Using Accounting Software for Food Hubs: Processing Traceable Orders

A Step-by-Step Tutorial based on QuickBooks™ Professional
Introduction

The vast majority of food hubs, or local food aggregators and distributors, use QuickBooks™ as their primary accounting software. While QuickBooks does not provide all the recordkeeping and sales functions necessary for a food hub, many newer hubs utilize the software for more than just accounting. They use the QuickBooks program’s ability to track inventory, provide traceability, and issue purchase orders and invoices.

Over time, it is common for hubs to transition these functions to an Information Technology package and/or accounting solution with more features specifically designed for a food distributor. Examples of software packages that provide at least some traceability and order management functions include Local Orbit, Local Food Marketplace, Delivery Biz Pro, WooCommerce, Food Connex, and other custom-built solutions. Most of these programs are set up to export financial information back to QuickBooks for business accounting purposes, but they include features that QuickBooks lacks, such as online sales portals, label generation capabilities, production planning and more advanced inventory control. However, for a new hub, a combination of QuickBooks, Microsoft Excel spreadsheets, and other low-cost tools can be the most cost-effective data management solution until the hub’s revenues are sufficient to pay for more elaborate options.

Many food hub managers struggle with how to organize their QuickBooks account files in order to make the best use of the software. This tutorial is intended for food hubs that wish to use QuickBooks for product traceability, recordkeeping, accounting, basic inventory management, and sales analysis of different product categories. Our specific examples using QuickBooks Professional 2015 will show you how to:

- Set up product lines so that reports can be created to compare their sales and margins;
- Allow pre-purchased items to be tracked as “inventory” until sold; and
- Process orders in a way that creates traceability from the customer invoice or box label back to the farm.

While there are many versions of QuickBooks available, our tutorial uses QuickBooks Professional 2015 because it is the lowest-cost version that tracks inventory and purchase orders. If you don’t have the latest version of QuickBooks, the same concepts should apply to earlier versions as long as they offer inventory and purchase order features.

To provide parameters for product types, marketing outlets, and traceability needs, the tutorial is built loosely around the case of Iowa Food Hub, an aggregator-distributor based in northeast Iowa. Iowa Food Hub sells a diverse product mix including produce, meat, eggs, value-added items and dairy products through a mixture of wholesale and retail outlets. The examples in the tutorial are focused mainly on wholesale. All names and figures in this tutorial are fictional and do not in any way represent actual suppliers, customers, or prices for Iowa Food Hub.

1 QuickBooks is a registered trademark of Intuit, Inc. Mention of a specific product does not imply endorsement.
Traceability and Reports: The General Idea

Traceability

Product traceability is important to food hub managers because it fosters transparency in the supply chain and food safety quality control. It also contributes to customer satisfaction and regulatory compliance. Traceable systems enable food hubs to investigate the reason for customer complaints or recall product if a food borne pathogen is discovered. Traceability is also required for Good Handling Practices and Good Agricultural Practices (GHP/GAP) Certification, which an increasing number of customers require.

The system described in this tutorial allows a food hub to trace a specific product delivered to a customer (as evidenced by an invoice sent by the hub to that customer) back to the farm that provided that product (as evidenced by a fulfilled purchase order and a bill paid by the food hub). It also makes it possible for a food hub to look up the date on which a particular product was delivered by the farmer, which is important if the product has to be recalled. QuickBooks can be used to locate other customers who received the same product from the same harvest date so that a recall can be conducted.

To meet GHP/GAP requirements, products must be traceable by date to the correct farm and specific farm field from which they were harvested. In the event of a food-borne illness particular fields would be identified and inspected for sources of pathogens. In our approach, QuickBooks only stores data about which farm produced each item. Therefore, farmers must do their own record keeping regarding which field produced which product for which delivery date. It is the responsibility of the food hub manager to check regularly with fruit and vegetable producers to be sure they are maintaining the correct records.

Reports

Using the QuickBooks configuration illustrated in this tutorial makes it possible to generate reports that are useful both for traceability and business analysis. While we will not cover the question of food hub business analysis in great detail, our suggested configuration does allow a hub to do basic analysis of sales and margins by product category. We recommend breaking income sales accounts into categories and sub-categories that differentiate between items. This allows costs and sales to be analyzed by category, for example, dairy, greens, root crops and by individual item type such as 25 lb. bags of Yukon Gold potatoes. We also make use of customer and job categories so that sales to different customers or programs can be analyzed. Having specific information about costs and sales allows closer management of margins, profitability comparisons across product lines, and ease of use for other diagnostic tools.
Setting up QuickBooks for Traceability

Activating the “Inventory and Purchase Orders” Function

Using purchase orders in QuickBooks makes it possible to create orders for producers linking every product back to its producer of origin through a chain of information. The inventory function allows improved tracking and tracing for individual items that are not sold immediately after being received. Once the inventory function is enabled, items that you receive and don’t sell immediately will remain in inventory until sold, instead of disappearing anonymously into “Costs of Goods Sold.” In addition to keeping track of quantities of products in your warehouse, the inventory function includes aspects that help with traceability. Bear in mind that entire software solutions exist just for inventory management. QuickBooks functions are very basic.

To activate the inventory and purchase orders function in QuickBooks (Figure 1):

• On the main menu bar, select Edit ➔ Preferences, and a dialogue box will appear.
• On the left hand sidebar, select Items & Inventory.
• Choose the Company Preferences tab.
• Check all three boxes to make sure that inventory and purchase orders are active, receive warnings about duplicate purchase order numbers, and receive warnings if not enough inventory is on hand.

Figure 1.
**Activating the “Jobs and Estimates” Function**

Activating this function makes it easier to create reports and analyze your sales data. The “Jobs” function also gives you more options for organizing product information by sales date and product line, which assists with traceability and reporting.

To activate the jobs and estimates function, continuing in the Preferences menu (Figure 2):

- Select **Job & Estimates** in the left hand sidebar.
- Under the **Company Preferences** tab, indicate that you want to create estimates.

**Figure 2.**

Additionally, if you open **Sales and Customers** under the left sidebar of the **Preferences** menu shown in Figure 2, you can select shipping options, set default invoice or packing slip options, and choose whether to use price levels. If you select **"use price levels,"** you can set custom default pricing for different customers or jobs, which we will explain later.

Once the necessary settings have been selected, QuickBooks is ready to be used for traceability.
Setting up the Chart of Accounts

In QuickBooks, the Chart of Accounts is a master list of all account categories for a business’ income, expenses (including Costs of Goods Sold), sales items, assets and liabilities. In the Chart of Accounts, specific items can be organized into sub-accounts under broader account categories. How you set up the Chart of Accounts determines how the information in your accounting records will be organized, and also affects how you will be able to analyze your business data later on. For this reason, it is recommended that food hubs consult with an accounting professional and/or other food hub managers about the appropriate set-up for their operation. In this tutorial, we pay the most attention to setting up the Sales, Costs of Goods Sold, and Inventory Asset components of the Chart of Accounts, as these are the most relevant for traceability purposes. We will not discuss how to categorize operational expenses, financial assets or fixed assets. However, these questions merit careful consideration when setting up QuickBooks as they will affect the ways in which you can analyze your business’ performance later on.

To view and edit your Chart of Accounts, go to Lists on the main menu bar and select Chart of Accounts. Figure 3 shows Sales (a type of Income account) and Costs of Goods Sold categories set up for a food hub.

In Figure 3, sales income accounts were created for each of several broad categories of wholesale product offerings, dairy, greens, and root crops, and for a Food Box program. Subcategories of sales income accounts were created for specific products, such as 20 lb. bags of carrots. Then, Costs of Goods Sold accounts were created to match each of the broad categories of products. This is an important practice if you wish to analyze the relative profitability of different types of products.
To create a new account category for sales income (Figure 4):

- Go to Lists on the main menu bar and select Chart of Accounts.
- Click the Account button at the bottom of the Chart of Accounts window and choose New.
- In the Add New Account: Choose Account Type window that appears, choose the Income option, then Continue.

In the Add New Account window that appears, under Account Name, fill in the desired name of your new sales account category. Check the Subaccount of box, and in the field next to it, choose Sales from the drop-down menu. (Or, if the new account will be a subcategory of an existing sales account that you have already created, choose the name of the existing account from the drop-down menu.)
The process to create a new account category for Cost of Goods Sold is similar.

- In the **Chart of Accounts** window, click the **Account** button at the bottom of the window and choose **New**.
- In the **Add New Account: Choose Account Type** window that appears, choose the **Other Account Types** option, and in the field next to it, choose **Cost of Goods Sold** from the drop-down menu. Click **Continue**.
- In the **Add New Account** window that appears, under **Account Name**, fill in the desired name of your new Cost of Goods Sold account category.

You may wish to first create a general Cost of Goods Sold (COGS) account category that will track all goods sold. Then, you can create COGS sub-categories to match each of your major sales accounts, such as dairy, root crops, meat, etc.

**Figure 5.**

The Chart of Accounts can also be used to set up sub-categories of Inventory Assets, if desired. In this tutorial, we categorize all products as inventory assets; once you buy and receive a product, it becomes inventory until you sell it. Creating sub-categories of inventory probably isn’t necessary unless you warehouse some less-perishable items in inventory from week to week, and want to use QuickBooks to keep track of what you have. In that case, using sub-categories of Inventory could help you create more organized reports about what’s in inventory at a given time. Figure 5 shows a new account being created for a sub-category of inventory—in this case, root crops. Note that QuickBooks lists inventory as a type of “Other Current Assets.”
Adding Product Items to the Chart of Accounts

Once you have set up the general categories of Sales, Cost of Goods Sold, and Inventory Assets that you wish to track, you’re ready to create individual items for each specific type and unit of product that the food hub sells. Each item that is created will appear on the Chart of Accounts.

To create a new item (Figure 6):

- In the main menu bar, choose Lists ➔ Item List
- Once in the Item List box, click the Item tab at the bottom of the screen and select New. A New Item dialogue box will open.
- Choose the desired type of item under Type, and fill in the remaining details.

The three types of items to be discussed here include Inventory Parts, Non-inventory Parts, and Service items.

An Inventory Part is recognized by QuickBooks as any type of item that belongs to you from the time you buy it from a farmer through the time you sell it to a customer.

It will appear in inventory reports and other inventory management features, and if you try to sell more of it than you have on hand, QuickBooks will warn you. The total cost of all inventory items that are currently in stock appears on the “Inventory Assets” line of the balance sheet.

For perishable items not normally kept as inventory, it still makes sense to classify them as inventory parts, for at least two reasons. First, at the end of the ordering cycle you will be able to verify whether you have correctly invoiced them out to customers, since the inventory balance of those items should be zero after each delivery date. Second, you will receive an automated warning if you try to invoice a customer for more of an item than QuickBooks knows you have in inventory. That is, you will be warned if you try to sell something that lacks a purchase order linking it back to the original producer. This helps assure that all products sold will be traceable to their source.

The New Item dialogue box for creating an Inventory Part item is shown in Figure 6.

Figure 6.
In the **New Item** window, the user enters a particular unit in which a product is commonly sold, for example, gallon of ice cream, 12 oz. bag salad mix, etc. Figure 6 shows an added item for a gallon of milk. It is categorized as a sub-item of Dairy, which is shown on the sub-item drop-down menu because Dairy is one of the Sales account categories we already created. The “Milk, Gallon” item is given a default purchase cost ($1.00) and sale price ($2.00), and assigned to the Cost of Goods Sold (COGS) account for Dairy. In the **Income Account** field, we will need to select **Add New** (shown at the top of the Income Account drop-down menu) and create a new income account for “Milk, Gallon” as a sub-item of Dairy, as shown in Figure 7.

Because the item is listed as an inventory part, it can be held as inventory before it is sold. If you created several different types of inventory in your Chart of Accounts, as discussed earlier, the **Asset Account** drop-down menu is where to indicate the type of inventory asset that matches your item. Do this if needed, and then click **OK** to create the new item.

**Non-Inventory Parts** are another useful type of item. This item type can apply to anything that you do not wish to track as inventory, including non-tangible items such as membership fees or event tickets. Non-inventory items can be linked to the same income (sales) and COGS accounts as inventory items; they can be ordered, received and invoiced in the same way. However, their value will not appear in the Inventory Asset line of your balance sheet, nor will they appear in inventory reports or in the other inventory management functions of QuickBooks. One problem with using non-inventory items is that if you try to invoice a customer for them without having created a record that links them back to the original producer, QuickBooks will not warn you. This makes it too easy to end up with missing information later when you try to trace the item to its source. Therefore, we recommend classifying tangible products as Inventory Parts whenever possible.
Service items are a third type of item in the item list. If a food hub often charges service or delivery fees to customers, it may be desirable to add these fees as items. This makes it easy to include fees on an invoice for a customer. Service items can be assigned default rates, and can be linked to a particular income account, such as “Shipping and Delivery,” so that service fees appear separately from product sales on the food hub’s income statement. In Figure 8 we have created a service item called “Small Order Fee” which can be added to invoices for small wholesale orders.

Figure 8.
Creating Customers and Jobs
Setting up customers in QuickBooks allows product sales to be grouped according to the buyer or program to which those sales should be invoiced. Individual jobs can then be created and assigned to customers; jobs are a way of further categorizing deliveries made to a given customer.

To view the list of customers and jobs in QuickBooks, select Customers in the main menu bar, then Customer Center.

Figure 9 shows an image of the Customer Center with a list of sample customers and jobs that have been created.

In this example, both wholesale customers and the Worksite Food Box program are set up as customers in the left panel. The green highlighted item whose details are shown on the right side, “Food Box 11.07.14,” is a job that has been created under the Food box customer. Creating a job for a given week’s food box delivery is one way to help ensure item-level traceability for each food box.

To add a new customer:
- Click the New Customer & Jobs button at the top of the Customer Center screen.
- Choose New Customer.
- In the New Customer window that appears, you can specify various attributes that will be useful later on, including billing address and payment methods.

Figure 9.
If you wish to consistently charge a customer prices that are different from your default selling prices (Figure 10):

- Still in the New Customer window, select the Payment Settings tab.
- In the Price Level field, select Add New.
- This will open up a window where you can specify a special percent markup or discount for the customer.

Be sure that you have enabled the Price Levels option as explained previously in the “Setting up QuickBooks for Traceability” section. More advanced versions of QuickBooks, including Premier and Enterprise, allow price levels for individual items to be set for each customer, but this feature is not available in Professional 2015.

To create a new job in the Customer Center:

- Click the New Customer & Jobs button and select Add Job.
- Job settings are similar to customer settings.
  - In the upper right-hand corner of the New Job dialog box, be sure to select the correct customer to whom the job will be invoiced.

The settings for customers and jobs can be modified at any time by double-clicking on their names in the left-hand panel of the Customer Center. To avoid having a long list of old, accumulated jobs appear in the drop-down menus of jobs and customers, older jobs can be made inactive.

To make a job inactive:

- Go to the Customer Center and double-click on the old job. An Edit Job dialogue box appears.
- Check the Job is Inactive box in the lower left corner of the dialogue box.

Inactive jobs can still be viewed by going to the Customer Center and selecting the All Customers option at the top of the Customers & Jobs tab.

**Figure 10.**
Creating Vendors

**Vendors** are people to whom you pay bills – in this case, farmers. Setting up farmers or other suppliers as vendors in QuickBooks makes it possible to issue **purchase orders** to each vendor. The orders show all the items the hub needs to receive from the vendor during a particular ordering cycle. Once farmers fill the order by providing products to the hub, the purchase order for each farmer can be used to compile the **bill** that you owe to the farmer.

To create new vendors (Figure 11):

- Click the **New Vendor** button at the top of the **Vendor Center** window.
- In the **New Vendor** window that appears, you also can add useful information regarding the vendor’s 1099 tax forms (under the **Tax Settings** tab), their websites, and other attributes.
- Enter an e-mail address on this form if you would like to be able to e-mail purchase orders directly to the vendor from QuickBooks.

To view all vendors, choose **Vendors** in the main menu bar and choose **Vendor Center**.

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**Figure 11.**

![New Vendor Window](image)
Once customers and vendors are in place, you are ready to begin processing orders. Figure 12 displays a sample view from the Vendor Center, showing vendor information for a particular farmer. This helpful summary includes purchase orders that have been issued to Farmer Bill and bills that are payable by the food hub to the farm. Information about issuing purchase orders appears in the next section.

**Figure 12.**

![Vendor Information](image)
From Order to Fulfillment: How It Works

This section lays out the general flow of how QuickBooks can be used to create and fulfill a new set of orders. Specific details on each step are explained later in this publication.

1. The food hub manager receives orders from wholesale customers and records them outside of QuickBooks, usually on a spreadsheet or other online sales platform. The manager already knows what producers have available and uses that information to determine which producer will provide which items.

2. In QuickBooks, the food hub manager creates a purchase order (PO) for each farmer who will be providing product. For tracking purposes, each PO is assigned a number. The manager sends the POs to farmers via e-mail or calls them with their order and PO number.

3. Each farmer harvests and packs orders and labels each box of product with: the farm name, the customer name, the product name and unit size, harvest date, PO number, and box number. (Example: Jane’s Farm, Yukon Gold Potatoes 10 lb. bag, 10/11/14, PO#2160, Box 1 of 3.) The farmer also records information in his own logbook, including the date, which items were packed, which farm field each item was harvested from, and the PO number used for that ordering cycle.

4. Products are brought by farmers to the food hub at its aggregation site and received by the food hub manager. The manager checks the delivery against the original PO, and modifies the original PO in QuickBooks to reflect any changes in the delivery. This includes removing items that were not received, perhaps due to unexpected unavailability, and changing any quantities that were different from the original delivery.

5. Once the purchase orders have been updated, the manager “receives” the products electronically in QuickBooks and creates bills for the food hub, showing what the hub will pay each farmer. These bills are based on the original purchase orders, reflecting any modifications made above in Step 4. Once entered in QuickBooks, the bills go into Accounts Payable.

6. The food hub creates an invoice and packing slip, if desired, for each customer, using information from the original or modified PO and the sale price information that was given for each item.

7. The product is provided to the customer, along with the corresponding invoice.

8. Inventory may be adjusted for spoilage or other losses (shrinkage).
Using Accounting Software for Food Hubs: Processing Traceable Orders

Creating a Purchase Order

Our tutorial assumes that the food hub has an existing process, outside of QuickBooks, for accepting and compiling customer orders. Customer order information can be collected via a spreadsheet, an online sales platform, or a combination of several different sources. We also assume that the food hub already knows which products each farmer has available, and is prepared to assign orders to farmers accordingly. It is recommended that the food hub manager create a checklist of items and quantities for every customer order to ensure that every item ordered by a customer will be procured from a farmer. Once this information is ready, the food hub manager is ready to start sending orders to farmers via QuickBooks.

To create a purchase order for a particular farmer (Figure 13):

- Choose Vendors in the main menu bar and select Create Purchase Orders. A blank purchase order will appear.
- In the bar at the top of the purchase order, select the desired vendor.
- In the Items column, click each line of the purchase order and select the desired items from the drop-down menu that appears. Description and rate (price per unit) will populate automatically based on the standard purchase price that was specified when the item was created.
- In the Price column, if any of the default prices need to be changed, click on them to change them manually.
- In the Customer column, select the correct customer and job for each item so that it becomes linked to that customer for invoicing and traceability purposes.

➔ If the same item from the same farm is being sold to more than one customer, for example “Yukon Gold potatoes 25#” as shown in Figure 13, the orders for that item need to be entered in a separate line for each customer.
➔ If an item such as a shelf-stable or frozen product is going to be held in inventory rather than sold immediately, the customer column can be left blank and the item will automatically become an inventory asset once it is received.

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Figure 13.

![Screenshot of QuickBooks Purchase Order interface](image-url)
Note that this PO example shows the customers’ name. However, in the QuickBooks version of the PO created for the farmer, customer names will be invisible. Viewed from the perspective of a conventional wholesaler using QuickBooks, this makes sense, as they probably do not want their suppliers or manufacturers to know who the final customers will be. A food hub, on the other hand, may prefer to give farmers the names of their customers so that farms can label each box of product according to its destination. This makes it easier to assure traceability and to assemble the correct orders for customers. One method we’ve found for including the customer name in the vendor PO is to type the customer name into the Description column after the product name, for example, “Yukon Potatoes 25# – Johnny’s Restaurant.” This does take a few extra seconds. However, it will not alter the identity of the item itself, and because the customers are already shown in the column to the right, it is not difficult to do.

When finished, if you wish to e-mail the purchase order directly to the farmer, click the Email button at the top of the Create Purchase Orders window. You can choose to send the e-mail immediately or at a specified future time. Purchase orders also can be printed or read to farmers over the phone, as long as the farmer receives the PO number and other necessary information for labeling.

Receiving Products and Creating Bills Payable to Producers

Once producers have delivered their products to the food hub, it is time to verify and update the purchase orders and set up bills to pay farmers. If the items received by the hub are different from what was on the original purchase order, perhaps Farmer Jane only delivered five bags of potatoes instead of six, this change must be made in the original purchase order before bills are created in QuickBooks. If multiple customers ordered potatoes, it will be necessary to choose which customer will receive one bag of potatoes less than they ordered, and change the PO accordingly. Next, the food hub manager will “receive” the products in QuickBooks and set up bills to pay producers. This can be done in a single step. To receive products and create a bill:

- Go to the Vendor Center.
- Click the New Transactions button at the top of the screen, and select Receive Items and Enter Bill. This will create a new Bill.
- At the top of the Bill, select the Vendor who delivered the products.
- If open purchase orders exist for the selected vendor, you will be asked to select the purchase orders you have received (Figure 14). Check the box next to the appropriate purchase order and click OK.

**Figure 14.**
Once a purchase order is selected, the Items section of the bill is automatically filled in with a list of items from that PO. Every item entered on the bill will automatically be marked as “received” in its original purchase order. The purchase prices for those products will also appear, based on the prices you entered earlier when you created Items in QuickBooks. Part of a completed bill, listing all the items delivered by Farmer Jane, is shown in Figure 15.

Make sure the Bill Due box shows the correct due date for the bill. This allows QuickBooks remind you when the bill is due in Accounts Payable.

Once the bill is saved, QuickBooks will know that you owe a certain amount for example, $80 to Farmer Jane, and will move the bill to Accounts Payable. If you return to the Vendor Center and click on Farmer Jane’s name, both the purchase order and the bill will appear under her Vendor Information.

Creating Customer Invoices and Packing Slips

The next step is to create invoices to send to customers for products you are delivering.

- Go to the Customer Center and click on the name of the customer you wish to invoice first.
- At the top of the screen click the New Transactions button and choose Invoices to create a blank invoice.
- At the top of the invoice, select your customer’s name. A Choose Billable Time and Costs dialogue box may appear automatically, or you may need to tap Add Time/Costs on the top right side of the invoice.
- Once in the Choose Billable Time and Costs dialogue box, click the Items tab on the right. This will show the purchase order items that are tied to the customer’s order, as seen in Figure 16. Select all of the items shown to invoice the customer for everything they are receiving and click OK.
- Default selling prices for each item will be filled in automatically based on the values you specified in the item information as outlined in the “Setting up Item Lists” on page 10 of this publication. Prices can be changed manually on the invoice if desired.

Figure 15.
Once you have added items from purchase orders, you may choose to add items from your previous inventory to fill the order. Keep in mind, items received from a previous purchase order without a specified customer are held in inventory and can be used to fill a later invoice.

Delivery fees or other service charges can be added to the invoice in a similar fashion, if you have already set up a delivery fee item in the Item List, as explained in the “Setting Up Item Lists section.” There are other ways of adding service fees to invoices, but we find this method to be the simplest.

To add an item from inventory or a service fee to the invoice (Figure 17):
- Click an empty line in the Item column of the invoice.
- Choose the desired item, an inventoried item or delivery fee, from the menu.

Don’t forget, prices and fees can be modified manually if desired.
To guarantee traceability, **be sure that the date shown on the invoice is the same as the date on which you will deliver the product.** If the customer has asked you to mark their invoice with a PO number from their own PO system, unrelated to the food hub’s PO numbers, type it at the top of the invoice in the **PO No.** box.

When the food hub delivers the product, a copy of the invoice, which shows price information, or a packing slip, listing the products in the delivery but no price information, should be included. An invoice can be printed or e-mailed using the buttons at the top of the screen. If you wish to print a packing slip, use the menu under **Template** at the top of the screen to select **Intuit Packing Slip** and then print. (Figure 18) Some customers have invoices emailed directly to their business manager, preferring to receive packing slips along with the physical product because they do not want their staff to see the monetary value of the product. In either case, make sure that the customer signs something – a packing slip or an invoice – when they receive the product from you.

### Adjusting Inventory

At the end of an ordering cycle, sometimes the inventory recorded in QuickBooks may not reflect the inventory that is actually still available to be sold. For example, if a case of salad mix spoils or if a dairy product must be thrown away because its expiration date has passed, those items must be deducted from inventory.

To adjust the quantity of a product in inventory (Figure 19):

- In the main menu bar, choose **Vendors ➔ Inventory Activities ➔ Adjust Quantity/Value on Hand**.
- In the **Adjust Quantity/Value on Hand** dialogue box, next to **Adjustment Type** choose **Quantity**.
- Enter the **Adjustment Date**, and then choose an **Adjustment Account** where the cost of the lost goods, often called **shrink** or **inventory shrinkage**, will be recorded. For routine adjustments you may wish to use your **Cost of Goods Sold** account for the appropriate category of product. This means the amount you paid to purchase the spoiled products

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**Figure 18.**

![Packing Slip Image](image-url)
will be taken out of your inventory assets and added to your COGS expenses. Alternatively, if desired, you can create an expense account specifically for inventory shrinkage. This may make it easier to track shrinkage over time.

- Click a cell under the **Item** column to choose the item whose quantity you wish to adjust. The **Qty on Hand** column will populate automatically with the number of that item that you have in stock.
- Type the new quantity of the item in the **New Quantity** column or type the change in number of that item under **Qty Difference** column in order to adjust the quantity.

**Figure 19.**

In Figure 19, the item for a one-gallon container of ice cream has been selected and a quantity difference of “-3” has been entered, representing three expired or damaged containers of ice cream that were thrown away. QuickBooks has automatically calculated the new quantity of ice cream remaining and the total value of the inventory adjustment based on the information provided. Once entered, these adjustments will affect how many containers of ice cream are available for the food hub to invoice to customers in the future.
Creating Reports

Creating reports in QuickBooks is an essential part of tracing products. Reports can also be useful for analyzing product sales and other business records, although that will not be covered in this publication. Many options for running reports are shown under Reports in the main menu bar. Two examples of useful report for food hubs are Sales by Item Detail (Figure 20), which allows analysis of sales of each item over a specified time period, and Sales by Customer Detail, which shows total sales from each customer. Detailed information on most items shown in a report can be obtained by double-clicking on the desired item. The dates covered by any report can easily be changed by altering the From and To fields at the top.

By clicking the Customize Report button (top left), it is possible to create a custom report that meets a food hub’s needs, as shown in Figure 21, and then to “memorize” the report’s settings so that it can be run repeatedly. Memorized report settings will appear in the same drop-down menus as the other report options.

Figure 20.
Figure 21.
A Word about Sales Analysis

Clearly, traceability is not the only reason to devote attention to the setup of items in Quickbooks. One benefit of organizing product items into subcategories of product, as we did in the “Adding Product Items to the Chart of Accounts” section, is that one can analyze the profitability of each product category. Not only can we do this in reports, but we also can see it in Profit & Loss statements. The simplified Profit & Loss statement (Figure 22) illustrates how sales and COGS are split out for the dairy category, making it easy to calculate gross profit.

As most food hub managers know, gross profit (sometimes also called gross margin) is the amount of sales revenue that remains after subtracting Cost of Goods Sold. Food hubs can calculate percent gross profit to compare the profitability of different product categories, or to see how much revenue from each product category is being retained by the food hub to cover business expenses and profit. To find the percent gross profit for the Root Crops product category (Figure 22), subtract “COGS - Root Crops” from “Total Root Crops” sales and divide the result by “Total Root Crops” sales:

\[
\text{% Gross profit} = \frac{(\text{Total Root Crops sales} - \text{COGS - Root Crops})}{\text{Total Root Crops sales}}
\]

This means that for every dollar of root crops sold, ten cents is kept by the food hub to cover trucking costs, labor, overhead, other costs, and profit.

**Figure 22.**

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<table>
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<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td><strong>Dairy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ice Cream, Gallon</td>
<td>5.00</td>
<td></td>
</tr>
<tr>
<td>Total Dairy</td>
<td>5.00</td>
<td></td>
</tr>
<tr>
<td><strong>Root Crops</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrots, 20#</td>
<td>50.00</td>
<td></td>
</tr>
<tr>
<td><strong>Potatoes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gold Potatoes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yukon Gold, 25#</td>
<td>50.00</td>
<td></td>
</tr>
<tr>
<td>Total Gold Potatoes</td>
<td>50.00</td>
<td></td>
</tr>
<tr>
<td>Total Potatoes</td>
<td>50.00</td>
<td></td>
</tr>
<tr>
<td>Total Root Crops</td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td><strong>Total Sales</strong></td>
<td>105.00</td>
<td></td>
</tr>
<tr>
<td><strong>Shipping and Delivery Income</strong></td>
<td>15.00</td>
<td></td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td>120.00</td>
<td></td>
</tr>
<tr>
<td><strong>Cost of Goods Sold</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cost of Goods Sold</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COGS - Dairy</td>
<td>2.00</td>
<td></td>
</tr>
<tr>
<td>COGS - Root Crops</td>
<td>90.00</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cost of Goods Sold</strong></td>
<td>92.00</td>
<td></td>
</tr>
<tr>
<td><strong>Total COGS</strong></td>
<td>92.00</td>
<td></td>
</tr>
<tr>
<td><strong>Gross Profit</strong></td>
<td>28.00</td>
<td></td>
</tr>
</tbody>
</table>
Tracing Products

If an item is spoiled or causes illness, or if the wrong item has been delivered to a customer, the food hub manager may need to check the original order, trace the product to the source and/or look up other items that may need to be recalled. The next section shows how to use QuickBooks to trace a product sold to a wholesale customer.

**Important note:** If a customer reports that a product may have sickened someone, there are a number of crucial measures that a food hub should take, most of which will not be discussed here. Be sure to consult applicable food safety laws about what to do in the case of a food-borne illness, and talk to experts at your local Extension Service, state Department of Agriculture, and relevant health inspection agencies such as the Iowa Department of Inspections and Appeals.

If something is wrong with a delivered item, the customer should contact the food hub and provide the label information applied to that box by the original farmer. This is why it is important, in the very least, for the label on every product to contain the PO number, item name and unit size. It is also recommended to include the producer name, harvest date, and box number, for example, “Box 1 of 2.” With this information, the food hub can trace the item back to the farm and the original order. To trace a product using QuickBooks, a food hub could start by looking at the purchase order for that item.

To quickly find the correct purchase order if the producer’s name is on the product label:

- Go to the **Vendor Center** and click on the name of the producer in the left column.
- All of that producer’s purchase orders and bills will be displayed on the right-hand side. Double-click the correct PO number to open it up.

If the producer name is not on the product label:

- Go to the **Vendor Center** and click on the **Transactions** tab.
- Select the correct PO number from the list that appears.

If the wrong item was delivered, the PO can be used to identify what should have been delivered. Or, if an item – for example, fresh spinach – was reported to be spoiled or to have caused a food-borne illness, the PO allows the food hub to look at any other deliveries of spinach made to other customers as part of the same purchase order. The PO also will list all the other items delivered by the same vendor in the same purchase order. This could be used to identify other products from the same order that might also have had a problem, for example, improper refrigeration by the vendor.

Other records and reports that are useful for traceability include:

**Purchases by Vendor Detail**

The hub may want to look at subsequent deliveries of the same item from the same vendor to other customers, or at other sales made by the same vendor. The Purchases by Vendor Detail report provides a list of all items purchased from each vendor.
To view the Purchases by Vendor Detail report (Figure 23):

- In the main menu bar, choose Reports ➔ Purchases ➔ Purchases by Vendor Detail.
- If desired, modify the time period covered by the report at the top of the window.
- The Date column reflects the date the product was received; this is the date that should be used to trace the item back to the farm.
- You can click each item to open the Bill paid by the food hub to the farmer for that item. The Bill shows the item in question as well as other items supplied by the farmer in the same delivery, and which customer(s) received them, unless they were sent to inventory.
- If desired, click the Customize Report button to narrow the report by vendor, sales item, shipping date, etc.

### Item QuickReport

To view the history of a particular item category, such as “Ice Cream 1 Gallon” (Figure 24):

- Select Lists from the QuickBooks main menu bar, then Item List.
- Find the name of the item you want, and click it once.
- At the bottom of the window, click the Reports button and select the QuickReport option for your item.
- Once the QuickReport is displayed, double-click on a transaction to display the original purchase order, bill or invoice associated with it.
Inventory Valuation Detail
This report can be used to view the history of an item that was kept in Inventory. Read more about using this report in the Tracing Items from Inventory Section which appears on the next page of this tutorial.

On-Farm Records
To be useful, traceability must extend all the way back to the harvest process, requiring good record-keeping by farmers. If a product is identified as being contaminated with a food-borne pathogen, such records will help farmers and food safety inspectors launch a more precise search for the source of the problem. It will help determine whether the problem originated from the soil where the product was grown, harvesting containers, storage receptacles, or poor refrigeration along the supply chain. Farmers should maintain a harvest log in which they record item names and quantities, fields from which items were harvested, harvest dates, delivery dates, final customers for each product, and the PO number to which each product is linked. This information cannot be stored in QuickBooks, but should be recorded in such a way that farmers’ records can be matched to QuickBooks purchase order numbers. An example of a harvest log, as well as other useful food safety protocols, can be found in this sample food safety manual for growers’ cooperatives: http://www.leopold.iastate.edu/pubs-and-papers/2011-10-growers-manual.

In cases of food contamination, a recall is sometimes necessary. To issue a product recall, the food hub must identify all of the other customers who received product from the same contaminated source, contact them, and recover the product. Periodic mock recalls, which involve all of these steps (except actually recovering the product) are required for farms and food hubs that are GHP/GAP certified. For more complete information on when and how to perform a recall, consult an Extension Service specialist, your state Department of Agriculture, and applicable health authorities.
Summary of relevant information for traceability of an item

<table>
<thead>
<tr>
<th>Traceability information</th>
<th>Where to find it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of vendor who provided product</td>
<td>Label attached to product (which should include PO number); purchase order</td>
</tr>
<tr>
<td>Date of harvest and farm field of origin</td>
<td>Farmer records linked to PO number</td>
</tr>
<tr>
<td>Date product was received by food hub</td>
<td>Farmer records and date on vendor bill. If item was held in inventory and not labeled with a PO number, an Inventory Valuation Detail report or item history may be necessary to identify the correct vendor bill</td>
</tr>
<tr>
<td>List of other items delivered by same vendor at the same time</td>
<td>Purchase order</td>
</tr>
<tr>
<td>Date product was delivered to customer</td>
<td>Customer invoices; sales reports showing customer invoices. For this to work, the date written on a customer invoice MUST be the same as the date of delivery to customer</td>
</tr>
<tr>
<td>List of other customers who received the same item, or who</td>
<td>Purchase order, or if item was held in inventory, an Inventory Valuation Detail report to show all customers who received a similar item from inventory</td>
</tr>
<tr>
<td>received other items from the same farmer delivery</td>
<td></td>
</tr>
<tr>
<td>List of other products delivered by the same farmer in</td>
<td>Purchases by Vendor Detail report (click on each item to see original vendor bill)</td>
</tr>
<tr>
<td>subsequent deliveries, and where they were distributed</td>
<td></td>
</tr>
</tbody>
</table>

Tracing Items from Inventory

In QuickBooks Professional, if the program is set up as suggested in the “Setting up QuickBooks for Traceability” section, items received but not sold are automatically kept on the balance sheet as inventory assets. Inventory items can be drawn upon at any time to fill orders. Under Reports in the main menu bar (Figure 25), there are several options for inventory reports. The Inventory Stock Status by Item report is a useful tool to determine how many items currently are in inventory.

Figure 25.
Inventory creates some unique challenges for traceability in QuickBooks. If an item was held in inventory, its original purchase order might not show the name of the customer to whom it would be delivered, because the identity of that customer might not have been known at the time. In that case, the purchase order cannot be used to link an inventoried product directly to a customer invoice. If items placed in inventory are physically labeled with their source farm and original PO number, and sold with that labeling, the PO number serves to trace those items back to their original farm source and date of receipt. However, if a case of items is placed in inventory and its contents are sold individually over time without additional labeling, it can be harder to trace them back to their source. This is why many food distributors eventually invest in a more sophisticated inventory tracking system, enabling the use of traceability labels or barcodes.

The **Inventory Valuation Detail** report can be helpful in tracking inventory activity over time. This report (Figure 26) shows the dates on which inventory items were sold to customers (invoiced) and the dates on which they were replenished from farmers (billed). The **Name** column shows which vendors provided the item or which customers received the item on each transaction date. If a customer has a problem with some ice cream that was sold to them out of inventory, you would first need to determine from the bill date when you delivered the ice cream, then look back through the inventory history to see when ice cream had last been re-stocked prior to the bill date. Depending on your inventory restocking practices, it should be possible to narrow down the history of the ice cream to one or two receipt dates and purchase orders. This approach does not offer “perfect traceability,” but makes it possible to take an educated guess about the source and purchase date of a given inventory item. If purchase order numbers and/or lot numbers are labeled directly on each unit sold, this would make the process much smoother.

Inventory management is a consideration on the customer side as well. If your only traceability labeling is on your delivery boxes, and not on the product itself, traceability will depend on your customers keeping the product in the correctly labeled boxes when they store items they have bought from you. If your customer has more than one shipment of your product in their storage area, discourage them from consolidating some of the older product into newer boxes of product or vice versa. This would make it impossible to trace the product to the correct delivery and harvest dates.

**Figure 26.**

![Inventory Valuation Detail Report](image)
Conclusions

Many food hubs find themselves using their accounting software as an interim solution for various kinds of recordkeeping during their startup phase, when they lack the time or money to spend on more sophisticated technologies. While QuickBooks Professional does not offer a complete or flawless system for processing orders, tracking inventory, or assuring product traceability back to the farm, it can assist with these functions in the short run. One advantage of storing information in QuickBooks is that even as a food hub adopts new information technologies, it is likely to continue using similar accounting software, so old records kept in QuickBooks will continue to be available over time.

In the absence of time-saving technologies, such as barcode-readable product labels, setting up a traceable system requires a firm dedication to established processes and to manually entering data as it comes in. If a food hub carefully follows the methods in this tutorial, QuickBooks Professional can be a valuable tool for organizing information. Training staff about the importance of the data entry process, and adapting this process to the constantly changing bustle of real life at a food hub, becomes the next challenge that managers must undertake.

Acknowledgement

The tutorial used in this publication was created by Johnice Cross, business and food hub consultant, johnicercross@gmail.com; and Savanna Lyons, graduate research assistant, Leopold Center for Sustainable Agriculture and Iowa State University Extension and Outreach. Text by Savanna Lyons (515) 294-3711, slyons@iastate.edu.

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The Leopold Center for Sustainable Agriculture seeks to identify and reduce adverse socioeconomic and environmental impacts of farming practices, develop profitable farming systems that conserve natural resources, and create educational programs with ISU Extension and Outreach. It was founded by the 1987 Iowa Groundwater Protection Act. The Center is located at 209 Curtiss Hall, Iowa State University, Ames, IA 50011-1050; (515) 294-3711.

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