Marshall Multispread MDC App
Door Controller Quick Start Guide

Background

This document is provided as a quick start guide for Multispread models fitted with the MDC door controller interfaced with the Multispread MDC app. It includes information on how to calibrate the door actuator and loadcells (if fitted) and how to calibrate and setup the spreader for work.

Prerequisites

- iPad/Android tablet with Marshall Multispread app installed. App software may be factory configured if tablet purchased with spreader
- Multispread with MDC Door Controller Hardware fitted (Loadcells Optional)
- Spreader connected to tractor with hydraulics or PTO connected. See the Multispread Operators manual for details on how to connect the spreader to the tractor. The wheel drive hydraulic cylinder must be connected to the tractor.
- 12V power to MDC controller module.

Disclaimer

The Marshall Multispread is to be used in the Agricultural and Horticultural industries to apply granulated and non-granulated fertilisers. It is very important that you follow the Calibration procedures and Operating instructions contained within the Marshall Multispread app before use. Calibration and operation of the Marshall Multispread must be in accordance with these instructions. Use of the Marshall Multispread app is subject to the following disclaimer;

So far as is legally permissible Roesner Pty Ltd, or its distributors, shall not be liable, whatever the cause, for any increased costs, loss of profits, business, contracts, income, or anticipated savings or for any special, indirect or inconsequential damage;

The capabilities and functions of the Marshall Multispread are limited as set out in the specifications within this app and the standard operators manual;

Without prejudice to the above it is hereby acknowledged that the Marshall Multispread is not designed nor intended to achieve application rates and spread widths outside the parameters calculated by the Marshall Multispread app.

CONTROLLER POWER

Before starting work the spreader power cable must be connected to a 12V power source. It is best practice to connect the terminals (Cable : WL68.100235) directly to the tractor battery. Attaching to a power source within the tractor cab is not recommended. (Fig 1)

When the power is connected, the LEDs on the underside of the RATEX controller (Fig 2) will glow Blue. The flashing Red LED indicates that communications from the RATEX controller are enabled.

IMPORTANT : The RATEX module has a 30 second startup procedure. Before starting the Multispread app, allow the RATEX controller 30 seconds to boot up.

When finishing work, disconnect the Cable WL68.100235 from the connector at the spreader drawbar. (Fig 3)
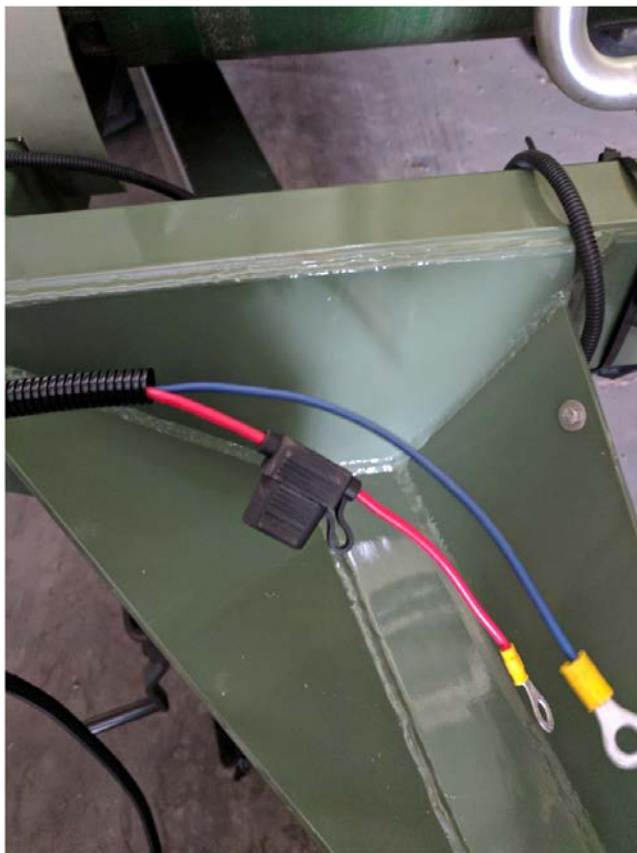
Figure 1 : Power Cable (WL68.100235)
Red Cable (Positive)
Blue Cable (Negative)

Figure 2 : RATEX Controller

Figure 3 : Spreader Power Connector

SOFTWARE QUICK START

If the tablet to control the spreader was purchased through Roesner Pty Ltd, the Multispread app will be installed and configured when the spreader is assembled at the factory. If you have supplied your own tablet, you will need to download the Multispread app from the App Store or Google PlayStore. Download links are provided below.

Apple App Store : https://itunes.apple.com/au/app/marshall-multispread/id589758435?mt=8

Google PlayStore : https://play.google.com/store/apps/details?id=com.roesner.spreader&hl=en

ENSURE THE RATEX CONTROLLER IS POWERED AND FINISHED BOOTING UP PRIOR TO PROCEEDING TO THE STEPS BELOW.

1. Open the Multispread App from the device home screen.

2. From the Main menu tap **CONTROLLER**
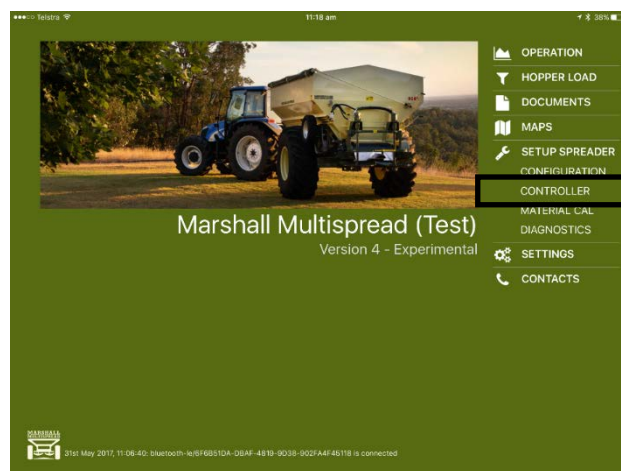
3. On the Controller page, the spreader will be configured for hydraulic feedbelt control. Tap the REFRESH icon to scan for the controller.
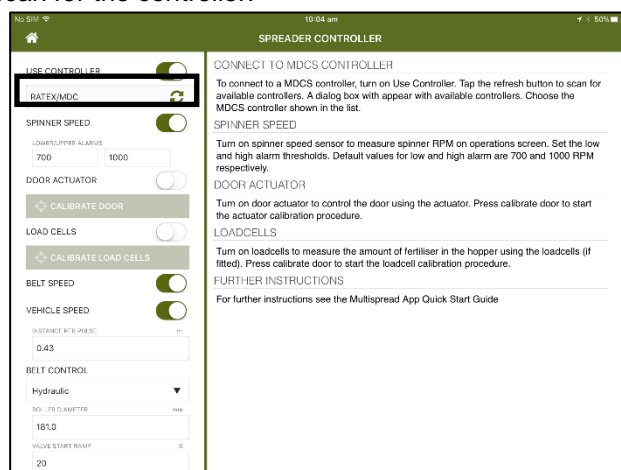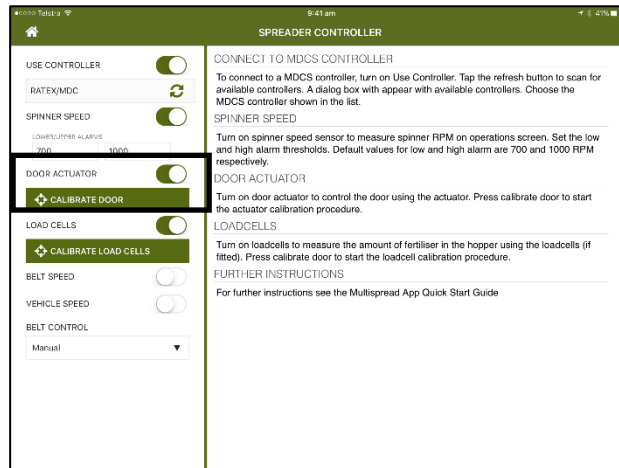
4. In the Scanning for spreader box, tap on the RATEX MDC or raspberrypi controller text as shown in box below.
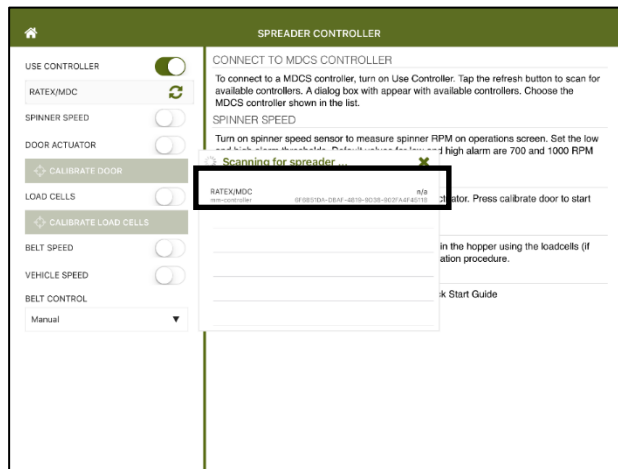
5. Turn on the Spinner Speed and set the lower and upper alarms. Default Low speed alarm is 700 RPM and high speed alarm is 1000 RPM.
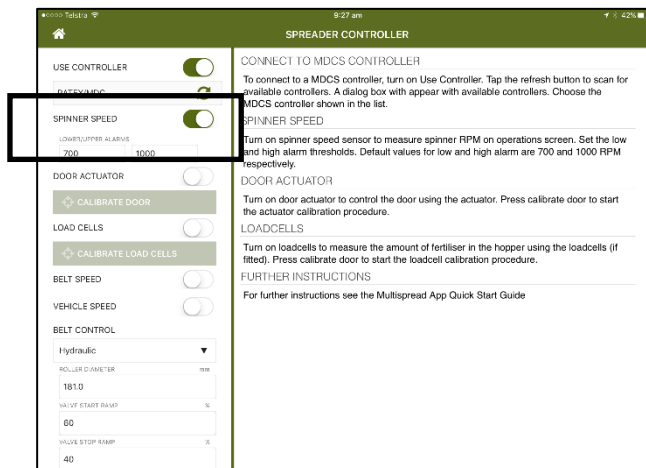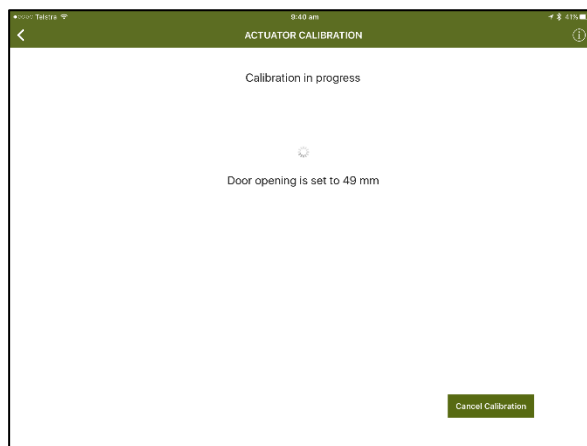
6. Turn on the Door Actuator, and Tap Calibrate Door to start the calibration procedure.
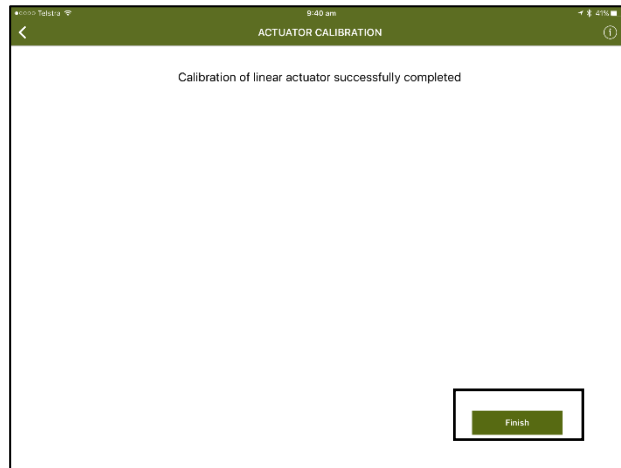

7. On the Door Calibration Page, tap Start Calibration.

8. The door will start to move the current opening will be shown on the screen. When the door gets to the fully closed position (10mm) it will pause for 5-10 seconds and then retract to the fully open position.

9. When the door calibration is complete, tap the finish button.

The door actuator calibration is stored within the inbuilt actuator Integrated Controller. The calibration procedure should be carried out on an annual basis.
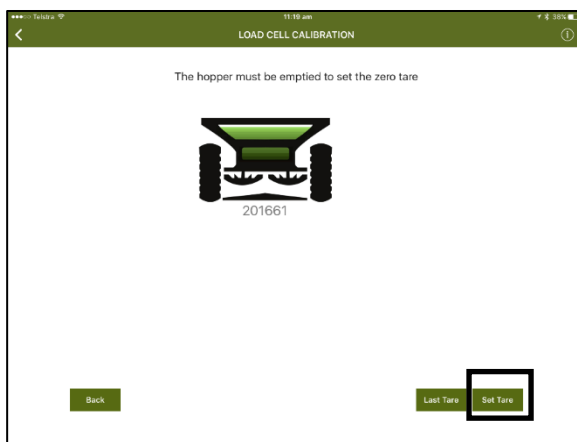
10. If the loadcells are fitted, turn on loadcells and tap calibrate loadcells to start the calibration procedure. **(If Loadcells are not fitted skip ahead to step 17)**
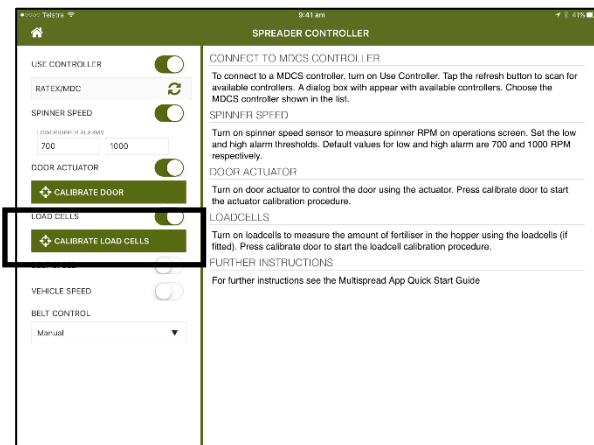
11. On the calibration screen Tap **START**
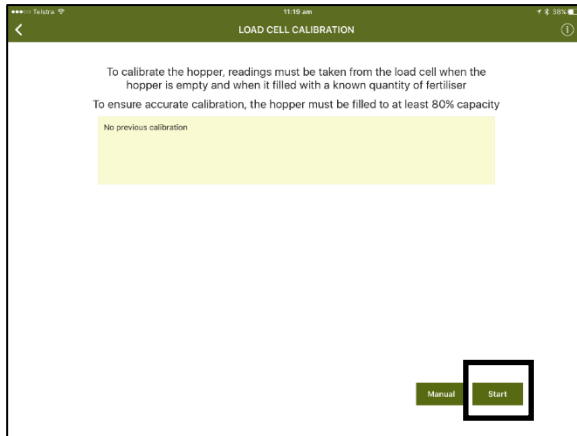
12. The raw loadcells output is shown under the spreader icon, ensure the spreader is **empty** and tap **SET TARE** to zero the loadcells.

13. Load the spreader with a known weight, to ensure an accurate span value a known weight of 500 kg is required. The known weight can be a bulk bag of seed, tractor weights or alternatively 4-5 people whose combined weight is known standing in the hopper.

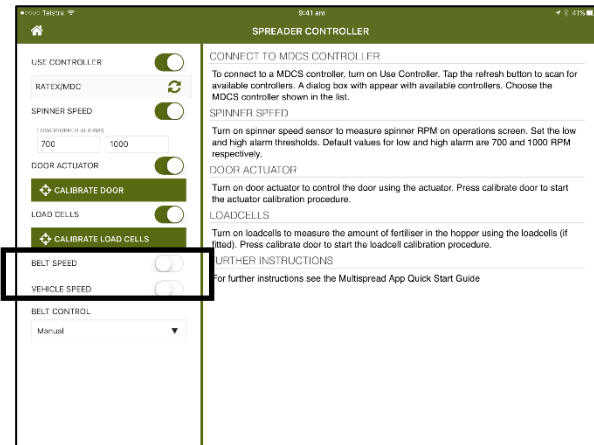14. When the spreader is loaded enter the weight into the app and tap **SET SPAN**.

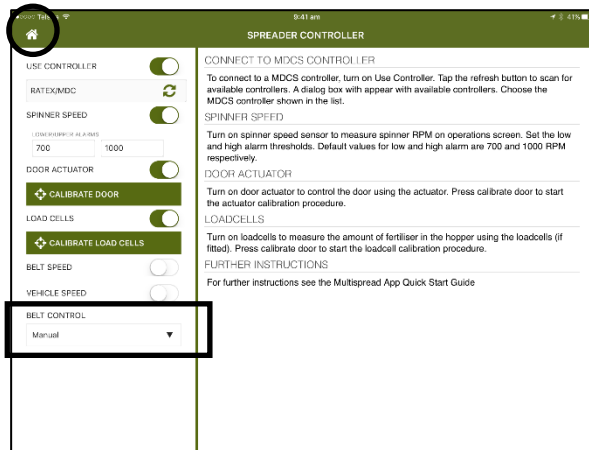15. To store the calibration tap **SAVE**.

16. Remove the known weight from the spreader.

17. If belt and vehicle speed sensors are fitted, turn on Belt and Vehicle Speed.
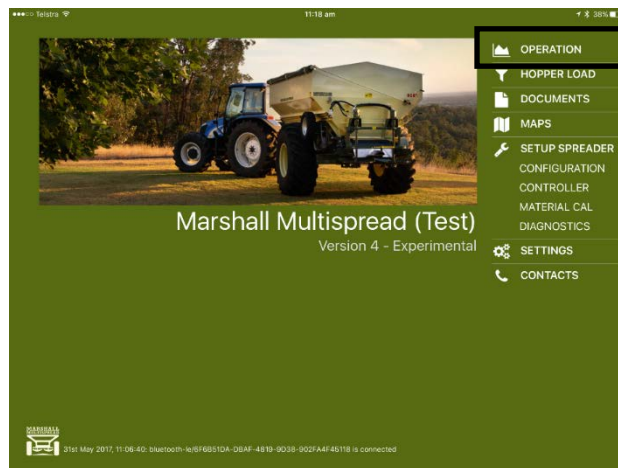
18. Ensure the belt control is set to Manual.

CONTROLLER CALIBRATION IS NOW COMPLETE

STARTING WORK – THE OPERATION PAGE

1. Tap OPERATION on the main menu.

2. Live Machine data is shown on the left hand side of the page. When load is placed in the hopper the hopper contents will be displayed along with the door opening, spinner and belt speed. If the mobile device has network access, a satellite overlay will be displayed on the map panel. The machines position and track are indicated by the blue dot on the map panel.
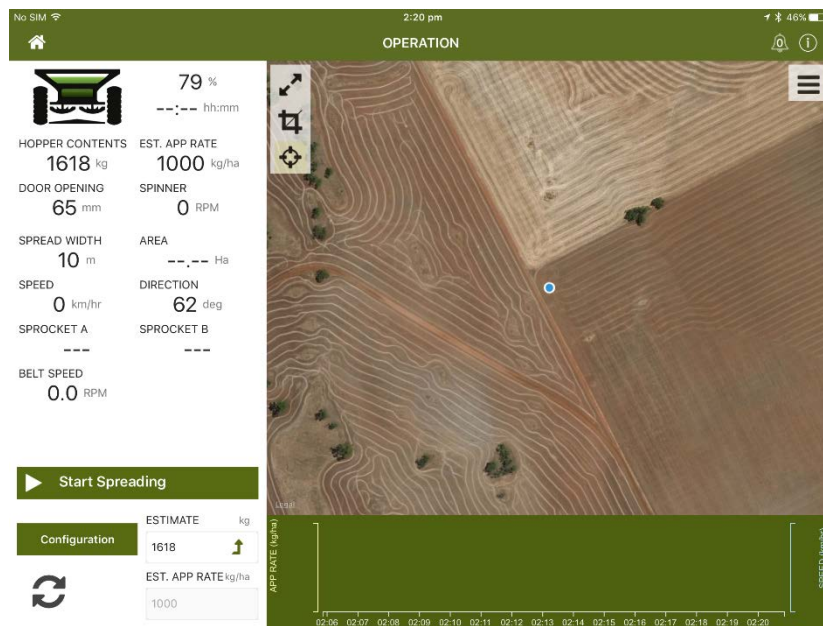
3. To setup the spreader for work, on the Operating screen tap **CONFIGURATION**
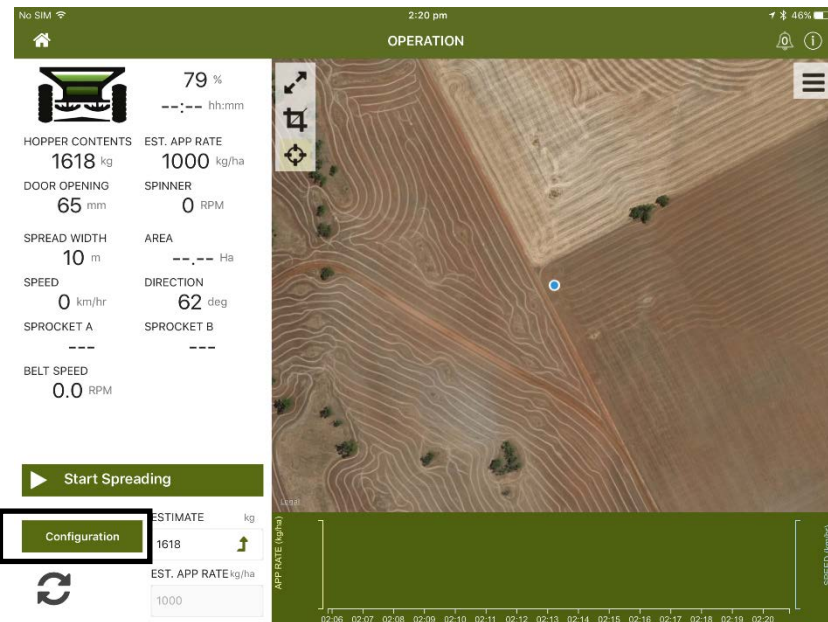
4. On the configuration screen, select the spreader model number, material type, spread width and target rate. Tap **Calculate Settings.** The app will calculate the required belt speed to achieve the fertiliser application rate.
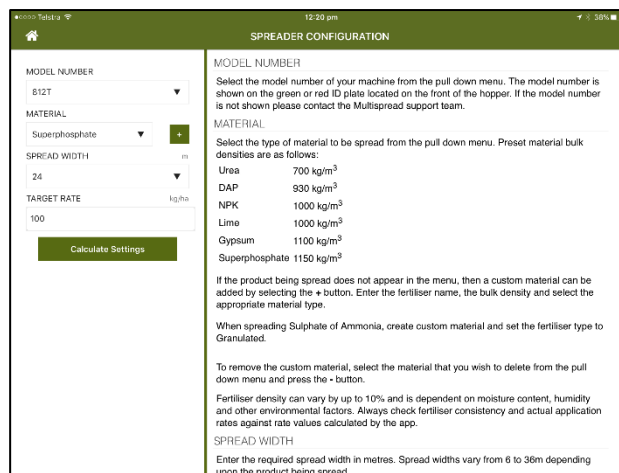
To add a new fertiliser type to the App material database, tap the + key and fill out the Custom Material details page.

5. The app will calculate the required door opening and sprocket setting to achieve the required application rate. To choose an alternative setting, tap the **<** or **>** key.
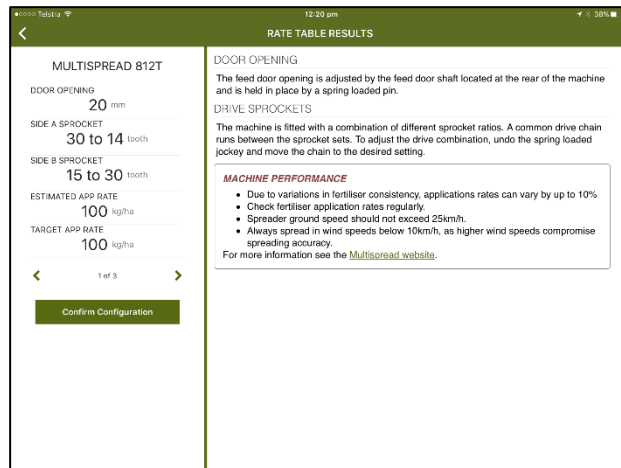
Tap CONFIRM CONFIGURATION to select the door opening and sprocket setting. Unsure to check the sprocket settings to make sure the gearbox and final drives are configured correctly.

Tap the Home key to return to the Operations page.

6. After exiting the spreader configuration page, the app will return to the Operation screen. Engage Spinner Circuit hydraulic remote and adjust the flow rate until the desired spinner speed is displayed on the operation screen.
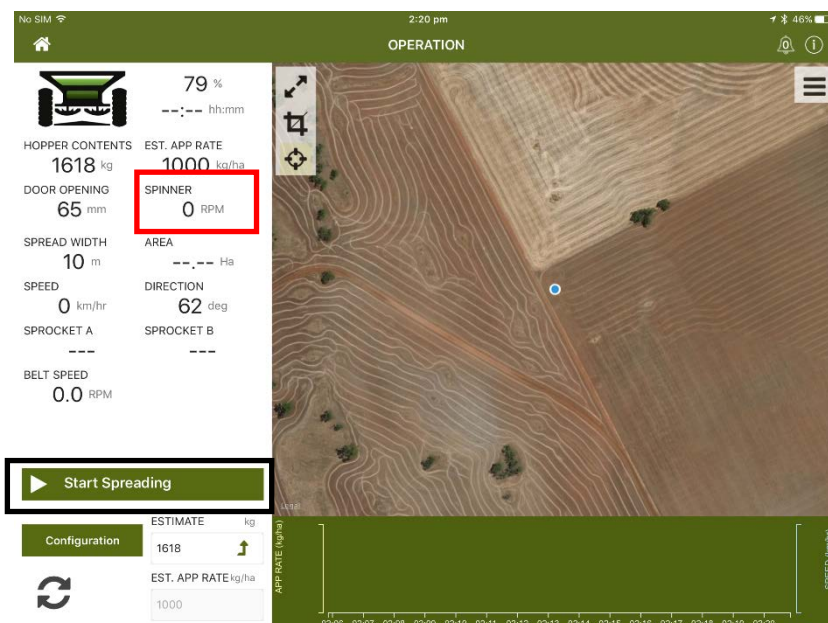
Engage the wheel drive hydraulic cylinder. Tap **START SPREADING** to begin work. The feedbelt will start turning as the spreader starts moving.

7. To stop spreading, Tap STOP and to suspend the spreading job when filling up tap SUSPEND.
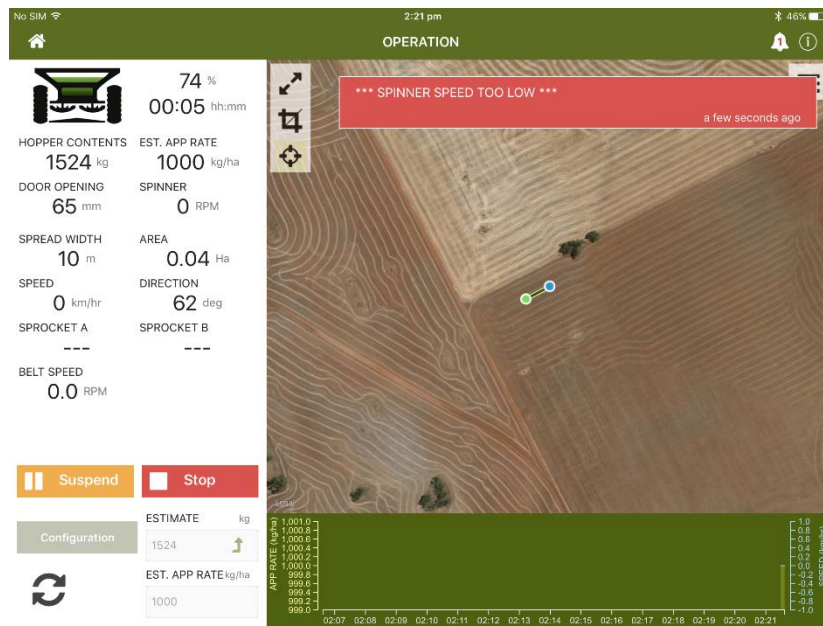
WHEN STOPPING WORK, TURN OFF THE SPINNER AND WHEEL DRIVE HYD REMOTES