

Module 4: Managing Your Finances

In this module, you will:

1. Learn about the importance of recordkeeping and how to keep accurate records.
2. Learn which financial statements are essential, how to understand them, and how and when to prepare them.
3. Get tips for estimating your income and expenses and keeping good records.

Imagine a typical day on your farm or ranch. Perhaps you wake up early to harvest the shares for your CSA and various veggies for a couple restaurants in town. While you're harvesting, the company you buy chicken feed from drops off your latest order. You're in the middle of something, so you stuff the receipt into your pocket. Later, after you've harvested everything, you pack your truck and head out to make your deliveries. The first restaurant has already paid for its order using PayPal but the second pays with cash, which you put into your wallet. It's only the first week of your CSA, so some of your customers haven't paid their remaining balance yet. As they do, you write their name down on a scrap of paper. You get home late that night, toss your clothes into the laundry and go to bed. Later that month, you find a few minutes to go over your finances. You try to remember everything you've spent and all the payments you've received but can't. You *know* you kept all of your receipts—but where are they?

Alternately, imagine a situation where you have a clear policy in place for you and your employees so that every time you get a receipt, each person knows exactly where it goes. When the chicken feed arrives, you take the receipt and stick it into the plastic receipt envelope hanging on the wall in the barn. When you're out making deliveries, you grab your income tracking book out of the truck glove box and note PayPal and cash payments in it as you get paid by the restaurant and the CSA customer. On your way home, you put the income tracking book back in the glove box and take the receipts you have for in-town purchases you made and put them in the plastic receipt envelope that you keep in the truck. At the end of the week, you stop by the barn and the truck to pick up the receipts and the income book and quickly categorize them and add them into QuickBooks. When you're wondering about how the farm is doing financially, you can quickly check in with the software to get your up-to-date numbers and at the end of the year when you're ready to go to the bank for a loan or to your accountant for tax season, you can rapidly export the documentation you need.

Why to Keep Records

Keeping accurate records is the first (and most important!) step towards successfully managing your farm or ranch's finances. There are three main reasons for keeping good financial records:

1. **Managing your business and making decisions:** Keeping records will allow you to evaluate the overall financial health of your farm or ranch and identify areas and strategies for improvement.
2. **Filing income taxes:** You will need good records in order to file your taxes accurately. Keeping records will allow you to deduct expenses, ensure that you don't overpay or underpay, and help you in case of an audit.
3. **Obtaining credit:** If you want to borrow money, you will need to prepare a variety of financial statements for your prospective lender to demonstrate your ability to repay any loans that you receive. Keeping records will allow you to prepare these statements and talk confidently about your finances.

We will discuss specific strategies and tips for recordkeeping at the end of this module. Right now, we'll talk about tracking and categorizing your expenses and which financial statements are essential for sound financial management. If you come across any terms that are unclear, try the **Glossary** at the end of this module.

Key Financial Statements

This module will work through the most common and important financial statements in the order we find to be most effective when working with beginning farmers. First, you need to set up your system so that it makes sense for your operation. That involves developing a **chart of accounts**. The next step most new business owners take is planning their finances for the first year. The **projected cash flow** will allow you to plan your income and expenses and see where there are gaps in financing. Third, business owners use a **cash flow statement** to track actual income and expenses each month. At the end of the year (or more regularly), these actual numbers are totaled up in an **income and expense statement**. While the income and expense statement is a useful document for many reasons, one of its primary uses is for filing the **Schedule F**, the tax form for farmers and ranchers. Finally, we will discuss the **balance sheet**, which differs from the other financial statements in that it is a snapshot of your financial position at a specific point in time, referencing your assets (checking accounts, land, tractors, etc.), liabilities (loans on land, tractors, etc.), and equity (the difference between the two, which is roughly your stake in the business). The balance sheet will be introduced here and discussed more in Module 5 because it is often used in financial planning and calculating ratios, which lenders use to evaluate your business' financial health.

Financial Statement Summary

Chart of Accounts: Establishes categories for tracking finances

Projected Cash Flow: Month-to-month budget for planning future income and expenses

Cash Flow Statement: Month-to-month tracking of past income and expenses

Income and Expense Statement: Assessment of overall income and expenses, typically at year-end

Schedule F: Tax Form for Farms

Balance Sheet: Snapshot of financial position at a specific point in time, typically at year-end

See the Glossary at the end of this module for more definitions.

Categorizing Your Finances: Chart of Accounts

The first component of keeping good financial records is categorizing your income and expenses. The way in which you categorize can certainly change over time, but it's worth thinking through this in advance as you're setting up your system.

A **chart of accounts** is simply a list of categories into which you group your income and expenses. For example, income categories could include Restaurant Sales, Wholesale, and Farmers Market. Expense categories could include Seeds, Accountant, and Fuel.

Setting Up Your Chart of Accounts

The goal is to have a list of categories that is simple enough that they're useful, but complex enough that they're useful. If you have 100 categories, you may have a hard time figuring out where a receipt fits and you may not be able to remember the list when you're sitting in your truck looking at a receipt. Alternately, if you only have 4 categories, you'll be lumping things together too much and you will have to go through and recategorize everything when it's time to file your taxes.

Taxes and the Schedule F are an important consideration when setting up your Schedule F. Make sure you don't *combine* categories in your chart of accounts that you'll later have to *separate* for your Schedule F. For example, if you include gas with your car expenses in your chart of accounts, you'll have to sort through all of your receipts when you file your Schedule F because gas and car expenses are categorized separately. At the same time, there are categories like Mortgage that don't show up in the Schedule F that you may still want to track for your business. Make your chart of accounts work for your business and the things you want to track first and then double check that it fits the Schedule F. A list of categories in the Schedule F is available on page 52.

Understanding the Chart of Accounts

You can see from the example chart of accounts on the following page that some of the expense categories come directly from the Schedule F, like Fertilizers and Lime, and others are things the farmers wanted to track themselves, like separating out car repairs and car insurance/registration or separating accounting costs out of what would be lumped together in "other expenses" on the Schedule F. They've chosen not to include other categories from the Schedule F that don't apply to their business, like Employee Benefit Programs and livestock-related categories, although they may choose to add those in the future. The numbers to the left of each category

Chart of Accounts for North Valley Farm

Assets (1000)		Revenue (4000)	
1010	Checking Account	4010	Sales CSA
1020	Savings Account	4020	Sales Farm Stand
1030	Accounts Receivable	4030	Sales Wholesale
1040	Equipment	Expenses (5000)	
1050	Tractor	5010	Chemicals
1060	Inventory (stored crops)	5020	Fertilizers and Lime
1070	Land and structures	5030	Fuel/Oil (for farm equipment)
		5040	Business Insurance
	Liabilities (2000)	5050	Mortgage
2000	Accounts Payable	5060	Tractor Loan Payments
2030	Credit Card	5070	Car/Truck Repairs and Fuel
2040	Tractor loan	5080	Car/Truck Insurance and Registration
2050	Land and structures loan	5090	Repairs/Maintenance (not car/truck)
		5110	Custom Hire
	Equity (3000)	5120	Accountant
3010	Partner 1 Investments	5130	Seeds & Plants
3020	Partner 2 Investments	5140	Conservation Expenses
3030	Net Profit (Earnings)	5150	Supplies
		5160	Fees
		5170	Taxes
		5180	Utilities

can be assigned by your recordkeeping system (e.g. Quickbooks) or you can assign them based on groupings that make sense to you.

The left side of the chart of accounts contains categories that are used in the balance sheet; the right side contains categories that are used in projected cash flow, cash flow statements, and income and expense statements. Throughout this module, we will carry these same categories through our example financial statements.

How to Use Your Chart of Accounts

Each time you get a receipt or invoice for an income or an expense, you should find a place on it to write the date, category, and any other memo information you want to keep track of. You can find a stamp for this or you can develop your own way to make sure you're tracking the info you most need.



Planning Your Finances: Projected Cash Flow Statement

Also called a projected farm budget, your **projected cash flow statement** is your best estimate of the amount and timing of your income and expenses. That is, when you *anticipate* money coming in, money going out, and how much. There are two main reasons to complete a projected cash flow statement: to identify time periods when you may struggle to meet financial obligations and to identify time periods when cash will be available for new investments. You will also need a projected cash flow to receive financing.

Projected Cash Flow Statement (2016) for North Valley Farm

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Beginning Cash	8,000	6,088	3,076	54	1,227	3,915	7,493	11,506	19,614	24,287	27,065	26,848	
Income													
CSA				5,000	3,000			3,000	2,000				13,000
Farm Stand					1,000	2,000	2,500	4,000	3,000	1,750	750		15,000
Wholesale					1,300	4,000	4,500	5,000	4,250	3,000	950		23,000
Total Income	0	0	0	5,000	5,300	6,000	7,000	12,000	9,250	4,750	1,700	0	51,000
Expenses													
Chemicals		100	150	50									300
Fertilizers					500			200					700
Fuel/Oil (for farm equipment)			50	50	70	80	85	90	50	30	30		535
Business Insurance				200				625					825
Mortgage	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	17,016
Tractor Loan Payments	144	144	144	144	144	144	144	144	144	144	144	144	1,728
Car/Truck Repairs and Fuel	50	50	60	65	80	80	90	340	90	80	75	500	1,560
Car/Truck Insurance/Registration									650				650
Repairs/Maint. (not car/truck)									750				750
Custom Hire						300	600	650	650				2,200
Accountant				1,500									1,500
Seeds & Plants		1,000	500										1,500
Supplies	100	100	100	200	200	200	225	225	225	100	50		1,725
Fees							225						225
Taxes			400						400				800
Utilities	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Total Expenses	1,912	3,012	3,022	3,827	2,612	2,422	2,987	3,892	4,577	1,972	1,917	2,262	34,414
Net Income (Profit/Loss)	-1,912	-3,012	-3,022	1,173	2,688	3,578	4,013	8,108	4,673	2,778	-217	-2,262	16,586
Ending Cash	6,088	3,076	54	1,227	3,915	7,493	11,506	19,614	24,287	27,065	26,848	24,586	

Understanding Your Projected Cash Flow Statement

Note: in the example above, we have shown the projected cash flow from North Valley Farm for 2016 so that we can compare it with the actual cash flow statement from 2016. For your purposes, you will want to create your projected cash flow for the upcoming year.

As you can see from the example from North Valley Farm above, the projected cash flow statement uses the categories from the right side of your chart of accounts. The first line, **beginning cash**, shows the amount in the bank account at the beginning of each month and relates directly to the **ending cash** from the end of the month below. For example, the ending cash from March 2016 was projected to be \$54 and so the beginning cash from April 2016 is also projected to be \$54. The **net income** line is the total income minus total expenses. You can see that North Valley Farm projected that in 2016 they would have net losses in January, February, March, November, and December. That is not uncommon in a vegetable operation like theirs where sales do not typically take place outside of the growing season.

How to Use Your Projected Cash Flow Statement

The best time to complete your projected cash flow statement is when you begin planning for the upcoming year. For most farmers and ranchers, this will be at the beginning of the year. Some farm consultants recommend using an ongoing, 13-month budget rather than just planning one year at a time. What they've seen is that we plan our cash through December, without realizing that we have major upcoming expenses in January and February of the following year that we've forgotten about and forgotten to prepare for. To do a 13-month budget, check in with your budget each month and add in one more month of projections to the future. For example, in January 2016, North Valley Farm would have reviewed their budget, entered their expenses and income into the cash flow statement (see below for more on that topic) and added in a budget for January 2017 to the projected cash flow.

Tracking Your Finances: Cash Flow Statement

A **cash flow statement** is a statement of all income (cash flowing in) and expenses (cash flowing out) broken down by month. You'll notice that the categories on the cash flow statement again correspond to the categories on the right side of the chart of accounts. A cash flow statement can reflect either only cash flow specific to your business or include both personal and business cash flow (called a consolidated cash flow). Since many beginning farmers and ranchers rely on income from off-farm jobs during the first few years, a consolidated cash flow statement might make more sense. A consolidated cash flow statement includes all cash from off-farm jobs, loans, selling capital assets, etc. It also includes personal expenses, such as living expenses, student loan payments, etc. Just remember that this may hide profitability problems with your farm enterprise if your off-farm income is significantly subsidizing the farm operation.

The first step to tracking your finances is determining how you will record your income and expenses. There are three methods for doing so: cash, accrual, and crop. Most people use the cash method, as it's the easiest to use and understand. Consult with your accountant about which method is right for you and your business.

Understanding Your Cash Flow Statement

Whereas the projected cash flow is used to estimate future costs and income, the cash flow statement is used to track past and current costs and income. You can see though that it has the same categories as the projected cash flow statement. For simplicity purposes, we have not included cents in the example cash flow but for your farm, you want to enter the exact income and expenses each month to capture the most accurate picture of your business as possible.

You will notice from looking at the example cash flow statement that in 2016, North Valley Farm spent more money than they made (net loss) in January, February, March, November, and December. For the most part, that didn't cause major issues to their business because they had enough cash to cover those added expenses. Remember from above that they projected these shortfalls in their projected cash flow. However, in March, their ending cash (the amount of money the farm had in its bank account at the end of the month) dipped down to a negative balance. Luckily, they started making income in April and were able to sell a large number of CSAs that brought them "out of the red" and back into an overall net positive position. In future years, North Valley Farm might use this information to take out an operating loan in December or January to cover early season expenses.

Cash Flow Statement (2016) for North Valley Farm

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Beginning Cash	8,000	6,037	1,784	-1,615	135	2,596	5,517	10,063	18,544	22,834	25,061	24,447	
Income													
CSA				5,600	2,400			3,200	1,400				12,600
Farm Stand					977	2,064	2,874	3,981	3,167	1,674	659		15,396
Wholesale					1,288	3,985	4,657	4,988	4,256	2,995	718		22,887
Total Income	0	0	0	5,600	4,665	6,049	7,531	12,169	8,823	4,669	1,377	0	50,883
Expenses													
Chemicals		100	150	50							90	180	570
Fertilizers					102	408		220					730
Fuel/Oil (for farm equipment)			51	54	72	78	86	89	49	31	33	32	575
Business Insurance				200				625					825
Mortgage	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	17,016
Tractor Loan Payments	144	144	144	144	144	144	144	144	144	144	144	144	1,728
Car/Truck Repairs and Fuel	51	55	65	67	80	372	83	95	94	83	75	458	1,578
Car/Truck Insurance/Registration									650				650
Repairs/Maint. (not car/truck)									300	450			750
Custom Hire						300	600	650	650				2,200
Accountant				1,500									1,500
Seeds & Plants		1,987	438										2,425
Supplies	135	112	116	209	187	199	216	227	212	108	29		1,750
Fees		225					225						450
Taxes									800				1,600
Utilities	215	212	217	208	201	209	213	220	216	208	202	199	2,520
Total Expenses	1,963	4,253	3,399	3,850	2,204	3,128	2,985	3,688	4,533	2,442	1,991	2,431	36,867
Net Income (Profit/Loss)	-1,963	-4,253	-3,399	1,750	2,461	2,921	4,546	8,481	4,290	2,227	-614	-2,431	14,016
Ending Cash	6,037	1,784	-1,615	135	2,596	5,517	10,063	18,544	22,834	25,061	24,447	22,016	

How to Use Your Cash Flow Statement

A cash flow statement should be updated at least every month. Gather your receipts (on which you've made notes as described in the section on the chart of accounts), categorize them, and enter your income and expenses for that month. If you haven't been keeping your receipts or haven't kept up with categorizing them, completing your cash flow statement will be much more difficult, if not impossible. Once you've entered the receipts into

Income and Expense Statement for North Valley Farm (Jan. 1—Dec. 31, 2016)	
Income	
CSA	\$12,600
Farm Stand	\$15,396
Wholesale	\$22,887
Total Income	\$50,883
Expenses	
Chemicals	\$570
Fertilizers	\$730
Fuel/Oil (for farm equipment)	\$575
Business Insurance	\$825
Car/Truck Repairs and Fuel	\$1,578
Car/Truck Insurance and Registration	\$650
Repairs/Maintenance (not car/truck)	\$750
Custom Hire	\$2,200
Accountant	\$1,500
Seeds & Plants	\$2,425
Supplies	\$1,750
Fees	\$450
Taxes	\$1,600
Utilities	\$2,520
Annual Depreciation Expense	\$2,000
Total Expenses	\$20,123
Net Income (Profit/Loss)	\$30,760

your cash flow, don't throw them away! For tax purposes, you should keep your receipts for at least seven years. The easiest way to keep track of past receipts for most businesses is to put them into a file labeled with the month and year when you're done with them. Most of us can remember the rough time of year we made a purchase, so if you need to find the receipt later, that will make it easier.

As we noted in the section above on the projected cash flow, some farm consultants recommend using a 13-month projected cash flow. The 13-month projected cash flow is paired with an ongoing cash flow statement so that each month, you are adding in your budget for one more month and adding in your actual income and expenses simultaneously, allowing yourself a regular heads-up on upcoming expenses.

Summarizing Your Finances: Income and Expense Statement

Also called a profit and loss statement, your **income and expense statement** allows you to evaluate your farm or ranch's financial performance over a period of time, typically one year. It includes all of your income and all of your expenses over a set period of time so that you can see if you made or lost money overall during that time period.

Understanding your Income and Expense Statement

The income and expense statement looks very similar to a summarized cash flow statement with one major exception: loans and depreciation. On the income and expense statement, you take your major assets (the tractor and land, in our example case) and rather than show your total loan payments, show depreciation of those assets. **Depreciation** is a way to express everyday wear and tear on equipment and other property so that you can capture the eventual cost of replacing that property.

For example, if you purchase a tractor for \$10,000, the first step toward calculating its depreciation would be to subtract its residual value from that price. The residual value is the amount you expect to be able to sell the used equipment for when you no longer need it. For this tractor, let's assume that you expect to keep the tractor for 10 years and that after 10 years, you'll be able to sell it for \$1,000.

$$\text{Depreciation} = (\text{Purchase Price} - \text{Residual Value}) / \text{Years of Use}$$

$$\$900 = (\$10,000 - \$1,000) / 10$$

In your income & expense statement, you would enter \$900 depreciation each year for the tractor.

You can depreciate the value of your property but it is more

complicated. You can also include mortgage interest and property taxes as categories on your income and expense statement.

How to Use Your Income and Expense Statement

The income and expense statement let's you know if you are making money and helps you make decisions for the coming year. It can also help you identify areas that need to be improved and is used by your lender to understand the financial health of your business (more on this in Module 5).

From the income and expense statement for North Valley Farm, we can see that they made a net profit of \$30,760 in 2016. From that profit, they will need to pay for their family living expenses, make their loan payments, and save for the future. Remember that we don't include the loan payments in the income and expense statement, so they need to be able to cover those with their net profit.

An income and expense statement should be completed at least once a year, although completing it on a monthly or quarterly basis might make more sense for you. Over time, you hope to see that your net profit is increasing or at least staying at a level that supports your financial needs and goals and gives you enough extra to keep saving and investing in the farm.

Expense Categories for Schedule F (Profit or Loss from Farming)	
Line 10	Car and truck expenses
Line 11	Chemicals
Line 12	Conservation expenses
Line 13	Custom hire (machine work)
Line 14	Depreciation and section 179 expense
Line 15	Employee benefit programs-except Line 23
Line 16	Feed
Line 17	Fertilizers and lime
Line 18	Freight and trucking
Line 19	Gasoline, fuel, and oil
Line 20	Insurance (other than health)
Line 21	Interest
Line 21a	Mortgage (paid to banks, etc.)
Line 21b	Other
Line 22	Labor hired (less employment credits)
Line 23	Pension and profit-sharing plans
Line 24	Rent or lease:
Line 24a	Vehicles, machinery, equipment
Line 24b	Other (land, animals, etc.)
Line 25	Repairs and maintenance
Line 26	Seeds and plants
Line 27	Storage and warehousing
Line 28	Supplies
Line 29	Taxes
Line 30	Utilities
Line 31	Veterinary, breeding, and medicine
Line 32	Other expenses (specify your own)

Schedule F (Profit or Loss from Farming)

Each year, you will have to report your farm income and expenses on a Schedule F (Profit or Loss from Farming), in addition to your personal and other business tax forms, when you file your taxes. If you have any farm-related income, you must submit a Schedule F and beyond the fact that you are required to do it, you should because there are a lot of tax benefits available to farmers.

Your Schedule F is one of the reasons to track your data in a cash flow statement and (at least annually) complete an income and expense statement. Keeping accurate records throughout the year will allow you to deduct expenses and file your Schedule F correctly and on time. Even if you have no income, you should still track your expenses to submit. You should consult with your accountant to see how and when to submit expenses incurred in a year with no income.

Understanding the Schedule F

We do not have the space here to fully describe the Schedule F, but there are many resources online, including the IRS Publication 225: The Farmer's Tax Guide. MOSES Organic has great resources for organic and specialty crop growers, including an expense worksheet with more in-depth instructions for organic growers on how to interpret some of the categories.

How to Use the Schedule F

You will need to submit your Schedule F when you file your taxes each year. However, you should refer to the categories in the Schedule F when you are developing your chart of accounts. The Schedule F is a great reminder of why we keep records: While every item you purchase for your farm or ranch is tax-deductible, *you can't claim the deduction if you don't keep the receipt and categorize it correctly.* We recommend working with a farm and ranch accountant at least initially so

you can ensure you're making the most of the tax deductions available to farmers and ranchers. Good help can save you a lot of money and a good accountant can help you to develop an effective recordkeeping system so you're prepared for tax season.

Getting a Snapshot of Where You Are Now: Balance Sheet

A balance sheet expresses the total financial worth of your farm or ranch at a *specific moment in time*. It is a summary of what you *own* versus what you *owe* and essentially shows how much money you would walk away with if you sold your farm or ranch today. It can be thought of as a snapshot of the net worth of your farm.

Balance Sheet for North Valley Farm				
As of: <u>Dec. 31, 2016</u>				
	Assets (What You Own)		Liabilities (What You Owe)	
Current	Checking Account	\$4,460	Accounts Payable	\$850
	Savings Account	\$1,000	Credit Card	\$13,000
	Accounts Receivable	\$540		
Intermediate	Equipment (tools, fencing, irrigation equip, etc.)	\$4,450	Tractor Loan	\$30,500
	Tractor Value	\$35,000		
	Inventory (stored crops, etc.)	\$2,000		
Long-term	Land and Structures Value	\$350,000	Land and Structures Loan	\$300,000
	Total Assets =	\$397,450	Total Liabilities =	\$344,350
	Equity (Your Stake)			
	Partner 1 Investment	\$4,000	Equity = Assets - Liabilities	
	Partner 2 Investment	\$4,000	\$53,100 = \$397,450 - \$344,350	
	Net Profit or Loss	\$45,100		
	Total Equity =	\$53,100		

Understanding Your Balance Sheet

Your balance sheet is broken down into three sections: assets, liabilities, and equity. **Assets** refers to what you own, **liabilities** refers to what you owe, and **equity** refers to your stake in the business. Your stake can be positive, showing a net profit, if you own more assets than you owe in liabilities or it can be negative, showing a net loss, if you owe more in liabilities than you own in assets on your farm or ranch.

Assets and liabilities are oftentimes categorized into current, intermediate, and long-term. These terms are further described in the Glossary at the end of this chapter. Briefly though, the Farm Service Agency generally categorizes **current** assets and liabilities as being items that could rapidly and easily be converted to cash (your checking account, outstanding bills, etc.). The FSA categorizes **intermediate** assets and liabilities as those that relate to equipment and sometimes inventory if you're planning on selling the stored crops in a later year. Finally, they categorize **long-term** assets and liabilities as those that relate to land and structures - things you'll have for a long time. **Accounts receivable** refers to money that is owed to you for some good or service but hasn't been paid yet,

for example, if you repaired a piece of equipment for someone and have sent them a bill but haven't received the payment yet. **Accounts payable** refers to money that you owe someone else for a good or service.

Probably the most complicated part of the balance sheet is **equity**. Think of it this way: all of the assets owned by your business fall into one of two categories. They're either owned by a creditor (you had to take out a loan to get them - liabilities) or they're owned by you (you paid for them in full or have paid off a portion of them - equity). So to flip the balance sheet equation, $Assets = Liabilities + Equity$ = the things you own balance out to a combination of things you owe money for and things you've paid off.

To break down the balance sheet into an extra-simple example, let's say you're buying a piece of land. The land and home are worth \$300,000 (asset). You put down \$50,000 (equity) and get a mortgage from the Farm Service Agency for \$250,000 (liability).

$$\begin{aligned} \text{Assets} &= \text{Liabilities} + \text{Equity} & \$300,000 &= \$250,000 + \$50,000 \\ \text{Equity} &= \text{Assets} - \text{Liability} & \$50,000 &= \$300,000 - \$250,000 \end{aligned}$$

How to Use Your Balance Sheet

Unlike the income and expense statement, which shows how a company performed over a period of time, a balance sheet shows a business' financial health at a single point in time. You should prepare a balance sheet at a minimum of once every year, on the same day each year. Many people choose to do a balance sheet on December 31 each year to track their year-end financial position. If you're struggling financially, completing it more frequently would be advisable. A series of balance sheets prepared on the same day each month or year shows the change in the financial position of your farm or ranch over time and the progress (or not) of your business. You can look at your balance sheet like a scorecard, helping you keep track of how your business is doing on December 31, 2017 compared to how your business was doing on December 31, 2016. If your equity is ever negative, that's not good - it means you owe more on your loans than the items you purchased are worth. This happened to a lot of people in the mortgage crisis. If suddenly, that \$300,000 farm you purchased is worth \$200,000 because the market crashed, but you still owe \$250,000 on the loan, then your balance sheet equation would wind up looking like this:

$$\text{Equity} = \text{Assets} - \text{Liability} \quad \quad \quad \mathbf{-\$50,000} = \$200,000 - \$250,000$$

Hopefully that won't ever happen for your business! Perhaps most importantly and certainly very commonly, your lender will use your balance sheet to calculate ratios that help to determine the health of your business. We'll dive into more depth on the most common ratios in Module 5.

A Financial Management Tool Checklist

1. Create a chart of accounts.
2. Develop a projected cash flow budget for the upcoming year (or 13 months).
3. Save receipts daily and make useful notes on them so you can record them accurately.
4. Schedule a time each week or month to enter receipts.
5. Fill in your cash flow statement on a monthly basis at least. If you're using the 13-month budget, add an additional month's projections at the same time.
6. Periodically (at least annually), complete income and expense statements to track your farm's finances.
7. Select one or more days per year to complete a balance sheet for a scorecard of your farm's financial position.

Estimating Your Expenses and Income

Now that you know which financial statements you should complete, as well as how and when to complete them, how do you wrap your mind around diving in? Many beginning farmers and ranchers are daunted by the financial statements listed above. Part of the intimidation is due to not knowing how to determine your costs and income. When they do figure them out, many feel nervous about their projections—did I get the numbers right?

What did I miss? Remember that estimating is about getting *close enough*. Don't let uncertainty about a number keep you from thinking ahead. Just remember to compare actual numbers to your estimates to avoid pitfalls. This section will walk you through some ways to build confidence in your estimates.

If it's too overwhelming to imagine estimating costs for your whole farm at the outset, it might be a good idea to start with an **enterprise budget**, which looks at just one crop or product from your farm, e.g. carrots or ground lamb. This provides an outline of the types of costs you can expect for your farm, but since it's only for one product, it can be an easier way to jump in and wrap your mind around some of your costs and income.

However, enterprise budgets can also be difficult for very diverse operations, since you're only looking at one of a number of your enterprises. You can also try using an enterprise budget to outline your estimated cost categories. Visit www.extension.iastate.edu/agdm for some sample enterprise budget tools.

In *The Organic Farmer's Business Handbook*, Richard Wiswall describes a simple enterprise budgeting exercise that showed him a more than \$10,000 difference between his average crop earnings per acre and his profits on one of his highest earning crops. Wiswall knew that he had gross sales of around \$5,000 per acre on average. He knew that some crops did better than others but he wasn't sure which. To compare the crops, he removed all of the fixed expenses that were equal across the farm and created enterprise budgets (he calls them crop budgets) with specific labor, machinery, and product costs and income for preparing, cultivating, harvesting, and post-harvest efforts. His enterprise budget for carrots showed him that he was making a *net* profit of over \$15,000 per acre! That made a big difference in his future crop planning.²³

Most importantly though, don't let the price tag of an expense scare you off if it's something you need! Obviously, if you evaluate whether to purchase a tractor and it doesn't pencil out, don't buy it. But if you start researching costs and see something that could help your farm but you are turned off by a high price tag, you could be missing something that would really help you.

Wiswall offers another example of this: early on he was using a hanging scale and, because of the time involved in making complicated calculations on the fly, he had been rounding the weights from, for example, 1-1/8 pounds to 1 pound. He finally made the decision to purchase a \$400 self-calculating digital scale when he realized that he was losing money at the market by not having one. If he sold 400 pounds of tomatoes each week at \$3/pound, he knew he should be making \$1,200 on them. But he found that if he made 355 of the same tomato sales of 1-1/8 pounds each but only charged the customer for 1 pound, he was only making \$1,065. That's \$135 less than when he used the digital scale, which paid for itself within a couple of weeks. Over a five month market season, that would add up to \$2,700 in added income. More on this in the module on financial planning, but for now, just remember that sometimes you have to spend money to make money!²⁴

Stories from the Fields

The Japanese Paper Pot Transplanter, was a significant investment for me, not huge compared to other pieces of equipment, but it allowed me, for example to transplant over 13,000 onions, and I did it by myself in a day without crawling on my hands and knees. That would've taken me and a crew of people multiple days, so I had to look at saving labor and I don't have a lot of labor available to me, so I make it up with some key efficiencies. —Fresh Roots Farm, Polson

Stories from the Fields

We just invested in the necessities. We put tunnels up as they were needed and we made them ourselves with a hoop bender. We've never been tractor farmers so we started with a tiller and it broke so we broad forked everything. We purchased additional things as we saw the need for them. Putting up hoop houses and having row cover were essential and as far as other investments, we felt we could do most things manually which kept costs low to start out. —Ian and Ellen Farm, Hamilton

So how do you find out the costs of labor, machinery, and materials that are listed in your cash flow projection or budget? Below are a few tips to get you started. Don't forget: estimating your costs isn't just something that you do before you start. Chris Blanchard of Purple Pitchfork recommends that farmers rigorously evaluate their expenses, especially feed and labor, which can quickly get higher than we realize. As you're doing your recordkeeping, think about your expenses and compare them to your budget—are certain areas higher than you expected?

²³ Richard Wiswall, *The Organic Farmer's Business Handbook*. Chelsea Green Publishing, 2009.

²⁴ Ibid

Estimating Your Expenses

Fixed, Unit-Variable, and Step-Variable Costs

One additional thing to think about when trying to estimate your costs is whether a particular cost is fixed, unit-variable, or step-variable. A **fixed** cost is one that doesn't change, no matter how many units you purchase. If the cost is **unit-variable**, the cost per unit is dependent on the number of units, with the price changing with the additional purchase of each additional unit. If the cost is **step-variable**, the cost per unit is variable but only with the additional purchase of a certain number of units. For example, if the price per unit is the same for 1-99 units, but decreases if you purchase 100-199 units, the price is step-variable. Keep this in mind when purchasing items that may be unit or step-variable—it may be less expensive in the long-run to purchase more at once, even if the out-of-pocket cost at the moment of purchase is greater!

Pricing seeds/transplants

For fruits and vegetables, you can look at seed catalogs to price out seeds or talk to local greenhouses to get up-to-date figures for flats of transplants. Johnny's Select Seeds (www.JohnnySeeds.com) has tools to help you with calculating seed needs, such as a seed calculator to help you figure out how many seeds you need for a certain length of row. There are now also a few seed producers in Montana, like Triple Divide Seeds, who may be able to offer seed that's specifically suited to your climate. Fedco Seeds (www.FedcoSeeds.com) has created catalog codes that include descriptions about how and where seeds are grown.

If you're buying large quantities of grass or grain seed for a livestock or grain operation, the best resource on prices can oftentimes be your local seed dealer. If you're new to a community and would like some feedback on the differences between seed dealers, try contacting your local Extension office or Natural Resources Conservation Service.

Pricing equipment costs

The equipment needs on your farm will be unique to the way in which you run your operation. If you aren't sure about your needs, try reaching out to similar farms in your area to see what they started out with. They will likely have tried things that failed and know which tools they wished they'd had earlier. Just like in the module on market research, don't forget to consider what you can offer back to them in thanks for their help.

Not sure what kind of equipment you want to buy? The table below outlines typical equipment needs at various scales of vegetable production although, as was pointed out in the *Stories from the Fields* note above from Ian and Ellen Farm, it is certainly feasible to do quite a bit on a shoestring budget.

Estimated Equipment Needs for Various Sizes of Vegetable Farms								
By Janet Bachmann, NCAT Agriculture Specialist								
Scale	Seed Starting	Power Source and Tillage	Direct Seeding	Production Equipment	Cultivation	Harvesting	Postharvest Handling	Delivery
1-3 acres	Small hoop house, grow lights, planting trays	Rototiller or walking tractor, custom work	Earthway seeder, Cyclone seeder	Backpack sprayer, irrigation, tools	Wheel hoe, hand hoes, digging forks, spades	Field knives, hand boxes, buckets, carts	Bulk tank, canopy, packing containers	Pickup with topper or van
4-6 acres	1000 sq. ft. greenhouse, cold frames, field tunnels, planting trays	35-40hp tractor, with creeper gear, power steering and high clearance	Planet Jr. plate seeder	1-row transplanter, irrigation, more tools	Cultivating tractor (IH Super A or IH 140)	Potato digger, bed lifter, wagon, more boxes, buckets	Roller track conveyor, hand carts, walk-in cooler	Cargo van
7-10 acres	Additional cold frames, planting trays	40-60 hp tractor, chisel plow, spader	Stanhay precision belt seeder with belts	2-row transplanter, sprayer,	Tool bar implements: beet knives, basket weeder	More field crates	Barrel washer, spinner, pallet jack	1 ton truck with refrig.
20 + acres	2,000 sq. ft. greenhouse	80 hp tractor with loader bucket, forks, compost spreader	Nibex or Monosem seeder	Irrigation, bed shaper, mulch layer	Sweeps, Budding finger weeders, flame weeder, potato hiller, 2nd tractor	Asa lift, harvest wagon	Wash line, larger cooler, packing shed and loading dock	Refrigerated truck

Adapted from table distributed at Michael Fields Institute Advanced Organic Vegetable Production Workshop, 2/2001, Jefferson City, MO.

To estimate usage costs, Richard Wiswall, author of *The Organic Farmer's Business Handbook*, suggests that tractor owners fill the tractor with fuel and use it for exactly one hour. Go back and top it off with fuel again, so you know how much fuel you are using in an hour. Pick an average task like discing, and an average speed. There will be some variation, but this gives you a good starting point. Price the fuel used in an hour, and use this number as a per-hour use cost.

Estimating Labor Costs

In order to get an accurate idea of labor costs, you will need to monitor your activities during the growing season. Carrying around a pocket notebook in the field is a great way to do this. When you start and complete each activity, note the time and the activity. After a while you will know how long it takes to weed the lettuce or move the sheep. Chris Blanchard of Purple Pitchfork, a farming consulting firm, has some great, simple tools to help evaluate labor costs.

There also are all kinds of apps for this kind of time-tracking, like Toggl or ATracker. Searching the internet for "time-tracking app" should bring up an array of results. Some will let you voice record the name of the task and then hit a start and end button, while others can create charts and exportable spreadsheets that you can use to evaluate time later. All of this data can be especially helpful when you start evaluating your profits on individual

Stories from the Fields

A lot of our original numbers for planning came from working with the Western Montana Growers' Cooperative and from Brian's background working with Helen Atthowe. Helen really gave us a sense of specific crops which would produce the highest financial yields per acre. We started from there and now that we've been growing for a few seasons, we can look at our own records and make decisions. We realized that a specific crop could net \$90,000 per acre in one season. Of course, the next question was how to scale our operation in way that made sense with what we wanted. That crop could net \$90,000, but it would take 200 hours of labor per week to harvest so we need to consider how to balance the outcome of a crop with the ability and needs of ourselves and our crew. We knew what we thought we could handle so we started with that and each year we reflected on the previous season to plan ahead. Then, in the spring we made sure to constantly check in with ourselves about whether our ambitions were reasonable. —Harlequin Produce, Arlee

products because you can see how much time you're spending weeding, harvesting, cleaning, and packing kale versus carrots or milking, moving, and feeding sheep versus goats.

What if you don't have a farm yet and want to evaluate costs in advance for a budget? This is another great thing to ask neighboring farms about. It's also a great reason to work on a farm before you start your own. Even if the farm you're working for doesn't keep this kind of data, you can! The info will undoubtedly be helpful when you go to start your own farm. If you've worked on farms in the past but didn't keep this kind of data while you were there, you can try to do it from memory. Just remember that we're likely to think we're a lot quicker in retrospect. It's a good idea to add 10-15% more time onto each task.

Employees Keeping Records

To have the greatest success in engaging your employees with recordkeeping, be clear about what you want. Set your expectations from the day they're hired and make sure their expectations about their position are realistic. Then, provide clear instructions on a daily basis—about how you want things planted, moved, cleaned, etc. and how you want them to enter that information into your logs. You'll notice that the logs ask them to initial or enter their name regularly and that will help to maintain accountability both on tasks and on recordkeeping. Making sure that they clearly understand what you are looking for will ensure that the records you keep are valuable to you and the work is done well. For more great resources on labor management, visit the resources from Purple Pitchfork: www.purplepitchfork.com/blog.

Other Costs

Information about many other types of costs can be obtained through catalogs or by calling the local compost suppliers and hardware stores. Suppliers such as Growers Greenhouse Supply, Farmtek, Peaceful Valley, and Johnny's Select Seeds sell many agricultural supplies and have good search functions on their websites. Also consider talking with any mentors and friends that own farms. If you have a mentoring relationship with a farmer, they will likely be willing to tell you what their typical costs are.

Personal Costs and Income

You have the option of including your personal budget with your business budget. First-time lenders may be interested in seeing your personal budget, so it's important to at least have those numbers figured out. In

particular, this will come up if you have off-farm income that will be used to pay a portion of your bills, such as truck payments, mortgage, etc. Your lender or investor will understand that personal bills will almost always get paid first in the grand scheme of things, so they will want to know that you have enough money to pay your personal bills and pay them! Just be sure that you don't *mix* your personal and business finances, particularly if you organize your business as an LLC or corporation (more on that in Module 7). Pay farm expenses from your farm account and put farm income into your farm account. Don't pay personal bills from your farm account and if you need to put personal money into the farm, note it in your accounting as an **owner investment**.

Estimating Your Income

Once you have a solid understanding of your costs, you get to start thinking about how to pay for them. An approach suggested by the Canadian Organic Growers publication "Crop Planning," is to start by developing a personal income goal and work back from there. How much money does your farm need to gross in order to meet that income goal? Once you have an estimation of your personal and business costs, you can estimate how much money your farm will need to make and outline some markets to make that happen.²⁵

You have to outline your markets and have a marketing plan in order to estimate your income. Having a diversified marketing strategy is great for beginners, but it is important to get out there and see what niches your product or enterprise can fill. These numbers will be based on the research you did in the module on Market Analysis, as well as the pricing evaluation you did in the module on Market Differentiation. Once you have completed your market research and identified your prices, you will be able to determine how much income you can expect from each channel. Your market research will tell you how much your planned market channels can absorb and your price research will tell you how much each channel will pay.

Stories from the Fields

We've grown into producing higher volumes of cheap crops. We knew we needed more market and we knew where those markets were so we got really good at growing a few cheap crops and we mechanized where necessary so that we could grow enough to make it worth it. Also, our highest value crops are some of the most risky. A mistake early in the season can seal the deal for the rest of the year. We haven't maxed out the market for these crops, we could certainly grow more, but there's a balance between these high risk, high return crops and the diversity in other crop areas which allows us to grow in other ways. One of our crops was completely lost last year for example but we were okay because we had a great year for another crop. The diversity was key.—Harlequin Produce, Arlee

Estimated Sales

Farmers market:	\$20,000
Co-op sales:	\$20,000
CSA:	\$10,000
Restaurants:	\$20,000
Total Sales:	\$70,000

From there it's a simple calculation. For example, if your personal costs and income research tells you that your farm needs to bring in \$30,000 to help pay your personal bills, and your research on farm costs and expenses tells you that your farming costs will be \$40,000, then your farm will need to gross \$70,000 in order to meet your income goal of \$30,000. Using the information from your market research and price research, you will be able to determine how much income you'll need to gain from each market channel to hit that \$70,000 mark. It might look something like the estimated sales at left.

With these numbers on hand, along with the background info they represent about your sales estimates and prices, you will have an idea of how much product you will need to supply on a weekly basis in order to meet those income goals. If you look at those targets and they seem unrealistic—for example, you know how much you'll have to produce to sell \$20,000 worth of products at the farmer's market and you don't think you can do it on the land you have available—you'll need to go back to the drawing board and figure out ways that you can increase your income through another avenue or decrease your costs. You might be able to live without a second car or you might be able to take on a second job to cover more of your personal expenses. If you want to try to quantify the size of your market more scientifically, see *Estimating Market Potential: Is There a Market?* by North Carolina State University Extension. It includes a calculation you can use to estimate your market potential. Figuring out this balancing act is probably the most important part of your financial management piece.

²⁵ Frederic Theriault and Daniel Brisebois, *Crop Planning for Organic Vegetable Growers*. Canadian Organic Growers, 2010.

Are My Numbers Right?

One of the biggest fears we encounter among beginning farmers and ranchers is whether they've calculated their expenses and income accurately. Unfortunately, the pre-start-up reality is that you can only make your best guess. Use the resources in this module and talk with other farmers in your area to get a sense of any costs you may be overlooking. Research price points and evaluate market capacity when you do your market analysis (Module 2). This will help to give you your best guess at an accurate financial plan.

Once you have numbers you feel pretty good about, here are some additional things to consider:

- **Use realistic production levels and prices.** Don't be overly optimistic or conservative. Adding 10-20% to your expense estimates and reducing your income estimates by 10-20% will help you to see if you can bounce back in the face of tough markets or high costs.
- **Estimate costs on a per unit basis first.** For example, rather than trying to figure out the cost of all of your seeds at once, figure out the cost of each of your seed types per acre. Once you have those numbers, you can look at your operation and calculate your costs for doing ¼ acre of carrots, 1/8 acre of kale, etc. This will make looking at multiple alternatives much easier as you'll have the original costs per acre on hand.
- **Include the annual ownership costs of capital investments, not the capital investments themselves.** These costs are sometimes called the DIRTI costs (depreciation, interest, repairs, taxes and insurance). While you'll pay for the capital investment in a loan, that actually shows up in your bills and on your financial statements as DIRTI costs. Definitely don't forget repairs! You can also include a savings line for a "replacement budget" that you can use to pay for a down payment when something breaks down.
- **Allocate home-produced feed properly.** For home-produced feeds, estimate your total production in an average year and the total livestock requirements. If the balance is positive, include the balance in crop sales if you plan to sell excess feed. If the balance is negative, include it in feed purchases, as you'll need to buy feed to make up the difference.
- **Keep track of your assumptions as you're calculating costs.** That way, when you find out that your chicken feed will cost more than you thought, you don't have to re-calculate your entire feed budget, because you'll have written down the amount you assumed you'd spend on each item within that budget. For example, your feed line item might say \$2,400, but the comment or separate document will say "\$100/month for chicken feed, \$75/month for turkey feed, \$25/month for rabbit feed."

Stories from the Fields

When I wrote the business plan, I had the three-to-five year plan to start making money. And now, looking at it, it will probably be five years before I'm in the black. The first year, the margins were so thin. We did really well for a first year, but when you're building infrastructure and building a business it takes a lot of money. And we both knew going into it that we would need to rely on our partner's income going into it before we could make this on its own. — Oxbow Cattle Company, Missoula

Most importantly, realize that your plans will not be perfect. Don't agonize over an individual income or expense item too long. Consider your past assumptions and new information as you make projections moving forward.

Managing Recordkeeping

At this point, you may be wondering how you can integrate recordkeeping into your life. A mistake that many farmers make is not prioritizing recordkeeping or only saving receipts. Remember that recordkeeping is the first step towards sound financial management. Don't you want to know whether you're making enough money to farm another year?

Computer vs. Paper

The first big question to answer is whether to do it on paper or on a computer. If you hate computers and you know that if it's computerized, you won't do it, choose paper! You can find business records books at your local office supply store that contain something that looks like an income and expense log. If you're going to use a paper format, it's a good idea to copy and tape a list of your categories into the front of the log so that you can categorize things as you go.

However, if you think you can get on a computer regularly to enter receipts, pay bills, and keep your financials up to date, there are some great benefits to this approach. One key benefit of using a computer-based program is that they are often capable of automatically creating financial statements from the expenses and income you enter. In addition, it can be a quicker way to reconcile bank accounts and record cash and credit card transactions. Many computer-based programs will also allow you to maintain vendor and customer lists and manage your inventory.

You can also use them to plan your weekly, monthly, and annual budgets, noting when certain bills are due and reminding you to pay them. There also are apps like You Need A Budget (YNAB) that you can use to plan personal and business budgets and enter expenses or income on your phone or on the computer. Rather than writing out your whole farm budget each year, you can even have some programs automatically fill in the budget based on your costs from the prior year and then you can alter and update costs from there. That's a big step towards making sure you're not forgetting something.

There are a lot of programs you can use, each with its own benefits and drawbacks. A few of the major ones are Excel, Quicken, Quickbooks, Moneydance, YNAB, Peachtree, FarmLogic, and AgSquared, but new programs are coming online every day. Take some time to think about what you want from a recordkeeping program and see what's out there. Each program has different tools and capabilities that can help you, but make sure you're only paying for what you'll use. It's worth asking your accountant if they have a preferred program.

Some Tips for Recordkeeping

The following tips will help you develop a record keeping system that works for you:

- **Keep it simple!** Making your system unnecessarily complicated will make it more likely that you'll make a mistake or abandon it completely.
- **Design your farm operation to make recordkeeping easy.** For example, making your bed lengths all the same length will simplify your data.
- **Design your markets to make recordkeeping easy.** If you have restaurant or wholesale accounts, make two copies of the invoice you take to them so you will know how much you're owed and the date the invoice was delivered. When they pay you, you can move that invoice straight from the accounts receivable file into the income file. To make that work, make sure that your invoices contain everything you need to know—date, amount, category, business name, etc.
- **Plan recordkeeping into your day and week.** Don't just leave it until you find a few free minutes—be intentional about picking a time of day when you know you'll be able to do a good job. Figure out where you could put your clipboard and pen or your computer so that you'll actually use them. For example, if you want to track the weight of washed product you have going out the door, put the scale and clipboard right next to the wash station. If you always drive the same truck to town, put your receipt organizer in the truck.
- **Categorize your expenses as you file your receipts.** Whether you use a receipt organizer like the one shown at right or a set of manila envelopes to organize your receipts, set up your system so that the expense categories are a part of it. For example, label the manila envelopes or the tops of the folders with your expense categories. If you buy a lot of things online and have receipts stored on your computer, don't just dump them in a "Receipts" file. Create folders within this file that correspond to your expense categories. For receipts that you receive via email, always download them immediately and save it in the appropriate folder on your computer.



Remember that lots of incomplete records are not as useful as a few complete ones. Choose a recordkeeping goal and create a plan that is achievable all season, even in your busiest months when the workload is high and you are tired.

Glossary

Assets are the things you own—even if you don't own them outright. They're captured on your financial statements because they have value and they're things that you could use to pay down debts or commitments if needed. A list of assets can also include money that you're owed, such as if you have invoiced a restaurant or wholesaler for products you delivered but they haven't paid you yet. These assets are known as *accounts receivable*.

Assets are sometimes divided into current assets and long-term assets. **Current assets** are what you use to pay your day-to-day operations and ongoing expenses. For example, this could include the farm's checking or savings account or inventory you are soon to sell. **Long-term assets** are things like your tractor or your land that you could sell if you needed to pay a debt, but that aren't as easily convertible into cash as current assets.

One thing to consider when you are valuing your assets for your balance sheet: should you value them based on their cost to you or their market value? Land, for example, may go up in market value, causing your balance sheet to look great, and then plummet, causing your balance sheet to look awful. It's best to ask your lender/investor for their advice on this, but many farm financial experts recommend that you base your assets on their actual cost to you so that any improvement in your farm financials is due only to how well your farm is doing.

Depreciation is a way to express the everyday wear and tear on equipment, spreading the cost of replacement over the useful life of the product. For example, if you purchase a tractor for \$10,000, the first step toward calculating its depreciation would be to subtract its residual value from that price. The **residual value** is the amount you expect to be able to sell the used equipment for when you no longer need it. Dividing the result by the number of years you expect to use the tractor tells you its depreciation. If you figure you want to keep the tractor for 10 years and that you'll be able to sell it for \$1,000 at that time, its depreciation would be \$900: $\$10,000$ (purchase price) — $\$1,000$ (residual value) = $\$9,000$, divided by 10 years = $\$900$. In your income & expense statement and Schedule F, you would enter \$900 depreciation each year for the tractor.

Expenses are broken down into capital and operating costs. **Capital costs** are things like tools or fencing that you purchase once and which last a long time (hopefully). If they're valuable enough, some of these capital purchases may also show up as assets on your balance sheet, such as a tractor. **Operating costs** are the things that you have to buy or pay for regularly, like seeds, insurance, or fuel. Capital and operating costs are typically separated on your cash flow and other financial statements because operating costs come up regularly throughout the year to help you run your business, whereas capital expenses may occur more irregularly. Operating costs are sometimes further broken down into **variable costs** (those that vary directly with your production levels) and **overhead costs** (those that are static, regardless of your production). For example, seeds are a variable cost but your insurance bill is an overhead cost.

Income may seem more straightforward, but it still can be a bit complicated. You may have **operating income** throughout the year that comes directly from your sales and you may have an **owner's contribution** that comes from your personal checking account or an off-farm job that you use to subsidize farm costs during low-income times of the year. In addition, you may seek out an **operating loan** (used to pay for operating expenses, like seed or feed) or a capital loan (used to purchase a capital investment, like a tractor). If you do have a loan, make sure that you're capturing the loan as income when you get the money *and* that you're capturing the interest and fees that you're paying as expenses. Regardless, it's good to have separate categories for each of these types of income so you can understand how you're making a profit. If your farm is only profitable because of the owner's contributions you're making throughout the year, that's something you should know. Perhaps you will develop a new market in the coming year or find a way to reduce expenses. It will also allow you to keep track of your overall investment in the farm so that when it becomes profitable, the farm can begin paying you back for that investment.

Liabilities are your financial obligations—electric bills, seed invoices, operating loans, student loans (if you're including personal financial items in your financials), etc. Think of them as anything that you don't pay for outright when you buy them. Take a tractor for example. If you pay for the tractor when you go to pick it up, it's an expense on your cash flow and on your income and expense statement. However, if the person who sells the

tractor to you sends you an **invoice** instead or you get on a payment plan of some kind, then the tractor is still a financial obligation, and therefore would show up as a liability on your balance sheet until you've paid it off. (Note: the tractor will also be factored into depreciation costs if it is something you plan on reselling at some point). Similarly, an electric bill may show up on your Balance Sheet as an **accounts payable** when you've received the bill but haven't paid it yet, and then once you've paid it, the bill will show up as an expense on your cash flow and income & expense statements. This doesn't mean that you have to make changes to your balance sheet every time a bill comes in and then move it to your cash flow as soon as you've paid it, but it does mean that if you create a balance sheet when you have unpaid bills, those liabilities should be captured.

Liabilities can also be divided into current and long-term. Similarly to assets, **current liabilities** are typically those that are due within one year. This could include a short-term loan that you take out to pay for seeds or feed, for example, that you'll pay back when you have a higher flow of income later in the year. **Long-term liabilities** are again, things like tractors or land that you will take more than a year to pay for. Once you've completely paid them off, they will become assets and will no longer show up as liabilities on your balance sheet.

Net and Gross are terms we use to define profit. Your **gross profits** are everything you make in a certain time period (typically over a year). For example, if you go to the farmer's market and sell \$1,500 worth of lamb, you've grossed \$1,500 at that market. However, we all know that doesn't mean that you made \$1,500 in profits. Your **net profits** are your gross profits minus your expenses. That's the number that matters most!

Owner Investment/Withdrawals are often listed under "equity" on your balance sheet, and are similar to your "owner's contribution" in the cash flow as outlined in the section above on income. You should include here any money you directly invest in the business or withdraw as your share of profits for the year. It typically makes better business sense to pay yourself an hourly wage for your time working on the farm. It is better for financial planning and it is better for making sure that you get paid. Also, counting your labor as a monthly expense means that if you get hurt and have to hire someone to do your work, you will already have those funds allocated in your budget. However, if you don't give yourself a regular paycheck, you may be withdrawing business funds to pay yourself for the work you perform and you should be sure to capture those on your balance sheet. For more info on how to capture this, we recommend discussing it with your accountant, as this will often have different ramifications depending on whether you're operating as a sole proprietorship, LLC, or other format.

Accounting Methods:

1. **Cash method:** You record income when payment is received and deduct all farming expenses in the year you pay them. For example, if you sell \$5,000 worth of cattle, you record that sale when you are paid the \$5,000. On the expense side, if you get your annual irrigation district bill for \$600 in January, you don't record it as an expense until you pay it, even if you pay it in March.
2. **Accrual method:** You report income when you finalize a sale—even if you don't receive the payment until the following year—and deduct costs in the year you become liable for payment, regardless of when you actually pay them. For example, if you sell \$5,000 worth of cattle, you record that sale when you make the sale and send the invoice, even if you don't receive payment for a few more months. Similarly, if you get your annual irrigation district bill for \$600 in January, you record it as a bill in January, even if you don't pay it until March.
3. **Crop method:** You wait until the year you sell your crops to report the related income and expenses on Schedule F. You must obtain IRS approval before using this method.

Worksheet 4A: Chart of Accounts and Projected Cash Flow Statement

1. Chart of Accounts: Take a few minutes to think about the way you want to categorize your income and expenses. Write down your categories in the first column. List assets first, then expenses. As you continue planning your farm operation, you can return to this list to add or combine categories.
2. Projected Cash Flow: Looking at your new chart of accounts, think about the timing and amount of each category. For example, if you listed “seeds and plants” as an expense, think about when you would likely purchase seeds and plants and how much you anticipate spending. For now, just use your best guess and come back later to fill in more details. Write down your estimates in the appropriate month.
3. For each month, total up your projected income and expense in the rows given and then take total income minus total expense to get your net profit/loss for each month.

Chart of Accounts	Projected Cash Flow												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Income													
<i>Total</i>													
Expense													
<i>Total</i>													
Net Profit/ Loss													

Thinking About Your Projected Cash Flow

- Are there any months in which you anticipate no income but expect to have expenses? If so, which ones?
- What strategies can you use to ensure that you can meet all of your expenses in those months?

Worksheet 4B: Balance Sheet

Read the description of a farm below. Then, refer to the text to fill in the balance sheet.

Tony and Christina own and operate a small, diversified livestock farm. Their land is valued at \$625,000 and they owe \$550,000 on their farm loan. When they started farming, they each invested \$5,000 in the farm. They now own \$1,300 worth of hoses and water troughs, feed buckets, portable electric fences, and other equipment. In addition, they have \$7,000 in their savings account and \$3,500 in their checking account. This past season, a few of their pigs needed to be seen by a vet and treated for an infection. They've received the bill, for \$350, but haven't paid it yet. They've sold three of their pigs but won't receive money for them until they slaughter them, which they can't do for another month (each pig sold for \$500).

Balance Sheet			
As of: December 31, 2016			
Assets		Liabilities	
Checking Account		Accounts Payable	
Savings Account		Loan Balance(s)	
Accounts Receivable			
Equipment (tools, fencing, irrigation equip, etc.)			
Land Value			
<i>Total Assets =</i>		<i>Total Liabilities =</i>	
Equity			
Partner 1 Investment			
Partner 2 Investment			
Net Profit or Loss (Retained Earnings)			
<i>Total Equity =</i>			

Remember the equation, $Equity = Assets - Liabilities$. Use that equation to figure out the amount of net profit or loss Tony and Christina currently have.

1. What are Tony and Christina's Total Assets? _____
2. What are Tony and Christina's Total Liabilities? _____
3. What is Tony and Christina's Total Equity? _____