage tile, fences, irrigation systems and other improvements that have a determinable useful life longer than one year. These should be included here, not as a cash farm expense. Enter land purchases in a separate line from buildings and capital improvements, because since land is non-depreciable, some of the columns will not apply, even if they were purcahsed together. You should also record any deductions taken for casualty losses, such as those resulting from fires or storms.

Instructions
Columns 1 and 2: Record the date of purchase and note if machinery is new or used, and number and type of livestock – dairy, breeding, etc.

Columns 3, 4 and 5: Total price is the total value of the item, including any fees and charges associated with the purchase. In column 4, note the cash portion. This may be the same as the total or not, if a trade-in was involved. Estimate a salvage value and place it in column 5.

Columns 6 and 7: Section 179 and Bonus Depreciation are incentives that allow taxpayers to write off all or part of the cost of qualifying assets in the year they are placed in service. Both deductions can be applied to new and used tangible property that was not inherited, gifted, or acquired from a related party, and can be combined if desired. Section 179 depreciation is reduced if purchases exceed a threshold, but it allows to allocate the deduction among assets according to preference. Bonus depreciation has no annual limit, but it applies to all assets within an asset class. Section 179 is limited to the amount of taxable income, whereas bonus depreciation can be used to create a net loss. Note that whenever you sell an asset for more than the cost basis left, you have to pay tax on the depreciation recapture, which is ordinary income. Consult with your accountant or look at last year's tax return to fill in these columns.

Columns 8 and 9: The convention chosen affects the depreciation amount that can be deducted in year 1. It can be Half-year or Mid-quarter. The annual depreciation expense will be determined by the cost recovery method chosen**,** including the recovery period in years (**column 9**, see Table 1. C. II.), and the cost basis for depreciation (**column 10**). The most common depreciation methods are the Modified Accelerated Cost Recovery System (MACRS), 150% declining balance (see Table 1. C. II.) and the straight-line. Other methods are the Alternative Depreciation System (ADS), the Special Depreciation Allowance and "Sum of the Years' Digits". The sum of years' digits method is accelerated depreciation. Consult with your accountant or look at last year's tax return to fill in these columns.

Column 10: The original basis is calculated as column 4 minus column 5 minus column 6.

Columns 11 through 15: Create a new line for each item every year, and update these columns. The cost left at the beginning of the year (**column 11**) is equal to the original cost basis (**column 10**) in the year of purchase. In successive years it is equal to the cost left at the end of the previous year. This year's depreciation is a calculation that has to be made separately, and your tax preparer will probably do that for you. Same applies to **column 15**, estimated depreciation to be taken next year. **Column 14** can be kept by adding all years' depreciation for an item.

1. C. I. Farm expenditures. Purchases of business property. Detail

Date purch	Description	Total price	Cash paid "boot"	Salvage value	Section 179 expens.	Bonus depr. %	Convention	Method and years	Original basis	Basis left at start of the year	This year's depr.	Basis left at end of the year	Accumulated depreciation taken so far	Next year's deprec.
1	2	3	4	5	6	7	8	9	10=4-5-6	11	12	13=11-12	14	15
TOTALS														

1. C. I. Farm expenditures. Purchases of business property. Detail

Date purch	Description	Total price	Cash paid "boot"	Salvage value	Section 179 expens.	Bonus depr. %	Convention	Method and years	Original basis	Basis left at start of the year	This year's depr.	Basis left at end of the year	Accumulated depreciation taken so far	Next year's deprec.
1	2	3	4	5	6	7	8	9	10=4-5-6	11	12	13=11-12	14	15
TOTALS														

1. C. I. Farm expenditures. Purchases of business property. Detail

Date purch	Description	Total price	Cash paid "boot"	Salvage value	Section 179 expens.	Bonus depr. %	Convention	Method and years	Original basis	Basis left at start of the year	This year's depr.	Basis left at end of the year	Accumulated depreciation taken so far	Next year's deprec.
1	2	3	4	5	6	7	8	9	10=4-5-6	11	12	13=11-12	14	15
TOTALS														

1. C. II. Farm expenditures. Purchases of business property. Farm property recovery periods

ASSETS	RECOVERY PERIOD IN YEARS FOR: GDS - general depreciation system	ADS - alternative depreciation system
Agricultural structures (single-purpose)	10	15
Airplanes (including helicopters) (1)	5	6
Automobiles	5	5
Calculators and copiers	5	6
Cattle (dairy or breeding)	5	7
Communication equipment (2)	7	10
Computers and peripheral equipment	5	5
Cotton ginning assets	7	12
Drainage facilities	15	20
Farm buildings (3)	20	25
Farm machinery and equipment	5 if new, 7 if used	10
Fences (agricultural)	7	10
Goats and sheep (breeding)	5	5
Grain bin	7	10
Hogs (breeding)	3	3
Horses (age when placed in service)		
Breeding and working (12 years or less)	7	10
Breeding and working (more than 12 years)	3	10
Racing horses (more than 2 years)	3	12
Horticultural structures (single purpose)	10	15
Logging machinery and equipment (4)	5	6
Non residential real property	39 (5)	40

1. C. II. Farm expenditures. Purchases of business property. Farm property recovery periods (cont'd)

ASSETS (cont'd.)	RECOVERY PERIOD IN YEARS FOR: GDS - general depreciation system	ADS - alternative depreciation system
Office equipment (not calculators, copiers or typewriters)	7	10
Office furniture or fixtures	7	10
Residential rental property	27.5	40
Tractor units (over-the-road)	3	4
Trees or vines bearing fruit or nuts	10	20
Truck (heavy duty, unloaded weight 13,000 lbs or more)	5	6
Truck (weight less than 13,000 lbs)	5	5
Typewriter	5	6

(1) Not including airplanes used in commercial or contract carrying of passengers.
(2) Not including communication equipment listed in other classes.
(3) Not including single purpose agricultural or horticultural structures.
(4) Used by logging and sawmill operators for cutting up timber.
(5) For property placed in service before May 13th 1993 the recovery period is 31.5 years.

1. C. II. Farm expenditures. Purchases of business property. 150% Declining Balance (DB) method

Year	3-year	5-year	7-year	20-year
1	25.0%	15.0%	10.71%	3.75%
2	37.5	25.5	19.13	7.219
3	25	17.85	15.03	6.677
4	12.5	16.66	12.25	6.177
5		16.66	12.25	5.713
6		8.33	12.25	5.285
7			12.25	4.888
8			6.13	4.522

1. D. Farm expenditures. Loan transactions

Making payments on farm debt obligations is a cash expenditure. A debt service payment most often consists of both a debt reduction (the principal payment) and an interest expense.
The principal portion of the debt service payment is an expenditure of funds but is not a tax-deductible expense and therefore is not included on Section 1.A., but is important for business analysis purposes.
The interest portion of the debt service payment is a tax-deductible expense and therefore it is included as a column on Section 1.A.

For these important distinctions, it is necessary that farm records provide an accurate accounting of these expenditures.
These loan transaction forms provide space to keep track of debt service payments. Use the first one for short-term, operating, current or annual loans, the second one for intermediate loans, and the third one for long term loans.
Intermediate loans are debts against intermediate assets - machinery, breeding livestock and buildings when due within 7 or 10 years.
Long-term loans are liabilities against long term assets. This will usually include loans, land contracts or mortgages for the purchase of land, buildings, and other permanent land improvements. These typically are set up with 10 or more years to repay.

After specifying the date of transaction, creditor and description on the first three columns:

Column 1 is used to record the beginning principal owed.

Column 2 can be used to recognize an additional borrowing from this credit source.

Column 3 represents the principal portion of the debt service payment.

Column 4 is the interest portion of the debt service payment. Interest totals from this section can be carried to the "Annual Summary of Farm Expenses", column 15, and/or entered on Schedule F, line 23a for mortgage interest and line 23b for other interest on farm business debt.

Column 5 is used to record the total debt service payment.

Column 6 provides the opportunity to determine the ending principal balance owed. This amount will eventually need to be reconciled with the statement provided by your creditor.

1. D. I. Farm expenditures. Loan transactions. Short-term Loans

Date	Creditor	Description	Beginning Principal Owed	Additional Borrowing	Payments			Ending Principal Owed
					Principal Payment	Interest Payment	Total Payment	
			1	2	3	4	5 = 3 + 4	6 = 1 + 2 - 3
TOTALS								

1. D. II. Farm expenditures. Loan transactions. Intermediate-term Loans

Date	Creditor	Description	Beginning Principal Owed	Additional Borrowing	Payments			Ending Principal Owed
					Principal Payment	Interest Payment	Total Payment	
			1	2	3	4	5 = 3 + 4	6 = 1 + 2 - 3
TOTALS								

1. D. III. Farm expenditures. Loan transactions. Long-term Loans

Date	Creditor	Description	Beginning Principal Owed	Additional Borrowing	Payments			Ending Principal Owed
					Principal Payment	Interest Payment	Total Payment	
			1	2	3	4	5 = 3 + 4	6 = 1 + 2 - 3
TOTALS								

2. A. Farm income. Cash farm receipts

Introduction

Farm income can be placed into two categories - ordinary income and capital gains.
Ordinary income originates from sales of products produced and services rendered. Examples of ordinary income are grain sales, livestock products such as milk, and feeder or market livestock sold. Ordinary farm income is reported to the IRS for income tax filing purposes on Schedule F. Line numbers are specified under column headings for your convenience. To learn more about farm taxes see the IRS "Farmers' Tax Guide".
On another hand the sale of capital items such as dairy, breeding and work stock, machinery, tile and buildings affect depreciation and capital gains tax calculations and therefore must be handled separately, see Secion 2.B.

Instructions

Column 1 is to be used for recording dollar amounts in journal fashion. The total of column 1 can be used as a cross-check of the totals of all other columns to guard against posting errors. Also, it can be used for initial recording during rush periods and the figures posted to the proper itemized column when more time is available. Space is provided on Section 2.A.3 to record monthly dollar totals for each kind of income.

Columns 2 and 3 are quantities such as number sold and weight. These are necessary for business analysis and planning. Space is provided on Section 2.A.3 to record monthly totals of quantities for each kind of income.

Many items of income are erroneousy reported on Schedule F which should be reported on a Schedule B, C, or D and totaled on the individual's Form 1040. For a more complete discussion, get a copy of the "Farmers' Tax Guide" from your county agricultural agent or the Internal Revenue Service.

An animal raised or purchased with the objective to be sold (market livestock) means the animal is not intended to become breeding or milking livestock. Income from these sales is typically reported on Schedule F, together with other raised or resold farm products.

On the other hand, the income from the sale of livestock bought or raised for breeding, draft or milking purposes is not reported on Schedule F. Instead, it is usually reported on Form 4797. It may be taxed at lower rates, and is not subject to self-employment tax. Please make sure to not include those sales on this table. They should be recorded on the "Sales of business property" tables in Section 2.B.

Column 4 is for the sale of livestock that was purchased to be fed out and resold. This column can also be used for other resale items.

2. A. Farm income. Cash farm receipts

Column 5 is for the sale of livestock that was raised to be fed out and sold. Include raised slaughter livestock (cattle, hogs and lambs). Line 2 of Schedule F will include this income plus that from the sale of other crops or livestock products raised at the farm (see columns 13 - 17).

Column 6 is for patronage dividends and refunds which result from the operation of the business.

Column 7 is for government payments for production flexibility contracts and agricultural conservation practices, e.g., SP-53, PA 116 and Homestead Credit.

Column 8 is for Commodity Credit Corporation grain loans that are claimed as income when received. Although generally loans received should not be reported as income, if you pledge part or all of your production to secure a CCC loan, you can treat the loan as if it were a sale of the crop and report the loan proceeds as income in the year you receive them.

Column 9 is for crop insurance indemnity payments received. If on cash method of accounting, you may elect to report crop insurance payments in the year following indemnity payment if the damaged crops would normally be converted to income in that year.

Column 10 is for custom income received.

Column 11 is provided for the sale of maple products, Christmas trees, pulpwood, and timber. Under special conditions, timber can be a Form 4797 item. See the Farmers' Tax Guide for details.

Columns 13 - 17 are for income from the sale of crops and livestock products not reported in columns 4 or 5. Be sure to place headings in the same order on each page to avoid confusion. Examples include: Corn, Soybeans, Wheat, Apples, Grapes, Sweet Cherries, Tart Cherries, Peaches, Plums, Pears, Strawberries, Raspberries, Blueberries, Asparagus, Vegetables, Livestock products such as milk, or any other income sources relevant to your operation. Use separate columns for Fresh, Processed, For Juice, etc. Sales of produce, grains, and other products you raised go on Line 2 of Schedule F.

Column 12 is for any miscellaneous income not reported elsewhere. Other income items can be CCC market loan gains, LDP/CRP or Government Crop, Livestock and Conservation Program payments, Contract livestock income, Other types of insurance income, Real estate tax refunds, etc. You should also include gains from hedging accounts here.

2. A. I. Farm income. Cash farm receipts. Detail

						SCHEDULE F PART I ITEMS			
Date	Item description	Buyer	Total amount	No. or head	Quantity measure (e.g., cwt, bu)	Purchased feeder livestock sold, Line 1a	Raised livestock sold Line 2	Patronage dividends and refunds Line 3a	Agricultural program payments Line 4a
			1	2	3	4	5	6	7
TOTALS									

2. A. I. Farm income. Cash farm receipts. Detail

SCHEDULE F PART I ITEMS (cont)

CCC loans as income Line 5a	Crop insurance proceeds Line 6	Custom machine work Line 7	Forest products See guide	Other Line 8	Write in these columns other headings specific to your business					Explanation
8	9	10	11	12	13	14	15	16	17	

2. A. I. Farm income. Cash farm receipts. Detail

						SCHEDULE F PART I ITEMS			
Date	Item description	Buyer	Total amount	No. or head	Quantity measure (e.g., cwt, bu)	Purchased feeder livestock sold, Line 1a	Raised livestock sold Line 2	Patronage dividends and refunds Line 3a	Agricultural program payments Line 4a
			1	2	3	4	5	6	7
TOTALS									

2. A. I. Farm income. Cash farm receipts. Detail

SCHEDULE F PART I ITEMS (cont)										
					Write in these columns other headings specific to your business					
CCC loans as income Line 5a	Crop insurance proceeds Line 6	Custom machine work Line 7	Forest products See guide	Other Line 8						Explanation
8	9	10	11	12	13	14	15	16	17	

2. A. II. Farm income. Cash farm receipts. Summary - Part 1

				SCHEDULE F PART I ITEMS			
Month	Total amount 1	No. or head 2	Quantity measure (e.g., cwt, bu) 3	Purchased feeder livestock sold, Line 1a 4	Raised livestock sold Line 2 5	Patronage dividends and refunds Line 3a 6	Agricultural program payments Line 4a 7
JANUARY							
FEBRUARY							
MARCH							
1ST QUARTER							
APRIL							
MAY							
JUNE							
2ND QUARTER							
JULY							
AUGUST							
SEPTEMBER							
3RD QUARTER							
OCTOBER							
NOVEMBER							
JANUARY-NOVEMBER TOTALS for Income Tax Management							
DECEMBER							
4TH QUARTER (OCT., NOV., DEC.)							
TOTAL FOR YEAR							

2. A. II. Farm income. Cash farm receipts. Summary - Part 1

SCHEDULE F PART I ITEMS (cont)										
CCC loans as income Line 5a	Crop insurance proceeds Line 6	Custom machine work Line 7	Forest products See guide	Other Line 8	Write in these columns other headings specific to your business					Explanation
8	9	10	11	12	13	14	15	16	17	

2. A. II. Farm income. Cash farm receipts. Summary - Part 2

Month	Total amount
JANUARY	
FEBRUARY	
MARCH	
1ST QUARTER	
APRIL	
MAY	
JUNE	
2ND QUARTER	
JULY	
AUGUST	
SEPTEMBER	
3RD QUARTER	
OCTOBER	
NOVEMBER	
JANUARY-NOVEMBER TOTALS for Income Tax Management	
DECEMBER	
4TH QUARTER (OCT., NOV., DEC.)	
TOTAL FOR YEAR	

2. B. Farm income. Sales of business property

Farm income can be placed into two categories - **ordinary income and capital gains**.

Capital gains income is generated from the sale of capital assets; e.g. cull, breeding or milking livestock, machinery and equipment (including trade-ins), land, buildings, and improvements to buildings or land. When capital assets are sold, the difference between its basis and the sale price is the capital gain (or loss). The basis is the original purchase price, plus improvements made, minus depreciation taken and casualty losses.

Land generates capital gains when sold, although is a non-depreciable capital item.
If a breeding, milking, cull or draft animal was raised and the costs of raising it were deducted on Schedule F, its basis is zero.

Capital gains income is reported for income tax purposes on IRS Form 4797 and is not earned income for self-employment Social Security purposes, so it must be kept separate from ordinary income.

The length of time the asset was held on the farm determines whether the sale will qualify as a short or long-term capital gain. Generally, the holding period is 24 months for cattle and horses, and 12 months for other assets, including other livestock. Long term capital gains tax rates are significantly lower. Short term caoital gains and the depreciation "recapture" portion of the sale are generally taxed as ordinary income.

Instructions

Columns 1, 2 and 3 are used to identify the capital asset sold and the relevant dates of purchase and sale. Capital livestock sales should be split between breeding/milking and cull, and it should be noted whether they were raised or purchased.

Column 4 is used to record the sales price, whether cash was received or value recognized in a trade-in.

Column 5 is for the remaining basis left of the capital asset sold, from Section 1. C. I. This amount will be subtracted from the sales price in determining capital gains or losses.

Column 6 is the difference between the sales price and the remaining basis.

2. B. Farm income. Sales of business property

Date sold	Description	Date acquired	Sales price	Remaining basis	Gain or loss
1	2	3	4	5	6 = (4 - 5)
TOTALS					

2. B. Farm income. Sales of business property

Date sold	Description	Date acquired	Sales price	Remaining basis	Gain or loss
1	2	3	4	5	6 = (4 - 5)
TOTALS					

3. Personal deductions and adjustments to income

Introduction

In these tables you may keep track of personal expenses that you will be able to use as deductions and adjustments to your income when filing or estimating your income tax. You may sum these expenses and enter them in their corresponding schedule, namely Schedule 1 and Schedule A. Samples of these schedules are presented on Section 6, Other taxes.

3. A. Personal deductions and adjustments to income. Itemized deductions

DATE	ITEM	TOTAL AMOUNT
Medical and dental		
	Medical insurance	
	Doctors (list)	
	Hospital	
	Medicine and drugs	
Taxes paid		
	Residence	
	State income	

DATE	ITEM	TOTAL AMOUNT
Interest (Personal Share on mortgages and investments)		
	Home	
Gifts to charity		
	Church	
	Other	
Casualty and theft losses		
Miscellaneous deductions		

3. B. Personal deductions and adjustments to income. Adjustments to income

DATE	ITEM	TOTAL AMOUNT
Educator expenses		
Expenses of reservists, performing artists, and fee-basis government officials		
Health savings account deductions		
Moving expenses for members of the Armed Forces		
Deductible part of self-employment tax		
Self-employed SEP, SIMPLE, and qualified plans. To find out more about which retirement plans are deductible or qualify as an adjustment to income see publication 560 "Retirement Plans for Small Businesses" at irs.gov/pub/irs-pdf/p560.pdf		

DATE	ITEM	TOTAL AMOUNT
Self-employed health insurance deduction		
Penalty on early withdrawal of savings		
Alimony paid		
IRA deduction		
Student loan interest deduction		
Tuition and fees		

4. Cash flow statement

Introduction

This form provides space to summarize your income and expenses, both personal and for the farm. It asks about operating, day-to-day items, about capital, longer term items, and about loans.

The first table is for operating income. The next two tables are for operating expenses. These are broken down into two pages to provide you with enough space.

The next table has three sections. The first section, "Investing Activities" is for farm capital purchases and sales. The second section, "Non-Farm Income and Expenses", is for personal income and expenses, including, again, cash, day-to-day transactions and capital, long-term items. The third section of this table, "Financing Activities", is for loans, both personal and for the farm.

The last table, "Cash Flow Summary", pulls information from all of the above and requires you to provide beginning and ending cash balances to perform a reconciliation. This is, making sure that what you had at the beginning of the period, plus or minus what you made or lost at the farm, plus or minus what you made or lost through personal activities, equals what you had at the end of the period. The "Discrepancy" should be equal or close to zero. If it is not, any tax returns or financial analyses prepared with this information will be inaccurate. You can also use this section to monitor your liquidity and make sure that you will be able to cover upcoming farm and family living expenses with the income coming in.

Please use the categories presented as they are, whenever they apply to your operation. If some of them do not apply to you, skip them. If any of your income or expenses do not match any of the presented categories, you can add them under "Other".

Most, but not all of the information for the cash flow statement will come from either Section 1 (Farm Expenses), Section 2 (Farm Income) or Section 3 (Personal Deductions and Adjustments to Taxable Income). This should also be consistent with tax forms.

Additionally, this form provides three columns for enterprise analysis ("EA"). This information is very valuable for analyzing the different crops or types of livestock at your farm. The form provides space to enter an allocation for each income and expense line item for the different enterprises. This can be in the form of percentages or dollar values.

Note that these cash flow summary statements are an incomplete reflection of your farm's income, as they don't account for inventory changes. They only reflect cash income and expenses. The Net Cash Farm Income below could be showing a loss if you had high expenses while growing your inventory. Or, conversely, it could be showing high income when you may actually be liquidating the farm. Section 9 presents the true, also called accrual adjusted, profit and loss or income statement. The Section 9 income statement is calculated using information from this section and from Section 8 - the Net Worth Statement.

NET CASH FARM INCOME (Line 4 minus Line 10)	

4. A. Detailed cash flow statement

	EA	EA	EA	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year
OPERATING INCOME								
Sales of Purchased Livestock and Other Resale Items								
Raised Market Livestock and Crop Sales								
Cooperative Distributions								
Agricultural Program Payments								
CCC Loans as Income								
Crop Insurance Proceeds								
Custom Machine Work								
Forest Products								
1 Hedging Accounts Withdrawals								
Other Income								
LDP payments								
Crop government payments								
CRP payments								
Livestock govt payments								
Conservation govt payment								
Other government payments								
Real estate tax refund								
Crop insurance income								
Livestock insurance income								
Property insurance income								
Contract livestock income								
2 Total Operating Income (add all of the above)								
3 Total Operating Income excluding Hedging withdrawals (2 - 1)								
4 Gross Cash Income (3 + 12)								

	EA	EA	EA	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year
OPERATING EXPENSES								
5 Feeder Livestock Purchases								
Car, Truck								
Chemicals								
Government and conservation program expenses								
Custom Hire								
Employee Benefits								
6 Feed Purchases								
Fertilizer And Lime								
Freight, Trucking								
Gas, Oil, Fuel								
Insurance (not health)								
7 Interest 7.a on short-term loans: 7.b on intermediate-term loans: 7.c on long-term loans:								
Machine Lease								
Land Rent or Lease								
Repairs, Maintenance								
Seeds, Plants								
Storage								
Supplies								
Real Estate Taxes								
Utilities								
Veterinary, Breeding, Medicine								
Labor Hired (including harvest)								
8 Hedging Accounts Deposits								
Other Expenses								
Drying expense								
Consultants								
Marketing								
Livestock leases								
Grazing fees								

	EA	EA	EA	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year
OPERATING EXPENSES								
Irrigation energy								
Building leases								
Dues & professional fees								
Purchase of resale items other than feeder livestock								
9 Total Operating Expenses (add all of the above)								
10 Total Operating Expenses excluding Hedging deposits (9 - 8)								
11 Total Cash Operating Expenses (10 - 7)								

	EA	EA	EA	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year
CAPITAL PURCHASES AND SALES (INVESTING ACTIVITIES)								
12 Livestock sales (Cull)								
13 Livestock sales (Breeding & Milking)								
14 Machinery and equipment sales								
15 Vehicle sales								
16 Land sales								
17 Buildings and improvements sales								
18 Sales of other capital (intermediate and long-term) assets								
19 Total Capital Sales (add rows 12 to 18)								
20 Livestock purchases (Breeding & Milking)								
21 Machinery and equipment purchases								
22 Vehicle purchases								
23 Land purchases								
24 Buildings and improvements purchases								
25 Purchases of other capital (intermediate and long-term) assets								
26 Total Capital Expenditures (add rows 20 to 25)								
NON-FARM INCOME AND EXPENSES*								
Wages								
Rental or other business income								
Interest and dividend income								
27 Personal capital sales								
Tax refunds								
Gifts and inheritances received								
28 Total Non-farm Income (add rows in this box)								
Family And Non-farm Expenses - from Section 3								
Family And Non-farm Expenses - other								
29 Personal capital purchases								
30 Income Tax and S.S. Paid								
Gifts Given (except for those included on Section 3)								
31 Total Family And Non-farm Expenses (add rows in this box)								
FINANCING ACTIVITIES								
32 Farm money borrowed								
33 Non-Farm money borrowed								
34 Farm Debt Principal Payments								
35 Personal Debt Principal Payments								

*Include income and expenses from stocks, bonds, dividends, interest, furnishings, vehicles, appliances, life insurance and retirement, and real estate or other non-farm business.

4. B. Cash flow statement. Cash flow summary

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year
Beginning Farm Cash Balance (add checking, savings, cash, safe)					
Beginning Non-Farm Cash Balance (add checking, savings, cash, safe)					
Farm Operating Income (2) if you split farm income with a partner, enter your share only					
Farm Capital Sales (19) if split with a partner, enter your share only					
Farm Money Borrowed (32) if split with a partner, enter your share only					
Non-Farm Money Borrowed (33)					
Total Non-Farm Income (28)					
36 TOTAL CASH INFLOWS (add all of the above)					
Ending Farm Cash Balance (checking, savings, cash, safe)					
Ending Non-Farm Cash Balance (checking, savings, cash, safe)					
Total Operating Expenses (9) if they are split with a partner, enter your share only					
Farm Capital Purchases (26) if split with a partner, enter your share only					
Farm Principal Payments (34) if split with a partner, enter your share only					
Non-Farm Principal Payments (35)					
37 SUBTOTAL CASH OUTFLOWS (add all of the above)					
38 Apparent family living expense (36 - 37)					
39 Family and non-farm expenses reported (31)					
Discrepancy - Unaccounted Cash (38 - 39)					

5. Farm taxes

Introduction

Schedule F is a federal tax from that is used to report farm income and expenses. It is filed along with form 1040, 1040-SR, 1040-NR, 1041, or 1065. You can find a fillable pdf version, instructions, and other tax information at https://www.irs.gov/forms-pubs/about-schedule-f-form-1040. You may use the table below to estimate your tax liability from farming before the end of the year so you can apply year-end tax management strategies and/or estimate your tax bill. Tax management will lessen your tax liability and maximize after-tax income. To be able to apply tax management strategies, you must understand tax laws and keep good records.

Part I: Farm Income - Cash Method. Complete Parts I and II. (Accrual method, Complete Parts II and III, and Part I, line 9.)

1a Sales of livestock and other resale items			1a	
1b Cost or other basis of livestock or other items reported on line 1a			1b	
1c Subtract line 1b from line 1a				1c
2 Sales of livestock, produce, grains, and other products you raised				2
3a Cooperative distributions (Form(s) 1099-PATR)	3a	3b Taxable amount		3b
4a Agricultural program payments	4a	4b Taxable amount		4b
5a Commodity Credit Corporation (CCC) loans reported under election				5a
5b CCC loans forfeited	5b	5c Taxable amount		5c
6 Crop insurance proceeds and federal crop disaster payments				
6a Amount received in 2021	6a	6b Taxable amount		6b
6c If election to defer to 2022 is attached, check here . . . . . ▸		6d Amount deferred from 2020		6d
7 Custom hire (machine work) income				7
8 Other income, including federal and state gasoline or fuel tax credit or refund				8
9 **Gross income**. Add amounts in the right column (lines 1c, 2, 3b, 4b, 5a, 5c, 6b, 6d, 7, and 8). If you use the accrual method, enter the amount from Part III, line 50.				9

Part II: Farm Expenses - Cash and Accrual Method. Do not include personal or living expenses.

10 Car and truck expenses. Attach Form 4562	10	
11 Chemicals	11	
12 Conservation expenses	12	
13 Custom hire (machine work)	13	
14 Depreciation and section 179 expense	14	
15 Employee benefit programs other than on line 23	15	
16 Feed	16	
17 Fertilizers and lime	17	
18 Freight and trucking	18	
19 Gasoline, fuel, and oil	19	
20 Insurance (other than health)	20	
21 Interest		
21a Mortgage (paid to banks, etc.)	21a	
21b Other	21b	
22 Labor hired (less employment credits)	22	
23 Pension and profit-sharing plans	23	

Part II: Farm Expenses - Cash and Accrual Method (cont.)

24 Rent or lease		
24a Vehicles, machinery, equipment	24a	
24b Other (land, animals, etc.)	24b	
25 Repairs and maintenance	25	
26 Seeds and plants	26	
27 Storage and warehousing	27	
28 Supplies	28	
29 Taxes	29	
30 Utilities	30	
31 Veterinary, breeding, and medicine	31	
32 Other expenses (specify):		
32a	32a	
32b	32b	
32c	32c	
32d	32d	
32e	32e	
32f	32f	

33 **Total expenses**. Add lines 10 through 32f. If line 32f is negative, see instructions. 33

34 **Net farm profit (or loss).** Subtract line 33 from line 9

If a profit, stop here and see instructions for where to report. If a loss, complete lines 35 and 36. 34

35 Reserved for future use.

36 Check the box that describes your investment in this activity and see instructions for where to report your loss:

- ☐ a All investment is at risk.
- ☐ b Some investment is not at risk.

Part III: Farm Income - Accrual Method

37 Sales of livestock, produce, grains, and other products				37
38a Cooperative distributions (Form(s) 1099-PATR)	38a		38b Taxable amount	38b
39a Agricultural program payments	39a		39b Taxable amount	39b
40 Commodity Credit Corporation (CCC) loans:				
40a CCC loans reported under election				40a
40b CCC loans forfeited	40b		40c Taxable amount	40c
41 Crop insurance proceeds				41
42 Custom hire (machine work) income				42
43 Other income				43
44 Add amounts in the right column for lines 37 through 43 (lines 37, 38b, 39b, 40a, 40c, 41, 42, and 43)				44
45 Inventory of livestock, produce, grains, and other products at beginning of the year. Do not include sales reported on Form 4797		45		
46 Cost of livestock, produce, grains, and other products purchased during the year		46		
47 Add lines 45 and 46		47		
48 Inventory of livestock, produce, grains, and other products at end of year		48		
49 Cost of livestock, produce, grains, and other products sold. Subtract line 48 from line 47*				49
50 **Gross income.** Subtract line 49 from line 44. Enter the result here and on Part I, line 9				50

* If you use the unit-livestock-price method or the farm-price method of valuing inventory and the amount on line 48 is larger than the amount on line 47, subtract line 47 from line 48. Enter the result on line 49. Add lines 44 and 49. Enter the total on line 50 and on Part I, line 9.

6. Other taxes

Introduction

Schedule F is filed along with form 1040, 1040-SR, 1040-NR, 1041, or 1065. For a complete tax estimation, you should include all the tax forms that apply to you. In this section we provide space for you to estimate:

Form 1040 – the Federal Individual Income Tax Return form,
Schedule 1 – Additional Income and Adjustments,
Schedule A – Itemized Deductions,
Schedule SE – Self-Employment Tax, and
the Michigan Individual Income Tax Return form.

Note that this is not a comprehensive list of forms and other ones could apply to you depending on your situation. For example, Form 8949 (Sales and Other Dispositions of Capital Assets), Schedule D (Capital Gains and Losses), Form 4562 (Depreciation and Amortization), or Form 4797 (Business Asset Sales) are usually applicable to growers.

You can find updated fillable pdf versions, detailed instructions, and other tax information at https://www.irs.gov/forms-pubs/about-form-1040 for the Federal level, and https://www.michigan.gov/taxes/iit-forms/2021-individual-income-tax-forms-and-instructions for Michigan.

The information in this publication/presentation is provided only for educational purposes and to inform the reader of relevant topics. This is not to be perceived or utilized as formal tax or legal advice. It is up to the reader to seek a tax professional who is familiar with farm taxes. You may find some for your area here: https://www.canr.msu.edu/taxschool/farm-tax-practitioners.

Through deductions and adjustments to income you may reduce your taxable income, resulting in a lower federal income tax liability. There are two types of tax deductions, standard and itemized deductions. The standard deduction is a specific dollar amount, while itemized deductions report amounts of certain expenses incurred during the year. In most cases, the taxpayer will choose the type of deduction that is higher and therefore results in a lower federal income tax liability.

By filling in the tables in this section you will be able to:

decide what type of deduction is best for you to take,
estimate your tax bill, and
apply year-end tax management strategies taking non-farm income and expenses, and asset sales and purchases into consideration

You may also google "Excel taxes" for some unofficial tax resources. However, make sure you always seek either official IRS information, or help from a trained professional.

6. A. Personal taxes. For Form 1040

At any time during 2021, did you receive, sell, send, exchange, or otherwise acquire any financial interest in any virtual currency?

☐ Yes ☐ No

Standard Deduction

Someone can claim: ☐ You as a dependent ☐ Your spouse as a dependent
☐ Spouse itemizes on a separate return or you were a dual-status alien

Age/Blindness

You: ☐ Were born before January 2, 1955 ☐ Are blind **Spouse:** ☐ Was born before January 2, 1955 ☐ Is blind

Dependents :

(1) First name Last name	(2) Social security number	(3) Relationship to you	(4) Qualifies for...? : (see instructions on IRS.gov)	☐ Child tax credit ☐ Credit for other dependents

1. Wages, salaries, tips, etc. Attach Form(s) W-2				1
2a. Tax-exempt interest	2a	b. Taxable interest. Attach Sch. B if required		2b
3a. Qualified dividends	3a	b. Ordinary dividends. Attach Sch. B if required		3b
4a. IRA distributions	4a	b. Taxable amount		4b
5a. Pensions and annuities	5a	b. Taxable amount		5b
6a. Social security benefits	5a	b. Taxable amount		6b
7. Capital gain or (loss). Attach Schedule D if required. If not required, check here ▸ ☐				7
8. Other income from Schedule 1, line 10				8
9. Add lines 1, 2b, 3b, 4b, 5b, 6b, 7 and 8. This is your **total income**				9
10. Adjustments to income from Schedule 1, line 26				10

11. Subtract line 10 from line 9. This is your **adjusted gross income** 11

12a. **Standard deduction or itemized deductions** (from Schedule A) 12a

>> Standard Deduction for:

(a) Single or Married filing separately, $12,200

(b) Married filing jointly or Qualifying widow(er), $24,400

(c) Head of household, $18,350

If you checked any box under Standard Deduction, (see instructions on IRS.gov)

12b. Charitable contributions if you take the standard deduction (see instructions on IRS.gov) 12b

12c. Add lines 12a and 12b 12c

13. Qualified business income deduction from Form 8995 or Form 8995-A 13

14. Add lines 12c and 12b 14

15. **Taxable income.** Subtract line 14 from line 11. If zero or less, enter -0- 15

16. Tax (see instructions on IRS.gov). Check if any form Form(s): **1** ☐ 8814 **2** ☐ 4972 **3** ☐ _____ 16

17. Amount from Schedule 2, line 3 17

18. Add lines 16 and 17 18

19. Nonrefundable child tax credit or credit for other dependents from Schedule 8812 19

20. Amount from Schedule 3, line 8 20

21. Add lines 19 and 20 21

22. Subtract line 21 from line 18. If zero or less, enter -0- 22

23. Other taxes, inculding self-employment tax, from Schedule 2, line 21 23

24. Add lines 22 and 23. This is your **total tax** 24

25. Federal income tax withheld from:

a Form(s) W-2	25a		
b Form(s) 1099	25b		
c Other forms (see instructions on IRS.gov)	25c		
d Add lines 25a through 25c			25d

26. 2021 estimated tax payments and amount applies from 2020 return		26

27a. Earned income credit (EIC)		27a	
>> Check here if you were born after January 1, 1998, and before January 2, 2004, and you satisfy all the other requirements for taxpayers who are at least 18, to claim the EIC. See instructions on IRS.gov ▸			
b. Nontaxable combat pay election	27b		
c. Prior year (2019) earned income	27c		

28. Refundable child tax credit or additional child tax credit from Schedule 8812	28	
29. American opportunity credit from Form 8863, line 8	29	
30. Recovery rebate credit. (see instructions on IRS.gov)	30	
31. Amount from Schedule 3, line 15	31	
32. Add lines 27a and 28 through 31. These are your **total other payments and refundable credits**		32
33. Add lines 25d, 26, and 32. These are your **total payments**		33

Refund

34. If line 33 is more than line 24, subtract line 24 from line 33. This is the amount you **overpaid**		34 0.0
35. Amount of line 34 you want **refunded to you.** If form 8888 is attached, check here ▸		35
36. Amount of line 34 you want **applied to your 2022 estimated tax**	36	

Amount You Owe

37. **Amount you owe.** Subtract line 33 from line 24. For details on how to pay, see instructions on IRS.gov		37
38. Estimated tax penalty (see instructions on IRS.gov)	38	

6. B. Personal taxes. For Schedule 1 (Form 1040 or 1040-SR) – Additional Income and Adjustments to Income

Part I - Additional Income

1. Taxable refunds, credits, or offsets of state and local income taxes	1	
2a. Alimony received	2a	
b. Date of original divorce or separation agreement (see instructions on IRS.gov) ▸		
3. Business income or (loss). Attach Schedule C	3	
4. Other gains or (losses). Attach Form 4797	4	
5. Rental real estate, royalties, partnerships, S corporations, trusts, etc. Attach Schedule E	5	
6. Farm income or (loss). Attach Schedule F	6	
7. Unemployment compensation	7	

8. Other income

a Net operating loss	8a	
b Gambling income	8b	
c Cancellation of debt	8c	
d Foreign earned income exclusion from Form 2555	8d	
e Taxable Health Savings Account distribution	8e	
f Alaska Permanent Fund dividends	8f	
g Jury duty pay	8g	
h Prizes and awards	8h	
i Activity not engaged in for profit income	8i	
j Stock options	8j	

k Income from the rental of personal property if you engaged in the rental for profit but were not in the business of renting such property	8k	
l Olympic and Paralympic medals and USOC prize money	8l	
m Section 951(a) inclusion	8m	
n Section 951A(a) inclusion	8n	
o Section 461(l) excess business loss adjustment	8o	
p Taxable distributions from an ABLE account	8p	
z Other income. List type and amount ▸	8z	

9. Total other income. Add lines 8a through 8z	9	
10. Combine lines 1 through 7 and 9. Enter here and on Form 1040, 1040-SR, or 1040-NR, line 8	10	

Part II - Adjustments to Income

11. Educator expenses	11	
12. Certain business expenses of reservists, performing artists, and fee-basis government officials. Attach Form 2106	12	
13. Health savings account deduction. Attach Form 8889	13	
14. Moving expenses for members of the Armed Forces. Attach Form 3903	14	
15. Deductible part of self-employment tax. Attach Schedule SE	15	
16. Self-employed SEP, SIMPLE, and qualified plans	16	

17. Self-employed health insurance deduction		17
18. Penalty on early withdrawal of savings		18
19. Alimony paid		19
20. IRA deduction		20
21. Student loan interest deduction		21
22. Reserved for future use		22
23. Archer MSA deduction		23

24. Other adjustments:

a Jury duty pay	24a	
b Deductible expenses related to income reported on line 8k from the rental of personal property	24b	
c Nontaxable amount of the value of Olympic and Paralympic medals and prizes reported on line 8l	24c	
d Reforestation amortization and expenses	24d	
e Repayment of supplemental unemployment benefits under the Trade Act of 1974	24e	
f Contributions to section 501(c)(18)(D) pension plans	24f	
g Contributions by certain chaplains to section 403(b) plans	24g	
h Attorney fees and court costs for actions involving certain unlawful discrimination claims	24h	
i Costs you incurred in connection with an award from the IRS for helping detect tax law violations	24i	
j Housing deduction from Form 2555	24j	
k Excess deductions of section 67(e) expenses from Schedule K-1	24k	
z Other adjustments. List type and amount ▸	24z	

25. Total other adjustments. Add lines 24a through 24z		25
26. Add lines 11 through 23 and 25. These are your **adjustments to income**. Enter here and on Form 1040 or 1040-SR,		26

6. C. Personal taxes. For Schedule A (Form 1040 or 1040-SR) – Itemized Deductions

Medical and Dental Expenses **Caution:** Do not include expenses reimbursed or paid by others

1. Medical and dental expenses (see instructions on IRS.gov)		1	
2. Enter amount from Form 1040 or 1040-SR, line 11	2		
3. Multiply line 2 by 7.5% (0.075)		3	
4. Subtract line 3 from line 1. If line 3 is more than line 1, enter -0-			4

Taxes You Paid

5. State and local taxes.		
a. State and local income taxes or general sales taxes. You may include either income taxes or general sales taxes on line 5a, but not both. If you elect to include general sales taxes instead of income taxes, check this box ▸ ☐	5a	
b. State and local real estate taxes	5b	
c. State and local personal property taxes	5c	
d. Add lines 5a through 5c	5d	
e. Enter the smaller of line 5d or $10,000 ($5,000 if married filing separately)	5e	
6. Other taxes. List type and amount	6	
7. Add lines 5e and 6		7 0.0

Interest You Paid **Caution: Your mortgage interest deduction may be limited (see instructions on IRS.gov)**

8. Home mortgage interest and points. If you didn't use all of your home mortgage loan(s) to buy, build, or improve your home, see instructions on IRS.gov and check this box ▸ ☐		
a. Home mortgage interest and points reported to you on Form 1098. See instructions on IRS. gov if limited	8a	

8b. Home mortgage interest not reported to you on Form 1098. See instructions on IRS.gov if limited. If paid to the person from whom you bought the home, show that person's name, identifying no., and address 8b

8c. Points not reported to you on Form 1098. (see instructions on IRS.gov for special rules) 8c

8d. Mortgage insurance premiums (see instructions on IRS.gov) 8d

8e. Add lines 8a through 8d 8e

9. Investment interest. Attach Form 4952 if required. 9

10. Add lines 8e and 9 10

Gifts to Charity **Caution:** If you made a gift and got a benefit for it, see instructions on IRS.gov

11. Gifts by cash or check. If you made any gift of $250 or more, see instructions on IRS.gov 11

12. Other than by cash or check. If you made any gift of $250 or more, see instructions. You **must** attach Form 8283 if over $500 12

13. Carryover from prior year 13

14. Add lines 11 through 13 14

Casualty and Theft Losses

15. Casualty and theft loss(es) from a federally declared disaster (other than net qualified disaster losses). Attach Form 4684 and enter the amount from line 18 of that form. (See instructions on IRS.gov) 15

Other Itemized Deductions

16. Other from list in instructions. List type and amount ▸ 16

Total Itemized Deductions

17. Add the amounts in the far right column for lines 4 through 16. Also, enter this amount on Form 1040 or 1040-SR, line 9 17

18. If you elect to itemize deductions even though they are less than your standard deduction, check this box ▸ ☐

6. D. Personal taxes. For Schedule SE (Form 1040 or 1040-SR) – Self-Employment Tax

Part I: Self-Employment Tax

Note: if your only income subject to self-employment tax is **church employee income**,
see instructions on IRS.gov for how to report your income and the definition of church employee income

A. If you are a minister, member of a religious order, or Christian Science practitioner **and** you filed Form 4361, but you had $400 or more of **other** net earnings from self-employment, check here and continue with Part I ▸ ☐

Caution: Skip lines 1a and 1b if you use the Farm Optional Method in Part II. See instructions on IRS.gov

1a.	Net farm profit or (loss) from Schedule F, line 34, and farm partnerships, Schedule K-1 (Form 1065), box 14, code A	1a
b.	If you received social security retirement or disability benefits, enter the amount of Conservation Reserve Program payments included on Schedule F, line 4b, or listed on Schedule K-1 (Form 1065), box 20, code AH	1b

Caution: Skip line 2 if you use the Nonfarm Optional Method in Part II. See instructions on IRS.gov

2.	Net profit or (loss) from Schedule C, line 31; and Schedule K-1 (Form 1065), box 14, code A (other than farming). See instructions on IRS.gov for other income to report or if you are a minister or member of a religious order	2
3.	Combine lines 1a, 1b, and 2	3
4a.	If line 3 is more than zero, multiply line 3 by 92.35% (0.9235). Otherwise, enter amount from line 3 . Note: If line 4a is less than $400 due to Conservation Reserve Program payments on line 1b, see instructions on IRS.gov	4a
b.	If you elect one or both of the optional methods, enter the total of lines 15 and 17 here	4b
c.	Combine lines 4a and 4b. If less than $400, **stop;** you don't owe self-employment tax. **Exception:** If less than $400 and you had **church employee income,** enter -0- and continue	4c

5a. Enter your **church employee income** from Form W-2. See instructions on IRS.gov for definition of church employee income	5a		
b. Multiply line 5a by 92.35% (0.9235). If less than $100, enter -0-		5b	
6. Add lines 4c and 5b		6	
7. Maximum amount if combined wages and self-employment earnings subject to social security tax or the 6.2% portion of the 7.65% railroad retirement (tier 1) tax for 2021		7	**142,800**
8a. Total social security wages and tips (total of boxes 3 and 7 on Form(s) W-2) and railroad retirement (tier 1) compensation. If $132,900 or more, skip lines 8b through 10, and go to line 11	8a		
b. Unreported tips subject to social security tax (from Form 4137, line 10)	8b		
c. Wages subject to social security tax (from Form 8919, line 10)	8c		
d. Add lines 8a, 8b, and 8c		8d	
9. Subtract line 8d from line 7. If zero or less, enter -0- here and on line 10 and go to line 11		9	
10. Multiply the smaller of line 6 or line 9 by 12.4% (0.124)		10	
11. Mutiply line 6 by 2.9% (0.029)		11	
12. **Self-employment tax.** Add lines 10 and 11. Enter here and on **Schedule 2 (Form 1040), line 4**		12	
13. **Deduction for one-half of self-employment tax.** Multiply line 12 by 50% (0.50). Enter here and on **Schedule 1 (Form 1040), line 15**	13		

Part II: Optional Methods To Figure Net Earnings (see instructions on IRS.gov)

Farm Optional Method. You may use this method **only** if **(a)** your gross farm income[1] wasn't more than $8,820, or **(b)** your net farm profits[2] were less than $6,367

14. Maximum income for optional methods. Value: $5,880	14	**5,880**
15. Enter the **smaller** of: two-thirds (2/3) of gross farm income (not less than zero) **or** $5,880. Also, include this amount on line 4b above	15	

Nonfarm Optional Method. You may use this method **only** if **(a)** your net nonfarm profits[3] were less than $6,367 and also less than 72.189% of your gross nonfarm income[4], **and (b)** you had net earnings from self-employment of at least $400 in 2 of the prior 3 years. **Caution:** You may use this method no more than five times

16. Subtract line 15 from line 14	16	
17. Enter the **smaller** of: two-thirds (2/3) of gross farm income (not less than zero) **or** the amount on line 16. Also, include this on line 4b above	17	

[1] From Sch. F, line 9, and Sch. K-1 (Form 1065), box 14, code B.

[2] From Sch. F, line 34, and Sch. K-1 (Form 1065), box 14, code A—minus the amount you would have entered on line 1b had you not used the optional method.

[3] From Sch. C, line 31; and Sch. K-1 (Form 1065), box 14, code A.

[4] From Sch. C, line 7; and Sch. K-1 (Form 1065), box 14, code C.

6. E. Personal taxes. For Michigan Income Tax

1. Filer's First Name, M.I., Last Name _____

If a Joint Return, Spouse's First Name, M.I., Last Name _____

Home Address (Number, Street, or P.O. Box) _____

City or Town, State, ZIP Code _____

2. Filer's Full Social Security No. (Example: 123-45-6789) ☐

3. Spouse's Full Social Security No. (Example: 123-45-6789) ☐

4. School District Code (5 digits – see instructions) ☐

5. STATE CAMPAIGN FUND

Check if you (and/or your spouse, if filing a joint return) want $3 of your taxes to go to this fund. This will not increase your tax or reduce your refund.

a. Filer ☐
b. Spouse ☐

6. FARMERS, FISHERMEN, OR SEAFARERS

Check this box if 2/3 of your income is from farming, fishing, or seafaring. ☐

7. 2021 FILING STATUS. Check one.

a. Single ☐
b. Married filing jointly ☐
c. Married filing separately* ☐

* If you check box "c," complete line 3 and enter spouse's full name below: _____

8. 2021 RESIDENCY STATUS. Check all that apply.
   a. Resident ☐
   b. Nonresident* ☐
   c. Part-Year Resident * ☐
   * If you check box “b” or “c,” you must complete and include Schedule NR.

9. **EXEMPTIONS. Note:** If someone else can claim you as a dependent, check box 9e, enter 0 on line 9a and enter $1,500 on line 9e (see instructions on michigan.gov/taxes).

a. Number of exemptions (see instructions on michigan.gov/taxes)	9a		x $4,750	9a
b. Number of individuals who qualify for one of the following special exemptions: deaf, blind, hemiplegic, paraplegic, quadriplegic, or totally and permanently disabled	9b		x $2,800	9b
c. Number of qualified disabled veterans	9c		x $400	9c
d. Number of Certificates of Stillbirth from MDHHS (see instructions on michigan.gov/taxes)	9d		x $4,750	9d
e. Claimed as dependent, see line 9 NOTE above	9e			9e
f. Add lines 9a, 9b, 9c, 9d and 9e. Enter here and on line 15				9f

10. Adjusted Gross Income from your U.S. Forms 1040 or 1040NR (see instructions on michigan.gov/taxes) 10

11. Additions from Schedule 1, line 9. **Include Schedule 1** 11

12. **Total.** Add lines 10 and 11 12

13. Subtractions from Schedule 1, line 28. **Include Schedule 1** 13

14. **Income subject to tax.** Subtract line 13 from line 12. If line 13 is greater than line 12, enter “0” 14

15. **Exemption allowance.** Enter amount from line 9f or Schedule NR, line 19 — 15

16. **Taxable income.** Subtract line 15 from line 14. If line 15 is greater than line 14, enter “0” — 16

17. **Tax.** Multiply line 16 by 4.25% (0.0425) — 17

NON-REFUNDABLE CREDITS

		AMOUNT		CREDIT
18. Income Tax Imposed by government units outside Michigan. Include a copy of the return (see instructions on michigan.gov/taxes)	18a		18b	
19. Michigan Historic Preservation Tax Credit carryforward (see instructions on michigan.gov/taxes)	19a		19b	

20. **Income Tax**. Subtract the sum of lines 18b and 19b from line 17. If the sum of lines 18b and 19b is greater than line 17, enter “0” — 20

21. Enter amount of Income Tax from line 20 — 21

22. Voluntary Contributions from Form 4642, line 6. **Include Form 4642** — 22

23. **USE TAX.** Use tax due on Internet, mail order or other out-of-state purchases from Worksheet 1 (see instructions on michigan.gov/taxes) — 23

24. **Total Tax Liability.** Add lines 21, 22 and 23 — 24 0.0

REFUNDABLE CREDITS AND PAYMENTS

25. **Property Tax Credit.** Include MI-1040CR or MI-1040CR-2 — 25

26. **Farmland Preservation Tax Credit.** Include MI-1040CR-5 — 26

	FEDERAL	MICHIGAN
27. Earned Income Tax Credit. Multiply line 27a by 6% (0.06) and enter result on line 27b	27a	27b
28. Michigan Historic Preservation Tax Credit (refundable). **Include Form 3581**		28
29. Credit for allocated share of tax paid by an electing flow-through entity (see instructions on michigan.gov/taxes)		29
30. Michigan tax withheld from Schedule W, line 6. **Include Schedule W (do not submit W-2s)**		30
31. Estimated tax, extension payments and 2020 credit forward		31

32. **2021 AMENDED RETURNS ONLY.** Taxpayers completing an original 2021 return should skip to line 33. Amended returns must include Schedule AMD (see instructions on michigan.gov/taxes)

32a ☐ If you had a refund and/or credit forward on the original return, check box 31a and enter this amount as a negative number on line 31c.

32b ☐ If you paid with the original return, check box 31b and enter the amount paid with the original return, plus any additional tax paid after filing, as a positive number on line 31c. Do not include interest or penalty. 32c

33. Total refundable credits and payments. Add lines 25, 26, 27b, 28, 29, 30 and 31c 33

REFUND OR TAX DUE

34. If line 33 is less than line 24, subtract line 33 from line 24. If applicable, see instructions on michigan.gov/taxes
Include interest ☐ and penalty ☐ **YOU OWE** 34

35. **Overpayment.** If line 33 is greater than line 24, subtract line 24 from line 33 35

36. **Credit Forward.** Amount of line 35 to be credited to your 2022 estimated tax for your 2022 tax return 36

37. Subtract line 36 from line 35 **REFUND** 37

7. A. Production. Crop production

Instructions

Column 1, crop type should be filled with 1 if it's an establishment crop, 2 if it's a double crop, 3 if it's an irrigated crop, and 4 if it's **prevent planted**. These reports are essential for allocating balance sheet items in the preparation of enterprise analysis.

CROP GROWN	TYPE	ACRES			SHARED RENTAL %	YIELD	UNIT	TOTAL PROD VALUE (your share)
		OWNED	CASH RENTED	SHARE RENTED				
	1	2	3	4	5	6	7	8
Corn for Grain								
Corn harvested as HMSC								
Corn for Silage							Ton	
Barley							Bu.	
Dry Hay							Tons Hay Equivalent	
Haylage							Tons Hay Equivalent	
Pasture from Fields from which a Cutting of Hay Has Been Taken							Tons Hay Equivalent	
Grass Hay Pasture							Tons Hay Equivalent	
Pasture- Not including hay fields							Tons Hay Equivalent	
Oats							Bu.	
Soybeans							Bu.	
Sugarbeets							Ton	
Wheat								
Rye								
Cover crops								
CRP Program								
Manure+wheat, seed								
Wood/Wet/Waste land pasturable								
Wood/Wet/Waste land not pasturable								
Non-tillable plus roads and buildings								

CROP GROWN (cont'd)	TYPE	ACRES			SHARED RENTAL %	YIELD	UNIT	VALUE
		OWNED	CASH RENTED	SHARE RENTED				
	1	2	3	4	5	6	7	8
Vegetables								
Potatoes								
Fruits								
Apples- Bearing							Bu.	
Apples- Non-bearing								
Tart Cherries- Bearing							Lb.	
Tart Cherries- Non-bearing								
Dry Beans - Name Type: Navy							Cwt.	
Dry Beans - Black								
Great Northern Beans							Cwt.	
Cranberry Beans							Cwt.	
Light Red Kidney Beans							Cwt.	
Navy Beans							Cwt.	
Non-government Idle Tillable Acres								
TOTAL TILLABLE ACRES								
Wood/Wet/Waste land not pasturable								
Non-tillable plus roads and buildings								
TOTAL FARM ACRES								

7. B. Production. Livestock production

This worksheet is for you to estimate and report your annual livestock production. You should at least enter Total/Average values as applicable.

Enterprise		Total/ Average	MONTH											
			January	Febuary	March	April	May	June	July	August	September	October	November	December
Dairy	Milking cows													
	Total herd													
	Barn capacity													
	Milk sold													
Heifer	Calves born													
	Heifers purchased													
	Heifers dead													
	Heifers sold													
	Heifers retained													
	Dairy / Beef heifer type													
	Sold heifers weight													
Steer	Steers purchased													
	Steers dead													
	Steers sold													
	Dairy / Beef steer type													
	Sold steers weight													

Enterprise		Total/ Average	MONTH											
			January	Febuary	March	April	May	June	July	August	September	October	November	December
Beef, Cow, Calf	Cows													
	Exposed females													
	Diagnosed as pregnant													
	Calvings													
	Calves born													
	Deaths													
	Calves weaned													
	Weaned weight													
Market Freezer Beef	Steers purchased													
	Steers dead													
	Steers sold													
	Dairy / Beef steer type													
	Sold steers weight													

Enterprise		Total/ Average	MONTH											
			January	Febuary	March	April	May	June	July	August	September	October	November	December
Farrow to Finish	Sows													
	Litters farrowed													
	Litters weaned													
	Farrowing crates													
	Pigs born													
	Pigs dead													
	Pigs weaned													
Feeder Pig	Sows													
	Litters farrowed													
	Litters weaned													
	Farrowing crates													
	Pigs born													
	Pigs dead													
	Pigs weaned													

Enterprise		Total/ Average	MONTH											
			January	Febuary	March	April	May	June	July	August	September	October	November	December
Market & Feeder Lamb	Ewes													
	Exposed females													
	Diagnosed as pregnant													
	Lambings													
	Lambs born													
	Lambs dead													
	Lambs weaned													
	Weaned weight													
Poultry	Laying Hens													

8. Net worth statement

Introduction

The balance sheet or net worth statement is a snapshot of the financial position of the farm business owner at a given point in time. Everything the producer owns and owes is listed on the balance sheet.

It provides a summary of how funds have been invested in the business (assets) and the financing methods (liabilities) used, at a given point in time. Accurate and detailed balance sheets are needed to accomplish the following:

- Analyze the financial performance of the business.
- Secure credit and financing from lenders
- Monitor financial progress over time
- Make financial projections
- Understand the financial risk position
- Provide information for transition planning

The first step in building an accurate balance sheet is to select the date that the balance sheet represents. It needs to be consistent from year to year. December 31st is the most common date, but pick something that matches your accounting year and your operation's activities. Space is provided to enter ending totals (as of Dec 31st of the year under analysis), and beginning totals (as of Dec 31st of the previous year). Having beginning and ending values enables adjustment of cash accounting for inventory changes that occurred during the year. This is essential to understanding the farm's true financial performance.

The next step is to identify the person(s) or entity(ies) being described (partners, individual or farm only). If you farm with a partner, it is useful to have two separate balance sheets, one for you as an individual, and one for the partnership.

Within the personal balance sheet, it is important to keep farm from non-farm assets and liabilities separate. Most farm balance sheets break both farm and non-farm assets and liabilities into three categories: current, intermediate, and long term.

The enterprise analysis ("EA") column reminds you to separate out asset usage by enterprise if you want to do an enterprise analysis. Start by simply noting what enterprise the asset is used mostly for, and eventually you'll come up with percent or dollar value use allocations for different ones.

ASSETS

Assets are all the things owned or owed to the business as of the date of the statement. There may be a liability against the asset. This will be accounted for in the liability part of the Balance Sheet.

Current assets are cash and other assets that you expect to receive, convert to cash, or use (feed, etc.) during a business year.

Intermediate-term assets are those resources intended to support production, rather than go for immediate sale. Such assets are expected to have a useful life of 1 to 10 years.

Long-term assets include items of a more permanent nature, such as farmland, buildings and improvements, and co-op shares.

Non-farm Assets are those assets not used in the farm business. These could be profits taken from the business for personal use.

Asset valuation methods: Cost Value (CV) versus Market Value (MV)

The Market Value and Cost Value amounts are the same for current assets.

For intermediate and long-term assets, values should be determined using both their Cost Value and their Market Value.

> Cost value is the total purchase cost less accumulated depreciation. Depreciation for business analysis purposes does not have to be tax depreciation. It is better to establish economic depreciation that more nearly distributes the purchase cost over the useful life of the assets. Each schedule in the Net Worth Statement provides a suggested economic depreciation amount, when applicable.
>
> Market value is an estimation of the fair market value that an asset could be sold for on December 31st.

Why include **both** Market Values and Cost Values in your balance sheet:

There is space to enter both the Cost Value and the Market Value of term (intermediate and long-term) assets in the worksheet.
Lenders want to see the Market Value of term assets so they can determine ability to repay the loan if they had to foreclose.
Comparisons of financial ratios across farms are more meaningful using Market Values, while comparisons from year to year of an individual farm are more meaningful using Cost Values. In general terms, the Cost Value measures reflect the actual returns to investment in the business. The Market Value measures reflect the opportunity cost of investing assets in the business. Thus, to know how much the money you have put into the farm is earning, look at the Cost Value column. To decide if money should continue to be invested in the farm, look at the Market Value column.
Looking at Market Values only can be misleading in determining profitability and monitoring financial progress over time.
Net worth calculated from a Market Value balance sheet is affected by inflation or deflation as well as actual earned income.
The Cost Value balance sheet is not affected by inflation or deflation and is more useful in monitoring the businesses financial profitability and progress since only the changes in net worth resulting from earnings are included.
A positive Cost Value farm net worth indicates that the business has had greater profits and/or contributed capital than what it has pulled out of the business.
A business with negative Cost Value net worth indicates that the business has had losses and/or has pulled more money out of the business than profits generated.
The difference between Cost Value net worth and Market Value net worth is called market valuation equity. This is commonly from land inflation and from machinery being valued greater than the remaining tax cost basis. Having both cost and market valuation balance sheets allows the manager to see where equity is coming from; retained profits or inflation.

LIABILITIES

Liabilities are all obligations that are owed as of the statement date. Do not change the classification of a liability as it matures. Cost Values and Market Values are the same for liabilities. Intermediate and Long-term liabilities are sometimes grouped and referred to as Term Liabilities.

Current Farm Liabilities are those due and payable on demand or within the operating year. These include commodity credit and operating loans, accounts payable and accrued expenses.

Intermediate liabilities and debts are against intermediate assets - machinery, breeding livestock & perhaps buildings. These typically are due within 7 or 10 years.

Long-term liabilities are against long term assets. This will usually include loans, land contracts or mortgages for the purchase of long term assets such as land, buildings, and other permanent land improvements. These typically were set up originally with 10 or more years to repay.

Non-Farm Liabilities are those liabilities against non-farm assets.

Deferred Farm Liabilities are taxes and other expenses that would have to be paid if assets were sold. Deferred taxes are the result of reconciling the tax basis of balance sheet assets and the market value of the same assets. A situation that might require a farmer to sell all assets at the same time is not typical, but if that was the case, what might be the resulting tax liability? By estimating your deferred tax liability, you can be more knowledgeable of the how your farm business would be affected.

EQUITY

The basic definition of Equity is Assets minus Liabilities, and it represents what owners really own of the business. It is also known as Net Worth.

Equity changes when:

- The business has a profit or loss, OR
- The owner invests more capital from outside the business or withdraws money from the business, OR
- Assets change value

It is important to know where changes in equity are coming from. To see where changes in equity came from, complete the Statement of Owner's Equity in Section 8.C with information from the beginning and ending balance sheets.

The sum of lines 29, 30 and 31 of the Statement of Owner's Equity should equal line 28. If not, there is a discrepancy that should be addressed as it signals errors in the records.

8. A. Net worth statement. Detailed statement

I. Current Farm Assets

Cash and Checking Balances (Financial Analysis Schedule A)

Money in farm cash, safe, and checking and savings bank accounts as of Dec 31st. Include the total of checks not yet deposited. It is not unusual to have a negative balance in situations where checks have not cleared the bank.

Description	EA	Value
1 THIS YEAR'S TOTAL (add Value column)		
2 LAST YEAR'S TOTAL (copy from last year's balance sheet)		

Prepaid Expenses and Supplies on Hand (Financial Analysis Schedule B)

Prepaid expenses and supplies on hand are inputs purchased or applied for next year's production. They should be valued at their purchase cost. Examples of prepaid expenses are Seed, Fertilizer and lime, Crop chemicals, Drying fuel, Crop supplies, Purchased feed, Vitamins, Minerals, Protein supplements, Packaging materials, Nursery stock, Fuel & oil, Parts & miscelaneous supplies, Dues, etc.

Description	EA	Quantity	Value Per Unit	Value
3 THIS YEAR'S TOTAL (add Value column)				
4 LAST YEAR'S TOTAL (copy from last year's balance sheet)				

Cash in Growing Crops (Financial Analysis Schedule C)

Growing crops includes the value of any crops in the field on the balance sheet date. Usually growing crops are valued at the total of the cash costs invested in them to date, including seed, fertilizer, fuel, and other expenses already invested in planted crops.

Description	EA	Quantity	Value Per Unit	Value
5 THIS YEAR'S TOTAL (add Value column)				
6 LAST YEAR'S TOTAL (copy from last year's balance sheet)				

Accounts receivable (Financial Analysis Schedule D)

Accounts receivable includes any amounts owed to the business expected to be collected within a year. Generally this includes sales not yet received, but may also include other income such as government payments scheduled to be received from the previous year's crops.

Description	EA	Quantity	Value Per Unit	Value
7 THIS YEAR'S TOTAL (add Value column)				
8 LAST YEAR'S TOTAL (copy from last year's balance sheet)				

Hedging accounts (Financial Analysis Schedule E)

Hedging Accounts includes the equity in all margin accounts. This should be the amount of cash received if liquidating all marketing positions and closing the accounts.

	Description	EA	Quantity	Value Per Unit	Value
9	THIS YEAR'S TOTAL (add Value column)				
10	LAST YEAR'S TOTAL (copy from last year's balance sheet)				

Other current assets (Financial Analysis Schedule F)

Other Current Assets includes the value of any current business assets not included elsewhere.

	Description	EA	Quantity	Value Per Unit	Value
11	THIS YEAR'S TOTAL (add Value column)				
12	LAST YEAR'S TOTAL (copy from last year's balance sheet)				

Crop inventory (Financial Analysis Schedule G)

Crops for sale or feed should include all crops in farm or commercial storage by Dec 31st. List the crop name, the quantity, and the total value of each crop. The value should reflect the current market price, unless it is contracted at a different price.

Crops Under Government Loan are crops that secure a government CCC loan. Include the total market value of CCC loan crops.
A crop under loan can be valued and listed with crops held for sale only if offset later by a loan against it in the liability section.

In the description column, note whether it's standing or stored. Also note whether grown for feed or sale. In the Unit column, note the unit used, such as tons, bushels, etc. See appendix for information on calculating the quantity of crops in storage and pricing corn silage and haylage.

Crop	Description	Feed or Sale	EA	Quantity	Unit	Value Per Unit	Value
13 THIS YEAR'S TOTAL (add Value column)							
14 LAST YEAR'S TOTAL (copy from last year's balance sheet)							

Livestock held for sale (Financial Analysis Schedule H)

Livestock for sale should include all market livestock being held for the sole purpose of eventual sale. Do not include breeding livestock, those to be culled from the breeding herd, or breeding herd replacements; those go on the next table.

List the livestock type, the number of head, and the value of each livestock type. The value should reflect the market value of the livestock on Dec 31st.

Enterprise	Description	EA	Number of Head	Average Weight	Value Per Unit	Value
15 THIS YEAR'S TOTAL (add Value column)						
16 LAST YEAR'S TOTAL (copy from last year's balance sheet)						

17 Total Current Farm Assets as of this year (add Line 1, 3, 5, 7, 9, 11, 13 and 15)	Value:	
18 Total Current Farm Assets as of last year (add Line 2, 4, 6, 8, 10, 12, 14 and 16)	Value:	

II. Intermediate Farm Assets

Breeding livestock (Financial Analysis Schedule I)

Breeding Livestock are livestock held for the purpose of producing offspring or livestock products (milk, etc.) List here the total value of the herd, herd replacements, and herd size.

There are several alternatives for establishing the cost value of raised breeding livestock. The easiest method is to establish a base value per head for each type of livestock and maintain that value per head from year to year. Changes in total value can then result only from changes in the number of head, not from changes in value.

Purchased breeding livestock should be valued at purchase cost less depreciation on cost value balance sheets.

Description	EA	Quantity	Year Purch	Purch Price	Cost Value/Unit	Mkt Value/Unit	Total CV	Total MV	Year Sold	Sale Price
19 THIS YEAR'S TOTAL (add Cost and Market Value columns, respectively)										
20 LAST YEAR'S TOTAL (copy from last year's balance sheet)										

Machinery and equipment (Financial Analysis Schedule J)

Purchases and sales listed here should match your accounting records.

Make Model	Model Year	VIN	Year Purch	Purch Price	EA	Cost Value	Market Value	Year Sold	Sale Price
21 Last year's inventory (Add inventory up to last year. Write result under Cost and Market Value)									
22 Last year's depreciation (7% of last year's inventory at Cost Value and Market Value)									
23 Last year's depreciated inventory (Line 21-22) (Calculate for CV only)									
24 This year's purchases (Add up this year's purchases. Write result under Cost and Market Value)									
25 This year's sales (Add up this year's sales. Write result on both Cost and Market Value Columns)									
26 This year's inventory (Line 23+24-25 for CV, Line 21+24-25 for MV)									
27 This year's depreciation (7% of this year's inventory at Cost Value and Market Value)									
28 This year's depreciated inventory (Line 26-27) (Calculate for CV only)									

Titled vehicles (Financial Analysis Schedule K)

Purchases and sales listed here should match your accounting records. Include cars, trucks, trailers, and boats.

Make Model	Model Year	VIN	Year Purch	Purch Price	EA	Cost Value	Market Value	Year Sold	Sale Price

29 Last year's inventory (Add inventory up to last year. Write result under Cost and Market Value)		
30 Last year's depreciation (15% of last year's inventory at Cost Value and Market Value)		
31 Last year's depreciated inventory (Line 29-30) (Calculate for CV only)		
32 This year's purchases (Add up this year's purchases. Write result under Cost and Market Value)		
33 This year's sales (Add up this year's sales. Write result on both CV and MV Columns)		
34 This year's inventory (Line 31+32-33 for CV, Line 29+32-33 for MV)		
35 This year's depreciation (15% of this year's inventory at Cost Value and Market Value)		
36 This year's depreciated inventory (Line 34-35) (Calculate for Cost Value only)		

Other intermediate assets (Financial Analysis Schedule L)

Other Intermediate Assets include buildings with a short life and securities not readily marketable. Include Co-op equity, Co-op stock, Co-op retains, Stock on intermediate Farm Credit Service loans, Plant material (Nursery Stock), Grape Certificates, etc.

Description	EA	Quantity	Year Purch	Purch Price	Cost Value/Unit	Mkt Value/Unit	Total CV	Total MV	Year Sold	Sale Price
37 THIS YEAR'S TOTAL (add Cost and Market Value columns, respectively)										
38 LAST YEAR'S TOTAL (copy from last year's balance sheet)										

39 Total Intermediate Farm Assets as of this year (19+28+36+37 for CV, 19+26+34+37 for MV)	CV:		MV:	
40 Total Intermediate Farm Assets as of last year (20+23+31+38 for CV, 20+21+29+38 for MV))	CV:		MV:	

III. Long-term Farm Assets

Land (Financial Analysis Schedule M)

Description	EA	Quantity	Year Purch	Purch Price	Cost Value/Unit	Mkt Value/Unit	Total CV	Total MV	Year Sold	Sale Price
41 THIS YEAR'S TOTAL (add Cost and Market Value columns, respectively)										
42 LAST YEAR'S TOTAL (copy from last year's balance sheet)										

Buildings and improvements (Financial Analysis Schedule N)

Please include buildings, land improvements like drainage tile or fencing, grates, plants & trellises, fruit plantings (bearing) and fruit plantings (non-bearing). To calculate depreciation on perennial crops, divide this year's inventory value by the remaining life in years. Use 5% of this year's inventory for everything else. Purchases and sales listed here should match your accounting records.

Description	Year Purchased	Purch Price	EA	Cost Value	Market Value	Year Sold	Sale Price

43 Last year's inventory (Add inventory up to last year. Write result under Cost and Market Value)		
44 Last year's depreciation (enter for both, Cost Values and Market Values)		
45 Last year's depreciated inventory (Line 43-44) (Calculate for CV only)		
46 This year's purchases (Add up this year's purchases. Write result under Cost and Market Value)		
47 This year's sales (Add up this year's sales. Write result on both Cost and Market Value Columns)		
48 This year's inventory (Line 45+46-47 for CV, Line 43+46-47 for MV)		
49 This year's depreciation (enter for both, Cost Values and Market Values)		
50 This year's depreciated inventory (Line 48-49) (Calculate for Cost Value Only)		

Other long term farm assets (Financial Analysis Schedule O)

Remember to include in Other Long Term Assets co-op shares valued as of the date of the statement.

Description	EA	Quantity	Year Purch	Purch Price	Cost Value/Unit	Mkt Value/Unit	Total CV	Total MV	Year Sold	Sale Price
51 THIS YEAR'S TOTAL (add Cost and Market Value columns, respectively)										
52 LAST YEAR'S TOTAL (copy from last year's balance sheet)										

53 Total Long-term Farm Assets as of this year (41+50+51 for CV, 41+48+51 for MV)	CV:		MV:	
54 Total Long-term Farm Assets as of last year (42+45+52 for CV, 42+43+52 for MV)	CV:		MV:	

55 TOTAL FARM ASSETS AS OF THIS YEAR (17+39CV+53CV for CV, 17+39MV+53MV for MV)	CV:		MV:	
56 TOTAL FARM ASSETS AS OF LAST YEAR (18+40CV+54CV for CV, 18+40MV+54MV for MV)	CV:		MV:	

IV. Non-farm Assets

Personal Assets (Financial Analysis Schedule P)

If including non-farm assets, include the value of all non-farm assets that you own, including nonfarm businesses, nonfarm property, savings and checking accounts, stocks and bonds, household furnishings and appliances, retirement accounts and IRAs, and personal investments.

Description	EA	Quantity	Cost Value/Unit	Mkt Value/Unit	Total Cost Value	Total Market Value
57 THIS YEAR'S TOTAL (add Cost and Market Value columns, respectively)						
58 LAST YEAR'S TOTAL (copy from last year's balance sheet)						

Personal Vehicles (Financial Analysis Schedule Q)

Purchases and sales listed here should match your accounting records. Include cars, trucks, trailers, and boats.

Make Model	Model Year	VIN	Year Purch	Purch Price	EA	Cost Value	Market Value	Year Sold	Sale Price

59 Last year's inventory (Add up inventory up to last year. Write result under Cost and Market Value)		
60 Last year's depreciation (7% of last year's inventory at Cost Value and Market Value)		
61 Last year's depreciated inventory (Line 59-60) (Calculate for CV only)		
62 This year's purchases (Add up this year's purchases. Write result under Cost and Market Value)		
63 This year's sales (Add up this year's sales. Write result on both Cost and Market Value Columns)		
64 This year's inventory (Line 61+62-63 for CV, Line 59+62-63 for MV)		
65 This year's depreciation (7% of this year's inventory at Cost Value and Market Value)		
66 This year's depreciated inventory (Line 64-65) (Calculate for CV Only)		

Cash Value of Life Insurance (Financial Analysis Schedule R)

Description	Person Insured	Beneficiary	Year Purchased	EA	Total Purchase Price	Policy Face Value	Cost Value	Market Value
67 THIS YEAR'S TOTAL								
68 LAST YEAR'S TOTAL (copy from last year's balance sheet)								

69 Total Non-farm Assets as of this year (57+66+67 for CV, 57+64+67 for MV)	CV:		MV:	
70 Total Non-farm Assets as of last year (58+61+68 for CV, 58+59+68 for MV)	CV:		MV:	

71 TOTAL COMBINED FARM AND NON-FARM ASSETS AS OF THIS YEAR (51 + 63)	CV:		MV:	
72 TOTAL COMBINED FARM AND NON-FARM ASSETS AS OF LAST YEAR (52 + 64)	CV:		MV:	

V. Current Farm Liabilities

Accounts payable and other accrued expenses (Financial Analysis Schedule T)

Accounts payable and other accrued expenses should be listed with the name of the account holder and the amount owed. Include such items as unpaid bills, seed, fertilizer, chemical, feed and fuel accounts, past due taxes, judgements, land rent, insurance, unpaid utilities, unpaid dues, packaging materials, repairs, labor related expenses, and custom hire. It is important to understand that in cash accounting unpaid bills have not yet been claimed as a tax-deductible expense.

Description	EA	Value
73 THIS YEAR'S TOTAL		
74 LAST YEAR'S TOTAL (copy from last year's balance sheet)		

Current loans (Financial Analysis Schedule U)

Current loans include the current balance on operating loans, feeder livestock loans, credit cards, and other loans that are due within 12 months.
Interest Rate: Enter the current interest rate on the note.
Principal Balance: Enter the total outstanding principal balance. Do not include accrued interest in this column.
Accrued Interest is the amount of interest that has accrued since last paid. This is Principal Balance times Interest divided by the number of days in the year times the number of days between the date the loan was last paid and December 31st.
P & I Payment: This is the total amount of principal and interest to be paid within the next year, including any past due P & I.
Last Payment is the month the loan was paid last. This is used to calculate the accrued interest as of December 31st.
Statements from lending institutions should be used to verify balances.
If a CCC loan is entered, make sure the product is listed on the asset side of the balance sheet as well.

Lender	Description	Annual Operating Loan?	Interest Rate	EA	Principal Balance	Accrued Interest	Annual P&I Payment	Last Paid

75	Total principal due on current loans (add Principal Balance column)	
76	Total accrued interest on current loans (add Accrued Interest column)	
77	Accrued interest on intermediate and long term debts (add Line 82 & 89 from upcoming tables)	
78	Current principal due on intermediate and long term debt (add Line 84 & 91 upcoming)	

79	Total Current Farm Liabilities as of this year (Line 73+75+76+77+78)	Value:	
80	Total Current Farm Liabilities as of last year (copy from last year's balance sheet)	Value:	

VI. Intermediate Farm Liabilities

Intermediate loans (Financial Analysis Schedule V)

For intermediate loans, follow the previous instructions for most entries.
payments is the number of payments in a typical year.
Principal Due is the total principal due within 12 months, and it is the principal portion of the Annual P & I Payment to be paid in the next year. You can estimate this as the Annual P&I Payment minus the result of multiplying the Total Principal Balance on the loan times the Interest Rate.
Loans for machinery and equipment purchases and breeding livestock tend to fall into this category.
Leases, such as on silos or machinery, should be added here as well.

Lender	Description	Interest Rate	EA	Principal Balance	Accrued Interest	Annual P&I Payment	Last Paid	# payments	Principal Due

81 Total principal due on inermediate loans (add Principal Balance column)	
82 Total unpaid accrued interest (add Unpaid Accrued Interest column)	
83 Total next year P&I payment (add Annual P&I Payment column)	
84 Total principal due in the next year (add Principal Due column)	
85 Total principal due in the next year as of last year (copy from last year's balance sheet)	

86	Total Intermediate Farm Liabilities as of this year (Line 81-84)	Value:
87	Total Intermediate Farm Liabilities as of last year (copy from last year's balance sheet)	Value:

VII. Long-term Farm Liabilities

Long term loans (Financial Analysis Schedule W)

Long Term Farm Liabilities consist of loans of ten years or more. Follow the previous instructions for most entries.
Your Long Term Balance can be calculated as Principal Balance minus Principal Due.

Lender	Description	Interest Rate	EA	Principal Balance	Accrued Interest	Annual P&I Payment	Last Paid	# payments	Principal Due

88 Total principal due on long term loans (add Principal Balance column)	
89 Total unpaid accrued interest (add Unpaid Accrued Interest column)	
90 Total next year P&I payment (add Annual P&I Payment column)	
91 Total principal due in the next year (add Principal Due column)	

92	Total Long-term Farm Liabilities as of this year (Line 88-91)	Value:
93	Total Long-term Farm Liabilities as of last year (copy from last year's balance sheet)	Value:

94	Accrued Interest on Farm Liabilities as of this year (Line 76+77)	Value:
95	Accrued Interest on Farm Liabilities as of last year (copy from last year's balance sheet)	Value:

96	Scheduled Term (Intermediate and Long-Term) Debt Payments as of this year (Line 83+90)	Value:
97	Principal Due within 12 Months on Term Liabilities as of this year (Line 84+91)	Value:
98	Interest on term debt as of this year (Line 96-97)	Value:
99	Scheduled Term Debt Payments as of last year (copy from last year's balance sheet)	Value:
100	Interest on term debt as of last year (copy from last year's balance sheet)	Value:

101	TOTAL FARM LIABILITIES AS OF THIS YEAR (Line 79+86+92)	Value:
102	TOTAL FARM LIABILITIES AS OF LAST YEAR (Line 80+87+93)	Value:

VIII. Non-farm Liabilities

Personal Liabilities (Financial Analysis Schedule X)

Nonfarm Liabilities include nonfarm accrued interest, taxes payable, and accounts payable.

Description	EA	Amount
103 THIS YEAR'S TOTAL		

Personal Loans (Financial Analysis Schedule Y)

Nonfarm Liabilities include nonfarm loans, credit card balances, car loans, school loans, nonfarm business debts, house mortgage etc.

Lender	Description	Interest Rate	EA	Principal Balance	Accrued Interest	Annual P&I Payment	Last Paid	# payments	Principal Due

104 Total unpaid accrued interest (add Unpaid Accrued Interest column)		
105 Total principal due on personal loans (add Principal Balance column)		

106 Total Non-farm Liabilities as of this year (Line 103+104+105)	Value:	
107 Total Non-farm Liabilities as of last year (copy from last year's balance sheet)	Value:	

Deferred liabilities (Financial Analysis Schedule Z)

Deferred taxes arise when assets get sold because of the difference in the balance sheet value of assets and their tax basis.
In other words, if the business is liquidated, what would be the taxes on current inventories and capital gains taxes on capital assets.

This section is optional. However, when considering a change in the business that involves liquidated some or all of the assets, completing this section gives a more complete estimate of net worth.

When completing this table, it is useful to divide deferred liabilities into two parts, the deferred tax liabilities due if current inventories are liquidated and the deferred tax liabilities due from the liquidation of capital assets.

Ask your local Extension educator for a worksheet to complete these values if you need.

Description	EA	Amount
108 THIS YEAR'S TOTAL		
109 LAST YEAR'S TOTAL (copy from last year's balance sheet)		

110 TOTAL COMBINED FARM AND NON-FARM LIABILITIES AS OF THIS YEAR (Line 101+106+108)	Value:	
111 TOTAL COMBINED FARM AND NON-FARM LIABILITIES AS OF LAST YEAR (Line 102+107+109)	Value:	

IX. Equity

Equity is used to document capital contributed from or stock issued to sources outside the operation. It is most commonly used by entities such as corporations and LLCs. An example of contributed capital would be if a newly incorporated farm has five initial investors who each contribute a thousand dollars. In a commercial business, often the contribution is the amount received in the sale of company stock. By using detail under the contributed capital entry, each of the contributions can be itemized, and the original source of that money documented. While these amounts received may also be included under cash and checking, the contributed capital and stock entries document the original source of that money. Enter contributions as positive numbers and draws or distributions as negative. Contributed Capital and Stocks are included in the Cost side of the balance sheet output along with Retained Earnings.

Description	EA	Value
112 THIS YEAR'S TOTAL		
113 LAST YEAR'S TOTAL (copy from last year's balance sheet)		

X. Additional Information

	Cost Value	Market Value
114 Farm Net Worth as of Last Year (Line 56 CV - 102 for CV, and Line 56 MV - 102 for MV)		
115 Farm Market Valuation Equity as of this year (Line 71 MV - 71 CV - 108, write result under market value column)		
116 Farm Market Valuation Equity as of last year (Line 72 MV - 72 CV - 109, write result under market value column)		
117 Retained Earnings as of this year (Line 71 CV - 110 - 112, write result under market value column)		
118 Retained Earnings as of last year (Line 72 CV - 111 - 113, write result under market value column)		
119 Cash Replacement Allowance* (Line 22 MV + 30 MV - 85, write result under market value column)		

* Use this year's balance sheet numbers if it's your first year; and If Market Values are not available on Schedules J and K, use Cost Values instead.

8. B. Net worth statement. Summarized statement

	Cost Value	Market Value
Total Current Farm Assets (Line 17)		
Total Intermediate Farm Assets (Line 39)		
Total Long-term Farm Assets (Line 53)		
TOTAL FARM ASSETS (Line 55)		
Total Non-farm Assets (Line 69)		
TOTAL COMBINED FARM AND NON-FARM ASSETS (Line 71)		
Total Current farm liabilities (Line 79)		
Total Intermediate Farm Liabilities (Line 86)		
Total Long-term Farm Liabilities (Line 92)		
TOTAL FARM LIABILITIES (Line 101)		
Total Non-farm Liabilities (Line 106)		
TOTAL COMBINED FARM AND NON-FARM LIABILITIES (Line 110)		
120 FARM NET WORTH (Line 55 CV - 101 for CV, and Line 55 MV - 101 for MV)		
121 NON-FARM NET WORTH (Line 69 CV - 106 for CV, and Line 69 MV - 106 for MV)		
122 TOTAL COMBINED FARM AND NON-FARM NET WORTH (Line 71 CV - 110 for CV, and Line 71 MV - 110 for MV)		

Statement of Owner's Equity

	Cost Value	Market Value
123 Change in Combined Net Worth (Line 122 - 72 + 111, use CV or MV accordingly when applicable)		
124 Change in Retained Earnings (Line 117 - 118, write result under market value column)		
125 Change in Contributed Capital (Line 112 - 113, write result under market value column)		
126 Change in Farm Market Valuation Equity (Line 115 - 116, write result under market value column)		

8. C. Net worth statement. Hints for making inventory estimations

Estimated Inventory Price Ranges
Oct.01, 2021 Estimations

Corn	$4.85	bu.	Soybean	$11.80	bu.
Wheat White	$7.10	bu.	Oats – feed grade	$3.00	bu.
Wheat Red	$7.10	bu.	Barley	$3.50	bu.
Growing Wheat	$90	per acre	Rye	$3.25	bu.

Dry Beans

Navy	$44.00	cwt.	Black Turtles	$46.00	cwt.
Lt. Red Kidney	$46.50	cwt.	Dk Red Kidney	$46.50	cwt.
Small Reds	$46.50	cwt.	Great Northern	$30.00	cwt.
Pinto	$45.00	cwt.	Pink	$40.00	cwt.

Sugar Beets $30.00 per ton - 2022 payments

Alfalfa Hay

Small Square Bales	$4.75	per 60# bale or	$175	per ton	
Large Square Bales	$190	per ton (premium) or	$170	per ton	(good)
Small Round	$180	per ton			
Large Round	$150	per ton			

Grass Hay

Large Round	$135	per ton						
Small Square	$155	per ton	(SmlSqrBale=	$4.50	)			
Straw (excellent quality)	$140	per ton	(SmlSqr=	$3.50	, LrgRnd=	$25.00	, LrgSqr=	$32.00)

Growing:

Alfalfa New Seeding	$185	per acre
Alfalfa Average (2-4yrs)	$160	per acre
Alfalfa Late Stand (+5yr)	$85	per acre
Grass Hay	$85	per acre

Corn Silage (in the silo)	$50	per ton 35% DM
Haylage - alfalfa (in the Bunk)	$70	per ton 50% DM
Oatlage	$38	per ton 45% DM

Feeder Cattle

Beef Steer	$165	per cwt (200-700 lbs)
Holstein Steer	$140	per cwt (200-700 lbs)
Heifers	$75	per cwt (200-700 lbs)

Dairy Cows - Holstein	$1,750	per head		
Dairy Bred – to close up Holstein	$1,100	to	$1,600	per head
Dairy Heifers (9-20 months)	$600	to	$1,000	per head
Dairy Heifer Calves (4-9 months)	$400	to	$600	per head
Dairy Heifer Calves (0-4 months)	$75	to	$175	per head
Dairy Steer Calves	$75	per head or less		

Tillage:

Fall Moldboard Plowing	$20.00	per acre
Fall Chisel Plowing	$17.50	per acre

ESTIMATED FEED NEEDS OF DAIRY COWS - 365 days*

Milk production per cow		DM consumed	FORAGE QUALITY					
			LOW		MEDIUM		HIGH	
			Forage**	Grain***	Forage**	Grain***	Forage**	Grain***
lb/yr	lb/day	lb/cow/day	ton DM	lb DM	ton DM	lb DM	ton DM	lb DM
20,000	66	47	4.7	7,300	5.1	6,600	5.3	6,200
18,000	60	45	4.7	6,800	4.9	6,500	5.1	6,000
16,000	52	43	4.7	6,200	4.9	5,700	5.1	5,400
14,000	46	41	4.6	5,700	4.9	5,200	5.2	4,600
Heifers, 1-2 yr	-----	+/- 20	3.9	200	3.8	100	3.6	100
Heifers, 1 yr	-----	-----	1.4	1,300	1.5	1,050	1.6	900

* Values given are for DM needed/animal/365 days. This includes a dry period of 60 days for milking cows fed about 28 lb DM hay/day. A reasonable estimate of DM consumed can be obtained from the equation DM intake = (2 + [.02 x milk lb/day]) x cwt body wt. This does not include feeding and storage losses, which are included in the above table. The value from that equation can be used for any given period. That value can then be multiplied by the percent concentrate and forage in the ration (DM basis) to give lb DM of each needed for that period.

**Forage values are in tons of dry matter. To convert to as-fed basis, divide lb or ton hay DM by .87; to convert DM to lb or ton of 55% DM haylage, divide lb DM by .55; to convert DM to ton or lb of 35% DM silage, divide by .35.

***Grain values are total DM for 1 yr. A 12% grain mix requires 90% corn and 10% soybean meal (44% protein SBM) or equivalent; a 14% mix requires 15% SBM; 16% requires 20% SBM; and 18% requires 26% SBM or equivalent. To convert lb corn DM to lb of HM corn as fed, divide lb DM obtained from table and footnote *** by percent DM in the HM corn; ex., the cow needs 4,000 lb dry corn plus 2,000 lb SBM. Amount of HM corn is 4,000 divided by .70 (70% DM in HMSC) = 5,714 lb of HMSC.

SILO CAPACITIES OF CORNAGE PER FOOT OF HEIGHT

APPROXIMATE BUSHELS OF DRY GRAIN (15.5%)												
Kernel moisture content	Conversion factor	Inside silo diameter (feet) 8	10	12	14	16	18	20	22	24	26	30
		SHELLED CORN (1.25 cubic feet per bushel at 15.5 percent moisture)										
15.5(*)	1.00	40	63	90	123	160	204	251	304	362	424	640
24	0.93	37	58	84	114	148	188	233	281	334	392	592
28	0.89	35	56	80	109	142	180	224	270	320	376	568
32	0.85	34	53	77	105	136	173	214	258	307	360	543
		GROUND EAR CORN (1.94 cubic feet per bushel at 15/5 percent kernel moisture)										
15.5	1.00	26	41	59	80	103	131	162	196	233	274	413
24	0.90	23	37	53	72	94	119	148	176	213	250	375
28	0.86	22	35	50	69	90	114	141	169	203	238	358
32	0.83	21	34	48	66	86	109	134	162	193	227	342

(*) This first line is for dry grain and can be used to measure capacity of round bins for all small grains.
Conversion factor - For any size not listed, multiply the dry grain capacity of the storage by this factor at listed moisture content to determine equivalent in dry grain.

Density increases with depth but no allowance was made for compaction in this table. Silos 40 feet or higher may have 10 percent greater capacity than shown in table.

CAPACITIES OF BINS AND CRIBS IN DRY GRAIN

To find the capacities in bushels, first find the volume in cubic feet. For a crib or cube, multiply the length x width x height (all in feet).
For round bins, cribs, or silo, multiply the radius (1/2 diameter) x radius x 3.1416 x height. Then, to convert cubic feet to bushels:
Multiply by .8 for small grain or shelled corn.
Multiply by .4 if ear corn.
Multiply by .515 if ground ear corn.
For round bins, you may use the top line in the table and multiply by height in feet..

Crib capacities in bushels for ear corn per foot of length:					
	Height (in feet)				
Width (in feet)	8'	10'	12'	14'	16'
5	16	20	24	28	32
6	19.2	24	28.8	33.6	38.4

STANDARD WEIGHTS OF FARM PRODUCTS PER BUSHEL

Product	lb
Alfalfa	60
Apples (average)	42
Barley (common)	48
Beans	60
Bluegrass (Kentucky)	14-28
Bromegrass, orchardgrass	14
Buckwheat	50
Clover	60
Corn (dry ear)	70
Corn and cob meal	45
Corn (shelled)	56
Corn kernel meal	50
Corn (sweet)	50
Cowpeas	60
Flax	56
Millet (grain)	50
Oats	32
Onions	52
Peas	60
Potatoes	60
Ryegrass	24
Ryegrass	56
Soybeans	60
Spelt	30-40
Sorghum	56
Sudangrass	40
Sunflower	24
Timothy	45
Wheat	60
Milk, per gallon	8.6

RULE OF THUMB ON SILO CAPACITIES

20' X 60' = 500 tons
20' x 50' = 390 tons
20' x 40' = 280 tons
20' x 70' = 575 tons

For any other size silo, the radius squared expressed as a decimal (divided by 100) times the tonnage of a 20-foot silo will give the capacity in tons

Examples:
30' x 60' - 15 x 15 = 2.25 x 500, or 1,145 tons
16' x 50' - 8 x 8 = .64 x 390, or 250 tons
12' x 40' - 6 x 6 = .36 x 280, or 101 tons

TO CONVERT HIGH MOISTURE FORAGE TO DRY HAY EQUIVALENT

Method A:
Read the tonnage from the silo capacity table. Then divide this figure by 3 to convert to dry hay equivalent. This will be a close estimate, regardless of the moisture content of the grass or haylage.

Method B:
Multiply the tonnage of green or wet material by the dry hay per ton equivalent in the following table:

Hay or forage	% moisture	Dry hay per ton
Green chop	88	.25 ton
Grass silage	70	0.34
Grass silage	65	0.4
Haylage	60	0.45
Haylage	50	0.57
Haylage	40	0.68

MEASUREMENT STANDARDS, HAY AND STRAW

	Avg. cu.ft / ton	Range cu.ft / ton
Hay, baled	275	250-300
Hay, chopped - field cured	425	400-450
Hay, chopped - mow cured	325	300-350
Hay, long	500	475-525
Straw, baled	450	400-500
Straw, chopped	600	575-625
Hay, loose	480	370-390
Straw, loose	800	750-850

BUNKER SILO CAPACITY FOR CORN SILAGE, 70 PERCENT MOISTURE

Formula:

$$\frac{\text{Average length x width x settled depth (all in feet) x lb/cubic ft}}{\text{2,000 lb.}} = \text{Tons}$$

Weight per cubic ft (lb/cubic ft above) will vary by amount of packing, fineness of cut, moisture content and depth of material. Use the following table to estimate pounds per cubic ft according to depth of pile:

Depth of silage (ft)	Pounds per cubic ft
6	32
8	36
12	40
20	45

SILO CAPACITY:

TONS OF CORN OR GRASS SILAGE (68% MOISTURE) IN SETTLED UNOPENED SILOS

	Inside diameter of silo in feet							
Depth of silage (in feet)	12'	14'	16'	18'	20'	24'	26'	30'
8	11	15	20	25	31	45	52	70
12	19	25	33	42	52	75	88	117
16	28	38	49	62	77	111	130	173
20	38	51	67	85	105	151	177	236
24	49	66	87	110	135	194	228	304
28	61	83	108	137	169	243	286	380
32	74	100	131	166	205	295	346	461
36	87	118	155	196	242	348	409	545
40	101	138	180	229	280	403	473	630
44	117	159	207	261	320	461	541	720
50	137	186	248	310	389	560	673	875
55	---	212	283	365	444	639	750	999
60	---	---	319	415	500	720	845	1,125
70	---	---	---	---	574	827	970	1,290
80	---	---	---	---	650	1,100	1,330	1,880
90	---	---	---	---	---	---	---	2,470

NOTE: When a silo is partially unloaded from the top, the remaining silage is more tightly packed and heavier than the same volume in an unopened silo. Therefore, compute the weight remaining as follows:

1. Use the table to find the original contents before the silo was opened. (Example: 50' of settled silage in a 20' silo = 389 tons).
2. Estimate depth of silage removed and determine its weight from table (Example: Weight removed in 32' = 205 tons).
3. Subtract tonnage removed from original contents to find tonnage remaining.

(Example: 389 tons (original contents) - 205 tons (removed in 32') = 184 tons (remaining in 18').

CONVERSION TABLES FOR COMMON WEIGHTS AND MEASURES

Metric conversions:
1 pound = 454 grams
2.2 pounds = 1 kilogram
1 quart = 0.946 liter
1 gram = 15.43 grains
1 metric ton - 2.205 bands
1 inch = 2.54 centimeters
1 centimeter - 10 millimeters = .39 inches
1 meter = 39.37 inches
1 acre = .406 hectare

Weight conversions:
8 tablespoons = 1/4 lb.
3 teaspoons = 1 tablespoon
1 pint = 1 pound
2 pints = 1 quart
4 quarts = 1 gallon = 8 lbs.
2,000 lbs. = 1 ton
16 ounces = 1 pound
27 cubic feet = 1 cubic yard
1 peck = 8 quarts
1 bushel = 4 pecks

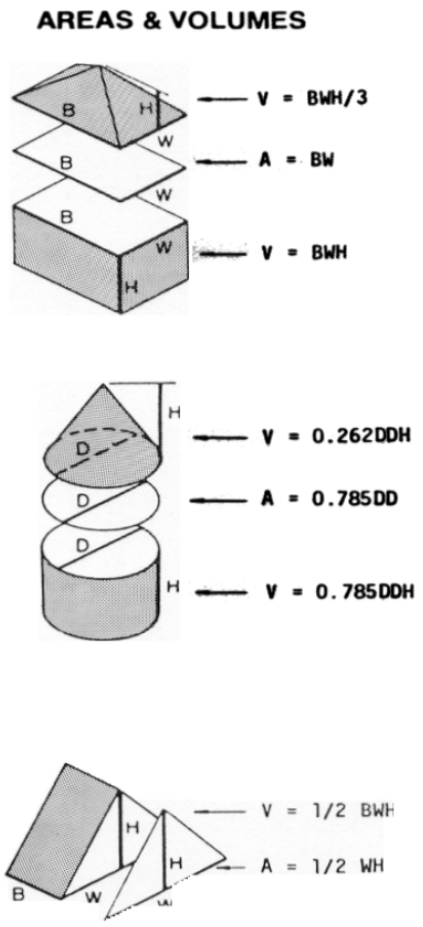
Other conversions:
1% = .01
1% = 10,000 parts per million (ppm)
1 Megacalorie (M-cal) = 1,000 calories
1 calorie (big calorie) = 1,000 calories (small calorie)
1 M-cal = 1 therm

Bushel weights and volumes:

	lb/cubic ft	cubic ft/ton
Oats = 32 lb/bu	26	77
Barley = 48 lb/bu	38.4	53
Shelled corn = 56 lb/bu	44.8	45
Wheat = 60 lb/bu	48	42
Corn & cob meal = 70 lb/bu	28	72
Soybeans = 60 lb/bu	48	42
Rye - 56 lb/bu	44.8	45
Soybean oil meal = 54 lb		37
Dairy feed = 35 lb		57

Storage and Feeding Dry Matter
Losses of Alfalfa

Storage method	Storage loss	Feeding loss
Small bales, stored inside	0.04	0.05
Round bales, stored inside	0.04	0.14
Hay stacks, stored inside	0.04	0.16
Round bales, stored outside	0.12	0.14
Hay stacks, stored outside	0.16	0.16
Haylage, vertical silo	0.07	0.11
Haylage, bunk silo	0.13	0.11



9. Income statement

Instructions

The profit and loss or income statement presents a summary of income, related expenses and the resultant profit or loss from operations for a given period, normally one year.

A detailed income statement (next page) starts with the Gross Cash Income and Total Operating Expenses. By subtracting them it arrives at the Net Cash Income. This value is what is subject to cash basis income taxes. The income statement then makes inventory adjustments to determine Net Operating Profit. These changes often make a significant difference to the income statement. Next, depreciation and other capital adjustments are made to determine Net Farm Income. The Net Farm Income is the true return to the farmer's unpaid labor and management and the farm equity used in the business.

The beginning and ending inventories come from the beginning and ending balance sheets (Section 8). While some of the purchase and sale information will be on Section 8, Hedging Account and Breeding Livestock transactions will have to be brought from Section 4. All values entered in this table should be consistent with Section 4 and Section 8. Note that most of the inventory changes are expense decreasing, but some are expense increasing, specifically accounts payable and accrued interest, so these two are calculated as beginning minus ending values, instead of ending minus beginning inventories.

While the detailed income statement is shown and calculated on the next page, the table below sumarizes the income statement's income and expense categories. Complete the table on the next page first, and then come back here to develop the summarized statement by bringing information from the detailed income statement to the right. You will need information from this summarized statement for the financial analysis.

	GROSS CASH INCOME (Section 4, Line 4)	
	Crops, Feed & Market Livestock inventory changes (4)	
	Receivables & Other Current Assets inventory changes (3)	
	Hedging Accounts inventory changes (6)	
	Breeding Livestock inventory changes (7)	
	Other Intermediate and Long-term Assets inventory changes (8)	
17	GROSS FARM INCOME (add all the values from this box)	
	TOTAL OPERATING EXPENSES (Section 4, Line 10)	
	Prepaid Expenses & Growing Crops (2, with swapped sign)	
	Payables & Accrued Interest Expenses (5, with swapped sign)	
	Total Depreciation and Other Capital Adjustments (15, with swapped sign)	
18	TOTAL EXPENSES (add all the values from this box)	
	NET FARM INCOME (17 - 18, it should match the NET FARM INCOME calculated on the table to the right)	

1	NET CASH FARM INCOME (Section 4 Line 4, minus Section 4 Line 10)	

INVENTORY CHANGES

	Ending Inventory	Beginning Inventory	Difference
Prepaid Expenses & Growing Crops	(Section 8, Lines 3+5)	(Section 8, Lines 4+6)	2 Ending-Beginning Values=
Receivables & Other Current Assets	(Section 8, Lines 7+11)	(Section 8, Lines 8+12)	3 Ending-Beginning Values=
Crops, Feed & Market Livestock in Inventory	(Section 8, Lines 13+15)	(Section 8, Lines 14+16)	4 Ending-Beginning Values=
Payables & Accrued Interest Expenses	(Section 8, Lines 73+95)	(Section 8, Lines 74+96)	5 **Beginning-Ending** Values=

	Ending Inventory	Sales/ Withdrawals	Purchases/ Deposits	Beginning Inventory	Difference (Ending+Sales-Purchases-Beginning)
Hedging Accounts	(Section 8, Line 9)	(Section 4, L1)	(Section 4, Line 8)	(Section 8, Line 10)	6
Breeding Livestock Use Cost Values when applicable	(Section 8, Line 19)	(Section 4, L13)	(Section 4, Line 20)	(Section 8, Line 20)	7
Other Intermediate and Long-term Assets Use Cost Values when applicable	(Section 8, L37+51)	(Section 4, L18)	(Section 4, Line 25)	(Section 8, Lines 38+52)	8

9	Total Inventory Change (add all the differences from the last column of the box above)	
10	Value of Farm Production (lines 3,4, 6, 7 and 8 from above plus Section 4 Line 4 minus Section 4, Lines 5 and 6)	
11	Value of unpaid operator labor and management ($30,000 per full time operator + 5% of the Value of Farm Production)	
12	NET OPERATING PROFIT (add lines 1 and 9)	

OTHER CAPITAL ADJUSTMENTS AND DEPRECIATION

	Ending Inventory	Capital Sales	Capital Purchases	Beginning Inventory	Ending+Sales-Purchases-Beginning=
Machinery, Equipment and Vehicles Use Cost Values when applicable	(Section 8, 28+36)	(Section 4, 14+15)	(Section 4, 21+22)	(Section 8, Lines 23+31)	13
Buildings and Improvements Use Cost Values when applicable	(Section 8, Line 50)	(Section 4, Line 47)	(Section 4, Line 46)	(Section 8, Line 45)	14

15	Total Depreciation and Other Capital Adjustments (add all the differences from the last column of the box above)	
16	NET FARM INCOME - Cost Value (add lines 12 and 15)	

10. Financial measurements

This Section includes three types of analyses: Ratio Analysis, Cash Flow Analysis, and Break-even Analysis. At the end, you will find a Farm Finance Scorecard with all the financial ratios in one page. For a complete look at the farm's financial health, make sure to also look at the Statement of Owner's Equity in Section 8.

Ratio Analysis

Having an understanding of the farm's financial ratios and measurements can provide guidance on improvement opportunities and expansion or succession feasibility. In order to be able to compare the relative financial condition of your business with others, with yourself over time, or with alternative potential scenarios, you need to use ratios. This is because business sizes vary, and ratios provide a standard metric independent of size. A large business and a small one may be very different in terms of dollar values on their financial statements, but ratios can indicate their relative degree of financial strength or weakness.

These financial measurements are calculated with information from the beginning and ending balance sheets, and the income and cash flow statements. Space is provided to assist with calculations, and a summary scorecard is presented at the end.

The indicators should be calculated each year and compared with:

01 Your performance in past years
02 Your budgets and projections
03 Top farms
04 Average farms

To find information about top and average farms, you may refer to FINBIN (https://finbin.umn.edu).

Measures are divided into five groups: Liquidity, Solvency, Profitability, Repayment and Replacement Capacity, and Efficiency.

Start by bringing the information you'll need from Section 4, 8 and 9 over to the table on the next page. If you want to analyze the whole farm, bring the numbers as they are. You may use the columns to bring cost values (CV) and market values (MV) from beginning and ending balance sheets.

If you want to analyze a specific enterprise, use the "EA" column on Section 4 to allocate percent income and expenses to each enterprise. Then, break up the Section 8 whole farm balance sheet "pie" into separate portions, making sure the parts add up to the total. Using this information, create separate Section 9 income statements for each enterprise. Once you have done this, you may perform separate analyses for each enterprise in this section.

Your local MSU Extension farm business management agent can perform a whole farm and enterprise business analysis if so you choose. You will have to provide them with the information from Section 4 and 8 for a whole farm analysis, or 4, 8 and 7 for an enterprise analysis.

From Section 4	Value
1 Total Operating Expenses (10)	
2 Non-Farm Income (28)	
3 Income and SS. Taxes Paid (30)	
4 Personal Debt Principal Payments (35)	
5 Family Living Expenses (39)	
6 Interest Expense (7)	

From Section 9	Value
25 Value of Farm Production (10)	
26 Value of Unpaid Operator Labor and Management (11)	
27 Depreciation and Amortization Expense (15)	
28 Cost Value Net Farm Income (16)	
29 Gross Farm Income (17)	
30 Total Expenses (18)	

From Section 8	Ending, CV	Ending, MV	Beginning, CV	Beginning, MV
7 Current Farm Assets (17)				
8 Intermediate Farm Assets (39, use CV or MV accordingly)				
9 Long-term Farm Assets (53, use CV or MV accordingly)				
10 Total Farm Assets (55 for ending value, and 56 for beginning value)				
11 Personal Assets (69, use CV or MV accordingly)				
12 Total Assets (71, use CV or MV accordingly)				
13 Current Farm Liabilities (79)				
14 Intermediate Farm Liabilities (86)				
15 Long-term Farm Liabilities (92)				
16 Accrued Interest on Farm Liabilities (94 for ending, and 95 for beginning)				
17 Scheduled Term Debt Payments (96 for ending, and 99 for beginning)				
18 Interest on Term Debt (98 for ending value, and 100 for beginning value)				
19 Total Farm Debt (101)				
20 Personal Liabilities (106)				
21 Total Debt (110)				
22 Farm Net Worth (120 for ending values, and 114 for beginning values)				
23 Farm Market Valuation Equity (115 for ending, and 116 for beginning)				
24 Cash Replacement Allowance (119)				

Liquidity Measures

Liquidity represents whether a farm can pay off its immediate debt. Low liquidity will look like cash always being tight. If liquidity is low, the operation may need to:

01 Refinance some debt,
02 Slow down expansion,
03 Sell off some assets,
04 Lease instead of own ground, equipment or buildings,
05 Reduce draws, or
06 Pay down loans.

The **Current Ratio** tells us if we have enough current assets to cover our current liabilities if we had to pay them off immediately. Remember that current is defined as a 12-month planning horizon. The current portions of intermediate and long-term debts are included in this ratio, meaning that any principal and interest on these debts projected to be paid in the next year.
Desired level varies by type of farm, with dairy able to have a lower value compared to fruit or cash crop operations. A value of 1.0 means current liabilities are equal to current assets, and while there are sufficient current assets to cover current liabilities, there is no safety margin. The larger the ratio value, the more liquid the business, and vice versa. A ratio less than 1.3 is considered "vulnerable", with ratios greater than 2 considered to be "strong". 1.3 to 2 is the “caution” zone. If your current ratio is low, you can refinance short-term debt into long-term debt, restructure loans with longer terms, or sell intermediate or long-term assets and pay short-term debts.
The current ratio is calculated as current farm assets (7) divided by current farm liabilities (13).

Current Ratio	

The **Working Capital to Gross Revenue Ratio** tells us the operating capital owned in the short term by the business, relative to its size, to purchase inputs or other items after the sale of current assets and the payment of current liabilities. Higher ratios indicate higher liquidity.
Some of the causes of a low working capital to gross revenues ratio are low profits, buying too much in capital items with cash versus borrowed money, having a current-heavy debt structure, and high family living expenses.
A working capital to gross revenues ratio under 10% is believed to be “vulnerable”, while over 30% it is believed to be “strong”, and 10% to 30% is the “caution” area. If your working capital to gross revenues ratio is under 10% or even negative, you should sell some assets and find outside sources of cash, such as off-farm income, stocks/bonds, gifts, etc.
The working capital to gross revenues ratio is calculated as Working Capital (below) divided by Gross Farm Income (29).
The **Working Capital** tells us the operating capital available in the short term from within the business, and is calculated as the total current farm assets minus the total current farm liabilities (7 - 13).

Working Capital	
Working Capital to Gross Revenues Ratio	

Solvency Measures

Solvency is the ability to pay long-term debt and represents a farm's ability to thrive in the long term. If solvency is low, you should:

01 Retain more of the net farm income instead of reinvesting or drawing it out, or

02 Sell some assets to reduce debt.

Since solvency ratios look at the current situation of the farm, they are calculated using market values.

The **Debt to Asset Ratio** tells us what percentage of assets are owed to creditors. It can be calculated as **total** debt to asset ratio or **farm** debt to asset ratio. The total debt to asset ratio tells us what percent of all your assets are actually the bank's, and the farm debt to asset ratio represents the percent of farm assets that are really the bank's. It measures the degree of risk exposure of the business and its ability to take hits.
A higher ratio is an indicator of greater financial risk and lower borrowing capacity. Ratios greater than 60% are considered to be "vulnerable", with over 100% meaning that the business is insolvent, so if the assets were all sold, there would not be enough money to pay all the debts.
Ratios under 30% considered to be "strong". Anything between 30% and 60% is considered the "caution" area.
It is calculated as Total Debt (21) divided by Total Assets at Market Value (12) for a Total debt to asset ratio; or Total Farm Debt (19) divided by Total Farm Assets (10) for a Farm debt to asset ratio. For more granular information, you could divide current farm liabilities by current farm assets (13 / 7), intermediate farm liabilities by intermediate farm assets (14 / 8), long-term farm liabilities by long-term farm assets (15 / 9), and personal liabilities by personal assets (20 / 11). Recall that for Liabilities and Current Assets Cost Values and Market Values are the same.

Total Debt to Asset Ratio	
Farm Debt to Asset Ratio	
Current Farm Debt to Asset Ratio	
Intermediate Farm Debt to Asset Ratio	
Long-Term Farm Debt to Asset Ratio	
Personal Debt to Asset Ratio	

An **Equity to Asset Ratio** could be further calculated as 100% minus the debt to asset ratio. So it is the reverse of the debt to asset ratio, representing your share of the business, or the relationship between owner's equity and total assets.
It is thought to be "strong" if over 70% and "vulnerable" if under 40%, with a "caution" area between 40% and 70%.
It can also be calculated as Farm Net Worth (22) divided by Total Farm Assets at Market Value (10). The debt to asset ratio and the equity to asset ratio should add up to 1.

Equity to Asset Ratio	

The farm **Debt to Equity Ratio** compares the bank's ownership to your ownership. It also indicates how much the owners have leveraged (i.e., multiplied) their equity in the business, so it is also called the leverage ratio.
When the debt to equity ratio is equal to 1, lenders and the owner are providing equal portions of the financing. Smaller values are preferred, and the debt/equity ratio will approach zero as liabilities approach zero. Large values result from small equity, which means an increasing chance of insolvency. If the ratio is over 1.5 it is considered to be "vulnerable", and if it is under 0.43 it is considered to be "strong". Anything between 0.43 and 1.5 is "caution".
It is calculated as Total Farm Liabilities (19) divided by Farm Net Worth at Market Value (22).

Debt to Equity Ratio	

Profitability Measures

Profitability is generally the first area of concern, although not the most important one. It represents the difference between the value of goods produced and the cost of the resources used in their production. Low profitability may be a matter of lack of adequate resources and can sometimes be increased by adding more:
01 Labor,
02 Management, or
03 Assets, such as land, machinery or livestock.

The most basic measure of profitability is the **Net Farm Income**. It represents the return to 3 things that you have invested in the business: your labor, your management and your equity. It is the reward for investing your unpaid family labor, management and money in the business instead of elsewhere. Any portion of the Net Farm Income left in the business, i.e., not taken out for family living and taxes, will increase your farm net worth. It can be calculated as Cost Value Net Farm Income or Market Value Net Farm Income. Cost Value Net Farm Income (28) was calculated on Section 9, line 16. The Market Value Net Farm Income is calculated as the Cost Value Net Farm Income (28) plus a Change in Market Valuation, which represents inflation and capital gains and is this year's Farm Market Valuation Equity (23) minus last year's Farm Market Valuation Equity (23 of last year's Balance Sheet).

Any analysis based on cost values will measure the actual returns to investment in the business. Market value measures reflect the opportunity cost of investing assets in the business. Thus, to know how much the money put into the farm is earning, look at the cost measures. To decide if money should continue to be invested in the farm, look at the market measures. Comparisons across farms are more meaningful using market values, while comparisons from year to year of an individual farm are more meaningful using cost values.

Net Farm Income at Cost Value	
Change in Market Valuation	
Net Farm Income at Market Value	

The **Rate of Return on Farm Assets** represents the average interest rate being earned on all (yours and creditors') investments in the farm. In other words, how much profit is being generated in relation to the amount of assets employed by the business. It's also known as the rate of return on investment or capital.
Ratios under 4% are considered "vulnerable", while over 8% are considered to be "strong". 4% to 8% is "caution".
The Rate of Return on Farm Assets is calculated as the Return on Farm Assets divided by the Average Farm Assets. The Average Farm Assets is simply the sum of the total farm assets (10) from the beginning and ending balance sheets at cost value divided by two for a cost average, or the sum of the equivalent market values divided by two for a market average. The Return on Farm Assets is Net Farm Income (at either cost or market value as calculated before) plus Total Interest Expense minus the Value of Unpaid Operator Labor and Management (26). Calculate the Total Interest Expense as Interest Expense (6), minus Accrued Interest on Farm Liabilities (16) of last year's balance sheet plus Accrued Interest on Farm Liabilities (16) of this year's balance sheet. The Return on Farm Assets is calculated subtracting the Value of Unpaid Labor and Management because we are interested in isolating the return to the farm assets only, excluding the value of management. Without this adjustment, the ratio would include not just the contribution of assets toward earning farm income, but also owner operators' labor and management contributions. Use Cost Value Average Farm Assets along with Cost Value Net Farm Income for a Cost Value Rate of Return on Farm Assets, and Market Value Average Farm Assets along with Market Value Net Farm Income for a Market Value Return on Farm Assets.

Total Interest Expense	
Average Farm Assets at Cost Value	
Average Farm Assets at Market Value	
Return on Farm Assets at Cost Value	-30,000.0
Return on Farm Assets at Market Value	-30,000.0
Rate of Return on Farm Assets at Cost Value	
Rate of Return on Farm Assets at Market Value	

The rate of return on assets is the return on all assets or capital invested in the business. On most farms and ranches, there is a mixture of debt and equity capital. Another important measure of profitability is the **Return on Equity**, the return or interest on the owner's share of the capital invested. Should the business be liquidated and the liabilities paid off, only the equity capital would be available for alternative investments. This return can be compared to returns available if your equity were invested somewhere else, such as a certificate of deposit. If the farm has no debt, the return on equity will be the same as the return on assets. Rate of return on farm equity in general should be higher than rate of return on assets.
Ratios under 3% are considered "vulnerable", and if it becomes negative that means that equity will be used to pay debt interest. Several years of this relationship can lead to insolvency. Ratios greater than 10% are considered "strong". 3% to 10% is the "caution" area.

The Rate of Return on Equity is the Return on Farm Equity divided by the Average Farm Net Worth. The Return on Farm Equity is Net Farm Income (at either cost or market value as calculated before) minus the Value of Unpaid Operator Labor and Management (26). The Average Farm Net Worth is the sum of Farm Net Worth (22) from the beginning and ending balance sheets divided by two. Use cost values for a cost average, and market values for a market average.

Return on Farm Equity at Cost Value	-30,000.0
Return on Farm Equity at Market Value	-30,000.0
Average Farm Net Worth at Cost Value	
Average Farm Net Worth at Market Value	
Rate of Return on Equity at Cost Value	
Rate of Return on Equity at Market Value	

The **Operating Profit Margin Ratio** measures the operating efficiency in terms of the return per dollar of sales. A higher value means the business is making more profit per dollar of revenue. A low value can be caused by low production, low prices, high input costs or operating expenses, or overall inefficient production. These expenses include all cash farm expenses, but not interest. Interest expense does not affect the operating profit margin ratio. To recognize that unpaid labor and management contributed to earning the profit, the value of unpaid labor and management is subtracted. This makes the results comparable to those from businesses where all labor and management is hired, as these expenses have already been deducted in the computation of income from operations. A high value of unpaid labor and management will reduce the operating profit margin ratio. A healthy operating profit margin is a result of low expenses relative to the value of farm production (Value of Farm Production is the same as value added–it's basically taking away from gross sales the major outside inputs your farm purchases: in cattle operations where they are buying a lot of feed, you would take the feed away; in a greenhouse operation, you would subtract away the value of plantings and plugs that have been started elsewhere and you bring into your farm.)
Operating profit margin ratios under 15% are considered "vulnerable", while ratios greater than 25% are considered "strong". A 25% operating profit margin ratio means that on average, for every dollar of revenue, 25¢ remained as profit after paying operating expenses (including owner's labor and management) necessary to generate that dollar. 15% to 25% is the "caution" area.
The Operating Profit Margin ratio is calculated as Return on Farm Assets calculated before (either at cost or market value), divided by Value of Farm Production (25).

Operating Profit Margin Ratio at Cost Value	
Operating Profit Margin Ratio at Market Value	

The **Asset Turnover Rate** measures how efficiently assets are being utilized in the business to generate dollars of value-added production. You could think of it as capital productivity. The combination of the asset turnover rate and the operating profit margin ratio determines the overall profitability in the business. The asset turnover rate times the operating profit margin ratio gives you the rate of return on farm assets. So in order to improve the rate of return on assets, you either must have the same income with a lower investment (ie, improve your asset turnover rate), or make more profit on every dollar that you turn into the business (ie, improve your operating profit margin). Hence, a low asset turnover rate can be improved by liquidating unproductive assets, including machinery, unproductive land, or high value land; or increasing the value of farm production. A farm business that owns most of its assets, including land and facilities will have a relatively low asset turnover rate compared to a business that rents most of its land and facilities.
Ratios under 30% are considered to be “vulnerable”, and over 45% are considered to be “strong”. Anything in between is “caution”. An asset turnover rate of 25% indicates that gross revenue was 25% of the total capital invested in the business. At this rate, it would take 4 years to produce agricultural products with a value equal to the total assets.
Asset Turnover Rate is Value of Farm Production (25), divided by Average Farm Assets (at cost or market value) calculated before.

Asset Turnover Rate at Cost Value	
Asset Turnover Rate at Market Value	

EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization) is another profitability measure that shows earnings that would be available for debt repayment.
It is calculated as Net Farm Income at cost value (28) plus Total Interest Expense calculated before, minus Depreciation and Amortization Expense (27).

EBITDA	

Repayment and Replacement Capacity Measures

Solvency and Liquidity will not give your lender a good idea of whether you are in a good position to pay intermediate and long term debt and replace needed capital. That is why there are also repayment capacity measures. They are similar to solvency, but represent your ability to replace assets while paying for business and personal obligations (debt, living expenses and taxes), using both farm and nonfarm income. They are not measures of business performance alone, but of someone’s borrowing ability.

The **Term Debt Coverage Ratio** measures the ability of businesses to cover all intermediate and long-term debt payments.
A ratio of 1 or 100% means that there is just enough money to service the debt. A ratio of less than 100 indicates that the business had to liquidate inventories, run up open accounts, borrow money, or sell assets to make scheduled payments. Ratios less than 125% or 1.25 are considered "vulnerable", while ratios greater than 175% or 1.75 are considered "strong".
The Term Debt Coverage Ratio is calculated as Capital Debt Repayment Capacity divided by the Beginning Scheduled Term Debt Payments (17).
Capital Debt Repayment Capacity measures the amount generated from farm and non-farm sources, to cover debt repayment and capital replacement. Repayment capacity is a measurement of the ability of the business to pay interest and principal in relationship to how debt is structured. It is calculated as Net Farm Income at Cost Value (28), plus Depreciation (27), plus Non-Farm Income (2), minus Family Living Expenses (5), minus Principal Payments on Personal Debt (4), minus Income and SS.Taxes Paid (3), plus last year's Interest on Term Debt (18).
A farm with a weak repayment capacity may or may not have a profitability problem. A fast debt repayment structure will generate a lower repayment capacity. The farm may be experiencing cash flow problems, creating a weak current ratio because of the fast repayment schedule.
A farm with a relatively good rate of return on assets and net farm income ratio, but a weak repayment capacity can restructure its debt to spread out payments and improve cash flow.

Capital Debt Repayment Capacity	
Term Debt Coverage Ratio	

The **Replacement Margin Coverage Ratio** is Capital Debt Repayment Capacity divided by the sum of the Beginning Scheduled Term Debt Payments (17) and the Cash Replacement Allowance (24).
A ratio under 1 or 1.1 indicates that you did not generate enough income to cover term debt payments and unfunded capital purchases. A ratio over 1.4 is considered to be strong.

Replacement Margin Coverage Ratio	

Two extra repayment and replacement capacity measures could be calculated: the Capital Debt Repayment Margin and the Replacement Margin.

Capital Debt Repayment Margin is the amount of money remaining after all operating expenses, taxes, family living costs, and scheduled debt payments have been made. It's really the money left out from the cash generated by the farm, after paying all bills, that is available for purchasing or financing new machinery, equipment, land or livestock.
It is calculated as the Capital Debt Repayment Capacity calculated before, minus the Beginning Scheduled Term Debt Payments (17).

Capital Debt Repayment Margin	

The **Replacement Margin** measures the amount of income remaining after paying principal and interest on term loans and unfunded (cash) capital purchases.
It is calculated as the Capital Debt Repayment Margin calculated before minus the Cash Replacement Allowance (24).

Replacement Margin	

Efficiency Measures

If adequate resources are available but profitability levels are still low, then efficiency measures can help pinpoint the problem. Efficiency measures represent the effects of management decisions on gross income. Poor efficiency is usually a result from either:

01 Low efficiency in the use of assets, which may be solved with training, by using higher quality inputs, or by changing enterprises;
02 Low selling prices, which can be solved by using new marketing tools, checking new markets, or improving product quality; and/or
03 High costs. Costs can be lowered by switching suppliers, buying raw materials, and using older equipment.

Efficiency ratios show how gross farm income is used, and the sum of the four efficiency ratios equals 100% (of Gross Farm Income).

The **Operating Expense Ratio** shows the proportion of farm income that is used to pay operating expenses, not including debt principal or interest payments. Farms with a high proportion of rented land and machinery or hired labor will tend to have higher operating expense ratios. Ratios greater than 80% are considered "vulnerable", while values under 60% are considered "strong", with a "caution" area in between.
It is calculated by taking Total Expenses (30), minus the Total Interest Expense calculated before and plus Depreciation (27), and dividing this total by the Gross Farm Income (29).

Operating Expense Ratio	

The **Depreciation Expense Ratio** indicates how fast the business wears out capital. It tells what proportion of farm income is needed to maintain the capital used by the business. A farm that has new facilities will experience a high depreciation ratio, but highly utilized facilities can keep the depreciation ratio under 10%. The only way to decrease the depreciation ratio without a major change in the business is to decrease the amount of capital purchases each year. A higher-than-average ratio may indicate underused capital assets. Conversely, a lower-than-average ratio may indicate that the farm frequently uses custom operations, that the machinery is old or perhaps too small, or that the farm has a lower investment in buildings or other improvements.
A ratio greater than 10% is considered "vulnerable", while a ratio under 5% is considered "strong".
This ratio is calculated as Depreciation and Amortization Expense (27) divided by Gross Farm Income (29).

Depreciation Expense Ratio	

The **Interest Expense Ratio** is used to measure the interest expense compared to the gross income from the operation. It shows how much of the gross farm income is used to pay for interest on borrowed capital. A high interest expense ratio indicates that the business is not generating much income in relation to the amount of interest being paid and needs to reduce debt or increase the output with the investment that it has. High depreciation and high interest ratios often go together. If these two items are high, the operating expense ratio needs to be relatively low in order to have a satisfactory net farm income ratio.
If the interest expense ratio is over 10%, it is considered “vulnerable”, while if under 5% it is considered “strong”.
It is calculated as the Total Interest Expense calculated before divided by the Gross Farm Income (29).

Interest Expense Ratio	

The **Net Farm Income Ratio** is the amount of money left over after operating, depreciation and interest expenses. It compares profit to gross farm income. It shows how much is left after all farm expenses except for unpaid labor and management are paid. A low net farm income ratio indicates the farm is not generating much profit for the unpaid labor or for net worth gain. Businesses that do not have any unpaid labor and where the owners are paid through salaries will tend to have lower farm income ratios because the value of labor is included in the cash expenses. The only difference between the Operating Profit Margin Ratio and this one is the value of unpaid family labor and management.
A net farm income ratio under 10% is considered "vulnerable", while greater than 20% is considered "strong".
This ratio is calculated as Net Farm Income at cost value (28), divided by Gross Farm Income (29).

Net Farm Income Ratio	

The four efficiency ratios can be interpreted as an amount in cents, of every dollar of revenue coming into the business, that are either used to pay for the different types of expenses or remain as net income.

Cash Flow Statement Analysis

The cash flow statement can show us differences between the cash provided by the different types of activities at the farm. If the cash generated from the “Operating” part is sufficient to fund some “Investing” activities and also reduce some debt “Financing”, this is a good scenario. So, the Cash Provided by Operating activities should ideally be greater than the Cash Provided by Investing Activities plus the Cash Provided by Financing Activities. In general, the Cash Provided by Operating Activities should be positive and the Cash Provided by Investing and Financing Activities should be negative. If the assets or “Investments” have to be sold off (positive investing) to fund shortages in the “Operating” portion, and/or to reduce debt (“Financing”), that would not be a good situation. Another undesirable scenario would be that the “Operating” portion was not sufficient to cover for living and taxes plus any “Investments” made during the year, so debt “Financing” was needed to fund the rest of it (positive financing).
The Cash Provided by Operating Activities is calculated as Gross Cash Income minus Total Operating Expenses excluding Hedging deposits (Section 4 Line 4, minus Section 4 Line 10).
The Cash Provided by Investing Activities is calculated as Total Farm Capital Sales (Section 4, Line 19) excluding Livestock sales (Section 4, Line 12), plus Personal Capital Sales (Section 4, Line 27) minus Total Farm Capital Expenditures (Section 4, Line 26) and minus Personal Capital Purchases (Section 4, Line 29).
The Cash Provided by Financing Activities is calculated as Money Borrowed for both farm and personal loans (Section 4, Lines 32 and 33) plus Personal Income (Section 4, Line 28 minus Line 27) plus Capital Contributions minus Capital Distributions (Section 8, Line 110), minus Principal Payments for both farm and personal loans (Section 4, Lines 34 plus 35), and minus Family Living Expenses (Section 4, Line 31 minus Line 29).

Cash Provided by Operating Activities	
Cash Provided by Investing Activities	
Cash Provided by Financing Activities	

Break-even Analysis

Break-even analysis helps us find the point at which costs equal revenue. Break-even points are useful for determining what type of marketing and what inputs to use. A break-even point is the number of units of a product that must be sold to cover the fixed and variable costs for its production at a specific price point. Or, alternatively, at what price a certain volume of product should be sold to cover its costs.

Break even points can be calculated in different ways to achieve different goals:
01 knowing when you’ll start covering costs,
02 knowing how much you need to make in order to maintain net worth, or
03 knowing how much you need to make to meet cash flow demands such as debt payment and machinery fleet maintenance.

The math to calculate break-even points, independently from the goal of the analysis, is always:

- Cost divided by Expected Production gives you a Break-Even Price, and
- Cost divided by Expected Price will give you Break-Even Production.

You choose what costs to use depending on your goal:

01 if you want to know when you'll start covering costs, use fixed and variable costs, or

02 if you want to know how much you need to make in order to maintain net worth, add money needed for debt interest and principal payments, family living expenses and taxes to your fixed and variable costs

03 if you want to know how much you need to make in order to meet cash flow demands, go one step further and add depreciation (economic, not tax) to the costs in 01 and 02 before.

If you do not have costs broken down by product, here is a template to roughly estimate break even prices based on quantities produced, using information from the whole-farm financial analysis. The real prices received can be averaged from information found on Section 2, and real quantities produced can be found on Section 7. Use the unit column to indicate bushels, pounds, tons, etc. Gross income is calculated as real price received times real quantity produced. The percent allocation is calculated as gross income for the specific crop divided by total gross income from all crops listed. The Net Farm Income Break Even Price is then calculated as the Real Price Received minus the result of multiplying the Percent allocation by the Cost Value Net Farm Income (Section 9, line 14) and dividing by the Real Quantity Produced. The Net Worth Change Break Even Price is calculated using the same formula, replacing that value with the difference in Cost Value Farm Net Worth (Section 8, line 22) between Ending and Beginning balance sheets. And the Cash Flow Break Even Price is calculated using the same formula, replacing the Cost Value Net Farm Income (Section 9, line 14) with the Replacement Margin calculated before.

Commodity	Real Price Received	Real Quantity Produced	Unit	Gross Income	Percent Allocation	Break-even Prices on		
						Net Farm Income	Cash Flow	Net Worth Change

Farm Finance Scorecard

		Vulnerable	Strong
LIQUIDITY			
Current ratio		1.3	2.0
Working capital to gross revenue		10%	30%
SOLVENCY			
Farm debt-to-asset ratio		60%	30%
PROFITABILITY			
Rate of return on farm assets		4%	8%
Rate of return on farm equity		3%	10%
Operating profit margin ratio		15%	25%
Asset turnover rate		30%	45%

		Vulnerable	Strong
REPAYMENT CAPACITY			
Term-debt coverage ratio		1.3	1.8
Replacement margin coverage ratio		1.1	1.5
FINANCIAL EFFICIENCY			
Operating expense ratio		80%	60%
Depreciation expense ratio		10%	5%
Interest expense ratio		10%	5%
Net farm income ratio		10%	20%