



## User Manual (English)

The following are the various modules and domains offered by ERP+ from Technocom, covering a wide range of businesses. You can be a small distributor, a manufacturer, running an educational institute, or a healthcare organization. There is something for everyone.

### Connect

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# Domain: **Agriculture**

## **Domain: Agriculture**

The Agriculture Domain of ERP+ comes with features to record crops and land, track plant, soil, water, weather analytics, and even track diseases and fertilizers. You can check out the following topics after this brief introduction to the agriculture module in ERP+.

# 1. Topics

## 1.1 Crops and Land

1. Introduction
2. Land Unit
3. Crop
4. Crop Cycle

## 1.2 Disease and Fertilizer

1. Disease
2. Fertilizer

## 1.3 Analytics

1. Analytics

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## **1.1 Topic: Crops and Land**

1. Introduction
2. Land Unit
3. Crop
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## 1. Introduction

Farmers know that even a small operation requires intensive record keeping. A well-run farm requires proper management of accounting, payroll, suppliers, customers and logistics to name a few areas. ERP+ already helps organize these activities.

**Dyersville Farm**
Menu ▼ Save

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**Attach File +**

TAGS  
Add a tag ...

SHARED WITH  
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You edited this a few seconds ago

You created this 13 hours ago

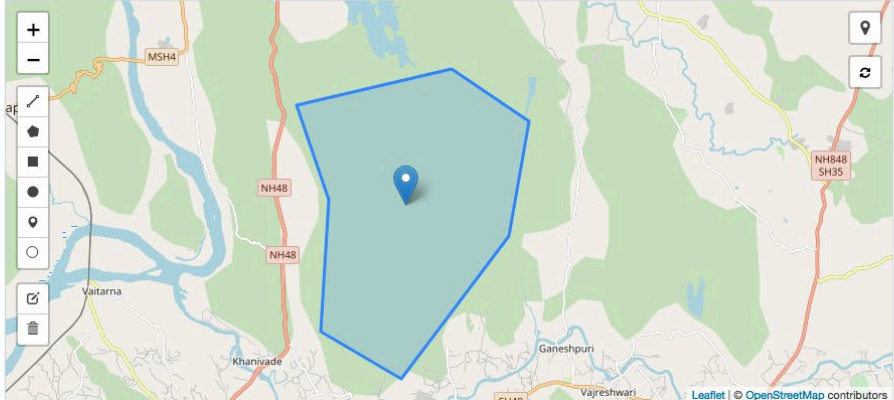
27.94MB (0%) used

Latitude

Longitude

Area **6,04,70,534.330**

Location



### ERP+ Agriculture

The Agriculture module in ERP+ helps you keep track of your farming operations. It allows you keep records for each field where you farm, such as geospatial and soil texture characteristics. It allows you to:

- Manage the physical spaces where you plant your crops
- Manage your crops
- Record analysis data
- Plan activities related to your crops
- Record sale of the harvest or transfer to warehouse for further processing
- View reports


### Capture Land Units and Manage Crops

A farm requires additional attention to manage its productive units (plots of land), time sensitive crop activities (such as planting, irrigating, fertilizing etc.), recording environmental and crop data for analysis, and reports to help make effective decisions.




STEXT00001 Menu Save

**Comments** 0

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 Elaine Ben...  
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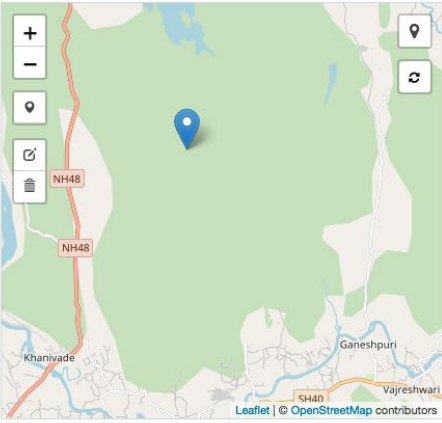
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You edited this 35 minutes ago

You created this 35 minutes ago

27.94MB (0%) used

**Location**



**Collection Datetime**

**Laboratory Testing Datetime**

**Result Datetime**

**Soil Type**

**Clay Composition (%)**

**Sand Composition (%)**

**Silt Composition (%)**

sand

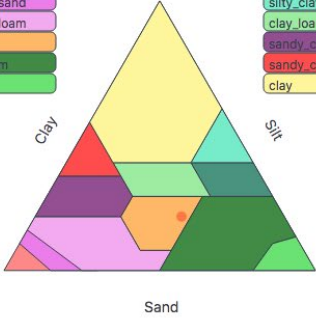
loamy\_sand

sandy\_loam

loam

silt\_loam

silt



silty\_clay\_loam

silty\_clay

clay\_loam

sandy\_clay\_loam

sandy\_clay

clay

## Crops and Land

The core and most important elements of Agriculture module are:

- Land Unit: Representing the physical space where the crops are planted.
- Crop: Characteristics of the crop, inputs and expected outputs, expected calendar of activities and harvest, etc.
- Crop Cycle: Individual representation of a single planting in a specific area. (Links a crop to a Land Unit for a specified period).

Here we will learn to do a quick setup with the essential requirements to manage a simple example crop, Carrots.

These instructions assume you have already completed the basic ERP+ setup, and you have the ERP+ desk on your browser window.

## 2. Land Unit

Before we do anything, we need to define some details about where our crops will be planted. We will first create our farm as a parent land unit, and then we will add one or more fields as children or nodes, belonging to the parent. Agriculture > Land Unit

On the desk, click on the Land Unit icon, a list will show any existing Land Units. On the top right, click on New to create the first Land Unit.

- Land Unit Name: Carrot Farm
- Parent Land Unit: All Land Units
- Check the box next to 'Is Group'
- Location: plot the area as you please

Click Save and it should look something like this

**Carrot Farm**
Menu ▼ Save

---

**Comments** 0

ASSIGNED TO  
**Assign +**

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TAGS  
Add a tag...

SHARED WITH  
+

♥ 0

You edited this a minute ago

You created this a minute ago

Parent Land Unit  Is Container  
Check if it is a hydroponic unit


**All Land Units**  Is Group

LAND UNIT DETAILS

Latitude  Area

Longitude

Location



<input type="checkbox"/>	Soil Texture	
No Data		
<span style="background-color: #f0f0f0; padding: 2px 5px;">Add Row</span>		
<input type="checkbox"/>	Soil Analysis	
No Data		
<span style="background-color: #f0f0f0; padding: 2px 5px;">Add Row</span>		
<input type="checkbox"/>	Plant Analysis	

With the farm created, we can now create our first Carrot Field! Click on New:

- Land Unit Name: Carrot Field 1
- Parent Land Unit: select the one we just created in step two, i.e. Carrot Farm
- Leave the 'Is Group' box unchecked
- Location: plot the area as you please

Click Save and repeat step 3 for as many fields as you need

### 3. Crop

Now we need to specify what our crop will be. A crop summarizes all that is necessary before creating our first crop cycle or planting. Agriculture > Crop.

On the desk, click on the Crop icon. A list will show any existing Crops. On the top right, click on 'New' to create the first Crop. A new Crop document will open, and we will enter basic information. The basic information should be entered as such:

- Title: Carrot from carrot-top
- Crop Name: Carrot
- Scientific name: Daucus Carota
- Type: Biennial
- Planting UOM: Unit
- Yield UOM: Grams

We will skip the Materials Required, Byproducts and Produce sections. In the Ideal Agriculture Task List, we enter some planned tasks such as planting, watering, and harvesting. (Please note, our activity list will be intentionally abbreviated for illustration purposes. For this example, we will prepare our field, plant the next day, water only once, add a cover after germination on day 12, remove weeds at day 19, and harvest at day 90.

The first row will look like this:

- Task Name: Preparation - Make rows
- Start Day: 1
- End Day: 1
- Holiday Management: Ignore holidays

When done, you can click 'Save' to prevent any work from being lost. We are not done yet, we simply have saved the minimum required information! Continue filling the next rows with Task Name, Start Day, End Day and Holiday Management.

- Row 2: Preparation - Add mulch cover, 1, 1, Previous Business Day
- Row 3: Planting - Sow the seeds, 2, 2, Previous Business Day
- Row 4: Water - 10ml per plant, 2, 2, Ignore holidays
- Row 5: Disease - Pest control - Cover with Fine Net, 12, 12, Previous Business Day
- Row 6: Weed Control - Remove weeds, 19, 19, Previous Business Day
- Row 7: Harvest - When top is at 5cm, 90, 90, Previous Business Day

Click 'Save'

Your form should now look something like this:

Carrot from carrot-top

Menu Save

Comments 0

ASSIGNED TO  
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Add a tag...

SHARED WITH  
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You edited this a few seconds ago

You created this a few seconds ago

DASHBOARD ^

Crop Cycle  
Crop Cycle +

Crop Name  Scientific Name

TASKS

You can define all the tasks which need to be carried out for this crop here. The day field is used to mention the day on which the task needs to be carried out, 1 being the 1st day, etc.

<input type="checkbox"/>	Task Name	Start Day	End Day	Holiday Management	
<input type="checkbox"/>	1 Preparation - Make rows	1	1	Ignore holidays	▼
<input type="checkbox"/>	2 Preparation - Add mulch cover	1	1	Ignore holidays	▼
<input type="checkbox"/>	3 Planting - Sow the seeds	2	2	Ignore holidays	▼
<input type="checkbox"/>	4 Water - 10ml per plant	2	2	Ignore holidays	▼
<input type="checkbox"/>	5 Disease - Pest control - Cover wi...	12	12	Ignore holidays	▼
<input type="checkbox"/>	6 Weed Control - Remove weeds	19	19	Ignore holidays	▼
<input type="checkbox"/>	7 Harvest - When top is at 5cm	90	90	Ignore holidays	▼

Add Row

Period

Crop Spacing  Row Spacing   
 Crop Spacing UOM  Row Spacing UOM

Type  Category

Target Warehouse

Planting UOM  Yield UOM   
 Planting Area

MATERIALS REQUIRED

<input type="checkbox"/>	Item Code	Qty	UOM	Rate	Amount	
No Data						
Add Row						

PRODUCED ITEMS

<input type="checkbox"/>	Item Code	Qty	UOM	Rate	Amount	
No Data						
Add Row						

BYPRODUCTS

<input type="checkbox"/>	Item Code	Qty	UOM	Rate	Amount	
No Data						

Repeat step 2 for as many crops as you need. You can save some time by duplicating existing crops and modifying only the necessary items

## 4. Crop Cycle

Once we have defined our crop, we can create as many crop cycles as we like, using the parameters outlined previously

On the desk, click on the Crop Cycle icon. A list will show any existing Crop Cycles. Agriculture > Crop Cycle

On the top right, click on New to create the first Crop Cycle. A new Crop Cycle document will open, and right away you see that two of the required items are a Land Unit and a Crop. We shall give it a descriptive name, to differentiate it from Crop Cycles we might create later.

- Title: Carrot Planting 2017
- Land Unit: Add a row, and select, Carrot Field 1
- Crop: Carrot from carrot-top
- Start Date: Today
- Leave the ISO 8601 Standard (week count) box unchecked
- Skip the next four fields for Crop Spacing

Save the new Crop Cycle and it should now look something like this

**Carrot Planting 2017**
Menu ▼ Save

---

**Comments** 0

ASSIGNED TO  
**Assign +**

ATTACHMENTS  
**Attach File +**

TAGS  
Add a tag...

SHARED WITH  
+

♥ 0

You edited this a few seconds ago

You created this a few seconds ago

Reload Linked Analysis

<p>Crop</p> <div style="border: 1px solid #ccc; padding: 2px; background-color: #fff9c4;">Carrot from carrot-top</div>	<p>Linked Land Unit</p> <p style="font-size: 0.8em;">A link to all the Land Units in which the Crop is growing</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"><input type="checkbox"/></td> <td style="border: 1px solid #ccc; padding: 2px;">Land Unit</td> <td style="width: 20px;"></td> </tr> <tr> <td><input type="checkbox"/></td> <td style="border: 1px solid #ccc; padding: 2px; background-color: #fff9c4;">Carrot Field 1</td> <td style="text-align: right; font-size: 0.8em;">▼</td> </tr> </table> <p style="text-align: center; font-size: 0.8em; margin-top: 5px;"><span style="border: 1px solid #ccc; padding: 2px 5px; border-radius: 3px;">Add Row</span></p>	<input type="checkbox"/>	Land Unit		<input type="checkbox"/>	Carrot Field 1	▼
<input type="checkbox"/>	Land Unit						
<input type="checkbox"/>	Carrot Field 1	▼					
<p>Project</p> <div style="border: 1px solid #ccc; padding: 2px; background-color: #fff9c4;">Carrot Planting 2017</div>	<p>Start Date</p> <div style="border: 1px solid #ccc; padding: 2px; background-color: #fff9c4;">07-12-2017</div> <p style="font-size: 0.8em; margin-top: 2px;">This will be day 1 of the crop cycle.</p>						
<p><input type="checkbox"/> ISO 8601 standard</p>	<p>Cycle Type</p> <div style="border: 1px solid #ccc; padding: 2px; background-color: #fff9c4;">Yearly</div>						
<p>Crop Spacing</p> <div style="border: 1px solid #ccc; padding: 2px; background-color: #fff9c4;">0.000</div> <p style="font-size: 0.8em; margin-top: 2px;">The minimum length between each plant in the field for optimum growth</p> <p>Crop Spacing UOM</p> <div style="border: 1px solid #ccc; padding: 2px; height: 20px;"></div>	<p>Row Spacing</p> <div style="border: 1px solid #ccc; padding: 2px; background-color: #fff9c4;">0.000</div> <p style="font-size: 0.8em; margin-top: 2px;">The minimum distance between rows of plants for optimum growth</p> <p>Row Spacing UOM</p> <div style="border: 1px solid #ccc; padding: 2px; height: 20px;"></div>						
<p>DETECTED DISEASES</p> <p style="font-size: 0.8em;">List of diseases detected on the field. When selected it'll automatically add a list of tasks to deal with the disease</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20px;"><input type="checkbox"/></th> <th style="width: 60%;">Disease</th> <th style="width: 20%;">Start Date</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center; padding: 5px 0;">No Data</td> </tr> </tbody> </table> <p style="text-align: center; font-size: 0.8em; margin-top: 5px;"><span style="border: 1px solid #ccc; padding: 2px 5px; border-radius: 3px;">Add Row</span></p>		<input type="checkbox"/>	Disease	Start Date	No Data		
<input type="checkbox"/>	Disease	Start Date					
No Data							

Repeat these for every Crop Cycle you need

As you can see a Project was created, with the same name as the Crop Cycle and linked to the Crop Cycle. If you click on the project, you'll see all the 'Sample Tasks' from the linked Crop, i.e. 'Carrot from carrot-top' in this case, were converted into actual 'Tasks' and linked to the Project, for easy management: Projects > Project

**Carrot Planting 2017** ● Open
Menu ▼ Save

**See on Website**

**Comments** 0

ASSIGNED TO  
**Assign** +

ATTACHMENTS  
**Attach File** +

TAGS  
Add a tag...

SHARED WITH  
+

♥ 0

You edited this  
8 minutes ago

You created this  
8 minutes ago

Gantt Chart

DASHBOARD ^

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov

This is based on the Time Sheets created against this project

**Project**

Task 7 +

Timesheet +

Expense Claim +

Issue +

**Sales**

Sales Order +

Delivery Note +

Sales Invoice +

**Material**

Material Request +

BOM +

Stock Entry +

**Purchase**

Purchase Order +

Purchase Receipt +

Purchase Invoice +

<p>Status</p> <div style="border: 1px solid #ccc; background-color: #fff9c4; padding: 2px; margin-bottom: 5px;"><b>Open</b></div> <p>Project Type</p> <div style="border: 1px solid #ccc; height: 20px; margin-bottom: 5px;"></div> <p>Is Active</p> <div style="border: 1px solid #ccc; background-color: #e0e0e0; padding: 2px; margin-bottom: 5px;">Yes</div> <p>% Complete Method</p> <div style="border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;">Task Completion</div>	<p>Priority</p> <div style="border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;">Medium</div> <p>Expected Start Date</p> <div style="border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;">07-12-2017</div> <p>Expected End Date</p> <div style="border: 1px solid #ccc; background-color: #fff9c4; padding: 2px; margin-bottom: 5px;"><b>06-03-2018</b></div> <p>% Completed</p> <div style="border: 1px solid #ccc; background-color: #e0e0e0; padding: 2px; margin-bottom: 5px;"><b>0%</b></div>
--	--

CUSTOMER DETAILS ▼

USERS ▼

TASKS

<input type="checkbox"/>	Title	Status	Start Date	End Date	
<input type="checkbox"/>	1 ● Preparation - Make rows	Open	07-12-2017	07-12-2017	▼
<input type="checkbox"/>	2 ● Preparation - Add mulch cover	Open	07-12-2017	07-12-2017	▼
<input type="checkbox"/>	3 ● Planting - Sow the seeds	Open	08-12-2017	08-12-2017	▼
<input type="checkbox"/>	4 ● Water - 10ml per plant	Open	08-12-2017	08-12-2017	▼
<input type="checkbox"/>	5 ● Disease - Pest control - Cover ...	Open	18-12-2017	18-12-2017	▼
<input type="checkbox"/>	6 ● Weed Control - Remove weeds	Open	25-12-2017	25-12-2017	▼
<input type="checkbox"/>	7 ● Harvest - When top is at 5cm	Open	06-03-2018	06-03-2018	▼

Add Row

NOTES ▼

## 1.2 Topic: **Disease and Fertilizer**

1. Disease
2. Fertilizer



## 1. Disease

This part of Agriculture module deals with the management of Diseases, which may include various types of bacteria, fungi, viruses, or pests which affect the Crop

On the desk, click on the Disease icon. A list will show any existing Diseases. Agriculture > Disease. The basic information should be entered as such:

- Disease Name: Aphids
- Scientific name: Aphidoidea
- Description: you could give a description of the disease here
- Treatment Task: This may contain a list of all the Tasks which need to be executed in order to get rid of the Disease

Once you fill the form, click Save and it should look something like this

**Aphids**
Menu ▼ Save

---

**Comments** 0

ASSIGNED TO

**Assign +**

ATTACHMENTS

**Attach File +**

TAGS

Add a tag...

SHARED WITH

+

♥ 0

You edited this  
4 minutes ago

You created this  
18 hours ago

Scientific Name

Aphidoidea

Description

TREATMENT TASK

<input type="checkbox"/>	Task Name	Start Day	End Day	Holiday Management	
<input type="checkbox"/>	1. Locate the crops affected	1	1	Ignore holidays	▼
<input type="checkbox"/>	2. Apply fungicide	2	2	Ignore holidays	▼

Add Row

Treatment Period

2

These Tasks will be imported into the Crop Cycle Project if you choose to add this Disease to the list of Detected Disease in Crop Cycle

## 2. Fertilizer

This is used to keep track of available fertilizers, and their chemical composition, which is linked to the Item master

**Urea**
Menu ▼ Save

---

**Comments** 0

ASSIGNED TO  
**Assign +**

ATTACHMENTS  
**Attach File +**

TAGS  
Add a tag...

SHARED WITH  
+

♥ 0

You edited this  
18 hours ago

You created this  
18 hours ago

Item

Density (if liquid)

FERTILIZER CONTENTS

<input type="checkbox"/>	Title	Value	
<input type="checkbox"/>	1 Others		▼
<input type="checkbox"/>	2 Inert		▼
<input type="checkbox"/>	3 Fulvic Acid		▼
<input type="checkbox"/>	4 Humic Acid		▼
<input type="checkbox"/>	5 Sodium Content		▼
<input type="checkbox"/>	6 Molybdenum Content		▼
<input type="checkbox"/>	7 Chlorine Content		▼
<input type="checkbox"/>	8 Manganese Content		▼
<input type="checkbox"/>	9 Boron Content		▼
<input type="checkbox"/>	10 Zinc Content		▼
<input type="checkbox"/>	11 Copper Content		▼
<input type="checkbox"/>	12 Iron Content		▼
<input type="checkbox"/>	13 Magnesium Content		▼
<input type="checkbox"/>	14 Sulphur Content		▼
<input type="checkbox"/>	15 Calcium Content		▼
<input type="checkbox"/>	16 Potassium Content		▼
<input type="checkbox"/>	17 Phosphorous Content		▼
<input type="checkbox"/>	18 Nitrogen Content		▼

Add Row

## **1.3 Topic: Analytics**

## 1. Analytics

This part of the Agriculture module is used for tracking data and report generation

All the data pertaining to the following doctypes can be tracked by ERP+

- Plant Analysis
- Soil Analysis
- Water Analysis
- Soil Texture
- Weather
- Agriculture Analysis Criteria