



Circle Fresh Farms Track and Trace Implementation Handbook

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I. Overview of Product Traceability Initiative (PTI)

Background—Food Safety and the Changing Context of the Fresh Produce Industry

With the rapid internationalization of the food industry, concerns over food safety have grown exponentially. These concerns have been magnified by a series of high profile food borne illness outbreaks that have caused both sickness and death. As a consequence, many producers have been seriously impacted by recalls as well as general consumer avoidance of foods linked to the outbreaks. Often these producers have no role in the outbreak and may be thousands of miles from the incident. However, without a clear means of demonstrating that their products are not responsible, farmers cannot substantiate the safety of their crops.

In response to these concerns, the Federal government passed the Food Safety and Modernization Act in 2011 ([Food Safety Modernization Act](http://www.fda.gov/food/food-safety/modernization-act)) that significantly expanded previous food safety responsibilities for the food industry. Final rule making for this Act is still in process, but it is clear that the new law will require substantially more record keeping and accountability for primary producers. (See <http://www.fda.gov/Food/FoodSafety/FSMA/ucm334114.htm> for more information on proposed rules).

Impacts on Producers

Two broad areas of response must now be considered by producers who want to minimize the potential risks and impacts of food safety issues and oversight.

Food Safety Plan—First, producers will likely soon be required to have written a comprehensive food safety and food handling plan—typically referred to as a Good Agricultural Practices (GAP) and Good Handling Practices (GHP) plans. Currently these efforts are voluntary but in many cases proactive retailers such as Wal-Mart, Safeway, Trader Joes and others are starting to require that their producers have these plans developed and their ongoing monitoring protocol in active compliance. Typically these plans must also be reviewed and field checked by a third party independent evaluator. In Colorado, the State Department of Agriculture provides this service. The State of Colorado's Department of Agriculture provides in-state support and training around the GAP program including voluntary auditing services. More information on this program can be found at <http://www.colorado.gov/cs/Satellite/Agriculture-Main/CDAG/1248443572427>

Producers can also retain a number of private firms who specialize in these third party audits including Primus (<http://www.primusgfs.com/index.aspx>), Scientific Certification Systems (<http://www.scsglobalservices.com/?scscertified=1>) and SQF (<http://www.sqfi.com/suppliers/certification-steps/>).

Track and Trace Implementation—While having a food safety plan is an essential first step in demonstrating that a producer is using best available practices to minimize



and manage food safety issues, the producer must still be able to demonstrate that their products were not associated should an outbreak be isolated to a particular produce type with multiple producers. Until recently, the cost and complexity of this process made it cost and resource prohibitive to smaller producers. However, with recent advances in digital technology, these systems can now be developed and implemented by smaller producers. This project was designed to evaluate the options available for smaller producers as well as design and implement an actual Track and Trace pilot project using a technology selected from among those currently available to smaller producers.

Overview of Track and Trace Systems

With the growing number of high profile food borne illness outbreaks, the produce industry recognized the likelihood that food safety could be imposed as a regulatory framework. They could also see the rapid growth of independent but uncoordinated efforts to develop produce tracking systems. This raised the prospects for a series of competing systems that would likely create both retailer and consumer confusion further increasing the likelihood of government intervention. To avert this outcome the produce industry began taking proactive steps in the mid-2000s to create a shared platform for a single produce tracking framework—The Produce Traceability Initiative (PTI-<http://www.producetraceability.org/>).

Produce Traceability Initiative--The Produce Traceability Initiative (PTI) is a voluntary, industry-wide effort designed to facilitate the fresh produce industry to rapidly implement track and trace procedures in a standardized industry approach. PTI was developed and launched by some of the biggest entities in the produce industry including the Produce Marketing Association (PMA-<http://www.pma.com/>), United Fresh (<http://www.unitedfresh.org/>), GS-1 (<http://www.gs1.org/>), and the Canadian Produce Marketing Association (CPMA <http://www.cpma.ca/>). The PTI is an industry-led, supply chain-wide Initiative governed by a 34-member Leadership Council. Participants range from grower/producers and packers, to distributors and retailers. The use of common standards in the supply chain across the produce industry will significantly enhance the ability to narrow the impact of potential recalls or similar problems, protecting both consumers and industry and supply chain members.

The PTI initiative has seven defining steps that each company must complete to achieve compliance.

1. Obtain company prefix
2. Assign GTIN numbers
3. Provide GTIN information to buyers
4. Show human-readable information on cases
5. Encode information in a barcode
6. Read and store information on inbound cases
7. Read and store information on outbound cases



A detailed explanation of the seven steps can be found at the PTI website <http://www.producetraceability.org/>. The requirements of each milestone will impact each company in different ways and may require modifications to internal systems or processes. The level of impact depends on the degree of tracking chosen. At the most basic level to achieve compliance, a company must track product down to the case level. Most basic track and trace systems are designed to achieve this level of tracking. For some products—melons are a common example—tracking may be implemented at the item level. This significantly increases the complexity, data intensity and mechanization required to accomplish this task efficiently.

Case Level Tracking

For this purposes of this project and analysis, case level tracking was the level of tracking chosen. With the utilization of QR codes, it would be possible to integrate item level tracking at a later time if either customer requirements or regulatory oversight required this level of monitoring. Given the decision to develop a system compliant with the PTI standards, the first step in this process is securing specific numbering allocations that are specific to each company and its particular products. The foundation of this system is the use of a numbering protocol called the Global Trade Item Number (GTIN).

Global Trade Item Number (GTIN)--GTIN is a numbering system developed by GS1 System (<http://www.gs1.org>). The GS1 organization was formed in 2005 and comprises the former EAN International and Uniform Code Council (UCC) organizations. UCC is known for successfully implementing the 12-digit identification number known as the Universal Product Code (UPC) in the United States. EAN International later developed the UPC system for use outside North America. The system provides unique identification worldwide and a GTIN can be used in barcodes or as Electronic Product Codes in Radio Frequency Identification (RFID) tags.

GTIN is an umbrella term introduced to ensure consistent terminology worldwide. It is important not to confuse a GTIN with a barcode. A GTIN can be represented by 8, 12, 13 or 14 digits. The number is encoded using existing barcode symbology. The following tables show the different GTINs and the barcode used for encoding the number.



Global Trade Item Number (GTIN) Barcode

GTIN-8



Using EAN8 Barcode

GTIN-12



Using UPCA Barcode



Using UPCE Barcode

GTIN-13



Using EAN13 Barcode



GTIN-14



Using UCCEAN 128 (now known as GS1-128)

Using ITF14 Barcode



Using Reduced Space Symbology (now known as GS1 Databar 14) Barcode

Figure 1 provides examples of PTI compliant labels.

Figure 1



The label typically includes both a numerical and bar code representation of a product tracking number. PTI has adopted the Global Trade Item Number (GTIN) system as the foundation of the PTI label system. This system was developed by the company GS-1 who now serves as the authorized source for issuing all GTIN numbers used in the PTI compliance system.

Each participating farm or producer must register with GS-1 and pay a fee based on the volume of sales it projects annually. GS-1 then authorizes a maximum amount of GTIN numbers for that vendor based on their scale of operations and the amount of their registration fee. Once the vendor or producer has secured this authorization and allocation of codes, it then goes through a process of registering each of its products to a unique GTIN number that will enable both the producer and its customers to track each of its product types. Guides for registering with GS-1 and for assigning GTIN numbers for products are included as attachments to this handbook.



II. Track and Trace System Comparisons

In choosing a Track and Trace system provider, there are a number of important factors to be considered. These include not only initial price, but ongoing costs (both for licensing fees and potentially for data storage); equipment, versatility, availability of on-site service and other considerations. As part of the analysis to evaluate which track and trace system would be most suitable for the Circle Fresh Network, a comparative analysis was conducted on the four leading system providers with products suitable for small producers. The rapidly changing nature of this field will lead to new vendors and products in the coming months and years. This assessment can provide a framework that new growers can use in evaluating potential service providers. The four vendors selected for the Circle Fresh comparison were:

1. PTI Print
2. Harvest Mark
3. Tru Trac/Foodlink
4. Redline Systems

A list of 28 system attributes were compared across the four vendors. The results from this analysis are displayed in the figure below.



Track and Trace Company Comparison

Feature	PTI Print	Harvest Mark	TrueTrac/FoodLink	RedLine-PTI Lite
Help Obtain Company Prefix, PTI Milestone #1	YES	NO		
Help Assign & Manage GTIN Numbers & GLN, PTI Milestone #2	YES	PTIPro		YES
Data Synchronization Files, PTI Milestone #3	YES	PTIPro	YES	
PTI Compliant Labels, PTI Milestone #4-5	YES	PTIExpress + PTIPro	YES	YES
Read & Store Information on Inbound Cases, PTI Milestone #6	YES	PTIPro	YES	YES
Read & Store Information on Outbound Cases, PTI Milestone #7	YES	PTIExpress + PTIPro	YES	YES
Know how much to pay your growers/vendors	YES		YES	
Know how much to bill your customers	YES		YES	
Automatically Generate Purchase Orders, Bills, Sales Orders, and Invoices in QuickBooks TM ©	Additional Fees Apply		NO	NO
Easy To Use Software	YES	PTIExpress + PTIPro	YES	YES
24 Hour Technical Support	YES	PTIExpress + PTIPro		YES
VoiceCode & RPC Support	YES	PTIExpress + PTIPro	YES	YES
Free software updates	YES	PTIExpress + PTIPro	YES	Annual renewal fee
Secure data storage	YES	PTIExpress + PTIPro	YES	YES
Sync GTIN lists and label templates with co-packers	YES	PTIPro	YES	
More than 100 GTIN's	YES	PTIPro	YES	YES
Branded Response/Landing Page	YES	PTIPro	Additional Fees Apply	NO
Production Insights	YES	PTIPro		
Print & Apply Automation Ready	YES	Additional Fees Apply	YES	YES
Implementation Consultation	Additional Fees	NO		Additional Fees



	Apply			Apply
Integration with buying organization systems	YES	PTIPro only	YES	
Item Level Traceability & Mobile End Customer Marketing	YES	Additional Fees Apply	Additional Fees Apply	NO
Computer/Hardware	Customer	\$4,000/site (must buy from HM)	Customer	Customer
Printer	Customer	included above	Customer	\$4,850-PTI Light
Labels	Customer	\$.003/lable (third party)	Customer	Purchase from RedLine
Software	\$995	included above	included in annual fee	Included in annual fee
Annual Fees	\$0	\$1,500 PTI Express, \$3,000 PTI Pro	\$995+FoodLink Membership	\$500
Per Case or Label Fees	<=\$0.025	\$0 case level, \$3.80/thous item	Label Only	No label fees



Four overarching criteria were central to the comparison and selection of the final vendor:

1. Compliance with the Produce Traceability Initiative (PTI)
2. Cost--up front and ongoing
3. Complexity of use and availability of product support
4. Multiple site integration capabilities

All four systems were determined to satisfy the first criteria. The second criteria immediately disqualified one vendor—Harvest Mark. This had been the system the Circle Fresh Proposal was originally constructed around. However, the high costs of installation at each site (\$4,000), the proprietary requirement of hardware, and the high annual renewal costs for each site, disqualified this vendor.

Of the three remaining vendors, only one other vendor was comparable in price (Foodlink), but its systems were not yet configured for multiple site integration. A final consideration that was significant in deciding on the system was the availability of on-site support. As the only vendor with a local presence, PTI Print was capable of providing on-site installation support as part of each of the farm deployments—all of this without an annual software fee.

The one downside to the PTI Print system was its per/label cost as part of maintaining all of the product information associated with each label. However, at only \$.025/label—and with the many added features such as automatic website landing and QR code integration and readability by smart devices, this was viewed as a good value.

III. Financial Analysis

A critical factor in determining the viability for integrating track and trace systems for small to medium scale produce greenhouse operations was the cost—both initial installation and setup and ongoing operations. Drawing on the actual operational experience gained after implementing the system at CFF’s central packing facility, a series of cost factors were derived for:

- Initial installation costs
- Materials costs
- Labor costs
- Ongoing service or licensing fees.

These costs were compiled into a spreadsheet model that also enabled cost projection for different sizes of greenhouse operation. Three broad size categories were chosen for comparison based on common greenhouse sizes within the CFF network. These included 10,000 SF (approx. $\frac{1}{4}$ acre), 22,000 sq ft (approx. $\frac{1}{2}$ acre), and 44,000 SF (approx. 1 acre). The results of this analysis are displayed in the table below. It indicates that costs range from \$.12/case for a small $\frac{1}{4}$ acre facility to as low as \$.07/case for a larger 1 acre facility. This would suggest that the cost of integrating a full-featured track and trace system make it financially viable for almost any scale of agricultural operation.



Financial Assessment of Track and Trace System Costs

Hardware	
Computer	\$500.00
Printer	\$300.00
Scanner	\$100.00
	<hr/>
	\$900.00
Software	
One-time Set-up	\$995.00
	<hr/>
	\$995.00
Setup Costs	
Prep and programming	\$200.00
Label layout	\$100.00
Setup support	\$300.00
	<hr/>
	\$600.00
Total	\$2,495.00
Years to depreciate expense	\$7.00
Cost/yr for hardware	\$356.43
Cost/case	
@ 5,300 cases/yr	\$0.067
@ 10,500 cases/yr	\$0.034
@ 21,500 cases/yr	\$0.016
Ongoing/Material Costs	
Labels	\$0.02
QR Codes	\$0.02
	<hr/>
Per case cost	\$0.04
Labor Costs	
# of seconds/hour	3600
Labor cost/hour	\$10
\$/second	\$0.00278
Second/label (config/print/apply)	5
Labor cost @ 5 sec/label	\$0.01
Total Cost for System-Labor & Materials	
for 10,000 SF facility	\$0.12
for 20,000 SF facility	\$0.09
for 40,000 SF facility	\$0.07

Assumptions

Facility Size and Case Production (tomato)	
Size	Yearly Cases
10,000 SF	5,300
20,000 SF	10,500
40,000 SF	21,500



IV. Implementation Steps

For producers interested in proceeding with the development and implementation of a Track and Trace system, the following represent the major steps and key information associated with each.

Step 1: Secure a GS1 Company Identifier Number

As the PTI Milestone's document outlines, obtaining a company identifier number is the first step in establishing a track and trace system. This number is unique to each company and provides the prefix to all product specific numbers that are integral to a product tracking program. To avoid confusion and guide a coherent tracking framework, PTI designated a specific company—GS1—to serve as the issuer of company tracking numbers for the entire food industry. GS1 is a standards organization that has over a hundred branches around the world.

US-based growers work through GS1 US to secure their company prefix. This can be obtained at <http://www.gs1us.org/get-started/i-need-a-gs1-company-prefix>. It typically takes less than a week to secure that company GS1 number after making contact with GS1. The cost of the GS1 number is based on the volume of sales anticipated on an annual basis and the number of codes being used. For companies with gross sales less than \$250,000 annually that needs up to 50 codes (one for each specific type of product), would have an initial fee of \$760 and an annual renewal fee of \$158. A company with revenues up to \$500,000 but using less than 1,000 codes would have an initial fee of \$1,575 and an annual renewal fee of \$500. A company with sales over a \$1M annually but using less than 1,000 codes would have an initial fee of around \$3,000 and an annual renewal fee of \$500. GS1 provides a rate calculator that is included as an attachment to this document.

The image below shows a typical certificate that is issued from GS1 once a company identifier has been secured.



Step 2: Create GTIN Numbers for Each Unique Product Offering

Once a GS1 number has been assigned, the next step is to create product identifier numbers that integrate the company ID secured above with a number specific to each unique product sold by the company. The most common of these identifier numbers is referred to as a GTIN number. GTIN stands for “Global Trade Item Number”. The GS1 organization provides substantial guidance in the creation of GTIN numbers. The following shows the sequence of actions undertaken to complete this task.

1. Enter <https://datadrive.prod.gs1us.org/> into your browser’s address bar.
2. The GS1 Data Driver login window will appear:



3. Enter your GS1 USA username and password.

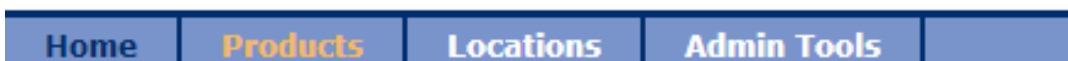
Username: _____

Password: _____

4. Choose your company and press the “Continue” button



5. Choose “Products” from the menu



- [illegible]

- Locations
Admin Tools

Packaging Level

Products are packaged at different levels, and each level requires a specific type of bar code. Choose the option below that best describes your packaging for your product:

Note: Packaging levels are hierarchical, which means you must define the lowest level (each/individual unit) first before proceeding to a higher level.

Please select the option below that best describes the packaging level you want to bar code.

The diagram illustrates the hierarchy of packaging levels. It shows a large blue rectangle representing a pallet, which contains 20 smaller blue rectangles representing cases. One case is further detailed to show it contains 12 smaller blue rectangles representing inner packs. One inner pack is further detailed to show it contains 12 smaller blue rectangles representing widgets. The smallest unit shown is a single widget.

Pallet (Shipping - can be Mixed Module): A packaging level that can contain within it cases, inner packs, or each/individual units. Used for shipping only; never sold at the point-of-sale (POS) (ex. 20 cases of widgets).

Case - Not Sold at Retail (Shipping - can be Display Shipper): This is the standard shipping level. Can contain within it inner packs and/or each/individual units. (ex. 12 inner packs of widgets.)

Inner Pack: A packaging level that is not sold at the point-of-sale. Can only contain each/individual units (ex. a sleeve or poly bag, etc.— of 12 widgets)

Each/Individual Unit (Retail): The lowest level of item packaging. These units are almost always sold at the point-of-sale. This typically is the product by itself. (ex. a widget)

The Product Packaging step loads. Most times you will use the Packaging Type of “Boxed.” But if you believe another packaging type is a better fit, feel free to choose it.

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10. The NEW PRODUCT: Category Information step loads. Choose a department, usually “FRESH PRODUCE”, a Category, and then a Sub Category and Press the Submit button.

11. When the NEW PRODUCT: Product Summary screen loads confirm your information and press “Next”.

12. The NEW PRODUCT: Product Identification Detail Sheet is a great screen to print for your records. Please not the GTIN number listed for your product, because it will be used by the LeafTrack system.



EDIT PRODUCT: Product Identification Detail Sheet	
U.P.C. Company Prefix:	854678004
GTIN:	00854678004308
Product Bar Code Number:	854678004308
SKU/Internal Part Number:	110
Product Line/Brand:	CIRCLE FRESH FARMS
Product Description:	TOY RED CONVENTIONAL
Required Symbology:	UPC-A
Minimum Size of Label:	
Width:	1.719
Height:	1.271
Bar Code Dimensions:	W 1.489 x H 1.021 (100%)
Minimum Quality Specs:	1.5/04/970

Press the Finish button, and repeat the process for each product you would like entered into GS1's database.

Step 3: Select a Track and Trace Vendor

The remainder of the key decisions related to system design and deployment will depend on the specific architecture of the track and trace vendor selected. There are substantial differences in both hardware and software systems that have substantial implications for both upfront costs, ongoing maintenance costs, and the organization and function of the track and trace operations station. The preceding sections have provided the analysis Circle Fresh conducted on the vendors available at the time it implemented this project. Based on this analysis, Circle Fresh Farms chose PTI Print as its vendor. The remaining section of this Grower Handbook provides the implementation handbook for the PTI Print system as it was configured for the Circle Fresh Farms network. A step-by-step video guide is also available at the special facebook page set up to provide support and assistance to producers interested in developing a track and trace system. Please see:

<https://www.facebook.com/pages/Circle-Fresh-Farms-Small-Farms-Track-and-Trace-Pilot/519575298095051>



V. PTI Print Track and Trace Program Start-up Guide



PTIPRINT Printing User Guide

PTIPRINT 

1

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PTIPRINT 



Overview

After you login into your PTIPRINT system you will see the main printing screen. It is broken up into a few sections.

The screenshot shows the 'Print Labels' interface in the PTIPRINT system. Red arrows point to the following sections:

- Menu:** Points to the top navigation bar with options: Labeling, Transfer, Reports, and More.
- Printing Options:** Points to the form fields for Product, Source, Destination, Weight, Carton Labels To Print, and Cartons Per Pallet.
- Print Button:** Points to the 'Print' button with a checkmark.
- Label Preview:** Points to the preview of the generated label, which includes a QR code, barcode, and text: 'PRODUCT OF USA 02062013 BEEFSTEAK RED TOMATO 9 COUNT / 1 LB'.

Menu

As you hover over your menu options a drop down may appear with additional options. The menu shows you all the different options you have available with your system. Often times this includes the ability to create labels, delete labels, ship, receive, and generate reports.

Printing Options

A label is made up of many different parts and they are controlled with the printing options. As you change the printing options it updates the label preview. Please continue reading to find out more about what each printing option does for your labels.

Print Button

Once you've chosen all of your printing options, press the Print button to generate and print your labels. By clicking print, you are generating your product specific traceability labels, entering the items into inventory, and using PTIPRINT LiveQR codes. Before pressing Print, you should make sure that the label preview looks like what you want your labels to look like. The product should match what you are packaging, and the lot number, date, and grower should match too.

Label Preview

The label preview shows you what your labels will look like when you print them. It changes whenever you change a printing option that affects the label. Before pressing Print; make sure that the label preview looks like what you want your labels to look like. The image on the screen should match what you are packaging including; lot number, date, and grower information.



Label Overview

Your PTIPRINT application has various label formats, and we'll illustrate the most common labels and layout.

Standard Carton Label (4" wide by 2" tall)

The diagram shows a standard carton label with the following components and annotations:

- LiveQR**: Points to a QR code on the left side of the label.
- Farm Name**: Points to the text "TEST FARM 7911 SOUTHPARK DRIVE SUITE 1200 LITTLETON, CO 80120".
- Tracking Barcode**: Points to a barcode at the bottom left of the label.
- GS1-128 Barcode**: Points to a barcode at the top right of the label.
- Barcode**: Points to the lot number "(01)00854678004194(10)01006130206".
- Lot #**: Points to the lot number "(01)00854678004194(10)01006130206".
- Product**: Points to the text "PRODUCT OF USA 02/06/2013 BEEFSTEAK RED TOMATO 9 COUNT / 1 LB".
- Voice Pick Code**: Points to a black box containing the text "03 20".

The standard carton label, contains all the information required by the Product Traceability Initiative, in addition, it provides mobile marketing to your consumers because they can scan the QR code with their mobile device and find out information about the product including food safety, traceability, and recall status.

Pallet Labels (3 Total)

SSCC (Serial Shipping Container Code)



The SSCC or Serial Shipping Container Code, is a barcode placed on every pallet, mandated under the Product Tracability Initiative, and it is generated automatically when you are printing with pallet labels. The SSCC is included on Advanced Ship Notification documents.



Pallet Tracking



The Pallet Tracking label is used during transfers, like shipping, receiving, and delivery to the end customer.

Hybrid Pallet Label



The Hybrid Pallet Label, is also mandated by the Produce Traceability Initiative, and includes the information about the pallets contents. It says how many cartons, what the cartons contain, and where they're going. It also contains a L veQR code that can be scanned by the end customer to find traceability and food safety information.

Need help or have a question?

PTIPRINT Support
support@PTIPRINT.com
(303) 862-3000

PTIPRINT 

5

Printing Labels

Once setup, printing labels can be as easy as updating which product you're packing, and how many labels you need, then pressing print. Below is an illustrated guide to printing labels.

Step-by-Step to Print Labels

1. Login to PTIPRINT, or press the labeling option on the menu.

The screenshot shows the 'Print Labels' interface in PTIPRINT. The top navigation bar includes 'Labeling', 'Transfer', 'Reports', and 'More'. The main form has the following fields and controls:

- Product:** TOMATO BEEFSTEAK RED 9 CO... (with a dropdown arrow) and a 'DEFAULT' checkbox.
- Weight:** A text input field and a 'Pounds' unit selector.
- Source:** Farm 1 (with a dropdown arrow) and a 'DEFAULT' checkbox.
- Carton Labels To Print:** A slider set to 50 and a 'DEFAULT' checkbox.
- Destination:** WHOLE FOODS DC (with a dropdown arrow) and a 'DEFAULT' checkbox.
- Cartons Per Pallet:** A slider set to 0 and a 'DEFAULT' checkbox.
- Print Date?:** A 'Yes' button.
- Lot Number:** 05006130206.
- Print:** A large brown button with a checkmark.
- Label Preview:** A QR code, a barcode, and text including 'BEEFSTEAK RED TOMATO 9 COUNT / 1 LB' and '65 42'.

2. Check your lot number is set correctly. Feel free to update it to what you need. This field populates based upon the lot options you choose in your settings.

This screenshot is identical to the previous one, but with a red rectangular box highlighting the 'Lot Number' field, which contains the value '05006130206'. This highlights the step where the user should verify the lot number.



- Set the product option, to the product you are packaging.

- Set the source, to the originating grower/producer/manufacturer of the product.



5. Set the destination to the end customer for all the labels you're printing. Sometimes, this is simply set to your cooler.

The screenshot shows the PTIPRINT 'Print Labels' interface. The 'Destination' dropdown menu is highlighted with a red box and contains the text 'WHOLE FOODS DC'. Other fields include Product: TOMATO BEEFSTEAK RED 9 CO..., Source: Farm 1, Weight: Pounds, Carton Labels To Print: 50, and Cartons Per Pallet: 0. A 'Print' button is visible below the form.

Need help or have a question?

PTIPRINT Support
support@PTIPRINT.com
(303) 862-3000



- If you're printing pallet labels, verify the Cartons Per Pallet value is set to the number of boxes you put on a pallet.

The screenshot shows the 'Print Labels' interface in PTIPRINT. The 'Cartons Per Pallet' field is highlighted with a red box and set to 0. Other fields include Product: TOMATO BEEFSTEAK RED 9 CO..., Source: Farm 1, Destination: WHOLE FOODS DC, and Lot Number: 05006130206. A preview of a label is shown at the bottom.

For example, 20 boxes fit on a pallet. In order to do this, set the Cartons per Pallet value to 20. If you choose to print 25 cartons, the system will automatically print a set of pallet labels after the 20th carton label, and then another set for the last 5 cartons. Printing less than the number of cartons that fit on a pallet, will still print pallet labels after the last carton label is printed.

Setting the Cartons Per Pallet value to 0 (zero), means the system will not print pallet labels for that print job.

- Set the number of carton labels to print.

The screenshot shows the 'Print Labels' interface in PTIPRINT. The 'Carton Labels To Print' field is highlighted with a red box and set to 50. Other fields include Product: TOMATO BEEFSTEAK RED 9 CO..., Source: Farm 1, Destination: WHOLE FOODS DC, and Lot Number: 05006130206. A preview of a label is shown at the bottom.

8. Verify the preview matches what you would like to print.

The screenshot shows the 'Print Labels' interface. At the top, there are tabs for 'Labeling', 'Transfer', 'Reports', and 'More'. The 'Print Labels' title is on the left, and 'Test Farm 0038-0000-000000000000' is on the right. The form includes fields for Product (TOMATO BEEFSTEAK RED 9 CO...), Source (Farm 1), Destination (WHOLE FOODS DC), Print Date? (Yes), and Lot Number (05006130206). There are also fields for Weight, Carton Labels To Print (50), and Cartons Per Pallet (0). A 'Print' button with a checkmark is visible. Below the form is a preview of a label with a QR code, barcode, and text: 'BEEFSTEAK RED TOMATO 9 COUNT / 1 LB'. A red arrow points to the label preview.

9. Press the Print button.

This screenshot is identical to the previous one, but the 'Print' button is highlighted with a red rectangular box, indicating it should be pressed.

Your labels will start printing automatically after they are generated. The more labels you print the longer it will take to generate and print the labels.



Deleting Labels

Sometimes you print labels you don't need. You can delete the labels by following the directions below. Otherwise, using your reporting options you can view the cartons in the system and remove them by clicking the corresponding delete link.

To remove labels by scanning:

1. Under the Labeling option in the menu, click the Delete Labels option.



2. Scan each label you would like to delete with a barcode scanner attached to your print station. If you don't have a barcode scanner you can type the 8 letters and numbers above or below a tracking barcode.

A screenshot of a web form titled 'Remove Label'. Below the title is a text prompt: 'Please scan tracking barcode or L'. Below this is a text input field containing the placeholder text 'Use scanner to enter code.....'. At the bottom of the form is a table with two columns: 'Carton ID' and an empty cell.

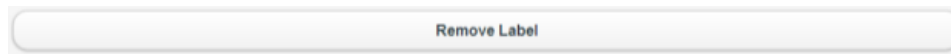
3. After each scan, the information from that carton is shown below the scanning area.

A screenshot of the 'Remove Label' form after a scan. The title 'Remove Label' is at the top. Below it is a section labeled 'Report Type:'. Underneath is a text prompt: 'Please scan tracking barcode or LiveQR code:'. Below this is a text input field containing the scanned code '890AA94F'. At the bottom is a table with six columns: 'Carton ID', 'Product', 'Lot #', 'Producer', 'Pack Date', and 'Customer'. The first row of the table contains the scanned data: '890AA94F-67EB', a product name, a lot number, a producer name, a pack date, and a customer name. Below the table is a button labeled 'Remove Label'.

4. Once you have scanned all your labels confirm that the list shown matches the labels you would like to remove.



5. Press the Remove Label button.



6. A popup will alert you to how many cartons were removed, and if any errors occurred.

Setting Defaults

Sometimes a print station is always using the same printing option over, and over again. We have added default options for each of the printing options. When you check the Default checkbox, next to a printing option it will always default to that option each time your PTIPRINT software loads.

Step-by-Step Setting the Default for a Printing Option

1. Set the printing option value to whatever you would like the default to be. This example illustrates setting a default product. The process is the same for setting a default grower, destination, carton labels to print, and cartons per pallet.



2. Check, the Default Checkbox



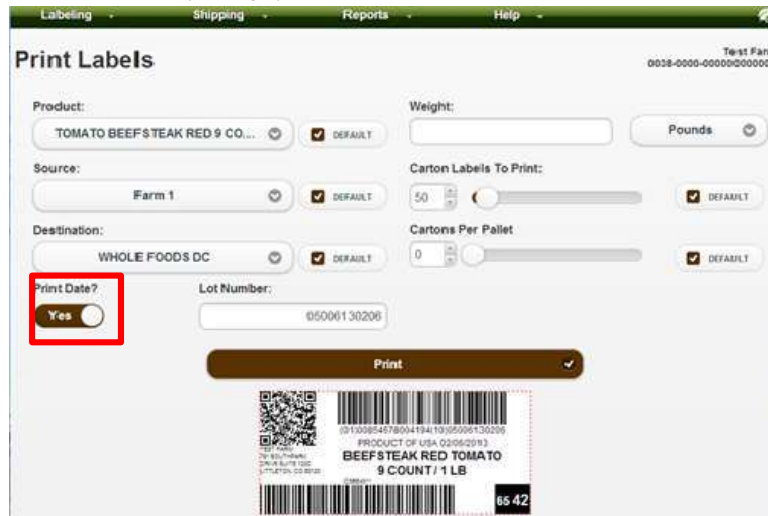
Printing Label's Without Packaging Date

By default your PTIPRINT application will print the packaging date on your label, and this will be the date the label is printed. You can print labels with the packaging date turned off by toggling the print date printing option. The Produce Traceability Initiative mandates that the packaging/harvest date should be in a human readable format or encoded in the lot number.



Step-by-Step to Print Labels without the Packaging/Harvest Date

1. Find the Print Date printing option



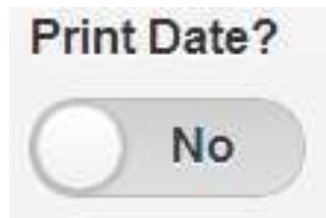
The screenshot shows the 'Print Labels' interface with the following fields and settings:

- Product: TOMATO BEEFSTEAK RED 9 CO... (DEFAULT)
- Weight: (empty) (Pounds)
- Source: Farm 1 (DEFAULT)
- Carton Labels To Print: 50 (DEFAULT)
- Destination: WHOLE FOODS DC (DEFAULT)
- Cartons Per Pallet: 0 (DEFAULT)
- Print Date?: Yes (highlighted with a red box)
- Lot Number: 05006130206
- Print button

Below the form, a sample label is shown with the following text:

0310085457800419410/05006130206
PRODUCT OF USA 0256/0313
BEEFSTEAK RED TOMATO
9 COUNT / 1 LB
65 42

2. Set it to No



The close-up shows the 'Print Date?' label above a toggle switch that is currently set to 'No'.

Need help or have a question?

PTIPRINT Support
support@PTIPRINT.com
(303) 862-3000



Reprinting Labels

Sometimes printers run out of labels and get jammed, or maybe the labels got misplaced or trashed accidentally. This means you may need to reprint labels that were already generated. Labels can only be reprinted from the computer that originally printed the labels. Login to PTIPRINT on the computer that originally printed the labels, scroll to the bottom of the Print Labels screen, find the print job you want to reprint and click the reprint link. Step-by-step directions are illustrated below.

Step-by-Step to Re-Print Labels

1. Login to PTIPRINT or press the Labeling link in the menu.
2. Scroll down the page to the Last Print Jobs section.

Last Print Jobs:				
Source	Product	Quantity	Date/Time	Actions
		10		REPRINT REMOVE

3. Find the print job you would like to reprint and press its corresponding Reprint link. The labels will be generated again and sent to your printer.

Last Print Jobs:				
Source	Product	Quantity	Date/Time	Actions
		10		REPRINT REMOVE

Making & Editing Orders

To make a new order, hover over the More menu option, then hover over Orders, and Click Manage Orders. A list of current orders in the system is displayed. Click the Add Order button to make a new order, or click the Pencil icon next to the order you would like to edit. Fill in the order options, and press the Create New Order button if making a new order, or if editing press the button is named Save Order. After you have created your order you are able to print a Pick List for employees to fill the order. You or employees filling orders are able to print the order's invoice after it has been filled.

When making orders the text entered into the Order Notes section is displayed on the Pick List for employees. If the order is for \$0.00 the notes are displayed on reporting to source farms, and the order notes are displayed on all reports designed for your accounting department.

The Closed option is filled in automatically when employees mark an order complete. You can also manually close an order by typing in a date and time in this box. Orders aren't considered closed until this option is filled in, and the order isn't converted into an invoice for import into Quickbooks unless this option is filled in as well.

Entering items for the order can be done by typing the items SKU or name and choosing it from the displayed list. Enter the quantity of the item for the order and press enter or the Add to Order button. The quantity available in inventory is then displayed and the price charged to the customer can be adjusted.

Step-by-step illustrated directions on creating and editing orders are below.

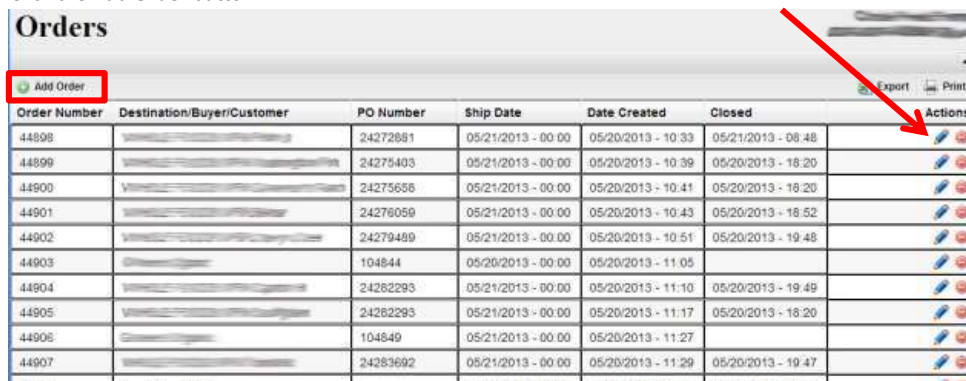


Step-by-Step Guide to Making & Editing Orders

1. Login to PTIPRINT and hover over More in the Main Menu. Hover over Orders and Manage Orders.



2. Click the Add Order button.



3. The New Order Screen is displayed.

4. Choose the customer for the order.
5. Enter any Order notes, the customer's P N mber, the terms for the order, the delivery method, and the date the order should be shipped.



- Only enter a date in the Closed field if the order is completed. If an employee has forgotten to finish the order you can manually enter the closing date in this field.
- In the search for products field, enter the SKU, or product name and choose it from the drop down list. Then enter the quantity you would like on the order. Press the enter key to add it to the order, or press the Add To Order button.

Search for product to place on the order, you can use the product name, family, or product number.

Qty:

Add To Order

- Once all the products for the order have been entered press the Create New Order or Save Order button.
- The order is then saved and your order number is displayed. In addition, you are then able to print the Pick List and Invoice.

Cartons Scanned Out For Order

Qty	Product No.	Product Description
15		

Save Order

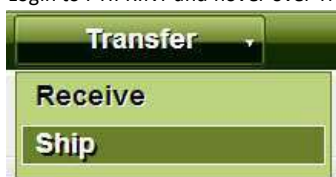
[Back to List](#) [Pick List](#) [Invoice](#)

Filling Orders & Shipping Product

By filling an order it is also shipping the product you filled the order with to that customer. To fill an order, hover over Transfer on the Main Menu and choose the Ship option. The orders that need to be shipped are displayed. Clicking the arrow takes opens the order and allows you to scan the boxes for the order. From that screen you can finish and close the order and print the order's invoice. Below is a step-by-step illustrated guide on how to fill an order.

Step-by-Step to Fill An Order




























- Login to PTIPRINT and hover over Transfer and click Ship.



- Find the order in the list and press the Fill Order Icon.

Open Orders

Export Print

Order Number	Customer	Ship Date	Actions
44894	Digga Roots LLC	05/18/2013 - 00:00	  
44895	Digga Roots LLC	05/19/2013 - 00:00	  
44903	Growers Organic	05/20/2013 - 00:00	  
44906	Growers Organic	05/21/2013 - 00:00	  
44909	Source Local Foods LLC	05/21/2013 - 00:00	  
44910	Door to Door Organics	05/24/2013 - 00:00	  
44911	Highland Tap and Burger	05/21/2013 - 00:00	  
44914	Growers Organic	05/21/2013 - 00:00	  
44915	Circle Fresh - Repack	05/21/2013 - 00:00	  

25 Page: 1 of 1 Displaying 1 to 9 of 9 items

- Scan the LiveQR or Tracking Barcode on each box you're using to fill the order. It is added to the list of items on the order.

Scan the LiveQR or Tracking codes on each carton or pallet.

The following cartons have been found:

Tracking #	Pallet #	Product	Lot #	Pack Date	Source	Current Location
------------	----------	---------	-------	-----------	--------	------------------



- Press the Deliver button to finish the shipment.

Deliver

- Then if the order is complete press the Close Order link, and if necessary click the Print Invoice link to generate the invoice for printing.

Items On Order

Item	On Order	Already Scanned
	6	6
	20	20
	1	1

 [Print Invoice](#)  [Close Order](#)

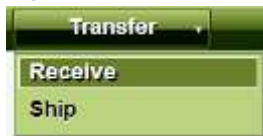
Receiving Products

If you are receiving product from another business that uses PTIPRINT you can use the same labels that were originally placed on the box, they just need to be received into your system. To receive a carton, hover over Transfer in the Main Menu and click the Receive link. Then choose the location you would like to receive the carton(s) into, and scan each carton that you want to receive. Below are step-by-step directions to receive products into your system.



Step-by-Step to Receive Products

1. Login to PTIPRINT and hover over Transfer in the Main Menu. Then click on Receive.



2. Choose the location from the list where you want to receive the products.



3. Scan each item.



4. Click the Receive button to finally receive and save the items.



Mobile Usage

All functions of PTIPRINT work on tablets and mobile devices that run the Google Chrome Browser. Printing labels from iOS devices may require additional hardware to make your printer compatible on the iOS Operating System. Reporting and other functions are easier to read and use on tablets and computers rather than your mobile phone because of the size of the screen. The scanning of labels requires additional hardware, namely a Bluetooth barcode scanner that is compatible with your device. Contact PTIPRINT support for more information.

Reports

The reports section of the menu contains all the reports for your organization. Reports always include the ability to trace-back and trace-forward cases, lots, products, products from sources, and products sent to destinations. If you do not have a desired report, or need help with any of the reports please contact PTIPRINT Support at (303) 862-3000.

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PTIPRINT 



Produce Traceability Initiative Milestones & Compliance

Your PTIPRINT system allows you to be compliant with the requirements and milestones outlined in the Produce Traceability Initiative (PTI) (<http://www.producetraceability.org/>). PTI specifies the following seven milestones, and PTIPRINT complies with all seven, the compliance information is outlined below.

	Milestone Description	PTI Print Milestone Compliance
Milestone 1	Obtain GS1 USA Company Prefix	Performed during setup
Milestone 2	Assign GS1 USA GTIN numbers to all products	Performed during setup
Milestone 3	Provide GTIN Numbers to Buyers	Product GTIN Report
Milestone 4	Show Human Readable Information On Cases	Included on PTIPRINT Label
Milestone 5	Encode information in barcode	Included on GS1-128 barcode on label
Milestone 6	Read and store information inbound cases	Captured during label creation and during Receiving
Milestone 7	Read and store information on outbound cases	Captured during shipping and filling orders

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Quickbooks is trademarked by Intuit Inc.

The Produce Traceability Initiative (PTI) is a set of specifications agreed upon by CPMA, GS1 US, PMA, and United Fresh and all their names are trademarked to their respective companies.

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Original Draft Date: January 19, 2013

Last Updated: May 21, 2013

Need help or have a question?

PTIPRINT Support
support@PTIPRINT.com
(303) 862-3000

PTIPRINT 

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Attachment 1 - PTI Pricing Document



FOR:

Sample farm-PTI print customer
Farm representative
Address of facility or business office
Address of facility or business office

Customer Order

Date:
Prepared by:
Agent:

Overview: **Defined hardware location**

Example of an initial estimate for LeafTrack® Print Stations installed in one physical location.

The following is an outline and estimate for potential product and services to be provided by LeafTrack LLC.

THIS IS AN ESTIMATE ONLY AND DOES NOT REPRESENT A CONTRACT FOR PRODUCTS OR SERVICES.

Items / Components / Systems		Cost / Fee	Unit	Quantity	Subtotal
1	PRODUCTS	*2, 3			
a	PTI Print Software (per Grower/EIN/Source)	\$995.00	ea	0	\$-
b	Production Management Application - (per Device License)				
i	Qty: 1 to 2 Device Licenses	\$65.00	ea/mo	0	\$-
ii	Qty: 3 to 14 Device Licenses	\$45.00	ea/mo	0	\$-
ii	Qty: 15 or more Device Licenses	\$25.00	ea/mo	0	\$-
c	POS Software (per license)	TBD		na	
d	LiveQR Codes (PRE-PAID ONLY) paid prior to delivery, per order				
	See Page 2 for Detail of ordered / estimated Pre-Paid Codes				
	Pre-Paid Codes Ordered / Estimated (notes here)			-	\$-
e	LiveQR Codes (30 NET MONTHLY BILLING) per order				
	See Page 2 for details of ordered / estimated 30 NET Billing Codes				
	30 NET Billing Codes Ordered / Estimated (notes here)			-	\$-
2	SERVICES (Consulting, Design and Integration)	*1, 4, 5			
a	Customer Assessment (Initial Only - 1hr)	incl		0	nc
b	Follow-Up Meetings and Design Analysis	TBD	\$100.00	hr	\$-
c	Prep and Pre-Install programming of PTI multi-station platform only		\$100.00	hr	\$-
d	Set-Up & Support (platform programming & hardware config)		\$100.00	hr	\$-
e	Follow Up Support (platform programming & hardware config)		\$100.00	hr	\$-
f	General and Customer Service Support (telephone, email)	nc		0	\$-
g	Prep and Pre-Install programming of PTI multi-station platform only		\$100.00	hr	\$-



h	Label layout and semi-custom design (4" x 2" or 11" x 2" size only)		\$100.00	hr	0	\$-
	Prep and Pre-Install programming of PTI multi-station platform only		\$100.00	hr	0	\$-
3	EQUIPMENT					
a	Computer - Desktop Computer System (w/ 19" mon)	TBD	\$800.00	ea	0	\$-
b	Scanner - Desktop Wired QR Scanner	TBD	\$700.00	ea	0	\$-
c	Scanner - Wireless barcode Scanner	TBD	\$540.00	ea	0	\$-
d	Printer	TBD	TBD	ea	0	\$-
e	Other Equipment	TBD	TBD	ea	0	\$-
4	ADMINISTRATIVE REQUIREMENTS	*6				
a	Travel Expenses		TBD	ea	0	\$-
b	Shipping and Delivery		TBD	ea	0	\$-
c	Other Requirements		TBD	ea	0	\$-
SUBTOTAL						\$-
5	OTHER					
a	DEPOSITS / PAYMENTS:		\$-	ea	0	\$-
b	Changes, Additions and Adjustment		\$-	ea	NA	\$-
c	Taxes - Applicable Sales and Transaction (State, County and Federal)		TBD	ea	TBD	\$-
Estimate does not include any taxes or fees that are assessed by city, county, state and federal (to be applied at invoice).						TOTAL
						\$-

Customer:

Name: <NAME>

Signature:

Name: Farm representative

Title:

Date:

Defined hardware location

*** Notes:**

- 1 Initial meeting and concept discussions of customer requirements, limited to one (1) hour at no charge.
 - 2 Initial scheduled set-up of system only, does not include delays, rescheduling and or additional requirements.
 - 3 Unless directly stated in customer order or contract, customer is solely responsible to obtain and provide all fully functional equipment, systems and utilities.
 - 4 QR code price is per code per transaction, and discount pricing only applies to pre-order code purchases (customer is solely responsible for all unused codes).
 - 5 Customer is responsible for all travel, lodging and mileage expenses for any support travel to/from customer location(s).
 - 6 Order Payment Terms:
 - a All orders require contract services agreement, licensing agreement and may require a credit or credit card preauthorization.
 - b Hardware and Software: Due and payable on order placement, or NET 30 days with approved credit.
 - c QR Codes: Due and payable upon order placement. All code orders are non-refundable.
 - d Installation Services: Due and payable on order, NET 30 days with approved credit.
 - e Consultation, Services or Additional Support: Due and payable at service date, or NET 30 days with approved credit.
 - f Travel Expenses: May require deposit or prepayment, and are due and payable on travel dates, or NET 30 days with approved credit.
 - g Taxes, Freight and Other Costs: May require deposit or prepayment, and are due and payable on travel dates, or NET 30 days with approved credit.
 - h All other provided, designed and fabricated materials: May require deposit or prepayment on or before delivery, or NET 30 days with approved credit.
 - i All non-payment, late payments or delinquent payments are subject to late fees outlined in the Sales and Services Agreement.
- Please note that additional conditions and requirements of the estimated products and services may be outlined in the contract.



LiveQR Codes (30 NET MONTHLY BILLING) per order and transaction.					
i	<i>Minimum QR Code order is quantity of 5,000 per order</i>				
ii	<i>Qty: 5000 to 250,000 QR Codes per order</i>	\$0.035	ea	-	\$-
iii	<i>Qty: Over 250,000 QR Codes per order</i>	\$0.0275	ea	-	\$-
iv	<i>Qty: Over 500,000 QR Codes per order</i>	\$0.02	ea	-	\$-
v	<i>Qty: Over 750,000 QR Codes per order</i>	\$0.0175	ea	-	\$-
vi	<i>Qty: Over 1mm QR Codes per order</i>	\$0.015	ea	-	\$-
vii	<i>Qty: Over 2.5mm QR Codes per order</i>	\$0.0115	ea	-	\$-
viii	<i>Qty: Over 5mm QR Codes per order</i>	\$0.0075	ea	-	\$-
ix	<i>Qty: Over 10mm QR Codes per order</i>	\$0.0050	ea	-	\$-
x	<i>Qty: Over 25mm QR Codes per order</i>	\$0.0035	ea	-	\$-
xi	<i>Pre-Printed Codes (roll only, 250 codes per roll only + shipping)</i>	\$0.20	ea	-	\$-
xii	<i>Custom Print Labels (same as above, plus design and printing)</i>	\$0.20	ea	-	\$-
30 NET MONTHLY BILLING CODES SUMMARY:		Subtotal	-	\$-	



Attachment 2 - GS1 Fee Calculator

To insure access to the most up-to-date version of the GS1 pricing guide, please go to this weblink and select the hot button to the right of the screen titled “BARCODE AND FEE ESTIMATOR”. Here is the website location:

<http://www.gs1us.org/get-started/im-new-to-gs1-us/get-your-company-prefix>