

COST HISTORY

I want to know how cost history works in agrē, and I want to understand why it is so important to enter transactions in a timely manner and in the order in which they occurred.

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What is Cost History?

Your locations can obtain inventory products a number of ways: inventory receipts, inventory adjustments, location transfers, customer returns, or promotional items from a supplier. **Every unit of inventory product** that is received, no matter how it arrived, needs a cost (even if it's \$0) so that agrē can calculate things like the cost of goods sold (which affects your margins and your profits) and the current value of inventory in stock.

Cost History keeps track of how many units you have on hand, how much each unit cost, and when each shipment arrived.

Inventory Cost History						All Details Jul 01, 2010	
46-0-0 Nitrogen Fertilizer (46-0-0) - tonnes							
Last Cost	Date	Estimated Cost	Update Last Cost	Remaining	Average Cost		
\$460.00	Nov 10, 2010	\$460.00	<input checked="" type="checkbox"/>	427.047	\$420.4528		
Date	Reference	Quantity	Remaining	Base Cost	Adjusted Cost		
Nov 10, 2010	1244558	44.64	44.64	\$450.00	\$460.00		
Nov 08, 2010	477752	44.98	44.98	\$450.4669	\$460.4669		
Nov 05, 2010	477524	44.75	44.75	\$460.00	\$470.00		
Oct 21, 2010	143440	44.05	44.05	\$450.00	\$460.00		
Oct 20, 2010	474964	44.43	44.43	\$450.00	\$460.00		
Sep 23, 2010	418494	43.46	43.46	\$350.00	\$374.9942		
Aug 31, 2010	418092	43.96	43.96	\$350.00	\$375.00		
Aug 26, 2010	418091	43.58	43.58	\$350.00	\$375.00		
Aug 25, 2010	417914	43.52	43.52	\$350.00	\$375.00		
Aug 25, 2010	417913	42.95	29.677	\$350.00	\$375.00		
Aug 25, 2010	417912	43.26	0.00	\$350.00	\$375.00		
Aug 24, 2010	417911	44.16	0.00	\$350.00	\$375.00		

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Costing Models

FIFO agrē's default costing model is based on FIFO, which stands for **First In, First Out**. FIFO means that the first units to come in (the oldest units) are the first units to go out when product is sold, transferred, returned to a supplier, or written off.

Average agrē can instead use an average cost by summing the cost of all units received at a location, dividing that value by the total number of units received, then assigning that value as the unit cost for all units. This method can be used for one, multiple, or all products.

Cost History in a Perfect World

In a perfect world, all inventory receipts get entered in chronological order *before* any product leaves the building, and the product is never sold into the negatives. The product comes in and goes out according to FIFO and everything looks as you'd expect.

Inventory Cost History

Edmonton All Details May 01, 2010

Power Pulse 25 kg (POWER) - bag

Last Cost	Date	Estimated Cost	Update Last Cost	Remaining	Average Cost
\$107.75	May 13, 2010	\$107.75	<input checked="" type="checkbox"/>	6.00	\$107.2917

Date	Reference	Quantity	Remaining	Base Cost	Adjusted Cost
May 13, 2010	101213-02	5.00	5.00	\$107.75	\$107.75
May 09, 2010	101210-02	5.00	1.00	\$105.00	\$105.00
May 02, 2010	101210-01	10.00	0.00	\$101.00	\$101.00

newest units at the top of the list

oldest units at the bottom of the list

oldest units are sold first

received 10, have 0 left

received 5, have 1 left

received 5, have 5 left

Cost History in the Real World

An important thing to remember is that although agrē draws down from the Inventory Cost History table in FIFO order, agrē can only see what is in the Cost History table *as of right now*. **Cost history never reshuffles itself** after the fact: once a transaction has used up a cost row from cost history, it holds onto it.

Note There is a way to [reshuffle costs manually](#) after the fact, but it's always a best practice to have the "right" cost available to agrē when it needs it.

If you enter your incoming inventory 'out of FIFO order', then as your inventory moves out it may draw down costs in a way that seems to be 'out of FIFO order': the thing is, the costs *were* in order at the time the inventory moved out – but if you've backdated incoming inventory transactions afterwards and those rows get inserted above the point where you've been drawing down inventory, it can be hard to see that that happened.

Cost History Example: Delayed Inventory Receipt

When you backdate an inventory receipt, agrē inserts the units into the cost history table in date order, but it doesn't reshuffle the costs on units that have already left the building.

On Monday

We receive 10 units

Cost History is:	No of Units <u>Received</u>	No of Units <u>Remaining</u>	<u>Cost</u>	<u>Current Value</u>
Monday	10	10	\$100	\$1,000
				<u>\$1,000</u>

On Wednesday

We receive an additional 5 units

Cost History is:	No of Units <u>Received</u>	No of Units <u>Remaining</u>	<u>Cost</u>	<u>Current Value</u>
Wednesday	5	5	\$110	\$550
Monday	10	10	\$100	\$1,000
				<u>\$1,550</u>

On Thursday

We sell 14 units (following FIFO)

Cost History is:	No of Units <u>Received</u>	No of Units <u>Remaining</u>	<u>Cost</u>	<u>Current Value</u>
Wednesday	5	1	\$110	\$110
Monday	10	0	\$100	\$0
				<u>\$110</u>

On Friday

We find an Inventory Receipt from Tuesday that was missed

If we back date it, Cost History is:	No of Units <u>Received</u>	No of Units <u>Remaining</u>	<u>Cost</u>	<u>Current Value</u>
Wednesday	5	1	\$110	\$110
Tuesday	8	8	\$105	\$840
Monday	10	0	\$100	\$0
				<u>\$950</u>

If agrē had known about the Tuesday units, it'd have used 4 of them on Thursday. But it didn't, so it'll use those units next.

If agrē had known about the Tuesday units on Thursday, when 14 units went out, it would have used them. But it didn't know about them until Friday, so it will use those units next because they are now the First In (oldest) ones.

Tip To see inventory transactions ordered by the date they were *entered*, run the ***Inventory Activity Detail report*** and sort by ***Entry Date*** instead of Activity Date.

Inventory Cost Reallocation

Continuing with the above example of a entering a back-dated inventory receipt, **Cost History** does *seem* to indicate that FIFO wasn't followed; but you already know the reason why: inventory was received after product was already loaded out and agrē used the best cost it had at the time.

agrē Tronia Testing Inc.
Inventory Cost History
 Edmonton All Details Dec 31, 2010

Power Pulse 25 kg (POWER) - Bag

Last Cost: \$110.00 **Last Date:** Mar 06, 2013 **Remaining:** 9.00
Estimated Cost: \$110.00 **Update Last Cost:**
Average Cost: \$105.5556

Date	Reference	Quantity	Remaining	Base Cost	Adjusted Cost	Details
Mar 06, 2013	130311-02	5.00	1.00	\$110.00	\$110.00	Details
Mar 05, 2013	130311-03	8.00	8.00	\$105.00	\$105.00	Details
Mar 04, 2013	130311-01	10.00	0.00	\$100.00	\$100.00	Details

FIFO appears broken (with red arrow pointing to the Mar 05, 2013 row)

Now that agrē *does* know about the back-dated units, and so has a 'better' cost than it had at the time the product was loaded out, you can return to a perfect world by using the **Cost Reallocation** tool to reshuffle the costs and use them in FIFO order.

Cost Reallocation Tool

The first 10 units did go out at the right cost so *uncheck* that row (since there is no need to change those costs you'll leave them as-is). It's just the 4 units with the wrong cost that need updated.

Inventory Cost Reallocation

Save Start Over Refresh Exit

1.) Choose Criteria

Product: Power Pulse 25 kg - POWER Find

Inv. Activity Date: Mar 01, 2013 to Mar 11, 2013 Outgoing Incoming Retrieve

Location: Edmonton

2.) Choose Inventory Activity

	Date	Type	Reference	Name	Quantity	Unit Cost	
>	<input checked="" type="checkbox"/>	Mar 07, 2013	AR Invoice	INV00052	Carter, Alexander	-14	\$102.8572

View Details Select All Deselect All

Cost Rows

	Cost Date	Reference	Name	Quantity	Unit Cost	
>	<input type="checkbox"/>	Mar 04, 2013	130311-01	Parkland Ag Supply	10	\$100.00
	<input checked="" type="checkbox"/>	Mar 06, 2013	130311-02	Parkland Ag Supply	4	\$110.00

Next

Inventory > Manage > Costing

Select **Recost inventory according to FIFO**. agrē will “give back” the \$110 units, and “replace” them with \$105 units (as those are the oldest units and the first to go).

The unit costs are reallocated according to FIFO and **Cost History** is updated.



Tronia Testing Inc.

Inventory Cost History

Edmonton All Details Dec 31, 2010

Power Pulse 25 kg (POWER) - Bag

Last Cost: \$110.00 Last Date: Mar 06, 2013 Remaining: 9.00
 Estimated Cost: \$110.00 Update Last Cost:
 Average Cost: \$107.7778

Date	Reference	Quantity	Remaining	Base Cost	Adjusted Cost	Details
Mar 06, 2013	130311-02	5.00	5.00	\$110.00	\$110.00	Details
Mar 05, 2013	130311-03	8.00	4.00	\$105.00	\$105.00	Details
Mar 04, 2013	130311-01	10.00	0.00	\$100.00	\$100.00	Details

The COGS posting for the sale will be reversed and reposted to reflect the updated cost/unit (which will also affect the current value of remaining inventory).

Journal: J416	Posted	Mar 07, 2013	AR Invoice: -14 Bag Power Pulse 25 kg (POWER)		
Source: INV00052	Entered	Mar 11, 2013			
Account		DR	CR	Description	new FIFO cost posted
COGS Chemicals (55015)		1,420.00		Dog River	
Chemicals (15015)			1,420.00		
Journal: J415	Posted	Mar 07, 2013	(REV) AR Invoice: -14 Bag Power Pulse 25 kg (POWER)		
Source: INV00052	Entered	Mar 11, 2013			
Account		DR	CR	Description	old 'entered out of order' cost reversed
Chemicals (15015)		1,440.00			
COGS Chemicals (55015)			1,440.00	Dog River	

Cost History Example: Split Billing

Split billing can give you more accurate costing without having to reallocate like you might need to do with a 'customer return that didn't really get returned'.

Tip

The *Split Billing* white paper provides more examples and more detail.

You received two shipments of seed at different costs. The inventory receipts were entered in chronological order.



Tronia Testing Inc.

Inventory Cost History

Dog River Active Details Dec 31, 2010

5440 LL w/Prosper (22.7kg) (5440.BA) - Bag

Last Cost: \$200.00 Last Date: May 01, 2015 Remaining: 10.00
 Estimated Cost: \$200.00 Update Last Cost:
 Average Cost: \$195.00

Date	Reference	Quantity	Remaining	Base Cost	Adjusted Cost	Details
May 01, 2015	150824-02	5.00	5.00	\$200.00	\$200.00	Details
Apr 01, 2015	150824-01	5.00	5.00	\$190.00	\$190.00	Details

Product was sold throughout the spring.



Tronia Testing Inc.

Inventory Activity Detail

Location is Dog River and Product Name is 5440.BA - 5440 LL w/Prosper (22.7kg) between Apr 01, 2015 and Aug 24, 2015

5440 LL w/Prosper (22.7kg) (5440.BA) - Bag

Date	Type	Description	Ship To	Ref #	Release #	In/Out	Balance
Apr 01, 2015	Opening Balance						0.0
Apr 01, 2015	Inventory Receipt	Parkland Ag Supply		150824-01		5.0	5.0
Apr 18, 2015	Loadout Ticket	Carter, Alexander	Billing	LOT165		-3.0	2.0
May 01, 2015	Inventory Receipt	Parkland Ag Supply		150824-02		5.0	7.0
May 03, 2015	Loadout Ticket	Baker, Mike	Billing	LOT166		-3.0	4.0
May 12, 2015	Loadout Ticket	Therrien, Raymond	Billing	LOT167		-2.0	2.0
Totals	Inventory Receipt					10.0	
	Loadout Ticket					-8.0	
	Net Change					2.0	

In May, Alexander Carter let you know that 2 of the 3 bags he picked up in April were really for his brother-in-law Terry Davison. The loadout ticket hasn't been billed yet, so you split it. Again,

the Activity Report makes it *look* like Alex and Terry got the same units – but you already know that doesn't necessarily mean they did.



Tronia Testing Inc.

Inventory Activity Detail

Location is Dog River and Product Name is 5440.BA - 5440 LL w/Prosper (22.7kg) between Apr 01, 2015 and Aug 24, 2015

5440 LL w/Prosper (22.7kg) (5440.BA) - Bag

Date	Type	Description	Ship To	Ref #	Release #	In/Out	Balance
Apr 01, 2015	Opening Balance						0.0
Apr 01, 2015	Inventory Receipt	Parkland Ag Supply		150824-01		5.0	5.0
Apr 18, 2015	Loadout Ticket	Carter, Alexander	Billing	LOT165		-1.0	4.0
Apr 18, 2015	Loadout Ticket	Davison, Terry	Billing	LOT168		-2.0	2.0
May 01, 2015	Inventory Receipt	Parkland Ag Supply		150824-02		5.0	7.0
May 03, 2015	Loadout Ticket	Baker, Mike	Billing	LOT166		-3.0	4.0
May 12, 2015	Loadout Ticket	Therrien, Raymond	Billing	LOT167		-2.0	2.0
Totals	Inventory Receipt					10.0	
	Loadout Ticket					-8.0	
	Net Change					2.0	

The Inventory Transaction Details report will confirm all units (including the split-off ones) have the same cost as the original transaction.



Tronia Testing Inc.

Inventory Transaction Details

Transaction Date: Apr 01, 2015
 Transaction Type: Inventory Receipt
 Reference Number: 150824-01
 Product: 5440.BA - 5440 LL w/Prosper (22.7kg)
 Quantity: 5.00 Bag
 Main Units: 5.00 Bag

Location: Dog River

Original Unit Cost: \$190.00

Adjusted Unit Cost: \$190.00

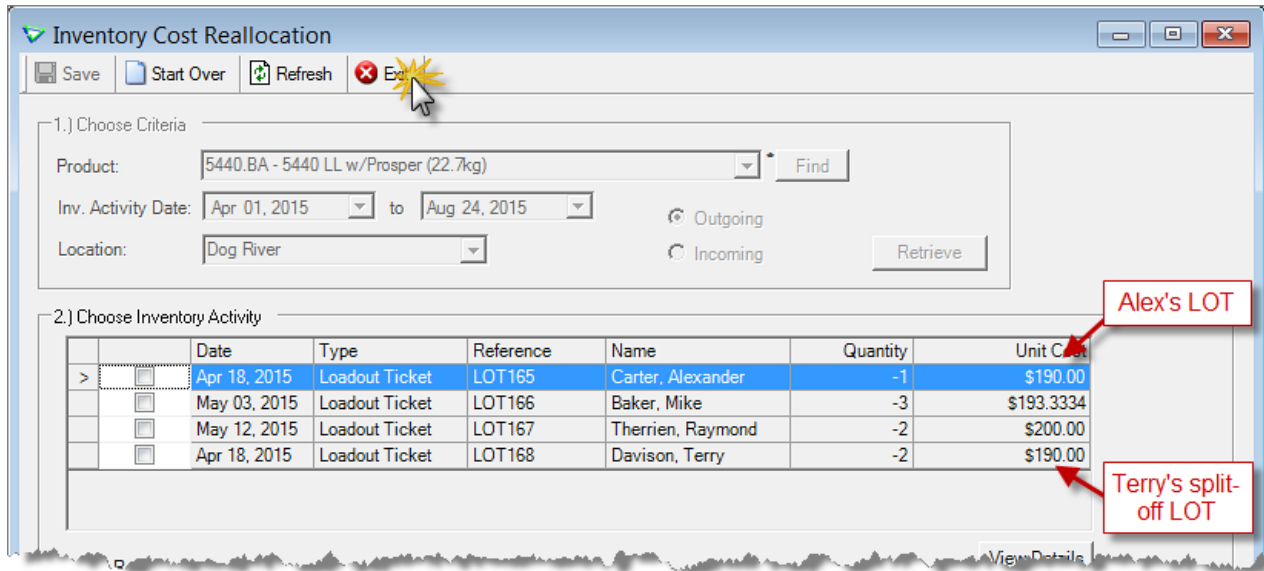
Transactions Drawing Unit Costs from this Transaction

Date	Reference	Quantity Drawn
Apr 18, 2015	LOT165 Alex's LOT	1 Bag
Apr 18, 2015	LOT168 Terry's split-off LOT	2 Bag
May 03, 2015	LOT166	2 Bag
Quantity Remaining:		0 Bag

All GL Postings from this Transaction

Date	Journal No	Account	Debit Amount	Credit Amount	Rev
Apr01, 2015	J1325	Seed	\$950.00		<input type="checkbox"/>
Apr01, 2015	J1325	Seed Accruals		\$950.00	<input type="checkbox"/>

You could also confirm using Cost Reallocation which shows at a glance which units have which cost.



Cost History Example: Customer Returns

Tip: If a customer **isn't really returning** product (i.e. no product is physically coming back into inventory), consider **other options** – like split billing - before you process a return.

If the product went out on a loadout ticket and it hasn't been billed yet, the best option would be to **edit the loadout ticket** to fix whatever is incorrect or **split** it. If already billed, edit or **split the invoice**.

If editing the original isn't possible, you may want to delete the original and create a new loadout ticket (or invoice) instead of processing a return. Keep in mind that agrē will make its **best guess** at the cost of returned product, and you may want to **change it**.

Manual Returns

You received three shipments of seed all at different costs. The inventory receipts were entered in chronological order.

Inventory Cost History

Edmonton All Details Sep 01, 2010

Crescendo Canola (CRESCAN) - bag

Last Cost	Date	Estimated Cost	Update Last Cost	Remaining	Average Cost
\$110.00	Nov 01, 2010	\$110.00	<input checked="" type="checkbox"/>	6.00	\$109.1667

Date	Reference	Quantity	Remaining	Base Cost	Adjusted Cost
Nov 01, 2010	101216-03	5.00	5.00	\$110.00	\$110.00
Oct 01, 2010	101216-02	5.00	1.00	\$105.00	\$105.00
Sep 01, 2010	101216-01	10.00	0.00	\$100.00	\$100.00

Product was sold throughout September and October.

Inventory Activity Detail

Location is Edmonton and Product Name is CRESCAN - Crescendo Canola between Sep 01, 2010 and Dec 22, 2010

Crescendo Canola (CRESCAN) - bag

Date	Transaction Type	Description	Ref #	In/Out	Balance
Sep 01, 2010	Opening Balance				0.0
Sep 01, 2010	Inventory Receipt	Parkland Super Seeds	101216-01	10.0	10.0
Sep 04, 2010	Loadout Ticket	Parkhill, Jason	LOTE263	-6.0	4.0
Oct 01, 2010	Inventory Receipt	Parkland Super Seeds	101216-02	5.0	9.0
Oct 04, 2010	Loadout Ticket	Stone, Leslie	LOTE265	-5.0	4.0
Oct 07, 2010	Loadout Ticket	Martin, Lyle	LOTE264	-3.0	1.0
Nov 01, 2010	Inventory Receipt	Parkland Super Seeds	101216-03	5.0	6.0
Totals	Inventory Receipt			20.0	
	Loadout Ticket			-14.0	
	Net Change			6.0	

In late November, Leslie Slone tells you that the 5 bags that he picked up were really for his brother. You return the units as of October 4 because that was the original date on the loadout ticket. The Activity Report makes it *look* like the units Leslie took out are the same units coming back in, and the same units that were subsequently taken by Wayne.

Inventory Activity Detail

Location is Edmonton and Product Name is CRESCAN - Crescendo Canola between Sep 01, 2010 and Jan 03, 2011

Crescendo Canola (CRESCAN) - bag

Date	Transaction Type	Description	Ref #	In/Out	Balance
Sep 01, 2010	Opening Balance				0.0
Sep 01, 2010	Inventory Receipt	Parkland Super Seeds	101216-01	10.0	10.0
Sep 04, 2010	Loadout Ticket	Parkhill, Jason	LOTE272	-6.0	4.0
Oct 01, 2010	Inventory Receipt	Parkland Super Seeds	101216-02	5.0	9.0
Oct 04, 2010	Loadout Ticket	Slone, Leslie	LOTE273	-5.0	4.0
Oct 04, 2010	Loadout Ticket	Slone, Leslie	LOTE275	5.0	9.0
Oct 04, 2010	Loadout Ticket	Slone, Wayne	LOTE276	-5.0	4.0
Oct 07, 2010	Loadout Ticket	Martin, Lyle	LOTE274	-3.0	1.0
Nov 01, 2010	Inventory Receipt	Parkland Super Seeds	101216-03	5.0	6.0
Totals	Inventory Receipt			20.0	
	Loadout Ticket			-14.0	
	Net Change			6.0	

Note: Remember that agrē doesn't automatically "reshuffle" costs after products have been sold and assigned a cost, even if you backdate.

Actually, with a manual return, agrē doesn't even check if Leslie ever bought that product; it relies on you, the smart human, to decide whether to let him return it or not. What if Leslie had taken 2 bags @ \$100, 2 bags @ \$105, and 1 bag @ \$110; then he returned 1 bag. How would agrē know which bag he returned? They all *look* the same!

When product is returned by a customer, agrē basically creates an Inventory Adjustment for "incoming new units". agrē assigns a cost to those units by making its **best guess**. The cost of the product when it's returned may have changed from when the product was sold (e.g. due to rebates or price volatility), so one of the questions agrē asks to help it decide what cost to assign to the returned units is "around the time period that this product was **returned**, how much did it cost?"

The **Cost History report** shows that agrē assigned a cost of \$105 to *all* of the units that Leslie returned.

Inventory Cost History

Edmonton All Details Sep 01, 2010

Crescendo Canola (CRESCAN) - bag

Last Cost	Date	Estimated Cost	Update Last Cost	Remaining	Average Cost
\$110.00	Nov 01, 2010	\$110.00	<input checked="" type="checkbox"/>	6.00	\$109.1667

Date	Reference	Quantity	Remaining	Base Cost	Adjusted Cost
Nov 01, 2010	101216-03	5.00	5.00	\$110.00	\$110.00
Oct 04, 2010	LOTE275	5.00	1.00	\$105.00	\$105.00
Oct 01, 2010	101216-02	5.00	0.00	\$105.00	\$105.00
Sep 01, 2010	101216-01	10.00	0.00	\$100.00	\$100.00

Inventory from Leslie's LOT return

In this case, agrē's best guess is valid (because in-stock product around that time actually did cost \$105) but it might not be quite what you expected. Because of FIFO, you know that Jason Parkhill took the first 6 units that came in; that would leave 4 @ \$100. Leslie took the next 5 units, so they were costed 4 @ \$100 and only 1 @ \$105.

Inventory Transaction Details

Transaction Date: Oct 04, 2010
 Transaction Type: Loadout Ticket
 Reference Number: LOTE273
 Product Code: CRESCAN
 Product Description: Crescendo Canola

Details from Leslie's original LOT: 5 units taken

Location	Units	Main Units
Edmonton	-5.0000 bag	-5.0000 bag

Unit Costs Applied to this Transaction

Quantity Costed	Unit Cost	Reference	Date
4 bag	\$100.00	101216-01	Sep 01, 2010
1 bag	\$105.00	101216-02	Oct 01, 2010

All GL Postings from this Transaction

Date	Journal No	Account	Debit Amount	Credit Amount	Rev
Oct 04, 2010	J788	Inventory Accruals Seed	\$505.00		<input type="checkbox"/>
Oct 04, 2010	J788	Inventory Seed		\$505.00	<input type="checkbox"/>

Compare those costs to the ones used by Wayne's loadout ticket; they won't necessarily match because you don't get to play with FIFO. The costs are different from the original, but still valid.

Inventory Transaction Details

Transaction Date: Oct 04, 2010
 Transaction Type: Loadout Ticket
 Reference Number: LOTE276
 Product Code: CRESCAN
 Product Description: Crescendo Canola

Details from Wayne's LOT:
5 units taken

Location	Units	Main Units
Edmonton	-5.0000 bag	-5.0000 bag

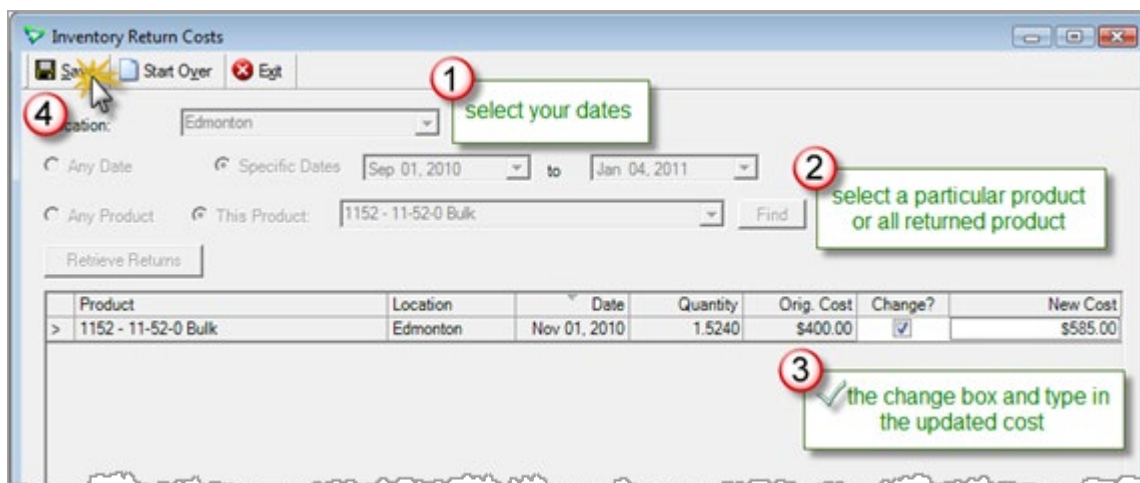
Unit Costs Applied to this Transaction			
Quantity Costed	Unit Cost	Reference	Date
1 bag	\$105.00	101216-02	Oct 01, 2010
4 bag	\$105.00		Oct 04, 2010

All GL Postings from this Transaction					
Date	Journal No	Account	Debit Amount	Credit Amount	Rev
Oct 04, 2010	J791	Inventory Accruals Seed	\$525.00		<input type="checkbox"/>
Oct 04, 2010	J791	Inventory Seed		\$525.00	<input type="checkbox"/>

Managing Return Costs

Sometimes agrē's best guess can be way off course. If you'd received free product around the time of the return agrē may have guessed that the return cost should be \$0, or if the price had changed significantly just after the return agrē may have guessed the old cost instead of the new.

If the actual cost is significantly different from agrē's best guess, your accountant may want you to change it. To change return costs, use the **Inventory Return Cost** tool. Find the return, and change its cost.



Inventory > Manage > Costing

Return Invoice Process

If you want to match the return cost to the original COGS posting instead of letting agrē use its best guess, use the **Return Invoice Process**.

Product was sold to a customer, and a COGS posting was made.

Accounts Receivable > Invoices

Even though costs may have changed since the sale, agrē uses the same cost on the return.

Accounts Receivable > Invoices

Journal: **J54** Posted: Nov 16, 2022
 Source: INV01654 Entered: Nov 16, 2022
 Description: AR Invoice: 5 Case Acapela (2x9.6L) (ACAPELA-1)

Account: Chemicals (15015.1) DR: 500.00 CR Description: 500.00 Edmonton
 COGS Liquid (55025)

return invoice uses same unit cost(s)