

vSet® Select

**vSet Select Operator's Guide
For Gen 3 20|20 Displays**

Precision Planting®

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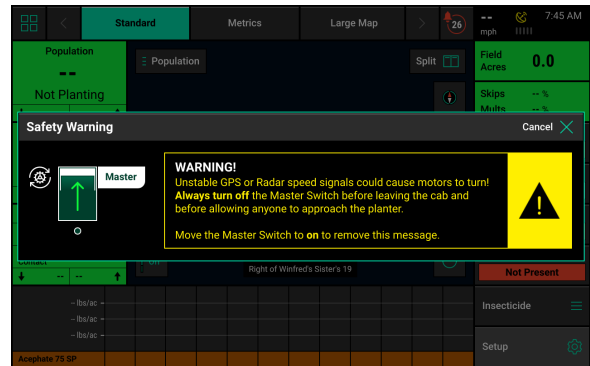
Safety Warning

Once any control product is configured on the 20|20 display, the system will require a Cab Control Module (CCM) and will prompt the user to toggle the Master Plant switch on the CCM before any control products can be used.

Note: This Safety Warning will only appear in 2020.1.x and newer software.



If a CCM is not installed, the cancel button can be used to bypass this warning. No control systems will operate until the Master Plant switch is toggled. This icon will be present in the status button in the top right if the Safety Warning was bypassed using the cancel button.



vSet Select System Setup and Operation

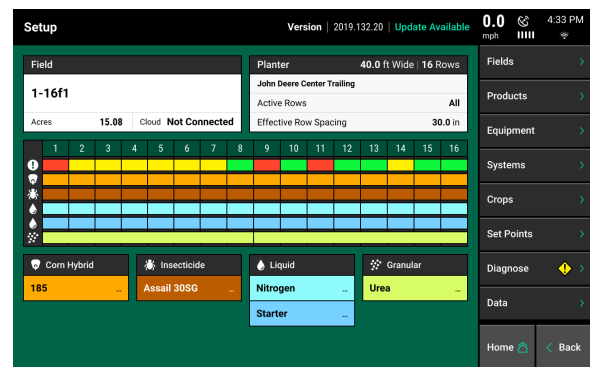
There are four requirements for the vSet Select system to function:

1. vSet Select must be configured on the 20|20 monitor.
2. There must be a Speed source.
3. The Master Plant Switch on the Cab Control Module must be in the up position
4. The planter must be lowered.

Configuring Monitor for vSet Select

Step 1:

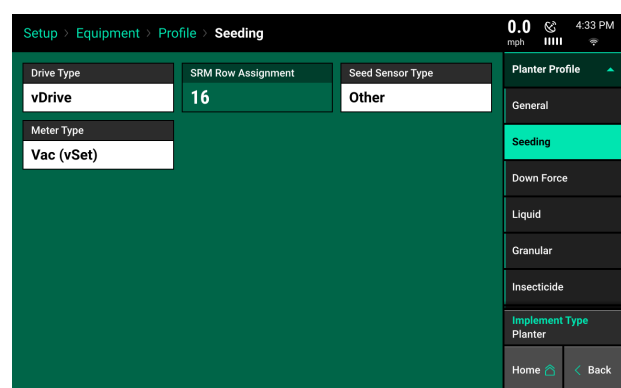
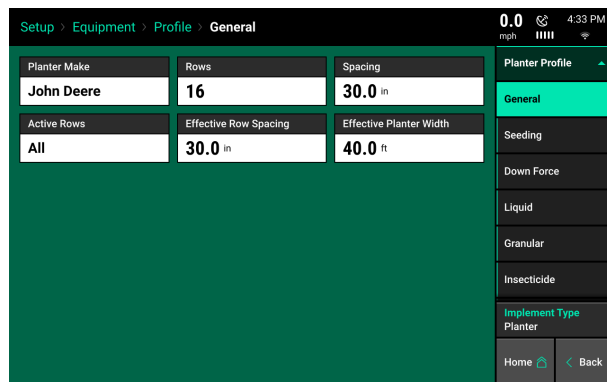
Set vSet Select as the drive type. Navigate to the planter setup page by selecting, “Setup” – “Equipment”.



Step 2:

Select the Seeding tab under Planter Profile.

Note: On 2020.0.x and older software, Drive type will be available under the main planter profile page.



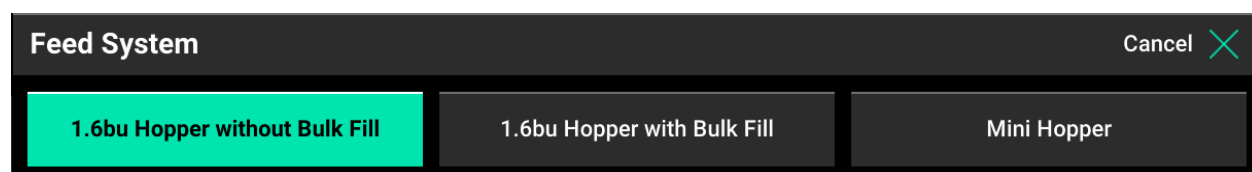
Step 3:

Press the “Drive Type” button and then select “vSet Select”.



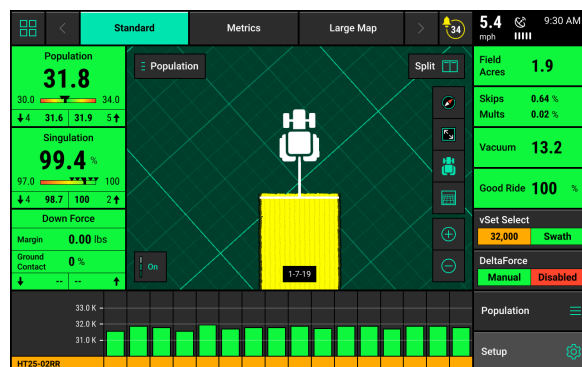
Step 4:

When choosing vSet Select as the Drive Type, define the feed system that is being used so that the system will control correctly.



Step 5:

On the Home screen, a vSet Select button will appear on the right hand side of the screen in the Standard and Metric tab. This is the vSet Select control button. It will display population, hybrid, and swath information. Use this button to access the vSet Select control page. See the vSet Control section for information on how to control vSet Select



Control Sections Setup

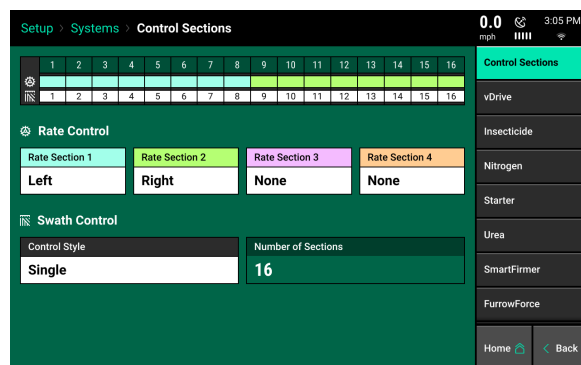
Navigate to Setup — Systems to configure the Control sections of this implement. The Control Sections will apply to all rate control products configured on this monitor. This includes seeding control, liquid fertilizer control, and granular fertilizer control.

Note: This section only applies to 2020.1.x and newer software, for 2020.0.x and older software, proceed to the next section of the manual.

Rate Section Setup

Setup the “Rate Control”. Rate Control Setup allows the operator to determine which rows to set to certain rates. The monitor can control up to 4 different rate sections at once. Each rate section can be assigned a different target rate or prescription attribute. A rate section can be any combination of rows.

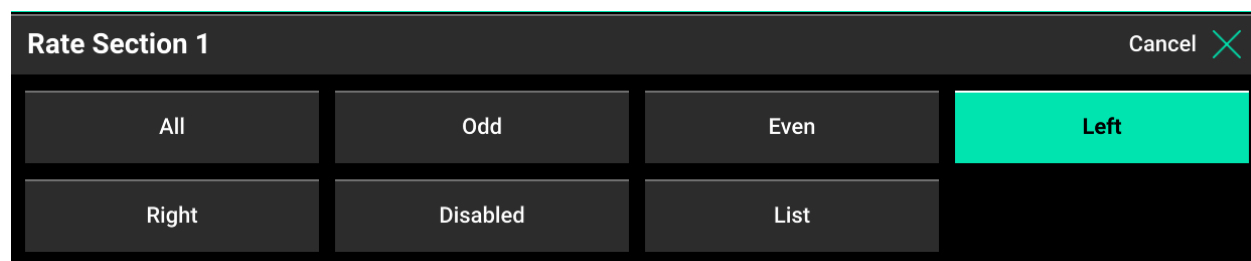
Note: Any rows **not assigned** to a rate section **will not operate or pass health checks**.



If all rows will be controlled with the same rate or the same prescription attribute only one rate section needs to be configured. If only one rate section will be used select “Rate Section 1” and then select “All”. Use multiple rate sections when controlling different rates between rows or sections.

To setup a rate section, select one of the four Rate Sections. Assign appropriate rows to the rate section. This may be Odd, Even, Left, Right or List. When selecting “List”, define which rows are to be used by touching those rows numbers so they turn green.

Note: Ensure that all rows are assigned to a rate section. Any row not assigned to a rate section will not operate.



Swath Setup

Set up the Swath Control. Swath Section Setup allows the operator to divide the planter into different swath sections. There are four different options for Swath Control.

Note: If setting up multiple Swath Sections, they **do not** have to be the same as Rate Sections.

Disabled — Rows will not shut off seeding when entering an area that is already planted.

Single Row — Each row will shut off individually as that row enters an area that is already planted.

Dual Ends — The outside two rows on each end of the planter are linked together. The inside rows are single row swath. Generally used with WAAS GPS correction.

Custom — If one of the pre-set settings is not acceptable, a custom setting can be selected. This will allow the operator to group any rows together for swath control.

Custom Swath Setup

If Custom is Selected:

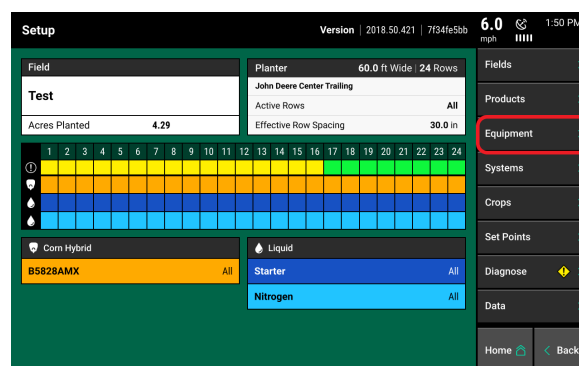
1. Select the total number of sections to set up.
2. For each section select the number of rows by pressing on the white box in the Number of Rows column and manually enter a value or by using the arrows to increase or decrease the number of rows in a section number
3. The Rows in Section will auto-populate as the Number of Rows is determined.
4. If a section does not have rows assigned to it, that section number will be ignored.

Section Number	Number of Rows	Rows in Section
1	2	1-2
2	1	3
3	1	4
4	2	5-6
5	2	7-8
6	1	9

vSet Select Setup — 2020.0.x and Older Software

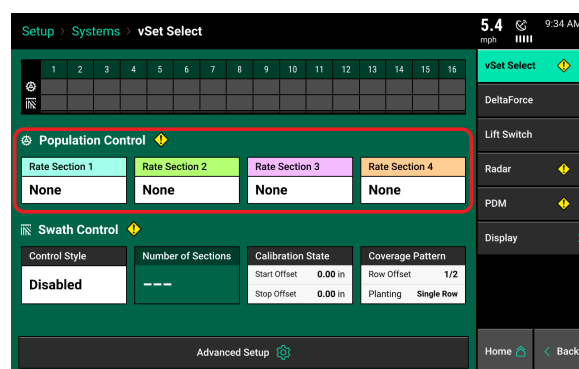
Step 1:

Navigate to “Setup” - “Systems” - “vSet Select”
After pressing the Setup button ensure that the correct planter is displayed in the Planter Information box. If this information is not correct, then select Equipment and set up the planter correctly. Once the planter information is correct; press the “Systems” button to begin the setup process.



Step 2:

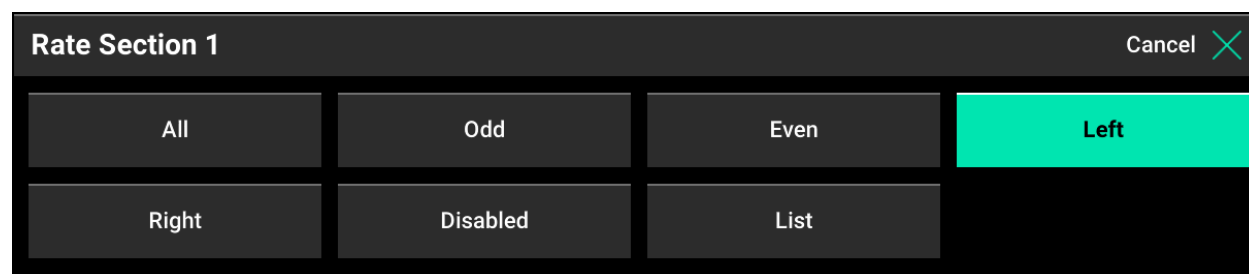
Set up “Population Control”. Population Control Setup allows the operator to determine which rows to set to certain populations. The 20/20 can control up to 4 different rate sections at once. Each rate section can be assigned a different population, hybrid (when in manual mode) or seeding prescription attribute. A rate section can be any combination of rows. Any rows not assigned to a rate section will not plant or pass health checks.



If all rows will have the same population rate, hybrid (in manual control), or seeding prescription attribute, only one rate section needs to be configured. If only one rate section will be used, select “Rate Section 1” and then select “All”. Use multiple rate sections when controlling different population rates different rows or sections.

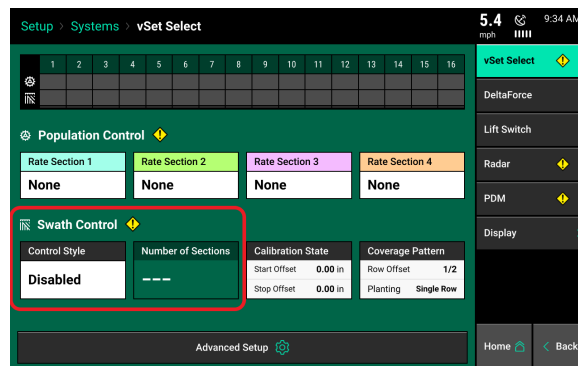
To set up a rate section, select one of the four Rate Sections. Assign appropriate rows to the rate section. This may be Odd, Even, Left, Right, or List. When selecting “List”, define which rows are to be used by touching those row numbers so they turn green.

Note: Note Ensure that all rows are assigned to a rate section. Any row not assigned to a rate section will not plant.



Step 3:

Set up “Swath Control” Swath Section Setup allows the operator to divide the planter into different swath sections. There are four different options for Swath Control:



Disabled - Rows will not shut off seeding when entering an area that is already planted.

Single Row - Each row will shut off individually as that row enters an area that is already planted.

Dual Ends - The outside two rows on each end of the planter are linked together. The inside rows are single row swath. Generally used with WAAS GPS correction.

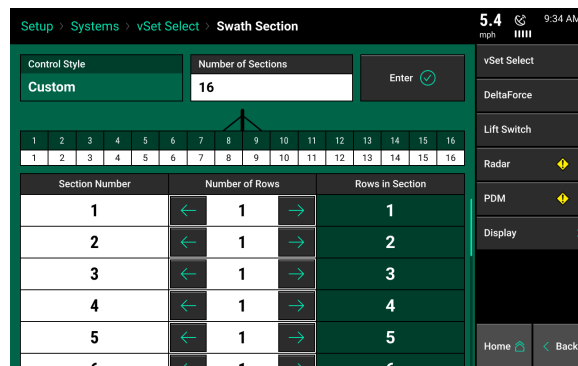
Custom - If one of the pre-set settings is not acceptable, a custom setting can be selected. This will allow the operator to group any rows together for swath control.

Note: When setting up multiple Swath Sections, they do NOT have to be the same as the Rate Sections.

Step 4:

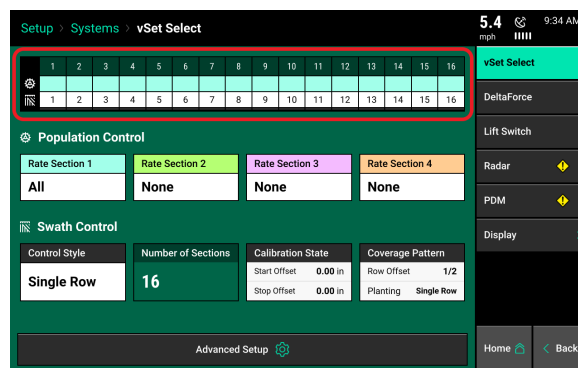
Custom Swath Sections

1. Select the total number of sections to set up
2. For each section select the number of rows by pressing the white box in the Number of Rows column to manually enter a value or by using the arrows to increase or decrease the number of rows in a section number
3. “Rows in Section” will auto-populate as the “Number of Rows” is determined.
4. If a section does not have rows assigned to it, that section number will be ignored.



Step 5:

Verify Rate Sections and Swath Sections on the main vSet Select System page (“Setup” — “Systems” — “vSet Select”).



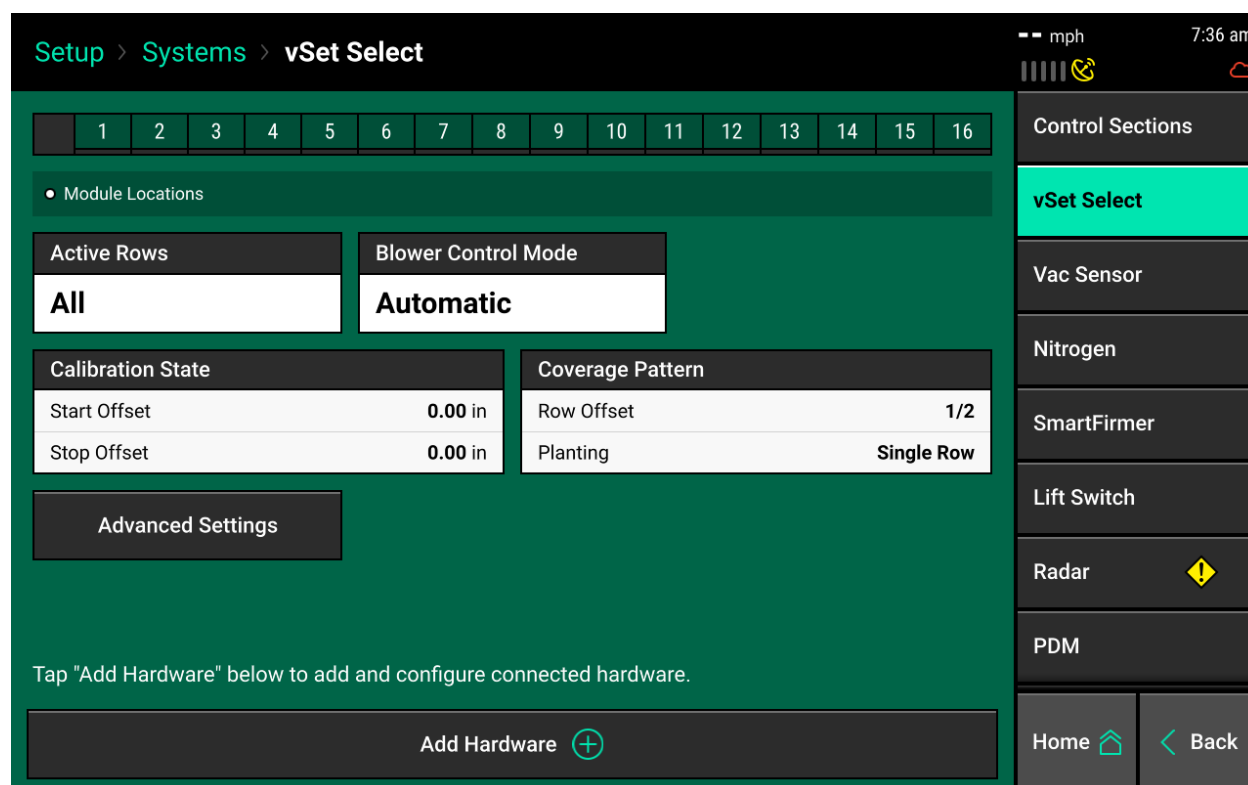
The Gear icon indicates the Rate Sections that have been configured and what rows they correspond to.



The Swath icon indicates the Swath Sections that have been configured and what rows they correspond to.

vSet Select Setup — 2020.1.x and Newer Software

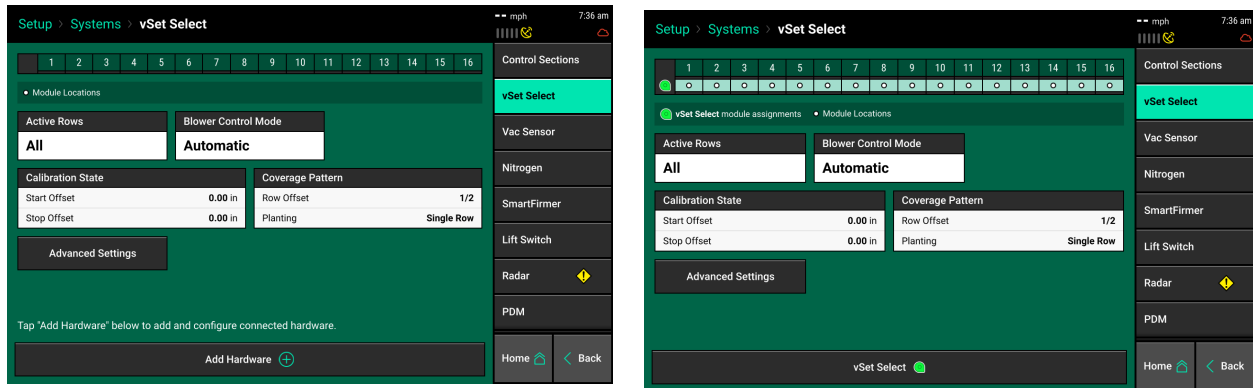
Navigate to Setup — Systems — vSet Select to configure your vSet Select system.



vSet Select Rows

Press the 'Add Hardware' button at the bottom of the screen and select how many rows on this implement have vSet Select installed.

Note: Current software requires an active vSet Select to be installed on a row for seed monitoring. The system does not support partial vSet Select planter setup.



Swath Control

The Swath Control configuration allows the user to adjust the control of the vDrive system for swath control. This includes both Calibration State and Coverage Pattern. For a complete guide on adjusting the vDrive system for Swath control, refer to the section of the manual on vDrive Swath Calibration.

Calibration State — The Calibration State adjusts the start and stop swathing delay of the vSet Select motor. Only adjust these values based on actual in ground seeding, and after validating GPS offsets.

Coverage Pattern — The Coverage Pattern allows the user to configure how the swath system will react to coverage. This can include an additional offset at the headlands.

Advanced

Automatic Unjamming — When enabled, the vDrive will automatically try to remove any debris that stops the motor and restart planting.

vDrive Swath Output Mode — vDrive Swath Output mode can be used with a vDrive swath output harness. This output harness can be used to control other swath devices or indicator lights. Available modes are: Always On, On While Planting, Off While Planting, and Always Off.

Section-Based VR — Section based VR, when enabled, will cause the vDrive system to control off of the rate sections for prescription control instead of row by row control.

Quick Start Delay — The Quick Start Delay can be changed to adjust the start delay when using the Quick Start button on the home screen.

WaveVision Updates — This setting will disable or enable firmware updates to the WaveVision seed tube sensor.

Primary Speed Source — The primary speed source defines what speed source the vDrive control system will use by default until it is flagged as unstable.

Blower Control Mode – ***This setting is only available when 1.6 bu hoppers with Bulk Fill is selected as the feed system. The blower control module controls when the bulk tank fan is blowing seed to the meters. When planting with the hybrid in the bulk tanks the blower is on and when the hybrid is planting that was placed in the 1 bushel box the blower is off. The default setting for the Blower Control Mode is Automatic. In Automatic mode, the system will automatically turn it on and off depending on which hybrid is being planting. In this advanced setting, the operator can turn the blower to either always On or always Off.

Flow Reducer Mode – ***This setting is only available if Mini Hopper is selected as the feed system. The Flow Reducer reduces the air flow from the bulk tank that is currently not feeding seed to the vSet Select System. This helps to prevent seed from jamming in the seed delivery lines. In Automatic Mode, the system will automatically adjust the Flow Reducer as the hybrid being planted switches. The operator can also select between Open – no air for either bulk tank is reduced, Blue Only – only seed in the Blue tank will transfer to the Blue meter, and Orange Only – only seed in the Orange tank will transfer to the Orange meter.

Flow Reducer Offset (*Required) – ***This setting is only required and available if Mini Hopper is selected as the feed system. Each flow reducer has a sticker on it showing a calibrated offset. This is considered the zero position (fully open). This offset MUST be entered for the Flow Reducer to be fully open when needed.

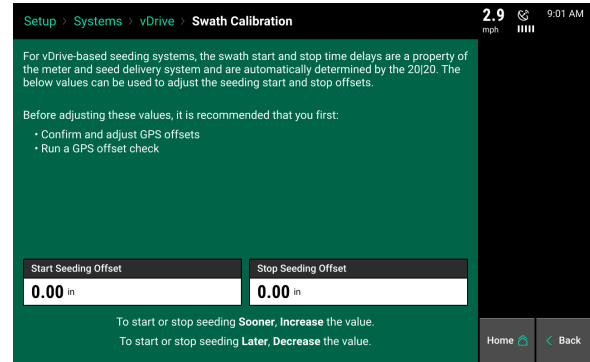
vDrive Swath Calibration

vDrive Swath Calibration settings can be found by navigating on the display through Setup — Systems — vDrive.

Calibration State

If the vDrive system is not starting or stopping at the appropriate time, the Calibration State can be used to improve the timing

Confirm GPS offsets and run a GPS Offset Check prior to adjusting the Start and Stop Seeding Offsets.



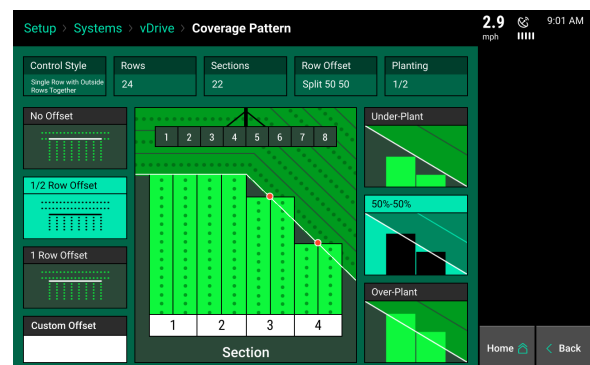
Always dig seeds to verify that the GPS offset measurements are working correctly.

Adjust the Start Seeding Offset to change where the system will begin dropping seeds. Find the distance from where the seeding is actually starting to where it should start by digging. Enter this distance in inches. Negative numbers will move the seeding backwards while positive numbers will move it forwards. Do the same with the Stop Seeding Delay for where the seeding should stop.

The Start Seeding Offset and the Stop Seeding Offset can be adjusted independently of each other. Enter the distance to adjust the offset in inches. Increase the value to start or stop seeding sooner and decrease the value to start or stop seeding later. The range of distances that can be entered is -120 – 120 inches.

Coverage Pattern

Define how the motors operate when entering and leaving already planted areas. Select the offsets and coverage pattern that is optimal for your specific operation.



On the left hand side of the screen select a Row Offset. This is the distance from the headlands that seeds start and stop. On the right hand side of the screen select a coverage pattern. This is used when rows are tied together in swath sections.

Single row swath sections can adjust the offset, but not the coverage pattern (since each row is acting independently of each other for swath control).

If any swath section has more than one row, then both the offset and coverage pattern can be adjusted.

Select an Offset: (Left side of the screen)

No Offset – The planter will place the last seed when stopping and the first seed when starting right at the beginning of the headland.

½ Row Offset – The planter will stop/start seeding half the distance of the planter's row spacing from the headland.

1 Row Offset – The planter will stop/start seeding 1 row from the headland.

Custom Offset – You manually set the distance away from the headlands the planter will start/stop seeding.

Select the Coverage: (Right side of the screen)

Note: “Section” refers to the swath sections that were setup for the Swath Control Style. Each section will control independently of each other.

Underplant – The section will shut off when the first row in the section hits the offset point.

50%-50% – The section will shut off when the middle of the section hits the offset point.

Overplant – Will shut off the section when the last row in the section hits the offset point

SRM System Calibrations

For vSet Select to function are the planter must be lowered and there must be speed.

Note: If the Lift Switches, Radar, and PDM have already been configured and calibrated during the setup of a different product (e.g. vDrive) this process does not need to be repeated.

Step 1:

Ensure that the Lift Switches have been calibrated and are functioning correctly. The Lift Switch systems page can be found by navigating to “Setup” – “Systems” – “Lift Switch”.

Step 2:

Both GPS and Radar should be used as speed sources. If Radar is installed, verify that the Radar calibration has been completed. The Radar Status systems page can be found by navigating to “Setup” – “Systems” – “Radar Status”.

Step 3:

The PDM must also be setup correctly for vSet Select to have optimal performance. Ensure the PDM Mounting Location & Orientation are set correctly and zero the gyro.

For more information on setting up and calibrating the SRM System, see the 20|20 Operators Guide and the vDrive Operators Guide.

Configure Crop Type

For the system to plant correctly, each crop type must be correctly configured. Select “Setup” – “Crops”. The information configured on the crops page is saved by crop type.

The screenshot shows the 'Crops' configuration screen for 'Corn' (Active Crop). The interface includes a top navigation bar with 'Setup', 'Crops', and 'Corn (Active)'. The main content area is divided into several sections: 'Active Crop' (Corn), 'Seeds / Disk' (27), 'Default Population' (32,000), 'Active Rows' (All), 'Swath Coverage Pattern' (1/2 | Single Row), 'Quick Adjust Population' (500), 'Seeds to Average' (300), 'Offset Distance D', and 'Offset Distance E'. A right sidebar contains 'Crop', 'Limit Adjustments', 'Custom Table Setup', 'Restore Default', and 'Home / Back' buttons. At the bottom, there are 'Add Crop' and 'Delete Crop' buttons.

Active Crop – Select the appropriate crop type by pressing on the “Active Crop” button. If the crop type being planted is not available, select “Add Crop” to select from all available options.

Seeds/Disk – Select the correct Seeds Per Disk for the disk being used in the meters. If the seeds per disk are not setup correctly, the applied population will be incorrect.

Default Population – Enter a default population that will be used if the system is not given a commanded population. Additionally, select what the system will plant if it goes outside of a seeding prescription that is active. Select between “Default” (the default population is used when outside of the prescription) or “Current” (use the same population that was being planted prior to exiting the prescription). After selecting the default population, press the check mark button. Finally, select which tank (Orange or Blue) that will be used to plant the default population. Only one hybrid can be selected. Essentially, you are selecting a default rate and a default hybrid.

Active Rows - Select the rows on the planter to plant with. Rows not selected will be disabled.

Swath Coverage Pattern – Links to the coverage pattern setup. See the vSet Select setup for more information on the Swath Coverage Pattern

Quick Adjust Population – Determines the amount of seeds the population is adjusted by when pressing the + or – button for seeding rate adjustments in the vSet Select Control page.

Seeds to Average - Seeds to Average determines on how many seeds are used in the rolling average for calculating population, singulation, and SRI. Set this to about 1% of the population for the crop (i.e. for corn, 300 seeds – 1% of 30,000 – is a good setting).

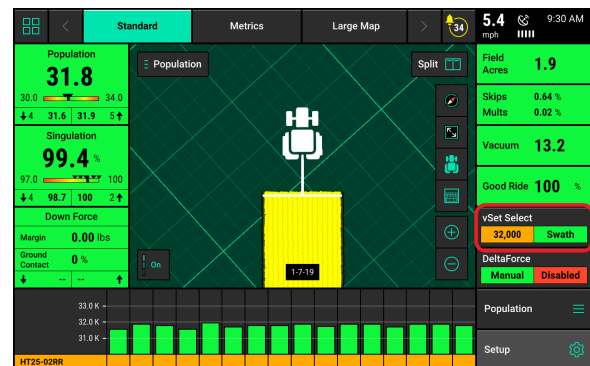
Offset Distance D & Offset Distance E – If using a Split Row planter with a hitch offset, measurements D & E from the planter GPS Offset setup can be adjusted in the Crop Setup. If moving the hitch offset to different positions for planting different crops, measurements D and E can be saved on a by crop basis in the Crop Setup.

Add Crop – Add a crop type to the quick crop selection. The added crops will be available to be selected as the Active Crop. Added crop types will also be available to select in the Products menu when assigning hybrids.

Delete Crop - Delete crop types from the quick selection menu. Deleted crops will not be available to be selected when pressing the Active Crop button nor will they be available to be selected when assigning hybrids.

vSet Select System Control

The vSet Select Control button is located on the right hand side of the home screen. The “vSet Select” button displays the status of the three functions of vSet Select: Population, Swath Control, and Hybrid Control.



vSet Select Control Button Population Legend

Disabled – The vSet Select system is disabled. Enable it under the control screen to plant.

Variable – A seeding prescription is assigned and the vSet Select system is in variable rate mode.

Multiple – the vSet Select system is in manual mode and there are multiple rate sections configured

Rate Off: Unable to plant because the master plant switch being in the down position.

A Number is Displayed – The vSet Select system is in manual mode with only a single rate section. The number that is displayed is the commanded manual population rate for that rate section.

Green: System is functional and has a commanded rate

Yellow: There is a prescription assigned to the active field, but the system is set to plant a manual rate.

Red: Unable to plant.

vSet Select Control Button Swath Legend

Disabled – The vSet Select system is disabled. Enable it under the control screen to plant.

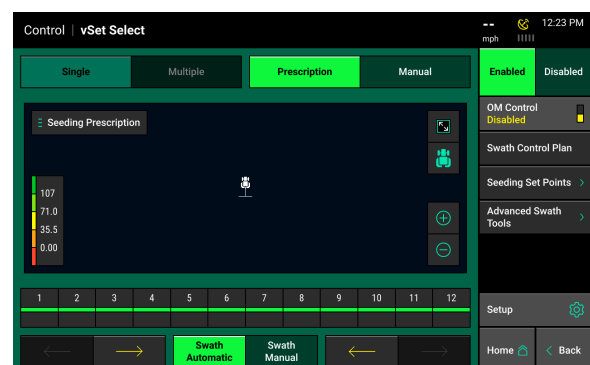
Green: Swath Control is enabled and set to automatic mode

Yellow: Swath Control is enabled and set to manual mode

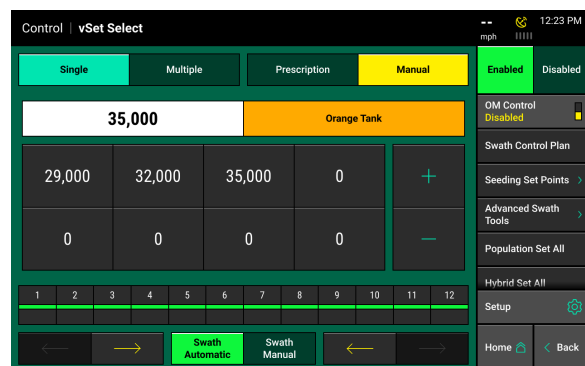
Red: Swath Control is disabled due to the swath switch being in the off position on the Cab Control Module or the planter is swathed off due to coverage.

vSet Select Population and Hybrid Control

The vSet Select Control screen allows the operator to manually control the vSet Select system or toggle on a seeding prescription if a file is assigned to the active field. For a seeding prescription to be used select “Variable” at the top of the screen. Variable will automatically be selected when a prescription has been assigned to the active field.



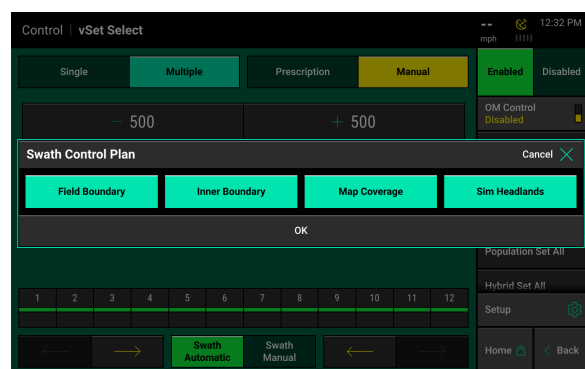
To manually control the vSet Select system select “Manual” at the top of the screen. Here all configured Rate Sections will be displayed. For each rate section the Population and Tank can be adjusted. To adjust all rate sections at the same time press the + or – buttons to change by 500 seeds. To change the Tank that seed is being planted from select the tank color button.



To adjust a single rate section’s population, press on the population rate that is displayed. Then either select a population from the Population Set Points or press the white box at the top and enter a rate. The Hybrid tank can be changed by pressing on the tank color.

vSet Select Swath Control

The vSet Select Control screen includes controls for Swath. If the Swath Control switch on the CCM is in the up position, use the vSet Select Control screen to configure the automatic swath settings as well as switch back and forth between manual and automatic swath control mode. When “Swath Automatic” is selected, press “Swath Control Plan” to configure what the vSet Select motors will swath to.



Items on the list that are green and in bold are active components of the Swath Control Plan. These components that are active are what the planter will automatically swath on and off to while planting. Those that are not are inactive and will not be controlled to.

Field Boundary – Swath rows off if they go outside of the field boundary that has been assigned to the active field.

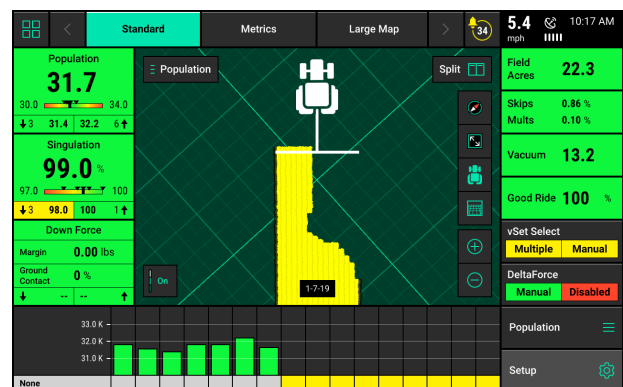
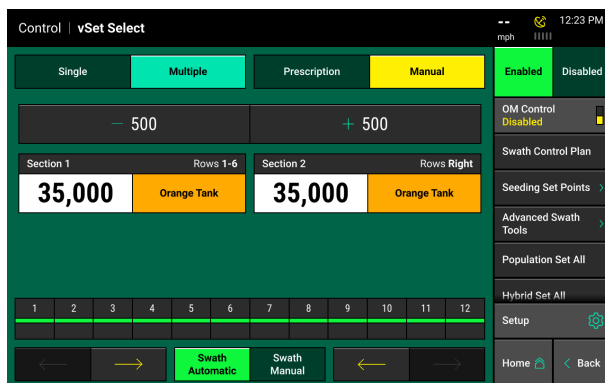
Inner Boundary - Swath rows off if they go inside of any inner boundary that has been assigned to the active field as part of a boundary file.

Map Coverage - Swath rows off that cross into an area of the field that has already been planted.

Simulated Headlands - Swaths rows off to an offset from the field boundary to allow the headlands to be planted last. Set the offset distance when configuring simulated headlands.

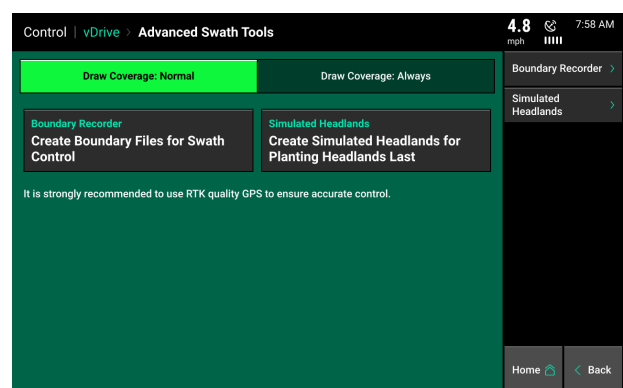
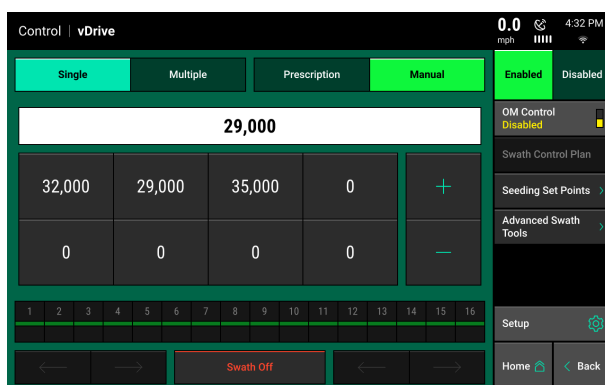
At the bottom of the vSet Select Control page, operators can switch between Automatic and Manual swath control. Rows can be manually swathed off from either side of the planter by pressing the arrows. Additionally, the box representing rows on the planter can be manually swathed off/on by pressing-holding-swiping any of the boxes. Boxes that are yellow are swathed off.

Note: Swath control can also be manually controlled from the home screen through the Swath Control button or the Dashboard Mini Chart. The manual swath control can be added by replacing the Dashboard Mini Chart [DMC] on the home screen. Refer to the 20|20 Operator's Guide for information on configuring the home screen.



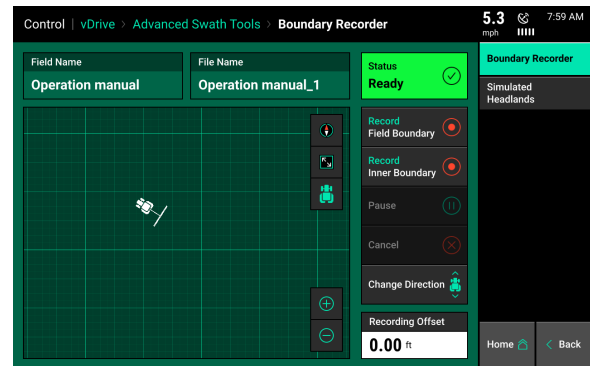
Advanced Swath Tools

Pressing the “Advanced Swath Control” button on the vDrive, vSet Select, or mSet Control screen gives access to two Advanced Swath Tools. These tools should only be used with RTK quality GPS to ensure accurate performance. Using poorer quality GPS can result in drifting boundaries and inaccurate clutch control.



Boundary Recorder

Pressing the “Boundary Recorder” button takes you to the Record Swath Boundaries screen. The boundaries that are recorded are for Swath Control only.



Record Field Boundary — Press this to start recording an outer field boundary. Once the recorder has started, this button will change to ‘End Field Boundary’.

Note: Pressing End Field Boundary will snap a line between the beginning and end locations of the recording.

Record Inner Boundary — Press this to start recording an inner field boundary. Once the recorder has started, this button will change to ‘End Inner Boundary’.

Note: Pressing End Field Boundary will snap a line between the beginning and end locations of the recording.

Pause/Resume — Use the Pause/Resume button to drive around an area while not drawing a boundary. The system will snap a line between the Pause and Resume locations.

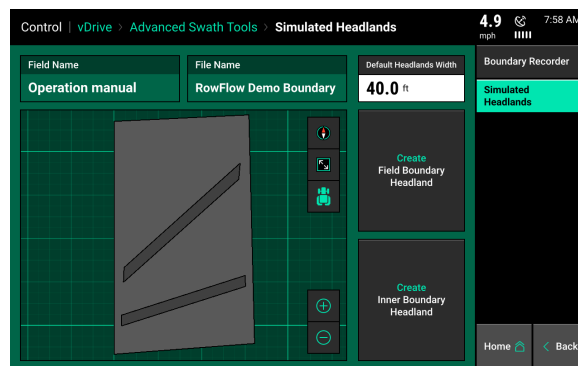
Cancel — Cancel will discard all boundary drawing and editing that has been accomplished.

Change Direction — Change direction will flip the planter 180 degrees.

Recording Offset — Use the recording offset to offset the boundary draw line from the center of the tractor.

Simulated Headlands

Pressing the 'Simulated Headlands' button on the Advanced Swath Tools page brings you to the Simulated Headlands screen. This feature offsets the field boundary for planting them last.



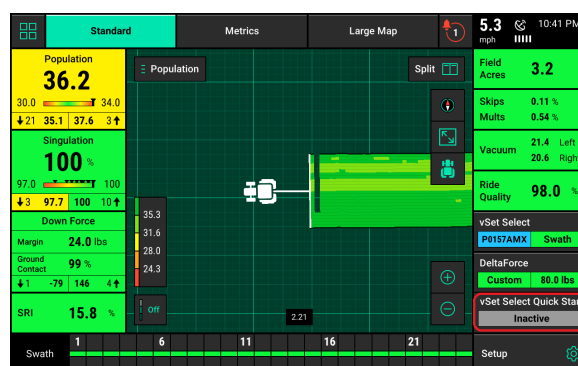
Default Headlands Width — The default headland with designates the width of the Inner and Field Boundary simulated headland.

Create Field Boundary Headland — Selecting 'Create Field Boundary Headland' will simulate a boundary around the Field boundary.

Create Inner Boundary Headland — Selecting 'Create Inner Boundary Headland' will simulate a boundary around the Inner boundary sections of the field.

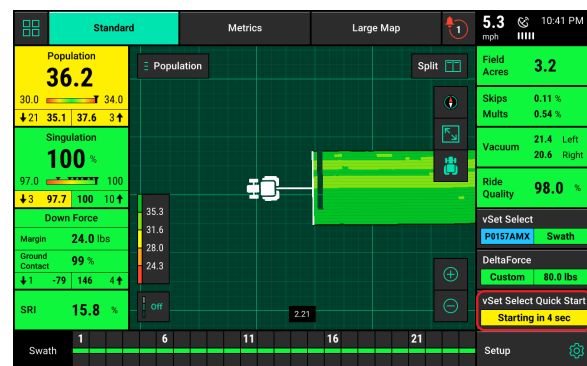
vSet Select Quick Start

The vSet Select Quick Start button allows the operator to start spinning the meters while stopped. This allows the operator to start moving while the meters are already spinning, helping to avoid any skips in the field. Press the button once to begin a countdown. When the countdown reaches zero, the meters will begin to spin. They will spin at a simulated speed of 3 mph and will continue to spin for seven seconds or until the speed of the planter is greater than 3 mph. The default time when the button is pressed to when the motors begin to spin is 2 seconds. This time can be adjusted in the Quick Start Delay located in the vSet Select Advanced Setup Page.



Note: The vSet Select Quick Start button must be added to the home screen before it can be used. See the Operator's Guide for information on configuring the home screen.

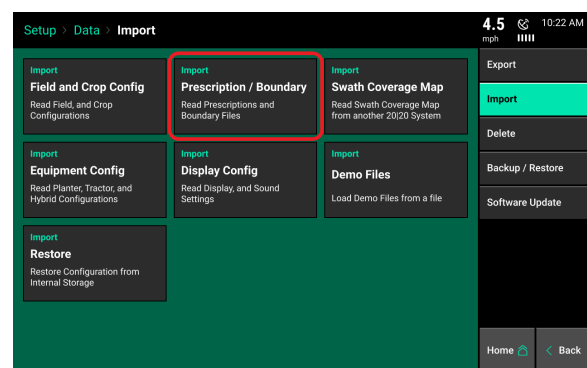
The Quick Start button will be gray and say Inactive when not in use. When it is pressed it will turn yellow and will begin to countdown to zero. When it changes to say “Active” (flashing between green and yellow) the meters will begin to spin.



Multi—Hybrid Prescriptions and Boundaries

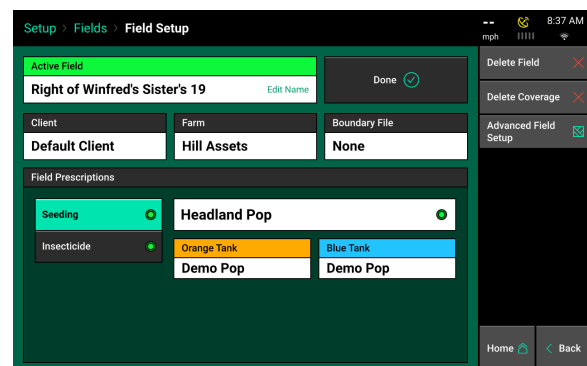
Importing Files into the Display

When importing Prescriptions and Boundaries, files must be in the form of a shape and include at minimum the .shp, .shx, & .dbf file extensions. Load all of the files on the root drive of the UBS drive or in a folder titled “Sendto2020”. Insert the USB drive into the side of the display. Then select “Setup” – “Data” – “Import” – “Prescription/Boundary”.



Assigning Prescriptions and Boundaries to a Field Name

Once Prescriptions and/or Boundaries have been imported into the display, they must then be assigned to the appropriate field names. To assign to a field select “Setup” – “Fields” – Select either the Active Field or another Field name (selecting a different Client or Farm name may be required to locate the appropriate Field name). The Field Setup page has options to assign both a Boundary and Prescription.



vSet Select multi-hybrid seeding prescriptions must have a MINIMUM of two attributes; one attribute for the orange meter and one attribute for the blue meter.

Note: Only one prescription can be assigned to each individual field. Prescriptions can be for seeding, liquid, and/or insecticide. To combine multiple types into one prescription, create separate attributes for seeding, liquid, and insecticide. If no seeding prescription is assigned, a manual rate and hybrid must be selected in the vSet Select Control Page.

Note: A field can have either a Boundary or a Seeding Prescription, both a Boundary and Seeding Prescription, or neither assigned to it. A boundary file is only used for swathing off rows on the planter if they go outside of the boundary. A boundary file can have both an exterior and interior zones.

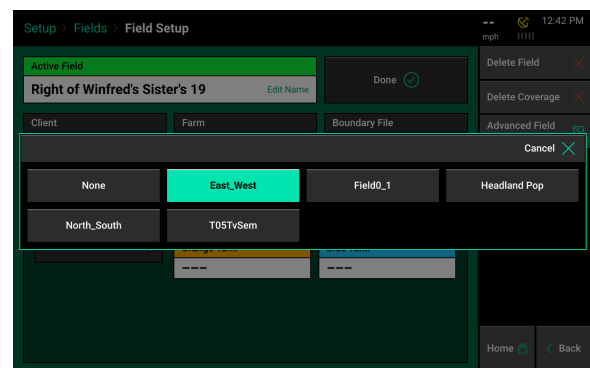
Boundaries

To assign a Boundary File to the selected field, press the “Boundary File” button. This will display ALL shapefiles that have been imported into the display. Select the appropriate boundary file, then an attribute if it is desired. It is not necessary to select an attribute for a boundary file

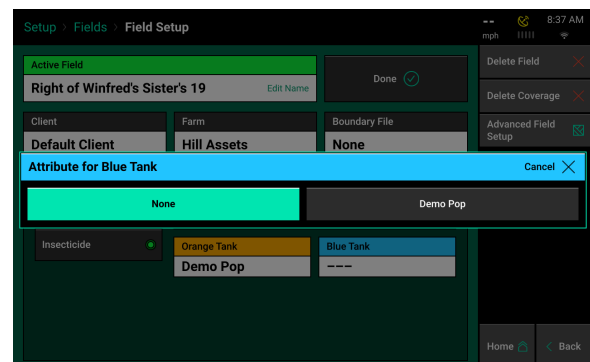
Prescriptions

To assign a Multi-Hybrid Seeding Prescription to the selected field, press the “Seeding Prescription” button. This will display ALL shapefiles that have been imported into the display. Choose the appropriate prescription for the field name. After selecting the prescription name, two attributes MUST be selected, one attribute for the blue meter and one for the orange meter. An attribute is based on a defined product and contains a single defined rate for each management zone. It is defined/named during the creation of the prescription. A different attribute must be selected for each meter or both meters will plant at the same time resulting in a doubling of the population.

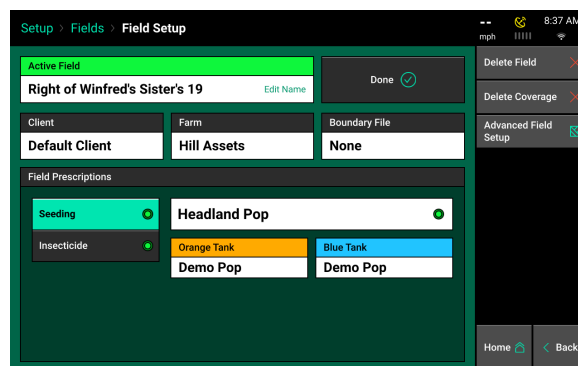
Select a Prescription Name.



Select an Attribute for both the Orange and Blue Tank.



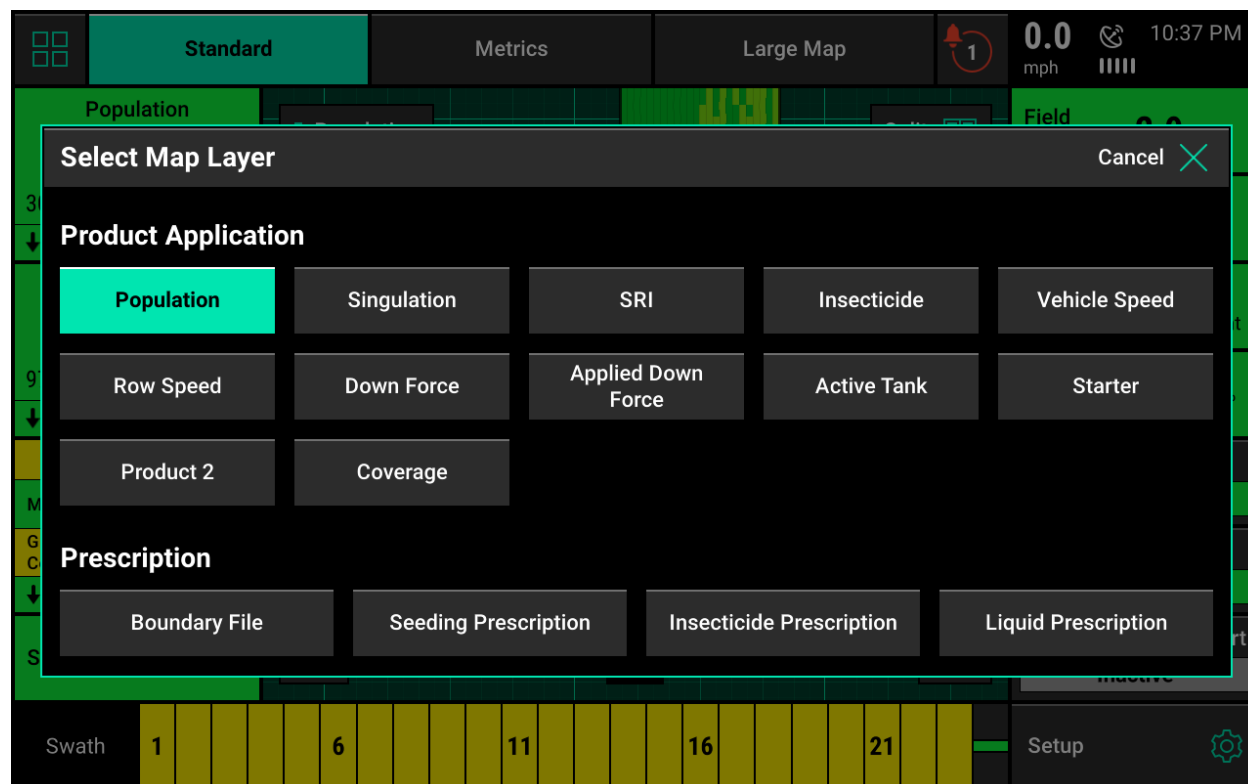
Once a prescription has been selected an attributes assigned to each tank color the Field Setup page will display this information for review. When finished select the “Make Active” button. If the selected field is already the active field the button will say ”Enter”.



Viewing the Boundary and Prescription

Boundary and Prescription files that have been assigned to a field can be viewed on the home screen for the active field. Select the current Map Type displayed at the top of the page to see a list of available map types. Scroll to the bottom of the list and locate the two map types called Boundary File and Seeding Prescription.

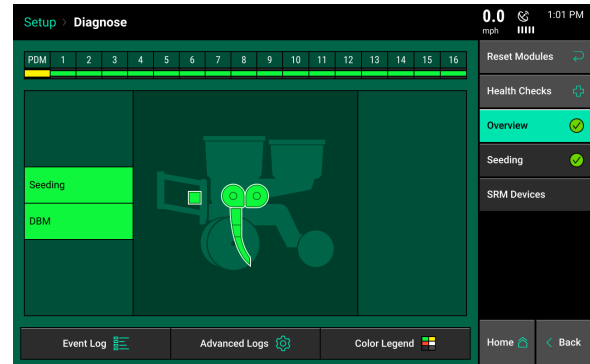
Select these to view the shapefiles that have been assigned to the active field as either a Boundary or Prescription. When viewing a multi-hybrid seeding prescription only one attribute can be viewed at a time



vSet Select Diagnostic Information

Prior to planting ensure that all planter diagnostic information is ok. Select “Setup” – “Diagnose”. Everything should be green on the diagnose page.

Note: Select “Color Legend” to view an explanation of what each color indicates.



Green - the system is working correctly and communications are good.

Yellow – a Device or sub-component is not 100.

Red – Device has failed or is expected but not detected.

White – Device is detected but not expected.

Black – Row has been disabled in the planter configuration.

Gray – Device is being detected, updating firmware, or unreachable.

Note: Modules may be updating during initial connection. Once updates are complete, all modules should be green. If the modules are not green, confirm that the number of rows and planter setup is correct. If still experiencing issues, refer to the Dealer Service Manual.

vSet Select Level 2 Diagnose

Select the Seeding system on the Diagnose page, then the vSet Select button to verify that all information looks good on the vSet Select level 2 diagnose page.

Note: On 2020.0.x and older software, press vSet Select directly from the main Diagnose page.

The screenshot shows the 'vSet Select' page in the vSet application. It features a table with 6 rows and 10 columns. The columns are: Row, Pop Actual, Tank, Pop Cmd, RPM Actual, RPM Cmd, Stability, Supply Volts, Drive Amps, and Duty Cycle. The table data is as follows:

Row	Pop Actual	Tank	Pop Cmd	RPM Actual	RPM Cmd	Stability	Supply Volts	Drive Amps	Duty Cycle
1	Not Apply	None	0	0.0	0.0	0%	13.5	0.00	0%
		None	35,000	0.0	0.0	0%	13.4	0.00	0%
		None	0	0.0	0.0	0%	13.5	0.00	0%
2	Not Apply	None	35,000	0.0	0.0	0%	13.4	0.00	0%
		None	0	0.0	0.0	0%	13.3	0.00	0%
		None	35,000	0.0	0.0	0%	13.4	0.00	0%
3	Not Apply	None	0	0.0	0.0	0%	13.3	0.00	0%
		None	35,000	0.0	0.0	0%	13.4	0.00	0%
		None	0	0.0	0.0	0%	13.3	0.00	0%
4	Not Apply	None	0	0.0	0.0	0%	13.3	0.00	0%
		None	35,000	0.0	0.0	0%	13.3	0.00	0%
		None	0	0.0	0.0	0%	13.3	0.00	0%
5	Not Apply	None	35,000	0.0	0.0	0%	13.3	0.00	0%
		None	0	0.0	0.0	0%	13.2	0.00	0%
		None	35,000	0.0	0.0	0%	13.2	0.00	0%
6	Not Apply	None	0	0.0	0.0	0%	13.2	0.00	0%
		None	35,000	0.0	0.0	0%	13.2	0.00	0%

At the bottom of the table, there are status indicators: 'Lift State Raised', 'Radar Speed Uncalibrated', 'GPS Speed 0.0 mph', 'FWD Accel 0.000 ft/s/s', 'Master Plant On', and 'Turn Rate Not Zeroed'. On the right side, there's a sidebar with 'Reset Modules', 'Health Checks', 'SRM', 'Seed Tube', and 'vSet Select' (which is highlighted in green). At the bottom, there are buttons for 'Home' and 'Back'.

Population Actual - This is the measured population the meter is actually planting reported by the seedtube sensors.

Tank – displays which tanks seeds are currently being planted from.

Pop Command - The target population that the system is commanding the meters to plant.

RPM Actual - The actual RPM of the vSet meter.

RPM Command - The RPM of the meter needed to reach the target population.

Stability - Measures the variance of the drag on the motor. The higher the stability percentage the smoother the vDrive motor will be turning.

Supply Volts - The amount of volts being sent to the vDrive motor. Average range of supply volts - 12-15 volts

Drive Amps - The amperage the vDrive is pulling while in operation.

Standard operating range of current draw at 5mph

- Corn - .4-.6 amps
- Beans - .7-.9 amps

Duty Cycle - The percent of time that power is commanded on where the on/off cycles are occurring at 35 kHz.

Reference the vSet Select Troubleshooting Guides in the Dealer Service Manual for assistance with diagnosing vSet Select issues.

Blower Control Diagnose Page

For vSet Select Systems with 1.6 bu hoppers connected to bulk tanks there will be a Blower Control button on the main diagnose page. vSet Select Systems with mini-hoppers will have a Flow Reducer button on the main diagnose page. Select this button to see the status of the Blower Control and Flow Reducer Modules.

Note: Reference the vSet Select Troubleshooting Guides in the Dealer Service Manual for assistance with diagnosing vSet Select system issues.

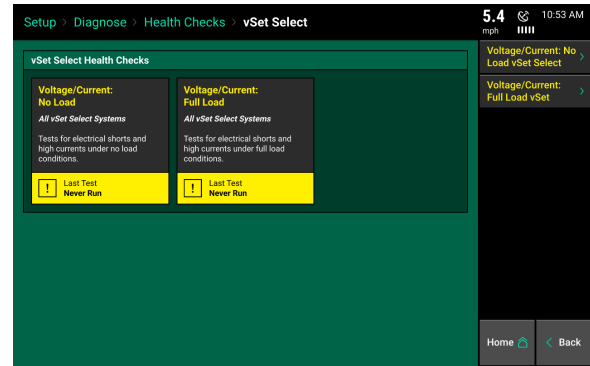
vDrive Motor Light Status

The vDrive motors on the vSet Select meters give diagnostic information by the red LED light.

Light Pattern	Meaning
No Light ()	Device is not powered
Solid Light (_____)	Device is being updated
Fast Blink (5Hz) (....)	Device is powered, but lost communication
Steady Blink (1 Hz) (- - -)	Device is powered and is communicating
Erratic Blink (..-..-..-..-)	Device is powered, never communicated

vSet Select Health Checks

Always perform a health check on the vSet Select system after installation or sitting for long periods of time. The health checks will be a yellow color if they need to be run. Access the vSet Select health check page by selecting “Setup” – “Diagnose” – “Health Checks” or select the “vSet Select Health Checks” button when in the vSet Select level 2 diagnose page. There are two vSet Select Health Checks that can be run.



Voltage Current No Load: vSet Select system motors will cycle to assess performance of the electrical and mechanical systems. It will test for electrical shorts and high currents under no load conditions. No seed is required for this test.

Voltage Current Full Load: vSet Select system motors will cycle to assess performance of the electrical and mechanical systems while vacuum is engaged and seed is present. It will test for electrical shorts and high currents under full load conditions. Seed IS required for this test.

Follow the on screen instructions when performing the tests.

A report card will be given for each row after completion of each Health Check.

For assistance with diagnosing failed health checks, see the Troubleshooting Diagrams in the Dealer Service Manual

Setup > Diagnose > Health Checks > vSet Select

0.0
mph

 7:16 PM

 Health Check | Voltage/Current: Full Load

 Test Again

 Done

Row	Tank	Pass/Fail	Volts Min	Volts Avg	Amps	Speed Test at 30 RPS			Speed Test at 80 RPS			
						DC Min	DC Max	Stab %	Amps	DC Min	DC Max	Stab %
1		Pass	12.1	12.2	0.38	20.1	20.3	98.7	1.73	45.0	45.2	99.5
		Pass	12.1	12.2	0.38	20.1	20.3	98.7	1.73	45.0	45.2	99.5
		Pass	12.1	12.2	0.38	20.1	20.3	98.7	1.73	44.9	45.2	99.5
2		Pass	12.1	12.2	0.38	20.1	20.3	98.7	1.73	45.0	45.2	99.5
		Pass	12.1	12.2	0.38	20.1	20.3	99.3	1.73	45.0	45.2	99.5
		Pass	12.1	12.2	0.38	20.1	20.3	98.7	1.73	45.0	45.2	99.8
3		Pass	12.1	12.2	0.38	20.1	20.3	98.7	1.73	45.0	45.2	99.5
		Pass	12.1	12.2	0.38	20.1	20.3	98.7	1.73	45.0	45.2	99.5
		Pass	12.1	12.2	0.38	20.1	20.3	98.7	1.73	45.0	45.2	99.5
4		Pass	12.1	12.2	0.38	20.1	20.3	98.7	1.73	45.0	45.2	99.5
		Pass	12.1	12.2	0.38	20.1	20.3	98.7	1.73	45.0	45.2	99.5
		Pass	12.1	12.2	0.38	20.1	20.3	98.7	1.73	45.0	45.2	99.5