

MANUFACTURING



In agrē you can track the manufacture of products from grain bins to spray wagons to bagged lawn fertilizer. Using the raw ingredients (inventory and non-inventory) you have in stock, you can track the costs, edit the manufacturing if a correction is required, or undo the manufacturing completely.

What you'll find:

Setup the Manufactured Product and Raw Ingredients	2
Manufacture the Product.....	3
Add products on the fly.....	5
Specifying the Cost of Non-Inventory Products	5
Save to Manufacture the Product.....	6
Optional: Confirm the Inventory Counts.....	7
Edit Manufacturing	8
Undo Manufacturing	8
Cost Adjust Manufacturing	9
Manufacturing Reports	10

Setup the Manufactured Product and Raw Ingredients

Before you manufacture a product for the first time, setup the “recipe” of raw ingredients (you will still be able to change them or add new ones on the fly).

In this example you'll manufacture 25 kg bags of lawn fertilizer from bulk product.

Add a new (or edit an existing) manufactured product.

On the **Product tab**, ensure that the **Manufactured?** box is checked. This tells agrē that you *make* this product rather than purchase it.

Product Code: LAWN
Description: Lawn Fertilizer 25 kg bag
Short Desc:
Alt Product Desc:
Product Type: Dry Fertilizer
UPC Code:

☒ Inventory Item?
☐ Returnable?
☒ Manufactured?
☐ Omit From Sales Reports?
☒ Returnable?
☐ Prohibit Purchase?
☐ Exclude From AgCollect?
☐ Overridable Sales Account?
☐ Exclude From Discount Groups?
☐ Lot Number Required?

Inventory > Manage > Products

Because the main unit type of the raw ingredients are metric tonnes, the manufactured product also needs to have **MT** as a unit type so agrē knows how to convert MT to bags when manufacturing.

On the **Units tab**, set up the main unit type and any conversion factors for alternate units.

Units	Main Units?	Conv. Factor to Main	Company Retail Price	Active?
BAG - Bag	☒	1.00	\$25.00	☒
> MT - Metric Tonne	☐	0.025		☒
*	☐			☒

There are 40 Bag per 1 Metric Tonne.

NOTE: 'Conv factor to main' is expressed as the number of units in 1 main unit of product

Default Units:
Invoices:
Loadout Tickets:
Work Orders:
Location Transfers:
Inventory Receipts / Purchase Orders:
Manufacturing:
Manual Counts:
Inventory Adjustments:

Inventory > Manage > Products

On the **Manufacturing tab**, add the raw products in the quantities needed to make **one unit** of manufactured product (use the **Up** and **Down** buttons to change the order). Notice that all the raw fertilizer products have MT as the unit type, and the quantity per bag is specified in MT. That's why you needed to add MT as a unit type to the manufactured product.

Product | Units | Inventory | Notes | Associated Products | Blending | **Manufacturing** | Dangerous Goods | Regulations

Product	Quantity per Product	Total Quantity
> 4600 - 46-0-0 (MT)	0.0083333333	
1152 - 11-52-0 (MT)	0.0083333333	
0060 - 0-0-60 (MT)	0.0083333333	
BAG25KG - 25 KG Bag (EA)	1.00	
BAGGING - Bagging Charge (EA)	1.00	

Up Down

Add Raw Product Row Edit Raw Product Row Remove Raw Product

Manufacturing Instruction Comment:

these products in these quantities are needed to make one bag of LAWN

Inventory > Manage > Products

Manufacture the Product

Navigate to **Inventory > Manufacturing**.

Inventory | Accounts Payable

- Inventory Receipts
- Inventory Adjustment
- Product Price Check
- Manufacturing**
- Manual Counts

Click **Add**.

Manufacturing

+ Add Edit Undo New Search Preview Item View Posting History Exit

Date	Reference	Location	Product	Quantity	Unit Type
No Products found					

all products manufactured in the last week would be listed by default

Inventory > Manufacturing

When you want to manufacture, you will start with the product you want to make – in this example, you're making 40 bags of Lawn Fertilizer.

The screenshot shows the 'Manufacture Product' window. Annotations with green arrows point to specific fields:

- 'what's being made?' points to the 'Product' dropdown menu.
- 'how many of them?' points to the 'Quantity' input field.
- 'where are the raw products coming from?' points to the 'Location' dropdown menu.

The window contains the following fields and controls:

- Buttons: Save, Start Over, Exit
- Reference: [] * ☒ Generate
- Product: LAWN - Lawn Fertilizer 25 kg bag
- Units: BAG - Bag
- Quantity: 40
- Date: Dec 16, 2013
- Location: Edmonton
- Comments: []
- Lot Number: <Auto-Generate Number>

Inventory > Manufacturing

Then you specify the raw materials you need to manufacture this product. If you've previously setup a recipe, click **Retrieve Raw Products**.

The screenshot shows the 'Manufacture Product' window with the 'Retrieve Default Raw Products' button highlighted by a red rectangle and a yellow starburst icon. The button is located below the 'Quantity' field.

The window contains the following fields and controls:

- Buttons: Save, Start Over, Exit
- Reference: [] * ☒ Generate Reference Automatically
- Product: LAWN - Lawn Fertilizer 25 kg bag
- Units: BAG - Bag
- Quantity: 40
- Date: Dec 16, 2013
- Location: Edmonton
- Comments: []
- Lot Number: <Auto-Generate Number>

agrē pulls in the raw ingredients and calculates how much of each you will need to make the quantity you specified.

The screenshot shows the 'Manufacture Product' window with the 'Raw Products' table displayed. Annotations with green arrows point to specific columns in the table:

- 'amount needed to make 1 bag' points to the 'Quantity Per Unit' column.
- 'amount needed to make 40 bags' points to the 'Total Used Quantity' column.

The window contains the following fields and controls:

- Buttons: Save, Start Over, Exit
- Reference: [] * ☒ Generate Reference Automatically
- Product: LAWN - Lawn Fertilizer 25 kg bag
- Units: BAG - Bag
- Quantity: 40
- Date: Dec 16, 2013
- Location: Edmonton
- Comments: []
- Lot Number: <Auto-Generate Number>

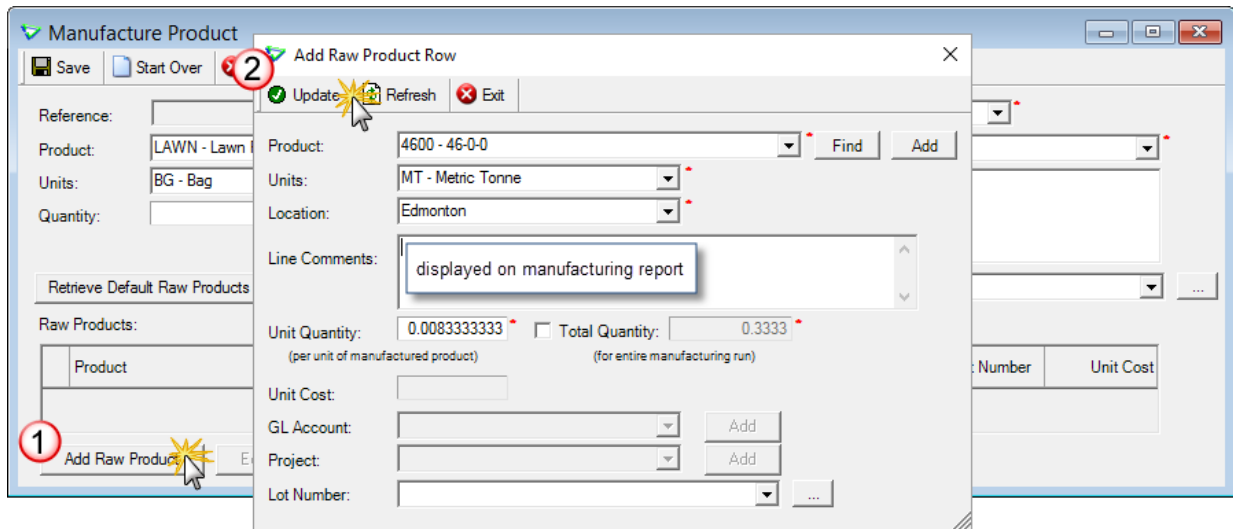
The 'Raw Products' table is as follows:

Product	Location	Quantity Per Unit	Total Used Quantity	Inventory On Hand	GL Account	Lot Number	Unit Cost
> 4600 - 46-0-0 (MT)	Edmonton	0.0083333333	0.3333	3,988.488			
1152 - 11-52-0 (MT)	Edmonton	0.0083333333	0.3333	27.7899			
0060 - 0-0-60 (MT)	Edmonton	0.0083333333	0.3333	81.2568			
BAG25KG - 25 KG Bag (EA)	Edmonton	1.0000	40.0000	9.0			
BAGGING - Bagging Charge (EA)	Edmonton	1.0000	40.0000		45075 - Sales Service		

Buttons at the bottom: Add Raw Product, Edit Raw Product, Remove Raw Product, Remove Multiple

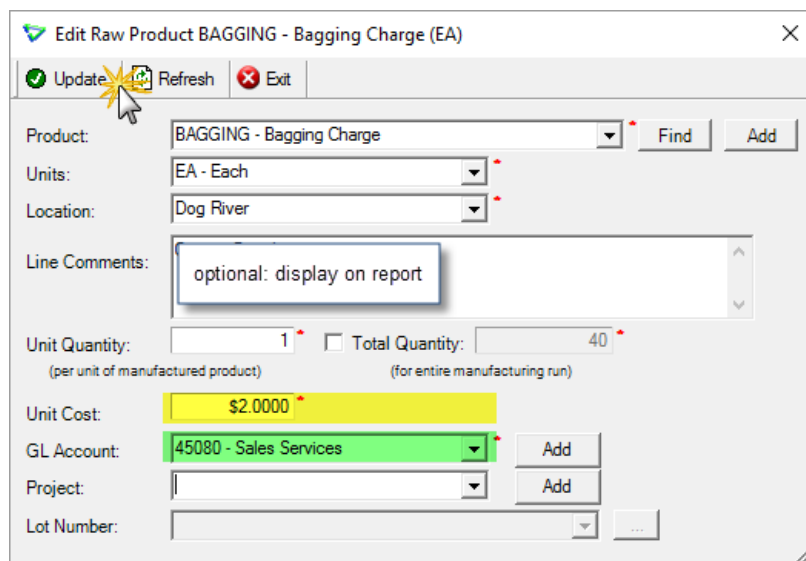
Add products on the fly

If you haven't setup a recipe in advance, or if the raw products change each time so a static recipe isn't practical, you can add products on the fly with the **Add Raw Product** button.



Specifying the Cost of Non-Inventory Products

Because the **bagging fee is a non-inventory product**, there is no cost associated with it by default. Select and **Edit** the bagging fee product row, and declare the cost (either cost/bag, or cost/40 bags). If you need to change the GL or the raw product location from the defaults, you can do that here too. When you are satisfied that your edits are complete, click **Update**.



Save to Manufacture the Product

When you've got all your raw products added in the correct amounts, **Save** the Manufactured Product.

Reference: * ☒ Generate Reference Automatically Date: Dec 16, 2013

Product: LAWN - Lawn Fertilizer 25 kg bag * Find Add Location: Edmonton

Units: BAG - Bag * Comments:

Quantity: 40 * of manufactured product Lot Number: <Auto-Generate Number> ...

Retrieve Default Raw Products

Raw Products:

Product	Location	Quantity Per Unit	Total Used Quantity	Inventory On Hand	GL Account	Lot Number	Unit Cost
4600 - 46-0-0 (MT)	Edmonton	0.0083333333	0.3333	3,988.488			
1152 - 11-52-0 (MT)	Edmonton	0.0083333333	0.3333	27.7899			
0060 - 0-0-60 (MT)	Edmonton	0.0083333333	0.3333	81.2568			
BAG25KG - 25 KG Bag (EA)	Edmonton	1.0000	40.0000	9.0			
> BAGGING - Bagging Charge (EA)	Edmonton	1.0000	40.0000		45075 - Sales Service		\$2.00

Add Raw Product Edit Raw Product Remove Raw Product Remove Multiple

You've just manufactured 40 bags of Lawn Fertilizer!

Preview the Manufacturing Document and print if you need a copy.

agré **Manufacturing Document**

Reference: MFE0002
Date: Apr 09, 2013
Location: Edmonton

Product: Lawn Fertilizer 25 kg bag (LAWN)

Quantity: 40 Units: Bag Unit Cost: \$15.943

46-0-0 (4600) 0.3333 Metric Tonne \$526.3157
11-52-0 (1152) 0.3333 Metric Tonne \$450.00
0-0-60 (0060) 0.3333 Metric Tonne \$565.00
25 KG Bag (BAG25KG) 40 Each \$1.10
Bagging Charge (BAGGING) 40 Each \$2.00

Optional: Confirm the Inventory Counts

You can confirm by checking the inventory levels of the raw products – the quantity should be less.

TSL Ag Services Ltd.

Inventory Activity Detail

Location is Edmonton and Individual Products Selected between Nov 16, 2010 and Nov 16, 2010

0-0-60 Bulk (0060) - metric tonne

Date	Transaction Type	Description	Ref #	In/Out
Nov 16, 2010	Manufacturing		MF10010	-0.3333
Totals	Manufacturing			-0.3333
	Net Change			-0.3333

11-52-0 Bulk (1152) - metric tonne

Date	Transaction Type	Description	Ref #	In/Out
Nov 16, 2010	Manufacturing		MF10010	-0.3333
Totals	Manufacturing			-0.3333
	Net Change			-0.3333

46-0-0 Bulk (46) - metric tonne

Date	Transaction Type	Description	Ref #	In/Out
Nov 16, 2010	Manufacturing		MF10010	-0.3333

Inventory > Reports > Inventory Activity Detail

And the quantity of the manufactured product should be more.



TSL Ag Services Ltd.

Inventory Activity Detail

Location is Edmonton and Product Name is LAWN - Lawn Fertilizer 25 kg bag between Nov 16, 2010 and Nov 16, 2010

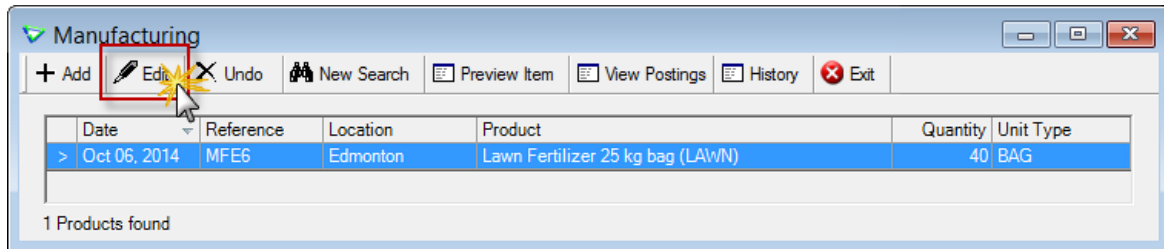
Lawn Fertilizer 25 kg bag (LAWN) - bag

Date	Transaction Type	Description	Ref #	In/Out
Nov 16, 2010	Manufacturing		MF10010	40.0
Totals	Manufacturing			40.0
	Net Change			40.0

Inventory > Reports > Inventory Activity Detail

Edit Manufacturing

If an update or correction is required, no worries! You can edit the manufacturing and make changes. Select the manufactured product and click **Edit**. Save your changes when you're done.

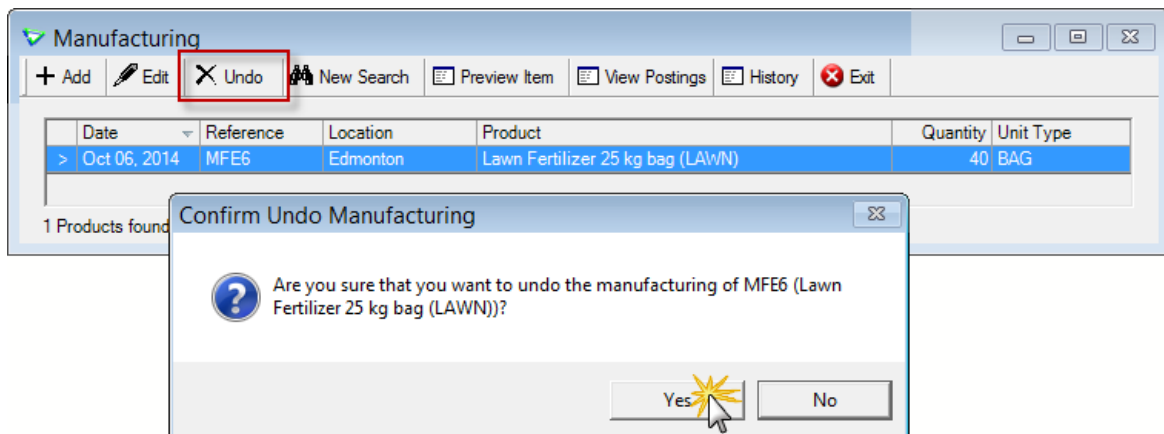


Note Manufacturing can be edited or undone as long as the manufacture date is in an open accounting period and it has not been cost-adjusted.

Edit is shortcut to “reverse and repost” and **Undo** is a “reverse” so both editing and undoing may affect FIFO (it would depend on what type of activity had already occurred with the raw products before the Edit or the Undo). Use the [Cost Reallocation](#) tool to shuffle costs after the fact if you need to.

Undo Manufacturing

You can also undo the manufacturing. Select the manufactured product and click **Undo**. Click **Yes** when prompted.



Cost Adjust Manufacturing

Manufactured items can be cost adjusted just like any other product.

Add Purchase Invoice

Supplier: Internal Supplier (S0023) Find Add

Invoice Date: Dec 11, 2017 Reference Number: PI-171211-01

Due Date: Jan 11, 2018 Location: Dog River

Comments: manufacturing cost adjustment

Non-Inventory Purchases | Inventory Purchases | **Cost Adjustments** | Taxes and Credits

Totals

Total Non-Inventory:	\$0.00
Total Inventory:	\$0.00
Total Cost Adjustments:	\$0.00
Total Taxes:	\$0.00
Total Purchase Invoice:	\$0.00

Find Product Cost History

Use Selected Rows Start Over Exit

Product: LAWN - Lawn Fertilizer 25 kg bag Find

Adjustment Units: BG - Bag

Cost Adjustment / Unit: \$1.25

Quantity (in Adj Units): 40 Reset

Cost Adjustment Total: \$50.00 ☐ GST Applies ☐ GST Included

Apply Cost Adjustment to Inventory Activity

Activity Type: Manufacturing

Supplier: All Types

Date Between: Dec 11, 2017

Refresh List

Activity Type	Date	Reference	Location	Current Cost	Quantity
> ☒ Manufacturing	Dec 11, 2017	DMAN30	Dog River	\$32.5702	40.0000

1 Inv. Activity found View Details Select All Deselect All Total Selected: 40.0000

Manufacturing can be cost adjusted

Manufacturing Reports

There are two Inventory reports designed specifically for manufacturing. The **Manufacturing Instructions** report prints out the “recipe” of raw products needed to make 1 unit of manufactured product.



Manufacturing Instructions

Product	Quantity	Units
Lawn Fertilizer 25 kg bag (LAWN)	1	bag
0-0-60 Bulk (0060)	0.0083	metric tonne
11-52-0 Bulk (1152)	0.0083	metric tonne
46-0-0 Bulk (46)	0.0083	metric tonne
Bagging Fee (BFEE)	1	each
Bags for bulk product (BAG)	1	each

[Inventory > Reports > Manufacturing Instructions](#)

The **Manufacturing Document** allows you to reprint the details for products that you’ve already made.

[Inventory > Reports > Manufacturing Document](#)