Cornell CALS
College of Agriculture and Life Sciences

Financial Year:

NYS Beekeeper Tech Team

Inventory & Financial Analysis Handbook

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NYS BEEKEEPER TECH TEAM

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This handbook is designed for double-sided (duplex) printing.

Inventory & Financial Analysis for Beekeepers

Introduction

An inventory is a list of all the productive resources that a business owns and uses to generate income. This list includes not only the type and quantity of each asset, but also its economic value. A complete inventory of business assets can help to answer the question: ***How much is my business worth?***

Used as a verb, inventory also refers to the process of creating such a list. Beekeepers who inventory their assets once a year are able to analyze and track business performance with greater precision. An up-to-date inventory can help business owners communicate with prospective lenders and investors. It also helps owners manage risk by selecting appropriate insurance products and, in the event of unexpected damages, filing insurance claims. To experience these benefits, an annual inventory must be carried out in a systematic way.

The goal of this handbook is to provide a step-by-step guide for owners and managers to inventory assets of a beekeeping business. It provides space to record inventory values at the beginning and end of a financial cycle, which typically coincides with a calendar year. Following the procedure outlined in Part 1 will ensure that the inventory is complete and consistent with financial standards for farm businesses.

For those interested in a deeper understanding of their financial picture, Part 2 provides a framework for constructing financial statements and calculating indicators of business performance. This section defines solvency, liquidity, profitability, and financial efficiency, and provides a guide for calculating and interpreting these key metrics. Part 2 utilizes inventory values from Part 1, and requires additional information about business revenues, expenses, and liabilities, to evaluate the overall health and stability of a beekeeping business.

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Glossary

Accounts Receivable. Amounts owed to a business by its customers for products and services already delivered. In other words, outstanding invoices. Considered a current asset on the balance sheet.

Accrual Accounting. An accounting method that records revenues when goods and services are produced, and expenses when production costs are incurred, regardless of when cash changes hands.

Accrual Adjustments. Accounting adjustments made at the end of a financial period to go from cash accounting to accrual accounting.

Accumulated Depreciation. The total depreciation expense associated with a noncurrent asset. Equivalent to the annual depreciation expense multiplied by the number of years the asset has been in service.

Asset. A productive resource with economic value that a business owns and uses to generate income.

Balance Sheet. A financial statement that reports business assets, liabilities, and net worth at a specific moment in time. Also called a Net Worth Statement.

Benchmark. A measurement or indicator that serves as a standard for comparison, by which others may be measured or judged.

Benchmarking. The process of comparing a business's performance metrics to external industry standards and/or to prior internal performance standards within the business.

Book Value. The value of an asset on the balance sheet, calculated by subtracting accumulated depreciation from the original cost.

Cash Accounting. An accounting method that records business transactions when cash changes hands, regardless of when the revenues and expenses were incurred.

Current Assets. Cash and all other assets that a business expects to convert to cash or use up in normal business operations within 12 months.

Current Liabilities. Financial obligations that must be paid within 12 months. This includes the portion of noncurrent liabilities due within 12 months.

Depreciation. The reduction in value of a long-term business asset over time as it is used in normal business operations.

Equipment. Tangible assets that a business uses over multiple years to produce goods or services. Examples include tools, machines, hive woodenware, vehicles, and electronic devices.

Equity. The value of an ownership claim to a business. Owner equity is synonymous with net worth, and refers to the value of the owner's stake in a business.

Expenses. The costs of producing and selling goods and services.

Fair Market Value. The price that an asset would be expected to fetch in the marketplace, given a reasonably interested buyer and seller.

Fixed Asset. A tangible asset that has an expected useful life greater than one year, and is not easily converted into cash. Sometimes called property, plant and equipment (PP&E).

Income Statement. A financial statement that reports the total value of farm production, the total cost of production, and net farm income over a specified period of time. Also called a Profit and Loss Statement.

Glossary (continued)

Intangible Asset. A business asset that does not have physical form. Common examples include intellectual property (patents, trademarks) and public opinion (brand loyalty, goodwill).

Inventory. A systematic list of all the productive resources that a business owns and uses to generate income. Also refers to the process of creating such a list.

Liability. A financial obligation that must be met in the future through the transfer of cash, goods, or services.

Liquidity. A measure of the extent to which a business has cash on hand, or other assets that can be quickly converted to cash, in order to meet immediate and short-term financial obligations without disrupting normal business operations.

Machinery. Tangible assets made up of multiple parts that use mechanical energy to produce goods or services. Machinery is a subcategory of equipment.

***Net Farm Income from Operations* (NFIFO).** Another name for farm profit, defined as the total value of farm production for a given year minus the total cost of production in that year.

Net Worth. The difference between total assets and total liabilities equals net worth. Net worth is synonymous with equity, and reflects the value of the owner's stake in a business.

Net Worth Statement. A financial statement that reports business assets, liabilities, and net worth at a specific moment in time. Also called a Balance Sheet.

Noncurrent Asset. Any asset that has an expected useful life greater than one year.

Noncurrent Liability. Any financial obligation due beyond the next 12 months.

Operator Management Fee. The annual value of the owner's labor and management, plus the value of all unpaid family labor.

Opportunity Cost. The loss of potential benefits from other alternatives when one alternative is chosen.

Prepaid Expense. A future expense that has been paid in advance. Common examples include insurance premiums and prepaid taxes. Considered a current asset on the balance sheet.

Profit. Farm profit is defined as the total value of farm production less the total cost of production over a specified period of time. Synonymous with Net Farm Income from Operations (NFIFO).

Profit and Loss Statement. A financial statement that reports the total value of farm production, the total cost of production, and net farm income over a specified period of time. Also called an Income Statement.

Real Estate Improvement. A building or other infrastructure development that is permanent in nature and adds value to the property. Examples include barns, sheds and other structures, roads, and permanent fencing.

Revenue. Income from selling goods and services.

Solvency. A measure of the extent to which a business would be able to pay all of its financial obligations if it were to close and sell off all of its assets.

Supplies. Items that a business consumes in the production of goods or services. Considered a current asset on the balance sheet.

Tangible Asset. An asset that has physical form. Examples include both current assets (supplies, products) and noncurrent assets (equipment, buildings, land).

Part 1

Inventory

Inventory of Honey Bee Colonies

This section exists to record the value of **honey bee colonies** that your operation owns and uses in the production of honey and other apiary products. You should also list colonies devoted to commercial pollination, nucleus colonies that serve as replacement colonies for your operation, and colonies used for producing queens and nucs. Do not list any queens or nucleus colonies that your business has produced for sale - these items should be listed under Inventory of Supplies for Producing Queens and Nucs (page 13).

Instructions

Beginning of Year	Enter the ***starting date of your beekeeping year***. For beekeepers that overwinter in New York State, we recommend using April 1, 20__ as a standard starting date. This is also the date used by the Bee Informed Partnership to calculate annual winter and summer colony losses. For beekeepers that overwinter bees in a warm climate where bees are active all winter, we recommend using the starting date of your financial year, which, in most cases, will be January 1, 20__.
End of Year	Enter the ***ending date of your beekeeping year***. For beekeepers that overwinter in New York State, we recommend using October 1, 20__ as a standard ending date. This is also the date used by the Bee Informed Partnership to calculate annual winter and summer colony losses. For beekeepers that overwinter bees in a warm climate where bees are active all winter, we recommend using the ending date of your financial year, which, in most cases, will be December 31, 20__.
1 Description	Describe the colony type and size (i.e. nucleus vs. field colony, number of brood boxes or frames).
2 # of Colonies	Number of live colonies at the start of the beekeeping year.
3 Colony Value	Estimate the sale price, or the cost of replacement, for each colony type.
4 Total Value	Multiply the quantity in Column 2 by the price in Column 3.
5 # of Colonies	Number of live colonies at the end of the beekeeping year.
6 Colony Value	Estimate the sale price, or the cost of replacement, for each colony type.
7 Total Value	Multiply the quantity in Column 5 by the price in Column 6.
Total Beginning Inventory	Sum of Column 4.
Total Ending Inventory	Sum of Column 7.

Inventory of Honey Bee Colonies

1		2	3	4	5	6	7
		Beginning of year:			End of year:		
	Description	# of Colonies	Colony Value	Total Value	# of Colonies	Colony Value	Total Value
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
TOTAL BEGINNING INVENTORY:					**TOTAL ENDING INVENTORY:**		

Inventory of Supplies

Supplies are items that a business consumes in the production of goods or services. Supplies are different from equipment, in that supplies are consumable goods that become incorporated into the finished product. In other words, a business uses equipment, but it uses up supplies. This section divides supplies into three different categories that are common to beekeeping businesses.

Beekeeping supplies (page 12). This worksheet records the value of supplies that beekeepers use to raise and maintain honey bee colonies. Feed (sugar, protein, supplements), medications (mite treatments, antibiotics), and other consumable supplies (smoker fuel, American Foulbrood test kits) should be listed in this category. Hive equipment (boxes, frames, foundation, feeders) or tools intended for use over multiple years should NOT be listed in this section (see page 22). If your operation stores gasoline, diesel fuel, or any supplies for vehicle maintenance, those items may also be listed here.

Supplies for making nucs and queens (page 13). This worksheet records the value of supplies used to make nucleus colonies or queens for sale to other beekeepers. This includes boxes, frames, and foundation used to assemble nucs. Materials for packaging and shipping nucs and queens (e.g. queen cages) should be listed here. Any nucleus colonies or queens ready for sale at the time of the inventory may also be included in this section. This section does not include mating nucs or nucs used as replacement colonies in your own operation - those should be listed in the Inventory of Honey Bee Colonies (page 8).

Marketing supplies (page 14 - 15). This worksheet records the value of product packaging and marketing supplies. This category includes unused bottles, jars, other containers, and labels. It should also include supplies used in the assembly of value added products, such as gift baskets or mead making kits.

Feed


Labels


Empty Bottles

Inventory of Supplies

Instructions

Beginning of Year	Enter the starting date of your financial year. In most cases, this will be January 1, 20__.
End of Year	Enter the ending date of your financial year. In most cases, this will be December 31, 20__.
1 Description	Item name or description.
2 Quantity	Quantity on hand at the start of the financial year.
3 Price per unit	Purchase price per unit for the quantity on hand at the start of the financial year.
4 Total Value	Multiply the quantity in Column 2 by the price in Column 3.
5 Quantity	Quantity on hand at the end of the financial year.
6 Price per unit	Purchase price per unit for the quantity on hand at the end of the financial year.
7 Total Value	Multiply the quantity in Column 5 by the price in Column 6.
Total Beginning Inventory	Sum of Column 4.
Total Ending Inventory	Sum of Column 7.

Inventory of Beekeeping Supplies

1		2	3	4	5	6	7
		Beginning of year:			End of year:		
	Description	Quantity	Price per Unit	Total Value	Quantity	Price per Unit	Total Value
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
TOTAL BEGINNING INVENTORY:					**TOTAL ENDING INVENTORY:**		

Inventory of Supplies for Producing Nucs and Queens

1		2	3	4	5	6	7
		Beginning of year:			End of year:		
	Description	Quantity	Price per Unit	Total Value	Quantity	Price per Unit	Total Value
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
TOTAL BEGINNING INVENTORY:					**TOTAL ENDING INVENTORY:**		

Inventory of Marketing Supplies

	1	2	3	4	5	6	7
		Beginning of year:			End of year:		
	Description	Quantity	Price per Unit	Total Value	Quantity	Price per Unit	Total Value
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
			TOTAL BEGINNING INVENTORY:		**TOTAL ENDING INVENTORY:**		

Inventory of Marketing Supplies (continued)

	1	2	3	4	5	6	7
		Beginning of year:			End of year:		
	Description	Quantity	Price per Unit	Total Value	Quantity	Price per Unit	Total Value
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
			TOTAL BEGINNING INVENTORY:			**TOTAL ENDING INVENTORY:**	

Inventory of Apiary Products

This section records the value of unsold **apiary products** that the business owns. This includes:

- Bulk honey
- Bottled honey
- Cut comb
- Comb honey and chunk honey
- Creamed honey
- Honey sticks
- Bulk beeswax
- Beeswax blocks, wax candles, and figurines
- Pollen, propolis, venom, and royal jelly

Please also include any additional value-added products that the business produces for sale, such as soap, cosmetics, tinctures, candy, and other processed food items.

Only products that are ready for sale at the time of the inventory should be included. For example, fully assembled gift baskets should be included in this section. However, gift basket supplies should NOT be recorded here - they can be entered under Inventory of Marketing Supplies (page 14). Honey that has not yet been extracted should not be included in this inventory, as it is not in saleable condition.

Bulk Honey

Bottled Honey


Beeswax

Inventory of Apiary Products

Instructions

Beginning of Year	Enter the starting date of your financial year. In most cases, this will be January 1, 20__.
End of Year	Enter the ending date of your financial year. In most cases, this will be December 31, 20__.
1 Description	Product description. For honey, specify bulk or bottled. For bottled honey, specify the container size. List different honey varietals separately ONLY if their prices differ.
2 Quantity	Number of product units on hand at the start of the financial year. Specify units of measurement (lbs, bottles, pieces, etc.).
3 Price per unit	Sale price per unit at the start of the financial year.
4 Total Value	Multiply the quantity in Column 2 by the price in Column 3.
5 Quantity	Number of product units on hand at the end of the financial year. Specify units of measurement (lbs, bottles, pieces, etc.).
6 Price per unit	Sale price per unit at the end of the financial year.
7 Total Value	Multiply the quantity in Column 5 by the price in Column 6.
Total Beginning Inventory	Sum of Column 4.
Total Ending Inventory	Sum of Column 7.

Inventory of Apiary Products

1		2	3	4	5	6	7
		Beginning of year:			End of year:		
	Description	Quantity	Price per Unit	Total Value	Quantity	Price per Unit	Total Value
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
			TOTAL BEGINNING INVENTORY:		**TOTAL ENDING INVENTORY:**		

Inventory of Apiary Products (continued)

	1	2	3	4	5	6	7
	Description	Beginning of year: Quantity	Price per Unit	Total Value	End of year: Quantity	Price per Unit	Total Value
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
			TOTAL BEGINNING INVENTORY:			**TOTAL ENDING INVENTORY:**	

Inventory of Accounts Receivable and Prepaid Expenses

This section records the value of all **accounts receivable** and **prepaid expenses**. Accounts receivable refers to money that customers owe to a business for products or services that the customers have received. Accounts receivable can be thought of as outstanding invoices.

Take the example of a beekeeping business that delivers ten barrels of honey to a wholesale client. Payment is not collected upon delivery, so the beekeeper invoices the client. From the moment the honey is delivered to the client, until the moment that payment is received, the value of that honey is recorded under accounts receivable.

Prepaid expenses refer to money that a business has paid for products or services that it will use at a later date. Prepaid expenses can be thought of as future business expenses that have been paid in advance.

Common examples of prepaid expenses include **insurance premiums** and **estimated (prepaid) taxes**. When a business pays for an insurance policy before the insurance coverage begins, that payment constitutes a prepaid expense. Similarly, if a business makes quarterly payments of estimated taxes, those payments are made in advance of the actual tax liability and are therefore considered prepaid expenses. **Farmers' market booth fees** are considered a prepaid expense if they are paid before the market season begins.

Accounts receivable and prepaid expenses are recorded as business assets on the balance sheet. As such, they must be included in the annual inventory. Changes in accounts receivable and prepaid expenses between the start and end of the year will be important for calculating business profit at the end of the financial cycle.

Instructions

Beginning of Year	Enter the starting date of your financial year. In most cases, this will be January 1, 20__.
End of Year	Enter the ending date of your financial year. In most cases, this will be December 31, 20__.
1 Account Name	Name of the client (Accounts Receivable) or supplier (Prepaid Expenses).
2 & 4 Description	Describe the product or service exchanged in the transaction.
3 & 5 Total Value	Enter the total value of the outstanding payment (Accounts Receivable) or the outstanding product or service (Prepaid Expenses).
Total Accounts Receivable	Add up the value of beginning accounts receivable in Column 3 and ending accounts receivable in Column 5.
Total Prepaid Expenses	Add up the value of beginning prepaid expenses in Column 3 and ending prepaid expenses in Column 5.

Inventory of Accounts Receivable and Prepaid Expenses

1		2	3	4	5
		Beginning of year:		End of year:	
	Account Name	Description	Total Value	Description	Total Value
Accounts Receivable					
1					
2					
3					
4					
5					
6					
7					
8					
			TOTAL BEGINNING ACCOUNTS RECEIVABLE:		**TOTAL ENDING ACCOUNTS RECEIVABLE:**
Prepaid Expenses					
1					
2					
3					
4					
5					
6					
			TOTAL BEGINNING PREPAID EXPENSES:		**TOTAL ENDING PREPAID EXPENSES:**

Inventory of Equipment and Machinery

This section records the value of all equipment, machinery, and vehicles owned and used by your business. These items are considered to be durable goods, and must therefore have a useful lifespan of more than one year.

Hive equipment (page 24). The first worksheet in this section records the value of hive equipment, which includes all of the components that make up your permanent hives: hive bodies, inner and outer covers, bottom boards, queen excluders, frames, foundation, feeders, etc. You may include boxes and frames used in mating nucs, or for nucs that serve as replacement colonies. Do NOT list boxes, frames, or foundation used to make up nucleus colonies for sale - these items should be listed under the Inventory of Supplies for Producing Queens and Nucs (page 13). Some pieces of hive equipment, like hive bodies, may have a useful life of 10 years or more, while frames and foundation may have a shorter lifespan. In fact, replacing frames and foundation every 5 years is recommended as a best management practice to reduce the buildup of pesticides and disease-causing spores. To simplify recordkeeping and depreciation estimates, we propose using a standard of 7 years as the useful life for all items in the hive equipment category.

General equipment (page 26). The second worksheet in this section records the value of all other equipment, including beekeeping, extraction, and bottling equipment. All equipment valued at $500 or more at the time of purchase should be included here. You may also list equipment valued at less than $500 if it has a projected life span of more than one year.

Vehicles and machinery (page 30). The third worksheet records the value of machinery and vehicles. Machines use mechanical power to accomplish a specific task. Vehicles are a type of machinery, used for transporting people or products. There may be some overlap between the machinery and equipment categories - if an item fits into both categories, record it only once on the worksheet of your choice.


Extraction Equipment


Machinery & Vehicles


Hive Equipment

Inventory of Equipment and Machinery

Instructions

Beginning of Year	Enter the starting date of your financial year. In most cases, this will be January 1, 20__.
End of Year	Enter the ending date of your financial year. In most cases, this will be December 31, 20__.
1 Description	Describe the item.
2 Date Owned	Enter the month and year the item was first used in the business. Typically this will be the same as the purchase date. However, if an item is purchased and stored for an extended period before being used, you should enter the date that it was first put to use.
3 Useful Life	Determine the estimated useful life of the item. The following standard lifespans are recommended for each type of farm asset, following IRS guidelines. • 7 years: hive equipment, honey extraction and bottling equipment, other equipment and machinery • 5 years: trucks, trailers, computers
4 Purchase Value	Enter the total cost of the item when it was purchased.
5 Annual Depreciation	Divide the Purchase Value of the item (Column 4) by its Useful Life (Column 3). This method produces the annual depreciation expense for each item, using the straight-line depreciation method.
6 & 10 Years in Use	Enter the total number of years that the item has been in use.
7 & 11 Total Depreciation	Record the cumulative depreciation expense for each item. Multiply Annual Depreciation (Column 5) by Years in Use (Column 6 or 10). Total Depreciation cannot be greater than Purchase Value. If Years in Use is equal to or greater than Useful Life, then the Total Depreciation will equal the Purchase Value.
8 & 12 Book Value	Enter the unused value of the item. This is calculated by subtracting Total Depreciation (Column 7 or 11) from the Purchase Value (Column 4). Book Value cannot be negative. If Years in Use is equal to or greater than Useful Life, then the Book Value will be zero.
9 & 13 Fair Market Value (FMV)	Estimate the current sale price of the item if you were to sell it today. This column does not need to be completed for hive equipment, which is assumed to have no resale value after it has been used to raise and house honey bees.
Totals	Record the sum of each column for Columns 4, 7, 8, 9, 11, 12, and 13.

Hive Equipment Inventory

1		2	3	4	5	6	7	8	9
						Beginning of year:			
	Hive Equipment Description	Date Owned	Useful Life	Purchase Value	Annual Depreciation	Years in Use	Total Depreciation	Book Value	FMV
1									N/A
2									N/A
3									N/A
4									N/A
5									N/A
6									N/A
7									N/A
8									N/A
9									N/A
10									N/A
11									N/A
12									N/A
13									N/A
14									N/A
15									N/A
16									N/A
			TOTALS:		N/A	N/A			$0.00

Hive Equipment Inventory

10		11	12	13
End of year:				
	Years in Use	Total Depreciation	Book Value	FMV
1				N/A
2				N/A
3				N/A
4				N/A
5				N/A
6				N/A
7				N/A
8				N/A
9				N/A
10				N/A
11				N/A
12				N/A
13				N/A
14				N/A
15				N/A
16				N/A
Totals:				$0.00

Notes:

General Equipment Inventory

	1	2	3	4	5	6	7	8	9
						Beginning of year:			
	General Equipment Description	Date Owned	Useful Life	Purchase Value	Annual Depreciation	Years in Use	Total Depreciation	Book Value	FMV
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
			TOTALS:		N/A	N/A			

General Equipment Inventory

10		11	12	13
End of year:				
	Years in Use	Total Depreciation	Book Value	FMV
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
Totals:				

Notes:

General Equipment Inventory (continued)

	1	2	3	4	5	6	7	8	9
	General Equipment Description	Date Owned	Useful Life	Purchase Value	Annual Depreciation	Beginning of year: Years in Use	Total Depreciation	Book Value	FMV
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
			TOTALS:		N/A	N/A			

General Equipment Inventory (continued)

10		11	12	13
End of year:				
	Years in Use	Total Depreciation	Book Value	FMV
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
Totals:				

Notes:

Vehicle and Machinery Inventory

	1	2	3	4	5	6	7	8	9
						Beginning of year:			
	Vehicle or Machinery Description	Date Owned	Useful Life	Purchase Value	Annual Depreciation	Years in Use	Total Depreciation	Book Value	FMV
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
			TOTALS:		N/A	N/A			

Vehicle and Machinery Inventory

10		11	12	13
End of year:				
	Years in Use	Total Depreciation	Book Value	FMV
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
Totals:				

Notes:

Inventory of Real Estate Improvements

This section records the value of **houses, barns, sheds, and other infrastructure** considered to be real estate improvements.

Instructions

Beginning of Year	Enter the starting date of your financial year. In most cases, this will be January 1, 20__.
End of Year	Enter the ending date of your financial year. In most cases, this will be December 31, 20__.
1 Description	Describe the real estate improvement.
2 Date Owned	Enter the month and year it was purchased or acquired. If constructing a building, enter the date it was first used by the business.
3 Useful Life	Determine the estimated useful life of the improvement. The following standard lifespans are recommended for each type of farm asset, following IRS guidelines. • 20 years: farm buildings such as sheds and barns • 15 years: tiling, drainage, retention ponds, underground irrigation, and driveways • 10 years: single-purpose structures for housing livestock (e.g. indoor overwintering facilities) • 7 years: permanent farm fencing
4 Purchase Value	Enter the total cost of the improvement when it was first put to use in the business.
5 Annual Depreciation	Divide the Purchase Value of the item (Column 4) by its Useful Life (Column 3). This method produces the annual depreciation expense for each item, using the straight-line depreciation method.
6 & 10 Years in Use	Enter the total number of years that the item has been in use.
7 & 11 Total Depreciation	Record the cumulative depreciation expense for each item. Multiply Annual Depreciation (Column 5) by Years in Use (Column 6 or 10). Total Depreciation cannot be greater than Purchase Value. If Years in Use is equal to or greater than Useful Life, then the Total Depreciation will equal the Purchase Value.
8 & 12 Book Value	Enter the unused value of the item. This is calculated by subtracting Total Depreciation (Column 7 or 11) from the Purchase Value (Column 4). Book Value cannot be negative. If Years in Use is equal to or greater than Useful Life, then the Book Value will be zero.
9 & 13 Fair Market Value	Estimate the current sale price of the item if you were to sell it today. If the item cannot be sold apart from a larger property, estimate the amount by which the sale of the property would increase because of this item.
Totals	Record the sum of each column for Columns 4, 7, 8, 9, 11, 12, and 13.

Inventory of Real Estate Improvements

1		2	3	4	5	6	7	8	9
						Beginning of year:			
	Building or Improvement Description	Date Owned	Useful Life	Purchase Value	Annual Depreciation	Years in Use	Total Depreciation	Book Value	FMV
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
			TOTALS:		N/A	N/A			

Inventory of Real Estate Improvements

10		11	12	13
End of year:				
	Years in Use	Total Depreciation	Book Value	FMV
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
Totals:				

Notes:

Inventory of Land

This section records the value of **land that your beekeeping business owns**. The first step in inventorying land is to record the initial purchase price of each parcel. After purchase, the value of land changes only when an event occurs that has a positive or negative effect on its price. Land values may decrease due to natural events that degrade productivity, such as flooding or erosion. Human activity may also affect land values. Changes in land use, sale of development rights, or partial sale of the property may affect land values. If local land prices increase or decrease, the value of your land may be adjusted accordingly.

Unlike many agricultural enterprises, beekeeping does not require extensive land ownership. If your business does not own land, skip this section. Otherwise, follow the instructions provided below to record the initial transaction when the land was acquired, and any events that have caused a change in its value. Use a separate Land Inventory worksheet for each parcel that you own. Three blank worksheets are included in this book; make additional copies if needed.

Instructions

Property Name	The common name for the property.
Address	Street address or a description of the location.
Details	Relevant details about the property, such as soil type, land cover, geological or hydrological features, historical land use, or how the land was acquired.
1 Description	The transaction or event that occurred. Examples include land purchase, land sale, donations of land, and increases or reductions in land value due to natural events or market conditions.
2 Date	The date that the transaction or event occurred.
3 Number of Acres	The number of acres affected by the transaction or event.
4 Value per Acre	The value per acre for the specified event. If the land was inherited or gifted, list the fair market value on the date that the transfer occurred.
5 Total Value	For each transaction, multiply the Number of Acres by the Value per Acre to generate the Total Value.
Market Value	For each parcel, record the current Market Value of the property by taking the sum of Column 5.

Inventory of Land - Property #1

Property name:	Address:
Details:	

	1	2	3	4	5
	Description of Transaction/Event	Date	# of Acres	Value per Acre	Total Value
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
				MARKET VALUE:	

Inventory of Land - Property #2

Property name:	Address:
Details:	

	1	2	3	4	5
	Description of Transaction/Event	Date	# of Acres	Value per Acre	Total Value
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
				MARKET VALUE:	

Inventory of Land - Property #3

Property name:	Address:
Details:	

	1	2	3	4	5
	Description of Transaction/Event	Date	# of Acres	Value per Acre	Total Value
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
				MARKET VALUE:	

Part 2

Financial Analysis

Assets and Liabilities

Assets

An asset is a productive resource that can be bought and sold. Businesses own assets and use them to generate revenue. Assets can be tangible, like tractors and livestock, or intangible, like patents and trademarks.

For the purposes of farm financial analysis, we separate assets into two categories that reflect their level of permanence in the business: current and non-current assets.

Current Assets

Current assets refer to resources that will be converted into cash or used up within one year. Examples include:

- Cash
- Checking and savings account balances
- Feed
- Supplies
- Prepaid expenses
- Accounts receivable
- Apiary products

Noncurrent Assets

In contrast, noncurrent assets are resources that the business expects to own for more than one year. Examples include:

- Vehicles
- Machinery
- Equipment
- Breeding livestock
- Buildings
- Land

We consider the inventory of honey bee colonies, as with other breeding livestock, to be a noncurrent asset. Intangible assets are also considered to be noncurrent assets.

Liabilities

Most businesses incur financial debts or obligations during the course of normal business operations. These obligations are known as liabilities. Each liability represents a claim by an outside entity to a portion of the value of the business.

Liabilities are settled over time when the business transfers money, goods, or services that relieve its prior obligations. Liabilities are also sorted into current and noncurrent categories.

Current Liabilities

Current liabilities are obligations that the business expects to meet within one year. Examples include:

- Short-term loans
- Lines of credit
- Credit card balances
- Accounts payable
- Accrued expenses

The portion of a long-term loan due within 12 months is also considered to be a current liability.

Noncurrent Liabilities

In contrast, noncurrent liabilities include the portion of all long-term financial obligations - including loans and mortgages - that are due beyond the next 12 months.

Net Worth Statement

The Net Worth Statement is a record of a farm's business assets (what the business owns) and liabilities (what the business owes) at a specific moment in time. Net worth is defined as the difference between total assets and total liabilities.

Owner equity is synonymous with net worth; both terms refer to the value of the business share that belongs to the owner(s). The Net Worth Statement is sometimes called a Balance Sheet, because it is structured around the accounting relationship that balances assets, liabilities, and net worth in a single equation:

Assets - Liabilities = Net Worth

This financial statement provides a snapshot of the farm's financial condition. A farm business will benefit from producing a Net Worth Statement at the beginning of each financial year, typically January 1st. This practice provides a series of financial snapshots that together illustrate business performance over time, which helps to inform management decisions.

The Net Worth statement is also useful for communicating the financial position of the business to outside entities. For instance, lenders typically require a current Balance Sheet to evaluate a loan application.

A Net Worth Statement is useful to farm managers and their lenders because it shows the overall liquidity and solvency of the business. **Liquidity** reflects the ability of a farm business to pay its bills on time without disrupting day-to-day operations. In accounting terminology, liquidity measures the relationship between current assets and current liabilities.

Solvency refers to the relationship between total assets and total liabilities. In other words, solvency represents the ability of a business to pay off its debts in the event that the business were to shut down and sell all of its assets. These concepts are discussed in more detail on pages 53.

Net Worth Statement (example)

Name: Joe Sideliner **Date:** January 1, 2017

Farm Assets	Cost Value	Market Value
Current Assets		
Cash, checking and savings	2,578	2,578
Accounts receivable	224	224
Prepaid expenses	125	125
Supplies inventory	879	879
Product inventory	3,500	3,500
Other current assets	0	0
Total Current Assets	$7,306	$7,306
Noncurrent Assets		
Honey bee colonies	0	42,300
Hive equipment	18,560	0
General equipment	4,057	2,936
Vehicles and machinery	12,284	8,000
Buildings and improvements	34,576	13,075
Farmland	0	0
(Subtract accumulated depreciation)	-7,358	
Total Noncurrent Assets	$62,119	$66,311
TOTAL FARM ASSETS	**$69,425**	**$73,617**

Farm Liabilities	Cost Value	Market Value
Current Liabilities		
Accounts payable		0
Accrued taxes and interest		0
Current notes and credit lines		567
Notes due in 12 months		2,371
Other current liabilities		0
Total Current Liabilities		$2,938
Noncurrent Liabilities		
Notes due beyond 12 months		
- Auto loan		5,760
- Mortgage		0
Other noncurrent liabilities		0
Total Noncurrent Liabilities		$5,760
TOTAL FARM LIABILITIES		**$8,698**

NET WORTH (total assets - total liabilities)	**$60,727**	**$64,919**

Net Worth Statement: Assets

Instructions

Beginning Date	The date you complied the beginning balance sheet. Typically, this will be January 1, 20__.
Ending Date	The date you compiled the ending balance sheet. Typically, this will be December 31, 20__.
1 Asset Name	If your business owns assets in categories that are not listed, list any additional current assets in rows 8 and 9, and list any additional noncurrent assets in rows 15 and 16.
2 Beginning	Enter the total value of each asset on the date specified at the top of Column 2. For noncurrent assets, we recommend using the fair market value (FMV) for each category.
3 Ending	Enter the total value of each asset on the date specified at the top of Column 3. For noncurrent assets, we recommend using the fair market value (FMV) for each category.
A Total Current Assets	For each column, record the sum of rows 1 - 9.
B Total Noncurrent Assets	For each column, record the sum of rows 10 - 16.
C Total Assets	Add Total Current Assets and Total Noncurrent Assets for each column.

Net Worth Statement: Assets

1		2	3
Asset Name		Beginning date:	Ending date:
Current Assets		**Beginning**	**Ending**
1	Cash on hand, checking, savings		
2	Marketable stocks and bonds		
3	Short-term notes receivable		
4	Accounts receivable (pg. 21)		
5	Prepaid expenses (pg. 21)		
6	Supplies (pg. 12-15)		
7	Apiary products (pg. 18-19)		
8	Other:		
9	Other:		
A. Total Current Assets			
Noncurrent Assets (Fair Market Value)		**Beginning**	**Ending**
10	Honey bee colonies (pg. 9)		
11	Equipment & machinery (pg. 24-31)		
12	Real estate improvements (pg. 34-35)		
13	Land (pg. 37-39)		
14	Intermediate & long-term notes receivable		
15	Other:		
16	Other:		
B. Total Noncurrent Assets			
C. TOTAL ASSETS (Current Assets + Noncurrent Assets)			

Net Worth Statement: Liabilities

Instructions

Beginning Date	The date you complied the beginning balance sheet. Typically, this will be January 1, 20__.
Ending Date	The date you compiled the ending balance sheet. Typically, this will be December 31, 20__.
1 Liability Name	If your business has liabilities in categories that are not listed, list any additional current liabilities in rows 7 to 9, and list any additional noncurrent liabilities in rows 12 to 14.
2 Beginning	Enter the total value of each liability on the date specified at the top of Column 2.
3 Ending	Enter the total value of each liability on the date specified at the top of Column 3.
A Total Current Liabilities	For each column, record the sum of rows 1 - 9.
B Total Noncurrent Liabilities	For each column, record the sum of rows 10 - 14.
C Total Liabilities	Add Total Current Liabilities and Total Noncurrent Liabilities for each column.
D Net Worth	Subtract Total Liabilities from Total Assets in each column.

Net Worth Statement: Liabilities

1		2	3
Liability Name		Beginning date:	Ending date:
Current Liabilities		**Beginning**	**Ending**
1	Credit card balance		
2	Line of credit		
3	Short-term loans (less than 1 year)		
4	Accounts payable		
5	Accrued taxes & interest		
6	Principal due within 12 months		
7	Other:		
8	Other:		
9	Other:		
A. Total Current Liabilities			
Non-Current Liabilities		**Beginning**	**Ending**
10	Loans (portion due beyond 12 months)		
11	Mortgages (portion due beyond 12 months)		
12	Other:		
13	Other:		
14	Other:		
B. Total Noncurrent Liabilities			
C. TOTAL LIABILITIES (Current Liabilities + Noncurrent Liabilities)			
D. NET WORTH = TOTAL ASSETS - TOTAL LIABILITIES			

Farm Profit

For a farm business, annual **farm profit** is defined as the total value of production less the total cost of production for a given year (Equation 1). With this definition, we run into the question of how to determine the total value and total cost of production within a specific financial year.

Most farm businesses rely on the **cash accounting method**, in which transactions are recorded when income is received and bills are paid. Yet cash transactions do not always coincide with the moment that business revenues are generated or operating costs are incurred.

For instance, honey produced in one year may not be sold until the following year. Similarly, some expenses incurred in 2017 may not be paid until 2018. For this reason, the difference between total cash revenues and total cash expenses - termed Net Cash Farm Income - is not an accurate measure of annual farm profit (Equation 2).

In contrast to cash accounting, the **accrual accounting method** records business revenues and expenses when they are incurred, regardless of when cash changes hands. This accounting method is better suited to calculate yearly farm profit. However, farms rarely use accrual accounting in day-to-day operations.

For farms using the cash accounting method, managers can apply **accrual adjustments** at the end of the financial year to determine the total value and total cost of production. Equation 3 is analogous to Equation 1, with **Net Farm Income from Operations (NFIFO)** being synonymous with farm profit. NFIFO represents the total earnings available for family living expenses, income taxes, loan principal payments, savings, and new investment in the business.

Equation 1

Farm Profit =
Total Value of Production - Total Cost of Production

Equation 2

Net Cash Farm Income =
Total Cash Revenues - Total Cash Expenses

Equation 3

Net Farm Income From Operations (NFIFO) =
Total Adjusted Income - Total Adjusted Expense

Income Statement

The Income Statement summarizes the relationship between farm revenues (income from the sale of goods and services) and expenses (costs of producing and selling goods and services) over a defined period of time, usually a fiscal year. This financial statement provides information about a business's ability to generate profits. As such, it is also commonly called a Profit and Loss (P&L) Statement.

The Income Statement template on pages 50 - 51 records cash farm income and cash farm expenses, which can be found on the IRS Schedule F (Profit or Loss from Farming) or Schedule C (Profit or Loss from Business) tax form. The template also incorporates accrual adjustments to income and expenses, based on asset and liability values recorded earlier in this handbook.

Instructions

Financial Year	The 12-month period for which income and expenses are presented.
Cash Farm Income	Record cash farm income from each source listed in rows 1 - 7.
A. Total Cash Income	Add lines 1 - 7.
B. Home Consumption	Total value of farm products used for home consumption or trade. For example, honey given to landowners as a rental payment for bee yards.
Accrued Income Adjustments	List inventory values from the end of your financial year in column (a). List inventory values from the beginning of your financial year in column (b). Take the difference by subtracting the value in column (b) from the value in column (a).
C. Total Accrued Income Adjustments	Add lines 8 - 12.
D. Total Adjusted Income	Take the sum of A + B + C.
Cash Farm Expenses	Record cash farm expenses for each item listed in rows 13 - 35.
E. Total Cash Expenses	Add lines 13 - 35.
Accrued Expense Adjustments	List the balance from the end of your financial year in column (a). List the balance from the beginning of your financial year in column (b). Take the difference by subtracting the value in column (b) from the value in column (a)
F. Total Accrued Expense Adjustments	Add lines 36 and 37.
Depreciation Expense Adjustments	Enter the annual depreciation expense for each category.
G. Total Depreciation Expense	Add lines 38 - 40.
H. Total Adjusted Expenses	Take the sum of E + F + G.
I. Net Cash Farm Income	The value of A - E.
J. Net Farm Income from Operations	The value of D - H.

Income Statement

Financial Year:

INCOME

	Cash Farm Income - Numbers in ( ) refer to lines from IRS Schedule F	**Dollar Value**
1	Sale of livestock (e.g. queens, nucs) and other items bought for resale (1a)	
2	Sale of honey, wax, raised livestock (e.g. queens, nucs), and other apiary products (2)	
3	Cooperative distributions paid (3b)	
4	Agricultural program payments (4b)	
5	Crop insurance proceeds (6b)	
6	Pollination services and other custom hire income (7)	
7	Other cash income (8)	
A. TOTAL CASH INCOME - Add lines 1 to 7		
B. Total value of farm products used for home consumption or trade		

	Accrued Income Adjustments - Numbers in ( ) refer to pages of this handbook	**(a) Ending Value**	**(b) Beginning Value**	**Difference (a - b)**
8	Inventory of honey bee colonies (pg. 9)			
9	Inventory of supplies (pg. 12 - 15)			
10	Inventory of apiary products (pg. 18 - 19)			
11	Inventory of accounts receivable (pg. 21)			
12	Inventory of prepaid expenses (pg. 21)			
C. Total Accrued Income Adjustments - Add lines 8 to 12				
D. TOTAL ADJUSTED INCOME (A + B + C)				

EXPENSES

	Cash Farm Expenses - Numbers in ( ) refer to lines from IRS Schedule F	**Dollar Value**
13	Cost of livestock (e.g. queens, nucs) and other items bought for resale (1b)	
14	Car and truck expenses (10)	
15	Chemicals (11)	
16	Conservation expenses (12)	
17	Custom hire (13)	
18	Employee benefits (15)	
19	Feed (16)	
20	Fertilizers and lime (17)	

21	Freight and trucking (18)	
22	Gasoline, fuel and oil (19)	
23	Insurance (20)	
24	Interest paid (21a + 21b)	
25	Labor hired (22)	
26	Pension and profit-share plans (23)	
27	Rent or lease payments (24a + 24b)	
28	Repairs, maintenance (25)	
29	Seeds, plants (26)	
30	Storage, warehousing (27)	
31	Supplies purchased (28)	
32	Taxes (29)	
33	Utilities (30)	
34	Veterinary, breeding, and medicine (31)	
35	Other expenses (32)	
E. TOTAL CASH EXPENSES - Add lines 13 to 35		

Accrued Expense Adjustments - Numbers in ( ) refer to pages of this handbook		**(a) Ending Value**	**(b) Beginning Value**	**Difference (a - b)**
36	Accounts payable (pg. 47)			
37	Accrued taxes & interest (pg. 47)			
F. Total Accrued Expense Adjustments - Add lines 36 and 37				

Depreciation Expense Adjustments - Numbers in ( ) refer to pages of this handbook		**Dollar Value**
38	Annual depreciation on hive equipment (pg. 24)	
39	Annual depreciation on general farm equipment, machinery, and vehicles (pg. 26 - 30)	
40	Annual depreciation on farm buildings and improvements (pg. 34)	
G. Total Depreciation Expense - Add lines 38 to 40		
H. TOTAL ADJUSTED EXPENSES (E + F + G)		

NET INCOME

I. NET CASH FARM INCOME: Total Cash Income (A) - Total Cash Expenses (E)	
J. NET FARM INCOME FROM OPERATIONS (NFIFO): Total Adjusted Income (D) - Total Adjusted Expenses (H)	

Analyzing Financial Statements

Once the Income Statement and Net Worth Statements are complete, it is possible to calculate and evaluate a variety of business performance metrics. This handbook focuses on four critical areas of performance for a farm business:

1. Liquidity
2. Solvency
3. Profitability
4. Financial Efficiency

These areas are defined on page 53, alongside the financial ratios that are commonly used to measure performance in each area. Financial ratios provide quantitative indicators of business health and performance. These measures are useful for tracking change over time within a business, and for comparing a business's performance to external industry standards.

The process of comparing one's business performance to internal or external standards is called benchmarking. This process begins by gathering all of the data that you need to calculate financial ratios for your business. There are twelve values needed to calculate the ten financial ratios described on page 54.

These values are listed to the right, with space to enter numbers from your own business. Six of the values come from your Net Worth Statements, and five can be found on your Income Statement. Finally, the Operator Management Fee captures the value of unpaid operator and family labor and management.

One method for estimating the value of ***unpaid operator labor and management***, use the opportunity cost for that labor. In other words, consider the economic return available if that labor and effort were allocated to the next best alternative use. For example, how much would the operator expect to earn if she were hired to perform similar duties in a different operation.

The value of ***unpaid family labor*** is best approximated by estimating a reasonable wage that the business would pay an employee to perform the same tasks.

NET WORTH STATEMENT

1. Current Assets (pg. 45; row A) (ending)
2. Total Assets (pg. 45; row C) (ending)
3. Average Total Assets (pg. 45; row C) (average of beginning and ending)
4. Current Liabilities (pg. 47; row A) (ending)
5. Total Liabilities (pg. 47; row C) (ending)
6. Average Total Liabilities (pg. 47; row C) (average of beginning and ending)

INCOME STATEMENT

7. Total Adjusted Income (pg. 50; row D) (also called gross revenue)
8. Total Interest Expense (pg. 51; row 24)
9. Total Depreciation Expense (pg. 51; row G)
10. Total Adjusted Expenses (pg. 51; row H)
11. NFIFO (pg. 51; row J)

OPERATOR MANAGEMENT FEE

a. Unpaid operator labor and management
b. Unpaid family labor
12. Operator Management Fee (a + b)

Areas of Business Performance[1]

Name	Definition	Financial Ratios	Strategies to Improve in this Area
Liquidity	Liquidity is defined as the availability of cash and near-cash assets to cover short-term obligations without disrupting normal business operations.	• Current Ratio • Working Capital Ratio	• Carefully structure loans to meet operating needs while reducing long-term debt. • Develop and follow marketing plans to increase operating profits. • Match the timing of cash flows in by carefully monitoring inventories and sales. • Consider selling business assets.
Solvency	Solvency addresses the relationship between assets and obligations, including the respective investment levels of owners and creditors.	• Debt to Asset Ratio	• Increase operating profits by increasing prices, quality, volume, or added value to production. • Improve production efficiencies. • Make additional principal payments, where prudent. • Avoid unnecessary capital expenditures. • Control family living withdrawals from the operation.
Profitability	Profitability compares business revenues against all economic costs and evaluates how productively a business is utilizing its resources, both capital and human.	• Rate of Return on Assets (ROA) • Rate of Return on Equity (ROE)	• Aggressively monitor and increase efficiencies of production costs. • Reduce unproductive capital or human assets. • Reduce costs - especially on the five largest expenses. • Improve revenue through increased production volume or quality. • Better manage interest rate risk and interest costs. • Reduce management draws. • Improve working capital to take advantage of cash discounts from suppliers.
Financial Efficiency	Financial efficiency measures how effectively a business uses its productive capabilities.	• Operating Expense Ratio • Interest Expense Ratio • Depreciation Expense Ratio • Asset Turnover Ratio • NFIFO Ratio	• Aggressively monitor and reduce production costs where prudent. • Increase quality, volume, and value of production. • Improve marketing practices. • Keep family living withdrawals to a minimum. • Properly structure debt.

[1]Adapted from material in: "Understanding Key Financial Ratios and Benchmarks." (2008). Northwest Farm Credit Services: Spokane, WA. Available online: http://farmbiztrainer.com/docs/BT_Understanding_Key_Ratios.pdf

Financial Ratio Analysis[2]

This table provides formulas for calculating financial ratios, and suggested cutoff values for assessing performance in each area.

Liquidity		**Calculation**	**Strong**	**Stable**	**Weak**
1	Current Ratio	Current Assets / Current Liabilities	> 1.5	1.0 - 1.5	< 1.0
2	Working Capital Rule	(Current Assets - Current Liabilities) / Total Adjusted Expenses	> 50%	20 - 50%	< 20%
Solvency		**Calculation**	**Strong**	**Stable**	**Weak**
3	Debt to Asset Ratio	Total Liabilities / Total Assets	< 30%	30 - 70%	> 70%
Profitability		**Calculation**	**Strong**	**Stable**	**Weak**
4	Rate of Return on Assets (ROA)	(NFIFO + Farm Interest Expense - Operator Management Fee) / Average Total Assets	> 5%	1 - 5%	< 1%
5	Rate of Return on Equity (ROE)	(NFIFO - Operator Management Fee) / Average Total Equity	> 12%	3 - 12%	< 3%
Financial Efficiency		**Calculation**	**Strong**	**Stable**	**Weak**
6	Operating Expense Ratio	(Total Operating Expense - Total Interest Expense - Total Depreciation Expense) / Total Adjusted Income	< 65%	65 - 80%	> 80%
7	Interest Expense Ratio	Interest Expense / Total Adjusted Income	< 12%	12 - 20%	> 20%
8	Depreciation Expense Ratio	Depreciation Expense / Total Adjusted Income	TBD for Beekeeping Industry		
9	Asset Turnover Ratio	Total Adjusted Income / Average Total Assets	TBD for Beekeeping Industry		
10	Net Farm Income from Operations (NFIFO) Ratio	NFIFO / Total Adjusted Income	TBD for Beekeeping Industry		

[2]Adapted from material in: "Understanding Key Financial Ratios and Benchmarks." (2008). Northwest Farm Credit Services: Spokane, WA. Available online: http://farmbiztrainer.com/docs/BT_Understanding_Key_Ratios.pdf

Your Financial Ratios

Using the formulas provided on page 54, plug in the appropriate values from page 52 to calculate the financial ratios for your business.

Liquidity		**Calculation**
1	Current Ratio	
2	Working Capital Rule	
Solvency		**Calculation**
3	Debt to Asset Ratio	
Profitability		**Calculation**
4	Rate of Return on Assets (ROA)	
5	Rate of Return on Equity (ROE)	
Financial Efficiency		**Calculation**
6	Operating Expense Ratio	
7	Interest Expense Ratio	
8	Depreciation Expense Ratio	
9	Asset Turnover Ratio	
10	Net Farm Income from Operations (NFIFO) Ratio	

Business Performance Scorecard

Liquidity

Assessment	Action Steps

Solvency

Assessment	Action Steps

Business Performance Scorecard

Profitability

Assessment	Action Steps

Financial Efficiency

Assessment	Action Steps

Find additional beekeeping resources on the Cornell Pollinator Network website and the Dyce Lab Facebook page.

https://pollinator.cals.cornell.edu

https://www.facebook.com/DyceLab