

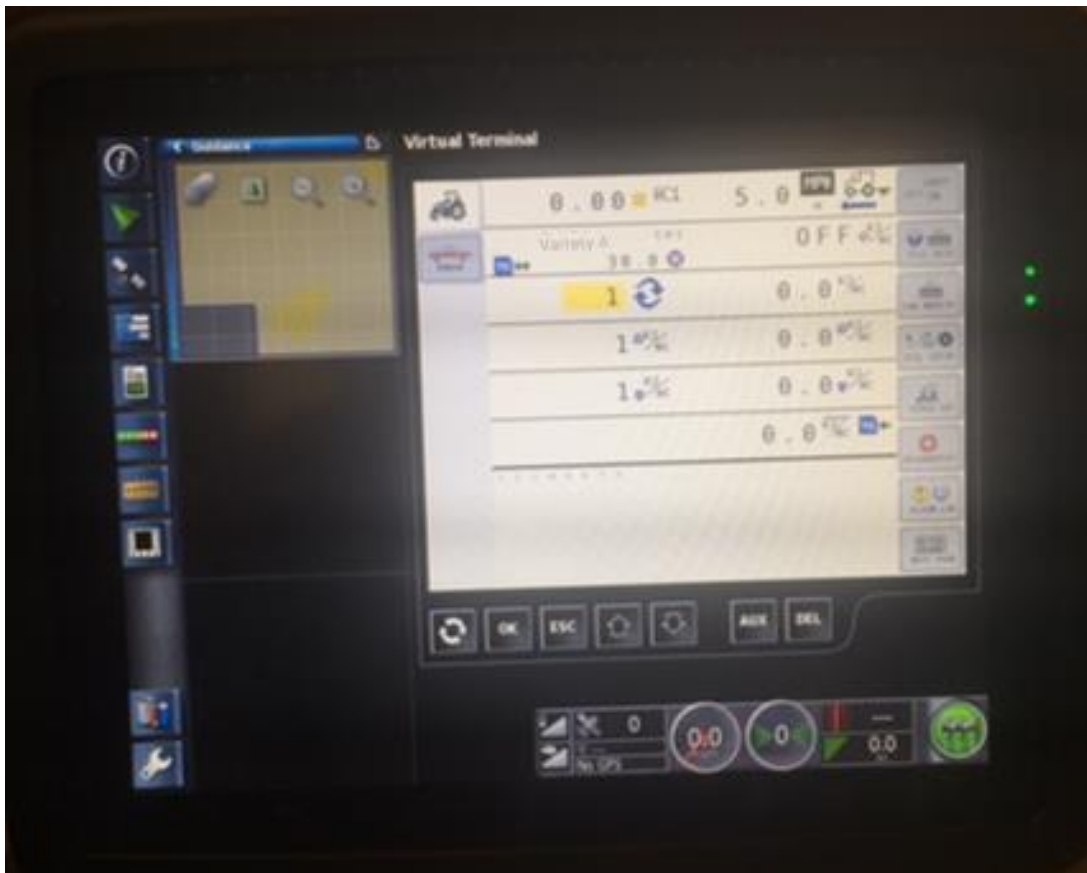
This document is designed to provide basic support for implementing variable rate seeding in common precision ag equipment. It is neither an operating manual nor a set-up guide for the monitor. Rather, it is a general set of principles designed to provide help with trouble shooting while preparing for a VRS operation.

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Updated: 3/29/2016

## *Prescription File Management*



# Prescription File Management

## AGCO C3000

1

To create a VRS prescription file, use an Export tool for a C3000 monitor. This creates a TASKDATA folder that includes a TaskData.xml and a \*.bin file. inside.

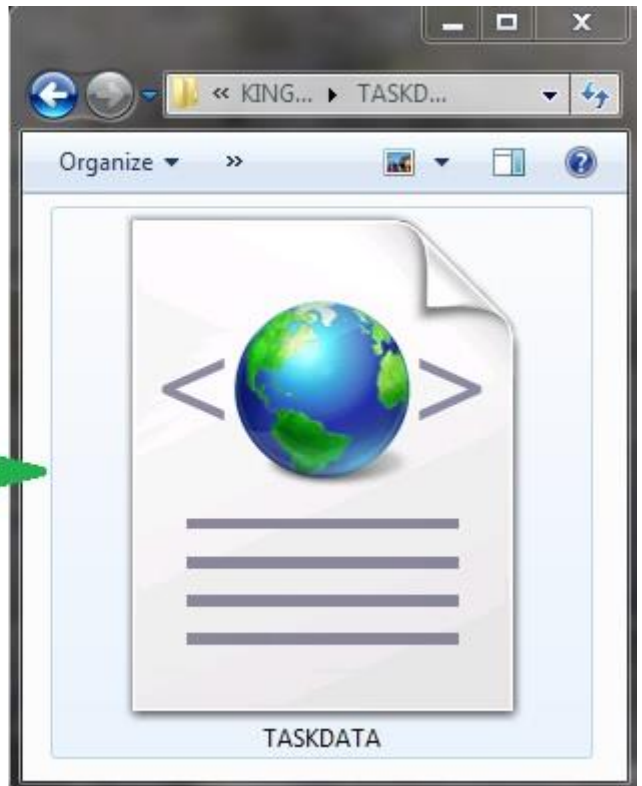
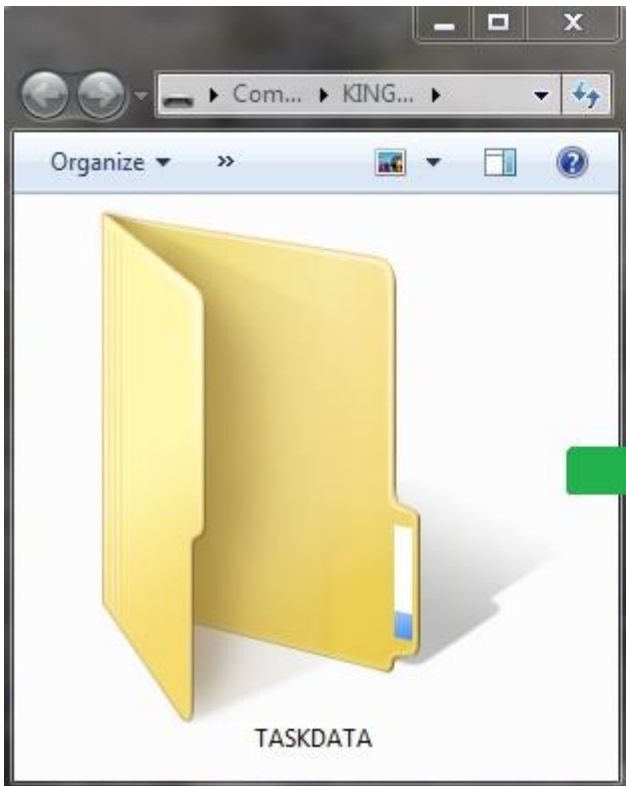
Prescription units must be in **kilo seeds per acre**.

2

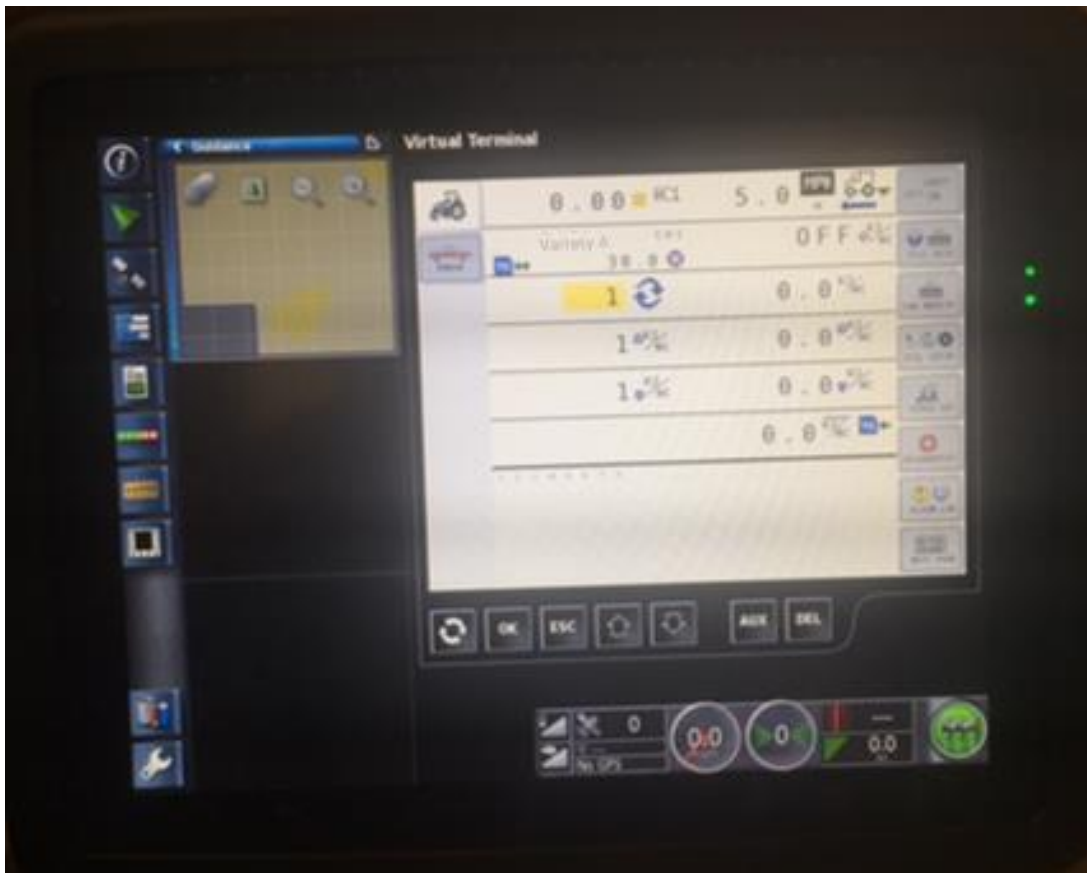
**Tip:** Make sure a boundary is created so the TaskData file fills the boundary of the field you're working in; there is no other way to make sure your grabbing the correct file.

3

On a blank USB thumb drive use Windows Copy/Paste tools, copy the "TASKDATA" folder on to the highest level of the drive (i.e. E:TASKDATA).



## Selecting VRS Prescription Files

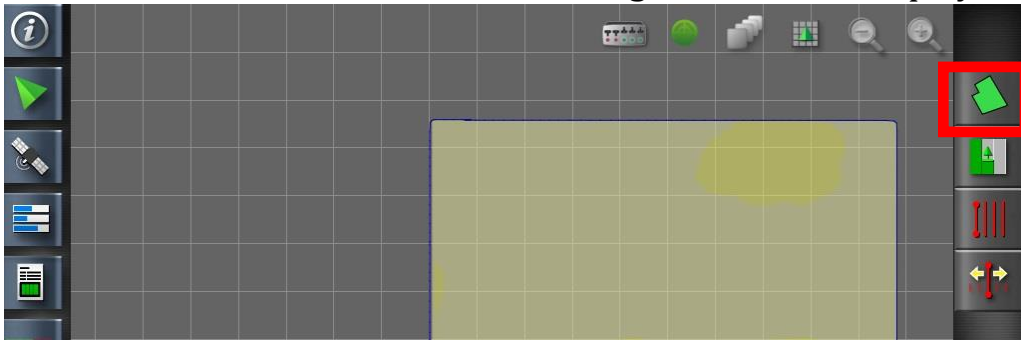


# Selecting VRS Prescription Files AGCO C3000

Once one Prescription has been loaded from the USB drive, the data should be present on the display. Leave the USB with the Farmer just in case.

Make sure the Client, Farm, and Field have been created. Boundary files are only needed if you wish to see the shape of the prescription file. Press on the **Field Menu** icon on the right side of the display.

1



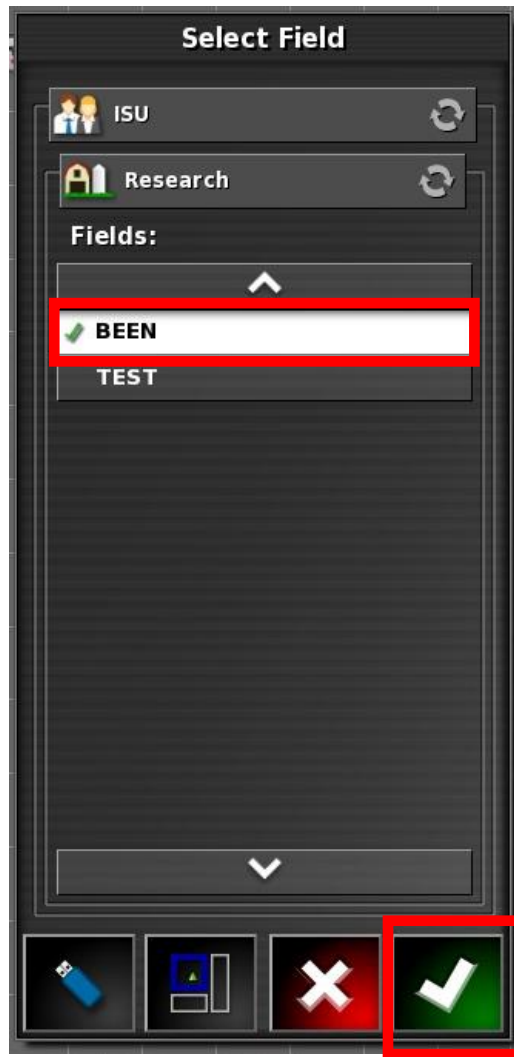
2

Select the field by pressing on the **Select Field** icon in the **Field Menu**.



3

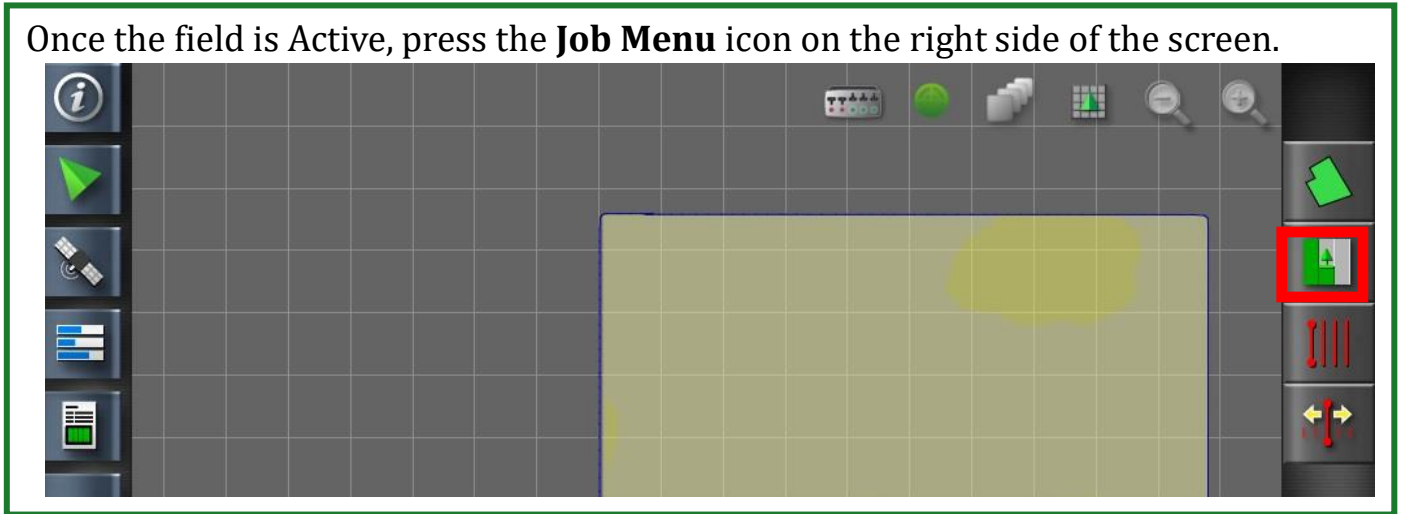
Make the field active by highlighting the field name and pressing the **Checkmark**.



# Selecting VRS Prescription Files AGCO C3000

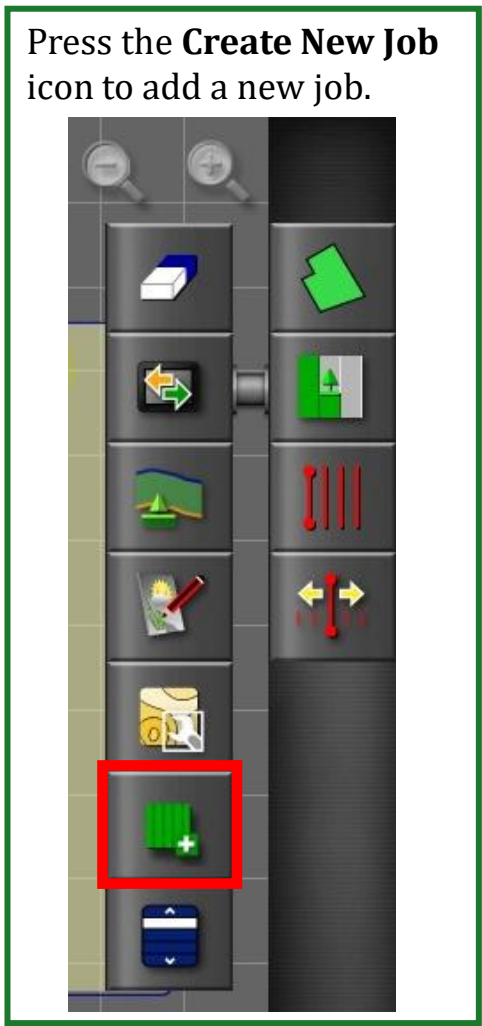
4

Once the field is Active, press the **Job Menu** icon on the right side of the screen.



5

Press the **Create New Job** icon to add a new job.



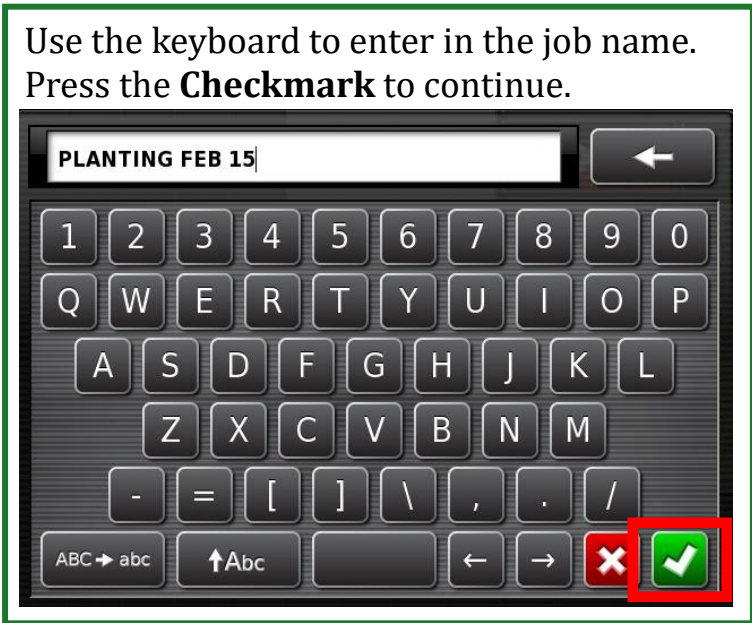
6

Press the **Job Name** to create your own name.



7

Use the keyboard to enter in the job name. Press the **Checkmark** to continue.



# Selecting VRS Prescription Files AGCO C3000

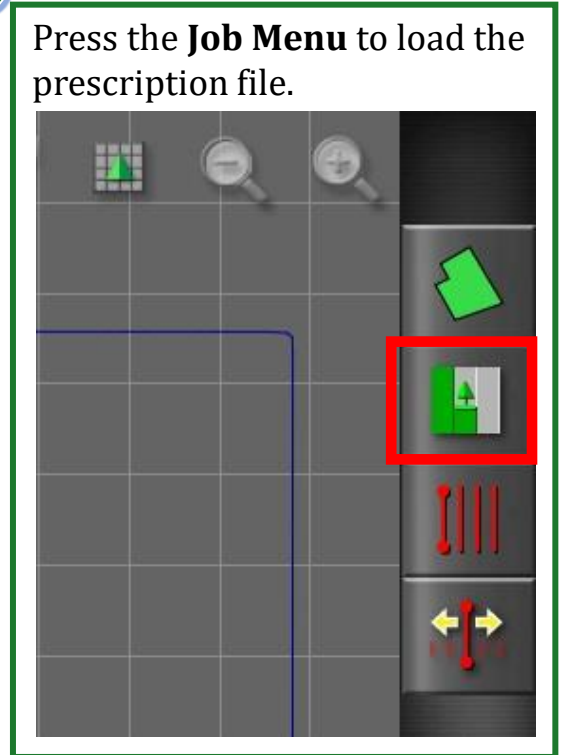
8

Press the **Checkmark** to approve the new job.



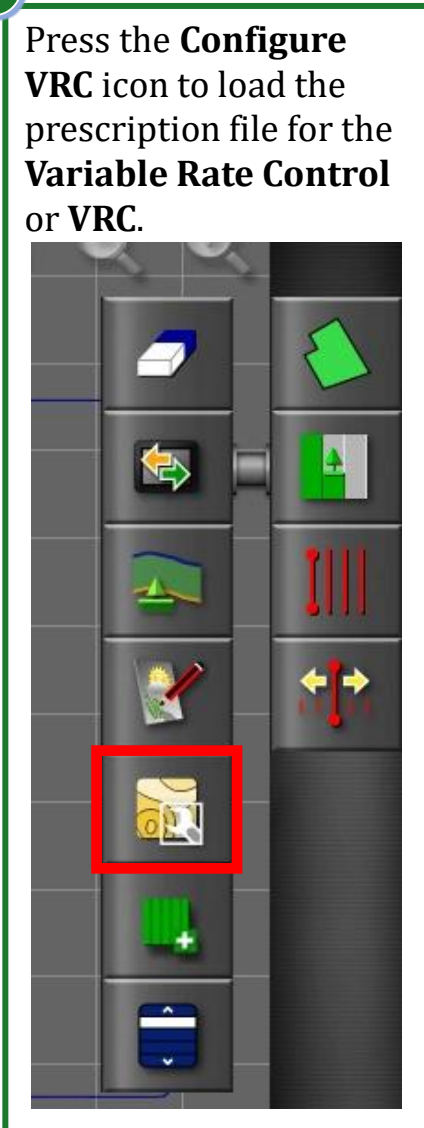
9

Press the **Job Menu** to load the prescription file.



10

Press the **Configure VRC** icon to load the prescription file for the **Variable Rate Control** or **VRC**.



11

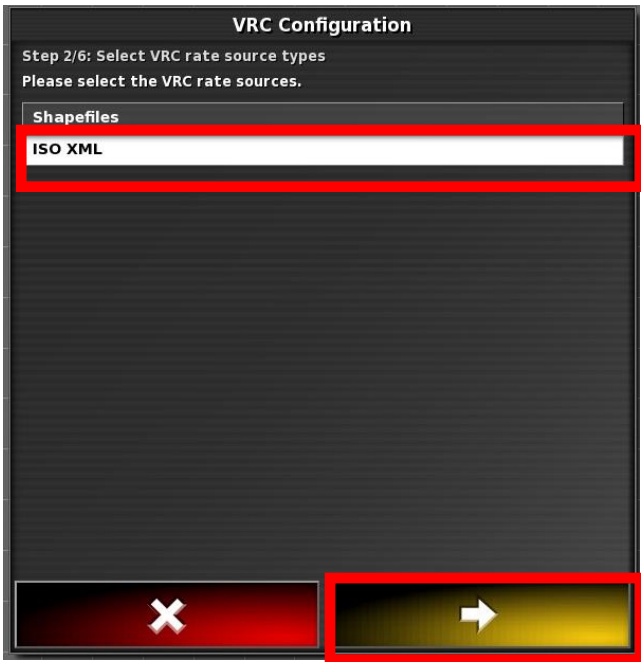
**Step 1/6: New Configuration** states that **VRC maps cannot be changed without changing jobs**. Press the **Right arrow** to continue with the configuration.



# Selecting VRS Prescription Files AGCO C3000

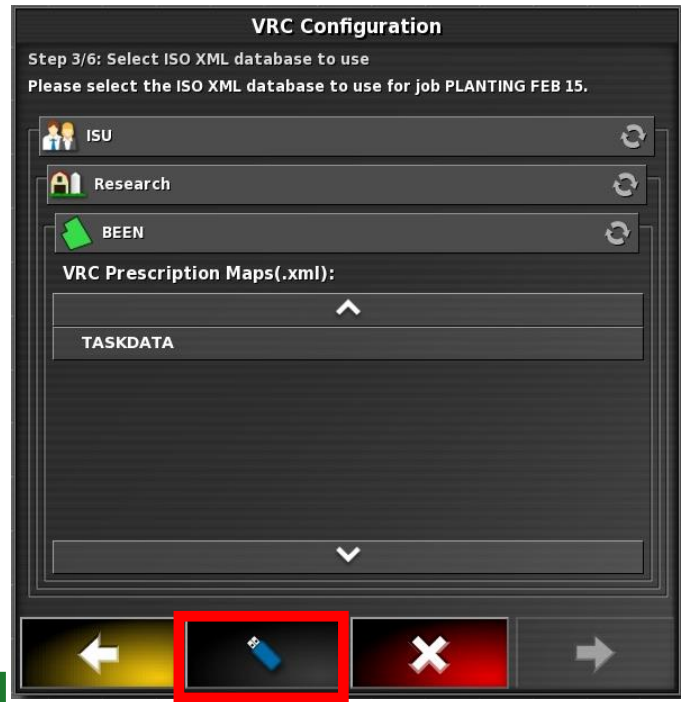
## 12

Press on **ISO XML** to select the file format that is being imported. It is recommended to use the **XML** file structure because the file structure needs to be **kilo-seeds per acre**. Press the **Right Arrow** to continue.



## 13

Step 3/6 Select ISO XML database to use: press on the **USB** drive. **Note: if data has been imported this season, TASKDATA can be selected right away. This will skip to Step 4/6 to select the Task.**



Notice how the page turns blue; this indicates USB usage. Press on the **USB pointing Home** to load Task Data from the USB drive.

## 14

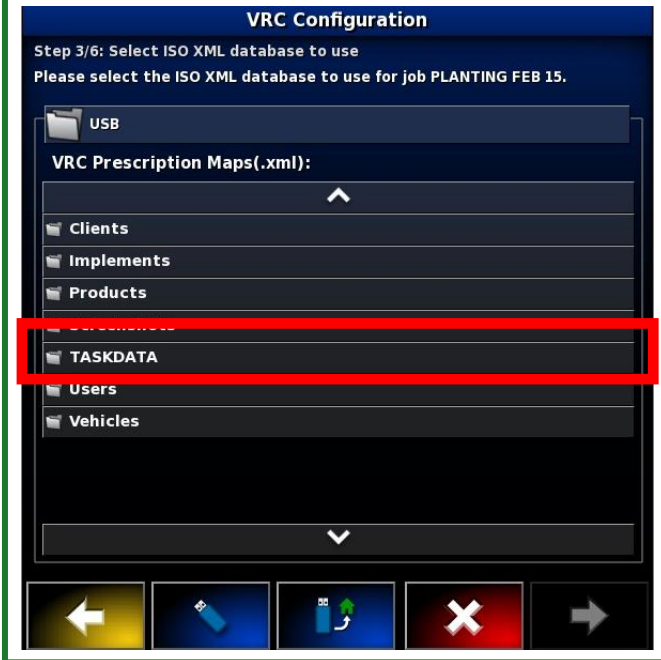




# Selecting VRS Prescription Files AGCO C3000

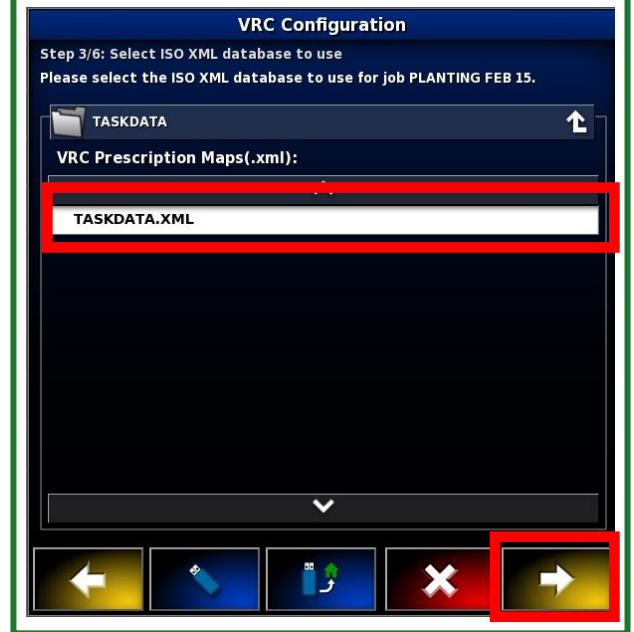
# 15

Press on **TASKDATA** to import the prescription file for the field.



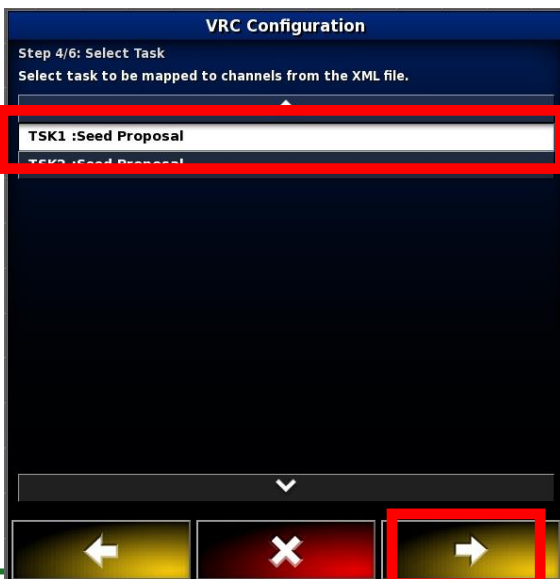
# 16

Highlight the **TASKDATA.XML** file; press the **Right Arrow** to continue.



# 17

Step 4/6: To Select Task: press on **TSK1 :Seed Proposal** prescription file. Make sure to match channel with the correct variety. **Note: if there are multiple task data files in this file you will need to click through them and load each one until you find your field. If the boundary file is saved on the monitor it will clip to the boundary edge. Press the Right Arrow to continue.**

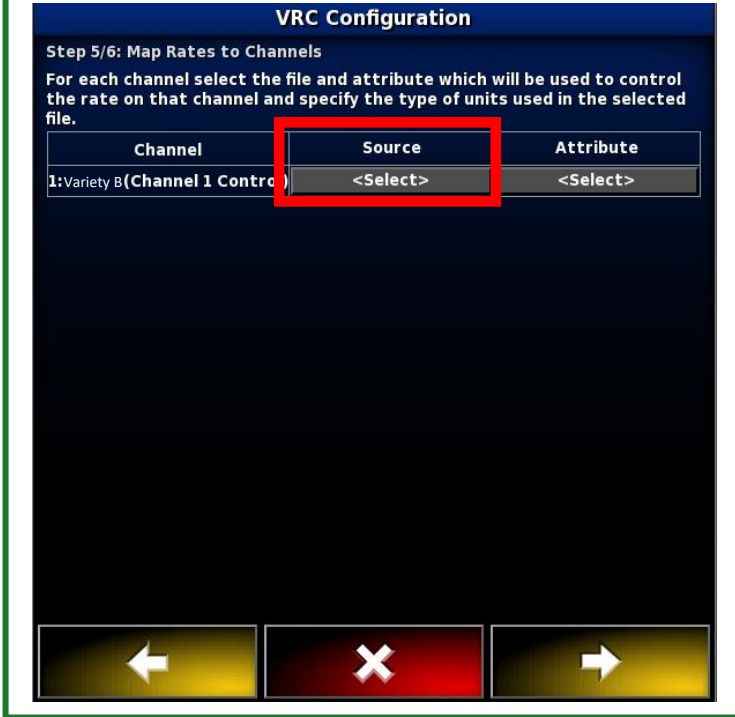


**Tip:** Ask for the PDF Printout. This report may help with sorting through all of the different **TSK: Seed Proposals**.

# Selecting VRS Prescription Files AGCO C3000

# 18

Step 5/6: Map Rates to Channels: press **Select** under **Source** to choose the Task.



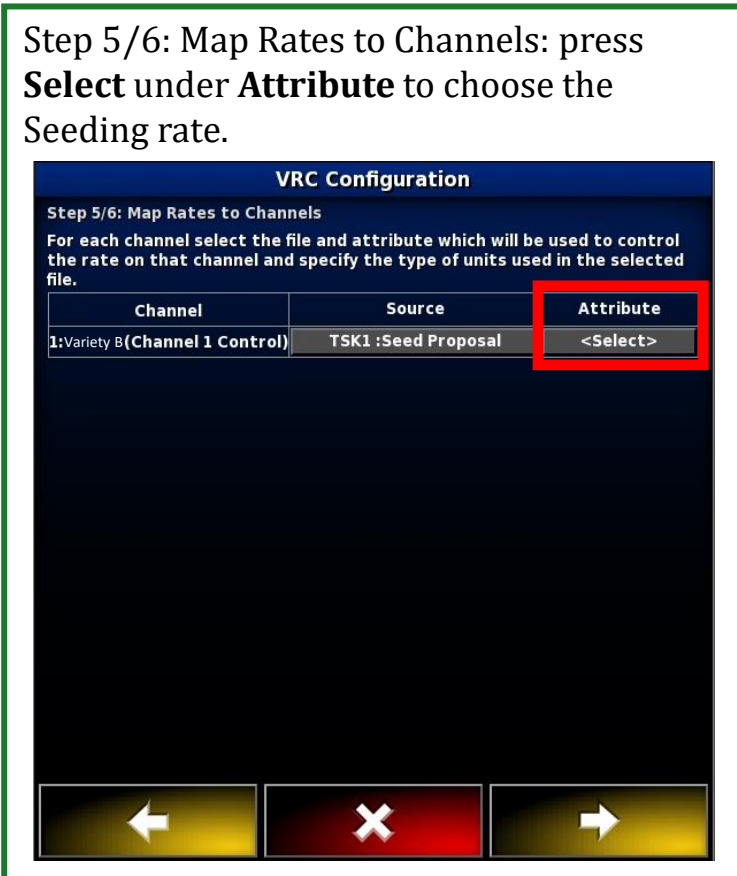
# 19

Press on **TSK1 :Seed Proposal** to highlight and press the **Checkmark** to confirm.



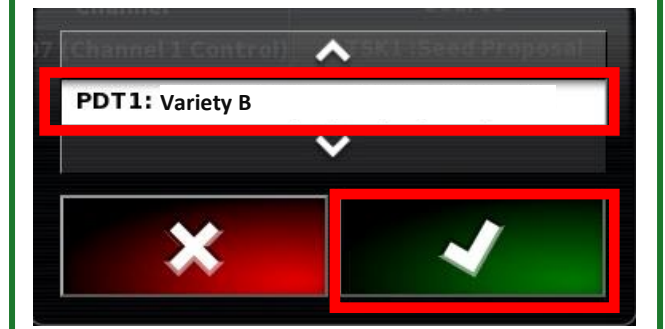
# 20

Step 5/6: Map Rates to Channels: press **Select** under **Attribute** to choose the Seeding rate.



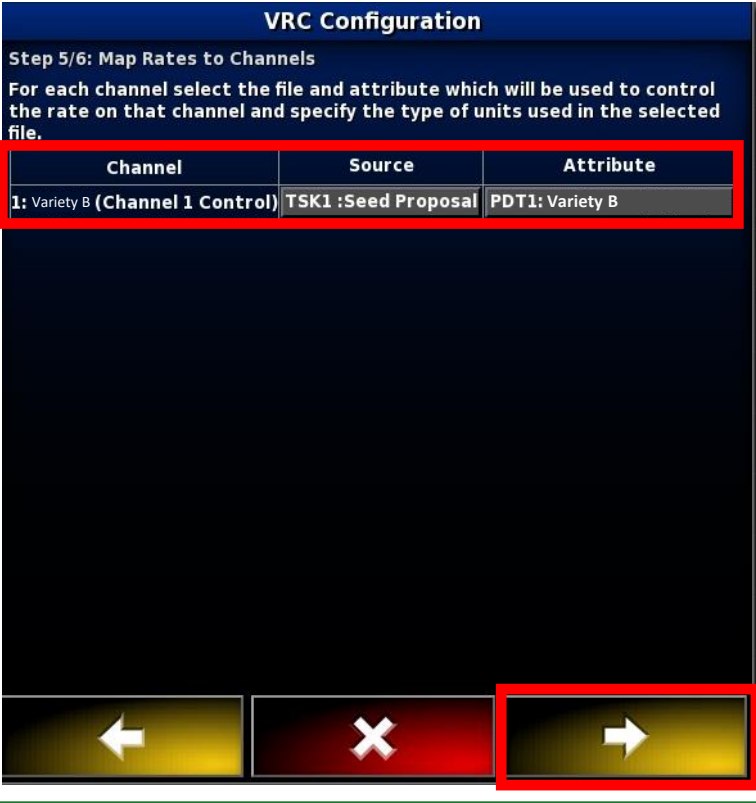
# 21

Press on **PDT1: Variety B** to highlight and press the **Checkmark** to confirm. **Note: make sure the VT product matches this Variety.**



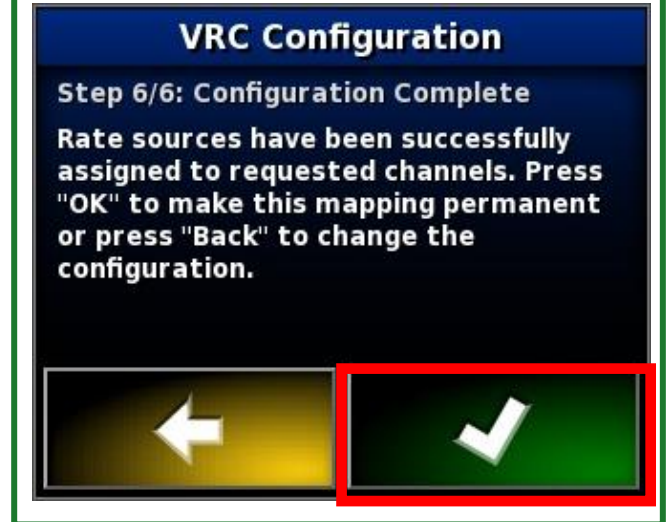
# 22

Verify the **Source** and **Attribute** are correct. Press the **Right Arrow** to continue.



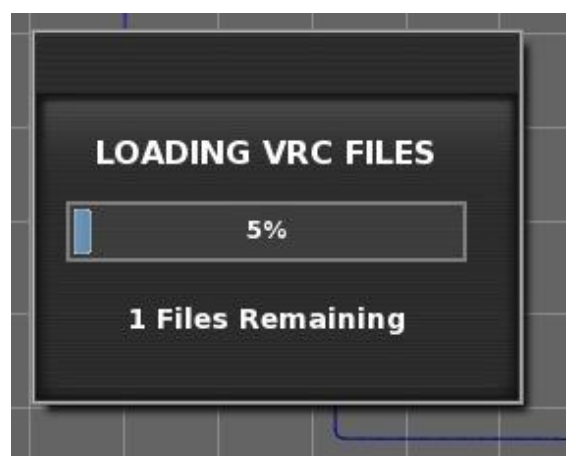
# 23

Step 6/6: Configuration Complete press on the **Check mark** to approve the VRC



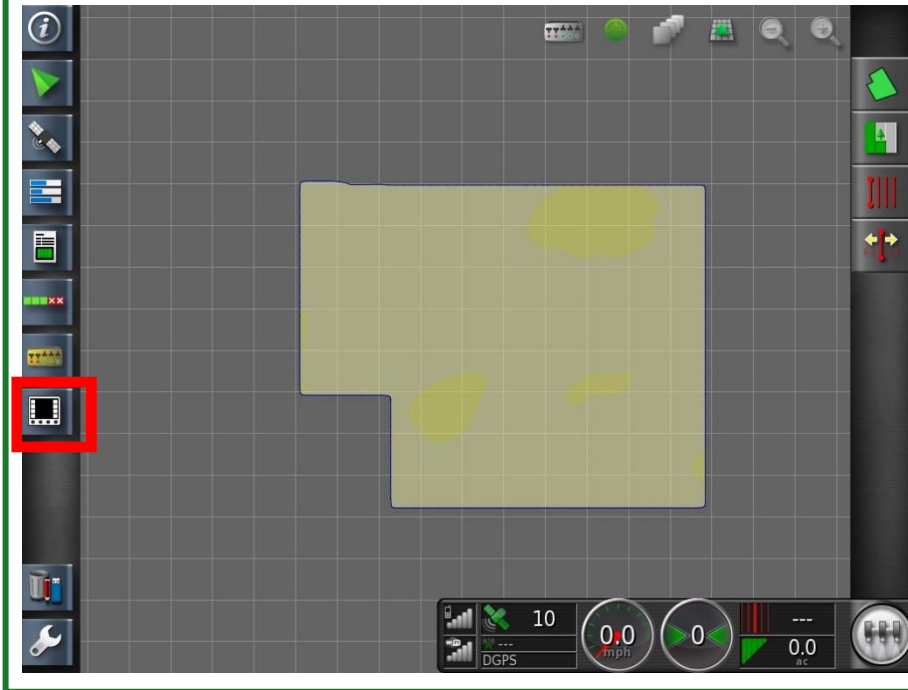
# 24

Wait for loading completion of the **VRC Files**. This process may take a few minutes.



# 25

Once the VRS prescription loads, press on the **VT** to enter the Virtual Terminal to check for errors.



# 26

Press the **Expand window** icon to make the VT larger.



# 27

The error code in the Virtual Terminal states it is no longer using the Task Controller (TC) to plant. To use the prescription file press **TC Rate**.

**Virtual Terminal**

**TASK CONTROLLER TASK STOPPED ALARM**  
607

TC RATE  
MAT RATE

Description

Control rates no longer set by Task Controller

- Press "TC RATE" to keep the last target rate from the Task Controller
- Press "MAT RATE" to use the target rate from the material setup

CHANNEL#	TC RATE	MAT RATE
1	32.00	35.00 $\frac{KS}{AC}$

OK ESC [Up] [Down] AUX

# 28

Verify that **CH1** Shows the **TC SD** card. This shows that the planter is planting the prescription.

**Virtual Terminal**

0.00 AC1 5.0 MPH M CH 1 P0339AM

Variety B CH 1 0FF  $\frac{KS}{AC}$  P0339AM CH 1

TC ← 32.0  $\frac{KS}{AC}$  P0339AM CH 1 ON

1  $\frac{KS}{AC}$  0.0  $\frac{KS}{AC}$  FILL DISK

1  $\frac{KS}{AC}$  0.0  $\frac{KS}{AC}$  ROW MONITR

1  $\frac{KS}{AC}$  0.0  $\frac{KS}{AC}$  CTRL SETUP

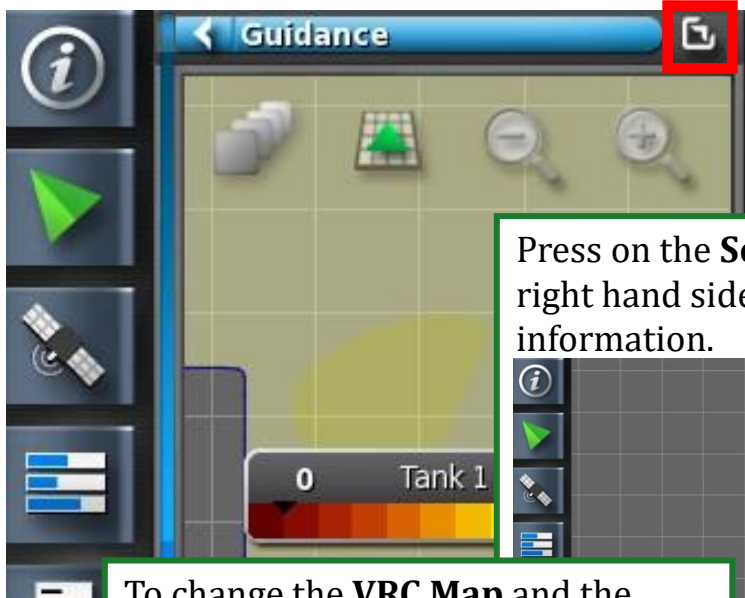
0.0  $\frac{KS}{AC}$  TC ← SPEED SET

1 2 3 4 5 6 7 8 NEXT PAGE

OK ESC [Up] [Down] AUX DEL

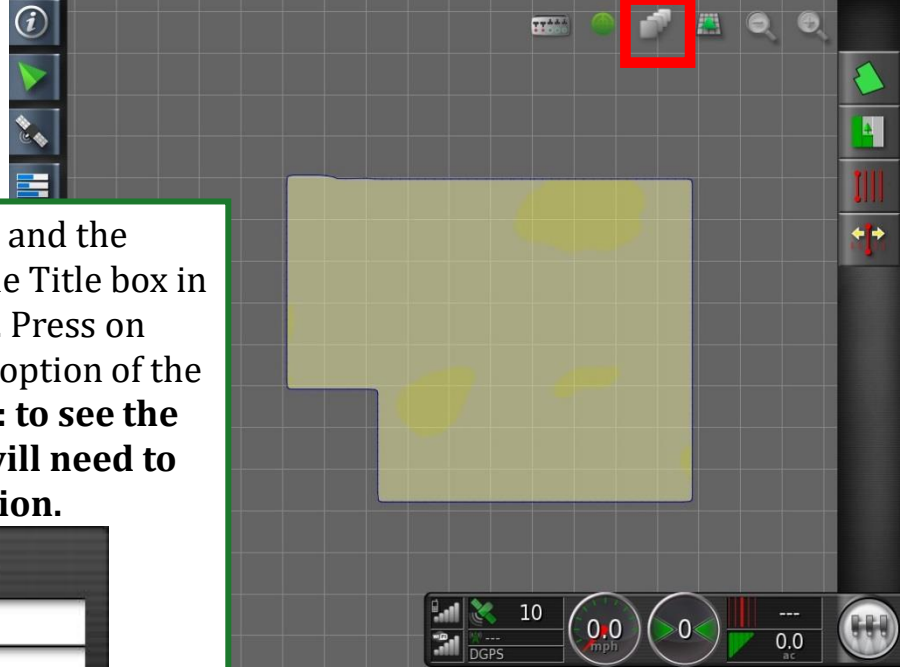
# 29

Once the VT is setup to run the Prescription, expand the guidance screen to the full map.



# 30

Press on the **Select Visible Map Layers** icon on the top right hand side of the screen to adjust the legend information.



# 31

To change the **VRC Map** and the **Coverage Map**, press the Title box in the middle of each Item. Press on **VRC Map** to choose the option of the **Channel** or **None**. **Note:** to see the prescription file you will need to select the **Channel** option.

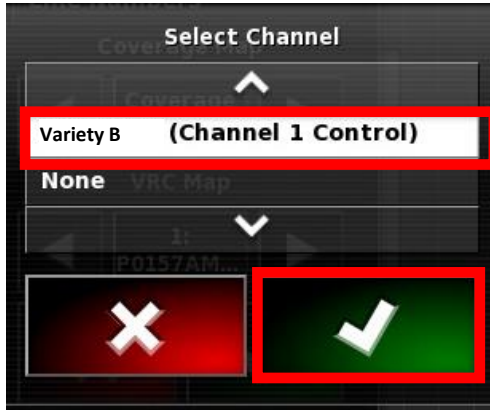


# Selecting VRS Prescription Files

## AGCO C3000

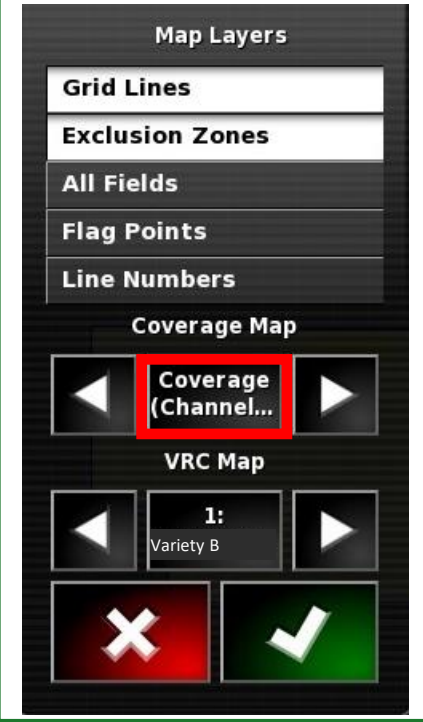
# 32

Press on the **Variety name (Channel 1 Control)** to load the prescription map as the layer. Press the **Checkmark** to approve the VRC map.



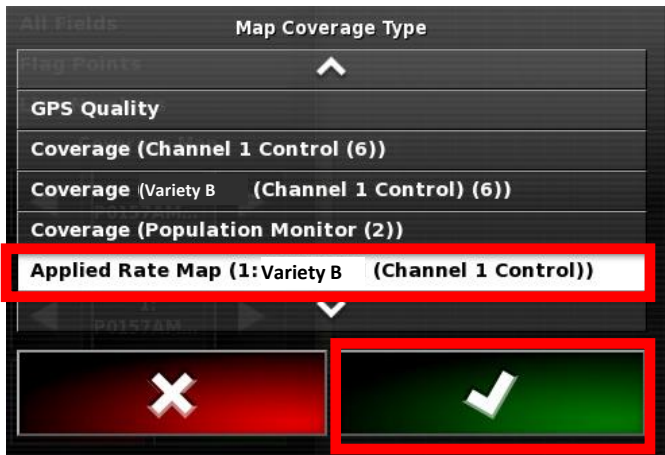
# 33

Press on **Coverage Map** to choose the option of **Applied Rate Map**.



# 34

Press **Applied Rate Map (Variety and Channel)** this will bring up the tank or legend for the prescription. Press the **Checkmark** to approve the Coverage Map.



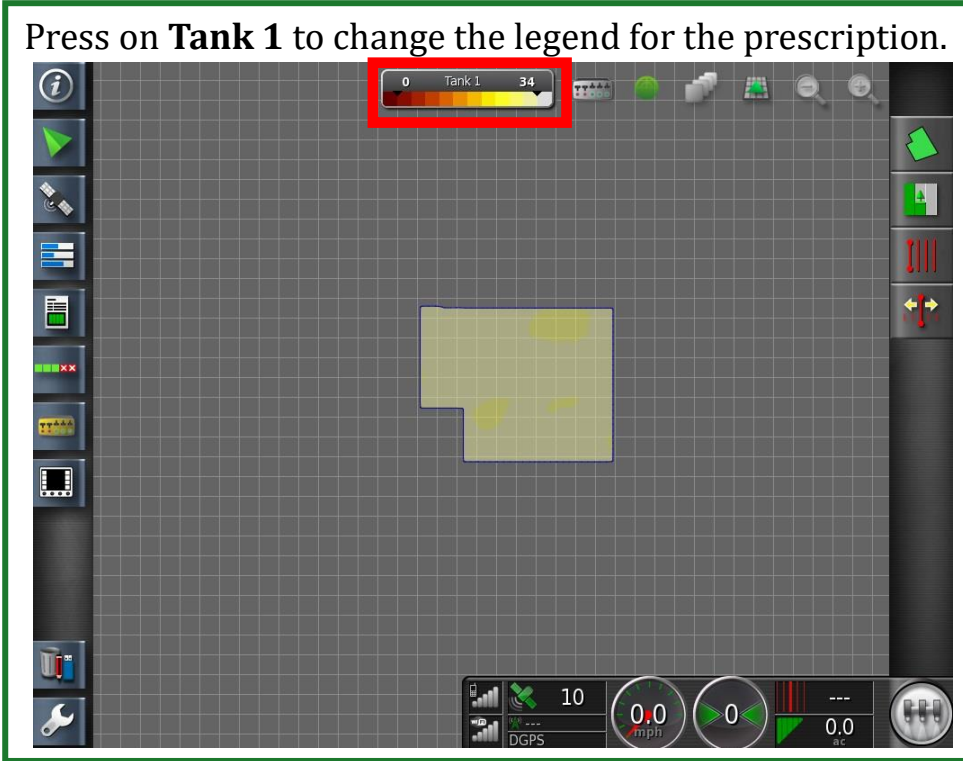
Once you can see the prescription and the Tank legend, press the **Checkmark** on the Map Layers screen.

# 35



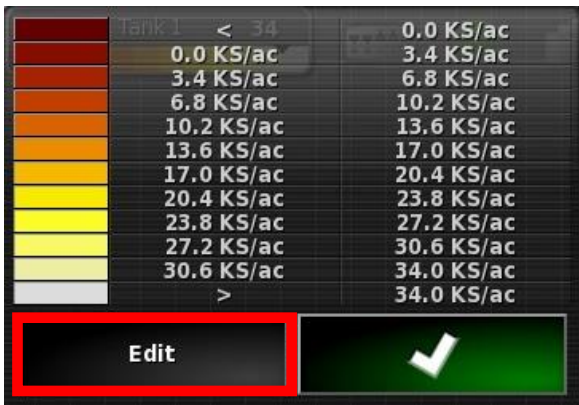
36

Press on **Tank 1** to change the legend for the prescription.



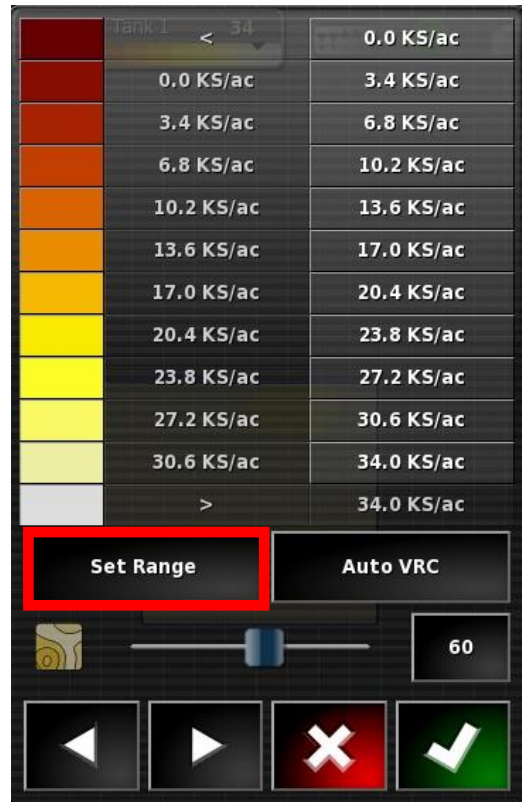
37

Press **Edit** to change the legend range.



38

Press **Set Range** to change the legend range for the prescription.

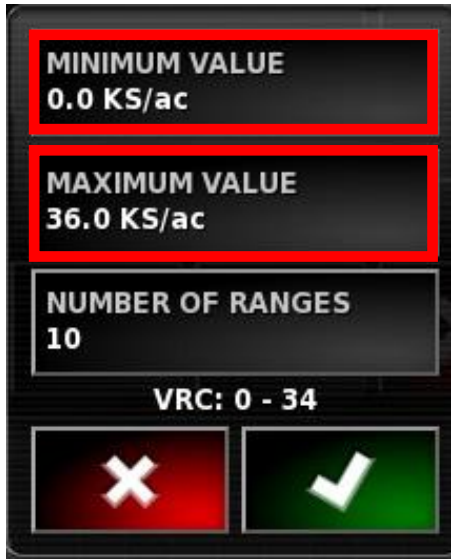




# Selecting VRS Prescription Files AGCO C3000

# 39

Press **Minimum Value** and **Maximum Value**. Use the calculator to enter the ranges in **kilo seeds per acre**.



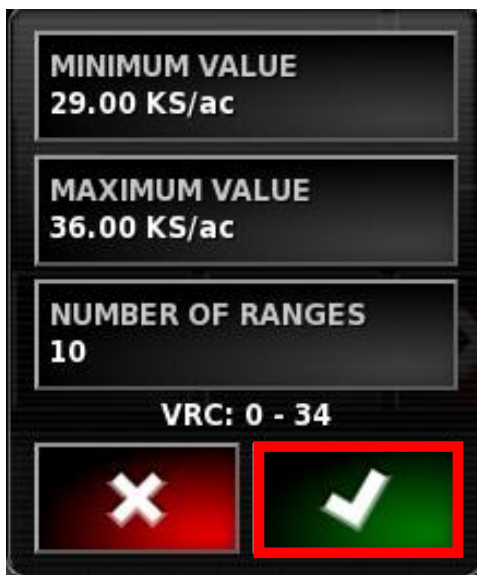
# 40

Use the **Calculator** to enter in the **kilo seeds per acre**. Press on the **Checkmark** to continue.



# 41

Once Minimum and Maximum have been changed press the **Checkmark** to Approve the changes



# 42

To approve the range change, press the **Check mark**. Note: **if you don't select the Checkmark, it won't save your changes.**

<	36.0	29.00 K5/ac
29.00 K5/ac	29.70 K5/ac	
29.70 K5/ac	30.40 K5/ac	
30.40 K5/ac	31.10 K5/ac	
31.10 K5/ac	31.80 K5/ac	
31.80 K5/ac	32.50 K5/ac	
32.50 K5/ac	33.20 K5/ac	
33.20 K5/ac	33.90 K5/ac	
33.90 K5/ac	34.60 K5/ac	
34.60 K5/ac	35.30 K5/ac	
35.30 K5/ac	36.00 K5/ac	
>	36.00 K5/ac	

Set Range      Auto VRC

60

Navigation buttons: Left arrow, Right arrow, Red X, Green Checkmark (highlighted)

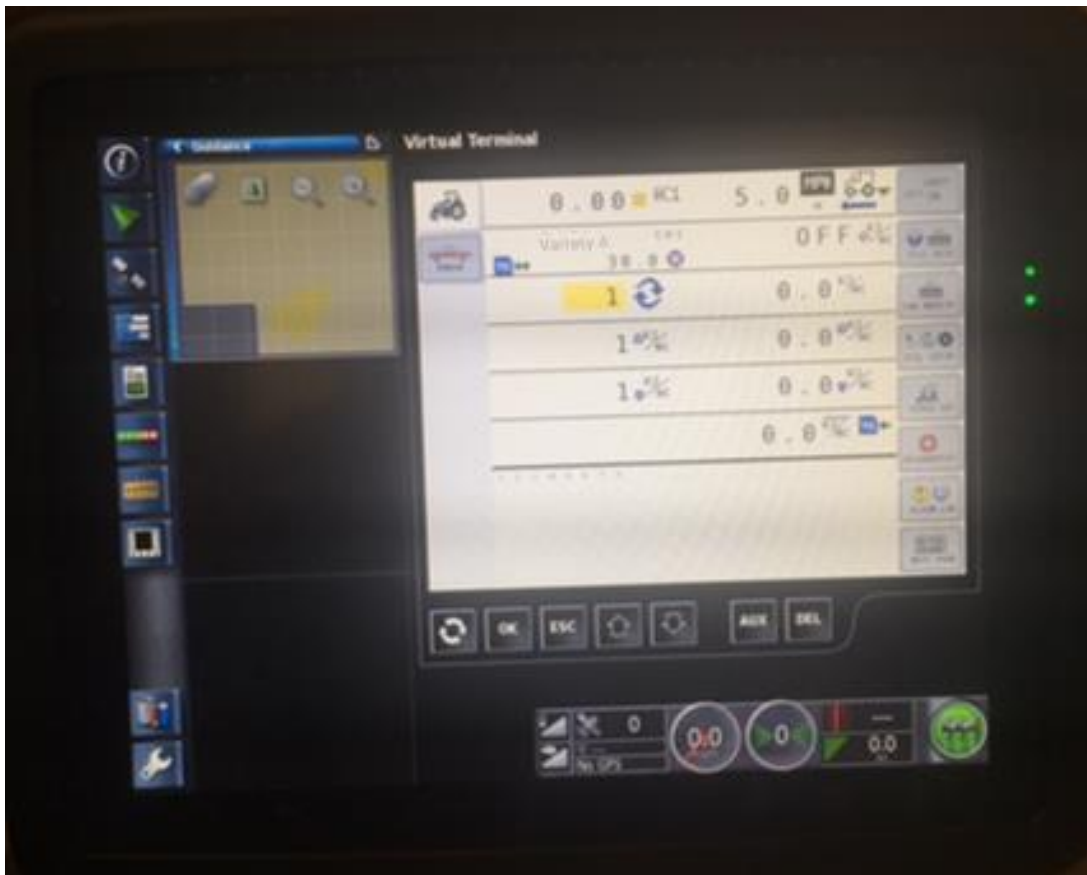
# 43

The Map will change the zones to match your Legend information, giving a visual aid.

29.0 Tank 1 36.0

10 DGPS      0.0 mph      0.0 ac

## *Cleaning up Prescriptions*

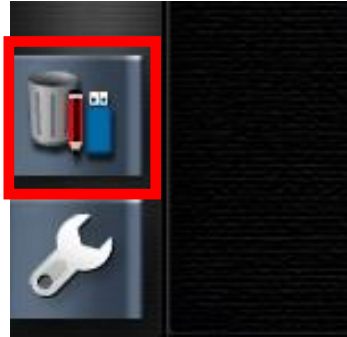


# Cleaning up Prescriptions

## AGCO C3000

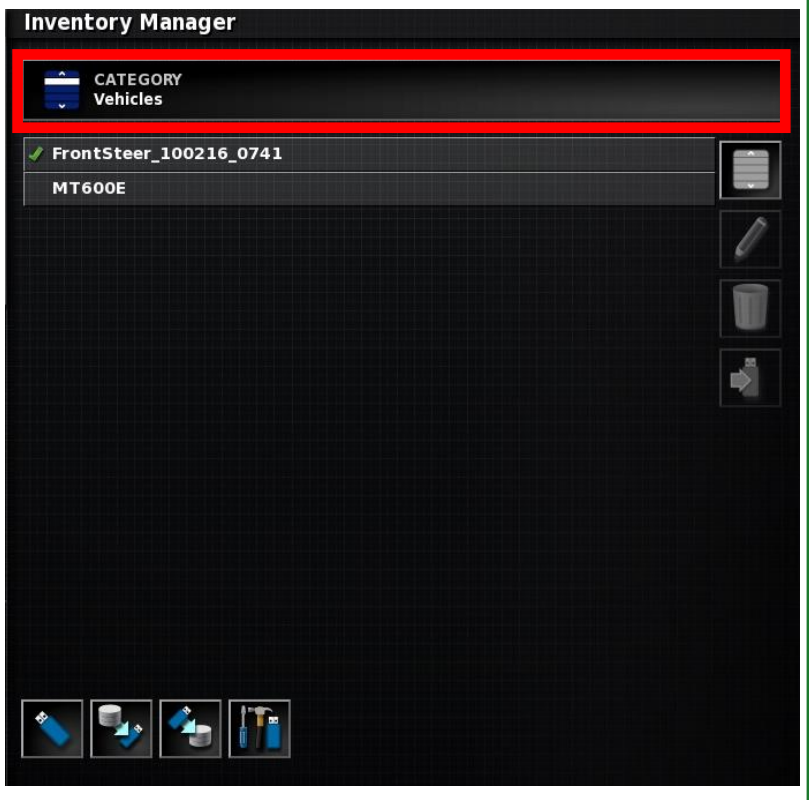
1

On the bottom left hand corner of the screen, press **Inventory Manager**.



2

Press the **Category** icon to change Vehicles to VRC Prescription Maps(.xml).



3

Press **VRC Prescription maps(.xml)** to highlight this category. Press the **Checkmark** to approve the selection.



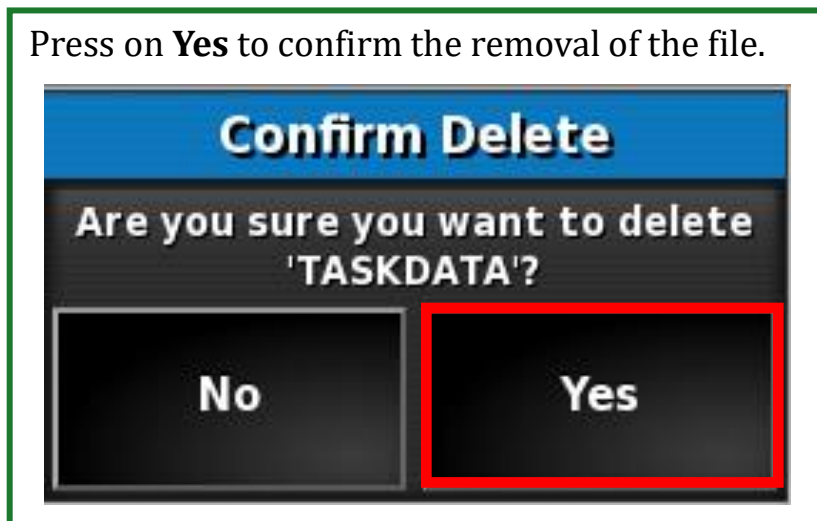
# 4

Press the **TASKDATA** .xml to select the file. Press the **Trask Can** to delete the selection

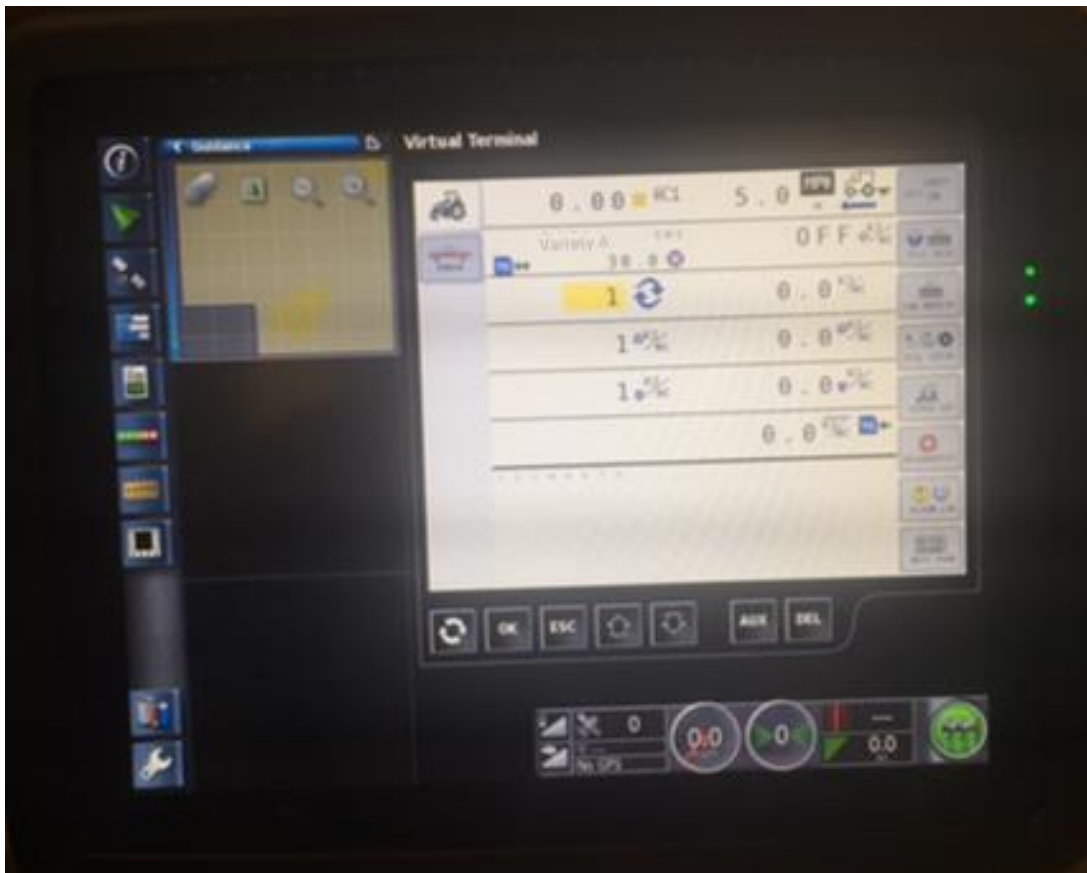


# 5

Press on **Yes** to confirm the removal of the file.



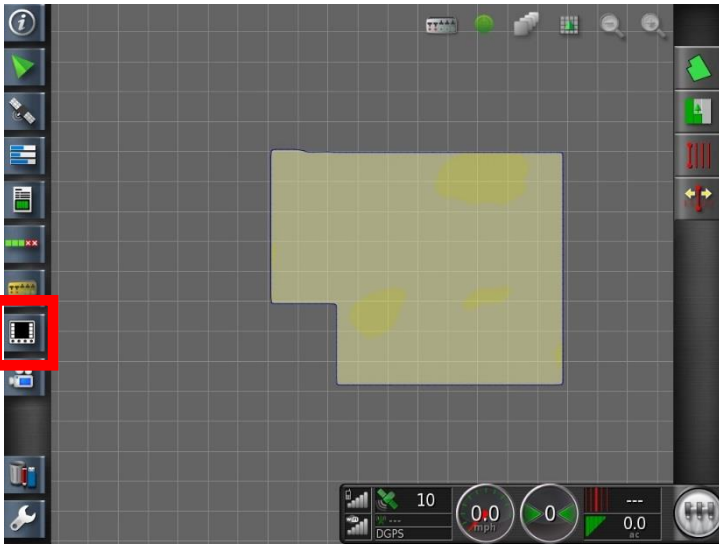
## *Creating Products for Planting*



# Creating Products For Planting AGCO C3000

1

From the guidance screen, press the **Virtual Terminal** or **VT** icon. This will make a small window of the VT.



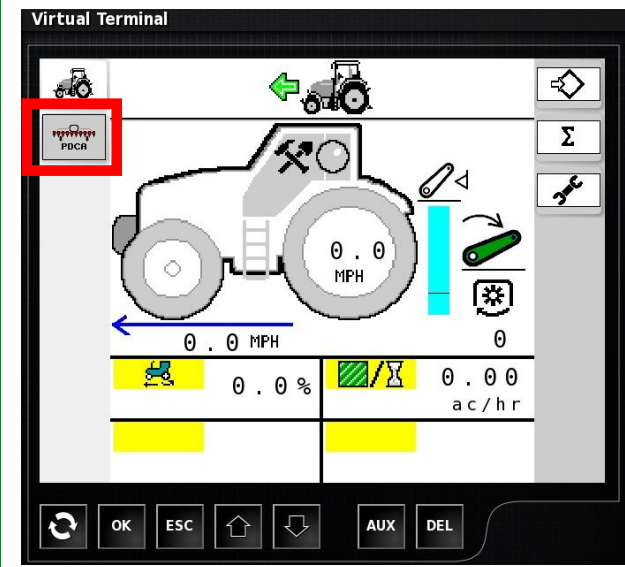
2

Press the **expand** icon to make the Virtual Terminal screen larger.



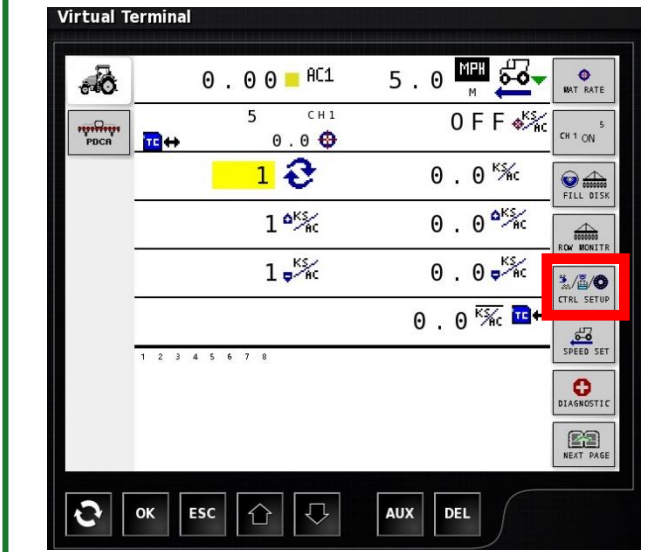
3

Press the **Planter** icon to load the planter page.



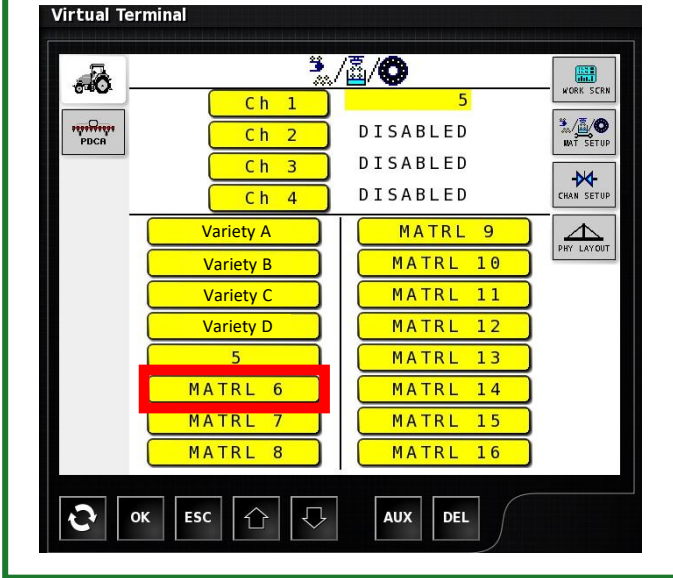
4

Press **CTRL Setup** on the right side of the screen. **Note: Products should be consistent between the Task Controller and the prescription.**



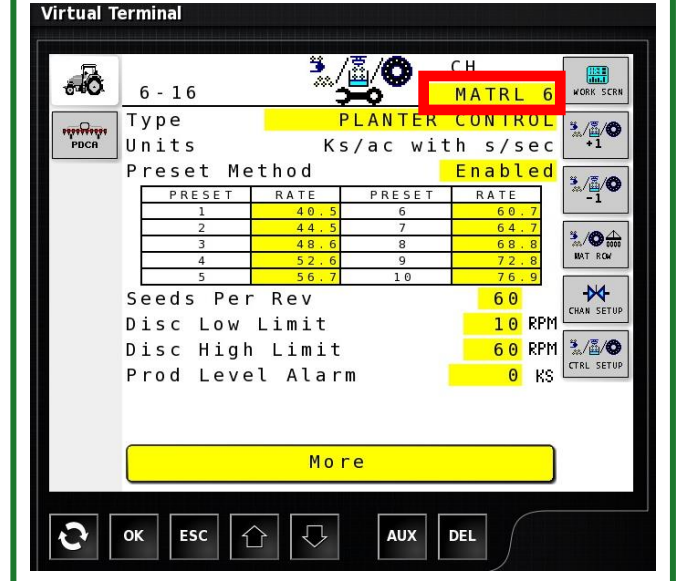
5

Select a new MATRL by pressing, example: MATRL 6.



6

Press MATRL 6 to change the name to your product.



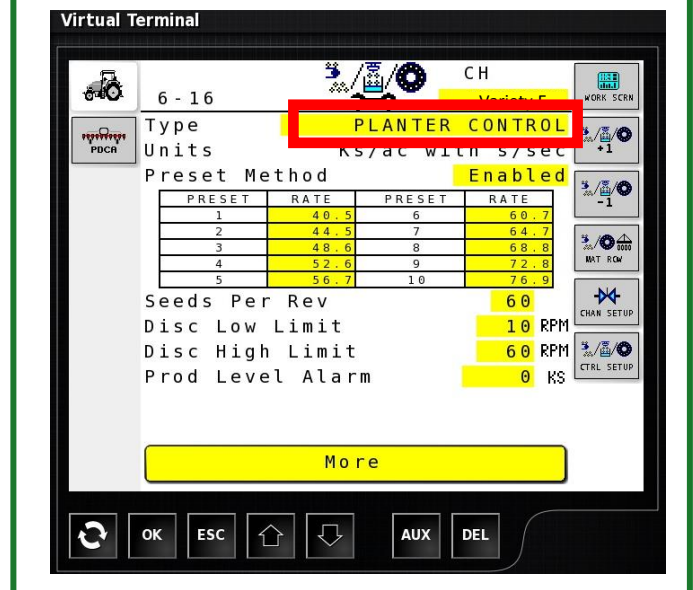
7

Use the keyboard to enter in the new product, example Variety E. Press the checkmark to continue.



8

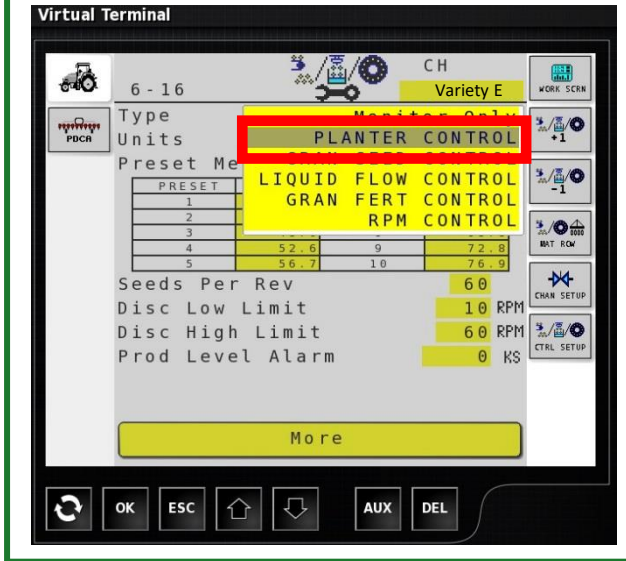
Press the Type field to change this to planter control.





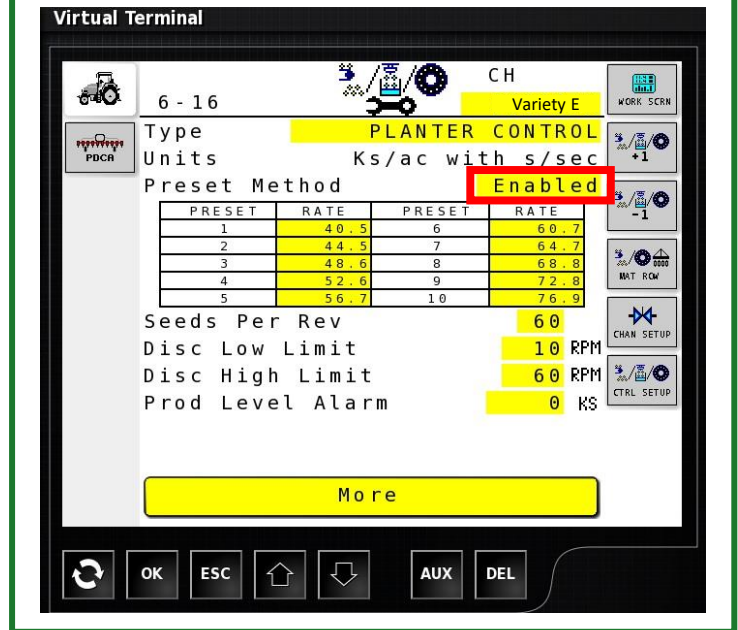
## 9

Press **Planter Control** to setup the type.



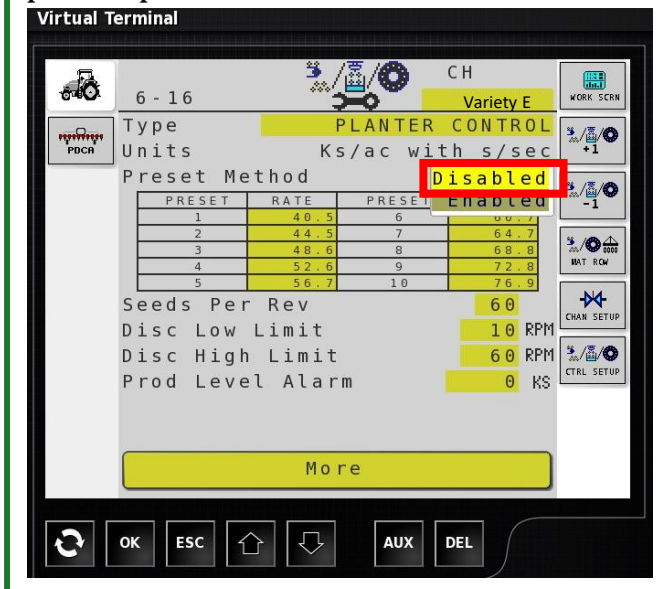
## 10

Press on the **Preset Method** to change to Disabled. **Note: Some producers may be using the Preset Method so make sure to double check with the producer.**



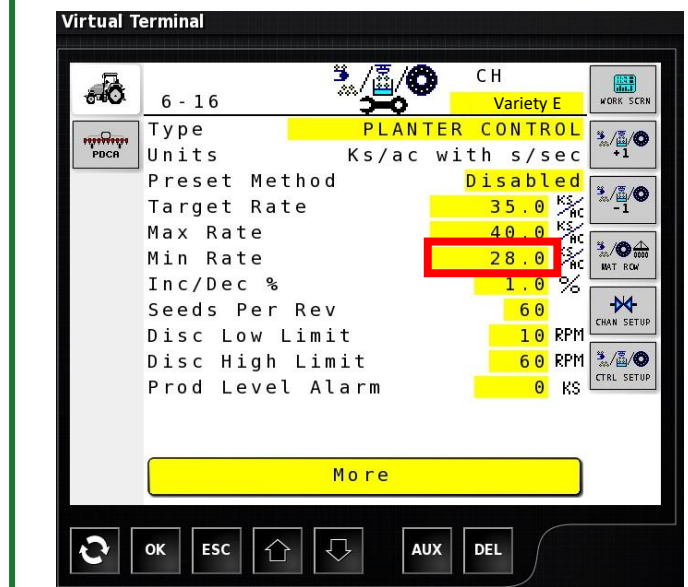
## 11

Press **Disabled** to change to the prescription method.



## 12

Change the rate by pressing the highlighted boxes. **Note: The Min and Max values need to be set equal to, or lower than, the VRS Min and higher than the VRS Max. Also note that these numbers are in kilo-seeds per acre.**



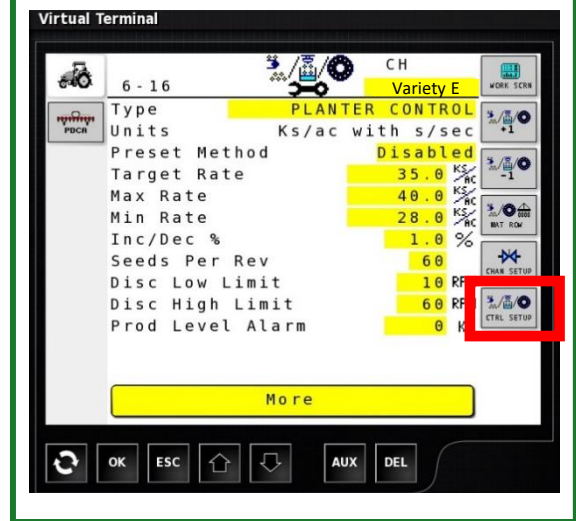
## 13

Use the on-screen calculator to enter in Ks/ac, then press the **checkmark** to move on.



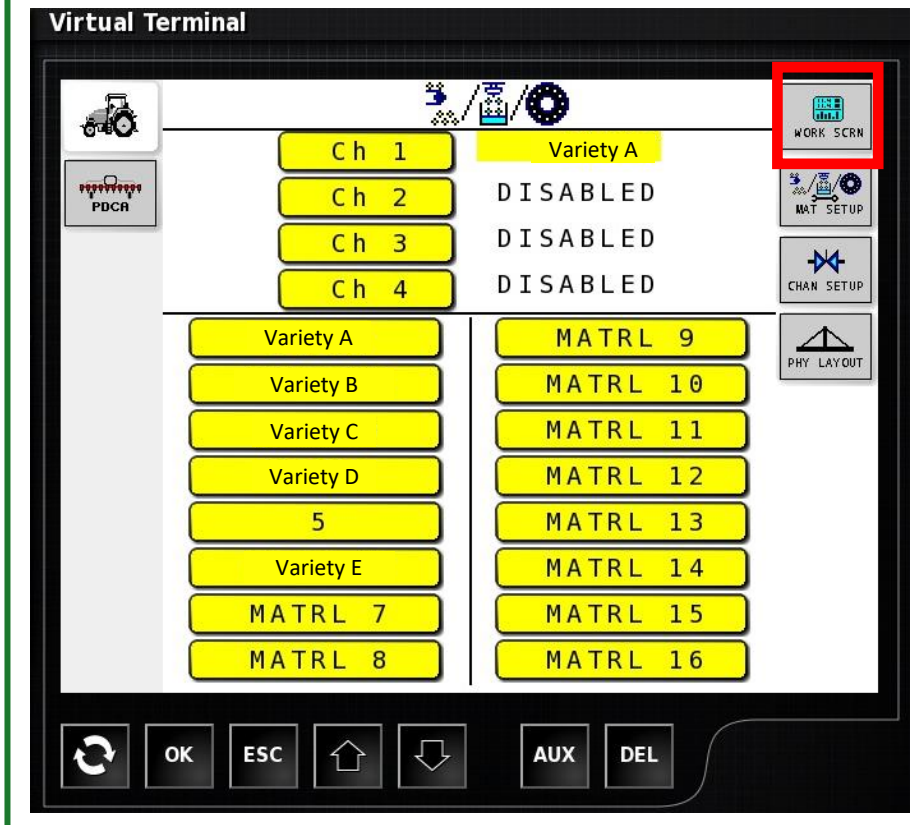
## 14

Press the **CTRL Setup** icon to return to the Material screen.

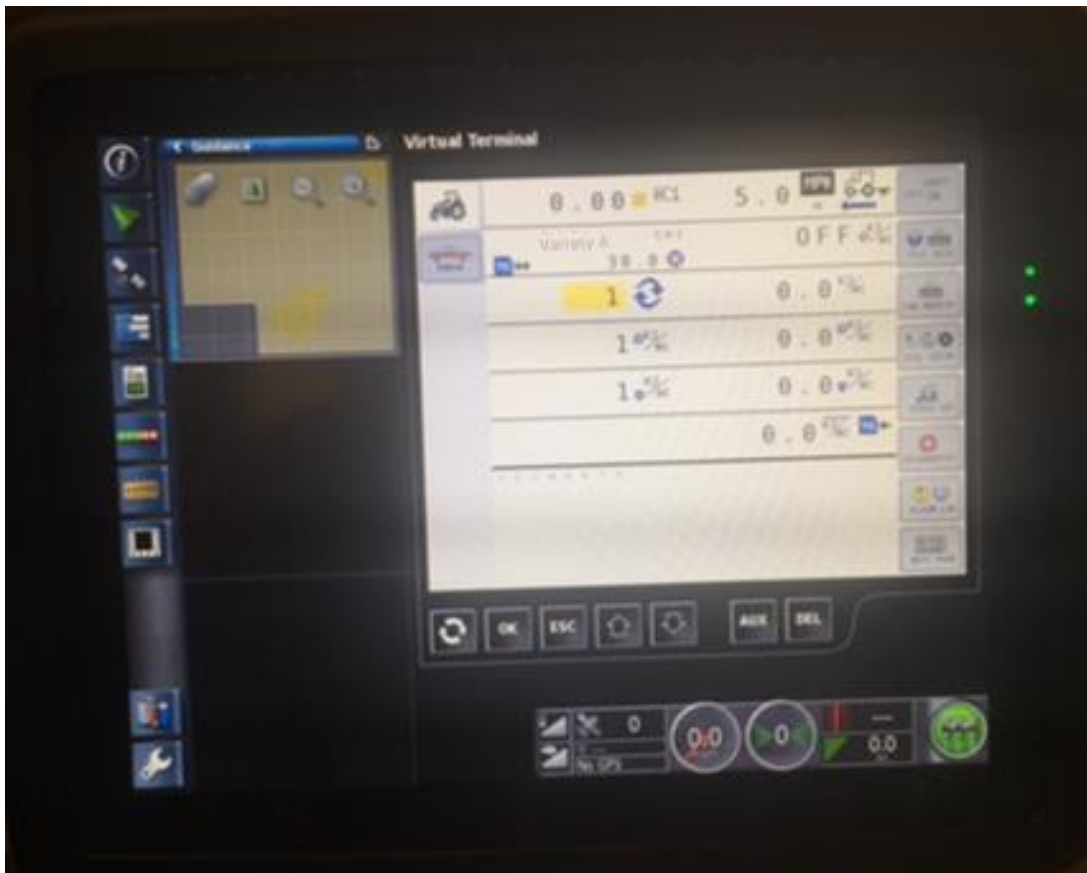


## 15

To add more products, repeat steps 5 to 13. To return to the planter screen, press the **Work Screen** icon.



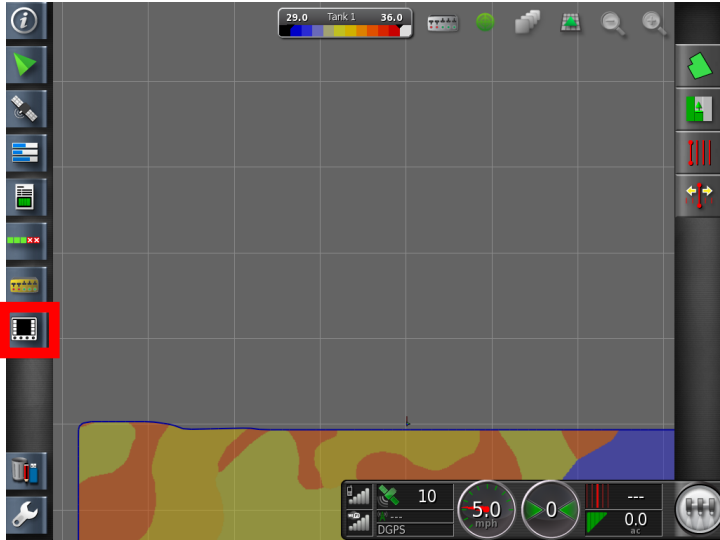
## *Cleaning up Product*



# Cleaning up Product AGCO C3000

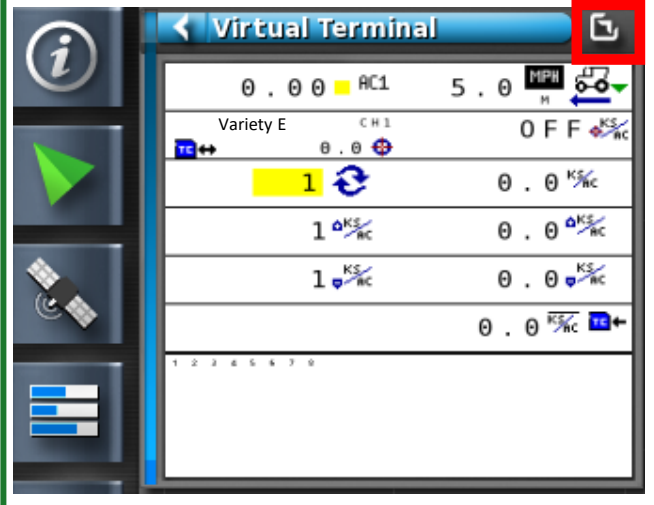
1

From the guidance screen, press the **Virtual Terminal** or **VT** icon. This will make a small window of the VT.



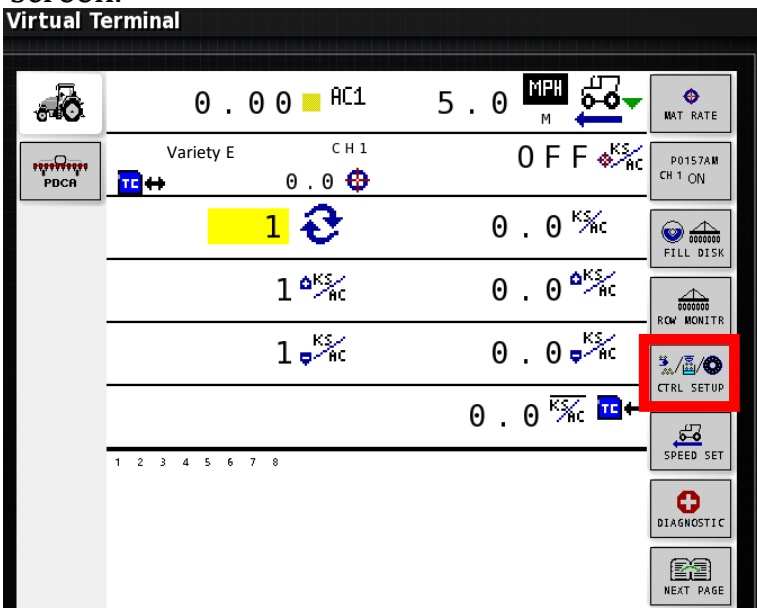
2

Press the **expand** icon to make the Virtual Terminal screen larger.



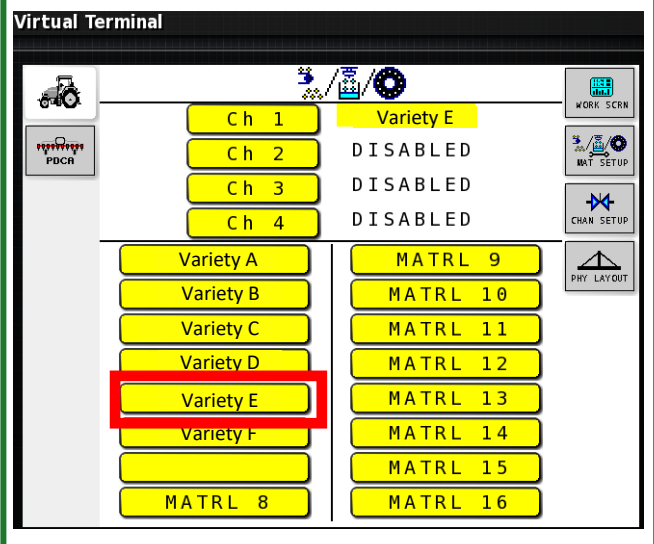
3

Press **CTRL Setup** on the right side of the screen.



4

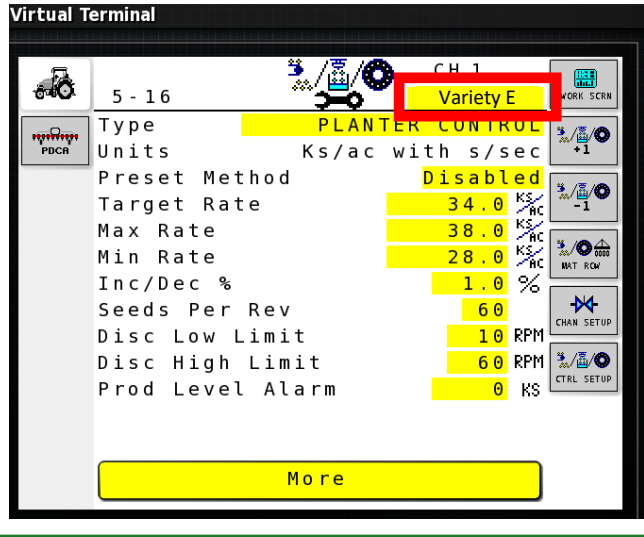
Products can't be deleted, but names can be changed. Select an **old product** name in the list.



# Cleaning up Product AGCO C3000

5

Select the **Product name** at the top to change the name



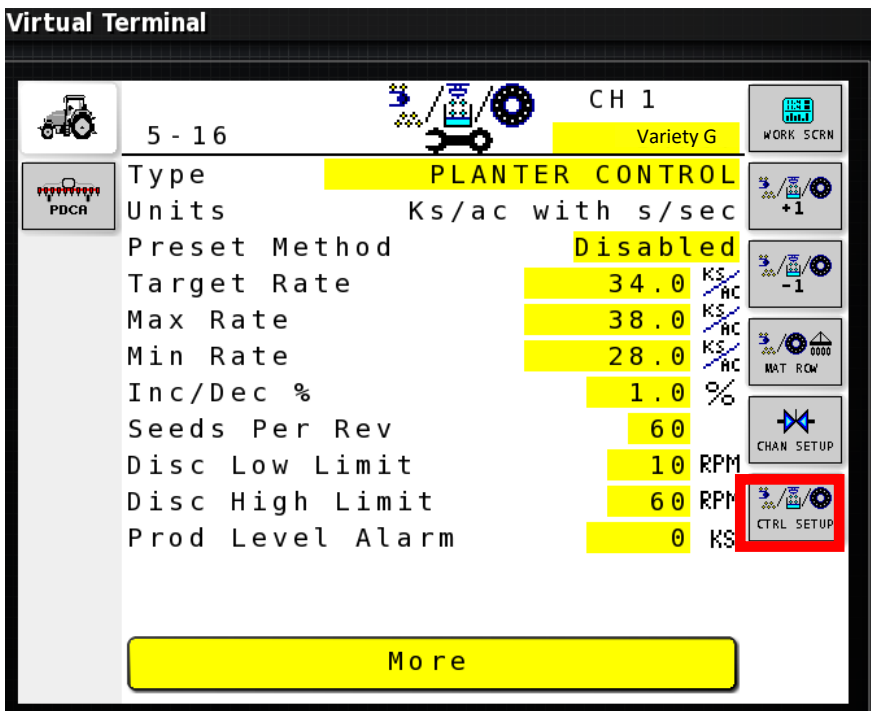
6

Use the keyboard to enter in the new product. Press the **Checkmark** to continue.

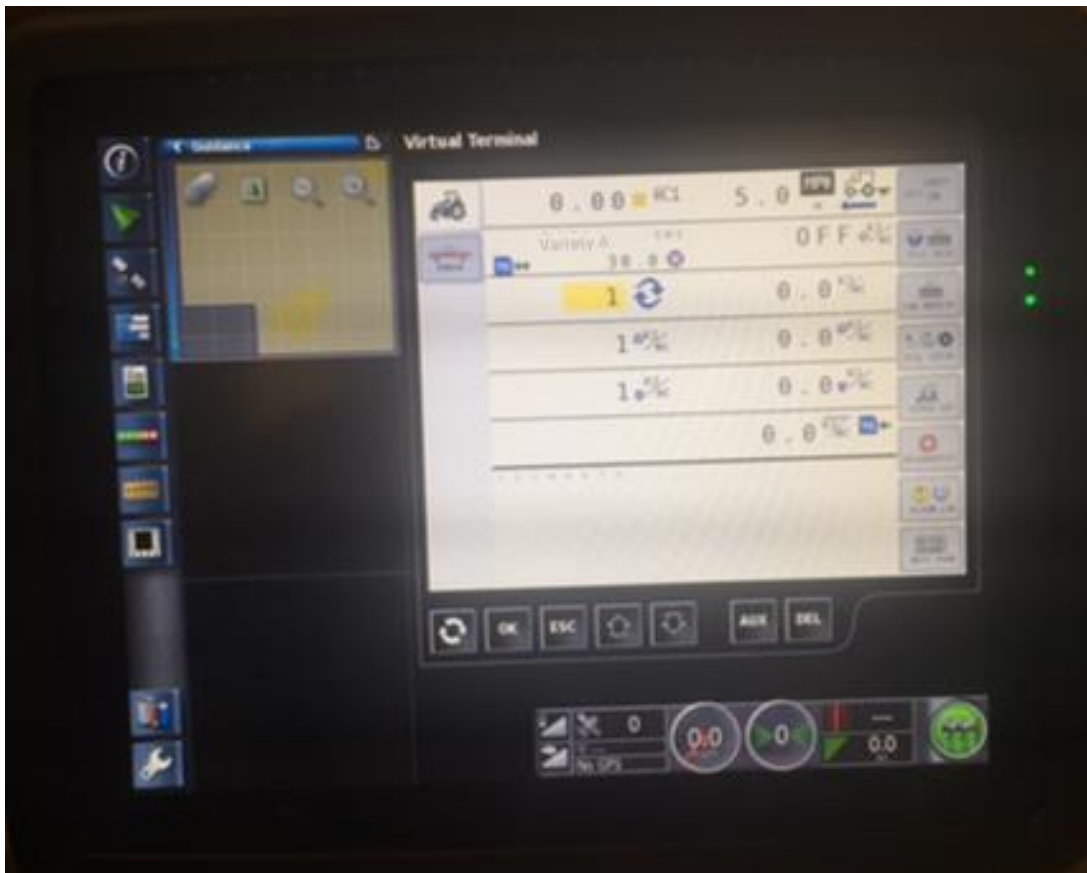


7

Once the name has changed, make sure the settings are correct for the product before returning to **CTRL setup**.



## *Changing Products Within A Field*

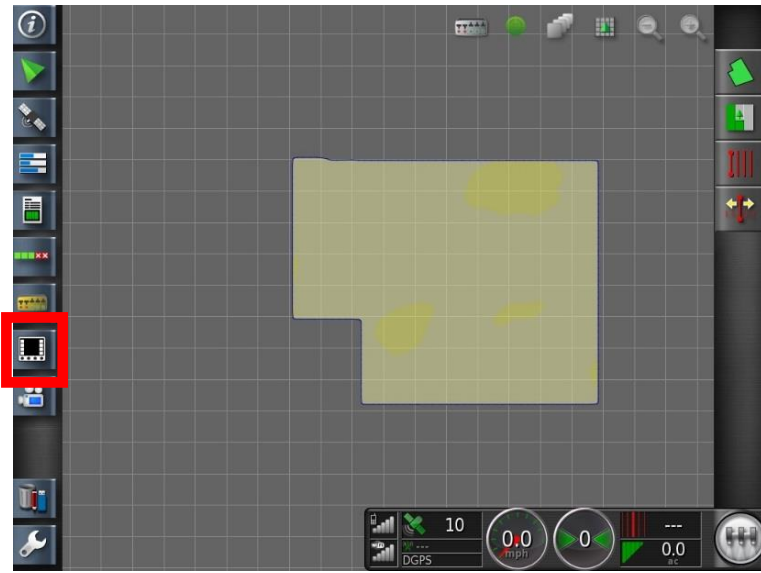


# Changing Products Within A Field

## AGCO C3000

1

To change products within field operation, press the **Virtual Terminal** icon to bring up the planter. **Note: Most prescriptions change rates based on product type. You may need to create a new job to do this. Please refer to Selecting VRS prescription for more details. Headland information should be saved with you boundary settings. Please contact your equipment provider for assistance.**



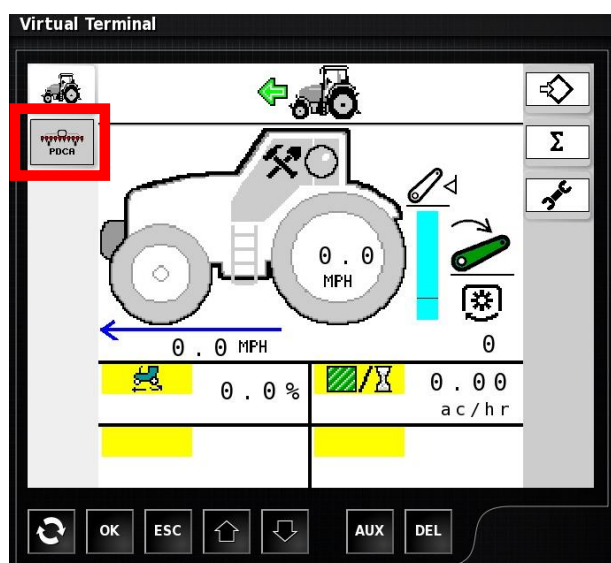
2

Press the **expand** icon to make the Virtual Terminal screen larger.



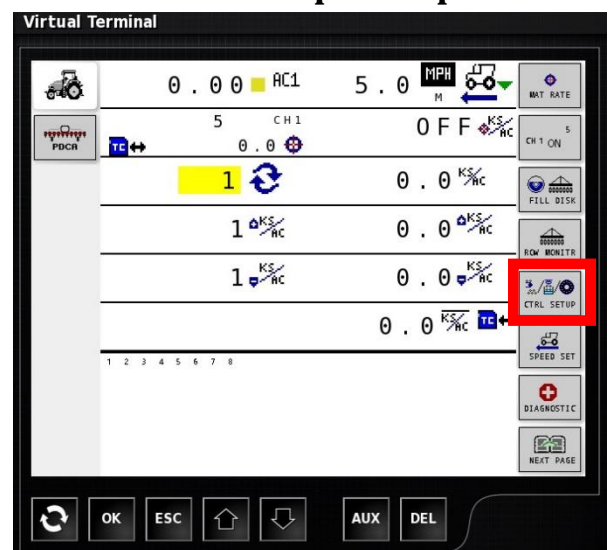
3

Press the **Planter** icon to load the planter page.



4

Press **CTRL Setup** on the right side of the screen. **Note: Products should be consistent between the Task Controller and the prescription.**

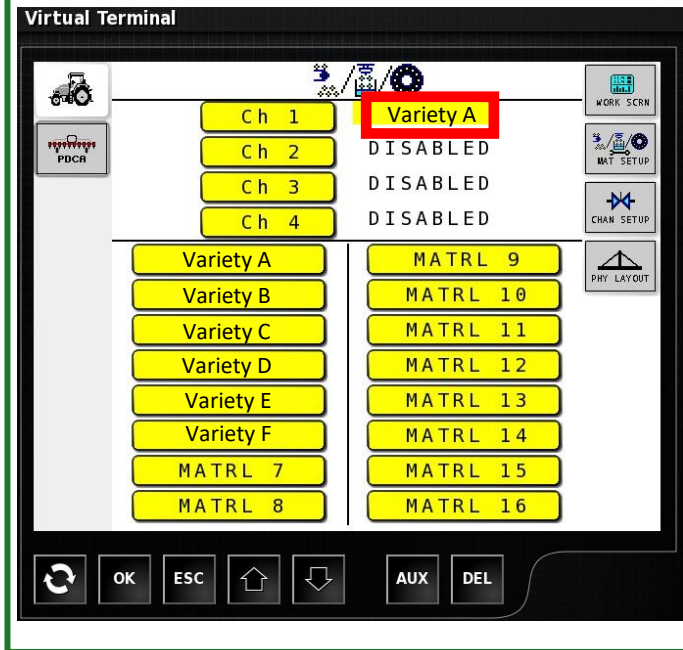


# Changing Products Within A Field

## AGCO C3000

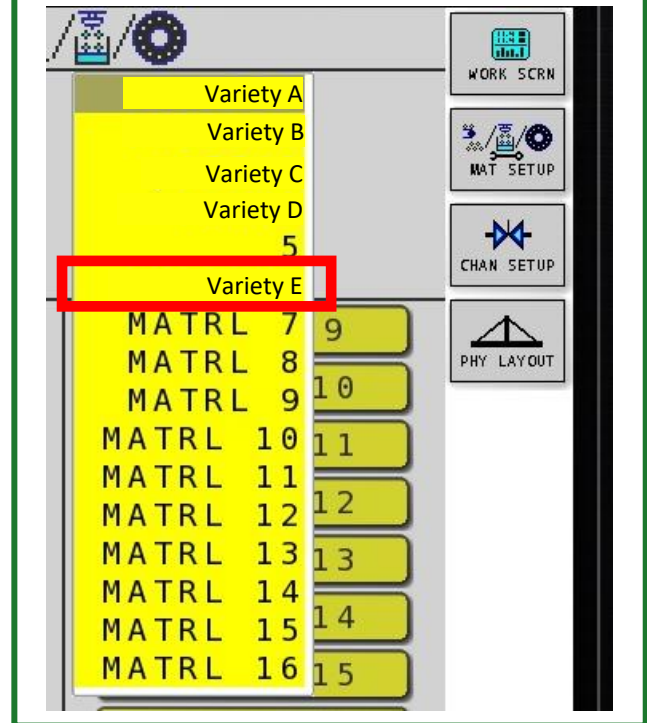
5

Press the **Channel 1 Product** to change the product.



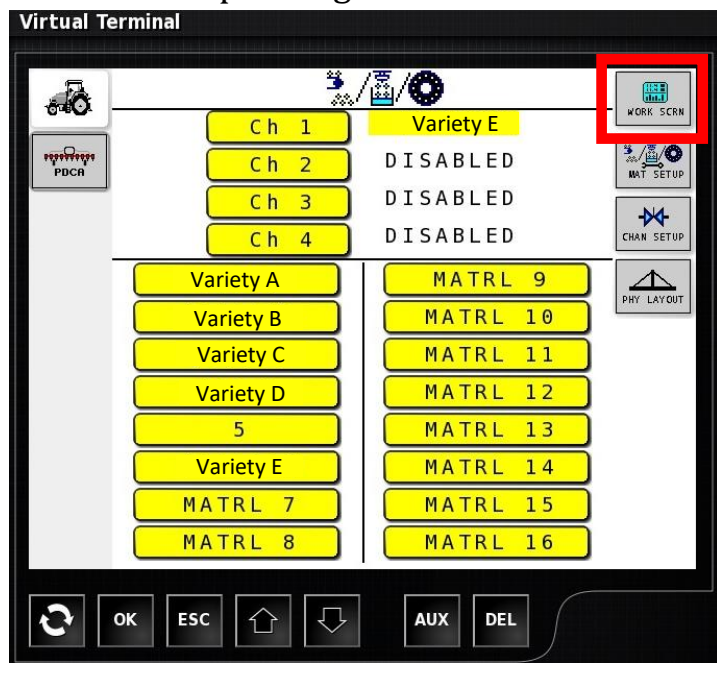
6

Press on the product or variety that you're currently using, **example: Variety E**



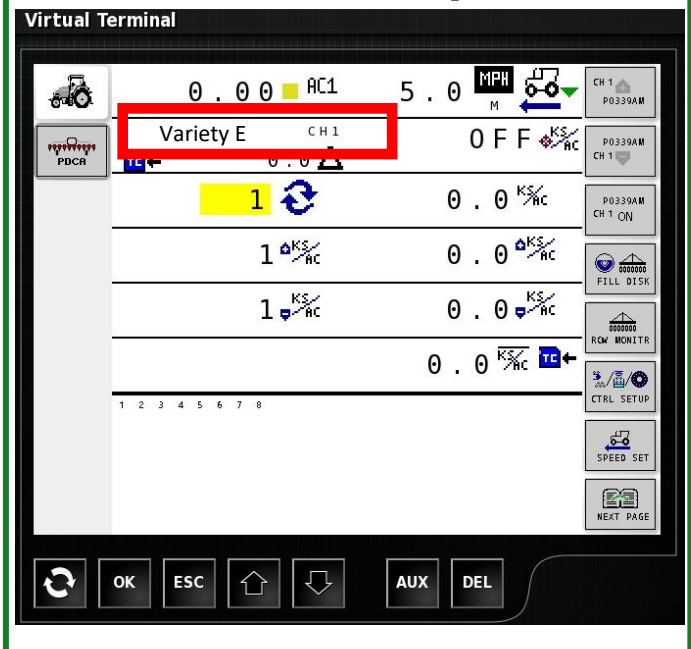
7

Once the product changes for Channel 1 are complete, press the **Work Screen** icon to return to the planting screen.



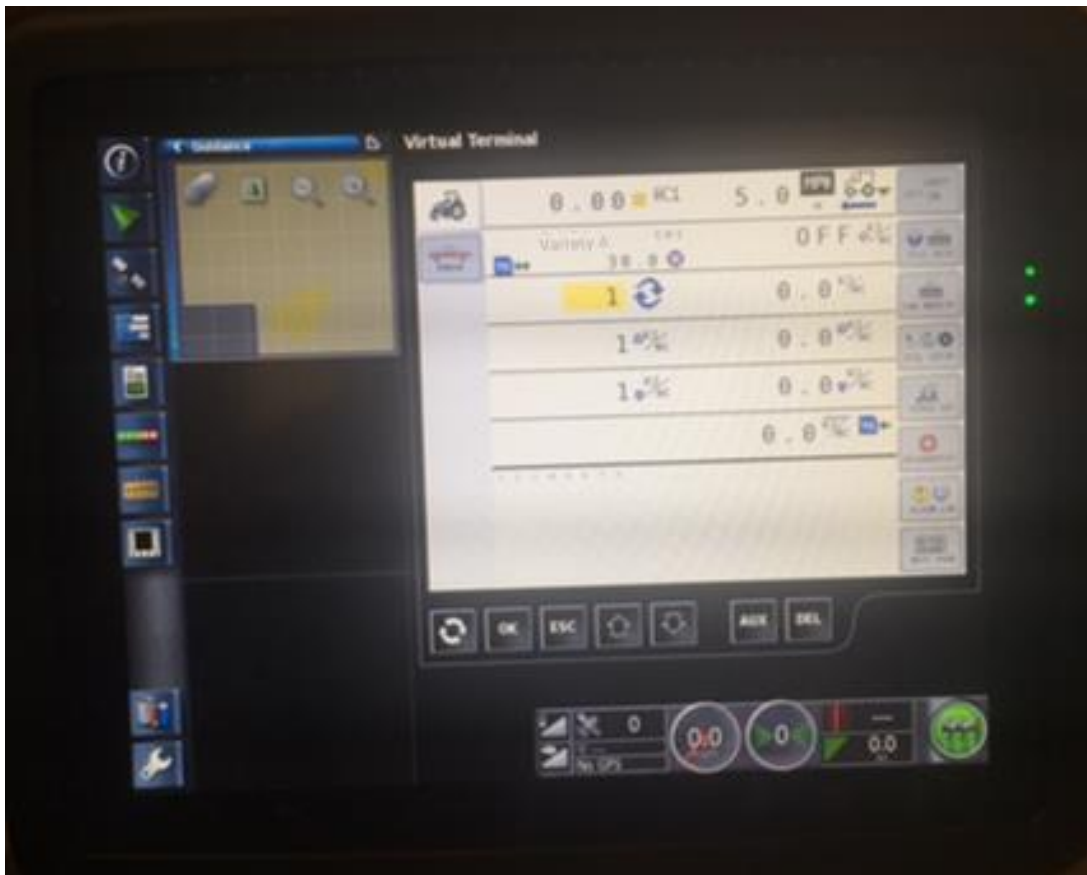
8

CH1 should show the new product.





## Setting Up Split Planter Treatment Data



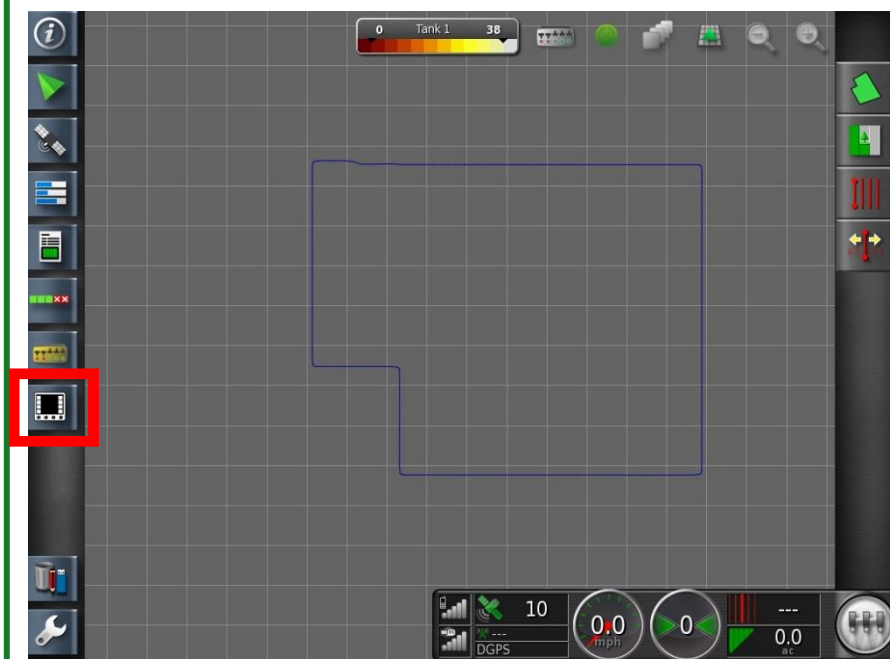
# Setting Up Split Planter Treatment Data AGCO C3000

Once one Prescription has been loaded from the USB drive, the data should be present on the display. Leave the USB with the Farmer just in case.

When Using **TASKDATA** files, only one Task or Prescription can be used for both rate control drives. Split Planters can only be setup with two different Varieties **not Prescriptions**.

# 1

Make sure Client, Farm, Field and Job are setup before doing anything with planter setup. Open the **VT terminal** by pressing the **VT icon** on the left side of the screen.



# 2

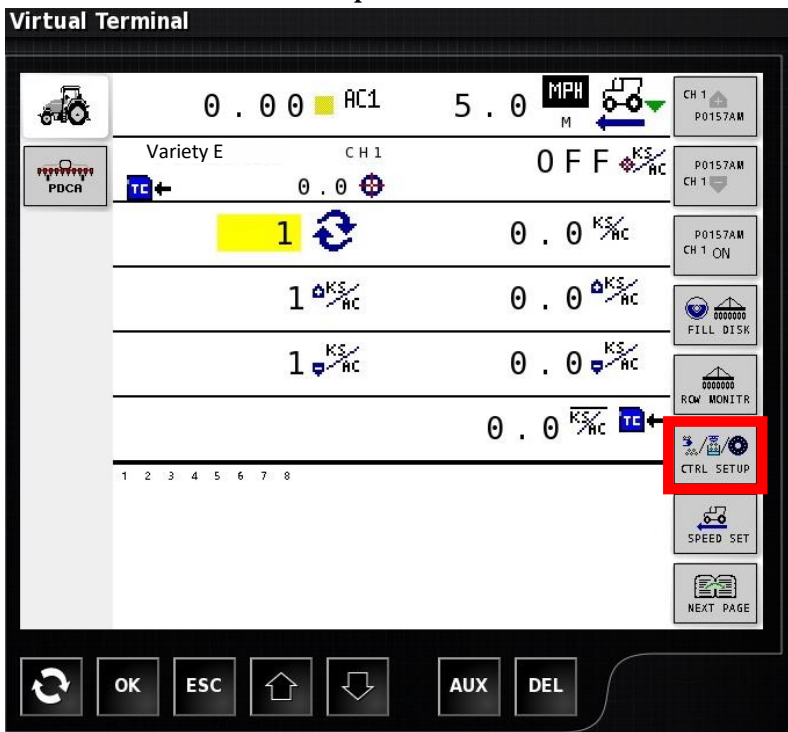
Press the **Expand** icon to make the Virtual Terminal screen larger.



# Setting Up Split Planter Treatment Data AGCO C3000

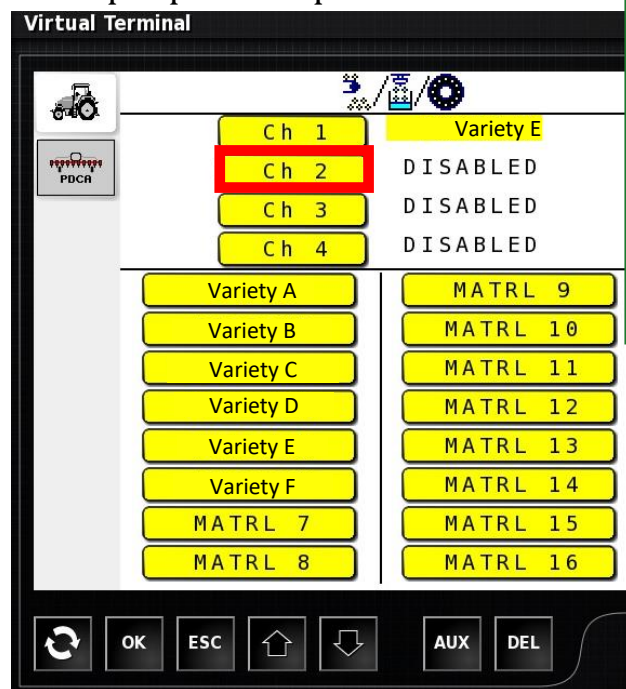
3

In the VT screen, press on the **CTRL Setup** to go into the Channel setup.



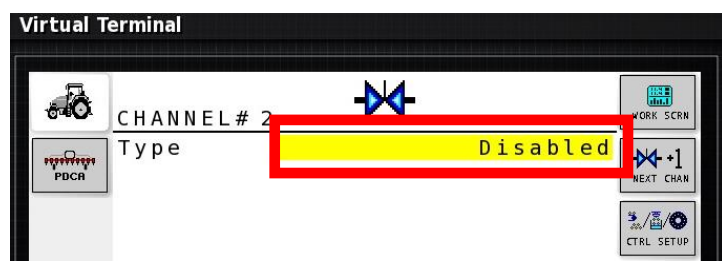
4

Press on **Ch 2** to turn on the second ch for a split planter operation.



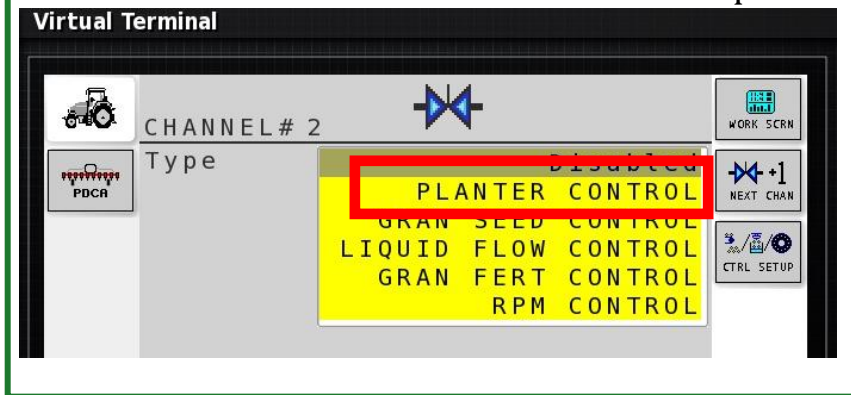
5

Press on **Disabled**.



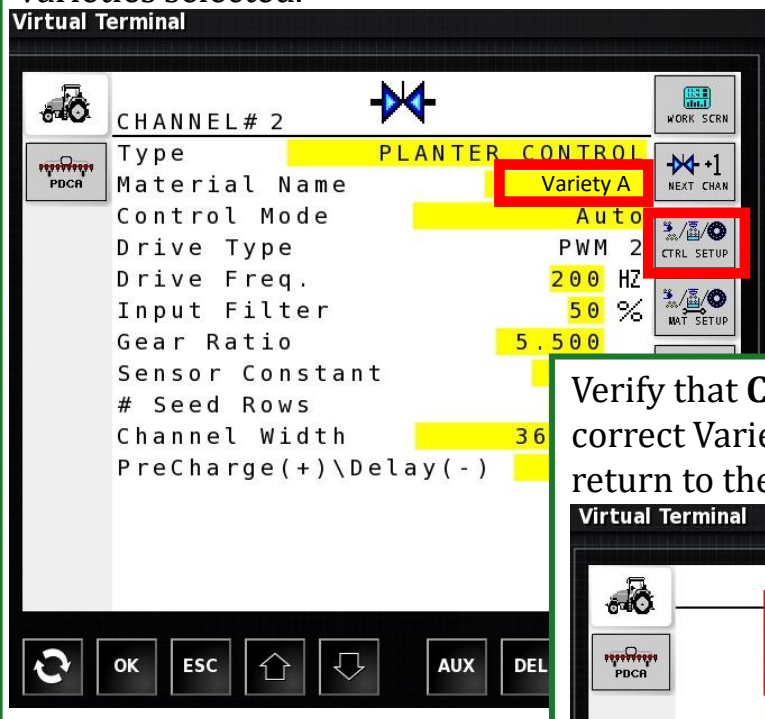
6

Press on **Planter Control** for Channel 2 setup.

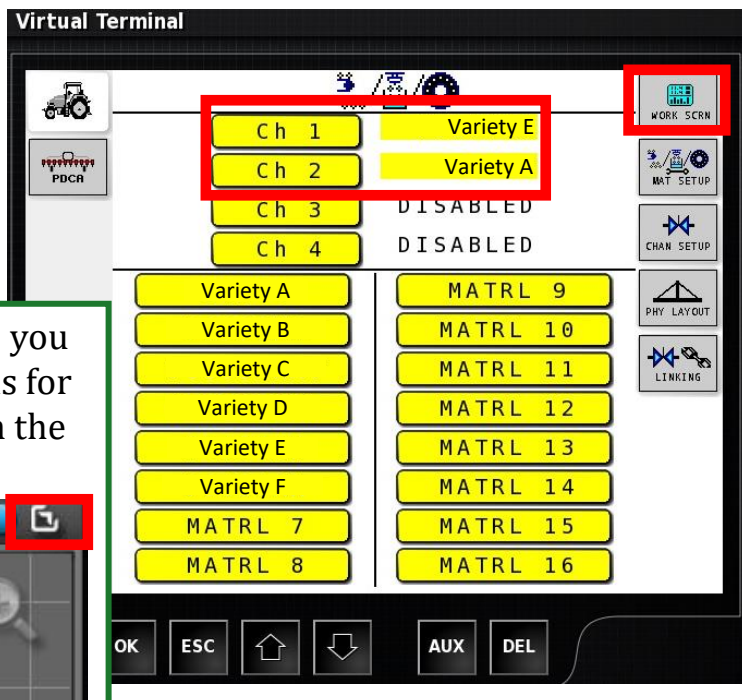


# Setting Up Split Planter Treatment Data AGCO C3000

**7** Press on the **Material Name** to change the Variety or refer back to **Changing Varieties within the Field**. Press **CTRL Setup** to make sure Channel 1 and 2 have the correct varieties selected.



**8** Verify that **Ch 1 and 2** are enabled with the correct Variety. Press the **Work Scrn** icon to return to the main screen.

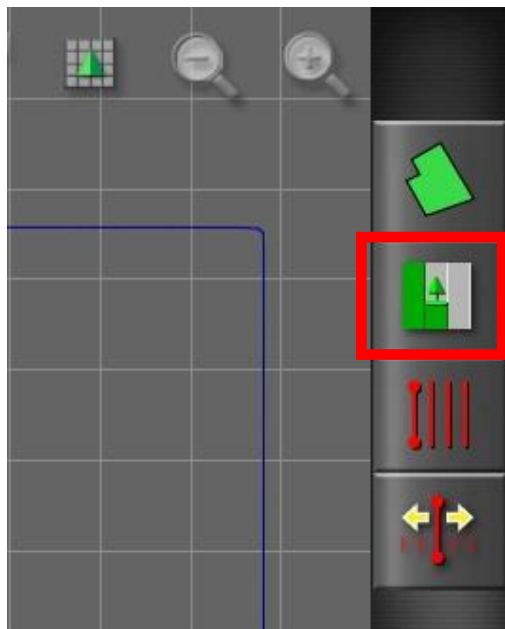


**9** Now that the Channels are setup, you will be able to select two channels for VRC. Press the **Expand** button on the Guidance Screen.



# 10

Press on the **Job Menu** icon to load the prescription file.



# 11

Press on the **Configure VRC** icon to load the prescription file for the **Variable Rate Control** or **VRC**.



# 12

**Step 1/6: New Configuration** states that VRC maps cannot be changed without changing jobs. Press the **Right arrow** to continue with the configuration.

### VRC Configuration

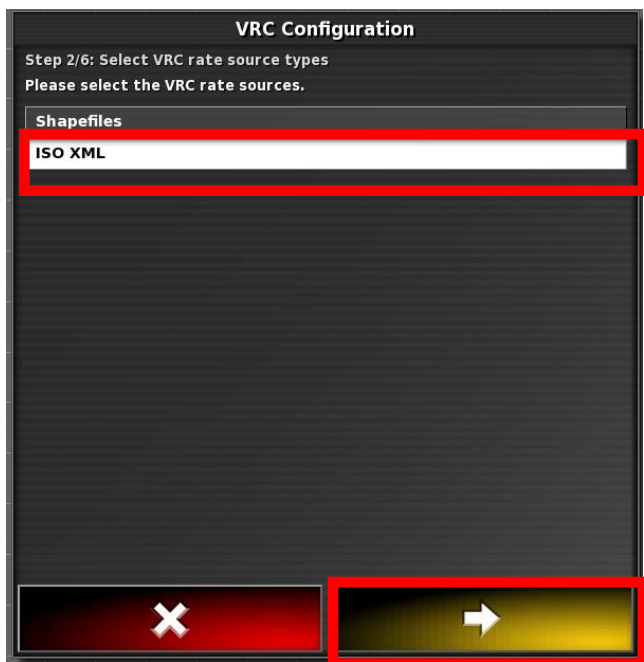
#### Step 1/6: New Configuration

This wizard will guide you through the process of selecting rate sources for each rate control channel. Once configured, the VRC maps cannot be changed without changing jobs. The current job is J\_PLANTER\_240216\_0738. Press "Next" to continue.



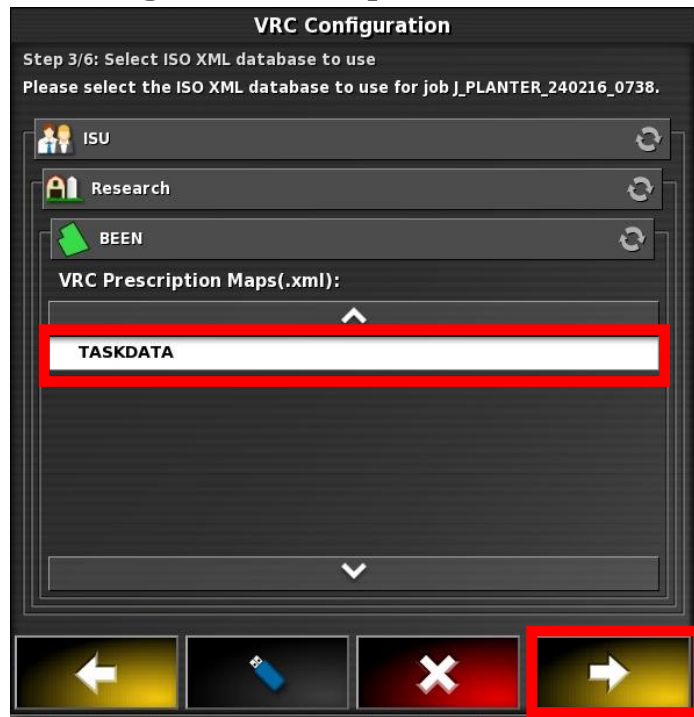
## 13

Press on **ISO XML** to select the file format that is being imported. It is recommended to use the **XML** file structure because file structure needs to be **kilo-seeds per acre**. Press the **Right Arrow** to continue.



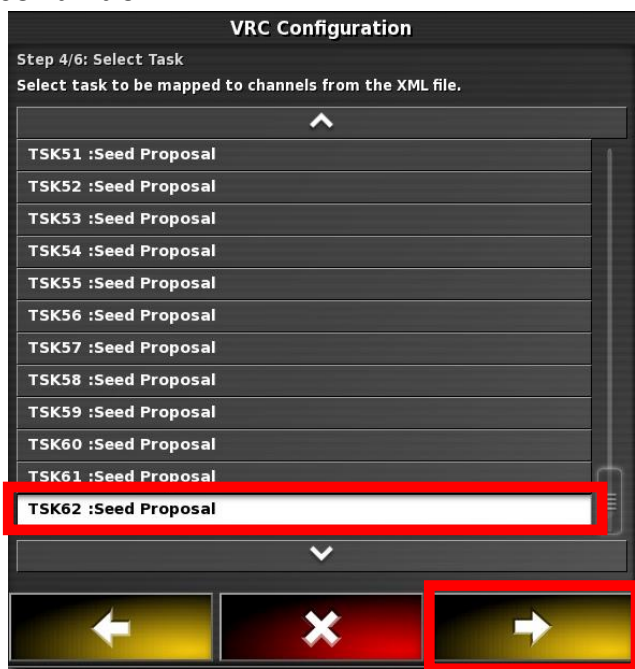
## 14

Step 3/6 Select ISO XML database to use: Press the **TASKDATA** file. Press the **Right Arrow** to continue. **Note: if data has been imported this season, TASKDATA can be selected right away. If not, refer to Selecting VRS Prescriptions.**



# Setting Up Split Planter Treatment Data AGCO C3000

Step 4/6: Select Task: Press on **TSK62 :Seed Proposal**. This is the only prescription that can be loaded for both Channels. **Note: if there are multiple task data files in this file, you will need to click through them and load each one until you find your field. If the boundary file is saved on the monitor, it will clip to the boundary edge.** Press the **Right Arrow** to continue.

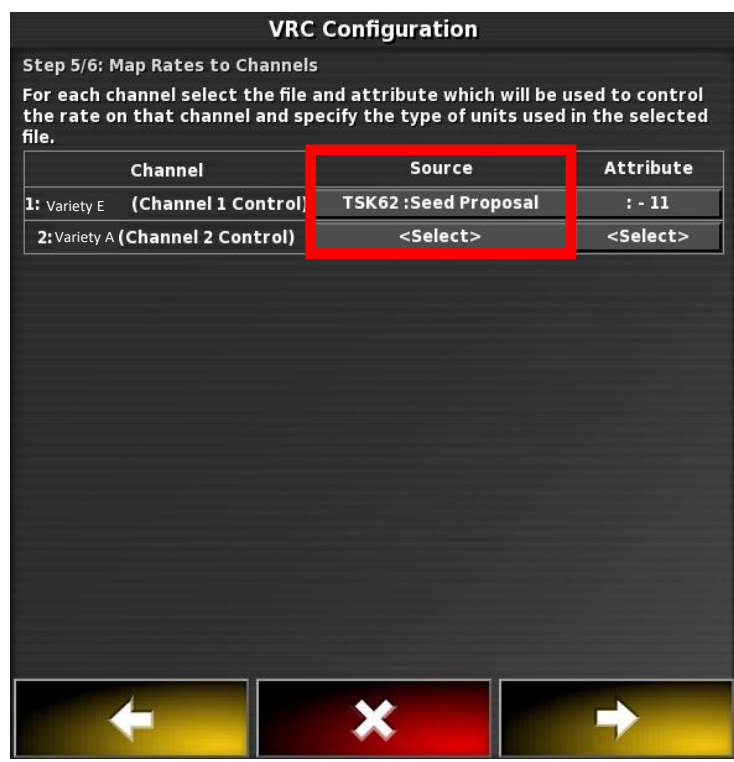


# 15

**Tip:** Ask for the PDF Printout. This report may help with sorting through all of the different **TSK: Seed Proposals**.

# 16

Step 5/6: Map Rates to Channels: Press **Select** under **Source** to choose the Task. Make sure Channel 1 and 2 sources match.



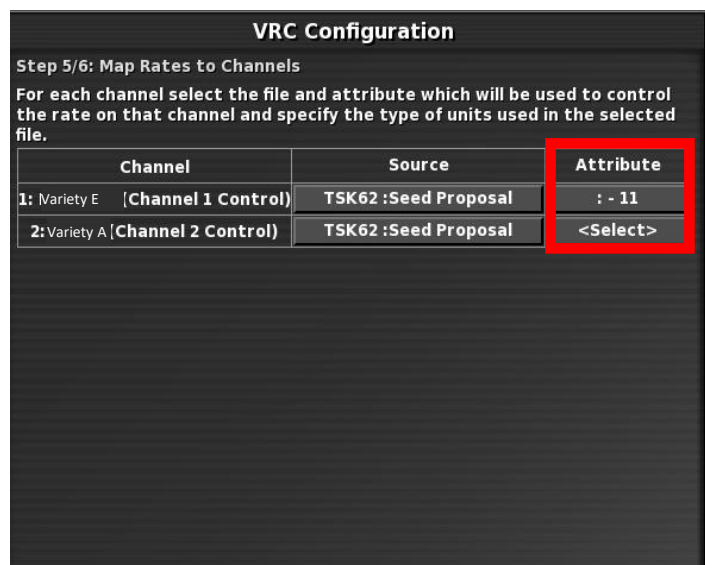
# 17

Press on **TSK62 :Seed Proposal** to highlight and press the **Checkmark** to confirm.



# 18

Step 5/6: Map Rates to Channels: Press **Select** under **Attribute** to choose the Seeding rate. Make sure Channel 1 and 2 sources match.



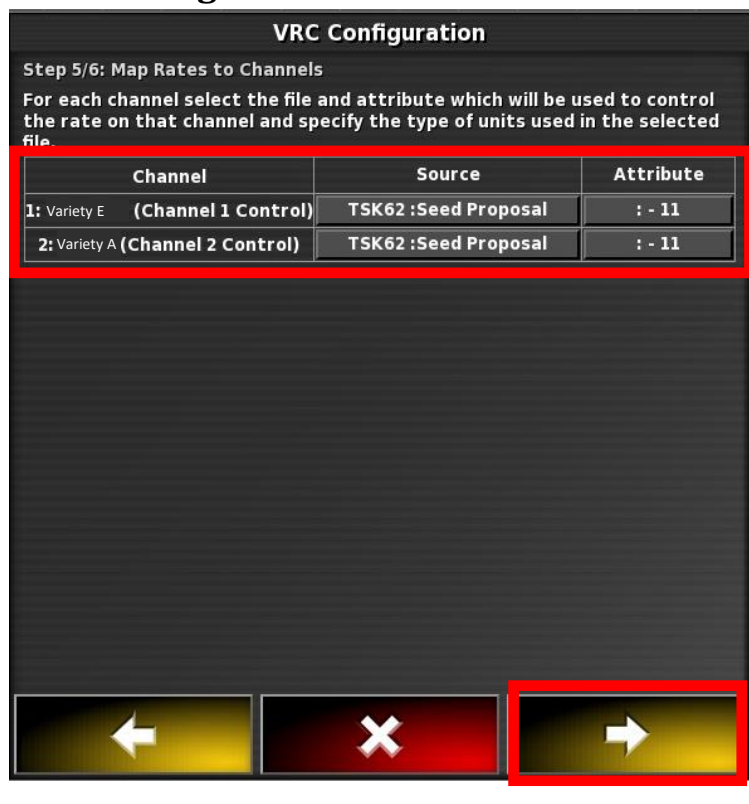
# 19

Press on the attribute; most of the time this will be a variety. Press the **Checkmark** to confirm. Make sure Channel 1 and 2 sources match.



Verify the **Source** and **Attribute** are correct. Press the **Right arrow** to continue.

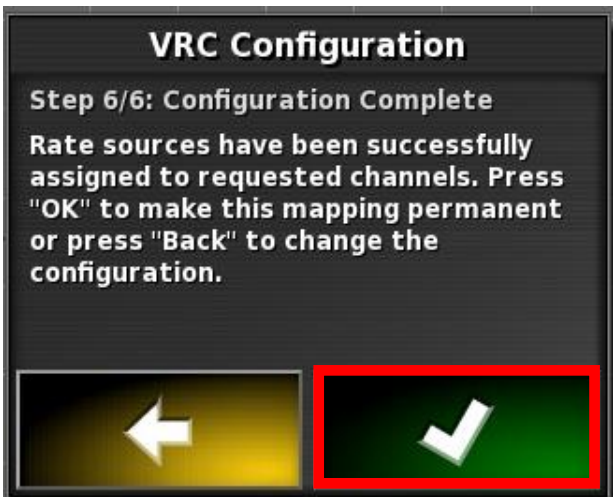
# 20





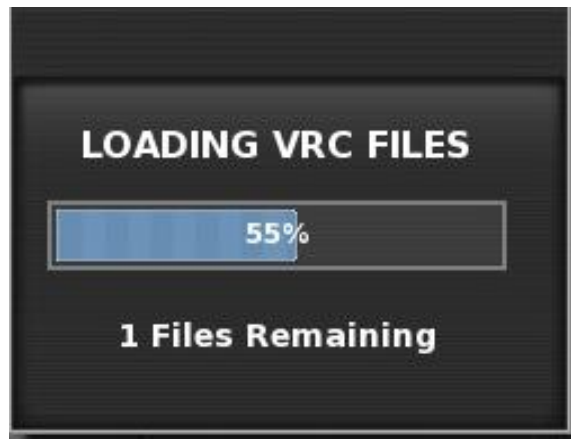
## 21

Step 6/6: Configuration Complete:  
Press the **Checkmark** to approve the VRC.



## 22

Wait for the loading of VRC Files to complete. This process may take a few minutes.



## 23

Press on the **Expand window** icon to make the VT larger.



# Setting Up Split Planter Treatment Data AGCO C3000

The error code in the Virtual Terminal states it is no longer using the Task Controller (TC) to plant. To use the prescription file, press **TC Rate**.

# 24

Virtual Terminal

**TASK STOPPED  
ALARM**  
607

TC RATE  
MAT RATE

Description  
Control rates no longer set by Task Controller  
- Press "TC RATE" to keep the last target rate from the Task Controller  
- Press "MAT RATE" to use the target rate from the material setup

CHANNEL#	TC RATE	MAT RATE	KS/AC
1	0.00	34.00	KS/AC
2	0.00	35.00	KS/AC

OK ESC

# 25

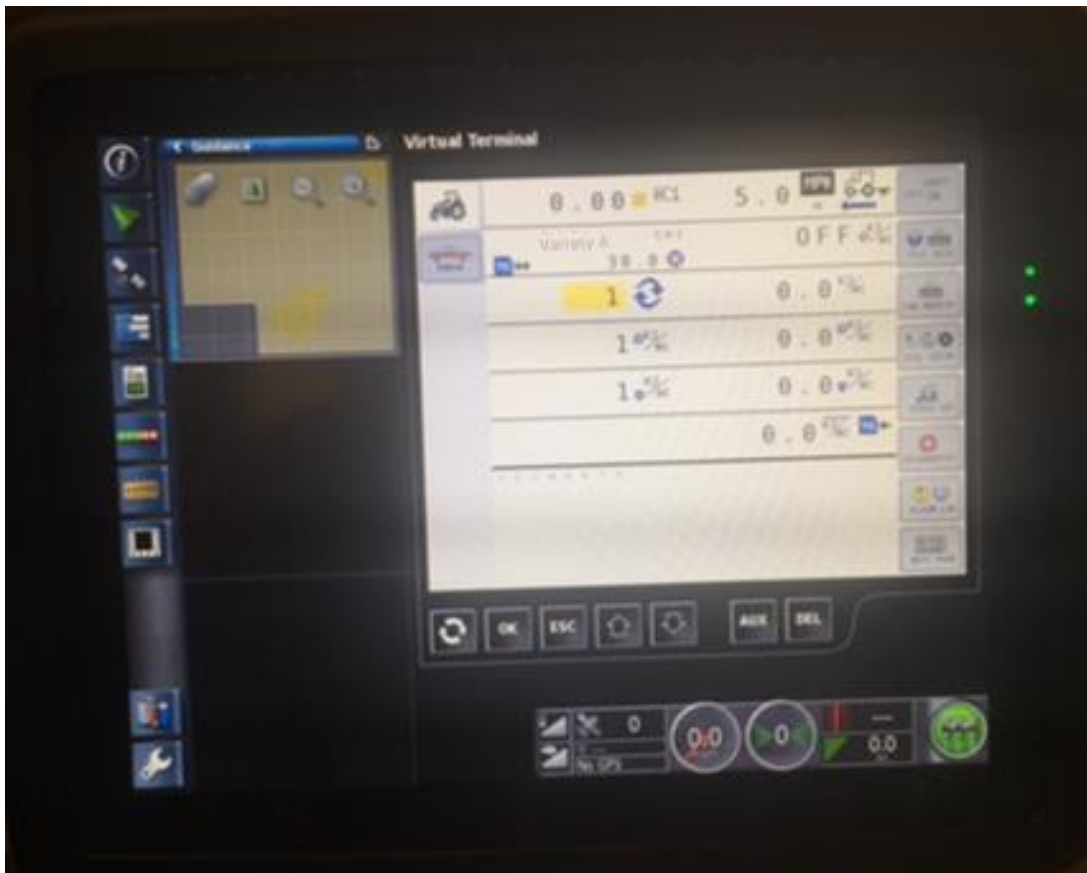
Verify that **CH1** shows the **TC SD** card. This indicates that the planter is planting the prescription. Also make sure **CH 2** is set to **ON** the right side of the screen.

Virtual Terminal

0.00 AC1 5.0 MPH  
Variety E CH 1  
34.0  
1 0.0  
1 0.0  
1 0.0  
CH 2 34F06  
34F06 CH 2  
34F06 CH 2 ON  
FILL DISK  
ROW MONITR  
CTRL SETUP  
NEXT PAGE

AUX DEL

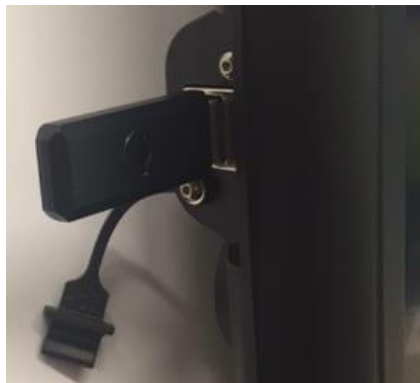
## *Exporting As-Applied Planting Files*



# Exported As-Applied Planting Files AGCO C3000

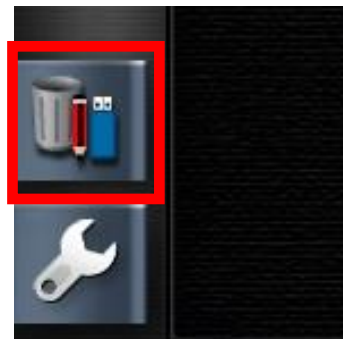
1

Place the USB drive into the left side of the display.



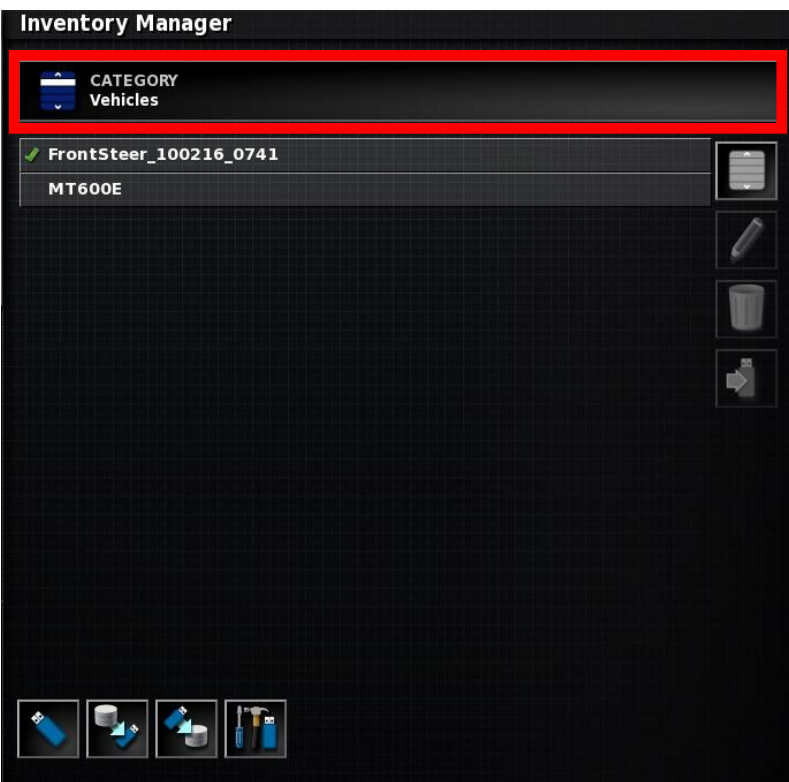
2

On the bottom left hand corner of the screen, press **Inventory Manager**.



3

Press the **Category** icon to change Vehicles to Jobs.



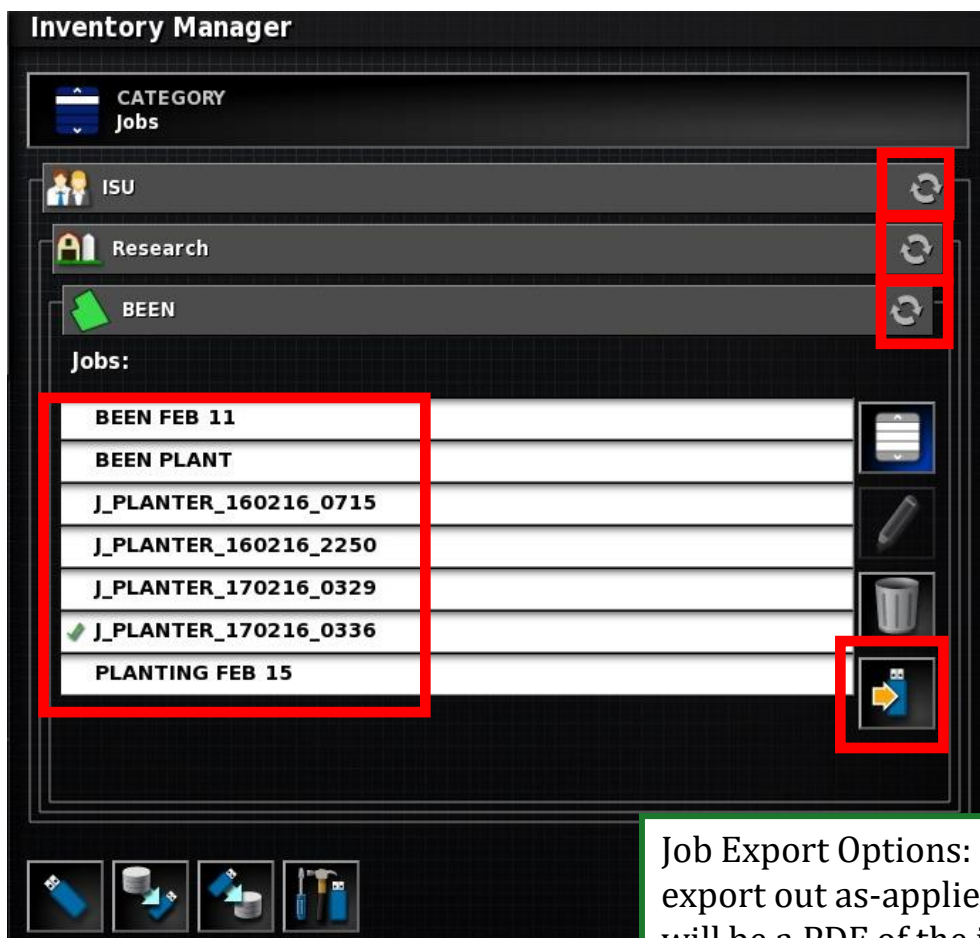
4

Press **Jobs** to highlight this category. Press the **Checkmark** to approve the selection.



5

Highlight the jobs that need to be exported. **Note: this will need to be done individually for each Grower, Farm, and Field. To change Grower, Farm and Field names, select each item individually.** Once jobs are highlighted press on **Export Selected Items to USB**.



6

Job Export Options: Press **Export Job** to export out as-applied data. Job Report will be a PDF of the job.



7

Once “Export Files” is complete, press the **Checkmark** to continue.

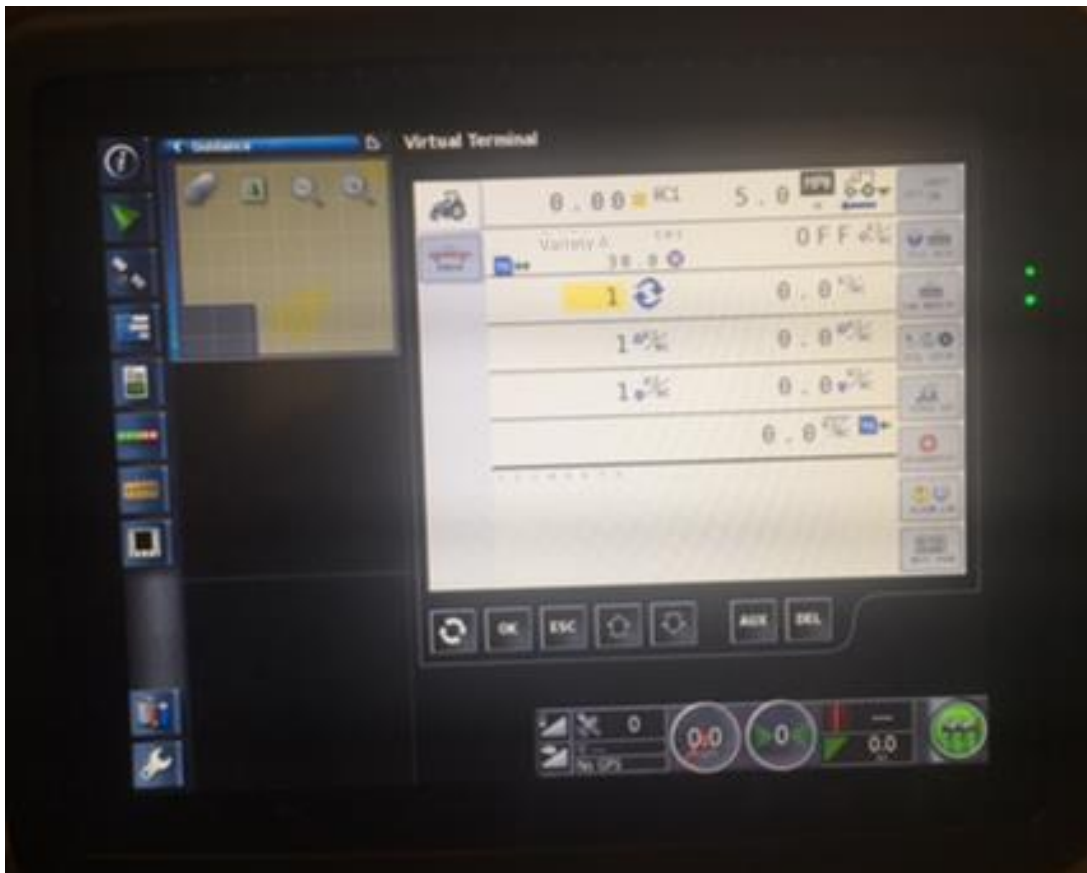


8

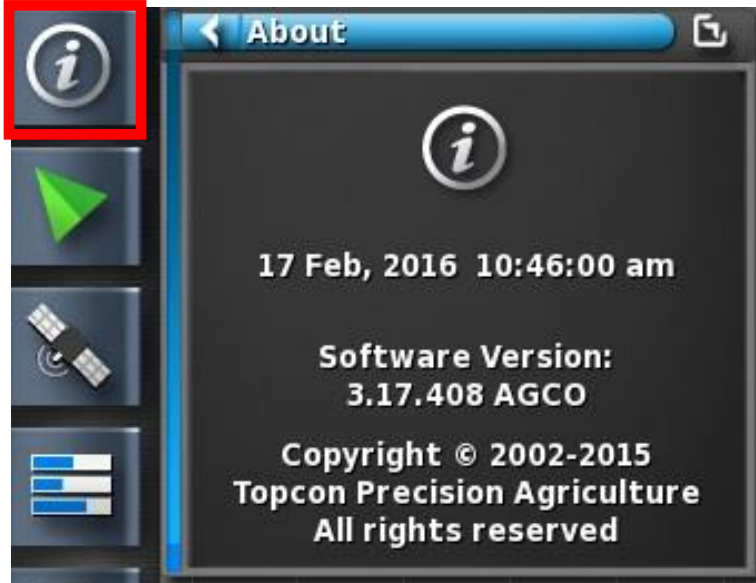
To safely remove the USB drive, press the **USB eject** button located on the bottom left hand side of the monitor.



## Troubleshooting



To check software version on the run/guidance screen, press the **About** icon in the top left corner of the display.



**Do not** import Task Data into the C3000 using the **Data Exchange** button under the Job Menu. This will not work with the current VT.

Icon Names: if you would like information concerning the buttons on the monitor, press the **Question Mark** on the bottom left side of the screen. This produces question marks near each icon; selecting these question marks will display the name of the corresponding icon. Pressing the **Question Mark** button again will disable this feature.





## **What is needed for selecting a VRC?**

- Client, Farm, and Field
- New Job
- Boundary File (This allows the file to fill the boundary edge.)
- Display located near the field with GPS access so the map appears
- USB with Task Data file
- PDF of the Export fields (This can help with selecting the correct field.)

Content written by Christopher Murphy, Program Coordinator II, Iowa State University Department of Agricultural and Biosystems Engineering.

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