FieldView

Operator’s Guide

Compatible with:

- iPad 2
  16GB 32GB 64GB

- iPad 3rd generation
  16GB 32GB 64GB

- iPad 4th generation
  16GB 32GB 64GB

- iPad Air/Air 2
  16GB 32GB 64GB 128GB

- iPad mini
  16GB 32GB 64GB
Precision Planting Warranty & Liability Policy (Revision effective 2-6-15)

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These terms and conditions represent the entire agreement between the parties hereto and there are no collateral, oral, or other agreements or understandings, unless expressly stipulated.

Precision Planting warrants that all Precision Planting products, equipment and merchandise are free from defects in material and workmanship. The term of the express warranty recited herein shall be limited to one (1) year from the date of sale by Precision Planting. This warranty shall only extend to the dealer if this warranty is properly presented to Customer. With respect to 20/20 SeedSense, AirForce and RowFlow, the express warranty recited herein shall only apply if such products are properly registered by the Customer.

These terms and conditions represent the entire agreement between the parties hereto and there are no collateral, oral, or other agreements or understandings, unless expressly stipulated.

The express warranty recited herein does not extend to any costs or damages other than one of the following, which Precision Planting shall elect at its sole discretion: replacement, repair, or refund of the purchase price. Precision Planting makes no other warranty of any kind whatsoever, express or implied.

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Some states or jurisdictions do not allow the exclusion or limitation of implied warranties, incidental damages or consequential damages; so the above limitations or exclusions may not apply to you.

Liability:
Customer assumes all liability for damages from accidents caused by or incurred in the use of transportation of said equipment. Customer agrees to indemnify and hold harmless the said Precision Planting, its officers, agents, and employees from any and all damages and/or liability to any person whomsoever arising out of or resulting from the use, storage, or transportation of said equipment by the Customer or anyone else while the equipment is in the custody of the Customer. The Customer acknowledges receipt of the equipment in good working condition and repair. In the event of any accident involving said equipment, Customer shall promptly furnish to Precision Planting a complete report in writing, with names and addresses of witnesses and parties involved and Customer shall make all reports required by law. Customer agrees to review and follow any published safety instructions in the product manual.

Notice of Non-Waiver:
The failure by Precision Planting, at any one or more time, to insist upon the strict performance by the Customer of the covenants, conditions and/or terms of this agreement, shall not be construed as a waiver of Precision Planting’s right to demand strict compliance with and performance of all covenants, conditions and/or terms hereof. Notice of demand for strict compliance is hereby waived by the Customer, and time is expressly made of the essence of this agreement.

Choice of Law:
Any dispute or claim arising from or related to this Policy, or related to a product governed by this Policy, shall be governed by the laws of the State of Illinois.
Safety Information

Always wash your hands after working on or around agricultural equipment prior to eating, drinking, smoking, chewing, etc...

Always use the proper Personal Protective Equipment (PPE) for any task. Examples include: Gloves when handling sharp or abrasive materials. Eye protection when handling contents or systems under pressure (ie. Hydraulic, Pneumatic, Water). Welding helmet, Welding gloves, and welders clothing when welding/torching.

Prior to working under or at ground level of any equipment secure the machinery from movement; accidental user operation or simple rolling of equipment. This should involve Lock-Out tags at the battery, removal of the Ignition key, “Do Not Operate” signs placed at key locations, as well as wheel chocks as necessary.

When working on a vehicle or implement’s hydraulic system, suspended components may suddenly drop. If you are working on or around the implement at this time serious injury could result. If possible lower the implement or attachment to the ground before beginning any work. Alternatively; use mechanical lock-up devices to secure any components in their lifted positions.

Agricultural equipment may have been exposed to many types of chemicals. Any chemicals or residues should be removed from the planter prior to beginning work. Obey all existing (new & original) warning signs and caution labels on all equipment.

When working on or around equipment that has been or is running many components may get extremely hot. To avoid injury &/or serious burns allow all equipment components to properly cool before working on or around them.

Avoid wearing loose or ragged clothing or jewelry around equipment, with special attention to avoid moving parts.

Route and secure all wires and connections to avoid crimping or damaging. This may result in unexpected shortages and shocks.

Use extreme caution when working on pressurized systems (Air, Water, Oil). Relieve all pressure from a system before disconnecting lines, fittings, etc... Use a cloth or other obstruction to divert possible spray when disconnecting hose connections, fittings, fill caps, breathers, etc. Always use gloves, NEVER use bare hands. To locate or check for leaks use cardboard, never your hand.

Electrical components and devices may contain high voltages and should be kept dry and closed.
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FieldView

Requirements:

1. iPad Compatibility: FieldView will work with iPad 2, third, fourth, and Air generation iPads with Retina Display, and the iPad mini.
2. iPad Software: Your compatible iPad must be updated to iOS version 8.1 or newer software.
3. 20/20 Display Software: Your 20/20 display must be updated to version 2015.00.09 software or newer.

FieldView

FieldView extends the functionality of your 20/20 SeedSense® monitor by acting as a second display in your cab. You can view real-time row-by-row maps of your planter’s performance. Then, when planting is complete, simply remove the iPad from your cab and have all of your 20/20 data with you at your fingertips. Additionally, field reports and planting summaries can be viewed and emailed.

FieldView also brings your data to harvest in the ultimate combination, when paired with YieldSense™. You can see how what you planted compares to your yield, with zone-by-zone maps in context. Also use split screen to view your planting maps next to your yield maps. Better information, helps to make better decisions for next season.

FieldView Plus

FieldView Plus is a separate, optional service that enhances the value of FieldView by connecting FieldView to the Precision Cloud. To upgrade your FieldView account to FieldView Plus, visit http://precisionacre.precisionplanting.com to purchase a Precision Acre Upgrade offer.

Features:

1. CloudSync keeps FieldView Data in sync between multiple iPads and FieldView Web.
2. Secure Data Backup keeps FieldView and 20/20 data backed up to the Precision Cloud.
3. Data Transfer: Share Coverage between planters and download files to the 20/20, such as FieldScripts™ and Shape File Prescriptions / Boundaries
4. The FieldView website http://fieldview.precisionplanting.com provides growers with tools for managing their operation. These tools include:
   a. Map: View field maps, run Harvest Reports, and build Variable Rate Seeding Prescriptions
   b. Reports: Key metrics and operation wide reports by Field, Planter & Hybrid.
   c. Data Manager: Download or share 20/20 files to PC or consultants.
   d. Text/Email Alerts: Set limits to when a text or email will be sent.
   e. Field Manager: Change/Merge/Import Field files together for correct reporting.
   f. Map Importer: Import polygon shape files to view on your ipad.
   g. Data Transfer: Upload Rx/Boundary files and 20/20 configuration files to send to the 20/20
Logging in to FieldView

Once FieldView is downloaded to a compatible iPad, tap the FieldView icon to launch the app.

Step 1
You will be asked several questions as you launch the app. First, you will need to accept the End User License Agreement. Select ACCEPT.

Step 2
If you are connected to a FieldView Module (FVM) while logging in to FieldView, you will be reminded that you need to register your FieldView before using it. Select OK.

Step 3
(Already Have a Precision Cloud or Climate Account)
If you already have a Precision account, select the first box and enter your username and password. This will log you into FieldView. If you do not remember your password, select the forgot password option below the log in button.

Step 3
(Do not Have a Precision Cloud or Climate Account)
If you do not already have a Precision account, select the second box and create an account. The first page will ask you to create log in information. The second page will ask for contact information. Once your account is created, you will be logged in to FieldView.
Step 4
Next, it will ask you to allow FieldView to use your current location. Select Allow. Allow Push Notifications will be next. Select Yes.

Step 5
When signed in to an account, you will see “Login Successful”.
Selecting Your Sync Method

The first time that you connect your iPad (with the FieldView app open) to your 20/20 SeedSense, you will be asked to verify that this is your 20/20.

If you select Yes, automatic sync method will be used. This is the method that should be selected by most users. Automatic Sync keeps your Client-Farm-Field structures in your FieldView and your 20/20 display in sync. In addition, all current season planting data is kept in sync between the 20/20 and the iPad. If you are a FieldView Plus user, this will keep the information up to date and accurate between all devices on your account. For information on how to sync and build maps from previous seasons, please see the Data Management section on page 11.

When selecting NO, manual sync will be used. FieldView will not automatically sync the Client-Farm-Field structure or current season planting data when it is connected to a 20/20 display. Rather, the user must manually select the fields in Data Manager (page 11) that he or she desires to sync and build maps for. The active field on the 20/20 will always sync to the iPad. This option is primarily for Precision Planting dealer’s who connect to the 20/20s of various customers to sync data for particular fields that might require analysis or other support. Manual sync prevents the dealer’s FieldView from becoming encumbered with the entire Client-Farm-Field structure and data of all 20/20s to which he or she connects, when only specific fields may be needed. In order to sync fields to the iPad in this mode, first make the fields active on the 20/20 and then select the fields wanted in the data manager menu on the FieldView app and press build map.
Using Field Manager

Field Manager allows users to create and edit client, farm, and field names. Changes made on this page will automatically be sent to the Precision Planting Cloud and 20/20 when connected.

Field Manager

Field manager displays a list of all field names in FieldView. The list on the left hand side is in alphabetical order and can be reversed by pressing the button. Additionally, the Search Fields textbox at the top will allow you to search for a specific field name. Selecting a field brings up the manager for that specific field. This will allow you to either edit or delete the field. Deleting the field will delete field data for all years from the iPad and the Precision Planting Cloud. It will also delete the field name from the 20/20, however it will not delete the data from the 20/20 and may still be exported onto a USB. This field will no longer be able to be viewed on FieldView or the FieldView website. Deleting a field cannot be undone.

Add a New Field

Pressing the button will bring up the menu to add a new field. Pressing the down arrow will allow the user to select an existing client and farm name or create a new name by typing it in the text box at the top. If creating a new Client or Farm name, select the ‘Create’ button directly underneath the text box to add the new Client or Farm name. Field names must always be a unique name. Field names can be repeated under a different Client or Farm name. Press the ‘Add’ button to finish creating the new field name.

Edit an Existing Field

Pressing the ‘Edit’ button will allow you to edit the Client, Farm, or Field Name. When changing the Client and Farm name you may select an existing Client or Farm name from the drop down menu or create a new name. When changing the Field name, a unique Field name must be created.
Using Field Manager (Continued)

Preparing to Plant

Planting Plan

The Planting Plan allows the user to load the crop, hybrid(s), and prescription or manual seeding rate without being connected to a 20/20. A Planting Plan can be created for each field. After selecting the field name on the left hand side of the screen, enter in the information for the Planting Plan. The Planting Plan can be adjusted at any time prior to planting the field. A CloudSync will transfer to the plan to all other FieldView apps on the account.

Crop – Specify the crop type being planted in the field by pressing on the crop box. Select the crop type that will be planted from the dropdown menu.

Hybrid – Assign a hybrid to the field by pressing on the hybrid box. The hybrid list is the same as the agX list of hybrids. A user can scroll through the list or type in the hybrid in the search box at the top of the screen. If there is not a matching hybrid found, the user can create a custom hybrid by selecting ‘Add New Custom Hybrid’ under the search box. If additional hybrids will be planted in the field, select ‘Add Hybrid’. Hybrids can be removed by selecting ‘Remove’ next to the hybrid that should be removed.

Acre – Assign a number of acres to each hybrid for your record keeping. This will not control the total amount of acres that can be planted for a hybrid.

Variable Rate - Selecting variable rate will allow the user to select a prescription for the field.

Prescription – Assign a prescription to a field by pressing on the Prescription box and selecting the correct prescription from the dropdown menu. Any prescription uploaded to FieldView Web, imported via Mail on the iPad, or created in FieldView Web can be selected in the Planting Plan. Prescriptions created in FieldView Web will only be available for the field that the prescription was created for.

Attribute – The seeding prescription must have an attribute selected. The attribute selected must control the seeding rate.

Manual Rate – Assign a seeding rate to be applied to the entire field. You may use either the iPad’s keyboard to enter in a rate or use the +/- buttons to select a rate
Using Field Manager (Continued)

Beginning to Plant a Field

When entering a field that FieldView has spatial data for (previous planting/harvesting data), the operator will be prompted to confirm the active field name. **Field Boundary Detection** can be disabled in the Settings menu.

When a field is made active the operator will be asked to confirm a summary of the planting plan. If the planting plan is incorrect the operator can change the plan. If it is correct, press ‘Confirm’ and all information will be sent to the 20/20 automatically and the operator can begin to plant. In order for FieldView to control the seeding rate of the planter, either RowFlow or vDrive must be installed on the planter.

The hybrid selected on the planting plan (or the hybrid from the top of the list if multiple hybrids were selected) will automatically be assigned to all rows on the planter. This can be changed on the Seeding Control summary. Pressing on ‘Rows’ will allow the operator to assign specific rows to a hybrid. Up to four hybrids can be chosen and assigned to rows.

**Swath Control**

Choose between automatic or manual swatch control by touching the portion of the control pane with the rows.

When in manual mode use the arrows to manually turn off or on rows or touch individual rows to turn them off or on.
Using the Tools Menu

The Tools Menu has a variety of functions that assist you in operating your FieldView software. Press **TOOLS** on the main menu to access the Tools menu.

**Data Manager**

Data Manager provides several options for managing the data in your FieldView. To sync field data from previous seasons select the year at the top of the screen. To sync and build all fields from that year, check the first box to select all fields and press BUILD MAP. To sync and build only specific fields check the boxes next to the field names that you want and press BUILD MAP. If the field data is not being stored on the iPad, this feature can only be done while connected to the 20/20. Fields that have maps built require more data to store than if maps are not built. By selecting fields and pressing CLEAR MAP, you can delete the map for that field without deleting the field data from which the map was built. To rebuild the map for that field, select the field and press BUILD MAP.

**FieldView Connection Status**

The icon in the bottom right of the screen indicates the status of the connection between FieldView and the 20/20 display. These symbols are also displayed on the bottom right hand corner of the home screen.

A USB with a circle and line through it indicates that you are not currently connected. A USB in a circle indicates that you are connected. Circling arrows indicates that the two devices are presently syncing data. Do not disconnect the iPad from the 20/20 or close the FieldView app (minimizing is OK) until the USB symbol returns. Finally, two arrows with the pause symbol in between, indicates the 20/20 has data to send to the iPad but is unable to do so due to active planting/harvesting.

**Data Transfer**

Data Transfer allows for the transfer of certain files from the cloud to FieldView and then to the 20/20 display. Prescriptions, boundaries, and 20/20 files may be uploaded to FieldView Web (see page 29). Once FieldView has done a Cloud Sync of the files uploaded via the web, they will be displayed here for all iPads on the account. These files will remain displayed on an iPad until that iPad transfers it to the 20/20. In addition, FieldView Plus users will be able to transfer planting coverage from another 20/20 & FieldView by UPLOAD COVERAGE (see page 14). FieldView checks the cloud for new data approximately every five minutes. To manually force FieldView to sync with the cloud, press **DOWNLOAD FILES**.
Using the Tools Menu (Continued)

Share Coverage Between Multiple Planters

Step #1: Use FieldView to Upload Coverage.

After planting the headlands, bring the planter to a stop. In FieldView, go to Tools>Data Transfer and press the Upload Coverage button. Your 20/20 accessory connection will begin spinning in the lower right corner. Once the icon stops spinning your coverage maps are finished uploading to the Cloud.

NOTE: The Data Transfer page will not display the coverage file when connected to the first 20/20 as it was the originating source of the Coverage File.

Step #2: Sync 20/20 Coverage File Down to iPad #2.

Once Planter #1 confirms the 20/20 Sync icon has stopped spinning, it may resume planting. The next CloudSync will bring the 20/20 coverage file down to Planter #2 (every 5min.). Alternately, you may press the Download Files button (Hurry button). A new row will appear in the Data Transfer table for the 20/20 Coverage File of the active Field in 20/20. The format of the row is Coverage: [Field Name] ([Originating 20/20 Serial Number]). If more than one planter has uploaded coverage, the Data Transfer screen will have multiple rows (one for each planter).

Step #3: Transfer Coverage File into 20/20 in Planter #2.

With Planer #2 stopped, ensure that the appropriate field is active on 20/20. In FieldView, on the Data Transfer page, select the Coverage Row, and press the Transfer to 20/20 button. This will transfer the Coverage file to the 20/20. The 20/20 will now merge the coverage files – the following popup message will be on the screen of the 20/20. Press “Yes” and do not start planting while coverage is being merged.

NOTE: The 20/20 Coverage file is separate from the FieldView Maps. If 2 planters are in the same field, CloudSync will bring down the map files and will build them, however CloudSync will not automatically transfer the coverage file.

NOTE: If you re-export coverage from Planter #2 and import it to Planter #1, the 20/20 will show overplant on the Coverage Map. This will not affect anything.
RemoteView

The RemoteView feature in FieldView allows users to remotely connect to a 20/20 Display running FieldView. This establishes a “wireless connection” that allows the viewer to see live Planting or Harvest info in their own FieldView App in a read only mode. Map types and set up screens can be viewed however, no changes to the 20/20 can be made from the RemoteView section. Dealers may select their growers using the search bar at the top of the screen and will have access to their growers only. If the viewer is a dealer or Precision Planting Product Support, the combine operator will be prompted to allow the remote connection to be established. If an iPad is logged into the same account, RemoteView will list the available planters or combines to connect to. Viewers on the same account as the operator will be taken directly to the Map Screen without operator prompts. Planters and Combines listed as “Unavailable” do not currently have a 20/20 connected to a FieldView app with active internet connection.

20/20 Software Updates

Software updates for the 20/20 Display can be installed through FieldView. When a new software update is available, press download to transfer it to FieldView. Once downloaded, FieldView will transfer the software update to the 20/20 SeedSense as bandwidth is available (updates will not transfer if the operator is actively planting or harvesting). Once the update has been transferred to the 20/20, you will be notified that a software update is ready to install. Press COMPLETE INSTALL when prompted or come to this screen later and press COMPLETE INSTALL. This will restart the 20/20 display and load the new version of software. If you need to backdate to an older version of software, select the version of software that you need and initiate the process by pressing COMPLETE INSTALL or DOWNLOAD, depending on the vintage of software. Remember that the software will only transfer to the 20/20 display while you are not planting or harvesting and may take about ten minutes to transfer to a Gen2 20/20 and about 40 minutes for a Gen1 20/20.

NOTE: Software updates will attempt to download the latest version of the 20/20 software if there is a WiFi or 3G/4G connection. It will then transfer to the 20/20 if the display is on and not planting, harvesting, or accessory syncing files. The update will not be installed however until the user prompts it to complete installation.
Using the Tools Menu (Continued)

**Demo Setup**

FieldView has demo fields loaded that you can use to see what the FieldView will look like during planting operations. Under the Demo Setup tab, select one of the available demo fields and press RUN DEMO to activate one of these demos. Demos will not run when connected to a 20/20, even if you are not planting/harvesting.
Using the Help Menu

The Help Menu gives you access to Product Support from Precision Planting and with the current FieldView Operator’s Guide. You may contact Precision Planting's Product Support department for assistance with any Precision Planting product through this menu.

Contact Support

Selecting CONTACT SUPPORT allows you to directly enter a ticket with Precision Planting's Ticket Support System. Enter your contact phone number, select the product requiring support, and a description of your problem before pressing SUBMIT TICKET. Please be as detailed as possible to speed resolution of the issue that you are experiencing. A Precision Planting representative will contact you by phone to resolve the matter. When you submit a ticket, various log files as well as field data for the active field (if connected to a 20/20) will be sent to Precision Planting to aid in the process of troubleshooting.

Operator’s Guide

The FieldView Operator’s Guide and How To documents are accessible from the FieldView app. Selecting “View Guide” will open up the Operators Guide on the iPad Safari web browser. FieldView Plus How to Docs will open a window in the iPads Safari browser with links to all of the documents.

CloudSync Log

The CloudSync Log will help determine any connection issues you might be having when syncing data to the cloud. This log will only show when you are signed in as a FieldView Plus user. Previous CloudSync sessions will be displayed along with status and reason if there was an issue and how much data was used to sync.
Device Settings

The Device Settings screen allows you to manage different FieldView settings.

Units allow the operator to toggle between English and Metric units of measurement. This will determine the units of measurement used to display various metrics in your FieldView app including pounds or kilograms of Down Force, miles or kilometers per hour for speed, etc.

Diagnostic Logging allows the operator to toggle between normal and detailed diagnostic logging. DETAILED should only be selected when asked to do so by a Precision Planting representative. Detailed logging records more detailed log information that can be used in troubleshooting. It occupies significantly more memory than normal logging.

Sync All 20/20 Seasons will sync prior season’s data as well as the current season from the 20/20 to FieldView.

CloudSync allows the operator to choose if the FieldView app sends and receives data from the Precision Planting Cloud. You may enable or disable CloudSync on this screen. CloudSync is only available for FieldView Plus users. Enabling CloudSync allows your FieldView and the Precision Cloud to remain in sync. This affects FieldView Plus features such as cloud backup and syncing data among various devices. When the arrow next to CloudSync is spinning, FieldView and the Cloud are in the process of syncing. If CloudSync is enabled you may switch to Send Only instead of Send & Receive. Send Only, will cut down on data transmissions, but will not allow FieldView to receive data from the cloud or other iPads.

Control Pane gives the user additional functions in the Map display so that they may quickly access features like Speed Source, DownForce Control, Seeding Control, and Swath Control for Planting and Swatch control, GPS information, Hybrids, and Load lists for Harvest. The Control Pane is located on the bottom of the Maps screen. The Control Pane will not appear on the Maps page if it is disabled.

Field Boundary Detection allows FieldView to alert the operator that they have crossed a boundary and asks if they want to change the active field. The popup asking to change the active field will only show once per twenty-four hours for each field boundary.
Using the Settings Menu

**Enabled Maps**

This screen allows you to select which maps are enabled when operating FieldView. If you do not wish to have a specific map show up as an option when toggling among maps for a particular field, you may disable that map on this screen by pressing it.

**About/Version Info**

This screen shows your FieldView version with that version’s release notes including description, features list, changes from previous versions, and other notes. You may also view the License Agreement and Privacy Policy on this page.
Navigating the Map Screens

**Navigation Menu**

On the top right of the screen is a display showing navigation options for FieldView. There are four zoom options in this menu. The Field Zoom button takes you to a zoom level that allows you to see the entire extent of the field. When connected to a SeedSense, the top right button is the Planter Zoom button. It takes you to a zoom level centered on the planter showing one pass in detail. When you press the planter zoom button, the screen will remain centered on the planter as it moves. When you are not connected to a SeedSense, the top right button is the “person” level zoom button. This takes you to a zoom level showing the immediate vicinity of your current location using the internal GPS of the iPad. Your current location will be identified by a blinking dot. The next set of buttons are a zoom in (+) and zoom out (-) option, then SplitView and Field Report. The More Menu at the bottom left allows you to select the Planting Summary, Drop Field Pin feature, Take Screenshot feature, Email Field Files feature, and the YieldSense Setup. The Home button returns you to the home menu.

**Show Field Report**

The Show Field Report function displays a field report for most maps. These field reports vary from map to map and are described as each map is discussed starting on page 20. The report that is displayed will coincide with the map type that is selected.
Navigating the Map Screens (Continued)

**SplitView**
SplitView allows you to view two map types simultaneously in FieldView. The two maps move in sync with one another at all times. When opening a Field Report while in SplitView, the Field Report will always be for the map on the right side of the screen. Imported Maps (page 23) may also be displayed in Split View.

**Planting Summary**
The Planting Summary Report displays field average information for Singulation, Good Spacing, Good Ride, Down Force Information, Hybrid Acres, and Average Population. IFS Standards are shown next to actual field averages. This report is a quick summary of your planting operation in this field. Field Summary can be emailed by pressing the envelope icon – it will email as a PDF.

**Drop Field Pin**
Dropping a Field Pin allows you to make a note about something in the field. That note is tied to the GPS location where the pin was dropped. In addition to text, photos may also be taken by the iPad and attached to the pin. Field Pins may also be placed by long pressing on the map screen at any time. Field Pins do not transfer to maps from different years.

**Take Screenshot**
The Take Screenshot feature allows you to take a screenshot of your FieldView screen. You have the option to just save the picture to the camera roll or to e-mail the screen shot. This allows you to quickly pass information about a field to your dealer, Precision Planting, another decision maker in your operation, a landlord, or other interested party. The Take Screenshot feature will remove the Metrics Pane, Field/Map selector, and Navigation Buttons from the picture.
Selecting Fields
The Field Selector at the top of the screen allows you to select a field to view. This can be done while planting without affecting the active field and is the primary means of switching between fields when scouting or in the office. Only fields for which data is present and maps built will be shown in the list.

When connected to a 20/20, if the field selected is not the active field, the user will be asked if they want to change the active field.
Navigating the Map Screens (Continued)

Control Pane

The Control Pane allows for limited planter control through the FieldView app. Manual/Auto Swath Control, Speed, Downforce, and Row Control information is available on the Control Pane as well as one blank spot for future expansion. The Control Pane may be disabled in the Settings menu on the FieldView homepage.

**Speed** information is shown by pressing on the Speed button. It will display both GPS and radar speed as well as GPS Quality information. The highlighted speed source that has the dot filled in is the speed source that is currently being used by the 20/20

**Downforce** displays both target and actual downforce readings. Pressing the downforce button will allow the operator to adjust the downforce.

Auto will allow the operator to adjust the target weight on the pin by moving the slider to the desired weight for DeltaForce or target for AirForce.

Manual will allow the operator to set a specific number of pounds for lift and down on the cylinders or airbags.
Seeding Control
Pressing the RowFlow or vDrive button (depending on which system is being used) will allow the operator to view the control plan.

If variable rate is selected, the prescription, attribute, and hybrid information will be displayed. Prescription, attribute, static rate, and hybrid information can be changed for the field on this page. If manual is selected, the static rate for seeds per acre will be displayed as well as hybrid information. The operator can adjust the seeding rate at any time on this page.
Navigating Among Maps of the Same Field
Tapping the bar at the top of the screen with the current map type will drop down a selection guide. You can also touch any of the buttons on the metrics pane to change the map view. Selecting imported at the top will allow you to be able to view any maps that were imported into the FieldView website.

Editing Legends
The legend pane in the bottom right identifies the values represented by the various colors on a map. In many maps, the legend may be edited. Touching the legend will allow you to edit the legend or minimize it. When editing a legend, you may select the number of steps that you want to see in the legend. You may also choose a min and max value and the system will create the steps. Legend values will stay with a field even if you navigate to another field and then return to the one you edited.

General Principles
FieldView displays its maps in a row-by-row format. Each row of the planter is individually displayed in the map. Each planter pass is differentiated by a heavier black line. Directional arrows under each pass indicate the planter’s direction of travel. Maps that collect planting data with a smart connector are recorded at 1 Hz, one data point per second. Maps that collect planting data with an SRM system are recorded at 5 Hz, five data points per second. All DownForce data is recorded at 5Hz, five data points per second.

NOTE: Maps are initially painted on the iPad while planting/harvesting with live data. Maps that are rebuilt are painted with the saved dat files and may look slightly different.
Understanding FieldView Maps (Continued)

**Hybrid**
The Hybrid map displays the varieties planted in a particular field as recorded by the SeedSense display. In order for this map to accurately display hybrids, you must correctly set up your hybrids in the SeedSense display and assign them correctly to rows. The legend cannot be edited but will grow as additional hybrids are planted in the field. The Field Report for the Hybrid Map shows acres and planting dates for each hybrid as well as total acres and planting dates for the field.

**Population**
The population map indicates the population at which the crop was planted. If a prescription map for the field exists in 20/20 SeedSense, the prescription will display as a layer over which the planter paints the population map. The legend may be edited. The report for the Population Map shows the average population for each row as well as the total average population for the planter. It also shows the number of units used by row and planter total, which is based on the hybrids setup on the 20/20.

NOTE: Prescriptions applied to a field will overlay on this map as well.

**Singulation**
The Singulation map displays the performance of each meter on the planter. For each second of data, five blocks are painted for each row. If there are no singulation errors, all five boxes will be green. For each error in that second, one of the five boxes will be colored to identify the error: red for a skip, blue for a multiple. If there are five or more errors in that second of data, all five boxes will be colored. The legend identifies the meaning of each color and may not be edited. The Singulation Field Report shows percentages of singulation, skips, and multiples for each row or for each hybrid with a total at the bottom. Toggle between row and hybrid at the top of the report.
Understanding FieldView Maps (Continued)

Spacing
The Spacing map displays the seed spacing errors as recorded by the SeedSense. Misplaced seeds are identified by the SeedSense as Severely or Moderately misplaced. This map is built in the same way as the Singulation map. For every second of data, five blocks are painted on each row. For each error in that section, a block is colored to indicate a Severely Misplaced or a Moderately Misplaced Seed. If there are five or more errors in that second, all five boxes are colored. The legend identifies the meaning of each color and may not be edited. To understand how seeds are characterized as severely or moderately misplaced, see the 20/20 SeedSense Owner’s Manual. The Spacing Field Report shows the Good Spacing percentage plus the percent of severely and moderately misplaced seeds for each row or for each hybrid. Toggle between row and hybrid at the top of the report.

Down Force
The Down Force map displays the weight detected by the down force sensors on those rows equipped with a sensor. This map is recorded at 5Hz meaning that each block of data represents 200 milliseconds (approx. 18” at 5 mph). You may edit the legend to determine how many steps and over what range are displayed. Loss of ground contact is always displayed as a blue block. The Down Force Field Report shows three values for each row equipped with a down force sensor: Percent of the field with Loss of Ground Contact, percent of the field with Good Down Force (neither loss of Ground Contact or Excessive), and percent of the field with Excess Down Force. Excess down force is defined by the top value input for the legend, rounded to the nearest one of several predetermined values such as 150 lbs, 200 lbs, or 250 lbs. The report also shows the field average.

Applied Down Force
The Applied DownForce map displays the amount of weight applied as the planter passes through the field. The legend can be edited. There is no Field Report for applied down force. Values will only be displayed if AirForce or DeltaForce is installed.
Understanding FieldView Maps (Continued)

**Good Ride**

Good Ride displays the how much the Row Units are bouncing due to vertical movement received by the Row Unit Modules. This value is only mapped for rows with a Row Unit Module. The Good Ride Field Report shows the Good Ride percentage for each row equipped with a Row Unit Module as well as a field total. The legend can be edited.

**Planter Speed**

Planter Speed displays the speed of the planter as reported by the 20/20 display from the GPS system to which it is attached. This information is 1Hz regardless of the actual GPS system’s output (often 5 or 10 Hz). The legend may be edited. There is no Speed Field Report.

**Seeding Rx**

The Seeding Rx will display a prescription map from the 20/20. The legend will show the target seeding rate set points. When planting, the Prescription map will be displayed as the background layer, and coverage will darken as the field is planted. If no prescription is assigned in the 20/20 the map will indicates areas that have been planted by painting it grey. It paints the map based on seed dropped by each row. This map is updated five times per second (5 Hz) and should match the coverage map on the SeedSense.
**Understanding FieldView Maps (Continued)**

**SRI**

SRI or Seed Release Index measures the consistency of seed spacing on each row. It is calculated by dividing standard deviation by the mean seed spacing for the given population and row width. Seed Release Index is often used to identify problems with drive systems, seed tubes, and other planter components that can lead to inconsistent spacing. The Legend can be edited. The SRI Field Report shows SRI percentages by row and the planter average.

**Target Pop**

Target Pop displays the multiple individual meter populations that electric motors (vDrive) controls too. The Legend can be edited. There is no field report available for Target Pop.

**Imported Maps**

Shape files that include the .shp, .shx, and .dbf file extensions and have been uploaded to FieldView Web through Map Importer (page 28) can be viewed on the maps page. At the top of the map selector switch from Standard to Imported. The legend of imported maps is not editable.
FieldView users can save email .zip file attachments that contain Shape Files or 20/20 field (.dat) files into the FieldView app directly. This is an easier way to get prescription files or shared field files from another FieldView account into FieldView without having to use the web.

From the Mail app, Long Press on an attached .zip file that contains either Shape Files or 20/20 Field Files. Next, select “Open in FieldView” from the options presented. The FieldView app will then open with a message “Importing Files”

Prescriptions will be available in the Planting Plan as well as imported to the Data Transfer screen where they can be transferred to a 20/20.

Shape files that have special data that matches to a field will automatically attach themselves to that field. To view the shape file, select it from the Imported & RX page in the Map screen.

NOTE: Prescriptions will not automatically attach themselves to a field.

Field Files will import and build maps on the iPad.
NOTE: Use this to import field files from a different FieldView account, or open FieldView files email from the Map page.
NOTE: This feature is only available if the user has set up email through the iPad’s mail application. If a third party email app has been downloaded through the app store this feature will be unavailable.
Logging Into FieldView Web

Go to https://fieldview.precisionplanting.com to log in. Login using the same username and password that was used to login on the FieldView app on the iPad. The username for the account is displayed at the center bottom of the home screen on the FieldView app. You may also your Climate username and password to log into FieldView web. FieldView web is only accessible for users who have a FieldView plus account.

Reports

The Summary page is a powerful reporting tool for both planting and harvesting information. The initial screen displayed at login shows a planting or harvest progress summary depending on the season. A graph of Planting/Harvesting activity as well as summary of each planter and combine can be found on the initial login page. The information displayed on this page is crop and year specific. The year and crop type can be changed by clicking on the down arrow next to the year or crop type.

The Planting and Harvest Reports in FieldView Web display reports by different types of information. All reports are crop type specific. Select a different crop by clicking on the down arrow next to the active crop type. The filter button allows for reports to be filtered by a client names, farm names, field names, specific dates, or by a specific planter or combine. All reports can be emailed as a PDF, CSV or XLS file by clicking on the Share button located near the top right hand corner of the screen.

Planting Report

By Field displays planting date, acres planted and several planter/operator performance measures for each field.

By Planter displays acres and the average performance measures for each planter.

By Hybrid displays each hybrid planted for every field along with the acres, population, singulation, and good spacing for each hybrid.
Harvest Report

By Field displays the date harvested, acres harvested, moisture, bushels and wet pounds.

By Combine displays the number of acres harvested, average yield, average moisture, total dry bushels, and total wet pounds for a particular combine.

By Hybrid displays all hybrids harvested for each field as well as the number of acres, average moisture, dry bushels, and total wet pounds for each hybrid.

By Population displays acres, average yield, average moisture, total dry bushels, and total wet pounds for a planted population range. The range can be edited by selecting the Edit button at the top of the list.

By Load displays the load list for each field. Each load includes acres, yield, moisture, bushels, recorded pounds, actual pounds, and the error percent.

Map

The Map allows users to view field locations and field pins, view and analyze field maps, as well as create variable rate seeding prescriptions.
FieldView Web (Continued)

Map (Continued)

From the Map select a field by choosing it from the list on the left side of the screen or clicking on a field marker on the map. Upon selecting a field the map will zoom to display the chosen field.

Machine locations, Field Pins, Field Markers (the location of fields on the map), and Field Boundaries can be toggled on or off by choosing the Map Layers button.

Once a field has been selected, planting and harvest maps will display if data is available for the field. Only maps from 2014 and newer will build in FieldView web. Select the Year/Crop and planting or harvest map type at the top of the screen. Map legends can be edited by pressing on ‘Edit Legend’ on the top of the legend displayed in the lower left of the map. To the upper right of the map are Zoom buttons, Map Layers button, Field Report, Polygon Report Tool, and the Prescription Creation button.

Field Report

Selecting the Field Report button will bring up a report built off of the field being viewed. This report will consist of the total Field Acres, Average Yield, Moisture, and Average Speed as well as a breakdown of soil zone Acres and Average Yield.

NOTE: At this time reports are primarily designed for Harvest data.
Use the Polygon Report tool to analyze yield on a portion of the field.

After clicking the Polygon Report button, click on different portions of the map to create the outer points the polygon. Click back to the first point to complete the shape. FieldView will then give a yield report (see image on right) for the chosen portion of the field that includes: acres, average yield, average moisture, average speed, as well as acres and average yield for each soil type. Press on delete to clear the report and polygon.

Map Overlays

Soil zones and any Imported Maps (Shapefiles) can be overlaid on top of any harvest or planting map. From the Map Layers button select any of the choices to overlay the current map.
Prescription Creator

Variable rate seeding prescriptions can be easily created in the FieldView Website. Begin by selecting a field and then pressing the Rx button on the right. This will change the map to begin displaying an overlay of USDA SSURGO soil zones. Additionally, a pane will open from the right, where the prescription can be configured. Clicking on a soil zone on the map will display a popover showing the soil type description and the number of acres of that soil type contained in the field. The pane on the right side displays the editable file name of the prescription.

Below the prescription name is a table listing every soil type and its associated acres in the field ranked in order of the average productivity of that soil type. The population column in this table is where the target seeding rate can be entered and adjusted. At the bottom of this table is the total number of acres the prescription will be created for, the average productivity for the field, and the average of all the target population rates.

NOTE: Productivity numbers are based on the SURGO database and should be used as a reference only. Not all zones will display expected values and should be used to base productivity off of other zones within that field only.

Additional zones can be created for an **irrigated pivot field** by using the circle pivot button under the zoom buttons. This will allow the user to draw the pivot and create separate zones for every soil type inside and outside the pivots. Zones inside the pivot will be indicated by the word pivot in the soil type column. Multiple pivots can be created for a single field. To delete a pivot, click on the pivot and an option to delete it will appear.

Creating and Delivering Prescriptions

After entering the target population rate desired for every soil type, the Prescription File Name can be edited. Spaces may not be used in the prescription name. Finally, click the “Create” button in order to create the prescription and sync it to all the iPads. The prescription can be selected in the Planting Plan prior to planting or in the Seeding Control Modal (Map Screen) when FieldView is connected to the 20/20 (See Planting Plan).
FieldView Web (Continued)

Data Selection

The Data tab allows the user to access the Field Manager, Map Importer, Data Manager and Data Transfer pages.

Field Manager

Field Manager allows a user to centrally manage the CFF (Client, Farm, and Field) list for their operation and keep this list in synch between all iPads and 20/20’s. Selecting the Action button will offer options for managing your CFF list. All changes done to the CFF list will sync to the FieldView app on the next CloudSync and to the 20/20 upon the next connection.

Add: Create a new field manually. Field names may be repeated if a different client or farm name is used.

Edit: Change or create a new Client or Farm name for the field. To edit the field name, click on the notepad and pencil next to each field name.

Merge: Select two fields to merge together (i.e. if two fields had different spellings). After selecting two fields you will be asked for which field name that should result from the merger. The field name not selected will be purged. Merge will combine fields in FieldView web and on the next cloud sync, the FieldView app will rebuild the combined maps into a single field.

Delete: The field selected will be completely removed from FieldView web and on the next CloudSync will be deleted from the FieldView app. This will also remove the field name from the 20/20.

Request Field Import: Enter an email address to request Fields/Boundaries created in SST Summit, MapShots AgStudio, SSI Agvance Mapping, or AgIntegrated by another person to be sent to a FieldView web account. Information will be included in the email of what username to send the information to.

Import: Fields that have been sent to FieldView from either SST Summit, MapShots AgStudio, SSI Agvance Mapping, or AgIntegrated will be available here. Select which fields you wish to import into FieldView.
FieldView Web (Continued)

**Map Importer**

Map Importer allows FieldView Plus users to upload shape files and transfer them wirelessly to their iPad to display as imported maps within FieldView. Files to be imported must contain all components of the shape file (.shp, .shx, and .dbf). You must select all of the file extensions for the shape file when importing. If your browser does not allow you to select multiple files, place all of the files for the shape file into a zipped folder and select the zipped folder when importing. After importing the files you must assign the imported map to a field. This is done by clicking on the notepad and pencil next to unassigned in the field column. The imported map will be available for viewing on the FieldView app after the next cloud sync. Shape files that you no longer want, can be deleted by selecting the file and pressing the Delete Files Button.

**Data Manager**

The Data Manager provides access to the field data for each field in your operation. This data can be exported to your computer for analysis or shared with a third party via email.

**Sharing Key:** Creates a Sharing Key that a trusted partner can enter directly into compatible 3rd party mapping software to retrieve Field Map files. The key will be emailed and can then be used with SST Summit, MapShots AgStudio, SSI Agvance Mapping, or AgIntegrated. The key is good for one year from date of creation and provides access to both planting and harvest files. Sharing key history will allow you to manage your sharing keys by viewing who has a sharing key for the account, renew sharing keys by extending the expiration date by one year, and revoking the sharing key access for a recipient.

**Share:** Enter an email address of the person that you want to send the field data for the fields that are selected. The recipient of the email will be sent an internet link that they have twenty four hours to click on. This link will download the field data from the selected fields to their computer. The sender will receive a confirmation email.

**Export DAT Files:** This will download all field data for the selected fields to the computer being used. This feature will not work with a tablet. Data will be downloaded into a zipped file.

**Export Field Pins:** This will download all the information from field pins to a CSV file.
FieldView Web (Continued)

Data Transfer
Data Transfer allows users to send Shape Files, Prescriptions, and 20/20 Configuration Files to any iPad logged into their FieldView account. These files can then be downloaded to a 2020. Click Add files to open up the computers file upload feature. Then select the files you want to upload. These files will be sent to the FieldView app upon the next CloudSync. .Dat files can also be transferred to the iPad for viewing. This will only allow the files to be viewed on the FieldView app. The data will not be available in FieldView web.

Notifications
Notifications allow the user to send text or email alerts to multiple accounts/smart phones.

Text Alerts
Text Alerts provide users and other interested parties with real time information on their smart phone. This page allows the user to select who will receive the information, what information they will receive, and when it will be sent. Text Alerts can be set up for both Planting and Harvesting. For growers with multiple planters, this alert can be set up for each planter.

Email Reports
Email reports allow the grower to have planter or combine summary reports sent via email. The grower can select the frequency of the reports and what planter(s) or combine(s) should be included.

Account
Clicking on the username in the top right corner of the page shows the account’s expiration date. Clicking on “settings” provides the option to change to Metric units. Clicking on help takes the user to the FieldView Plus Technical Support documents.
Other Features

Syncing Data from Multiple SeedSense Displays
In operations with multiple planters/combines, FieldView Plus allows all iPads in the operation to be kept in sync from data from all planters/combines if they are logged into the same account. If you choose not to use FieldView Plus, then you can keep all of the iPads in sync by manually plugging in each iPad to each 20/20. The data for the current season will automatically sync over and build the maps (if you have chosen automatic sync). The various 20/20 displays need to have their client-farm-field structure identical for the data to build a common map if two planters/combines work in the same field.

Data Plans
If you have not already set up a data plan for your iPad, you may do so by pressing the SETTINGS icon on your iPad and selecting CELLULAR DATA from the menu at left. On the right side of the screen, select VIEW ACCOUNT. Fill in the information required and select the amount of data that you would like to purchase on a monthly basis. You will likely need 2 GB per month while planting. At any point, you may return to the VIEW ACCOUNT screen, log into your account, and track your data usage.

If you do not have a data plan for your iPad, there are certain features of FieldView that will not work while there is not internet connection. These features include:

1. Background Google imagery will be not be displayed while viewing or building maps.
2. You will be not able to update your SeedSense or YieldSense software while in the field.
3. You will not be able to CloudSync.
4. You will not be able to e-mail support or enter a support ticket from within the app.
5. You will not be able to use the RemoteView feature.

If you have an iPad that does not have 3G/4G functionality, then it will not have an internal GPS receiver and you will not be able to use it to scout fields while disconnected from the SeedSense.

Setting Up e-mail on the iPad
In order for certain functions in FieldView to operate, especially the ability to contact support from within the app by e-mail, you will need to set up your e-mail on your iPad. To do this, follow the following steps:

1. On the iPad, select the SETTINGS icon.
2. On the left, select MAIL, CONTACTS, CALENDARS.
3. On the right, select ADD ACCOUNT... under Accounts.
4. Select the type of account you would like to add (Gmail, Yahoo, etc).
5. Enter the required information as prompted (name, e-mail address, password, etc).
6. Use the e-mail icon on your iPad to access e-mail from this account on your iPad.