



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: 4/20/2016

Prescription File Management



Prescription File Management

Case IH Pro 700

1

To create a VRS prescription file use the Export tool for Pro700 display. This will generate a .cn1 folder that will include the file format for Case.

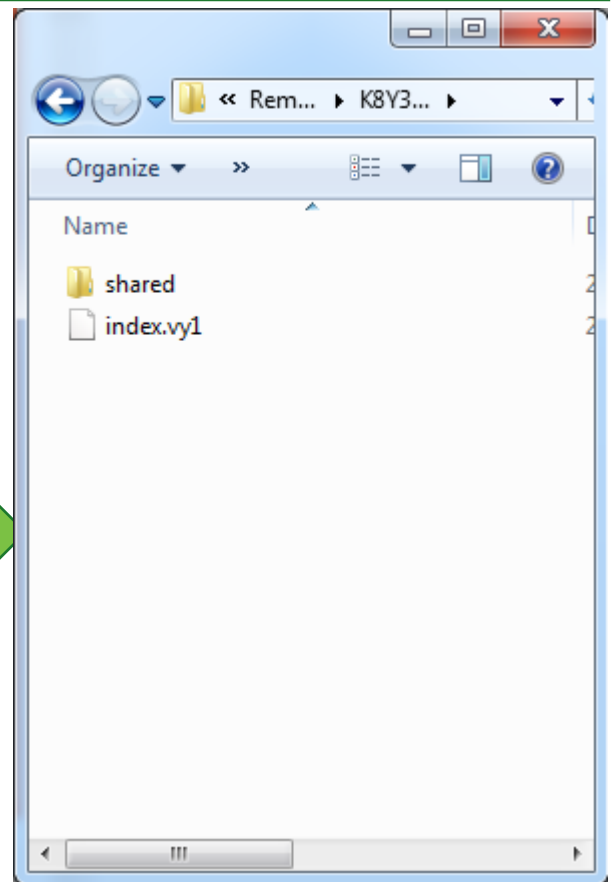
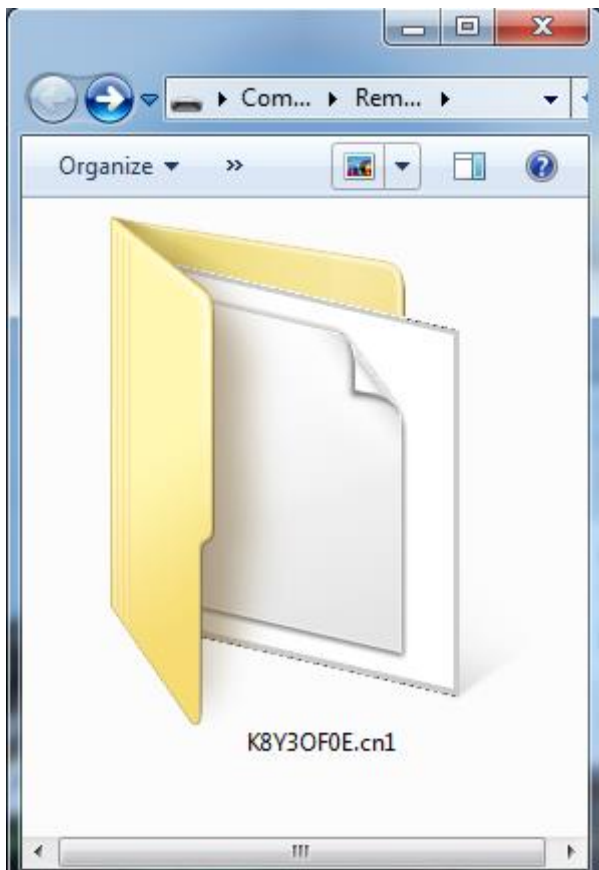
Prescription units must be in kilo seeds per acre and a contoured map.

Note: Grower, Farm and Field have to be created **EXACTLY** like the farmers display data. If you don't do this the Farmers lines will not show up with the VRS maps. This is case sensitive.

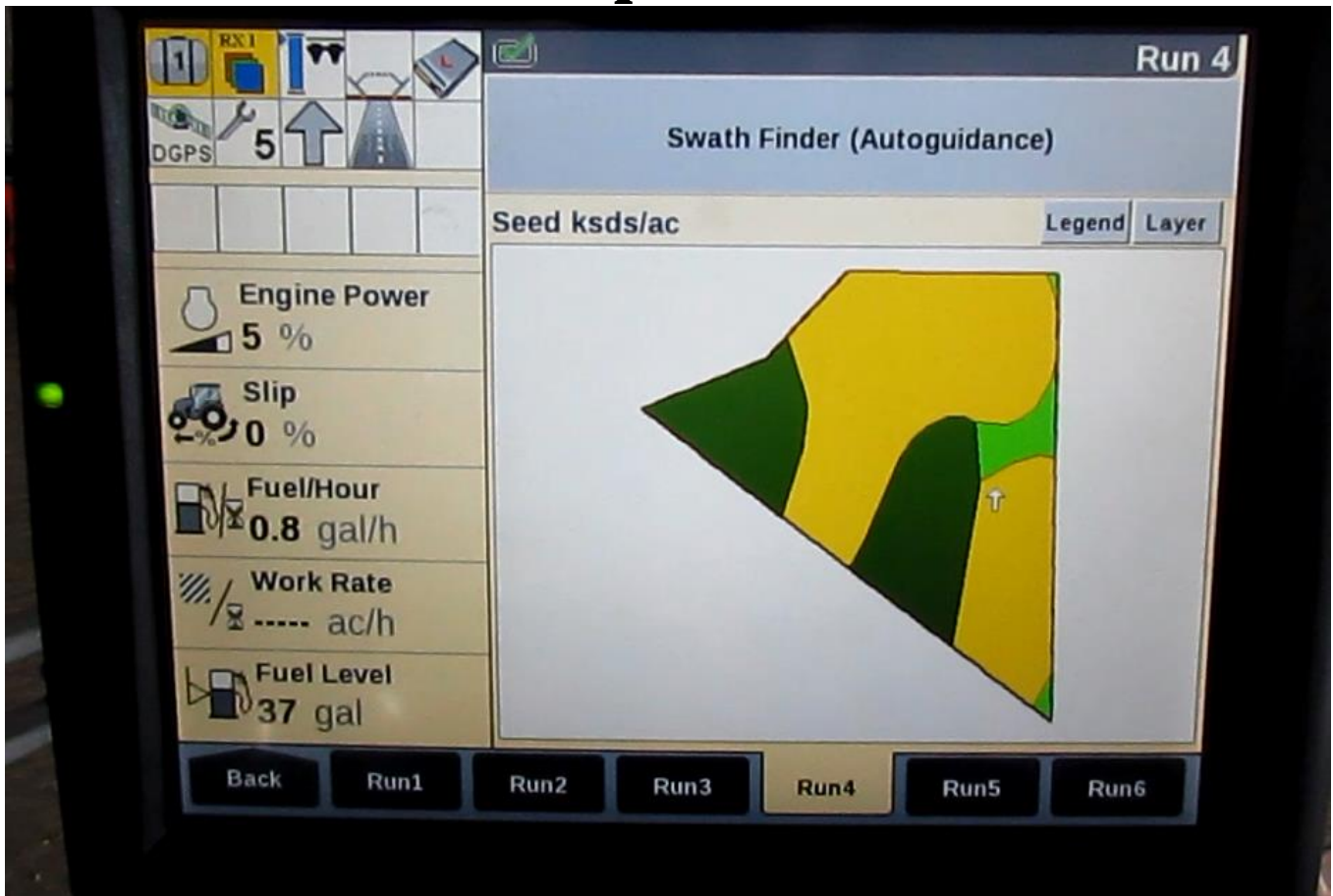
2

The Pro 700 monitor only accepts a USB thumb drive. It is recommended to use CNH's compatible USB drive. This can be ordered at a local CNH dealer.

Using the dealer recommended thumb drive use Windows Copy/Paste tools to copy the *.cn1 folder on to the highest level of the drive. The .cn1 folder contains the .vy1 file for the Pro 700 display.



Reading and Selecting VRS Prescription Files



Reading VRS Prescription Files

Case IH Pro 700

1

Place the USB drive into the monitor with all of the VRS maps for the farmer. **Note: the USB drive can only be inserted and removed from the monitor when the tractor is turned off. If the USB drive is removed during operation there is potential for memory loss.**

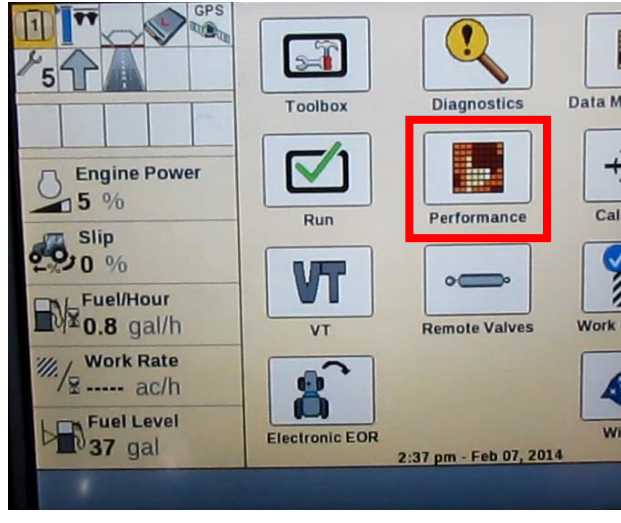
Note: The USB MUST remain with the monitor at all times for logging purposes.

Selecting VRS Prescription Files

Case IH Pro 700

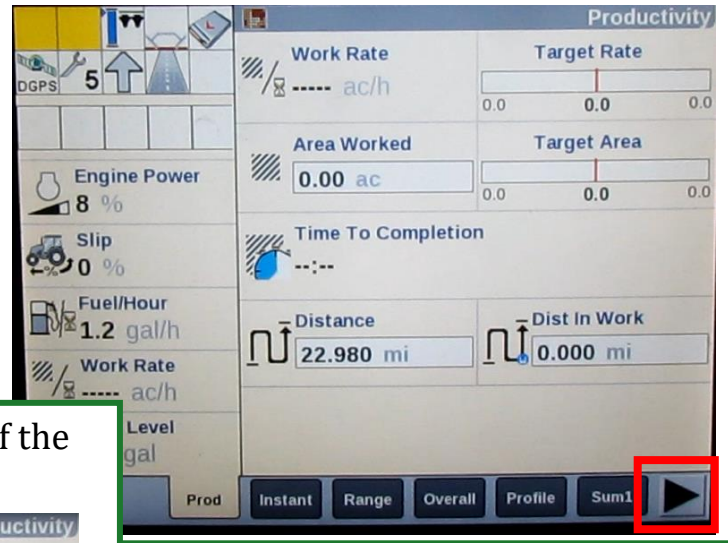
1

To load the Prescription map press the **Performance** icon on the screen.



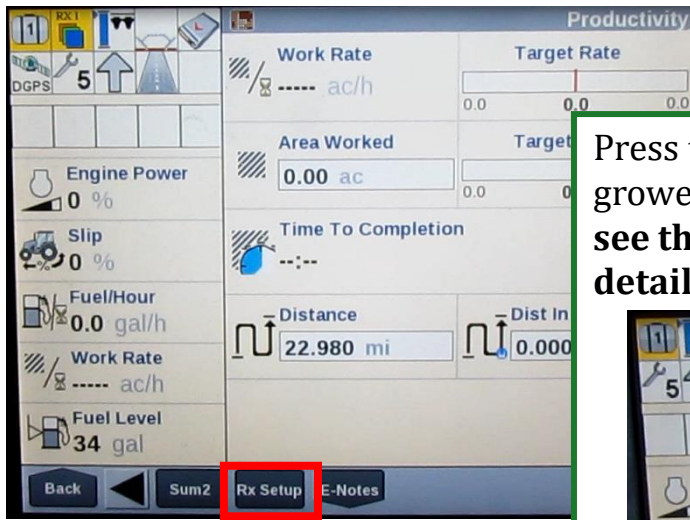
2

Press the **right arrow** icon to change the tabs at the bottom of the screen until the Rx Setup tab appears.



3

Press the **Rx Setup** tab on the bottom of the page.



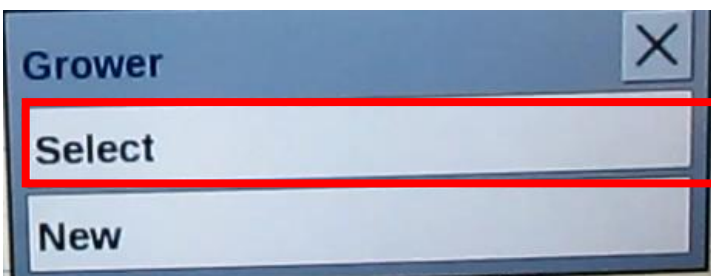
4

Press the **Grower** box to select the correct grower. **Note: for the Auto Reload Rx please see the Troubleshooting section for more details.**



5

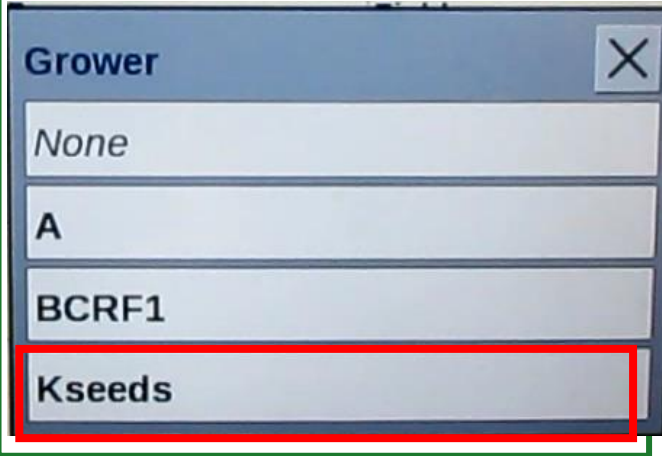
Press on the **Select** box to select the Grower from the USB file.



Selecting VRS Prescription Files Case IH Pro 700

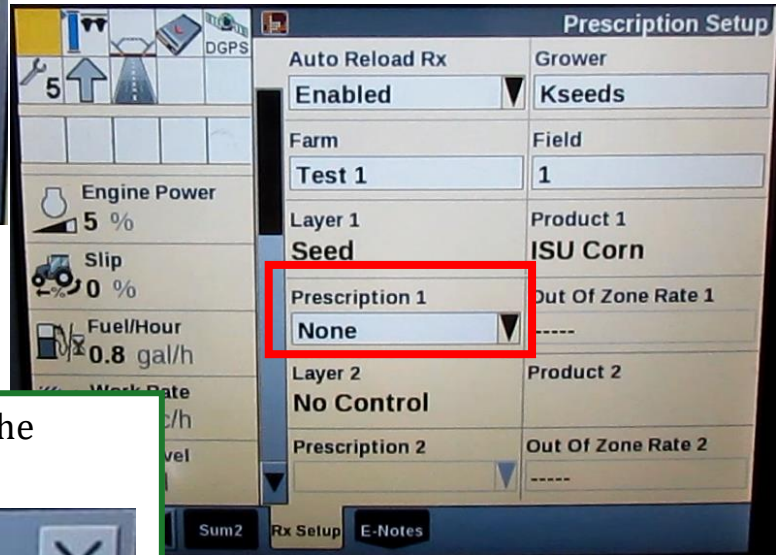
6

Select the correct **Grower** by pressing on the correct name.



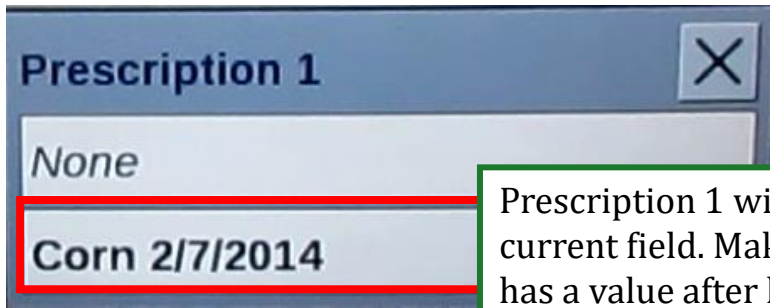
7

The Farm and Field will need to be selected if there is more than one Farm or Field under each Grower. Press **Prescription 1** to select the VRS map.



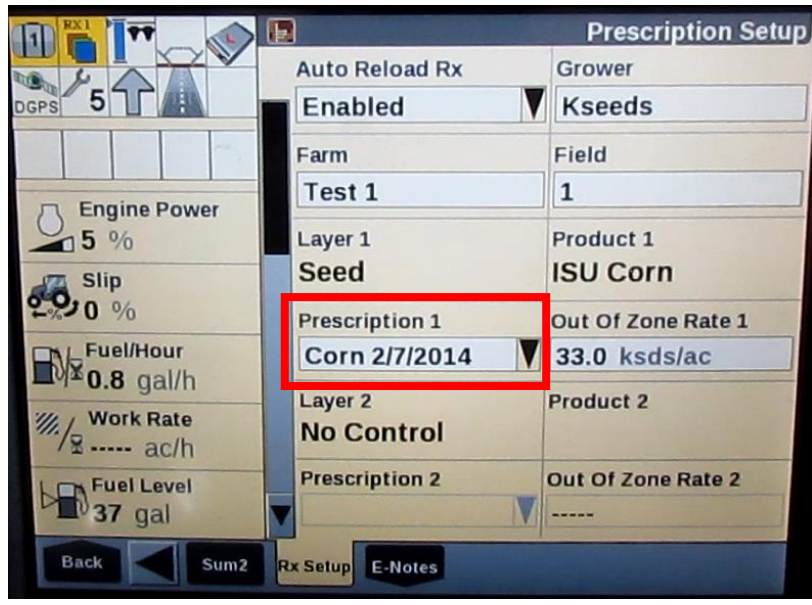
8

Select the **Prescription** by Pressing on the correct file name.



Prescription 1 will show the correct VRS for the current field. Make sure the **Out of Zone Rate 1** has a value after loading VRS map. If there is no Out of Zone Rate enter in a Default rate.

9



Selecting VRS Prescription Files Case IH Pro 700

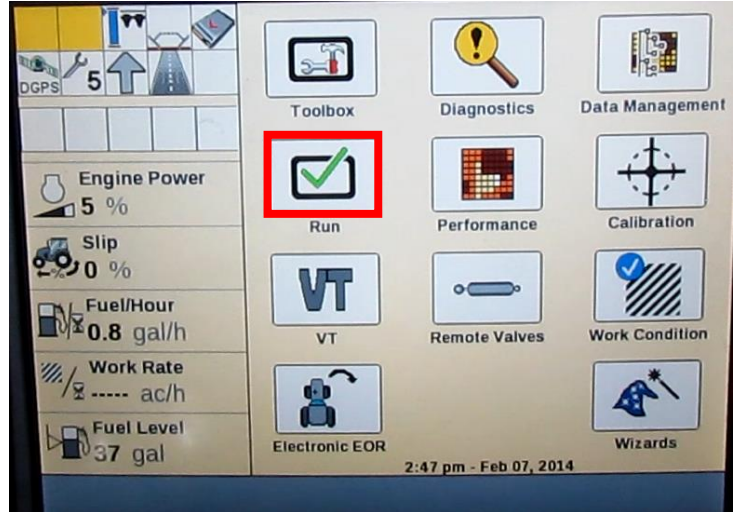
10

Press the **Back** icon to return to the menu screen.



11

Press on the **Run** icon to head to the Run screens.



12

Press the **Run** tab at the bottom that is setup for the mapping screen. For this example Run 4 is being selected.



13

Press **Layer** to show the VRS map.

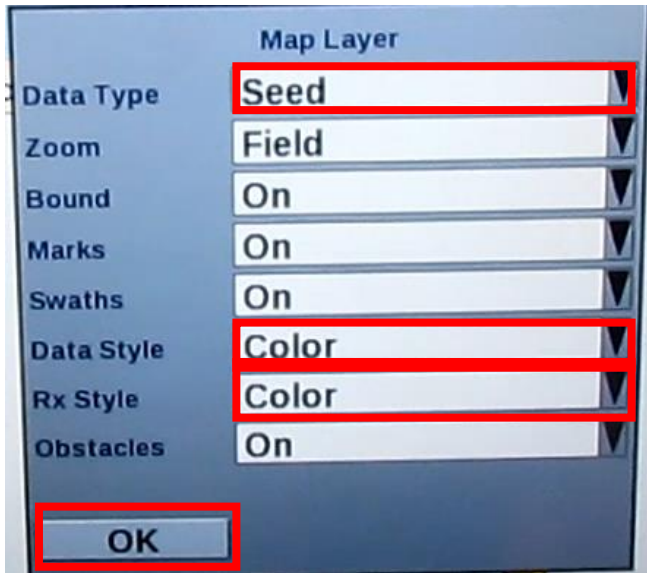


Note: Run screens will vary on every monitor.

Selecting VRS Prescription Files Case IH Pro 700

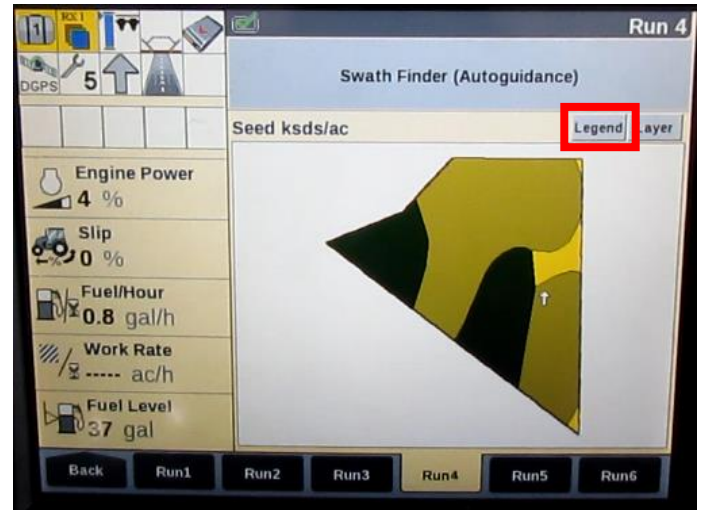
14

Press on the **Data type** to show the **Seed** Layer, **Data Style** as **Color** and **RX Style** to be **Color**. Press **OK** to move on.



15

Press on **Legend** to change the color for each rate. **Note: the map may just show one color when first starting the Legends will need to be changed to show the correct rate.**



16

Adjust the legend by pressing the **ksds/ac** and using the correct VRS rates for each field.



17

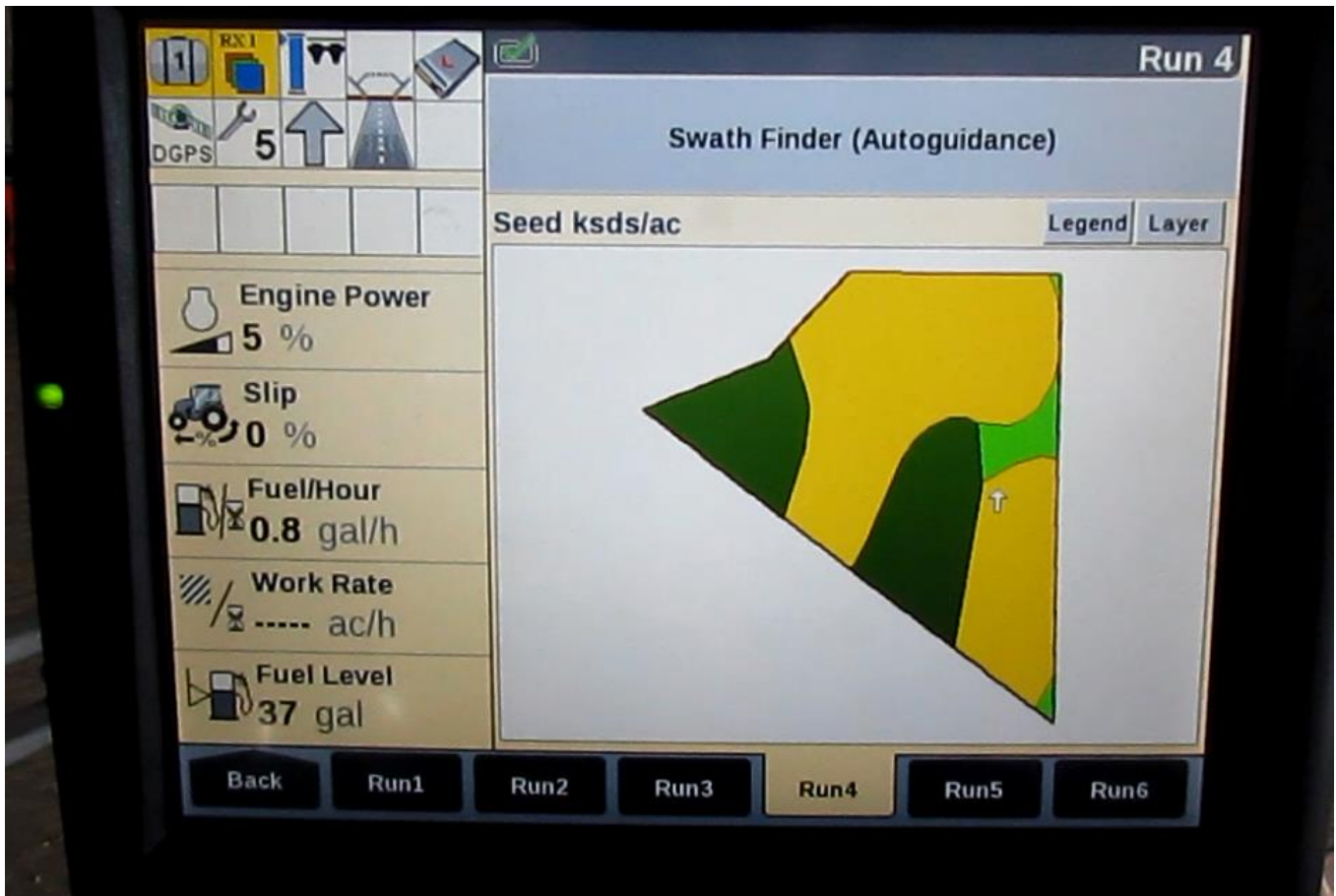
Use the Calculator to enter in the correct Rate. Press **Enter** to continue. **Note: this is in kilo seeds.**



Shapefile Prescription Management Version 30.6.0.0



Importing Shapefiles with Version 30.6.0.0



Importing Shapefiles with Version 30.6.0.0

Case IH Pro 700

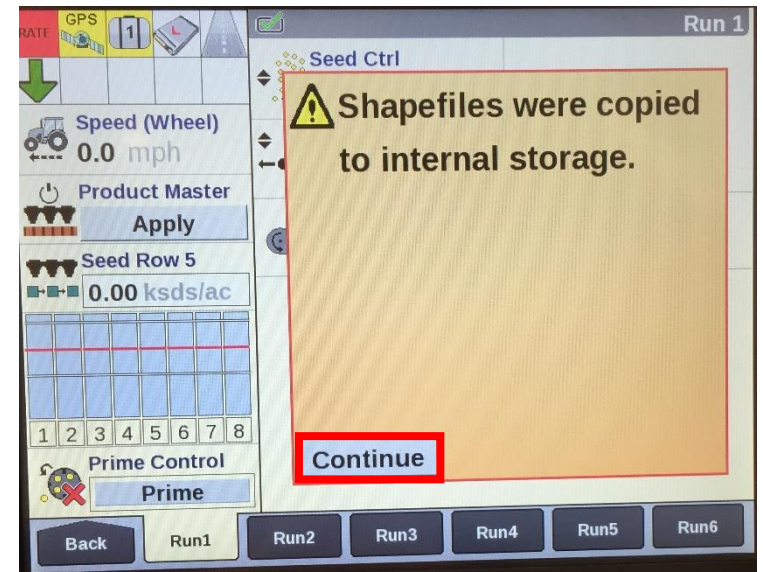
1

While the machine is off insert the USB containing the shapefiles into the Pro700. Once the USB is inserted into the monitor power on the machine.



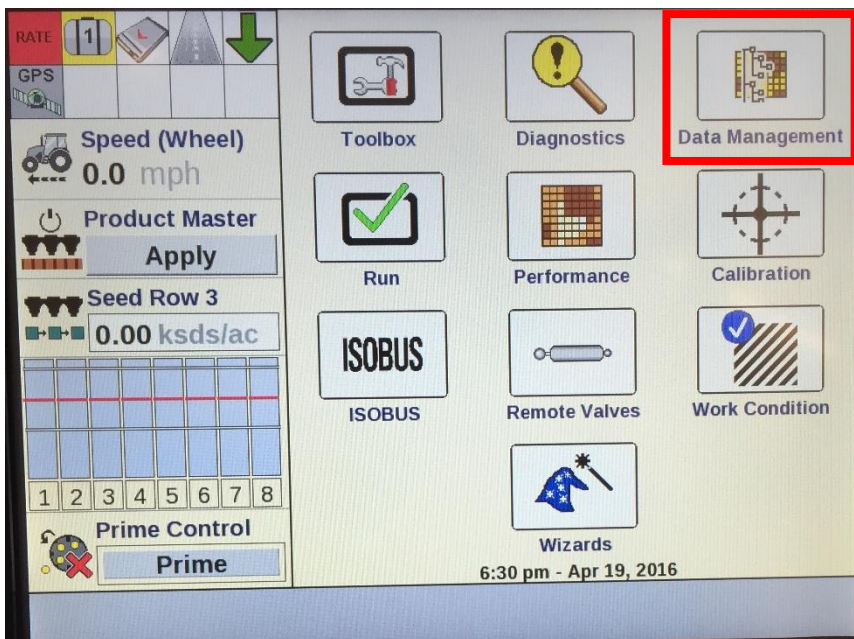
2

Wait for the display to power on, press **Continue** to approve the shapefiles that have been copied to the internal storage.



3

Press **Data Management** to import each shapefile with the correct grower, farm and field. **Note: this will need to be done for each individual shapefile.** If the Data Management isn't on the screen press the **Back** button on the bottom left side of the screen.

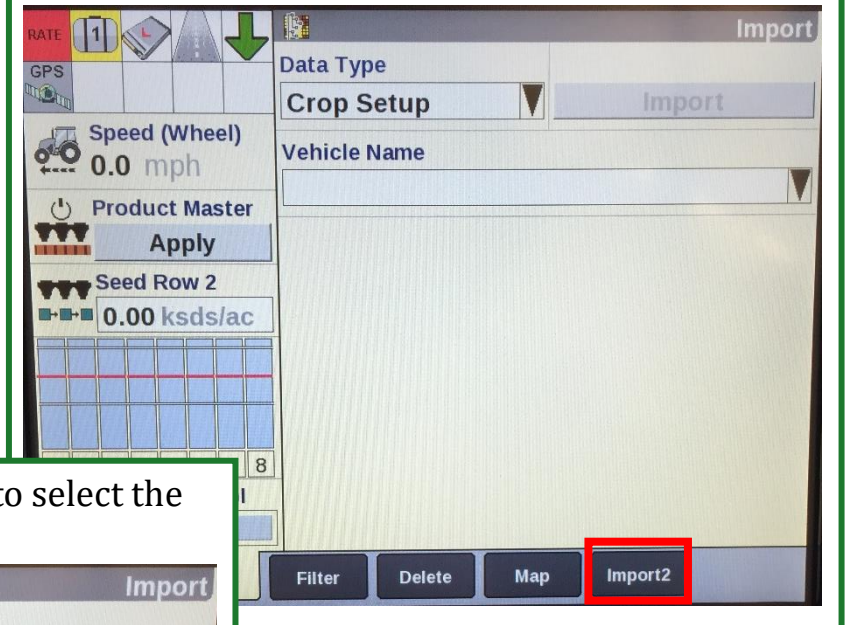


Importing Shapefiles with Version 30.6.0.0

Case IH Pro 700

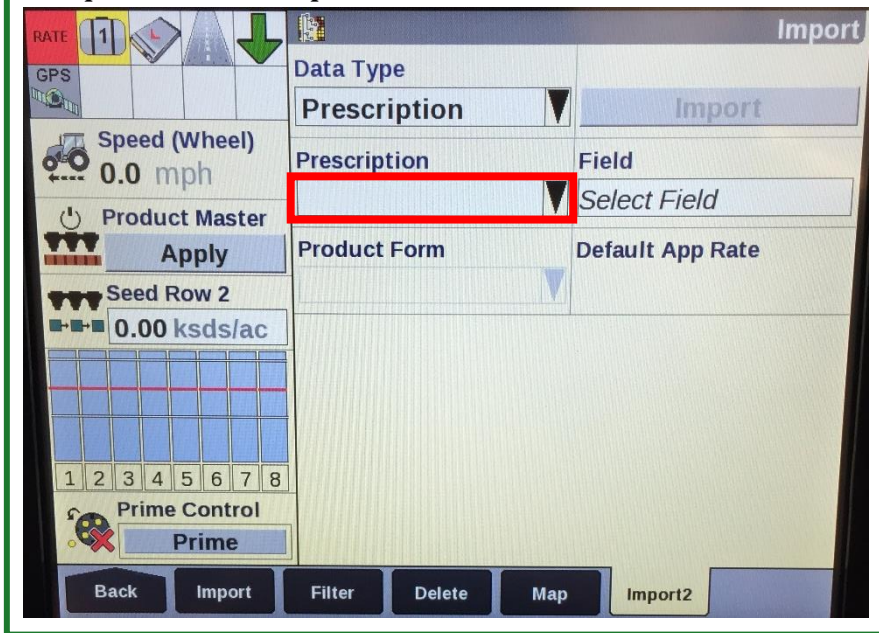
4

Press **Import2** to import shapefiles.



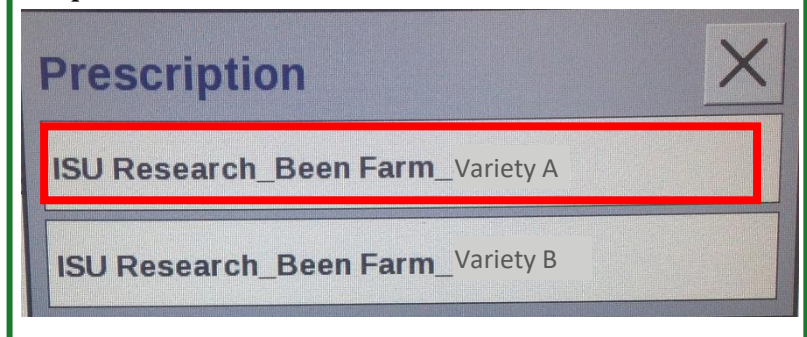
5

Press on the **Prescription** drop down, to select the Shapefile to be imported.



6

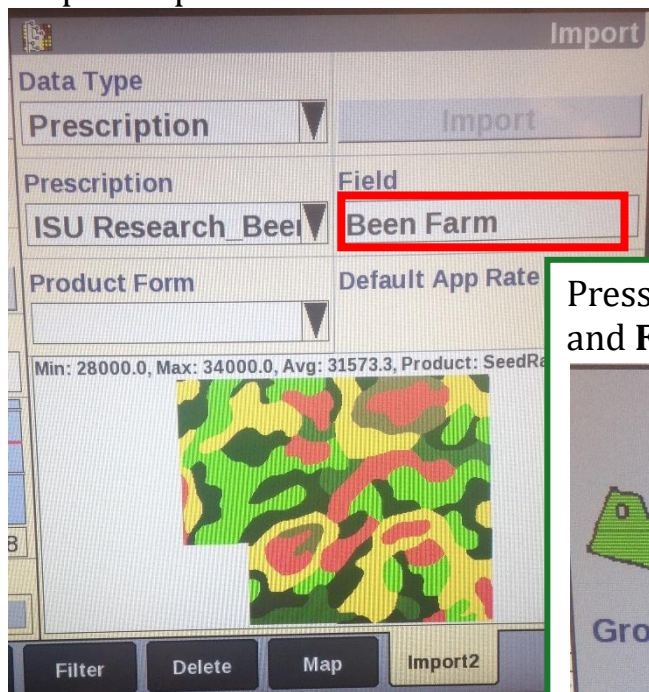
Press on the **prescription file** that needs to be imported.



Importing Shapefiles with Version 30.6.0.0

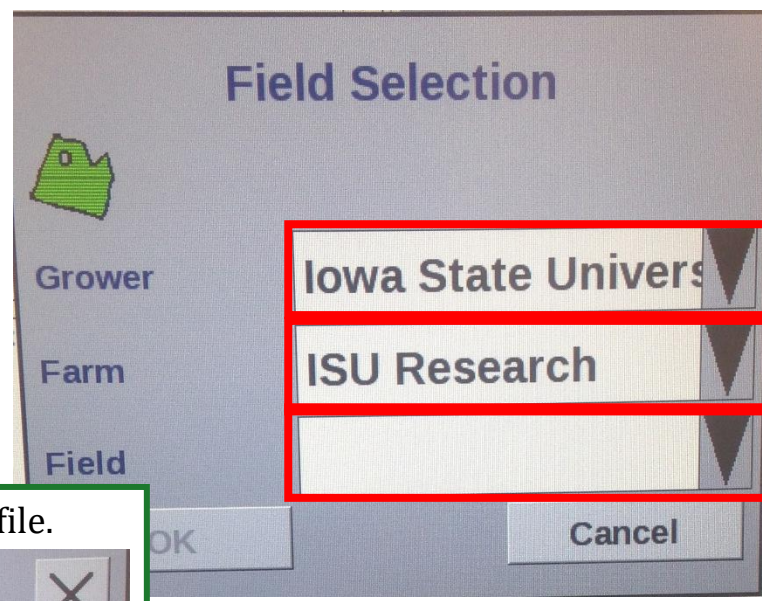
Case IH Pro 700

7 Press on **Field** under Field to associate Grower, Farm, and Field information with the prescription.

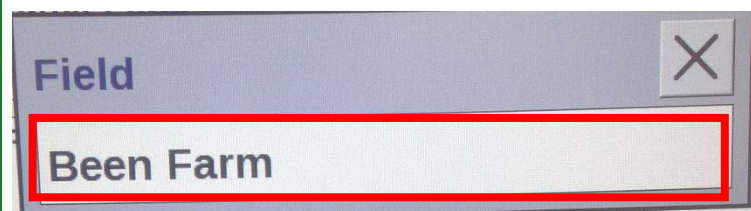


8

Press on the Drop down next to **Grower, Farm** and **Field** to select the correct field.



9 Press on the **Field name** to select the file.



10

Press **OK** to approve the Grower, Farm, and Field selection.



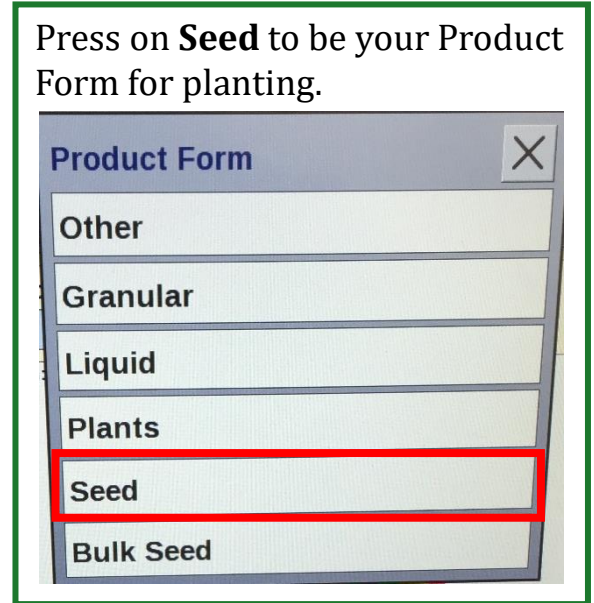
11

Press on **Product Form** drop down.



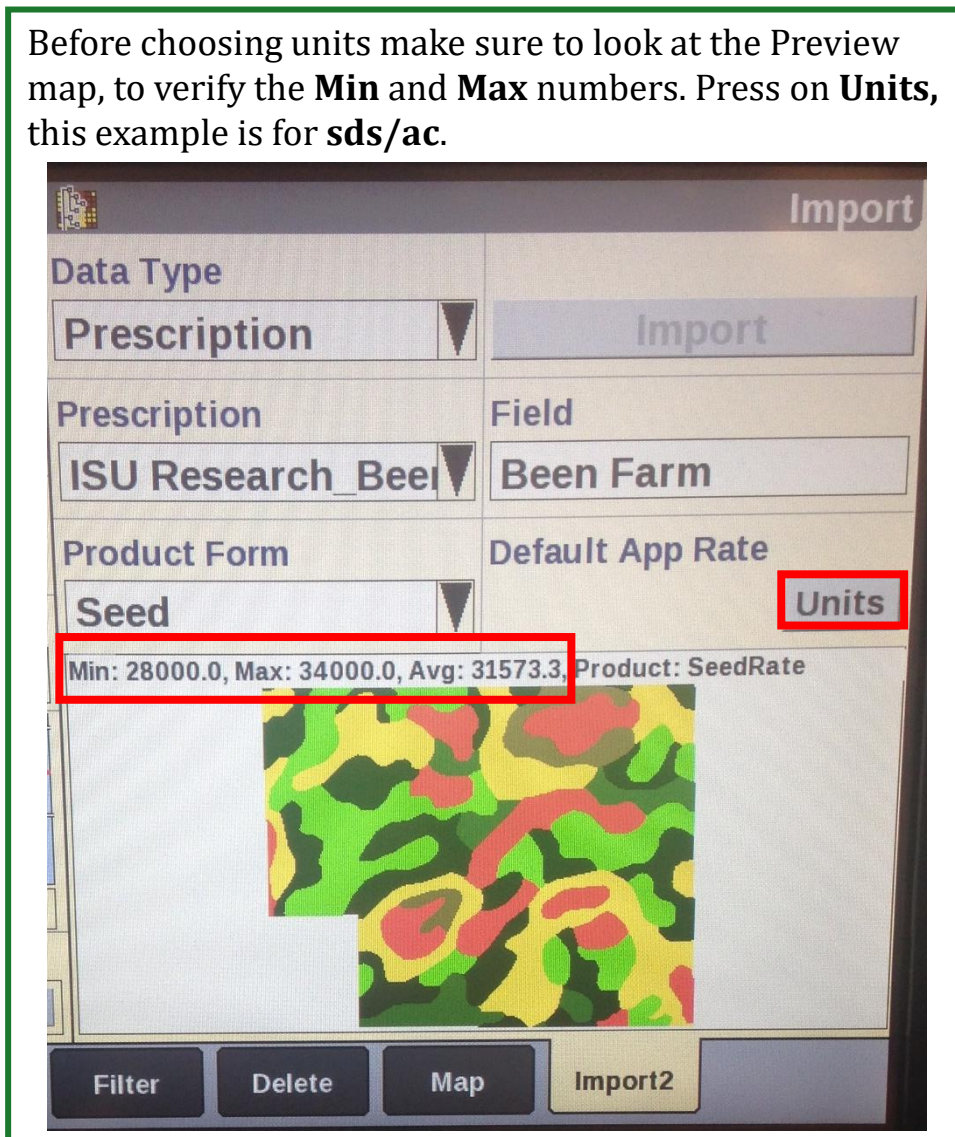
12

Press on **Seed** to be your Product Form for planting.



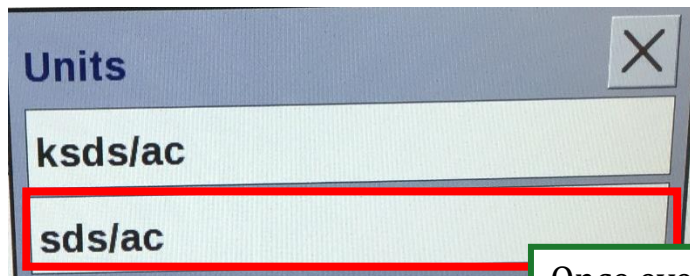
13

Before choosing units make sure to look at the Preview map, to verify the **Min** and **Max** numbers. Press on **Units**, this example is for **sds/ac**.



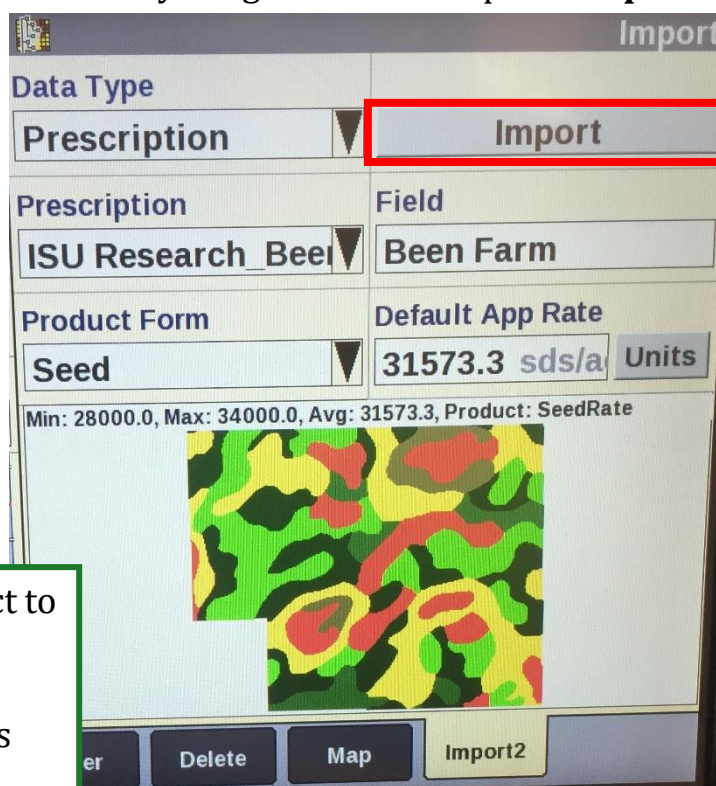
14

Press on the correct units for the prescriptions
sds/ac.



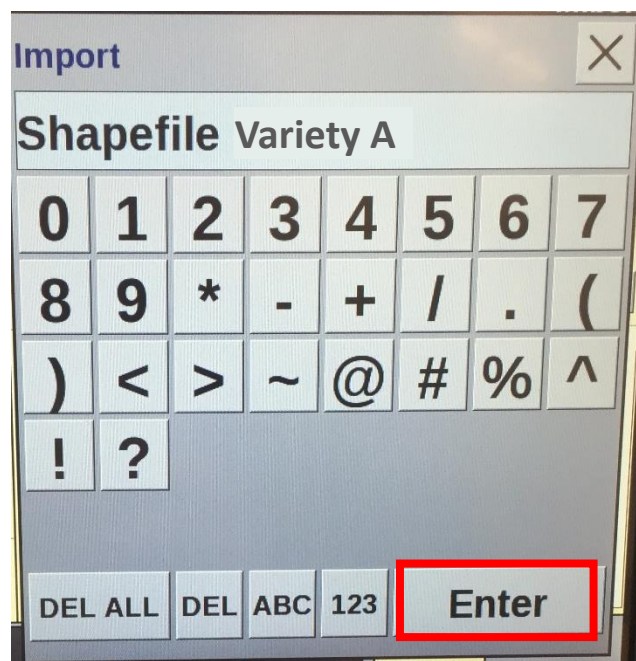
15

Once everything looks correct press **Import**.



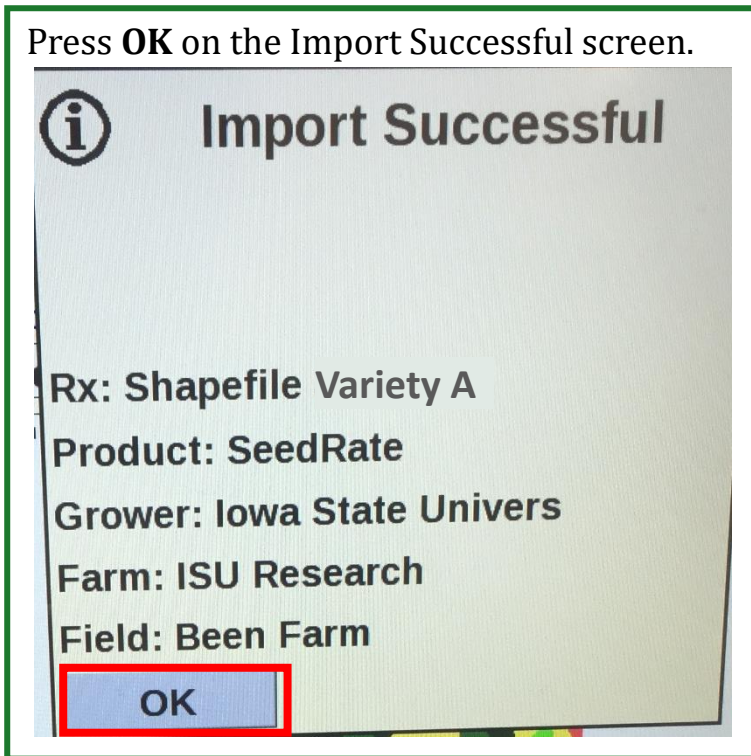
16

Enter in a unique name with product to
show the difference between
shapefiles and **.CN1** files. Use the
keyboard to enter in the name, press
Enter to confirm name.



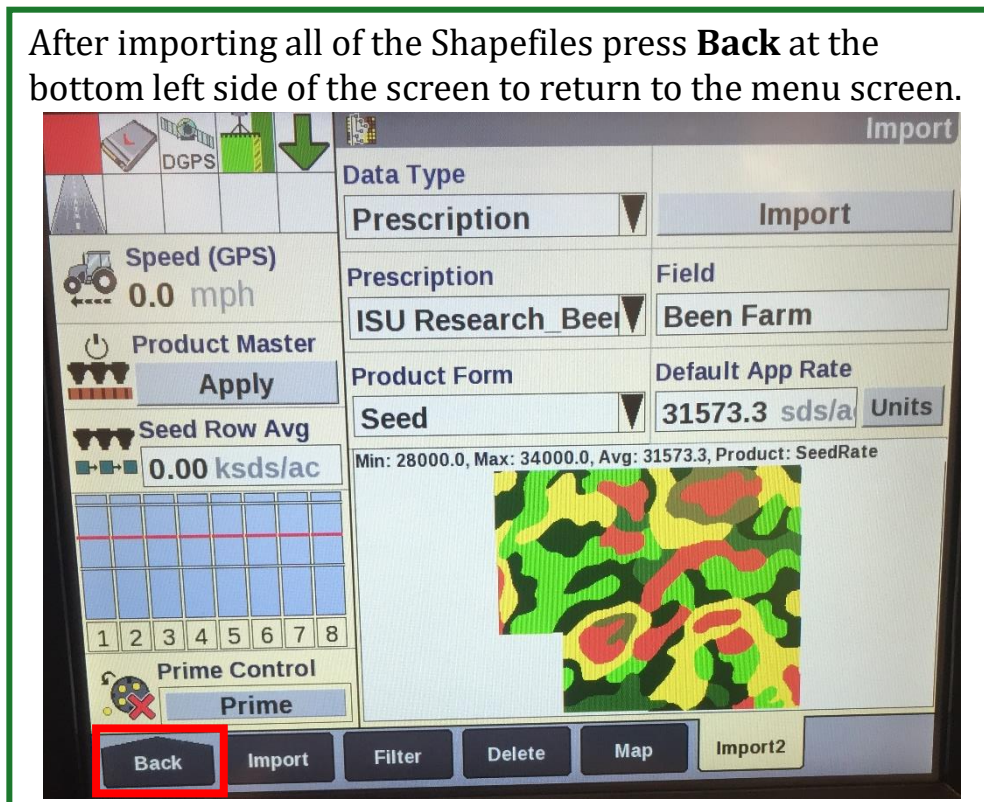
17

Press **OK** on the Import Successful screen.

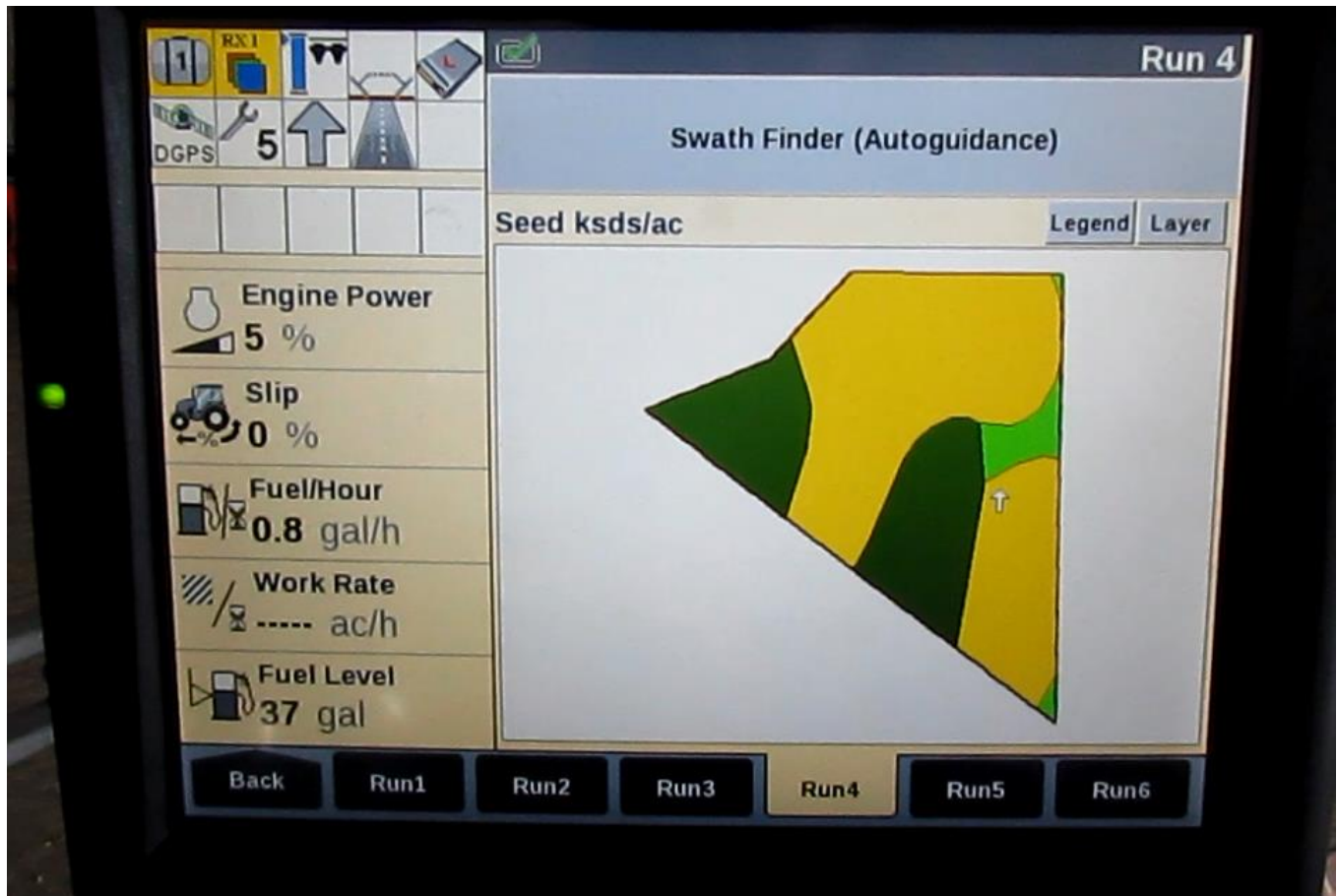


18

After importing all of the Shapefiles press **Back** at the bottom left side of the screen to return to the menu screen.



Using Shapefiles with the Wizard Version 30.6.0.0



Note: When using the Wizard, Products have to be setup in the Wizard operations screen.

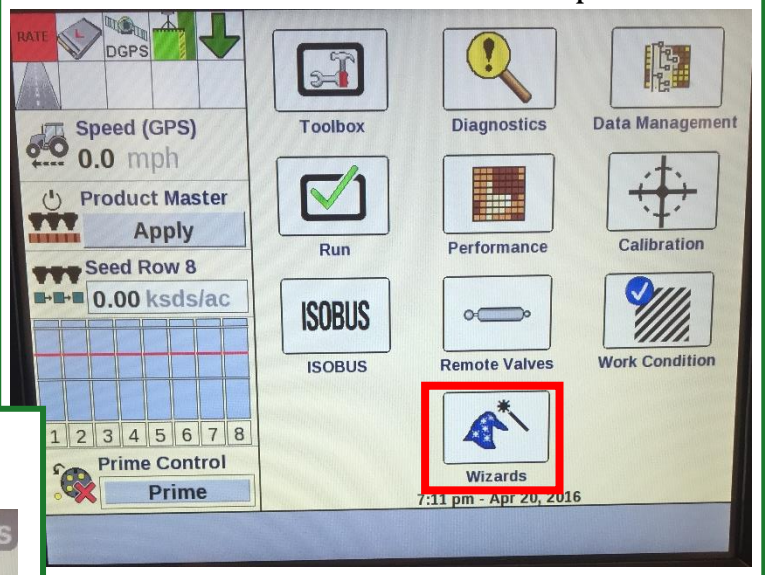
1

After importing the Shapefiles the USB will need to stay in the display with both the .cn1 folder and Shapefile folder on the card. **Note:** the USB drive can only be inserted and removed from the monitor when the tractor is turned off. If the USB drive is removed during operation there is potential for memory loss.

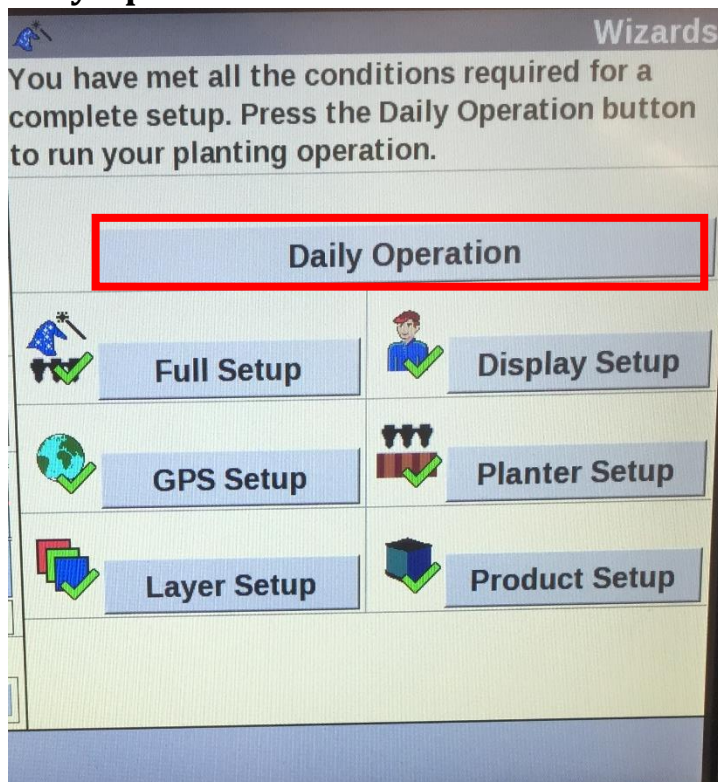
Note: The USB MUST remain with the monitor at all times for logging purposes.

2

Press on the **Wizards** to start the operation.

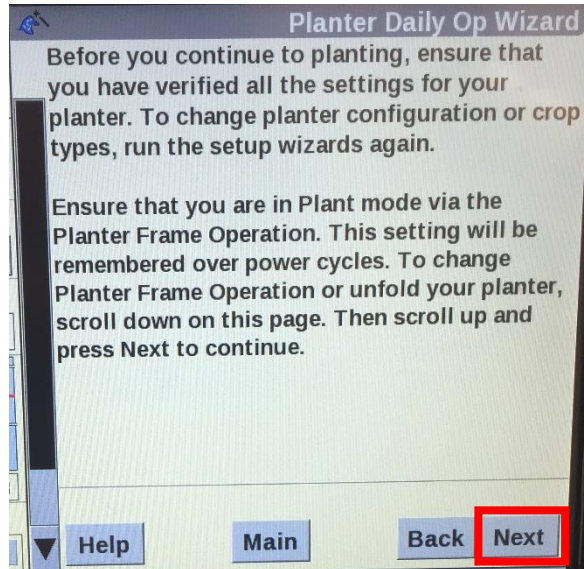
**3**

Once everything shows a check mark press **Daily Operations**.



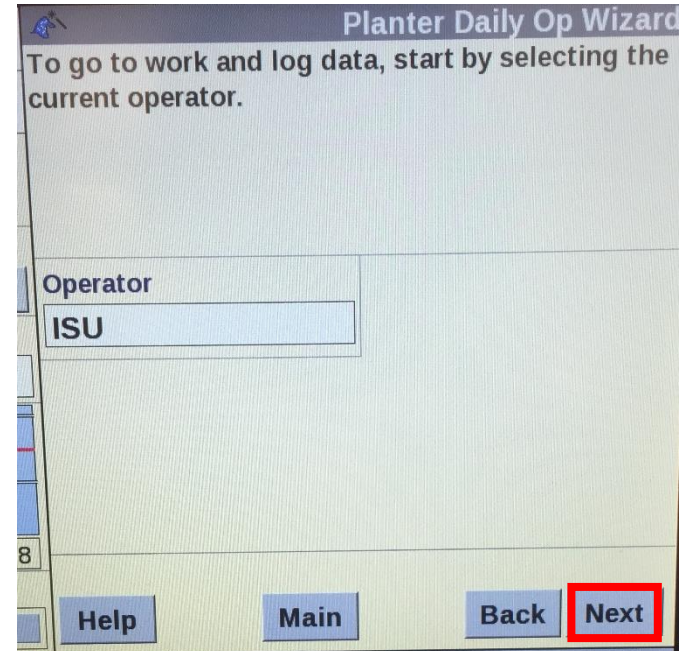
4

Note: The settings in this document are not actual planter setups. The disclaimer wants you to check your planter settings, to continue press **Next**.



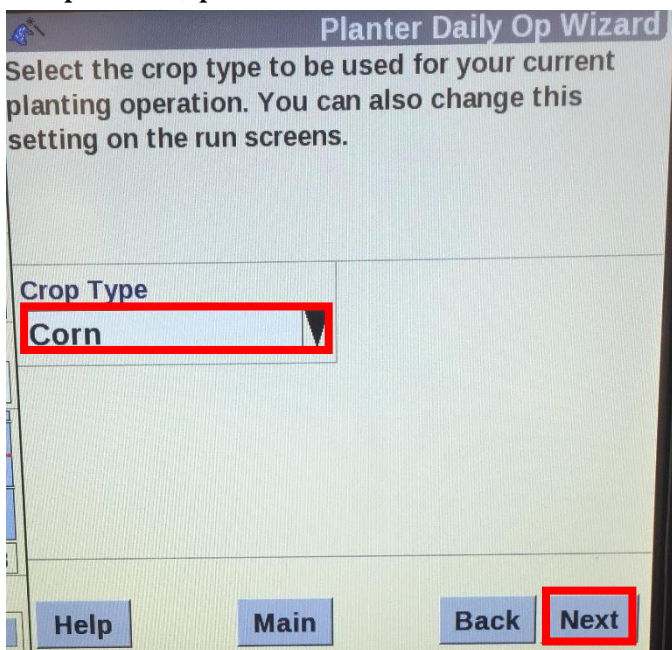
5

Select your Operator, press **Next** to continue.



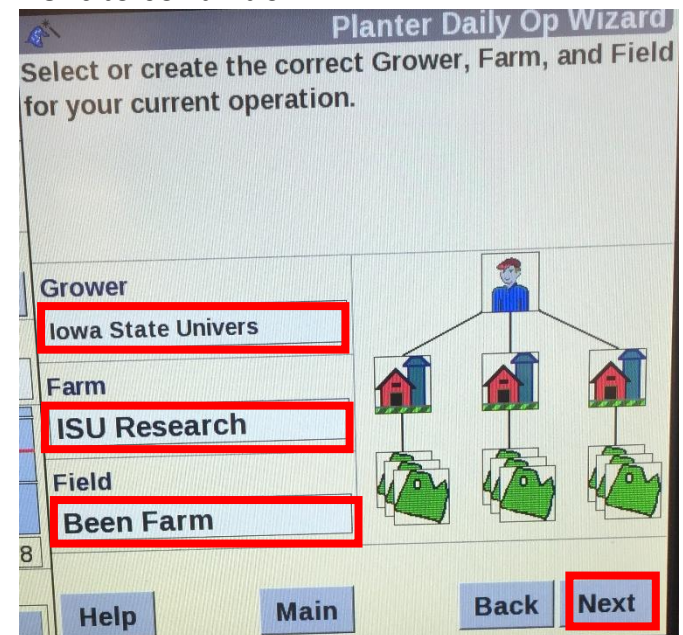
6

Choose your Crop type by pressing on the drop down, press **Next** to move on.



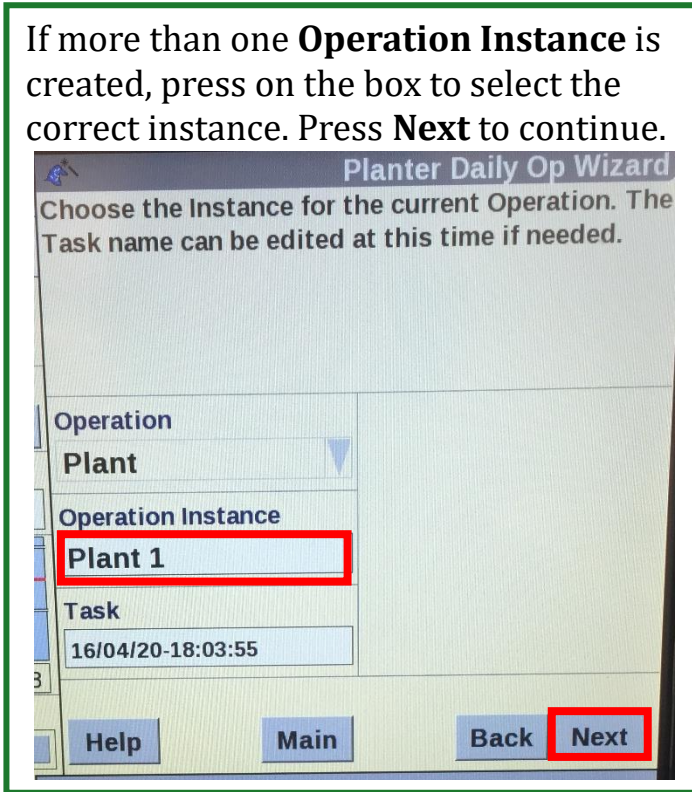
7

Choose the Grower, Farm, and Field by selecting the box under each item. Press **Next** to continue.



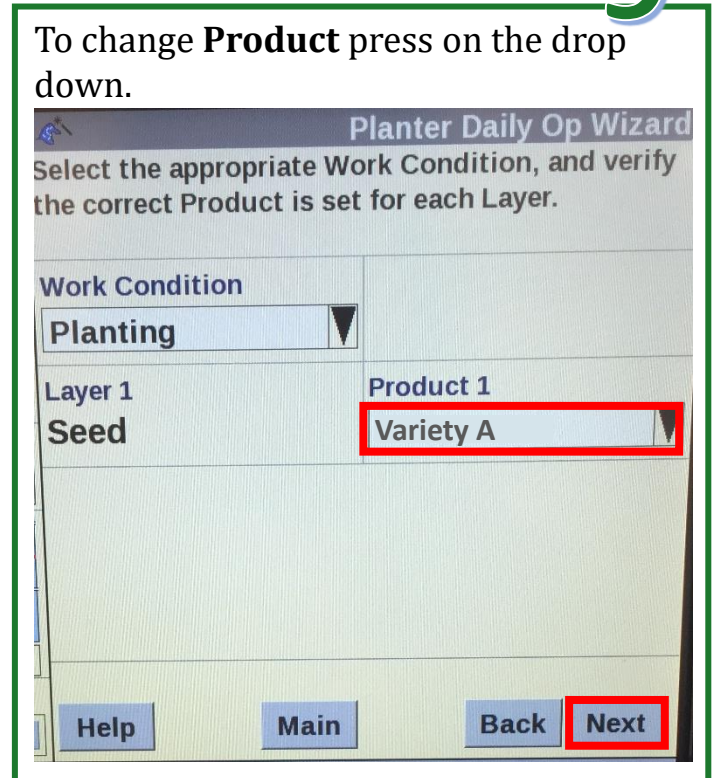
8

If more than one **Operation Instance** is created, press on the box to select the correct instance. Press **Next** to continue.



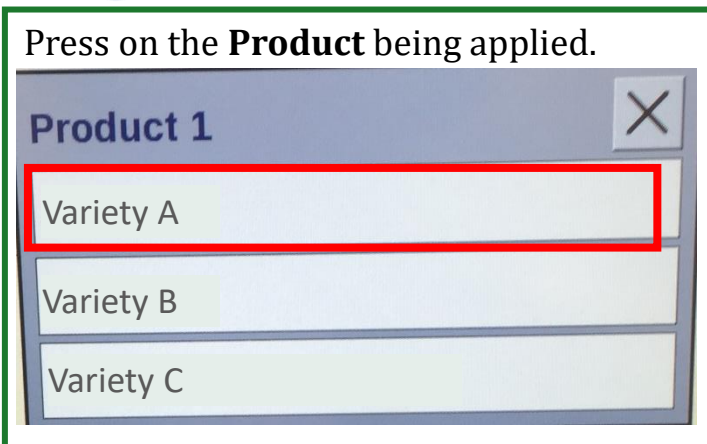
9

To change **Product** press on the drop down.



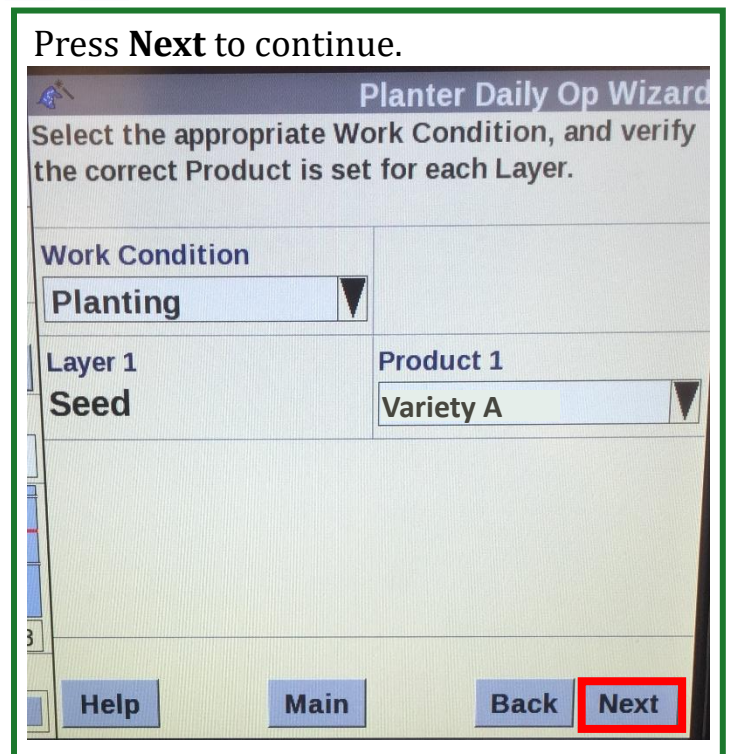
10

Press on the **Product** being applied.



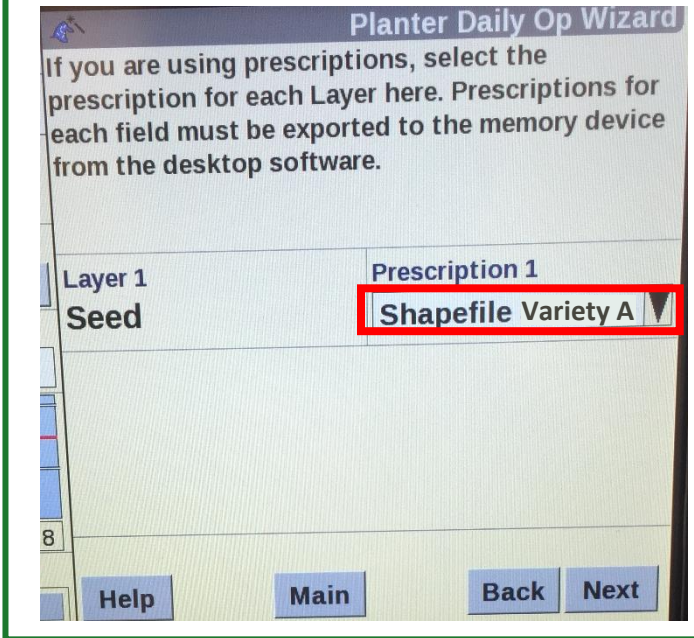
11

Press **Next** to continue.



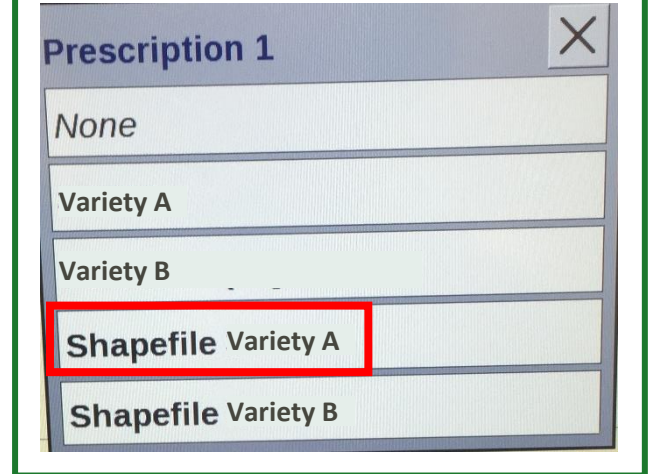
12

Press on the drop down for **Prescription 1** to select the VRS.



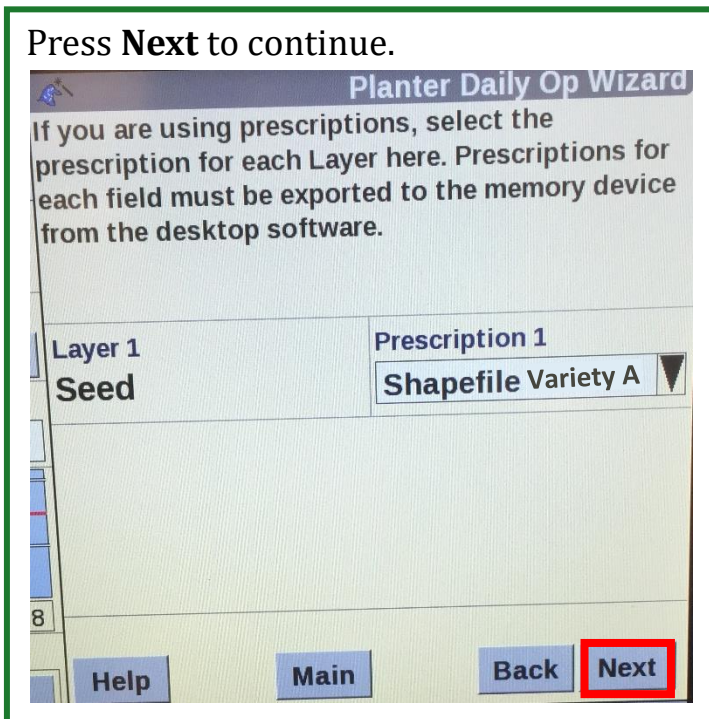
13

Press on the **Prescription** that is need, this will pull in the Shapefiles and the VRS files from the .CN1 folder



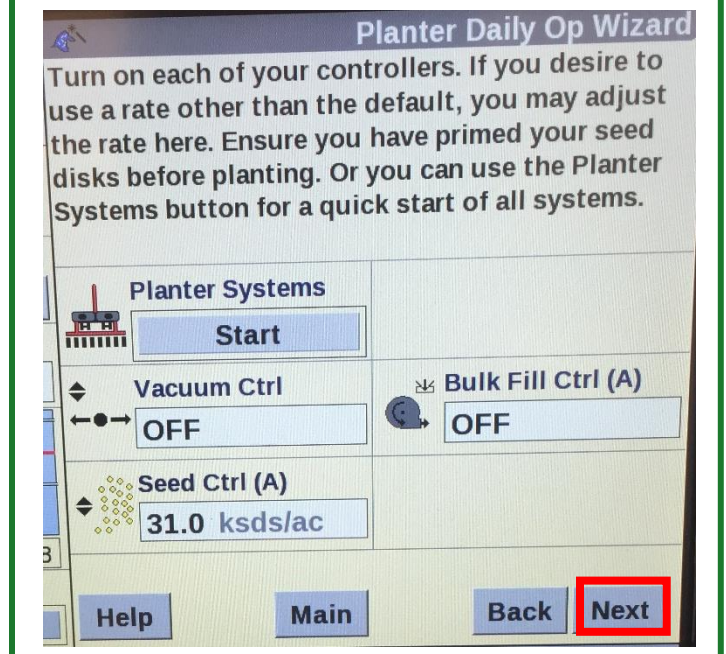
14

Press **Next** to continue.



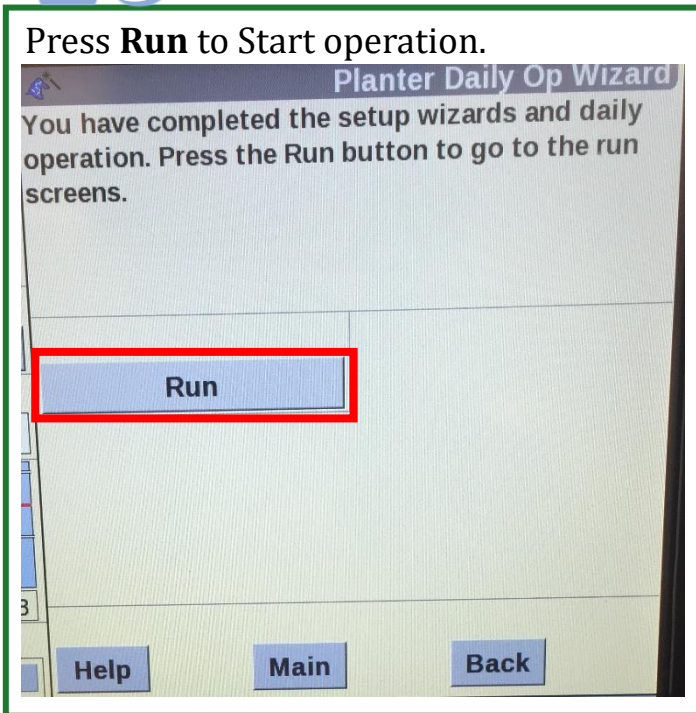
15

Note: The settings in this document are not actual planter setups. Press Next to continue.



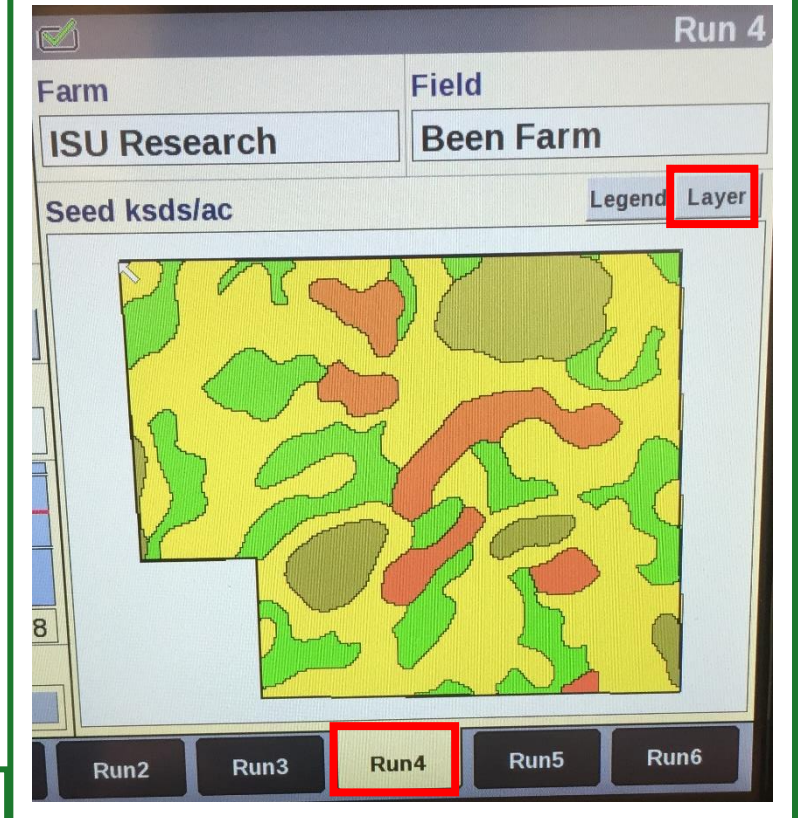
16

Press **Run** to Start operation.



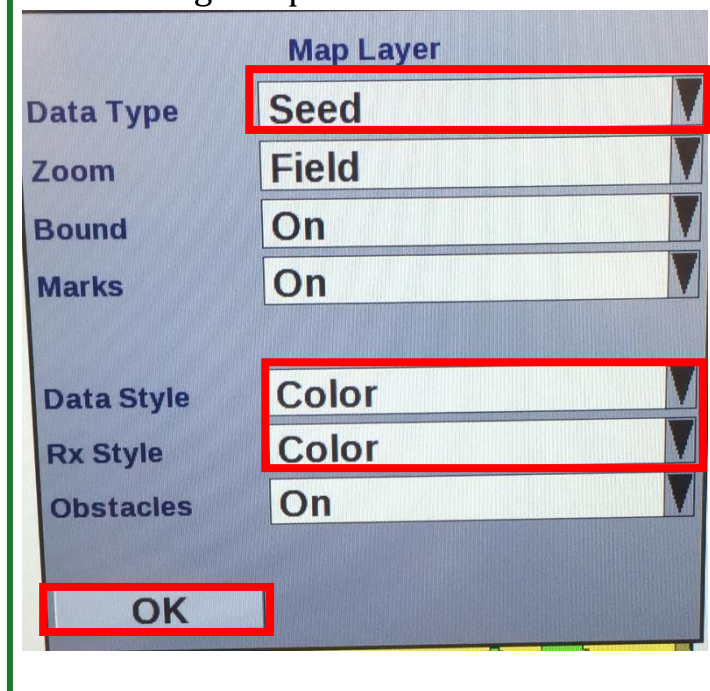
17

Press on the **Run** that shows the coverage map for the Field, this will be different per machine. Press on **Layers** to choose the visible layers.

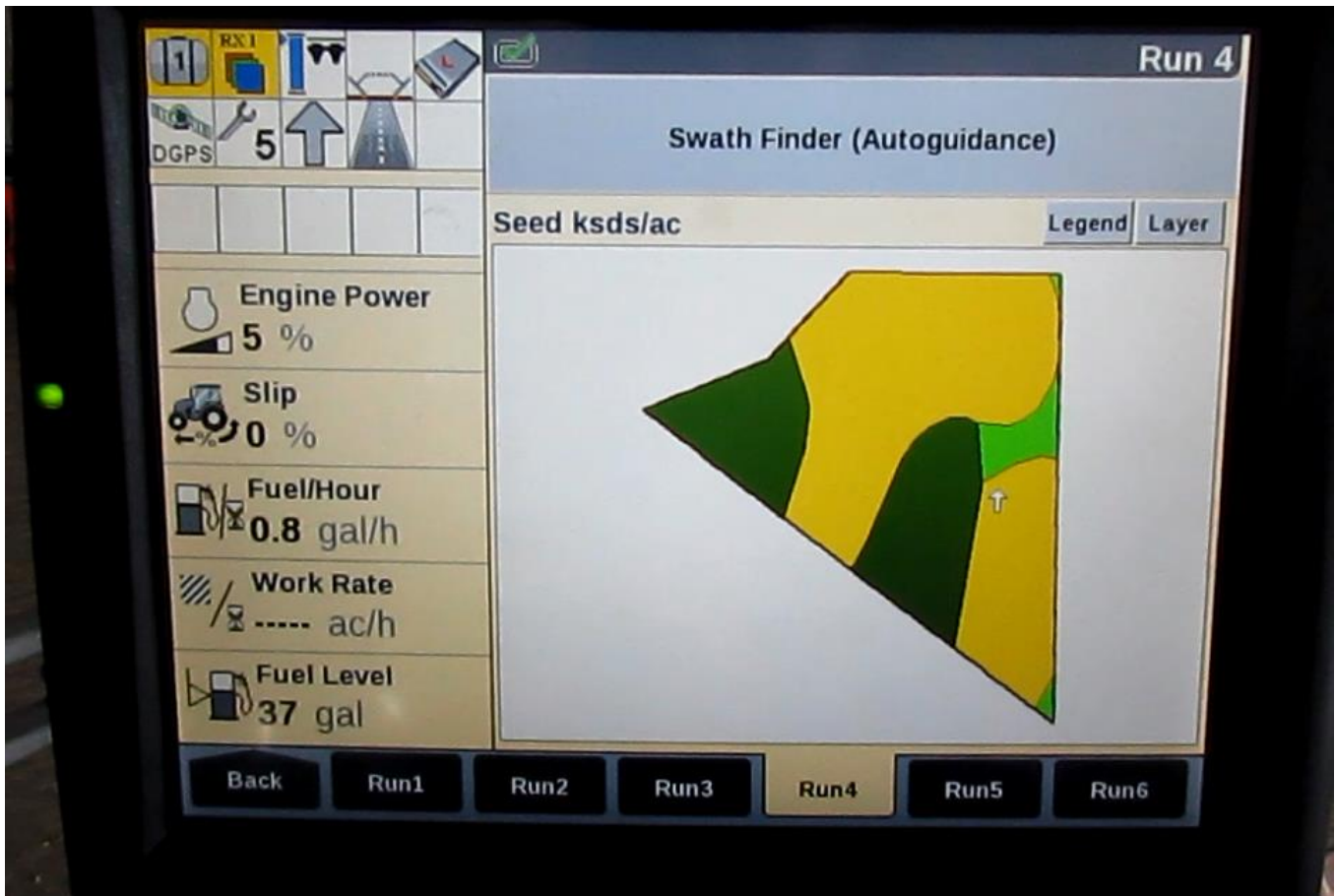


18

Change the **Data Type** to **Seed, Data** and **Rx Style** to **color**. Press **OK** to return to the coverage map.



Cleaning up Prescriptions



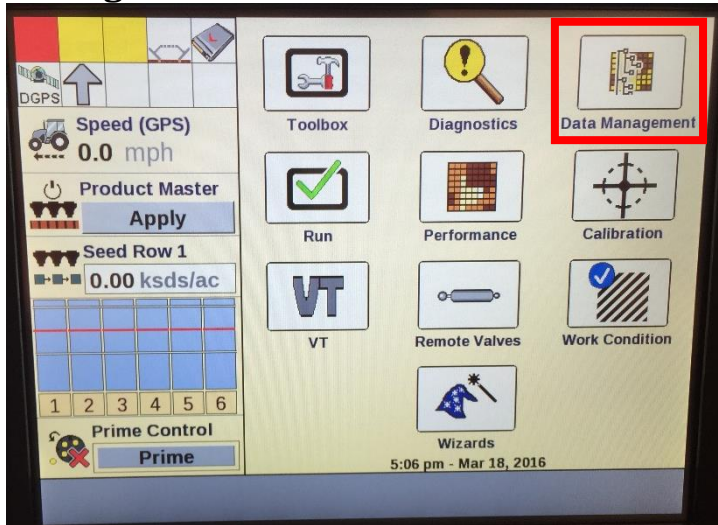
Cleaning up Prescriptions

Case IH Pro 700

Before Cleaning up Prescriptions Create a Copy of the .CN1 file, to ensure data isn't lost.

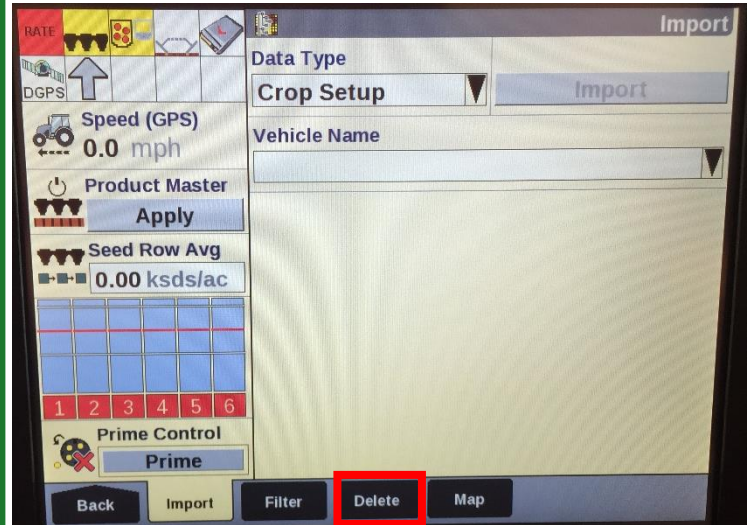
1

From the Main Screen press the **Data Management** icon.



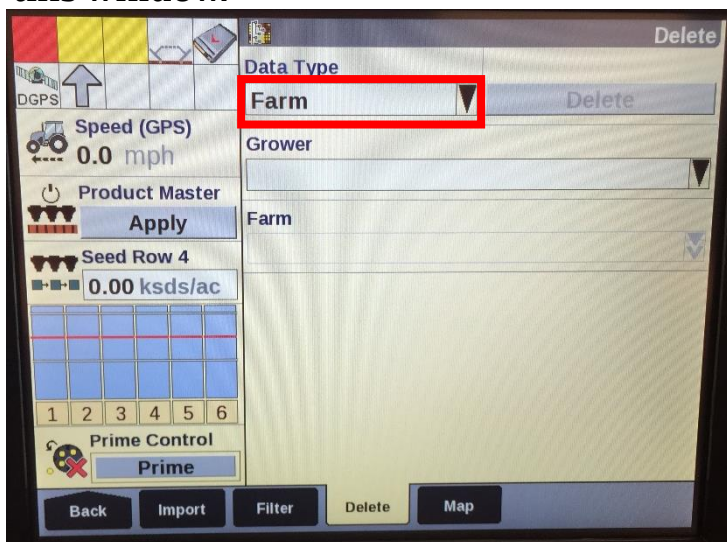
2

Press on the **Delete** tab.



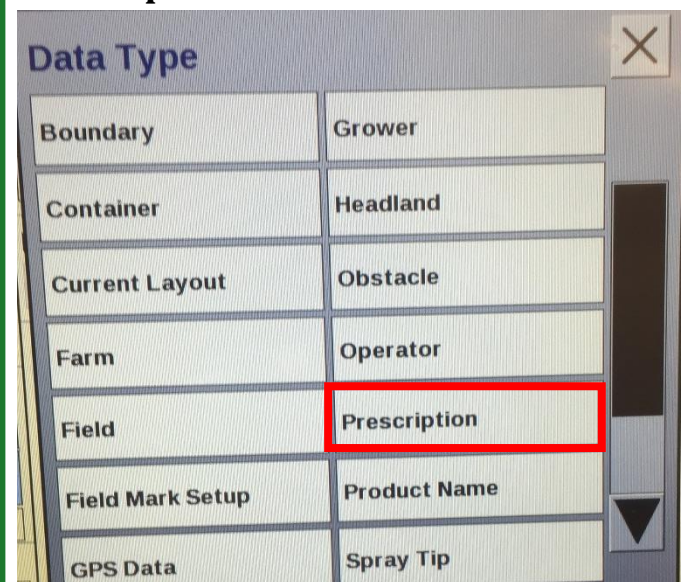
3

Press on the **Drop down** under Data type.
Note: Make sure to only delete product in this window.



4

In the Data Type window, press on **Prescriptions**.



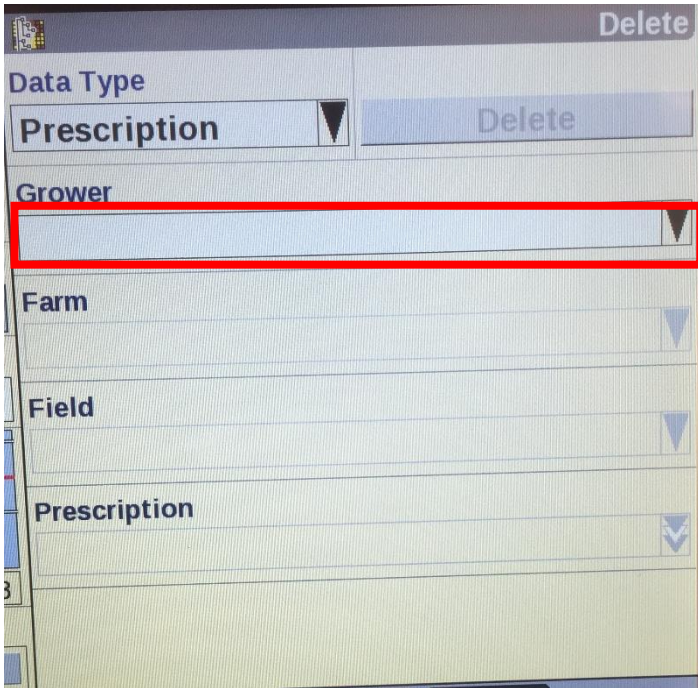
Cleaning up Prescriptions

Case IH Pro 700

27

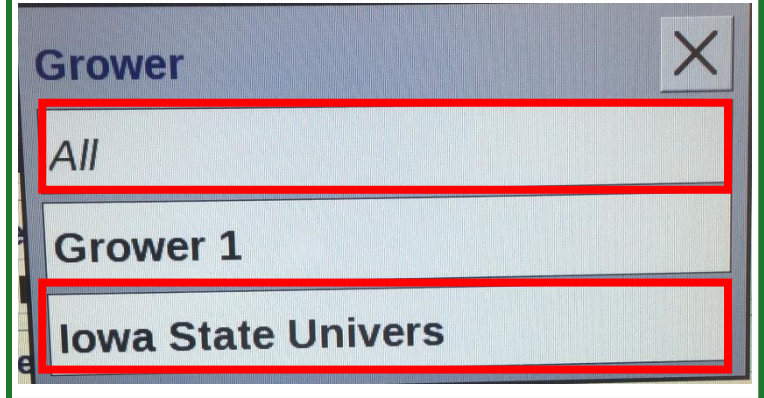
5

Press on the drop down for **Grower**.



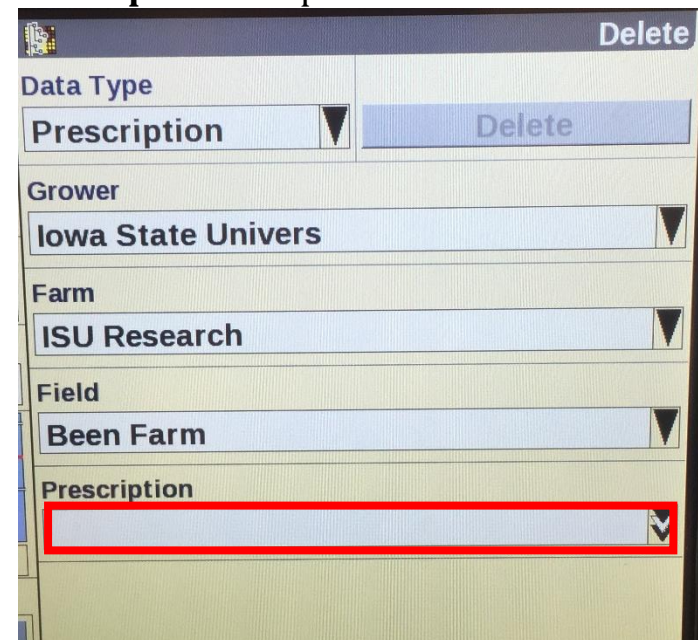
6

To delete **All Prescriptions** select **All Growers**. To delete a specific prescription **Grower, Farm, and Field** will need to be selected.



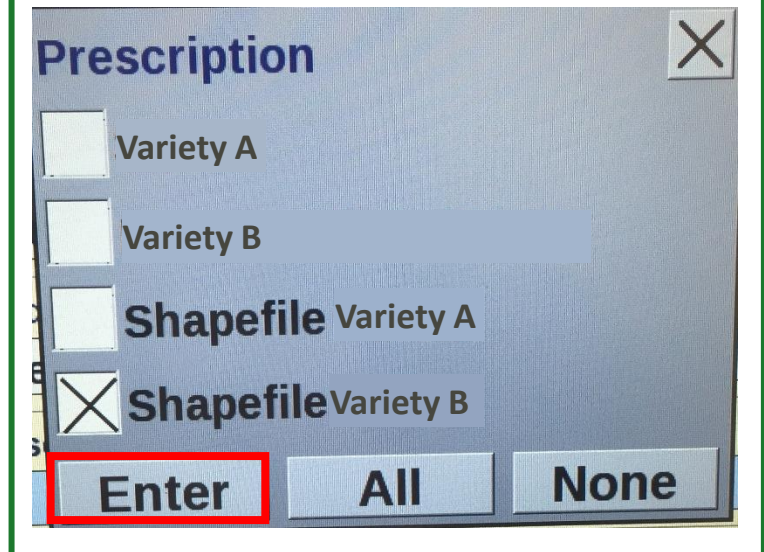
7

If only one Prescription needs to be deleted enter in the **Farm** and **Field** for the prescription, then press on the **Prescriptions** drop down.



8

Select the prescriptions that need to be deleted, by pressing on the **box** next to each file. Press **Enter** to continue.

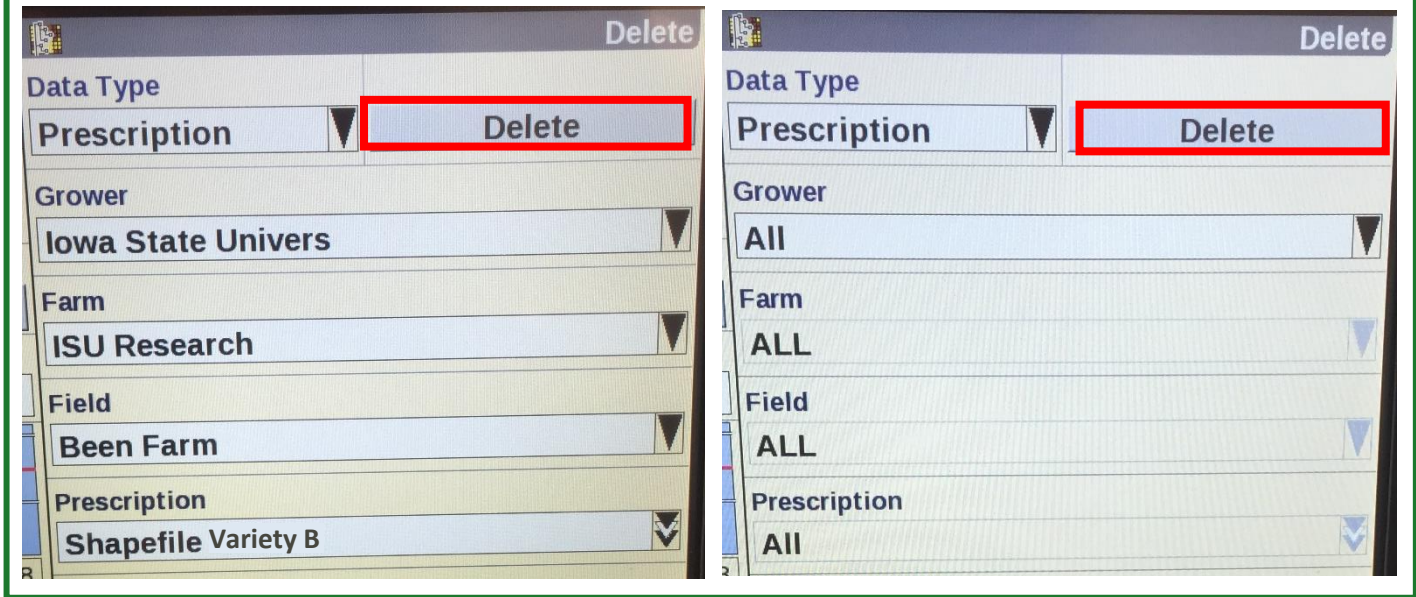


Cleaning up Prescriptions

Case IH Pro 700

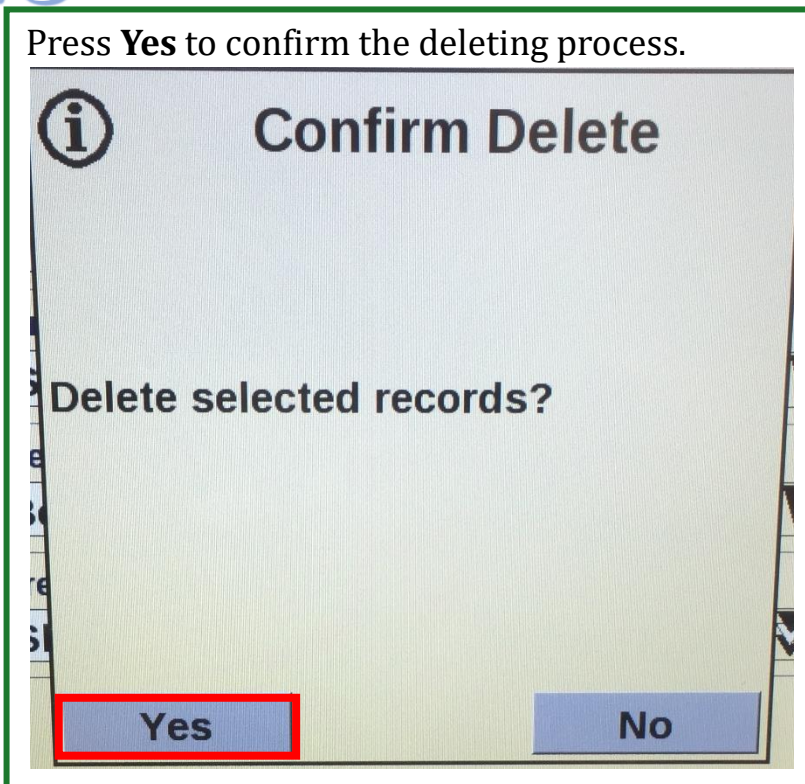
9

Once the correct Prescriptions are selected as shown, press **Delete**. The image shows both **individual prescriptions** and all **Growers**.

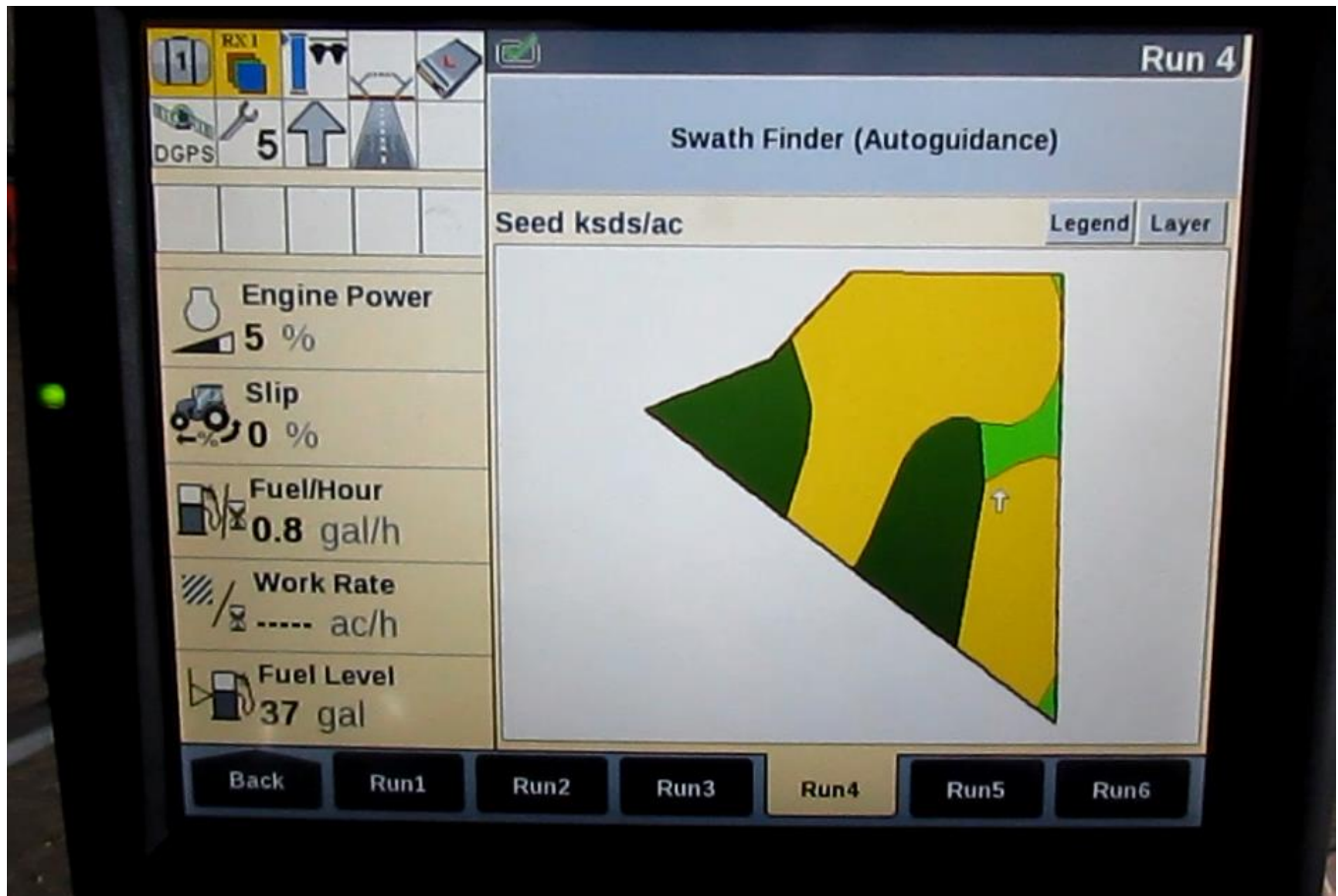


10

Press **Yes** to confirm the deleting process.



Creating Varieties for Planting

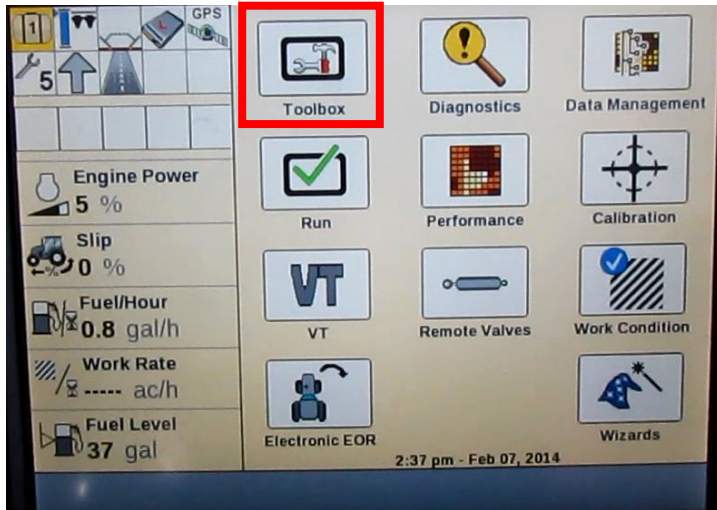


Creating Varieties For Planting

Case IH Pro 700

1

From the Main Screen press the **Toolbox** icon.



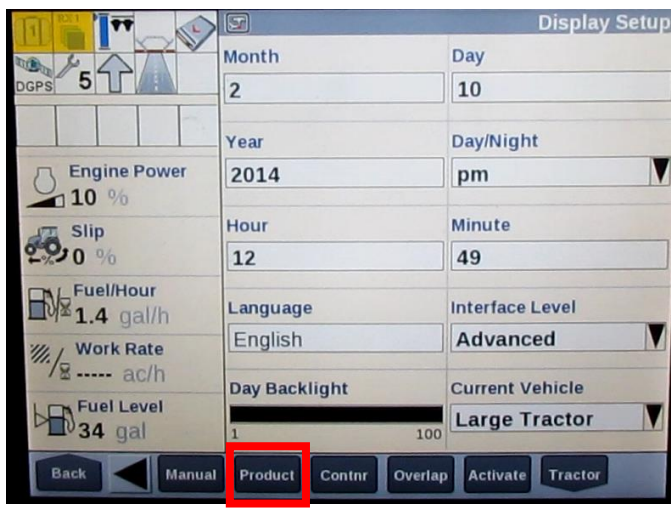
2

Press the **right arrow** until the Product tab appears at the bottom of the screen.



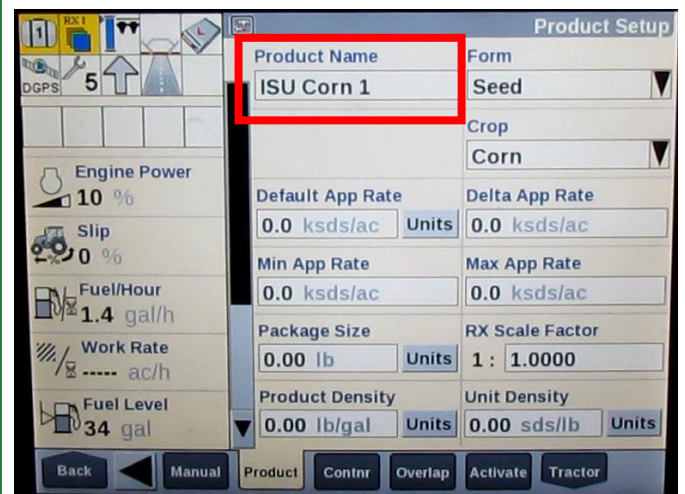
3

Press the **Product** tab at the bottom of the screen.



4

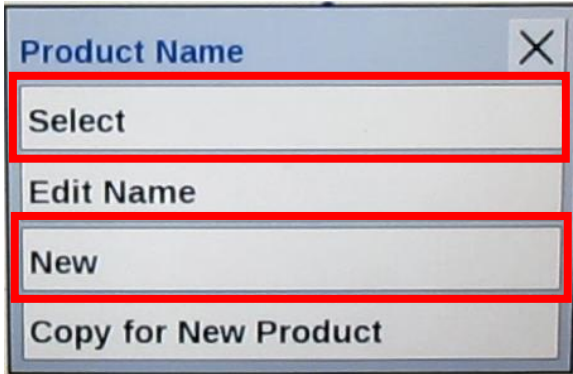
Press the **Product Name** to create or select a different product.



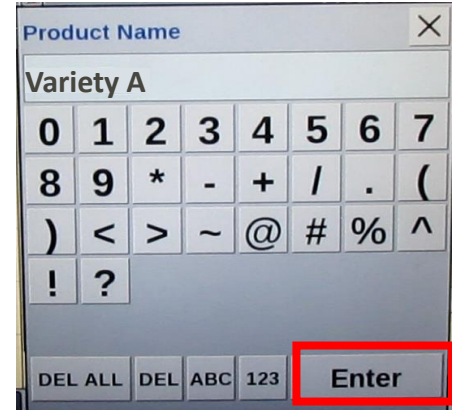
Creating Varieties For Planting

Case IH Pro 700

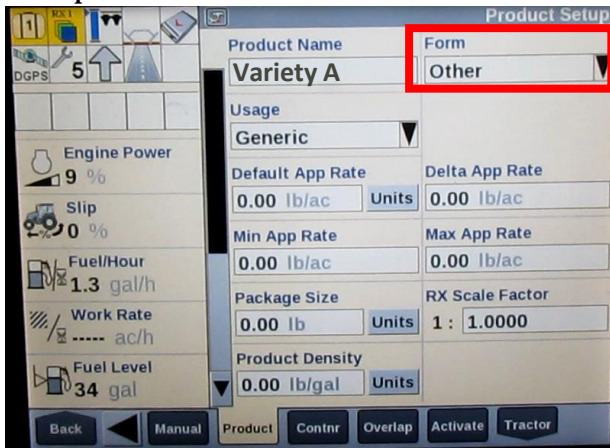
5 To select a current product press **Select**. Press on **New** to create a new product.



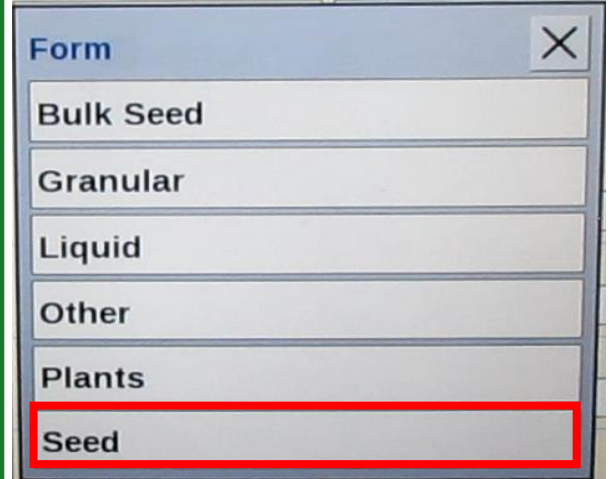
6 When creating a new product use the Keyboard to enter in the product name. Press **Enter** to continue.



7 Press **Form** to change the form of the product to seed.



8 In the **Form** window press **seed**. This will allow the display to recognize the product for the planter.

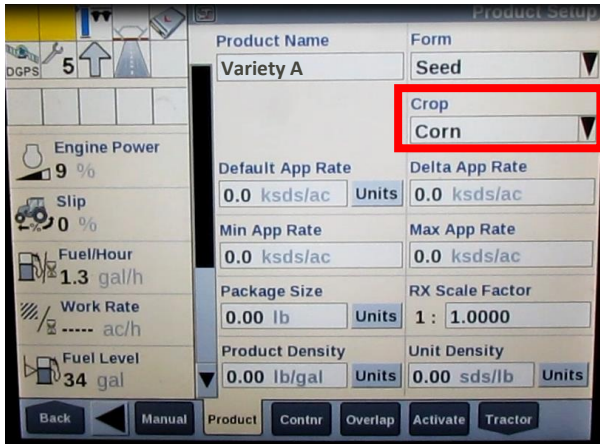


Creating Varieties For Planting

Case IH Pro 700

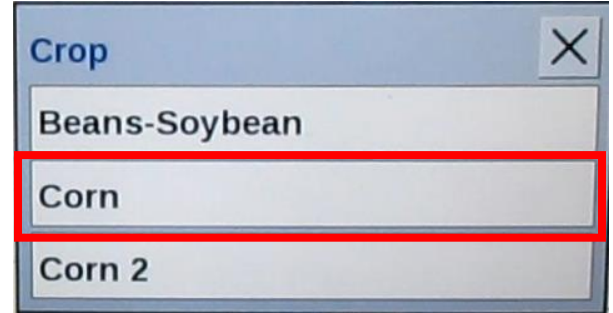
9

Press **Crop** to change the seed type to corn or soybeans.



10

Select the **Crop** type by pressing on the appropriate crop. **Note: the Crop type will vary based on monitor setup.**



The Following information would need to be filled out if you're not using a VRS map.

Default App Rate	Delta App Rate
0.0 kdsds/ac Units	0.0 kdsds/ac
Min App Rate	Max App Rate
0.0 kdsds/ac	0.0 kdsds/ac
Package Size	RX Scale Factor
0.00 lb Units	1 : 1.0000
Product Density	Unit Density
0.00 lb/gal Units	0.00 sds/lb Units

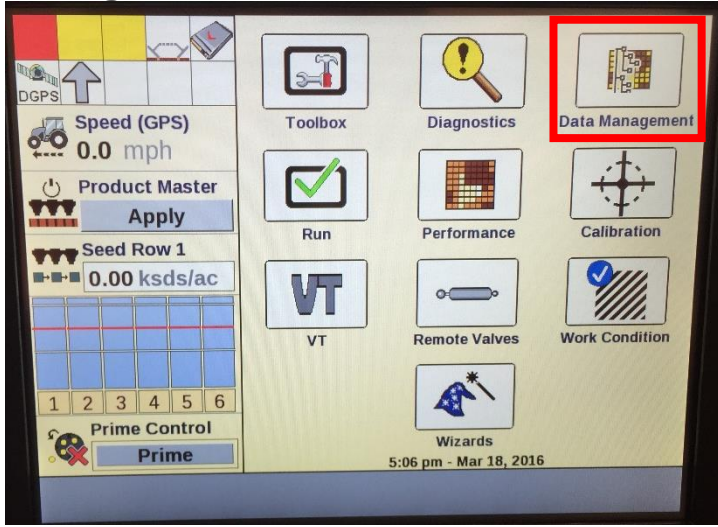
Cleaning up Product



Cleaning up Product Case IH Pro 700

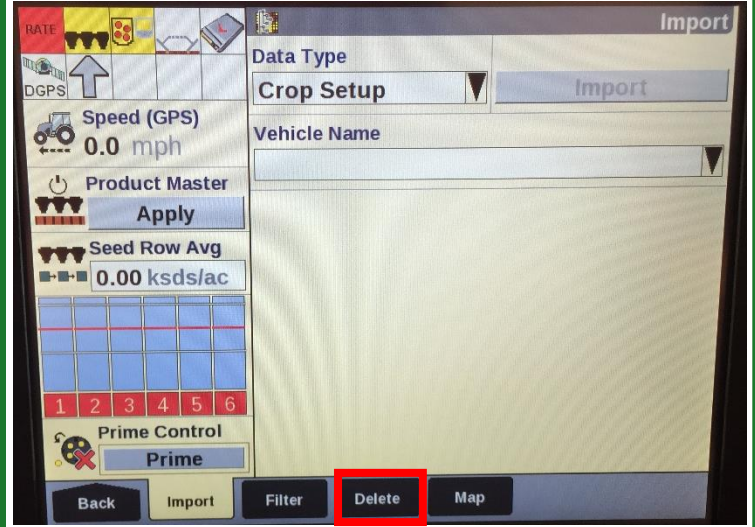
1

From the Main Screen press the **Data Management** icon.



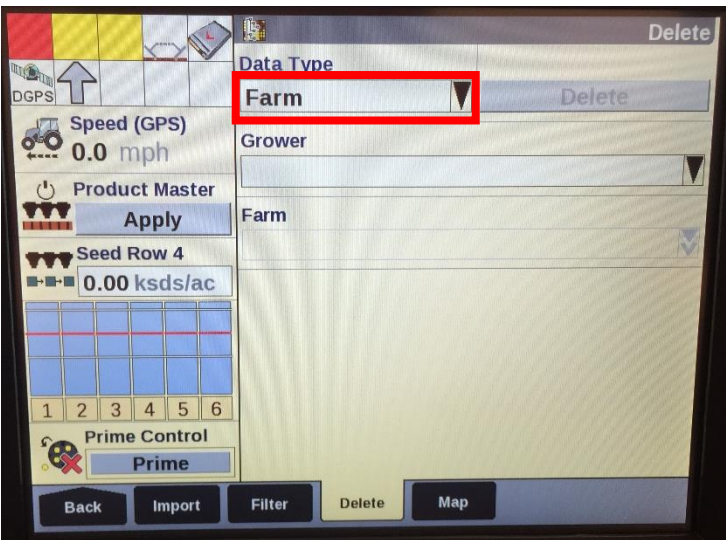
2

Press on the **Delete** tab.



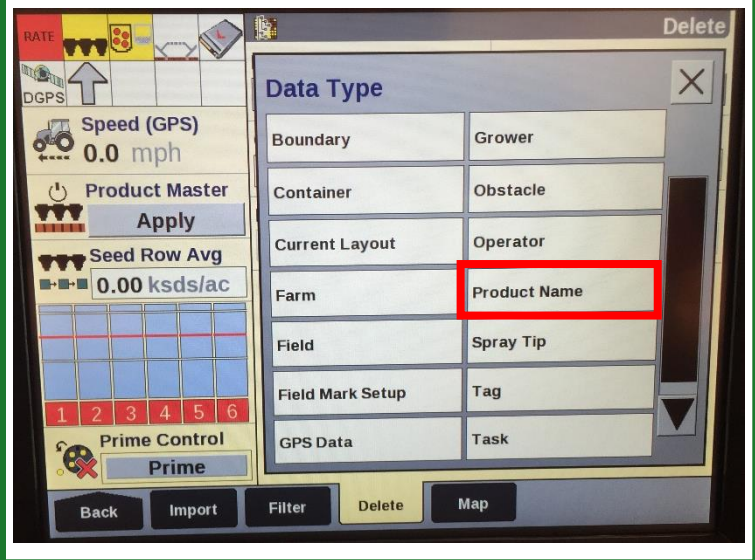
3

Press on the **Drop down** under Data type.
Note: Make sure to only delete product in this window.



4

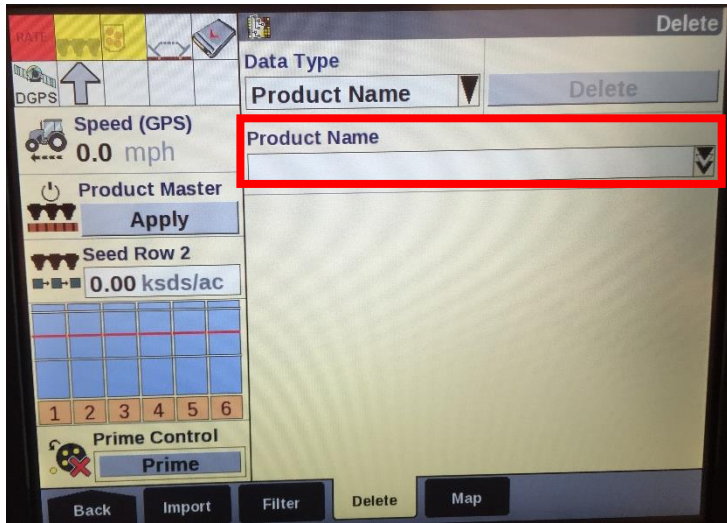
In the Data Type window, press on **Product Name**.



Cleaning up Product Case IH Pro 700

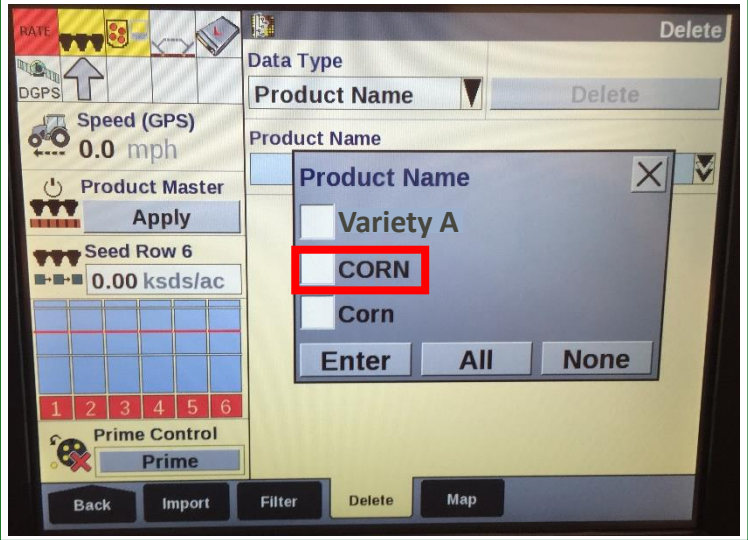
5

Press on the **Drop Down** for Product Name



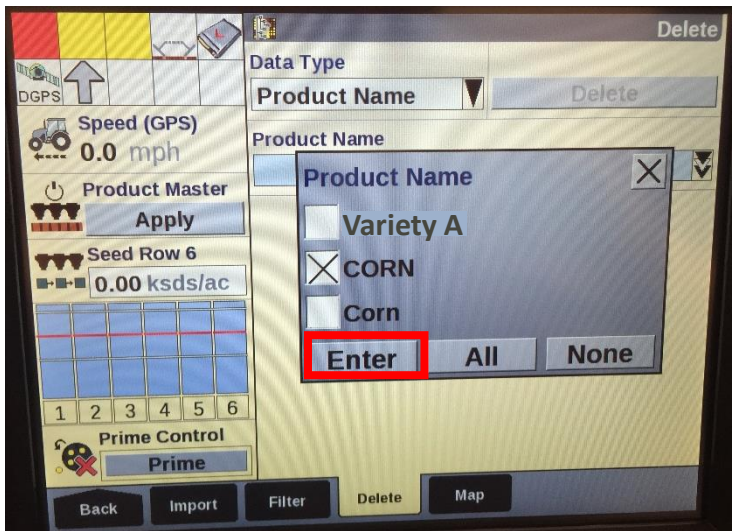
6

Press on the **box** next to each product name that needs to be deleted.



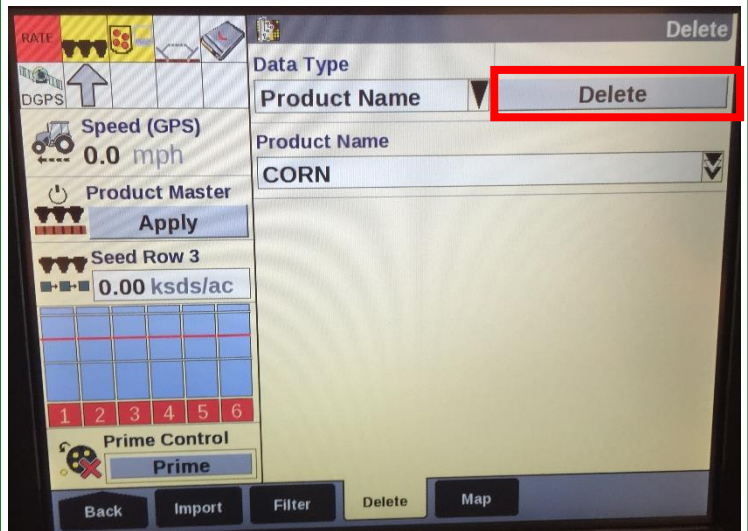
7

Press **Enter** to continue.



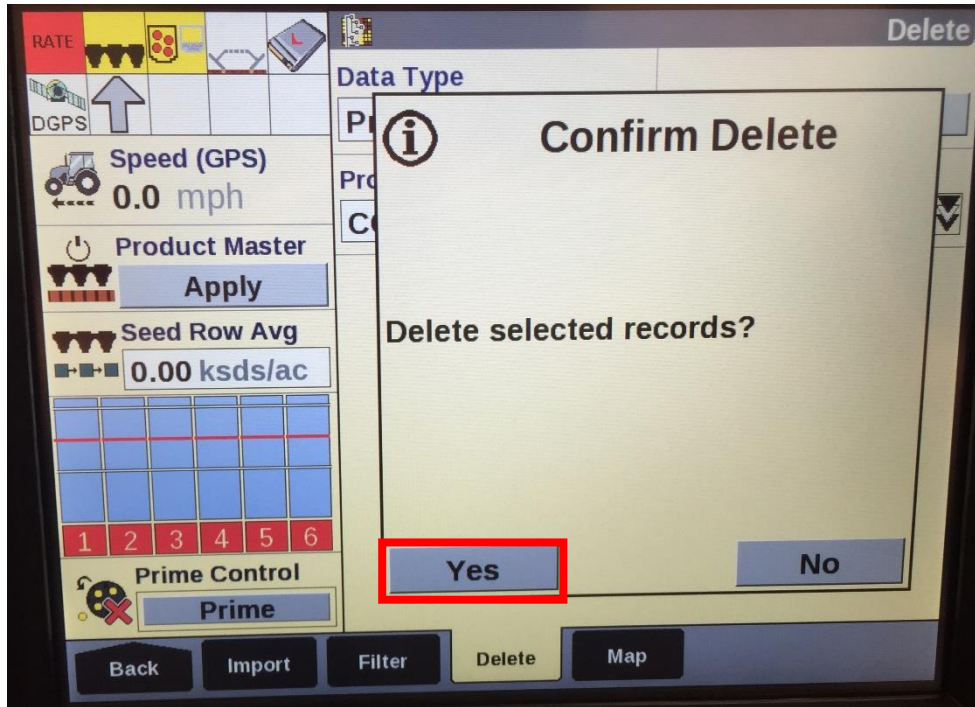
8

Press **Delete** to remove the products



9

Press on **Yes** to confirm the deleting process.



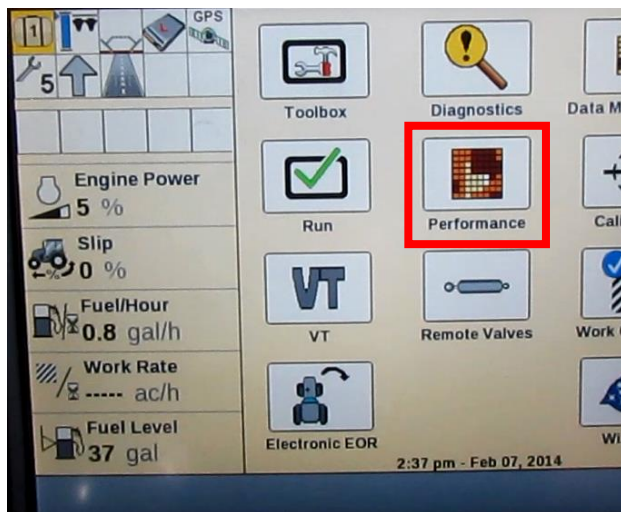
Setting Up Split Planter Treatment Data



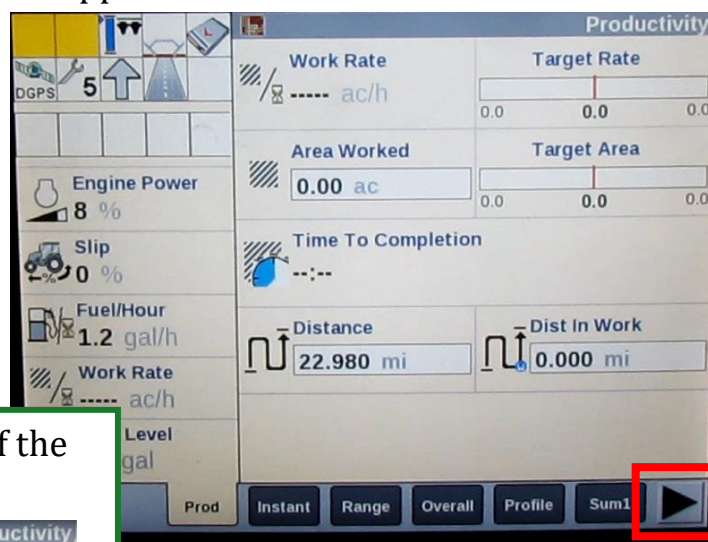
Setting Up Split Planter Treatment Data

Case IH Pro 700

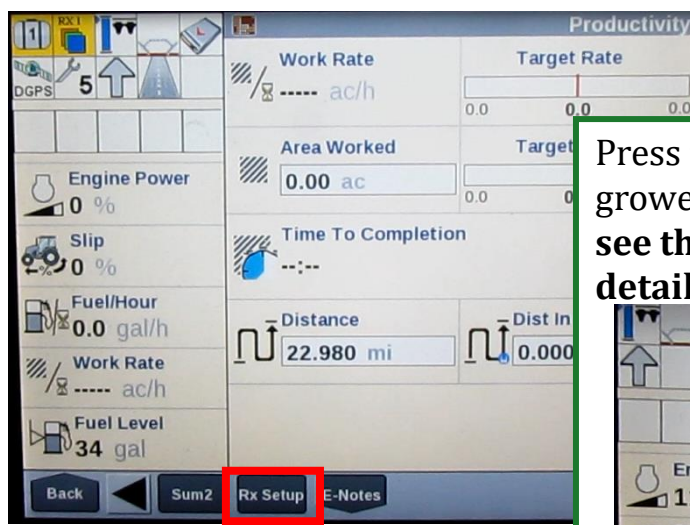
1 To load the Prescription map press the **Performance** icon on the screen.



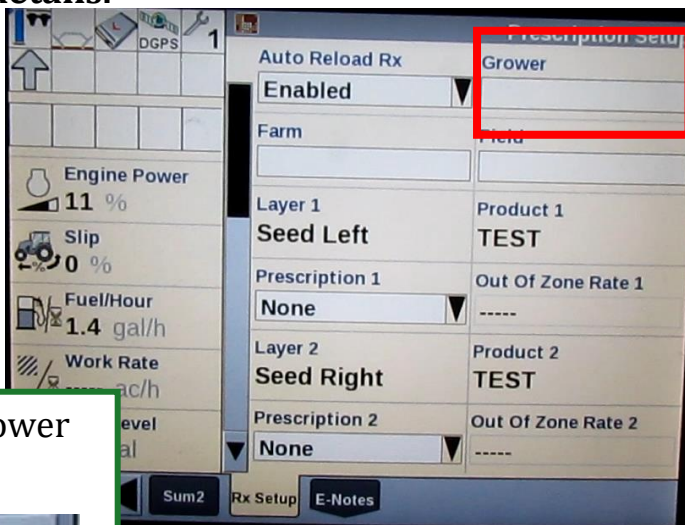
2 Press the **right arrow** icon to change the tabs at the bottom of the screen until the Rx Setup tab appears.



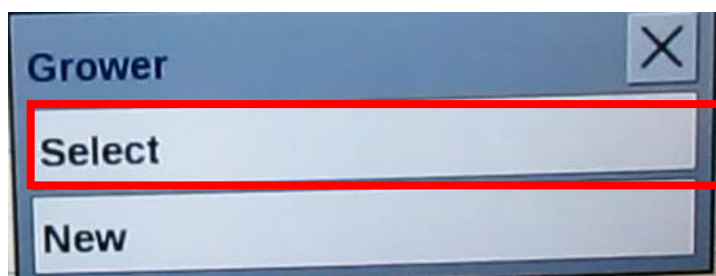
3 Press the **Rx Setup** tab on the bottom of the page.



4 Press the **Grower** box to select the correct grower. **Note: for the Auto Reload Rx please see the Troubleshooting section for more details.**



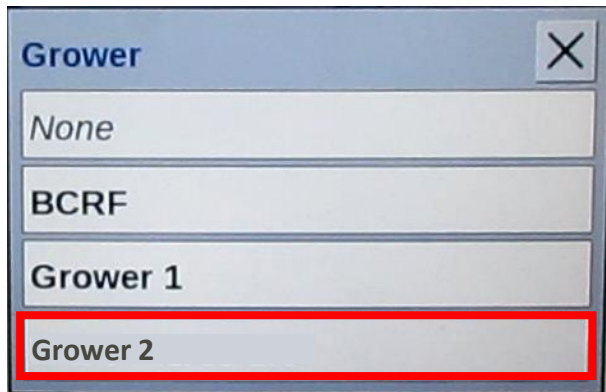
5 Press on the **Select** box to select the Grower from the USB file.



Setting Up Split Planter Treatment Data Case IH Pro 700

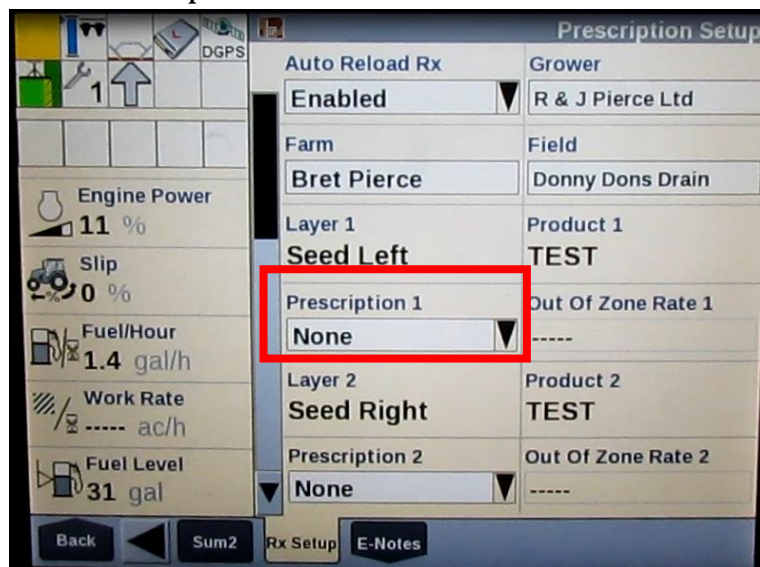
6

Select the correct **Grower** by pressing on the correct name.



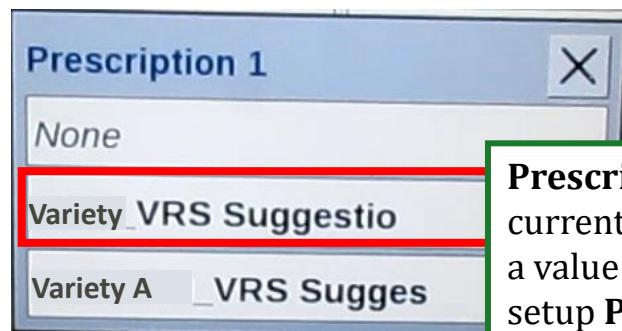
7

The **Farm** and **Field** will need to be selected if there is more than one Farm or Field under each Grower. Press on **Prescription 1** to select the VRS map



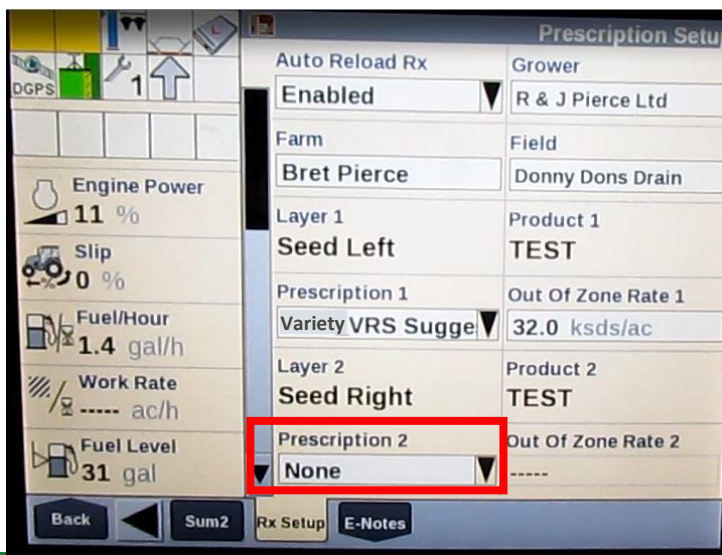
8

Select the **Prescription** by pressing on the correct file name.



Prescription 1 will show the correct VRS for the current field, make sure the **Out of Zone Rate 1** has a value after loading VRS map. With the Split planter setup **Prescription 2** will need to be setup too. **Note: if there is no Out of Zone Rate enter in a Default rate.**

9



Setting Up Split Planter Treatment Data Case IH Pro 700

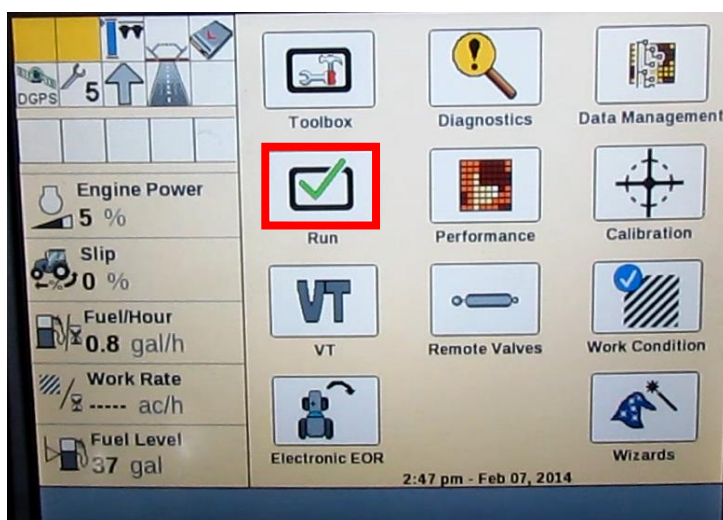
10

Prescription 1 is setup for the left hand side of the Planter and **Prescription 2** is for the right hand side of the planter. To different Prescription maps can be selected if there are two independent drives. Follow steps 7 to 9 to setup Prescription 2. Press Back to return to the menu screen.

11

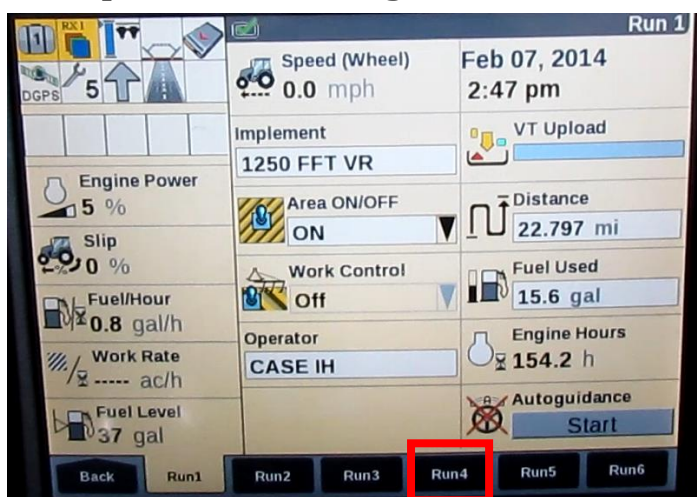


Press the **Run** icon to head to the Run screens.



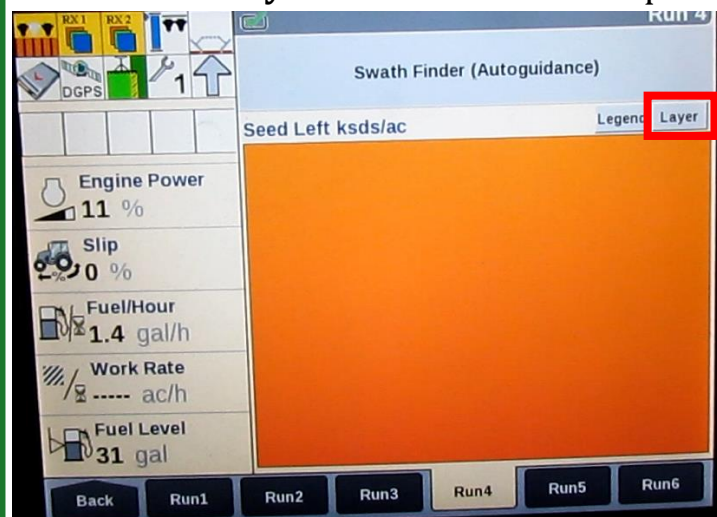
12

Press the **Run** tab at the bottom that is setup for the mapping screen. **For this example Run 4 is being selected.**



13

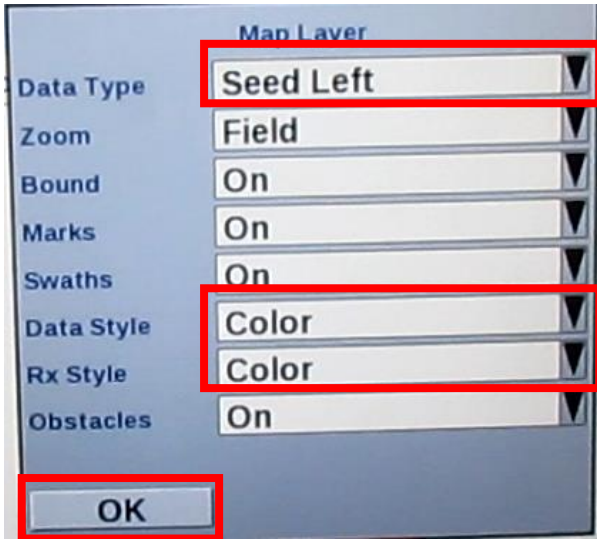
Press on the **Layer** to show the VRS map.



Setting Up Split Planter Treatment Data Case IH Pro 700

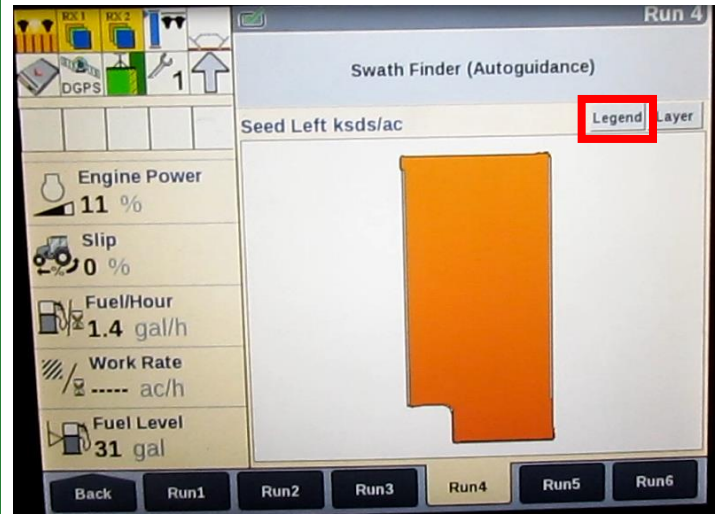
14

Press **Data type** to show either Seed Left or Seed Right since this is Setup for a Split Planter. **Data Style** as **Color** and **RX Style** to be **Color**. Press **OK** to move on.



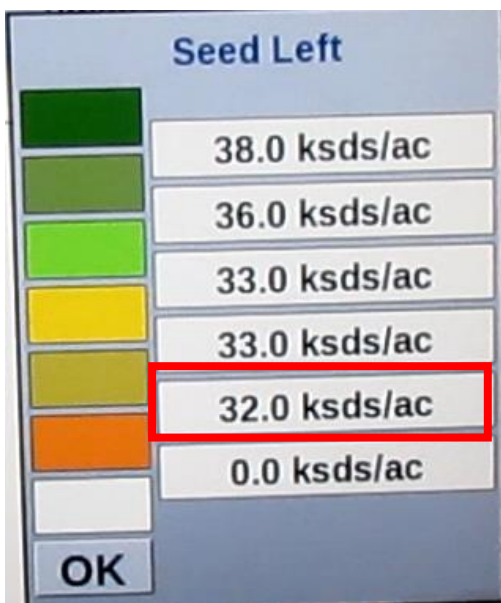
15

Press on **Legend** to change the color for each rate. **Note: the map may just show one color when first starting the Legends will need to be changed to show the correct rate.**



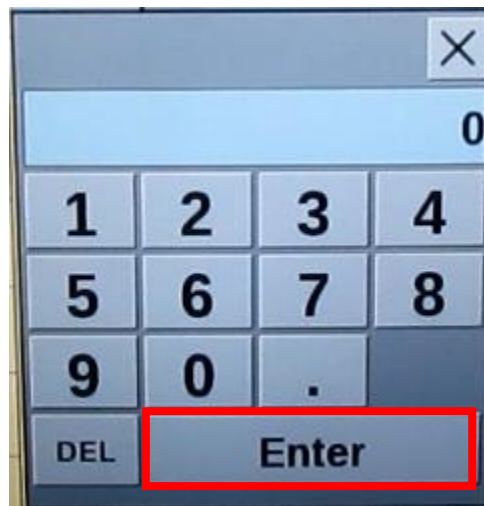
16

Adjust the legend by pressing on the **ksds/ac** and using the correct VRS rates for each field.



17

Use the Calculator to enter in the correct Rate. Press **Enter** to continue. **Note: this is in kilo seeds.**



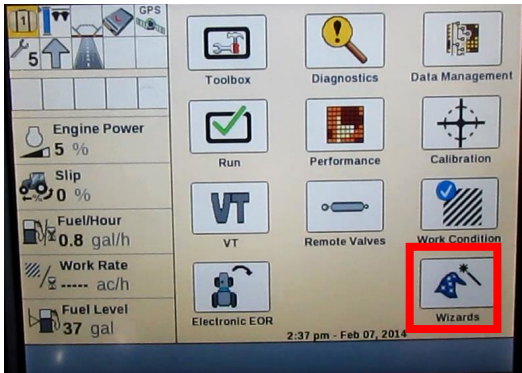
Using the Wizard



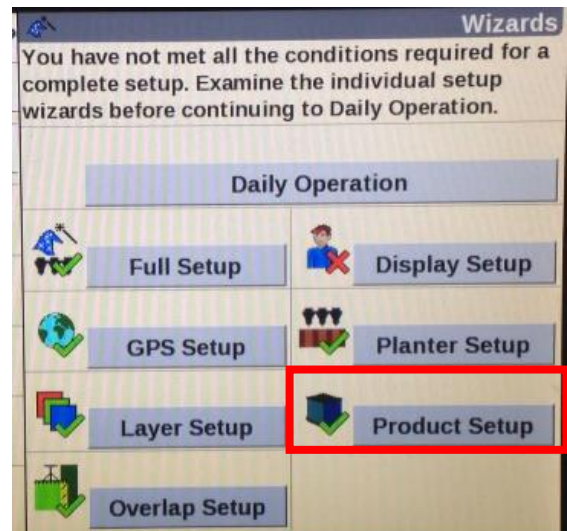
Note: When using the Wizard, Products have to be setup in the Wizard operations screen.

1

From the main Screen press the **Wizard** icon.

**2**

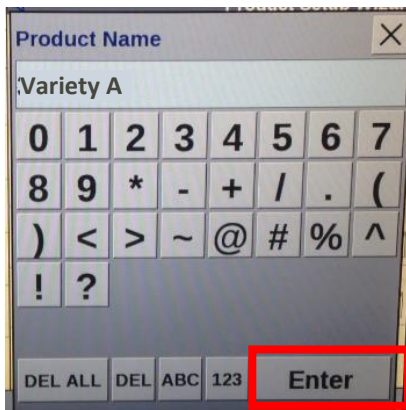
Make sure to Create the Product in the Wizard setup screen. Press **Product Setup** to add a new products.

**3**

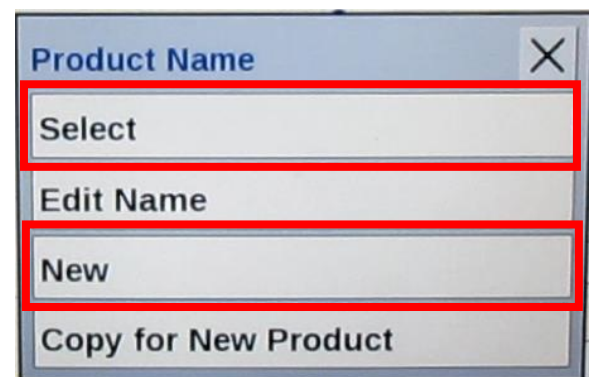
Press the **Product Name** to create or select a different product.



When creating a new product use the Keyboard to enter in the product name. Press **Enter** to continue.

5**4**

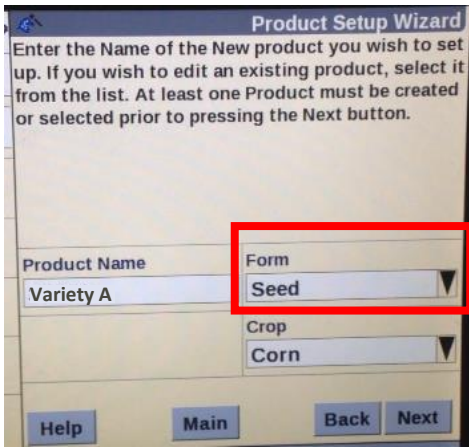
To select a current product press **Select**. Press on **New** to create a new product.



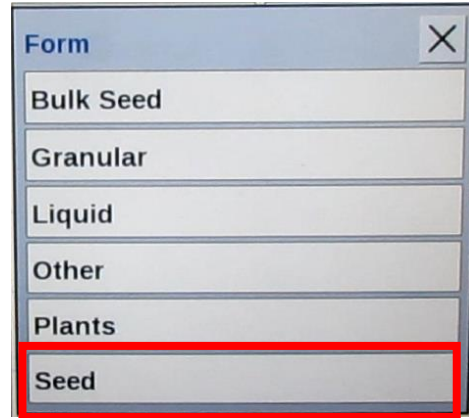
Using the Wizard

Case IH Pro 700

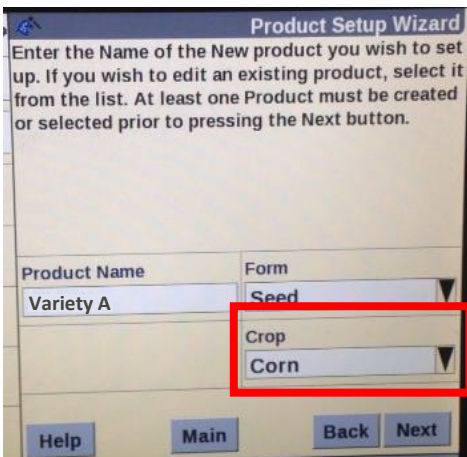
6 Press **Form** to change the form of the product to seed.



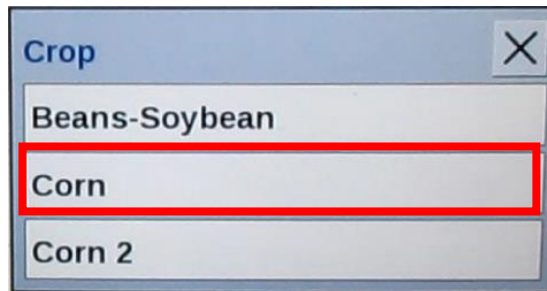
7 In the **Form** press **Seed**. This will allow the display to recognize the product for the planter.



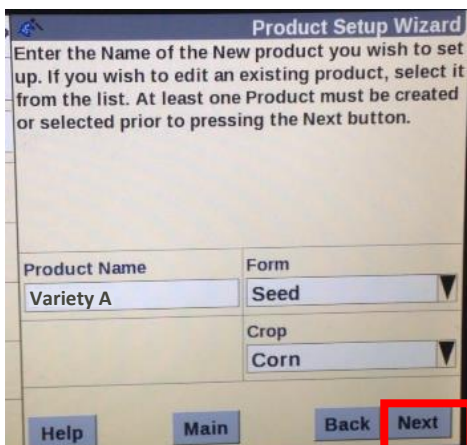
8 Press **Crop** to change the type of crop such as corn or soybeans.



Select the Crop type by pressing on the appropriate crop. **Note: the Crop type will vary based on monitor setup.**

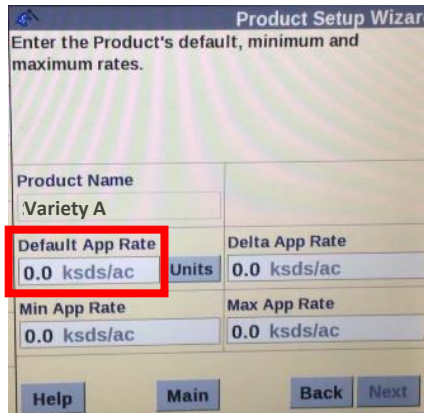


10 Press **Next** to continue.



11

A Default App Rate will need to be entered before being able to continue. Press on the **Default rate** and use the calculator to enter in ksds/ac. **Note: this is just a Default rate once Prescription is loaded this will be overridden.**



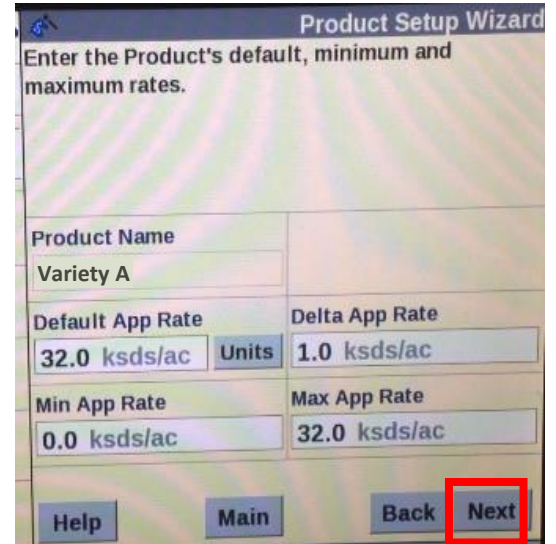
The screenshot shows the 'Product Setup Wizard' interface. The title bar reads 'Product Setup Wizard'. Below the title bar, the instruction says 'Enter the Product's default, minimum and maximum rates.' The form contains the following fields:

Product Name	Variety A		
Default App Rate	0.0 ksds/ac	Units	0.0 ksds/ac
Min App Rate	0.0 ksds/ac	Max App Rate	0.0 ksds/ac

At the bottom of the screen, there are four buttons: 'Help', 'Main', 'Back', and 'Next'. The 'Next' button is highlighted with a red box.

12

Press **Next** to continue once the Default rate has been entered.



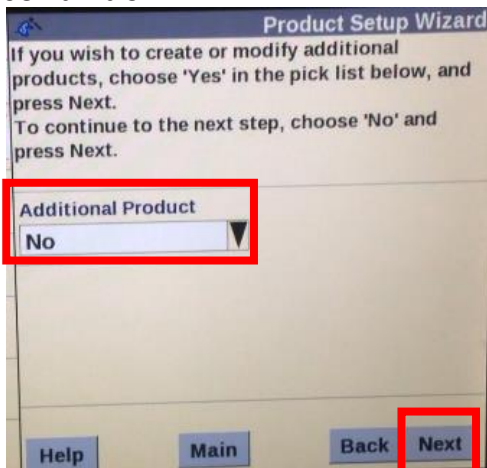
The screenshot shows the 'Product Setup Wizard' interface. The title bar reads 'Product Setup Wizard'. Below the title bar, the instruction says 'Enter the Product's default, minimum and maximum rates.' The form contains the following fields:

Product Name	Variety A		
Default App Rate	32.0 ksds/ac	Units	1.0 ksds/ac
Min App Rate	0.0 ksds/ac	Max App Rate	32.0 ksds/ac

At the bottom of the screen, there are four buttons: 'Help', 'Main', 'Back', and 'Next'. The 'Next' button is highlighted with a red box.

13

If you want to create more products press **Additional Products** and change this to Yes. If not press **Next** to continue.



The screenshot shows the 'Product Setup Wizard' interface. The title bar reads 'Product Setup Wizard'. Below the title bar, the instruction says 'If you wish to create or modify additional products, choose 'Yes' in the pick list below, and press Next. To continue to the next step, choose 'No' and press Next.' The form contains the following field:

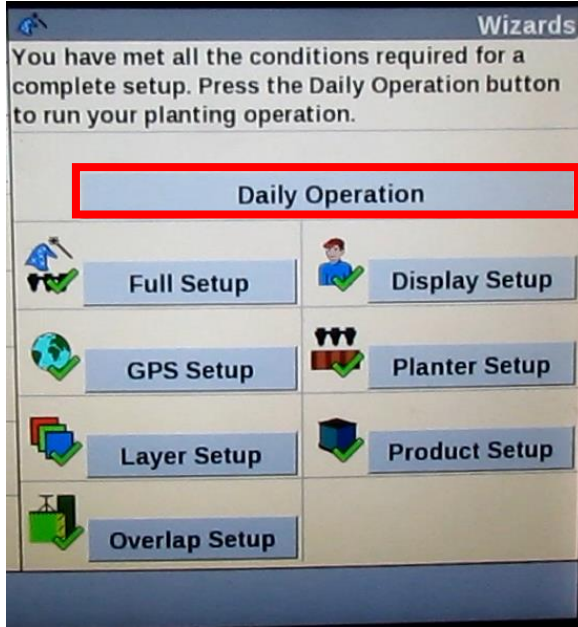
Additional Product	No
--------------------	----

At the bottom of the screen, there are four buttons: 'Help', 'Main', 'Back', and 'Next'. The 'Next' button is highlighted with a red box.

Once all of the Products have been Created within the Wizards Product Setup page the Daily Operations can be Started. **Note: if a Product is created out of the Wizard page you won't be able to utilize it until it has been created in the Wizard Product Setup.**

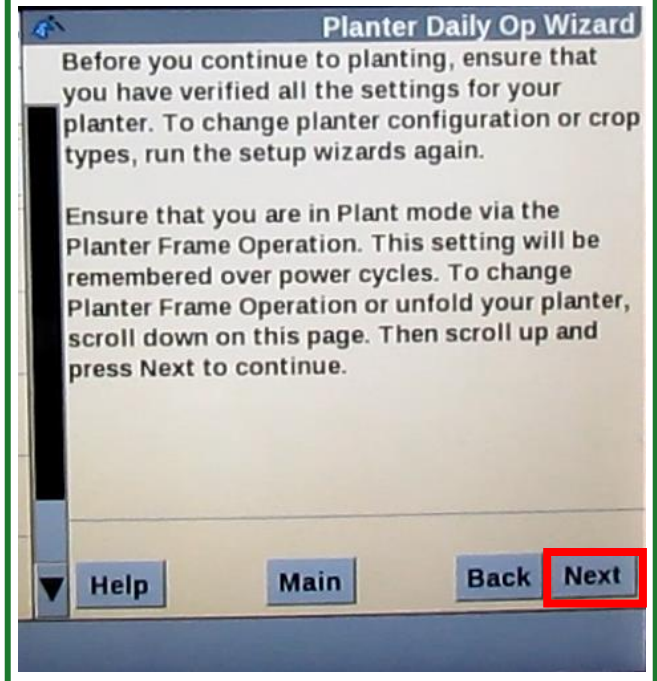
14

Before pressing **Daily Operations** every icon needs to have a green check mark next to it. **Note: if some icons don't have a green check mark may need to contact the equipment provider for support.**



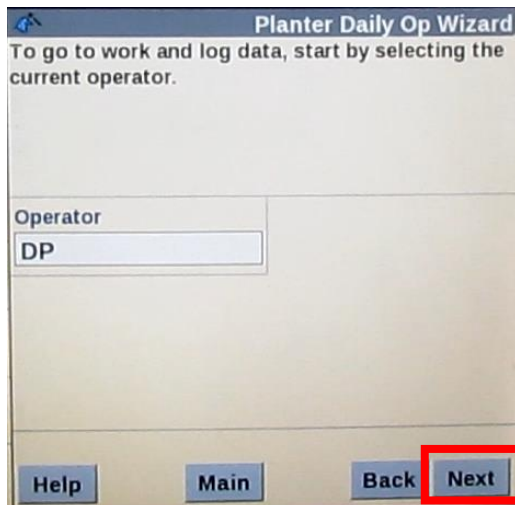
15

The first page is the Disclaimer page make sure everything is correct before moving on such as Crop type and Planter Setup. Press **Next** to move on.



16

Once the **Operator** has been selected press **Next** to continue.



17

Change the crop type by pressing on the box under **Crop Type**. Press **Next** to continue once the correct Crop is selected.

Planter Daily Op Wizard

Select the crop type to be used for your current planting operation. You can also change this setting on the run screens.

Crop Type
Corn

Help Main Back Next

18

Change the **Grower**, **Farm**, and **Field** by pressing on the boxes under each title. Press **Next** to continue.

Planter Daily Op Wizard

Select or create the correct Grower, Farm, and Field for your current operation.

Grower
R & J Pierce Ltd

Farm
Bret Pierce

Field
Donny Dons Drain

Help Main Back Next

19

The Operation Instance page allows for the Task to be renamed if you desire, to change the name press the box under **Task**. Use the Keyboard to change the Task name. Press **Next** to continue.

Planter Daily Op Wizard

Choose the Instance for the current Operation. The Task name can be edited at this time if needed.

Operation
Plant

Operation Instance
Plant 1

Task
14/02/18-20:46:39

Help Main Back Next

20

Depending on how the planter is setup, there might be two products. Change the Products by pressing the box under each title. Press **Next** to continue. **Note: The products have to be created in the Wizards Product Setup screen to be able to select the product.**

Planter Daily Op Wizard

Select the appropriate Work Condition, and verify the correct Product is set for each Layer.

Work Condition
Planting

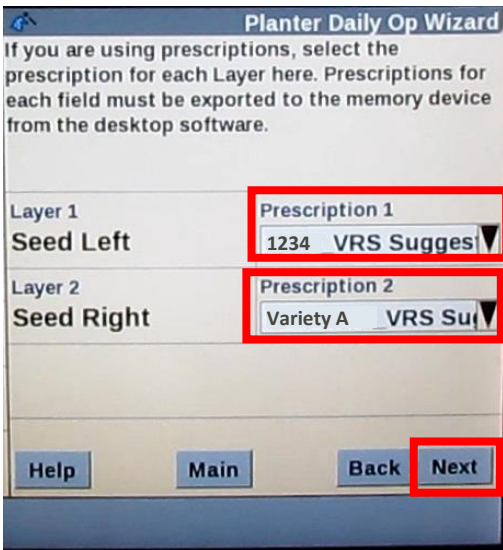
Layer 1
Seed Left
Product 1
Variety A

Layer 2
Seed Right
Product 2
TEST

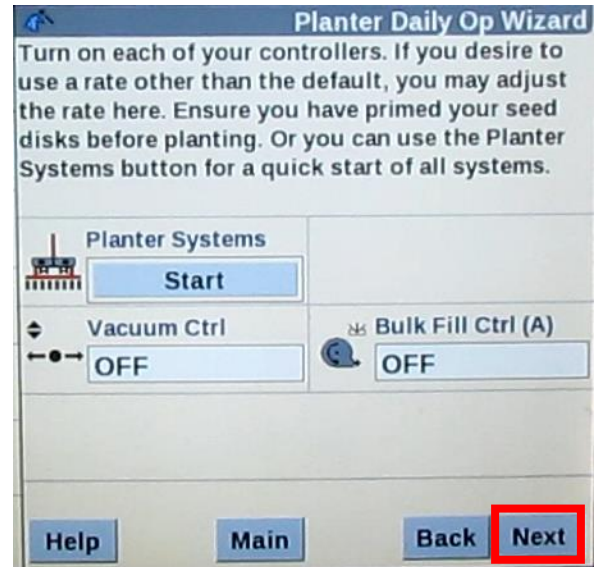
Help Main Back Next

22

21 The number of Prescription maps will vary depending on planter setup. Press on **Prescription 1** to select the correct VRS map for the Product. Press **Next** to continue. **Note: steps will need to be repeated if there is more than one Prescription. Also the Prescription map may have the Product name within the Name**

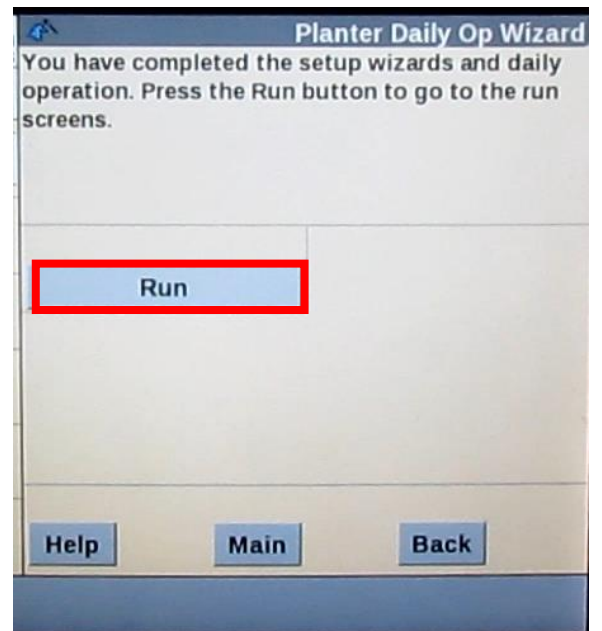


If ready to plant, pressing the **Start** button will prime the planter. Press **Next** to continue.



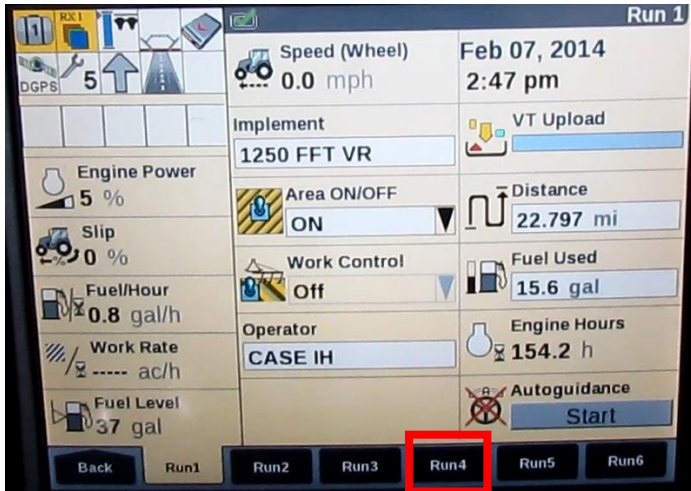
Press **Run** To complete the setup wizard.

23



24

Press the **Run** tab at the bottom that is setup for the mapping screen. **For this example Run 4 is being selected.**



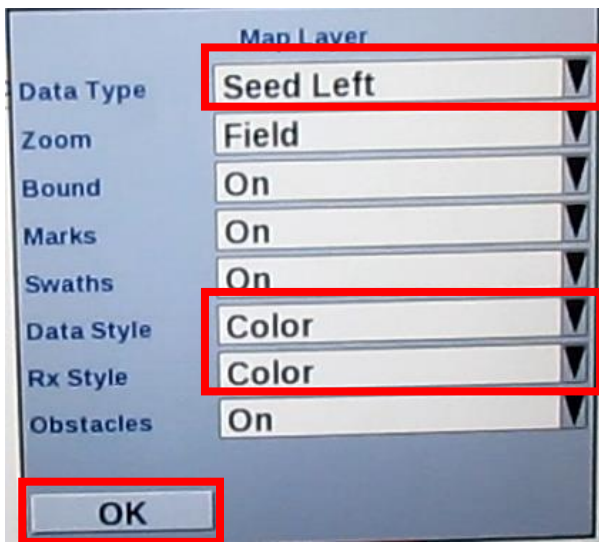
25

Press on the **Layer** to show the VRS map.



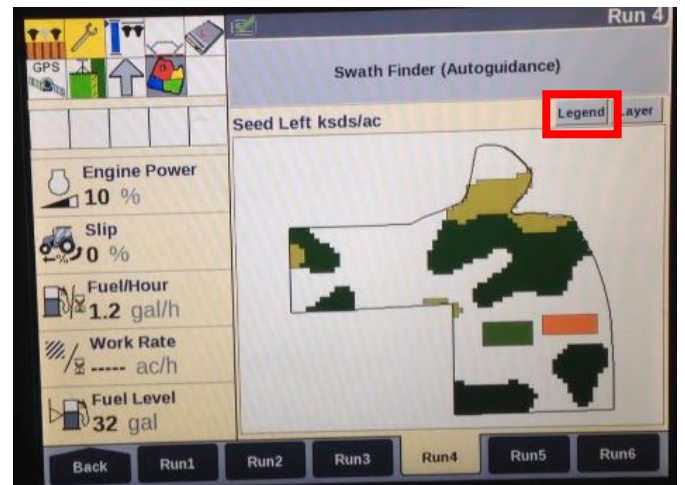
26

Press **Data type** to show either Seed Left or Seed Right since this is Setup for a Split Planter. **Data Style** as **Color** and **RX Style** to be **Color**. Press **OK** to move on.



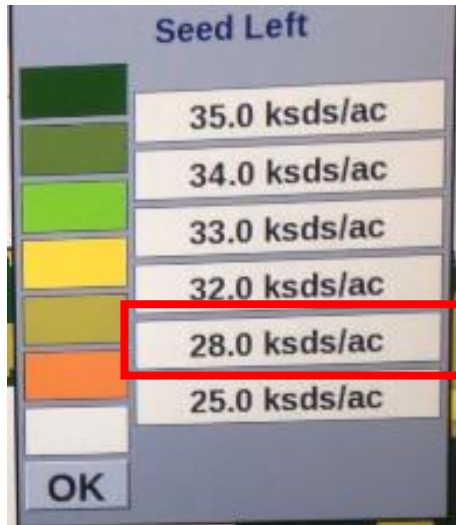
27

Press on **Legend** to change the color for each rate. **Note: the map may just show one color when first starting the Legends will need to be changed to show the correct rate.**



28

Adjust the legend by pressing on the **ksds/ac** and using the correct VRS rates for each field.



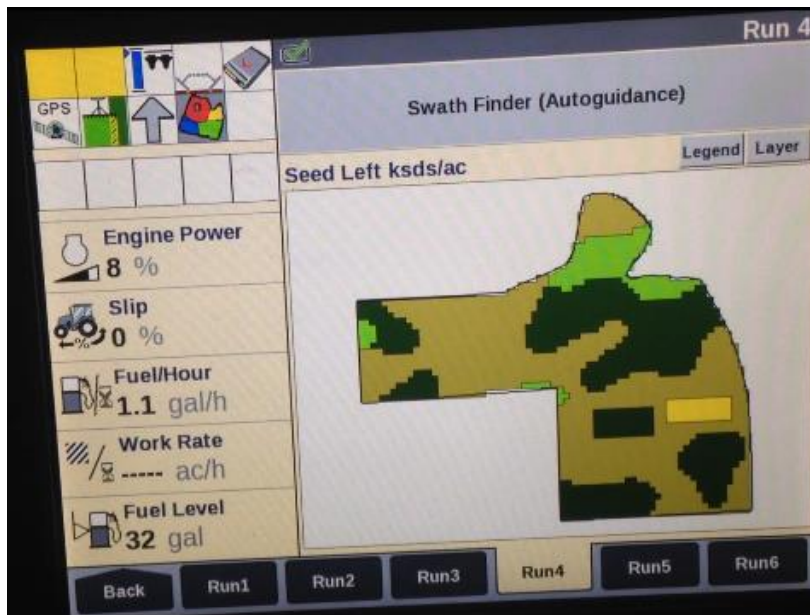
29

Use the Calculator to enter in the correct Rate. Press **Enter** to continue. **Note: this is in kilo seeds.**



30

Once the Legend is setup Correctly your Map should show the Different Rate across the field.



Exporting As-Applied Planting Files



1

The USB drive needs to be left in the screen during operations for logging purposes. To export the Data the tractor will need to be shut off, wait until the display turns complete off before removing the USB drive. **Note the USB needs to be in the Monitor at all times with the VRS maps to be able to log the information.**

Troubleshooting



- 1** The **Auto Reload Rx** allows for Rx map to reload automatically after reboot if its enabled. To Enable or disable press the box and choose the correct one.



- 2** If the Auto Reload Rx fails there will be a warning screen that will appear giving you the option to press **Ok** and return to the home screen to load the prescription. **Ignore** the problem or **Setup** which will take you back to the Prescription page.

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

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