



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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Prescription File Management



Prescription File Management Ag Leader InSight

1

When using shapefiles for VRS Prescriptions, there will typically be 4 unique file types (*.shp, *.shx, *.dbf, and *.prj) for each prescription generated.

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

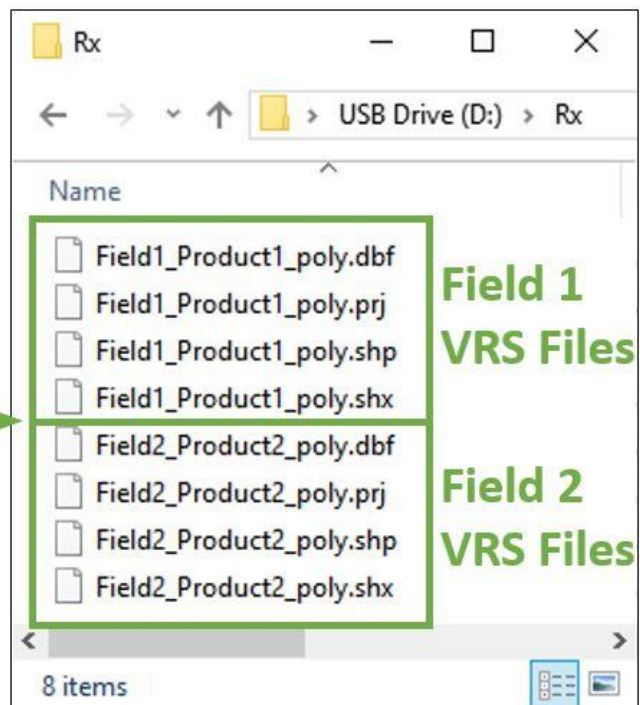
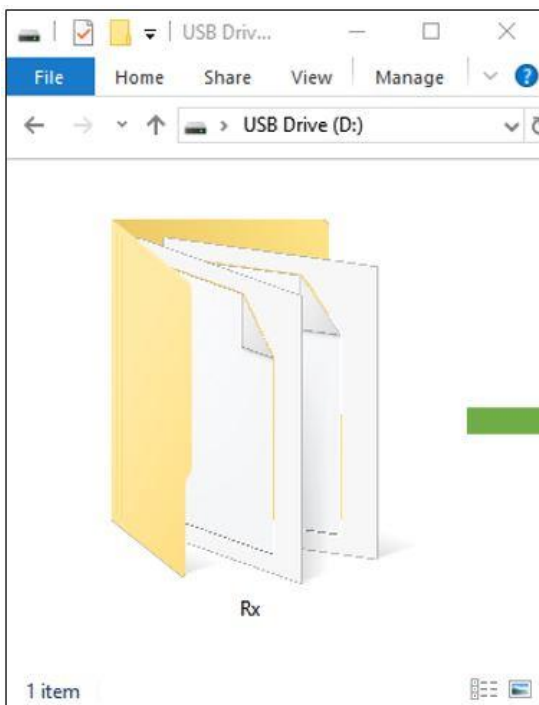


2

On a blank USB thumb drive, create a folder named "Rx" at the highest level of the drive (i.e. E:Rx).

Using Windows Copy/Paste tools, copy all the individual shapefiles into this folder. There are four files per field, so for a customer with more than one prescription per field, there will be several files in this new Rx folder. Multiple VRS shapefiles can be in the same folder.

To help identify the correct shapefile to use in the field, use the field name and product name to name the shapefile.



Importing And Planting With A VRS Prescription Map



Importing and Planting with A VRS Prescription Ag Leader InSight

5

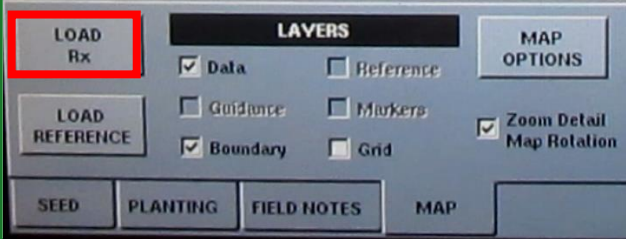
1

Insert the compact flash card containing the Rx folder and shapefiles into the InSight display.



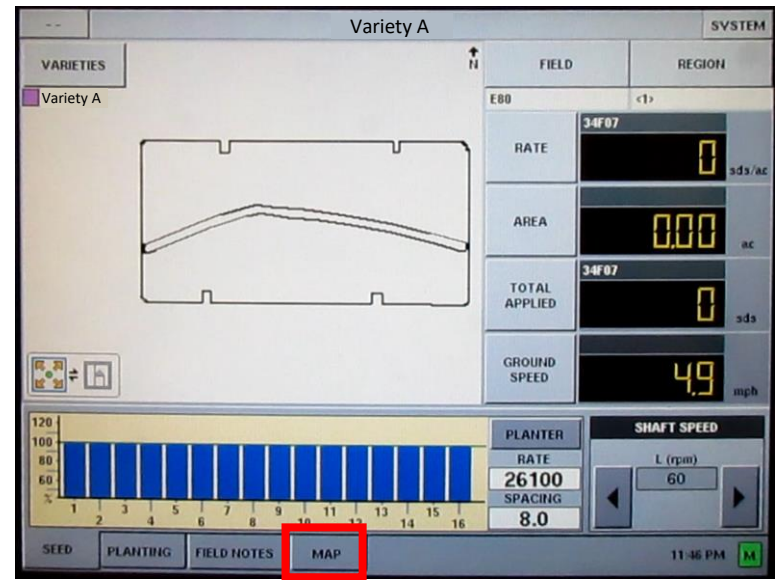
3

Press Load RX to load the RX file to the InSight display.



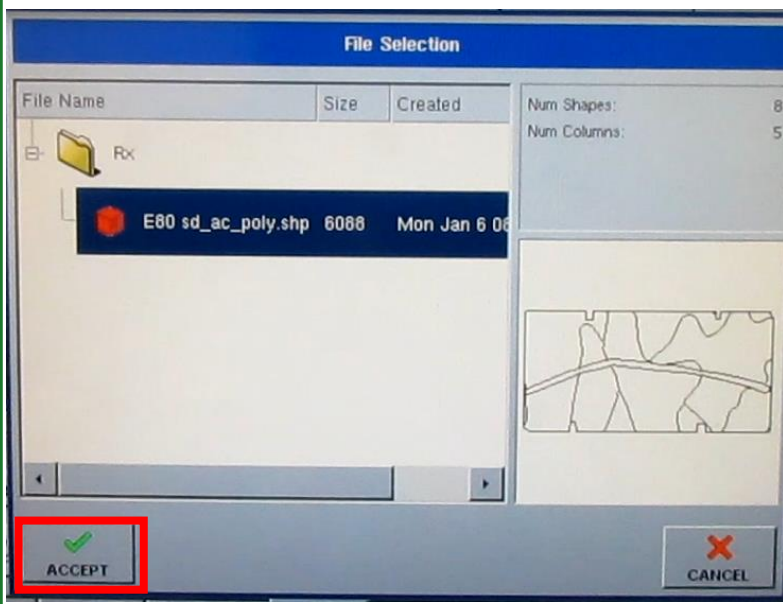
2

Start from the home planting screen of the InSight. Press the map tab on the bottom left part of the screen.



4

The File Selection page will show a folder map similar to a PC. You will use the touch screen to navigate to the prescription file for the desired field, press to highlight the file. When the file has been chosen press accept to continue.



5

Press the Next button on the Shapefile Conversion Wizard: Welcome. This disclaimer is telling you that the shapefile is going to be changed into an IRX prescription at the end of the Wizard.



Importing and Planting with A VRS Prescription Ag Leader InSight

6

For Step 2 of 4 select the product and the specific units. Press the next icon to move on.

Shapefile Conversion Wizard: Step 2 of 4

Select Shapefile Product and Units

Product: Variety A

Units: seeds

TIP: Select the product and units that the Shapefile prescription was made for.

BACK NEXT CANCEL

In the Shapefile Conversion Wizard: Step 3 of 4 make sure the Column is set to the variety for the current field. This is typically not the default.

Other tags for this are Tgt_Rate, Target_Rate, or Seeding_Rate among others.

When the correct Column is selected you will see a series of values in the Column Preview window that will be very close to the seeding rates prescribed for the field.

Do not proceed until the column preview shows valid seeding values.

Change value to match seeding rate attribute.

7

Confirm seeding rate values in the preview window, then press the next button.

8

Shapefile Conversion Wizard: Step 3 of 4

Select the Rate Column

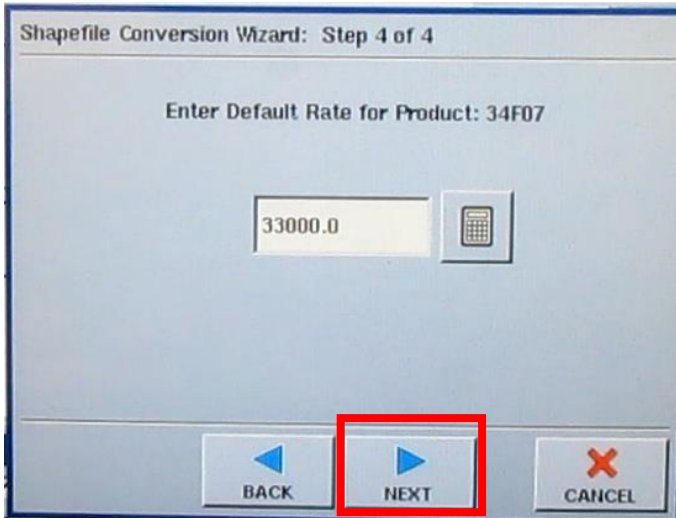
Column: Variety A

Column Preview: 35000.00, 35000.00, 35000.00, 35000.00

BACK NEXT CANCEL

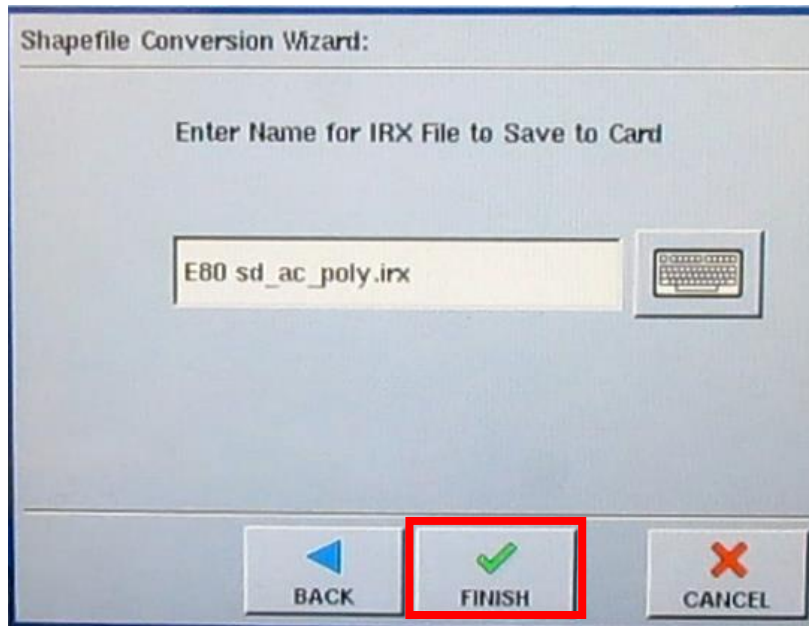
9

On the Shapefile Conversion Wizard: Step 4 of 4 enter in a default rate for the product by selecting the calculator. Press the next button to move on. **Note: this Default rate is in seeds/ac.**



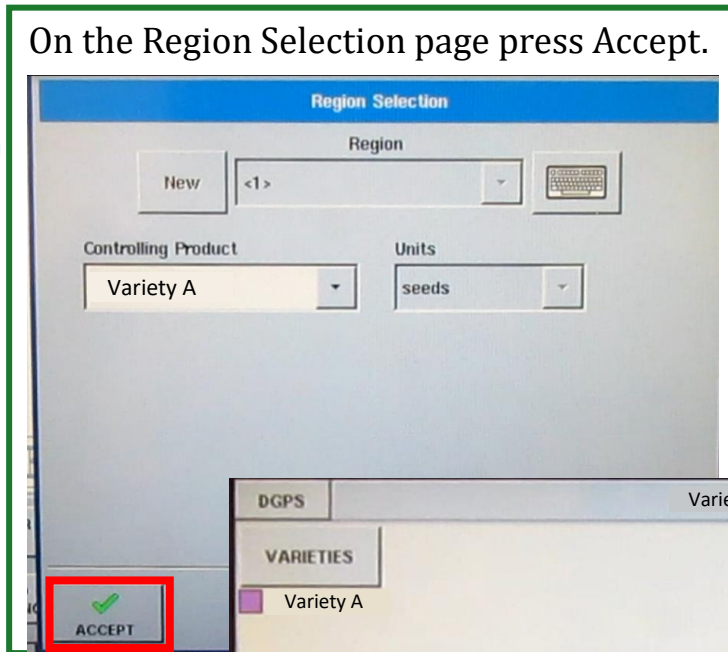
10

On the Shapefile Conversion Wizard: Press the Finish Icon to complete the prescription map. **Note: if there is an error on this page you may need to add a unique name to the this by selecting the keyboard.**

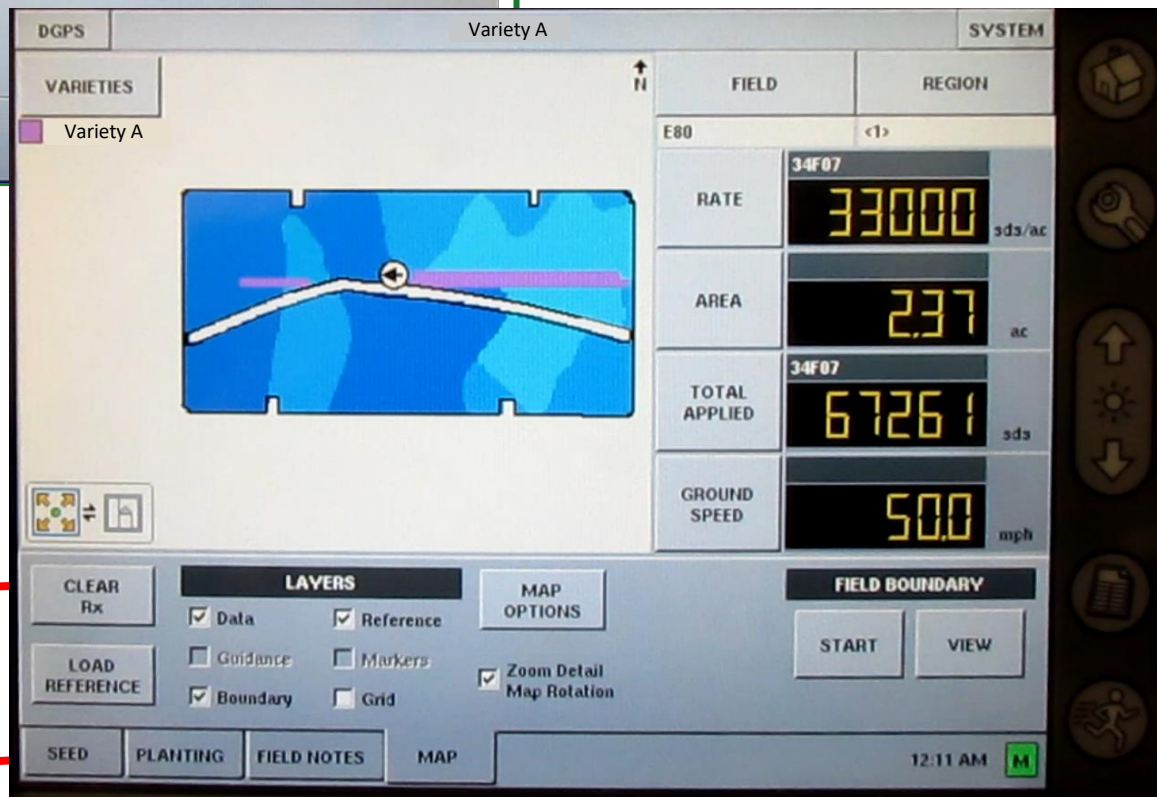


11

On the Region Selection page press Accept.



12



After accepting the VRS prescription shapefile you'll return to the main Planting screen.

Notice that the load map icon has been replaced with Clear Rx. This indicates that a VRS map is loaded. To change maps you first need to delete the current map by pressing the clear Rx, then repeat the VRS process at Step 3.

To return to the main run screen and execute the VRS prescription map simply press the Seed tab at the bottom right hand side of the screen.

Importing and Planting with A VRS Prescription Ag Leader InSight



Confirm that the VRS map was properly loaded by reviewing the following check list:

1. Make sure the Target rate matches the current VRS zone.
2. Review the Rx rates on the reference map and confirm they match the seeding plan.

Cleaning up Prescriptions



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Cleaning up Prescription Ag Leader InSight

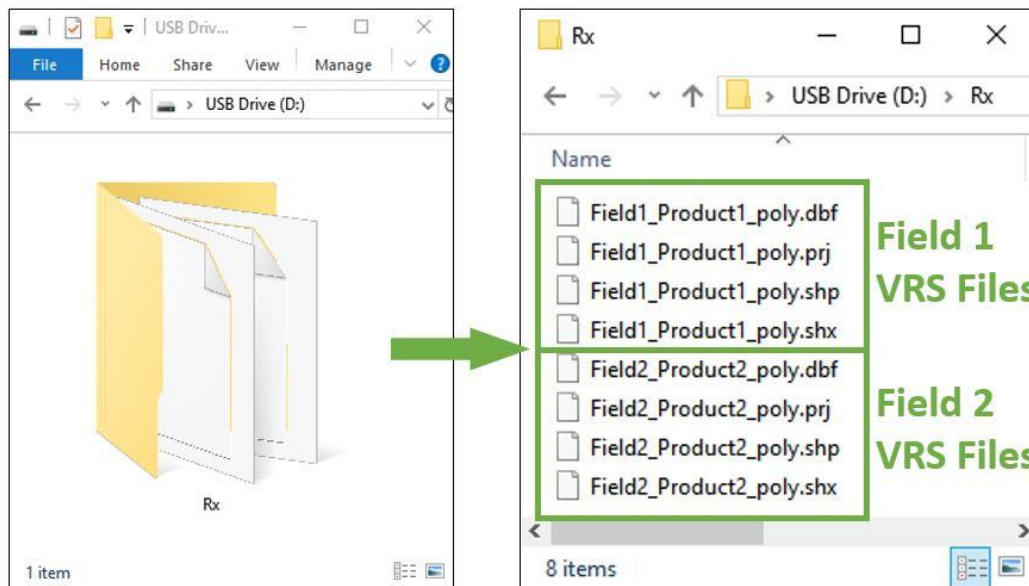
1

Eject the Compact Flash card that contains the Rx folder with the shapefiles.



2

Use a computer with a USB to Compact flash card reader, to open the Rx Folder on the compact flash card. When in the Rx Folder, **delete** the previous shapefiles from the past year. The folder can be left on the Compact flash card for later use



Creating Varieties For Planting

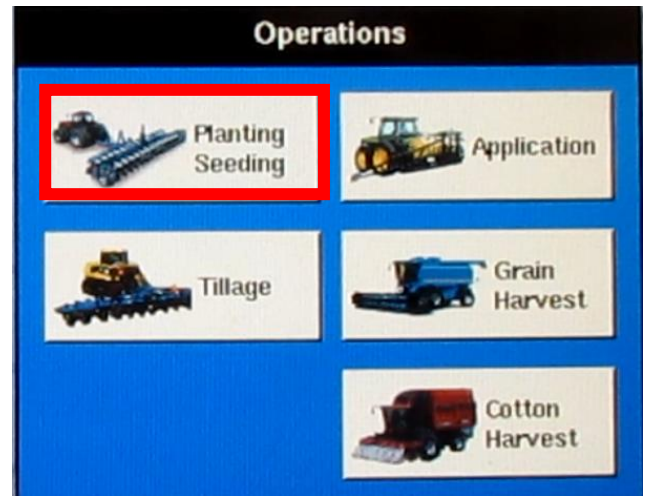


Creating Varieties For Planting Ag Leader InSight

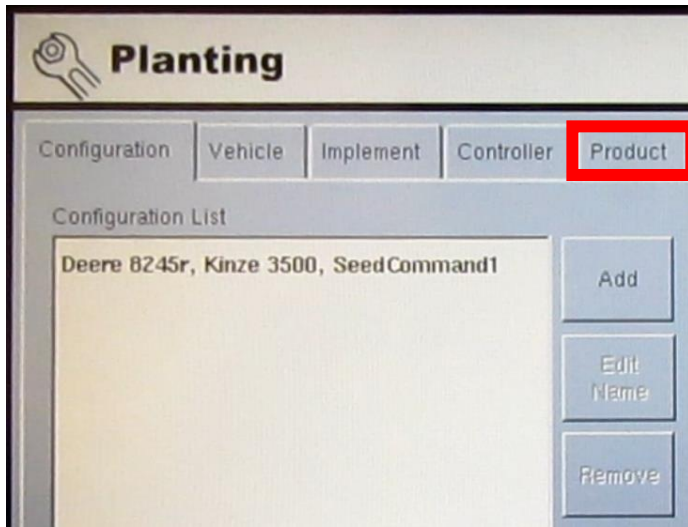
1 Before starting the Planter Operation press the wrench icon to enter in all the different varieties that are going to be planted this year. **Note: the Wrench is located on the right side of the screen. This will bring up the Setup Screen.**



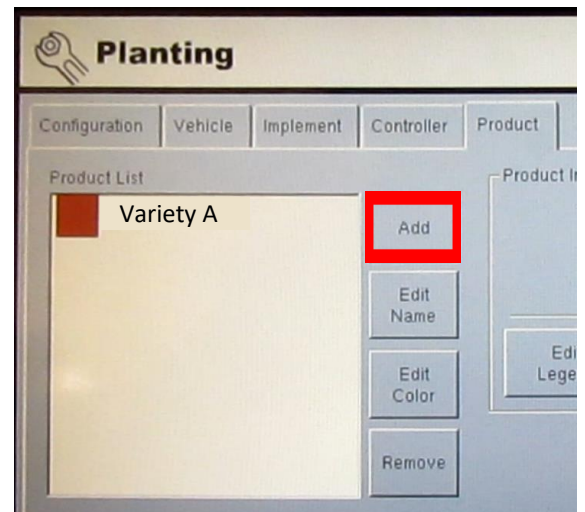
2 To add different varieties press the planting and seeding icon under operations on the setup page.



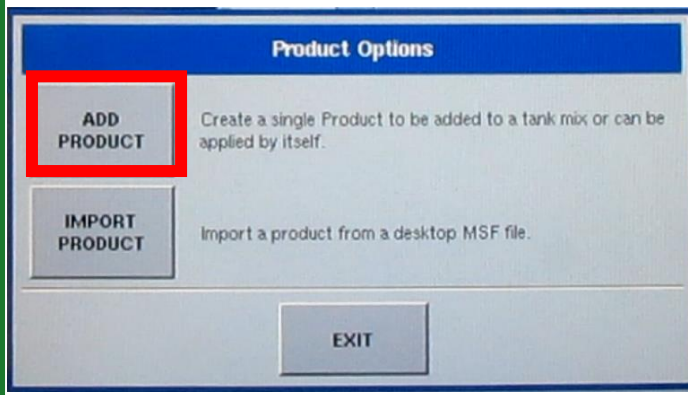
3 On the Planting Configuration screen press the product tab.



4 Press the Add button on the Product List page. This creates a seed product to be planted.



5 A popup window will appear for Product Options. Press Add Product to Create a single Product.



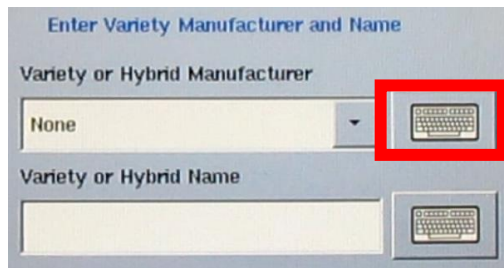
Creating Varieties For Planting Ag Leader InSight

6

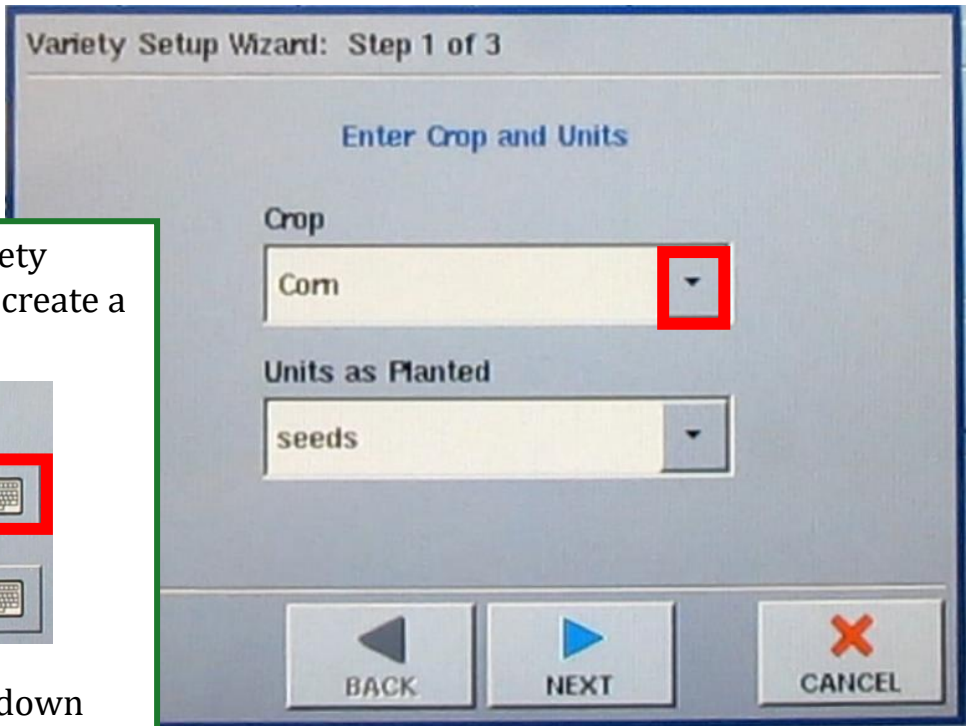
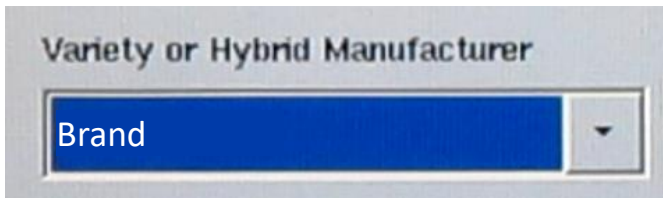
To change the Crop press the drop down box under the text. Example: the Crop is Corn. Press the next button to

7

On the Variety Setup Wizard: Variety Name page press the keyboard to create a new Variety or Hybrid Brand.

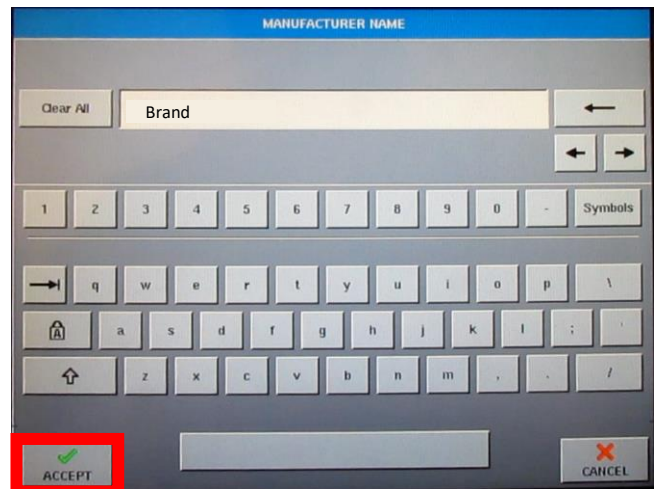


If one has been created press the down arrow that says None and choose the correct Brand, example: Brand.



8

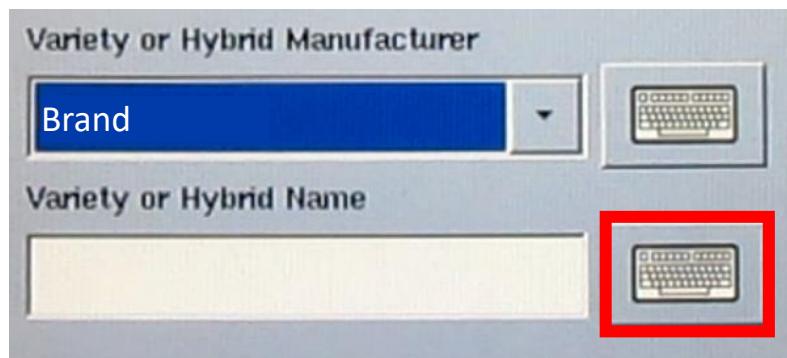
After pressing the Keyboard icon type in the correct Brands name, example Brand. Press the accept button when the correct name is entered.



Creating Varieties For Planting Ag Leader InSight

9

When the Manufactures are entered, use the drop down arrow to select the correct Brand (example: Brand) to enter in the Variety or Hybrid Name press the keyboard icon. Use the keyboard to enter in the Variety or Hybrid Name.



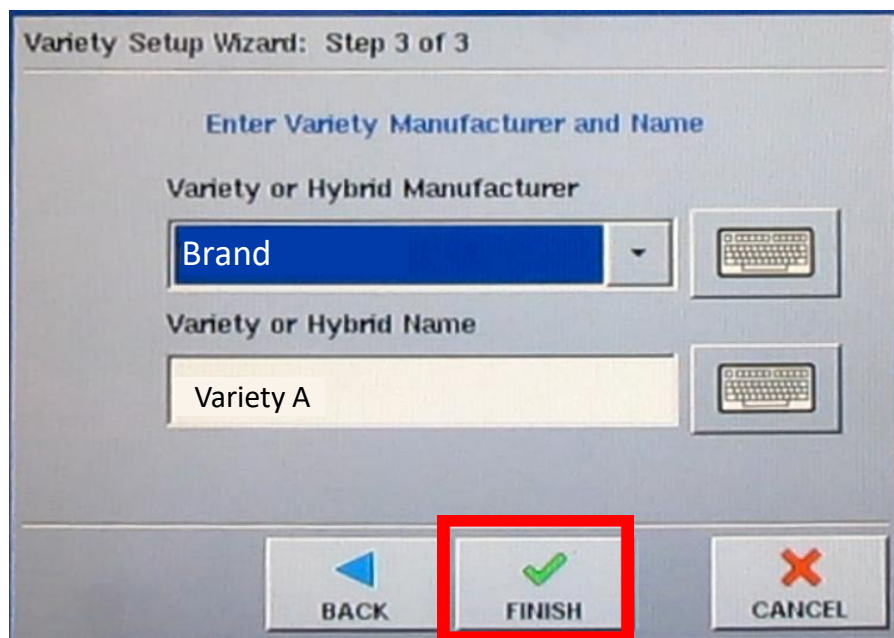
Variety or Hybrid Manufacturer

Brand

Variety or Hybrid Name

10

Press the check mark once the Brand and Variety name has been entered. To create more Varieties repeat steps 4 to 5 to get to the Variety Setup Wizard. Then press select the correct Brand and enter in the Variety name.



Variety Setup Wizard: Step 3 of 3

Enter Variety Manufacturer and Name

Variety or Hybrid Manufacturer

Brand

Variety or Hybrid Name

Variety A

BACK FINISH CANCEL

Cleaning up Varieties



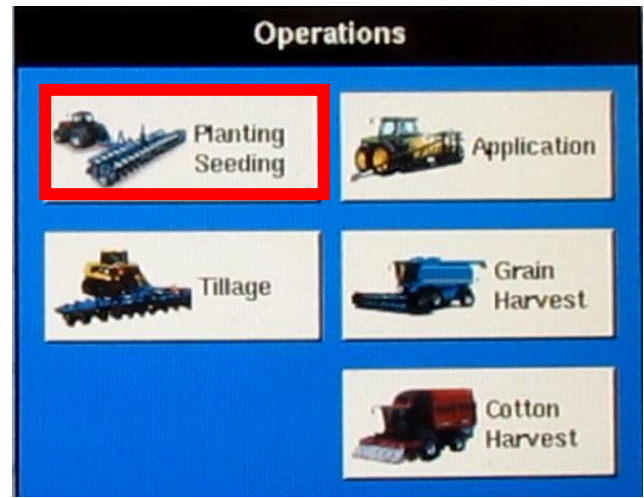
Cleaning up Varieties

Ag Leader InSight

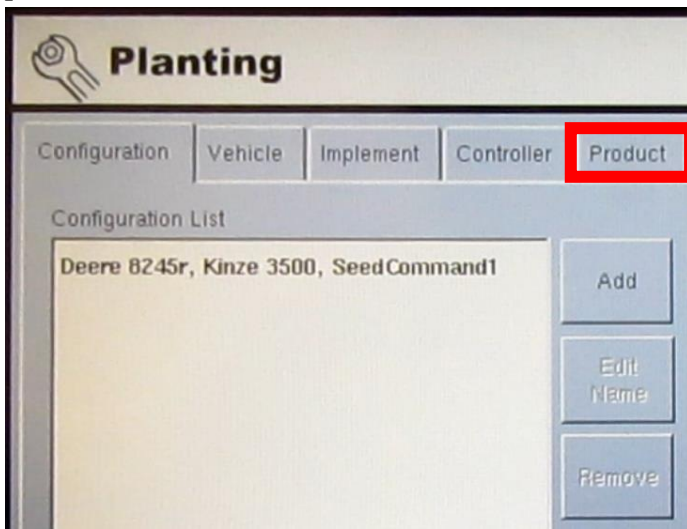
1 To clean up Varieties press on the **Wrench** icon. **Note: the Wrench is located on the right side of the screen. This will bring up the Setup Screen.**



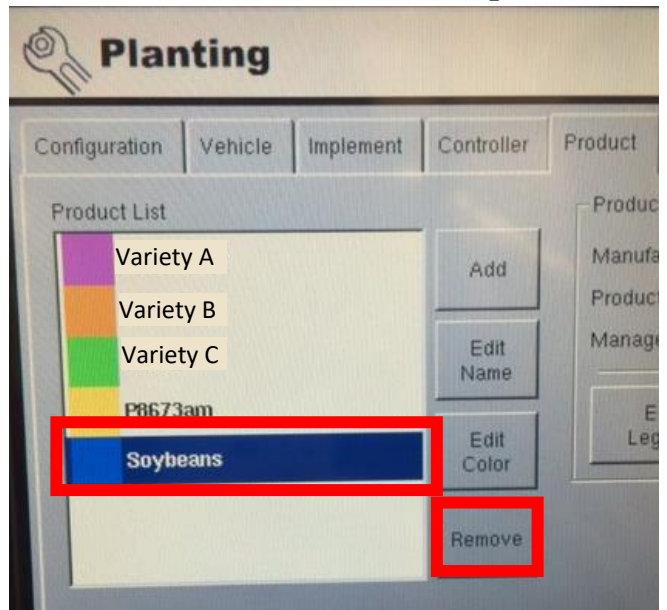
2 To delete varieties, press the **Planting Seeding** icon under operations on the setup page.



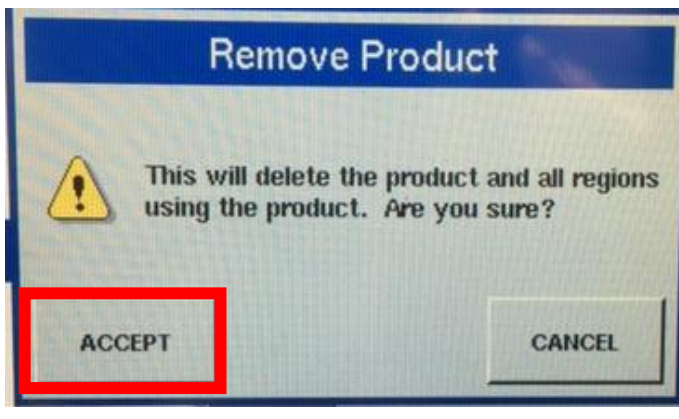
3 On the Planting Configuration screen, press on **Product** tab.



4 Select a Variety by pressing on one in the product list. Once highlighted, press on **Remove**. **Be Cautious as this will delete all logging data/regions associated with the deleted product!**



5 **Be Cautious as this will delete all logging data/regions associated with the deleted product!** Press the **Accept** to approve the removal of the product.



Changing Varieties Within A Field

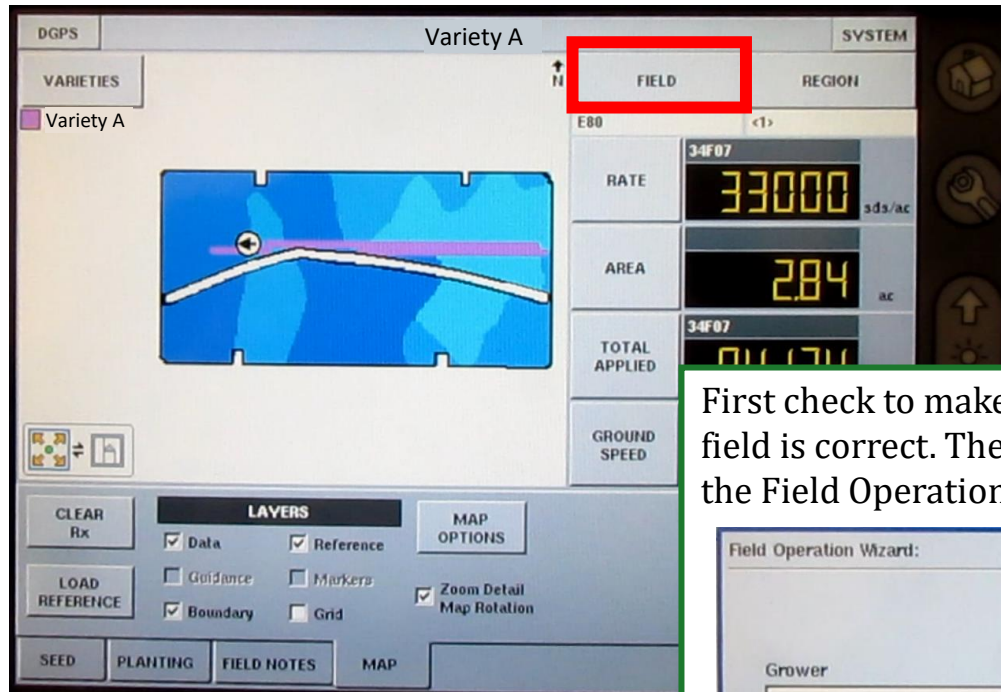


Changing Varieties Within A Field Ag Leader InSight

When Changing Varieties in the field Make sure to have all of the Varieties entered in before going to the run screen.

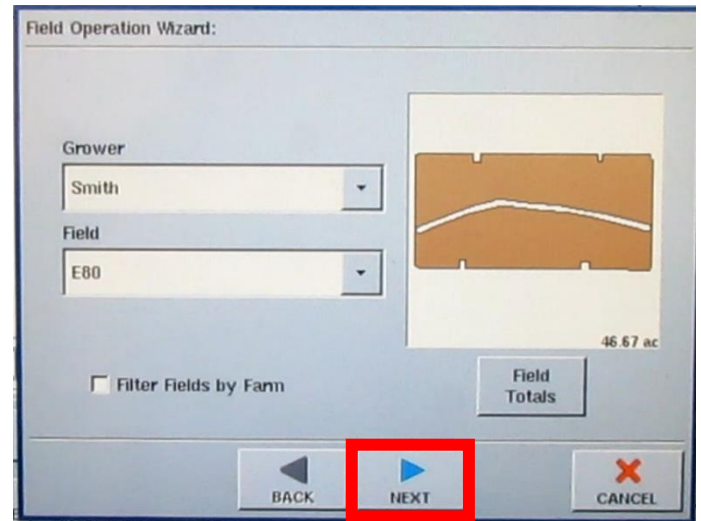
1

From the home planting screen press the Field button on the top right hand side of the screen.



2

First check to make sure that the grower and field is correct. Then press the next button in the Field Operation Wizard.



3

Press the next button in the Field Operation Wizard. **Note: the Operation Configuration should be the Planter setup.**

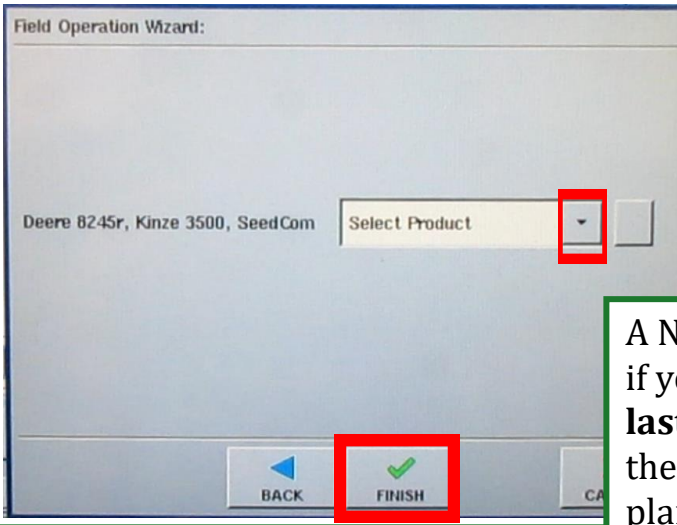


Changing Varieties Within A Field

Ag Leader InSight

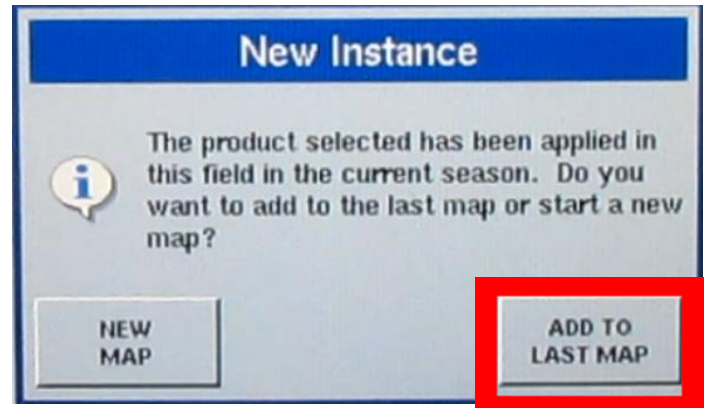
4

On the Field Operation Wizard page press the down arrow to change to the next variety, Example: switching from Variety A to Variety A Variety B. Select Finish to continue.



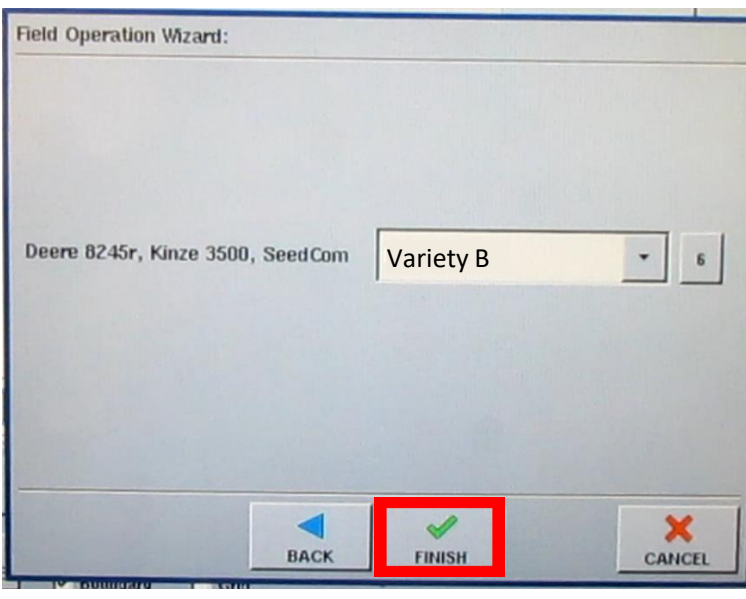
5

A New Instance window will popup asking you if you would like to start a new map or **Add to last Map**. Press Add to last map this will allow the new variety to be added to the current planting map. **Note: If you don't add to last map the row clutches will not work correctly, because it will lose the headlands.**



6

Press Finish on the Field Operation Wizard once you have changed to the correct Variety.



Setting Up Split Planter Treatment Data



Setting Up Split Planter Treatment Data Ag Leader InSight

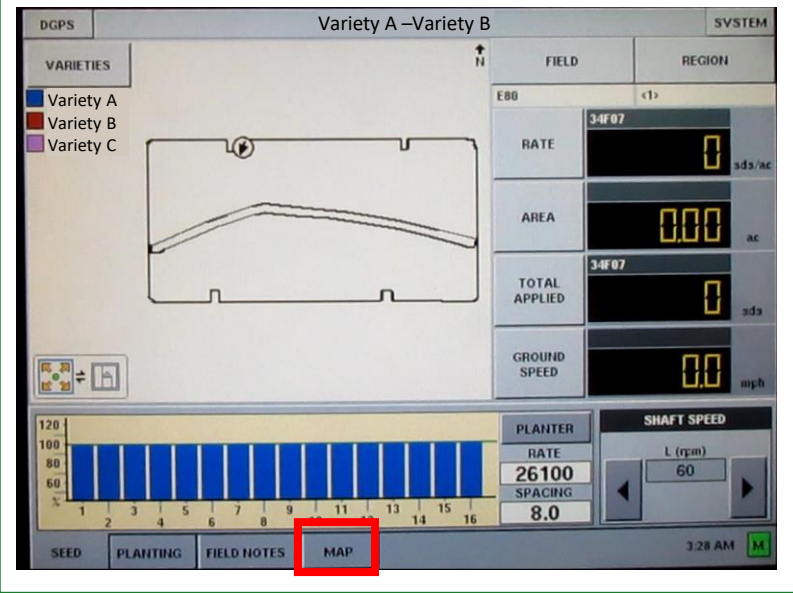
1

Insert the compact flash card containing the Rx folder and shapefiles into the InSight display.



2

Start from the home planting screen of the InSight. Press the map tab on the bottom left part of the screen.



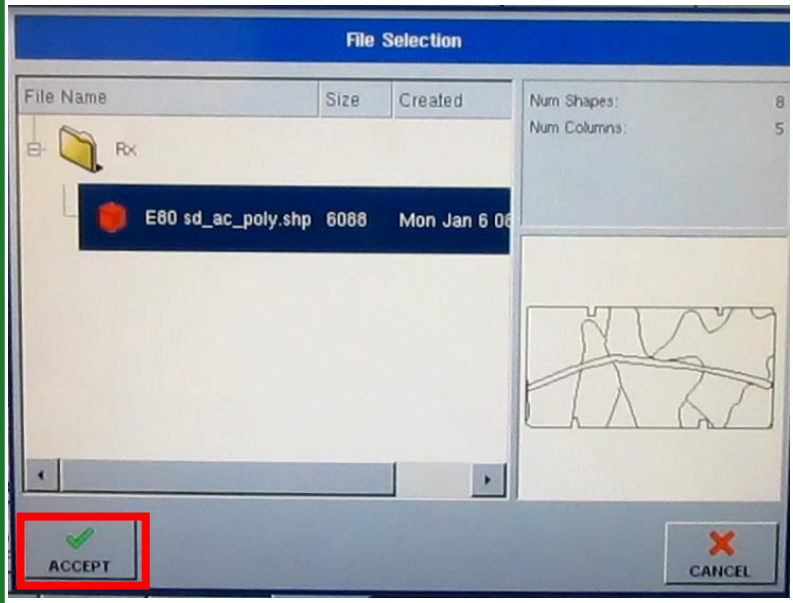
3

Press Load RX to load the RX file to the InSight display.



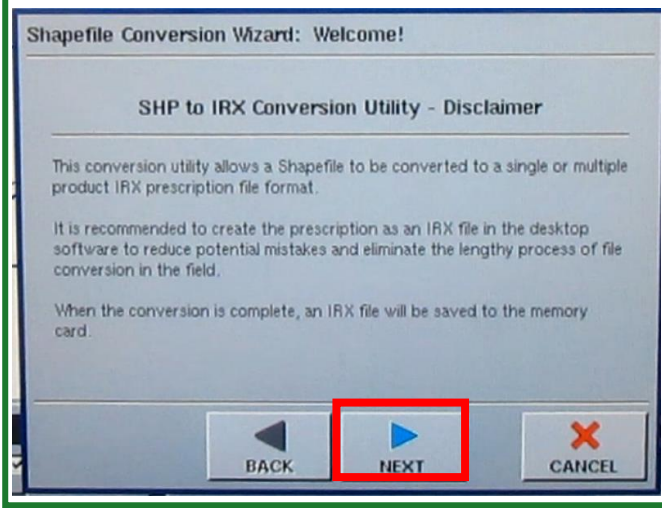
4

The File Selection page will show a folder map similar to a PC. You will use the touch screen to navigate to the prescription file for the desired field, press to highlight the file. When the file has been chosen press accept to continue.



5

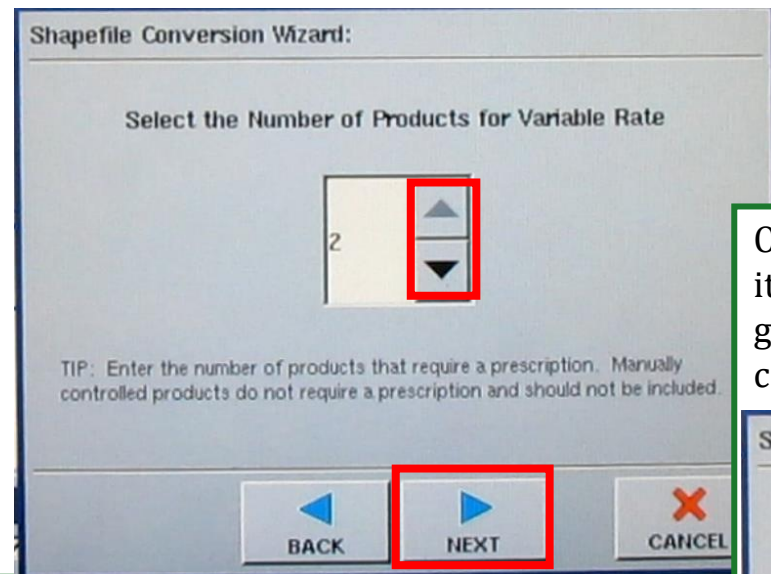
Press the Next button on the Shapefile Conversion Wizard: Welcome. This disclaimer is telling you that the shape file is going to be changed into an IRX prescription at the end of the Wizard.



Setting Up Split Planter Treatment Data Ag Leader InSight

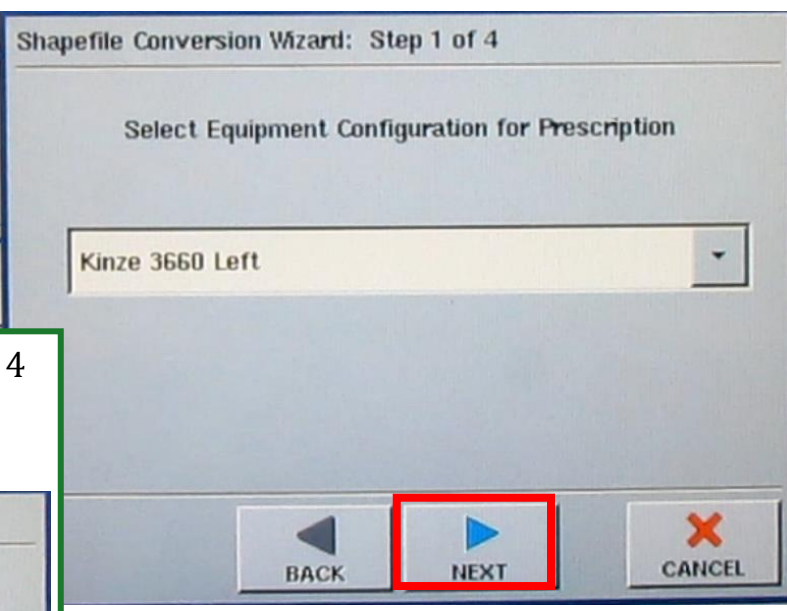
For Shapefile Conversion wizard press to select the number of drives or sections. Example is 2 because this planter has 2 separate drives. To move on press the next button. **Note: if the Product for Variable rate doesn't show up on the screen this will need to be setup in the Seed Command window. Please contact the equipment Brand for support.**

6



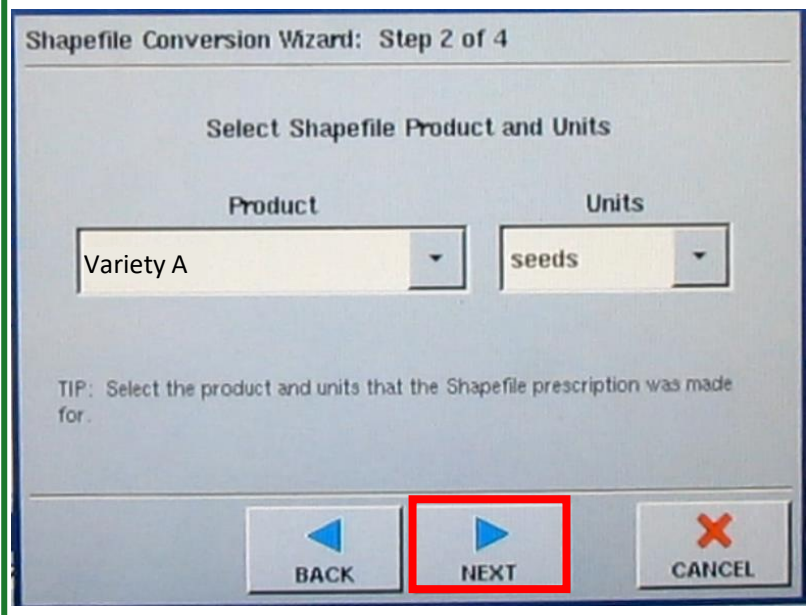
7

On the Shapefile Conversion Wizard: Step 1 of 4 it just saying what section of the planter is going to be setup first. Press the Next button to continue.



8

On the Shapefile Conversion Wizard: Step 2 of 4 shows the current variety or Product in the current section.



Setting Up Split Planter Treatment Data Ag Leader InSight

In the Shapefile Conversion Wizard: Step 3 of 4 make sure the Column is set to the variety for the current field. This is typically not the default.

Other tags for this are Tgt_Rate, Target_Rate, or Seeding_Rate among others.

When the correct Column is selected you will see a series of values in the Column Preview window that will be very close to the seeding rates prescribed for the field.

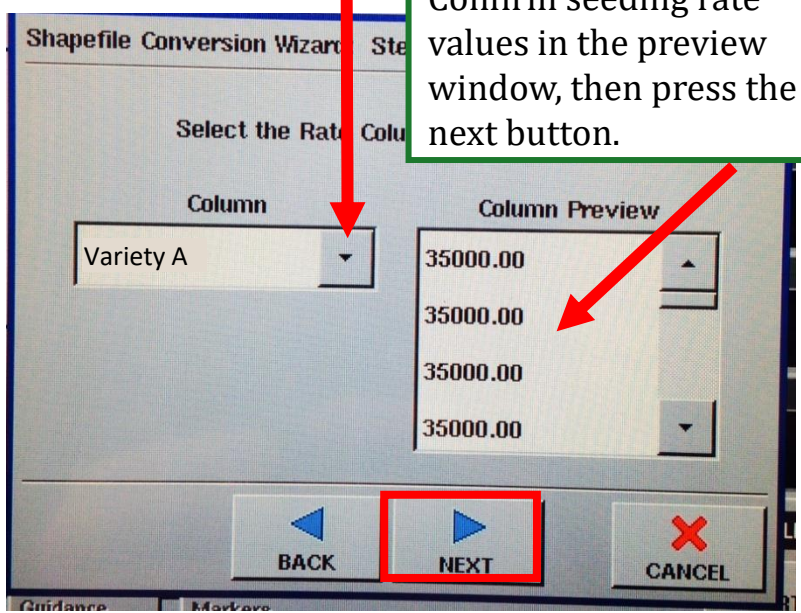
Do not proceed until the column preview shows valid seeding values.

Change value to match seeding rate attribute.

9

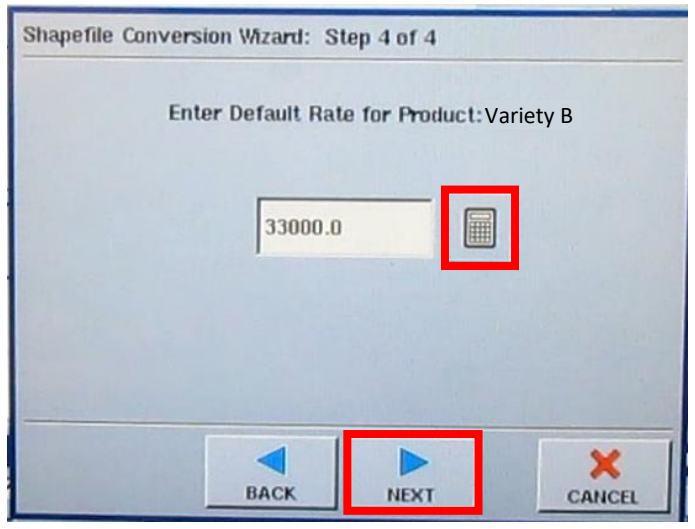
10

Confirm seeding rate values in the preview window, then press the next button.



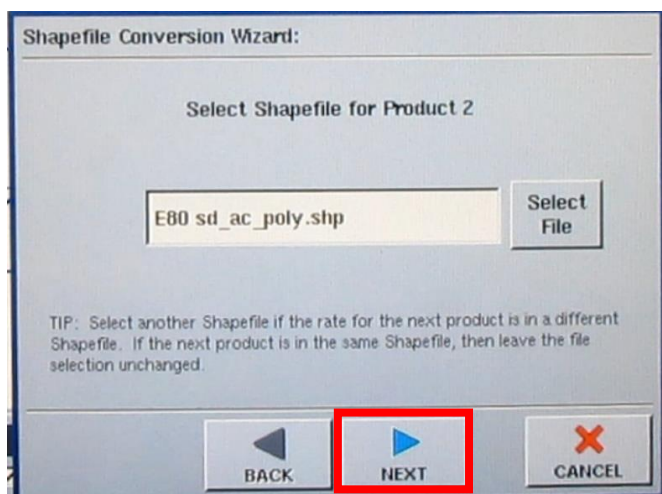
11

On the Shapefile Conversion Wizard: Step 4 of 4 enter in a default rate for the product by pressing the calculator. Press the next button to move on. **Note: this Default rate is in seeds/ac.**



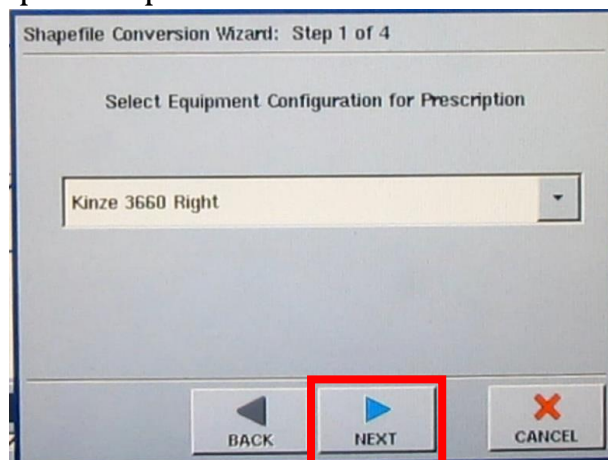
12

On the Shapefile Conversion Wizard: Continues to selecting the correct File for product 2. If the file shows up to be incorrect press the Select File icon. Once the correct file has been chosen press the next button to continue.



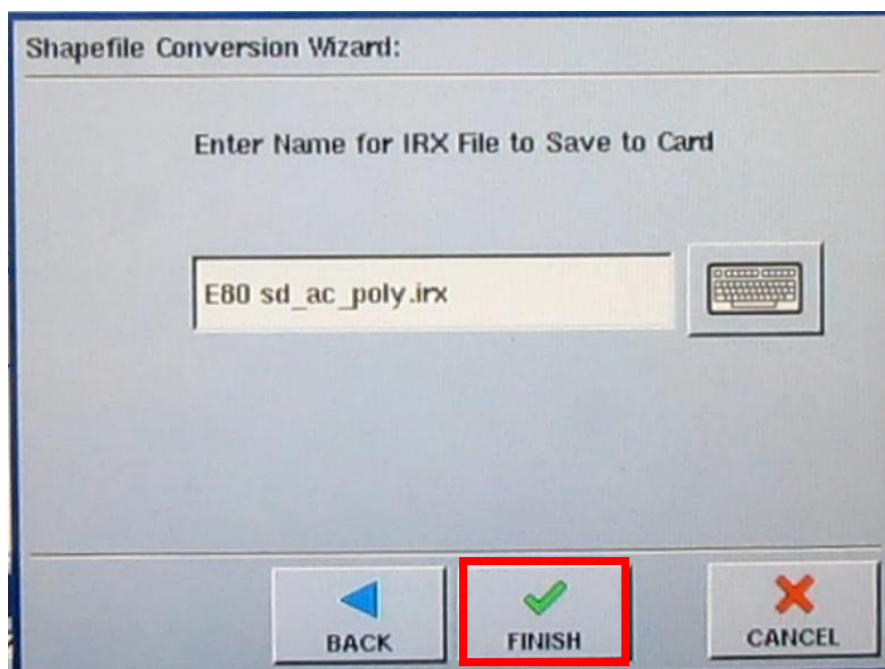
13

After choosing the correct VRS map for the second product it changes the section to the right side of a two section planter. Repeat steps 8 to 11.



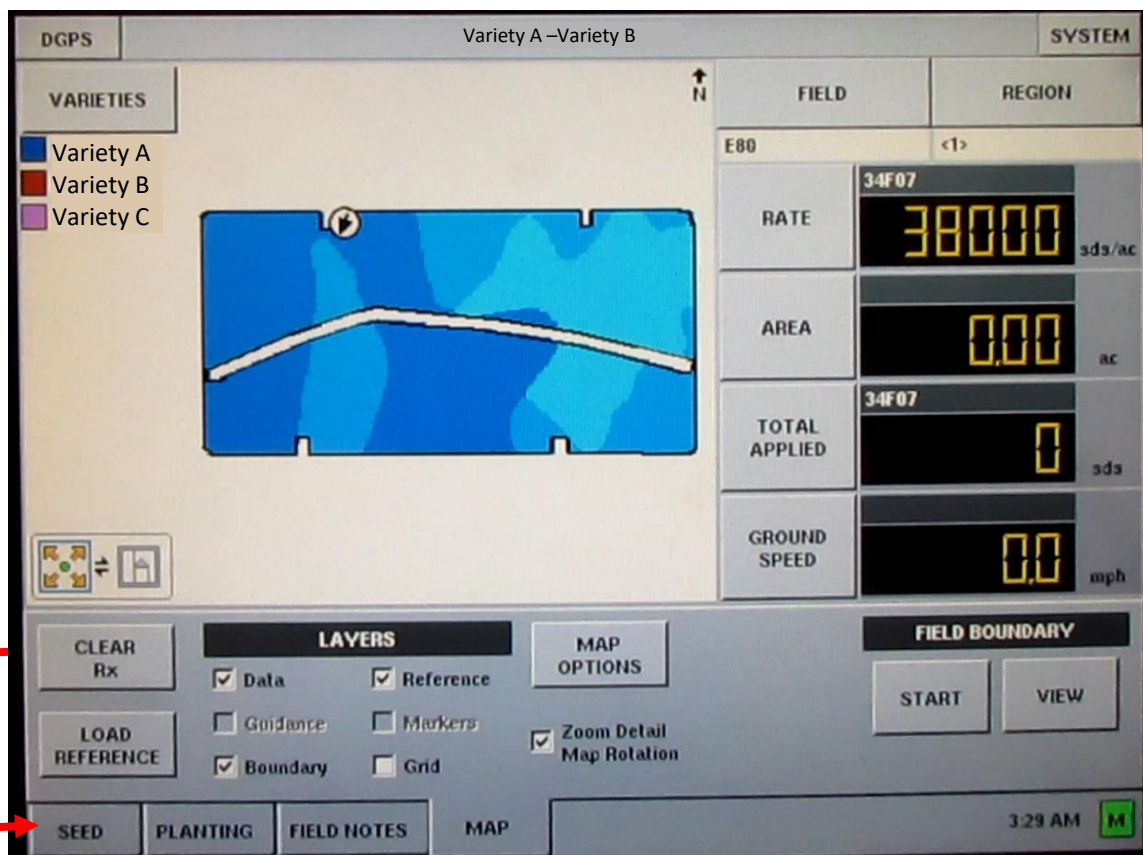
14

Once all of the planter section have been assigned with a VRS map. Press Finish to save the IRX file to the card.



Setting Up Split Planter Treatment Data Ag Leader InSight

26



After accepting the VRS prescription shapefile you'll return to the main Planting screen.

Notice that the load map icon has been replaced with Clear Rx. This indicates that a VRS map is loaded. To change maps you first need to delete the current map by pressing the clear Rx, then repeat the VRS process at Step 3. **(don't press)**

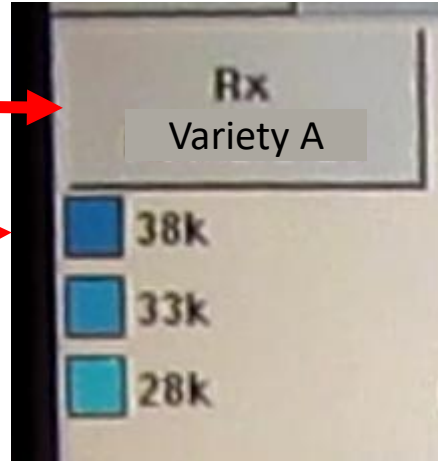
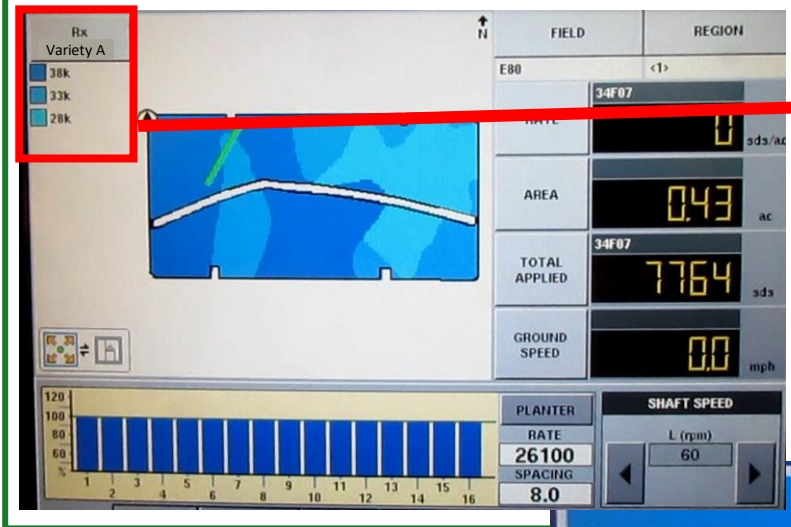
To return to the main run screen and execute the VRS prescription map simply press the Seed tab at the bottom right hand side of the screen.

15

Setting Up Split Planter Treatment Data Ag Leader InSight

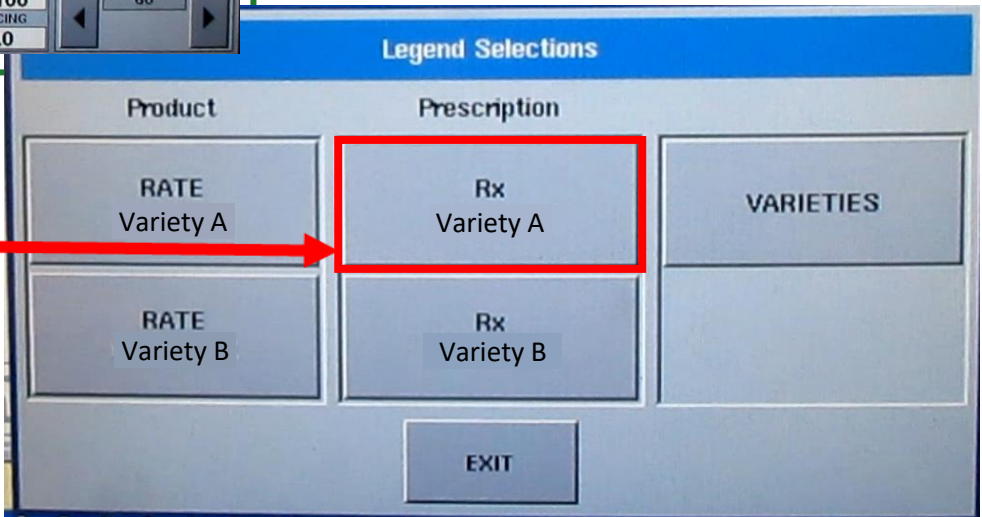
The RX should show the product applied along with the Rates being applied. To change product press the Rx button.

16



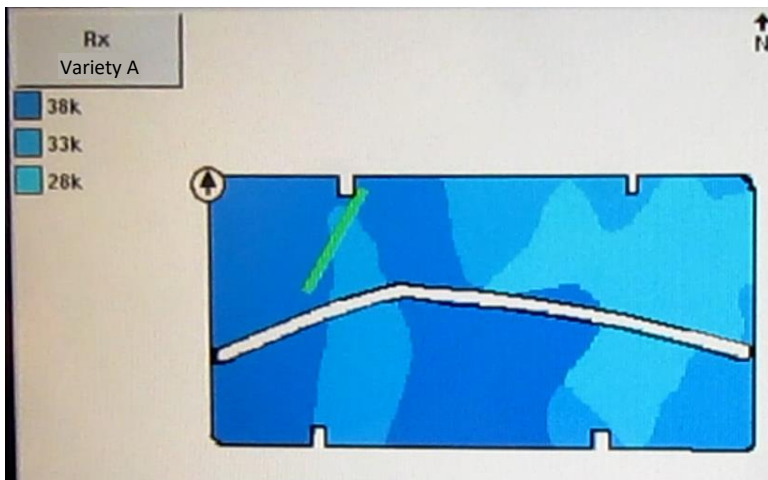
17

On the Legend Selection page press the second Prescription Rx Variety A.



18

When the 2nd product appears verify that the VRS Map is present and the Rates are correct.



Exporting As-Applied Planting Files



Exported As-Applied Planting Files Ag Leader InSight

1

From the main planter screen press the Home button to return to the main InSight screen.
Note: the Home icon is located on the upper right side of the screen. This will bring up the Home screen.



2

Press the Copy to Card button to transfer as-applied files on the monitor the Compact Flash drive.

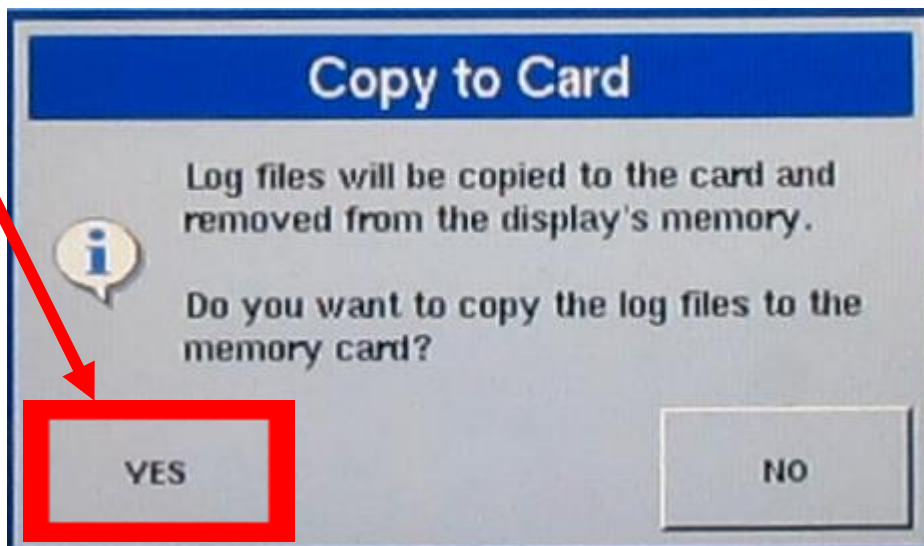


3

Press yes to Copying the data to the card.

After files are exported they will no longer reside on the display.

Make sure to provide the grower a backup copy of the exported files for there own records





4

Wait while data files are transferred to the Compact Flash drive.

Once the transfer is complete press the ok button. You can now remove the compact flash card. Once you open the slot wait a few seconds until the screen says its save to remove.

Data files will be stored on the Compact Flash card in a folder which is the serial number of the InSight display. This will be unique to the customer, but it is good practice to rename the folder with the customer's name to ensure data integrity.

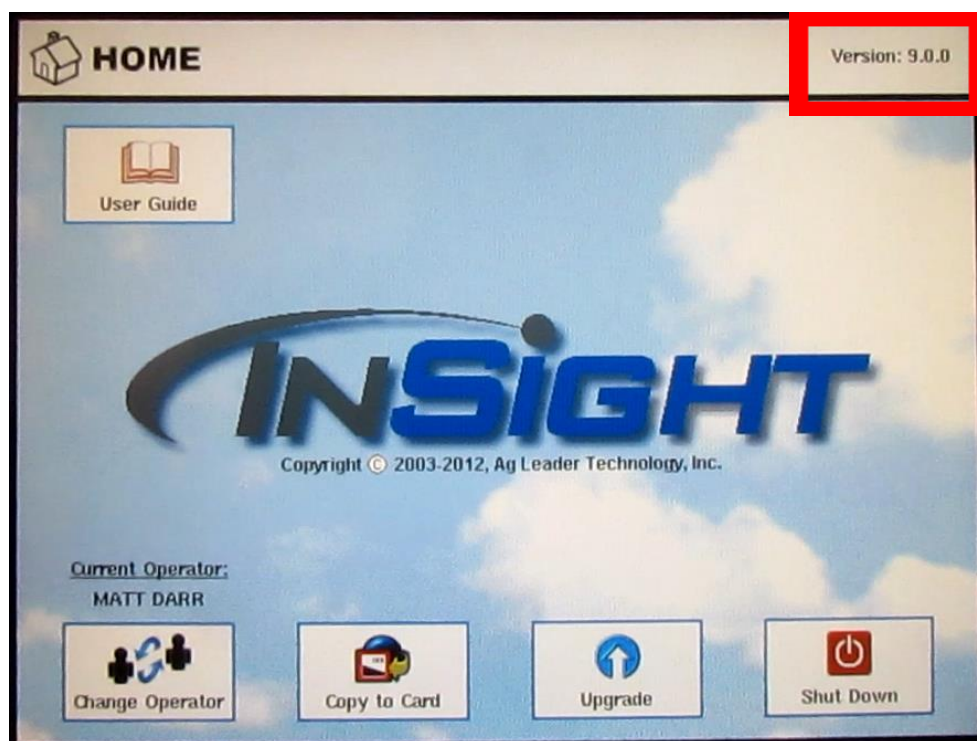
Trouble Shooting



Check the firmware version number of the display by press the home icon in the upper right hand corner of the screen.



The Firmware will be located on the top right hand corner that says version.



Question: Does it matter what the seeding rate units are?

Answer: Yes, shapefiles for the Integra and InSight displays require units of Seeds Per Acre. Prescription shapefiles with units of thousands of seeds per acre or kseeds per acre will not work correctly.

Split Planter setup not working: Display needs to be Unlocked for Multiple Products, Please contact the Equipment provider for more assistance.

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

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Department of Agricultural and Biosystems Engineering

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