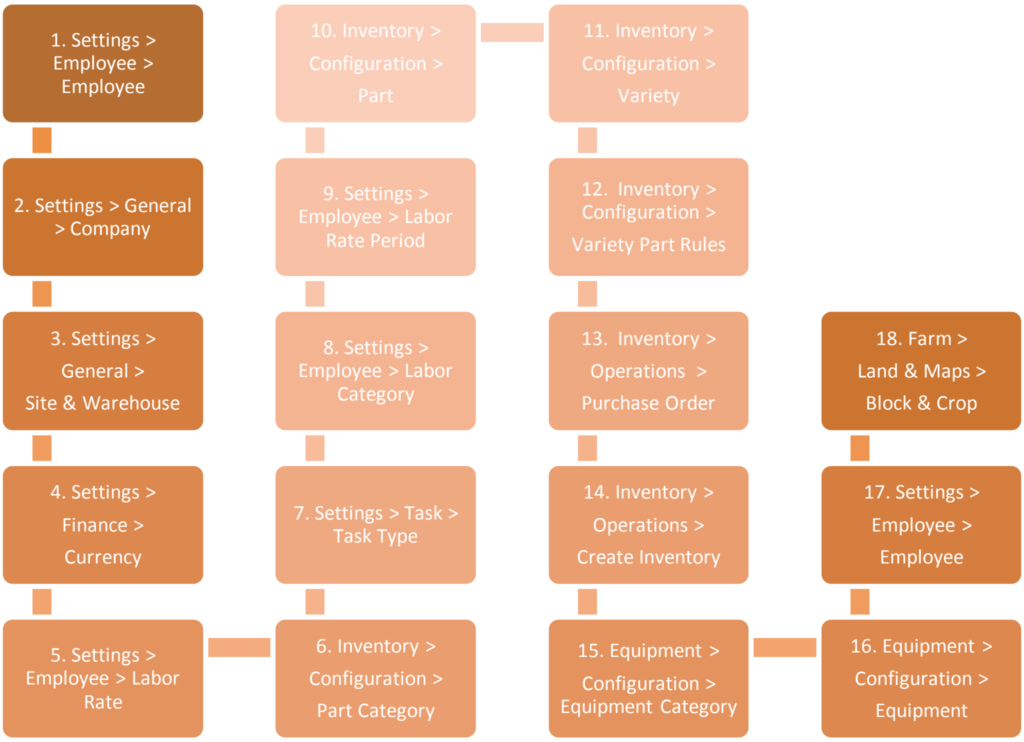
Contents

How to use this Guide

Your database will install with sample records. This guide will help you change the sample records to match the records your company needs. You can always make a record inactive by un-ticking the check box on a record. **Follow this guide sequentially**.

Basic Configuration

The diagram below shows the processes you need to configure your system, and are shown in the **required order.** These are the minimum processes required to get your farm up and running. Once you get the Basic Configuration finished, you can start using the basic features of the software, and when you are ready, you can move on to Advanced Configuration, then implement advanced features.



To access FarmSoft from any computer on your local network

- Type [ip address]:8081 into your browser, eg: 192.168.1.1:8081
- Mobile only login eg: 192.168.01.:8081/LoginToMobile.aspx
- Make a bookmark of the address, or shortcut on your desktop

To access FarmSoft from any computer/device away from your office

- Type [ip WAN address]:8081 into your browser, eg http://59.154.144.124:8081
- Mobile only login eg: 241.168.01:8081/LoginToMobile.aspx
- Make a bookmark of the address, or shortcut on your desktop
- Note that your network administrator will need to configure the WAN address, your TSL consultant will not do this for you because it requires access to your network.

Settings > General > System Settings
There are hundreds of settings for your system here. Use the "Setting Type" search box to search for specific settings, for example, to see all "Inventory" settings, type "Inventory" in the Setting Type search box.

Settings > General > User Defined Fields
Use this screen to add your own fields throughout FarmSoft. You can also add options, checkboxes, make a field mandatory, date, or number.

Settings > Employee > Employee Details
Employees that need to either sign in to FarmSoft OR have their name recorded as a supervisor or employee for quality control or labor needs to be recorded. The default employee that you signed in with should now be edited to match YOUR details.

- Click Settings > General > Employee from the menu
- Click the Edit link next to the sample Employee and change its details to match your own details, **don't forget to change the username, and password!**
- Set your timezone , eg: if you are GMT -6 then select "-" and enter "6"
- Enter a Secret Question and Secret Answer, and correct email address (this will allow you to recover your password)
- Click the Update link at the bottom right.
- Click the New button to add additional employees as required.
- When configuring future screens use the same process as above, we will not mention "Click New" or "Click Update" when we talk about future screens that require configuration – you need to remember this yourself.

Settings > General > Companies
Companies in FarmSoft represent your own company, customers, suppliers of cultivation materials and services/contractors, and transport companies.

- Edit the sample company called "Our Main Company" so that it represents your companies details.
- Clicking the dropdown arrow to the left of the company name allows you to enter addresses for each company.
- Edit the sample company called "Supplier Sample" so that it represents a company that supplies materials to your business, and then click New to add the rest of your suppliers.
- Do the same for Transport Sample and Customer Sample.

Settings > General > Site and Warehouse
Sites allow your business to define separate geographical areas. Each warehouse is used to record the storage location of inventory and is located at a site. A farm may divide its farm into multiple sites, or one company may own multiple farms - in which case each site may be a farm, or a division of a farm. Sites are commonly used in reporting filters, and users have permissions to access only selected sites that are configured on their Employee Details screen. Warehouses store inventory (materials, pallets, fresh produce, chemicals, fertilizer etc). Each warehouse is associated to a site. Employees can access a warehouse's inventory only if they have permission to access the site on which the warehouse is located (see Employee Details).

- Edit the existing Site (and Warehouse by clicking the + button) to match a site you will use in your business and add any additional sites you require.

Settings > Finance > Currency
You can configure currencies used in your business.

- Edit the existing currency to match the currency you use in your country. This will be your default currency (make sure you tick "Default" (or untick any other currency that is ticked as "default").

Settings > Employee > Labor Rate

Configure pay rates for Employees. These rates will be used to calculate the cost of labor used on tasks. For example, you may have several pay rates, some by the hour, and some by the unit (ie: per bucket of harvested fruit). The actual amount paid to the employee will be recorded on the child record called "Labor Rate Period". You need to enter a new record each time the pay rate changes and put a Thru/Finish date on the old Labor Rate Period record.

Settings > Task > Task Type

A Task is any job that is performed on the farm, for example, Harvesting, Spraying, Irrigation, Chipping, Weeding, Laying Plastic, Ground Preparation etc….

- Edit the existing sample Tasks to match your company's tasks.
- Use the Help link to see a definition of the options for Tasks.

Inventory > Configuration > Part Categories

Parts are the materials that will become Inventory when you receive materials from a supplier, and types of Produce are also recorded as Parts (eg: Tomato, Banana). Each Part must be defined for traceability and cost accounting purposes. To make it easy to locate Inventory, you need to create Part Categories (and optionally Part Sub Categories) to help you find Inventory easily. Edit the existing Part Categories and add more as required or mark as not "Active" to hide.

Inventory > Configuration > Part

Parts are the materials that will become Inventory when you receive materials from a supplier, and types of Produce are also recorded as Parts (eg: Tomato, Banana). Each Part must be defined for traceability and cost accounting purposes.

- In the name of the Part, at the end, note the weight or size of the product
- In the Weight field, enter 1 unless your consultant instructs otherwise
- Configure the Parts used in your business and ensure they are in the correct Category, for example, Zucchini would be added to the "Produce" Category. RoundUp would be added to the "Pesticide" category.
- Note that the "Default Sale Price" is the price you will pay for one measurement unit of this Part, this price will be used to determine costs if you do NOT record Purchase Orders when you acquire Inventory. If you sell this part, then this will be used as the default sale price.
- Click "Help" to find more details on the fields for Parts.
- Enter each Produce type as a Part and select Part Category "Produce"
- Unless the material is a Final Product Unit , enter 1.00 into Weight or Amount , Label Quantity, if the Part is a final product, the Label Quantity will be the weight displayed on labels.
- The Default Price is the Price per unit (eg: $1 per Kilogram), for sales or purchases of the product.
- Don't forget to enter your Container types

Inventory > Configuration > Variety

Each Produce Part (that you configured as a Part) will have one or more Varieties. For example "Tomato" will have a variety such as "Gourmet", a "Banana" produce will have variety "Cavendish" and so on. Configure the Varieties used in your business

Inventory > Configuration > Variety Part Rules

Use this page to configure special rules that may apply to Parts used in spray tasks (note: many clients chose to fill this information in after completing the rest of the configuration):

  - Pre Harvest Interval (PHI)
  - Re-entry period
  - Authorization
  - Default Application rate and water mix ratio

Filter for your chosen produce, and part, enter values, Update, then click Apply to all Varieties.

Inventory > Operations > Purchase Order

A Part becomes Inventory when it is delivered to your farm. You can optionally make a Purchase Order for Inventory and then Create Inventory (which is the process of "receiving" the Inventory) by referencing that purchase order. On the "Create Inventory" screen, use the Select Purchase Order option to relate a delivery to the Purchase Order.

Example data:
Units: the number of drums or boxes
Quantity per unit: the quantity of kilograms or pounds in each barrel or box
Total Quantity: the quantity in all units being purchased (in kilograms or pounds)
Price Per Unit: the cost per drum or box
Total Price: the total cost for

NOTE: You can choose to skip the Purchase Order process by using the Create Inventory – Select Supplier & Part button, however, you are bypassing the traceability details collected on the Purchase Order, so you must ensure that Batch Numbers are manually recorded when you Create Inventory or when materials are used.

Inventory > Operations > Create Inventory

The process of receiving inventory onto your farm is called "Create Inventory" in FarmSoft. Use the Create Inventory page to receive the Inventory that you placed on the Sales Order (use the Look Up Purchase Order or Select Purchase Order from List buttons, OR if you didn't make a Purchase Order use the Select Supplier and Part button).

For Farm Inventory, it is recommended that you record the Quantity of Units AND the Weight/Measurement in the same units. For example, if you receive 5 drums of roundup and they contain 100 pounds each (and have the same batch) then record 500 pounds with 500 units; this makes it easy to record tasks because you will not use "1 drum" of roundup, you will specifically use 25 pounds as an example.

Inventory is used in the farming process from the Farm Diary by selecting the Inventory button and "Select Inventory" link.

Asset > Configuration > Asset Category

Equipment can be tractors, trucks, plough, spray rig, trailer, etc. You will soon configure your equipment, but first, create some logical categories for equipment or edit the existing ones.

Asset > Configuration > Assets

Equipment can be tractors, trucks, plough, spray rig, trailer, etc. Use this screen to configure equipment that will be used on farming Tasks. Click the + button next to your equipment after you have saved it to check the Site permissions (ie: tick the sites you want your equipment to be used on).

Settings > Employee > Employee Details Now that you have entered all Sites, and Task Types, you need to be sure all employees have been entered, and give permissions to the employees you have already entered; so they can access these items. To give permissions to bulk employees, tick the Select box next to each employee, then select the Give Permissions option (top right) to apply all permissions for all of the selected item to all selected employees. Note that some employees will not require access to the system, so simply remove all of their screen permissions or set their password to random characters (obviously you don't need to tell them their password if they do not need to sign into the system). Return to the Employee Details screen; click the plus symbol next to each employee to set their permissions for Screen, Task Types, and Sites. Remember, **an Employee will not be available for use as labor on a task unless they have permission to view the task <u>Site</u> and <u>Task Type Employee Labor permissions</u> set** (on Task Type Permissions, tick the "Employee Labor" option for the selected employee). **Hint**: the two most common screens for employees on the farm are "My Tasks" and "Farm Diary".
Quality Control > Settings > Subject When performing Quality Control tests, a Subject must be selected. The subject is the "thing" that you are testing. For example, employees, or a spray rig. Each subject may include data from FarmSoft, tick the fields that must be selected along with the subject during tests.
Quality Control > Settings > Quality Program Define a Quality Program, click + to define its related Categories, and click + to define the Criteria (tests) that are in this Quality Program
Settings > Tasks > Task Type If your Quality Control tests must be associated to a Task (eg: when the employee is performing a task, they will be prompted to perform the QC test), then you need to associate the Quality Program with the Task Type. Click the + button to the left of a Task Type, select the Quality Control tab and enter the Quality Control tests that must be performed with the selected task. Be sure to set the "Default Supervisor" and "Supervisor" to a person who is authorized to supervise this task. This information will be used by the system when creating tasks automatically.

Cultivation > Land > Farm

If you require farms (these are additional to Site) configured, configure Farms here, each Farm can have many Blocks. **Note that usually only very large companies will need to use this feature.**

Cultivation > Land > Block & Crop

Land that is used in farming needs to be divided into manageable areas consisting of Blocks and Block Areas. Each Block is assigned to one Site, and each Block must be divided into one or more Block Areas. These areas can further optionally be subdivided into Bays and Rows (activate the respective setting to see these additional grids in System Setting 292). Once your Blocks and Block Areas have been defined, you can select a Block then click the Crop tab to create instances of crop. A Crop is either:

- For short life cycle produce: An instance of planting produce on a specific are of land (also called a "batch" or "planting" on some farms, OR
- For perennial produce: You can leave the crop open for the lifecycle of the plants (eg: 20 years)

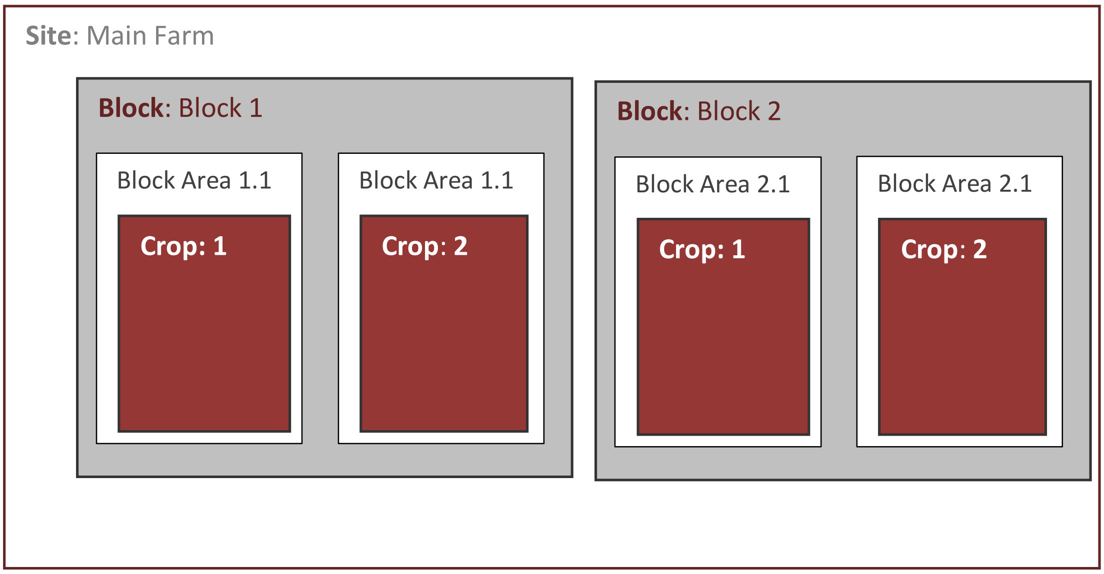
A record for farm Block, Block Area, and Crop has already been inserted into your database; it is recommended that you keep this record and use it for testing. If you want to hide the record, un tick the "active" button on the Block, Block Area, and Crop.

1. Create your Block
2. Select the Block and Create one or more Block Areas on your Block
3. Click the Crop tab (the currently selected Block is where the Crop will be located) and create and save a new Crop.
4. Select your new Crop, the available Block Areas will now appear in the Block areas grid, tick each Block Area that this crop is using.

When a crop is finished (ie: all produce has been harvested or it is the start of a new perennial season), you should set the Active Thru date of the crop, and un-tick the Active option on the crop. This will hide the crop from operational screen.

Use the help link to view a detailed process for creating Block, Block Area, and Crops.

Diagram: Block and Crop relationship.



Basic Farm Operations

Hints:
Enable the iOS Skin (important for tablet users):
Click on the gears icon in the top right hand corner and select iOS.

1. Farm Diary

FarmSoft is a task based management system. The Farm Diary shows tasks on selected dates filtered by your selection of filters. Use the farm diary to create tasks (either in advance, or after you finish them) and use the *Cultivation > Tasks > Task Instructions* report to print tasks for use as worksheets or allow employees to access their tasks via tablet or smartphone. You must select a Site and click Search before the Farm Diary will show any tasks. Use the New Task button to make new tasks, or click on an existing task to view its Task Details.

Farm Diary Viewing Options

- **Day**: Choose this mode to view tasks on the date selected in the calendar at top right.
- **Week**: Chose this mode to view a week of activities, with a calendar for each active crop. Note that PHI and Re-Entry alerts will not show in this view.
- **Month**: Choose this mode to view all tasks for the current month. Note that PHI and Re-Entry alerts will not show in this view.

Features

- **New Task**: Click on a crop and click New Task to create a new farm task.
- **Move Task**: Use this feature to move bulk tasks, or delete bulk tasks.
- Multi Crop: Use this button to create a task on multiple crops. Note that the amount of employee, inventory, asset that you enter will be divided over all crops on this task (the system does this by creating one task for each crop with a ratio of materials based on the crop size)

Filters

- **Site**: Filters crops on farm diary by your selected site. You must select one site.
- **Select other filters** to refine your search. For example, if you have 100 active crops, use the filters to reduce the crops that are shown. Showing too many crops on the farm diary will make it slow and difficult to read.

2. Task Details

You will see the Task Details when you are creating or editing a task. Clicking the New Task button will create a new task, and ask you for a Task Type and which Crop the task will be on.

Buttons will appear on the right hand side of the Task Details page, these buttons allow entry of important information such as Employee, Inventory, Land, Equipment, Documents, Observations, and Properties. Some buttons may not appear, this is controlled by settings on the Task Type (*see Settings > Task > Task Type to modify*).

Special functions:

Inventory:

- If you enable Setting 328 you can edit the quality of a part, when there are other parts in the Estimated Inventory grid, the other parts quantities will be updated, eg: if you increase water by double, the other Parts quantities will be doubled. Click the Formula link to use this feature.

3. Giving Task information to employees

If you are not using a smartphone or tablet to allow access the My Tasks and Farm Diary screens, you can print the Farm Tasks from Cultivation > Tasks > Task Instructions.

Buttons will appear on the right hand side of the Task Details page, these buttons allow entry of important information such as Employee, Inventory, Land, Equipment, Documents, Observations, and Properties. Some buttons may not appear, this is controlled by settings on the Task Type (*see Settings > Task > Task Type to modify*).

For employees using the My Task screen:

1. Ensure the employee has screen permissions to use only My Tasks, and optionally tick “My Tasks” on the employee profile to show then screen as soon as they sign in
2. The employee is presented with a list of tasks that they are a Supervisor/Creator/Employee on. They can click on a task to view details, and enter “Actual” values.

3. Tasks are hidden from the My Tasks screen when they are completed. Tasks are shown in order of time. Users can filter the tasks to see future tasks as required, by using the fitlers across the top of the screen.
4. If the employee has rights to create thei8r own tasks, a Create Task button will show at the top of the screen. Remember an employee can create only the Task Types that they have permission to create via the Employee Task Type Permissions tab on their Employee Profile.

4. Recalls & Traceability

View various reports under the Traceability menu, here are some of the most pertinent traceability reports:

Cultivation > Traceability > Crop Inputs Detail
Purpose: Report details on individual tasks on a selected crop for selected Crops for selected Task Types for selected Part Categories.
Result: Task Number, Part Name, Task Type, Quantity, Measure, Application Rate, Supplier Batch Data, Supervisor, Supplier, Application Rate, Inventory Number

Cultivation > Traceability > Crop Input Summary
Purpose: Report the total combined inputs (grouped by Crop) of each Part for selected Crops for selected Task Types for selected Part Categories.
Result: Part Name, Measure, Total Quantity Used (grouped by Crop)

Cultivation > Traceability > Crop Recall
Purpose: Recall where Supplier has given you a Supplier Batch Number
Result: Details of Tasks and the Block and Crops they were applied to, and application rates and quantities.

Cultivation > Traceability > Pesticide Application Report
Purpose: Report chemical applications
Result: Details of Tasks where chemicals were applied, area, supervisor, weather, and application rates etc.

Cultivation > Traceability > Active Ingredients
Purpose: display total active ingredients on selected area
Result: Summary of inputs of active ingredients (Active Ingredients are associated with Parts) used on selected areas during selected date range.

5. Finishing old crops and making new ones

To Finish an Old Crop

1. Go to Cultivation > Land and Areas > Block and Crop, select your Site, Block, and click Crop tab
2. Click on the name of the Crop you want to finish, untick Active, and set the Crop Thru date to today (or any date in the past – that is the same as or after the last task recorded on this crop)

To Finish an old or redundant Block Area

If a Block Area will not be reused on a new Crop, you can hide it from operational screen in FarmSoft.

1. Go to Cultivation > Land and Areas > Block and Crop, select your Site and Block
2. Click on the name of the Block Area you want to finish, untick Active, and set the Thru date to today (or any date in the past – that is the same as or after the Thru date of any active Crop)

Make a new Crop

1. If your new Crop is not the same size as an existing (and empty) Block Area, you will first need to make a new Block Area (from Block and Crop screen, select Site, Block, and click New in Block Area).
2. Select the Crop tab, and click New to make your Crop, enter details as required and click Save
3. IMPORTANT: you must now **tick the associated Block Area in the bottom grid**, this will associate your new Crop with the Block Area. If you do not do this then your new crop will not be available for use in FarmSoft.

Congratulations! You should now be able to perform all basic farm operations. Remember, click the Help link on the FarmSoft page for more details, and [contact support]() or your TSL FarmSoft Partner for assistance. Please be sure you have changed the default username and password.

Best Practice Modules

The best practice system allows you to define the best way to produce a selected variety of produce. The information used to configure this system will be used to **generate budgets, and automatically create tasks on the farm diary**. We will now perform the following steps:

1. Settings > Tasks > Best Practice Task: Each production task is a small task that's performed during the farming process, for example, chipping, weeding, spray, irrigation, planting, harvesting, soil analysis etc. Each task will have its labor, inventory, and equipment settings filled out. The consumption of these items will be specified as X units per area of land, for example, 1kg per hectare, or 80 minutes of labor per hectare.
2. Settings > Tasks > Best Practice: Each production method ties together all of the production tasks and specifies which day of the crop/season its normally performed on. For example, on day 1 production task "Plough ground" should be performed, on day 2 production tasks "form rows in soil" should be performed.
3. Cultivation > Best Practice > Implement Best Practice. This simply means you specify a crop, chose a start date for the first task, and select a production method to apply the tasks to. Your tasks will then be automatically created, and you can now access budget information relating to the selected crop.

Best Practice Tasks

For each common task type performed in the business, create a Best Practice Task.

1. Go to page Settings > Tasks > Best Practice Tasks
2. Click New in the production tasks grid (or edit and overwrite a sample record if they are still in your database). Fill in the Name of the production task and select the Task Type & click Update
3. Next to the new production task you created, click the + button.
4. **Asset Tab:** click New in this tab to add equipment (or edit the existing record if updating sample data). Note that the Minutes Per Unit will be multiplied by the area of land this equipment is used on. For example, if you enter 100 and the area of land is 10, then 1000 minutes will be the resulting time of use on the task (10 X 100). Click Update.
5. **Inventory Tab:** click New in this tab to add inventory (or edit the existing record if updating sample data). Note that the Quantity Per Output Area will be multiplied by the area of land this inventory is used on. For example, if you enter 100 and the area of land is 10, then 1000 kilograms (or whatever units of inventory) will be the resulting total weight (or other measurement) of this inventory used on the task (10 X 100). Click Update.
6. **Labor Tab:** click New in this tab to add labor (or edit the existing record if updating sample data). Note that the Quantity Per Output Area will be multiplied by the area of land this labor is used on. For example, if you enter 100 and the area of land is 10, then 1000 minutes (or whatever units of inventory) will be the resulting total labor of this type used on the task (10 X 100). Click Update.

Best Practice

For each unique variety of produce farmed by your business, we will now create a Best Practice. Note that if for example 4 varieties of produce have exactly the same production processes, then you can use one production method for all 4, no need to create 4 identical production methods.

1. Go to page Settings > Tasks > Best Practice, click New
2. Enter the details of your Best Practice, don't forget to set the Variety and fill out both fields Part and Manufactured Product with the Produce that will be grown. Click Update.
3. Click the plus button next to the Production Method.
4. In the Best Practice Task box, click New to add each task to the Best Practice, you may end up with anywhere between 20 and 300 tasks depending on the length of the growing cycle and the complexity of your farming methods. The screenshot below shows the first six "days" of my sample Production Method:

⊟	Edit New Delete	Bella Capsicum Program 3	5/1/2011	Bill Thorton	Production

Production Method Task

Tasks	Production Task	Estimated Start	Estimated Finish	Day	Task Time Per Unit
Edit New Delete	Spray Program 3A	09:00:00	20:00:00	1	300
Edit New Delete	Irrigation	09:00:00		2	22
Edit New Delete	Chipping	09:00:00		3	25
Edit New Delete	Spray Program 3A	09:00:00		4	30
Edit New Delete	Irrigation	09:00:00		5	35
Edit New Delete	Chipping	09:00:00		6	40

Implementing Best Practices

Now that you have created the Production Task and Production Method, you can implement the Production Method (as a Best Practice).

1. Go to Farm > Best Practice > Implement Best Practice: from this screen, filter for the Crop on which you will implement the best practices.
2. Set the "Start date for first task", this date will become "Day 1" (as in the day measurements used to configure your Production Method).
3. Select a Production Method and click "Implement Best Practice". You will receive a message telling you how many tasks were created.
4. If you visit the Farm Diary (Farm > Tasks > Farm Diary) and filter for your Site, Crop, Start Date for First Task, you will see the automatically created tasks. These tasks have only their "Estimated" values filled out. When the tasks are performed, you must mark the tasks as completed by filling out the Actual values for Inventory, Employee, and Equipment, and the Actual Finish Dates.

Traceability & Recalls

This section discusses how to perform a recall of a crop based on the inputs, and how to summarize inputs on a selected area. The following reports are located in Farm > Traceability.

Crop Recall

This report allows for a recall (returns the names of Crops) based on an input using the Inventory Number, Supplier Batch Data, and Supplier data. Run the report entering at least one of the values, and selecting a date range which will filter results by the Estimated Start and Finish dates.

Crop Input Summary

This report returns the total application of selected types of inventory. This report is useful for planning spray tasks, and showing auditors that you have checked total application of dangerous (controlled) substances over the minimum application periods.

Crop Inputs Detail

This report returns the individual applications of each input, the task number, and date of application. Can be used for similar purposes as the Crop Input Summary.

Export Data for Payroll

Use the Farm > Tasks > Employee Tasks and Employee Task Details reports to export payroll data. Instead of printing the report, use the dropdown on the report menu bar to select Csv, Xls (or other) then click the Save As button. Note that you can have Tenacious Systems develop an export method that best matches your data import/export requirements. To allow TSL consultants to understand your requirements, please export sample data in the exact same format that you wish to import into your financial/payroll package, and send this along with a description of the name and version of your financial or payroll package. TSL will then use your sample file (csv, slx, xml) as a specification.

Budget Operations

There are various reports in the Farm > Budget menu that will be very useful for day to day operations.

Report	Purpose
Monthly Budget Projection	Used to plan cash-flow and acquisition of materials and labor on a monthly basis
Monthly Budget Analysis	Compares the actual costs and consumption with the estimated costs and quantities
Monthly Materials Projection	Use for planning materials acquisition
Crop Budget Summary Chart	Summarizes each crops budget position across the entire farm
Detailed Budget Analysis	Analyze individual estimated versus actual on a task by task basis
Farm Budget Summary	Summary of each crops budgetary status across the entire farm in tabular format
Over Budget Quantity and Cost	Analyze individual estimated versus actual highlighting only items that have run over budget
Over Budget Quantity	Analyze individual estimated versus actual (quantity only) highlighting only items that have run over budget quantity

Yield Analysis

Use the Farm > Yield reports to view actual yield. Each report can be filtered to provide your required data. If you need any additional reporting tools for yield, please contact you TSL Consultant.

Cost Monitoring

Use the Farm > Cost reports to analyze various costs and KPI's. Each report can be filtered to provide your required data. If you need additional reporting tools for yield, please contact you TSL Consultant.

Congratulations! You should now be able to perform all basic advanced farming operations. Remember, contact support or your TSL FarmSoft Partner for assistance.