Rehab Seeder V2

Operation Manual

Version: 1.0

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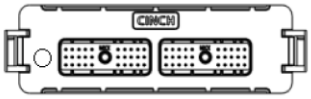
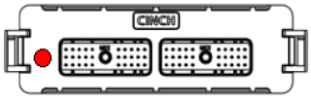
Controller Power

- The i4M controller and GPS unit take 5 seconds to boot up.
- There is a diagnostic LED on the boxes.
- Control Box LED: Red is booting up, Green is on solid when ready to use.



Off

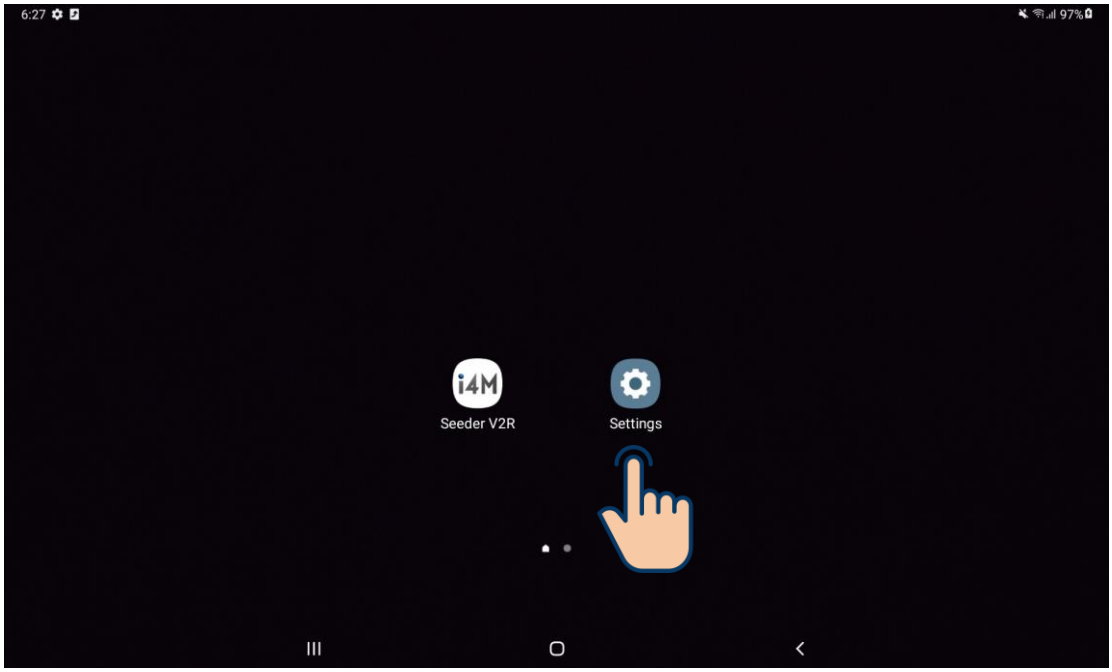


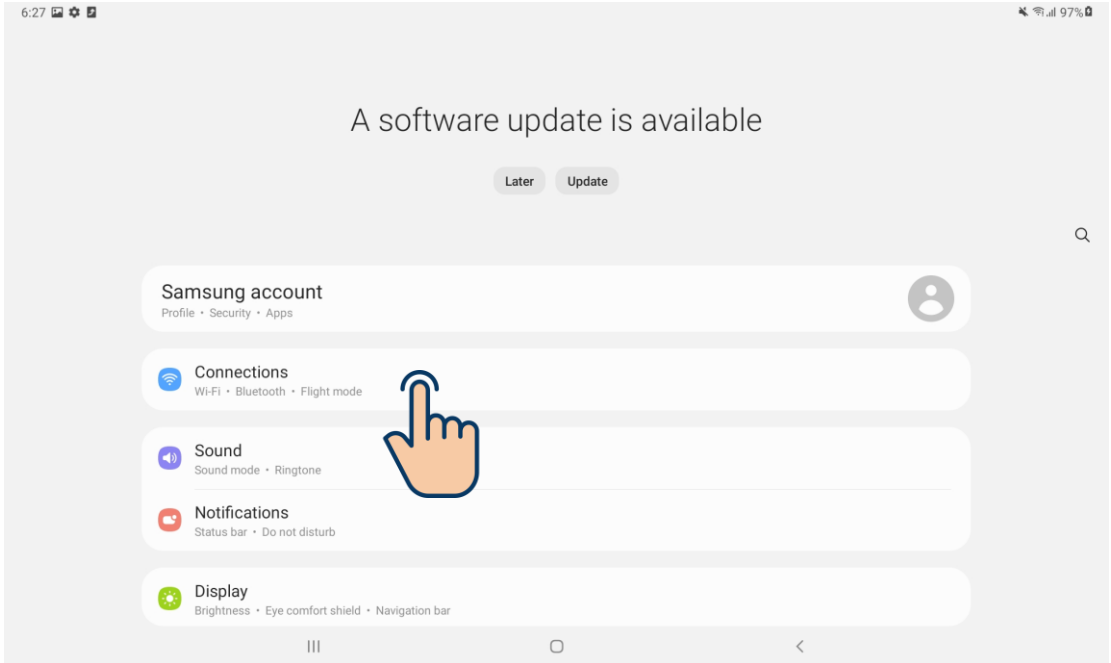
Booting Up

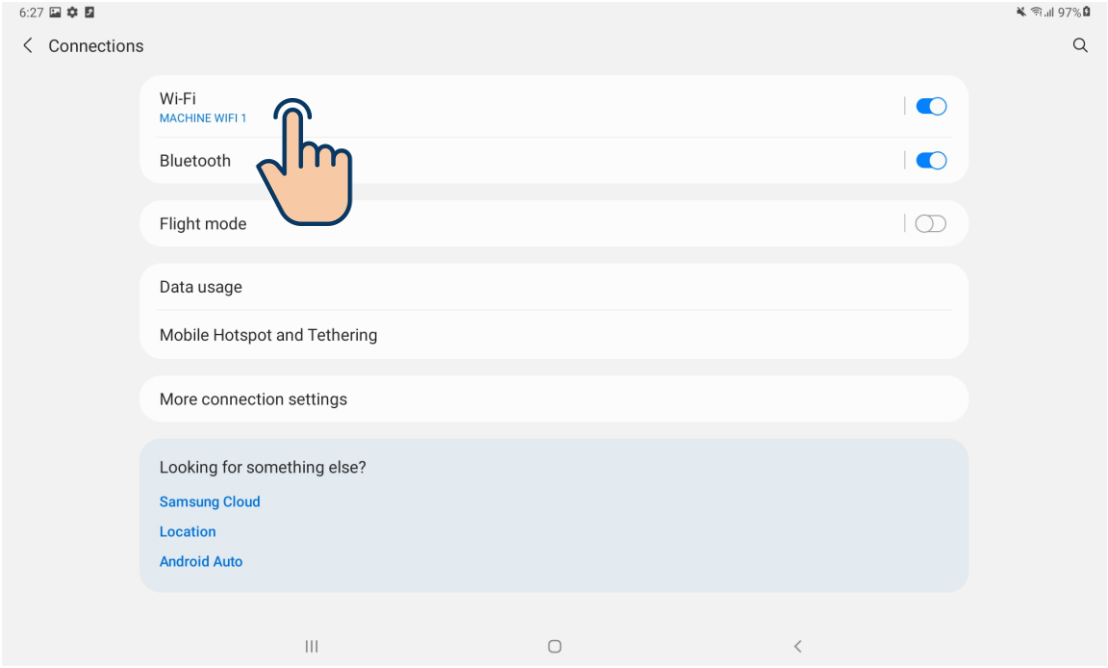
Ready To Use

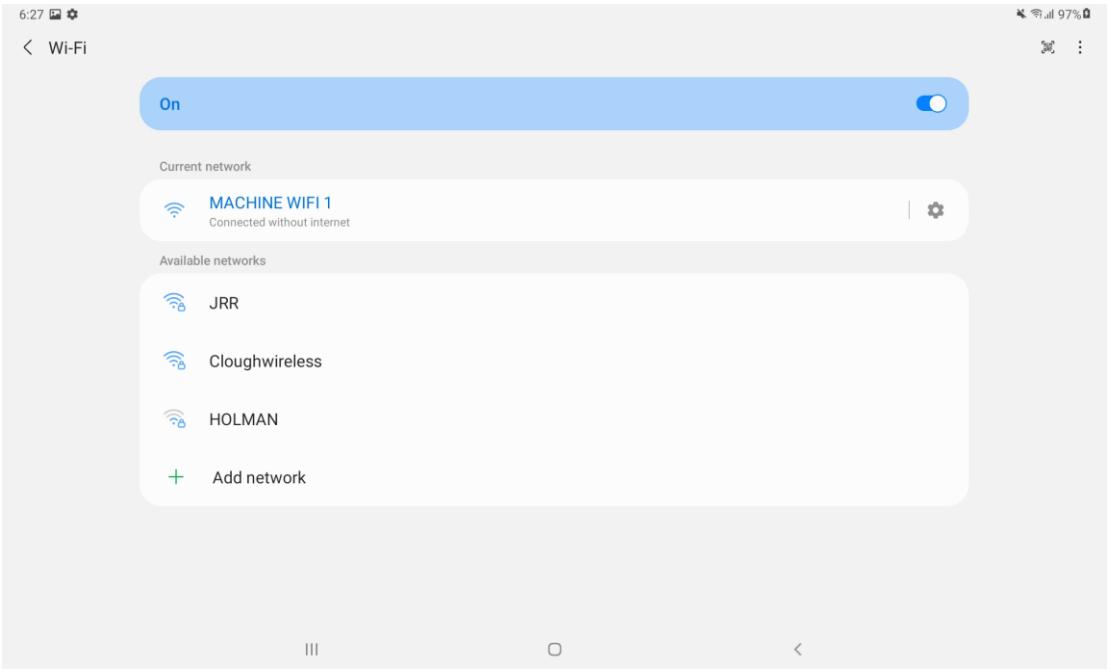
Connecting To Controller

- i4M controller acts as a Wi-Fi hotspot.
- Connect the tablet to the controller by going to Settings > Connections > Wi-Fi and selecting MACHINE WIFI 1 from Available networks.



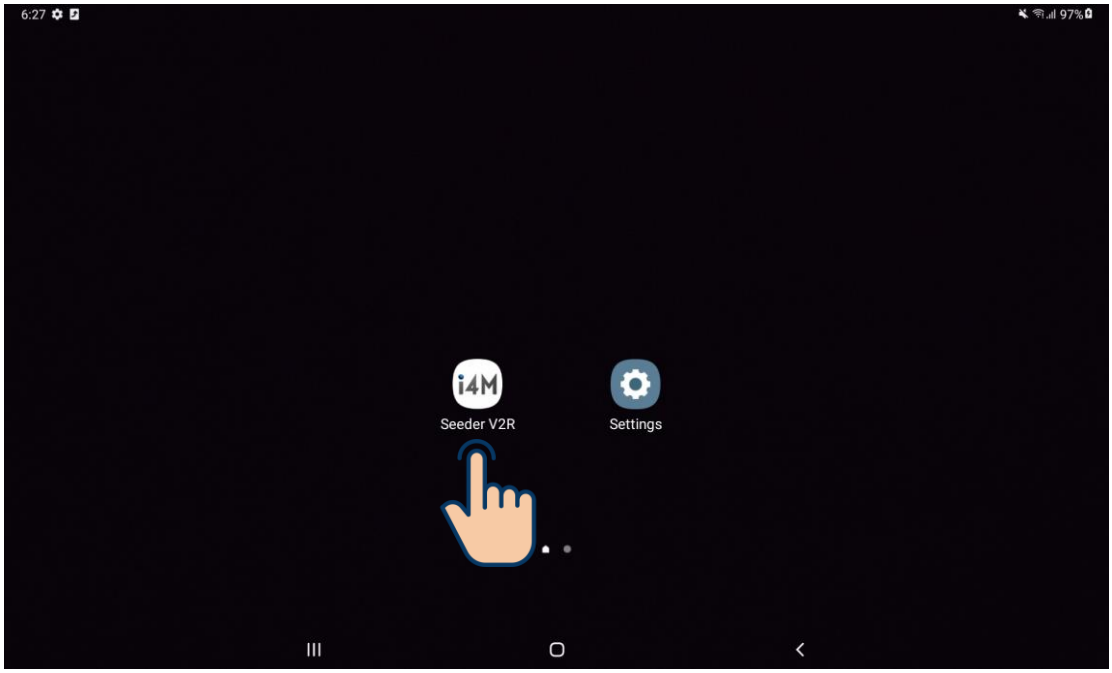


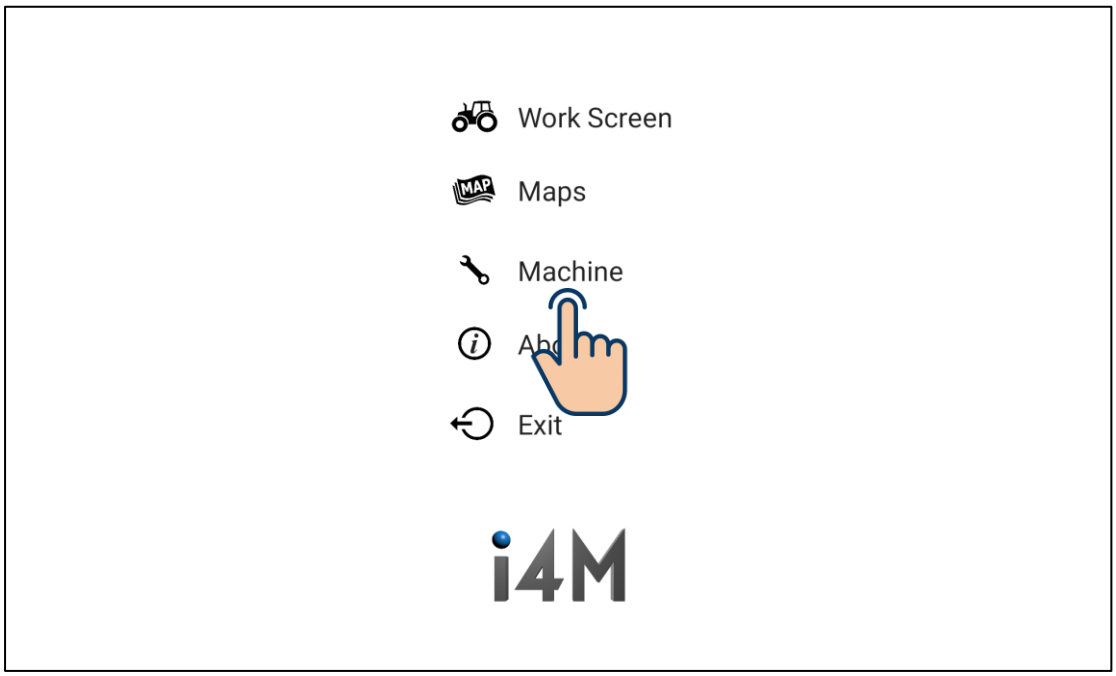

6:27
97%
Connections
Wi-Fi
MACHINE WIFI 1
Bluetooth
Flight mode
Data usage
Mobile Hotspot and Tethering
More connection settings
Looking for something else?
Samsung Cloud
Location
Android Auto


6:27
97%
Wi-Fi
On
Current network
MACHINE WIFI 1
Connected without internet
Available networks
JRR
Cloughwireless
HOLMAN
Add network

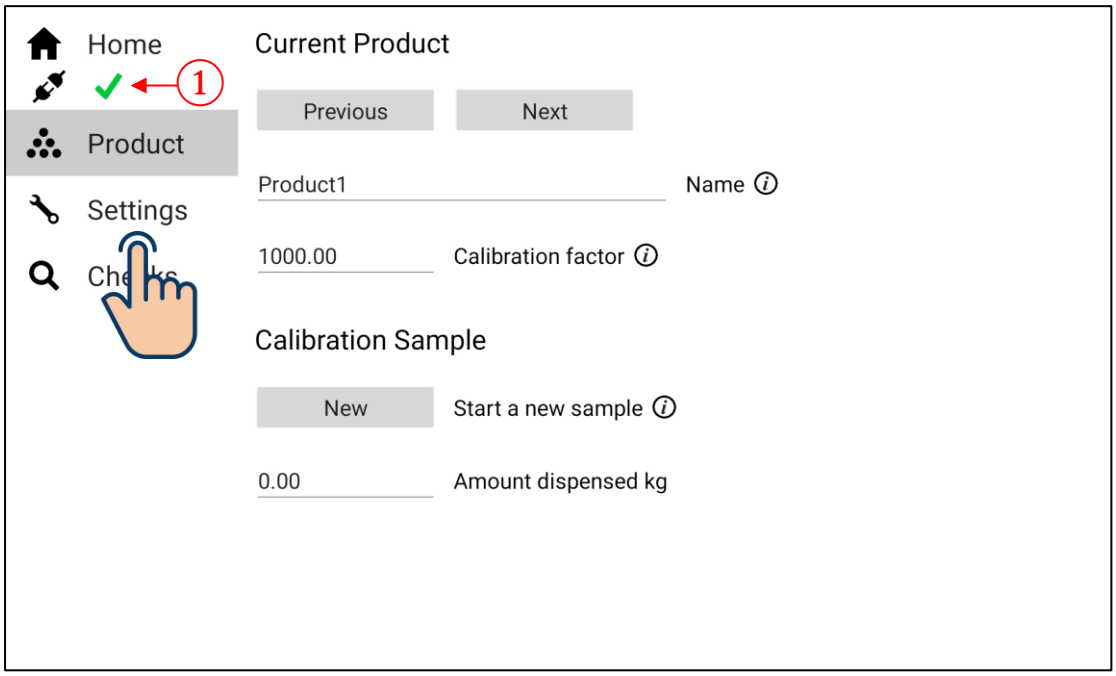
Machine Setup

- Open the i4M Seeder V2R app.
- Navigate to Machine > Settings.





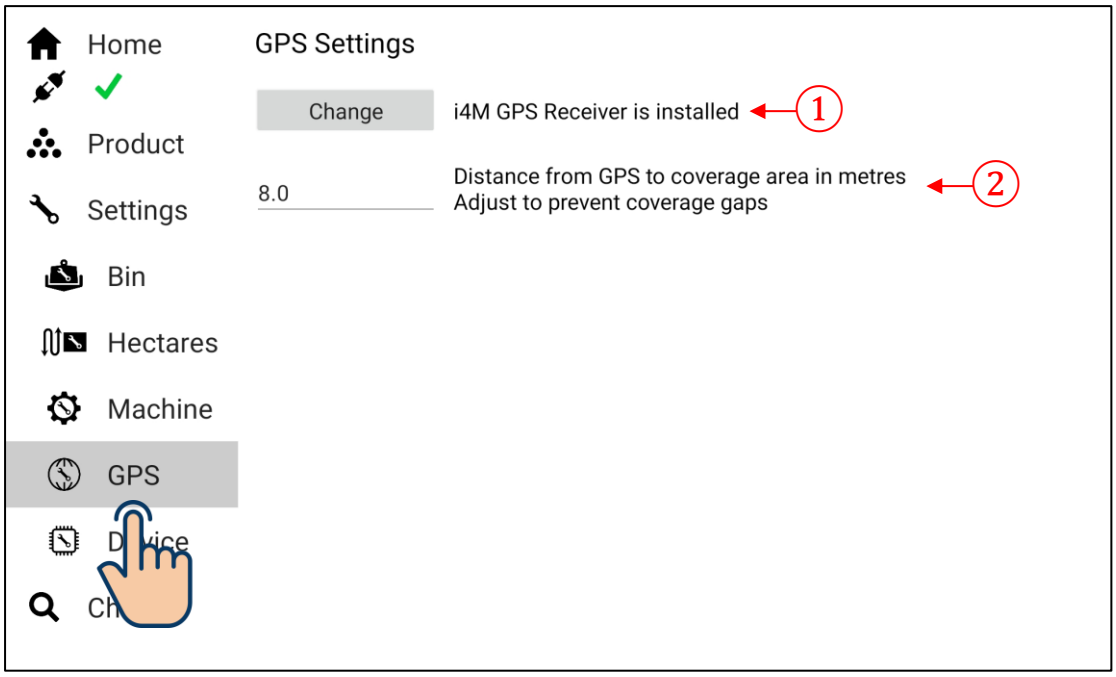
① Wi-Fi connection status. Displays a green tick when connected to controller Wi-Fi. Otherwise displays a red cross.



GPS

- Navigate to Settings > GPS.

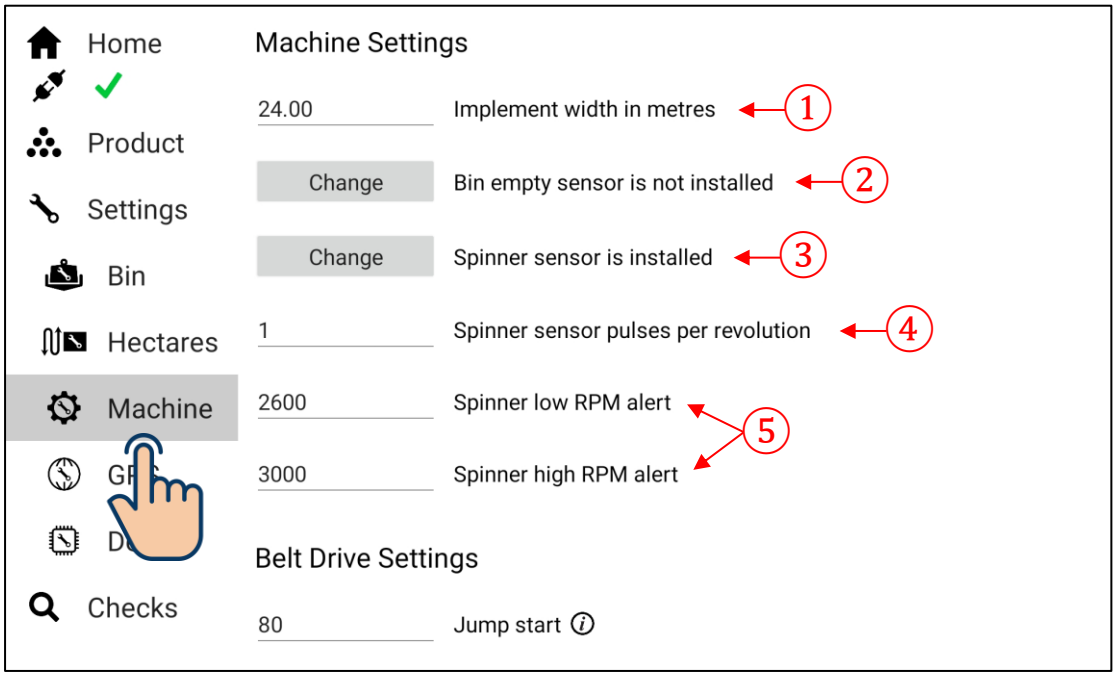
① Set i4M GPS Receiver to “installed”.
② Enter the distance from i4M GPS Receiver to coverage area in metres (*i.e.* the distance from the GPS Receiver to the spinners).



Machine

- Navigate to Settings > Machine.

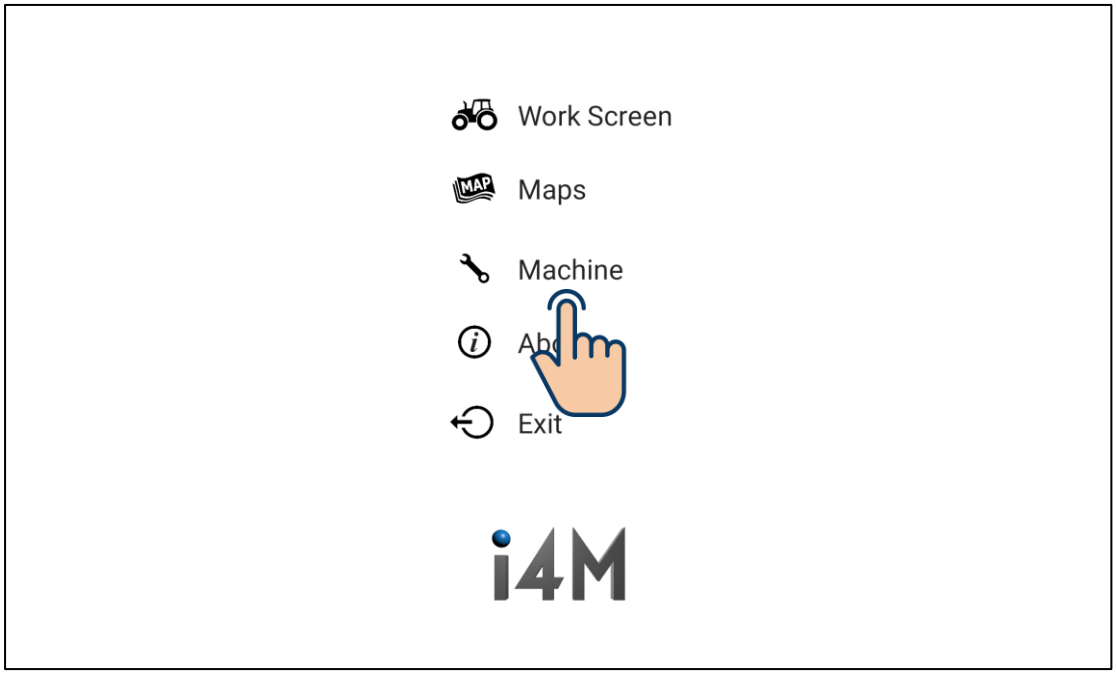
① Enter seeding coverage width in metres (should be “3” metres).
② Set bin sensor to “not installed”.
③ Set spinner sensor to “installed”.
④ Enter “1” for spinner sensor pulses per revolution.
⑤ Enter appropriate values for spinner low and high RPM alerts. If spinner rpm falls outside of this range during operation, the user will receive an alert on the Work screen.



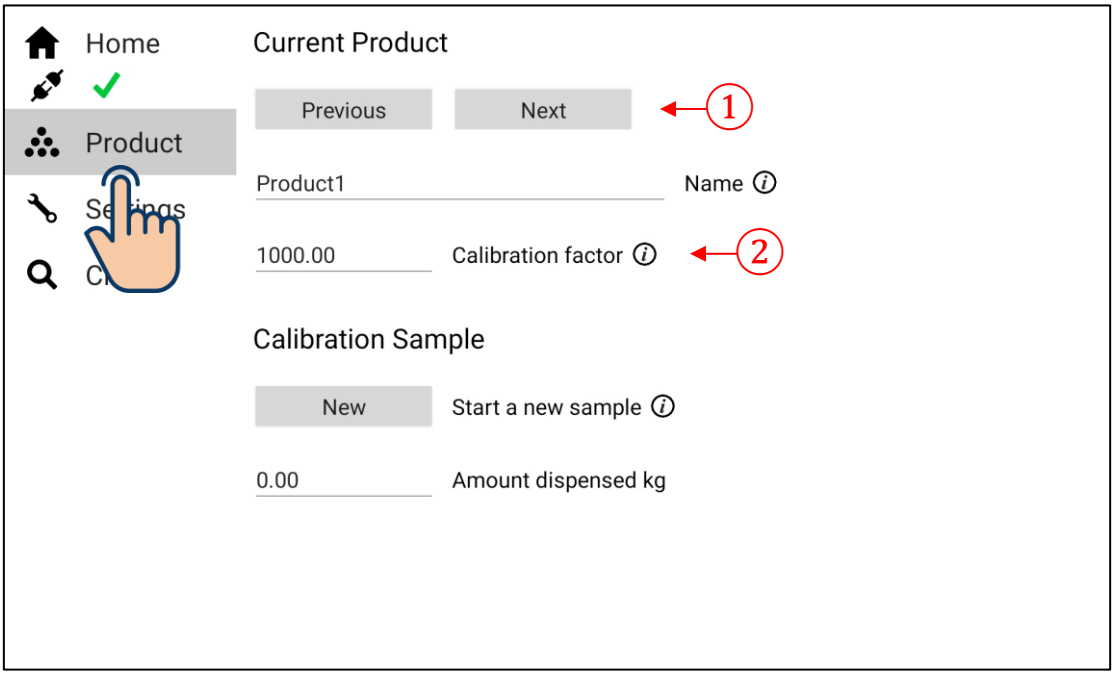
Calibration

Belt Calibration

- Navigate to Machine > Product.

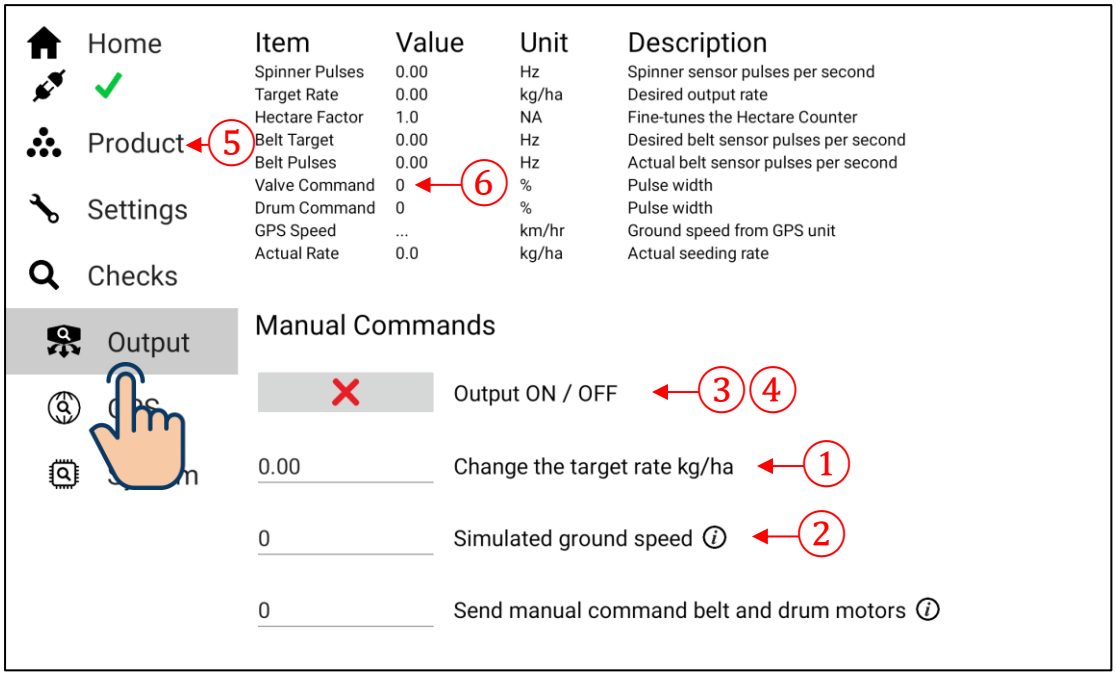


① Tap Next / Previous to select a product. There are 20 stored products. This can be used to store 20 unique names and calibration factors.
② Set the calibration factor. Increasing the calibration factor will increase the rate at which the belt runs, increasing the seed output. Decreasing the calibration factor will decrease the rate at which the belt runs, decreasing the seed output.



- Navigate to Checks > Output.
- This will allow us to simulate seeding operation while the seeder remains stationary.

① Enter “100” for target rate. (Normally this would correspond to a rate in kg/ha, but since rehabilitation seeding involves multiple types of seed being spread at different rates, we will calibrate using an arbitrary value of 100).
② Enter “3” km/hr for simulated ground speed.
③ Tap the Output ON / OFF button. The button will display a green tick when the output is ON.
WARNING: This will run the belt and the drum!
④ When finished running the belt, tap the Output ON / OFF button. It will display a red cross when the output is OFF.
⑤ Based on the results of the test, return to the Product screen to adjust the calibration factor accordingly (*i.e.* Increase the calibration factor if not enough seed was output. Decrease the calibration factor if too much seed was output). Repeat this process until the desired amount of seed is output.
⑥ Once the desired amount of seed is being output, note the Valve Command value when the Output is ON. (This represents the PWM signal being sent to the belt motor and will be useful when calibrating the drum).



Drum Calibration

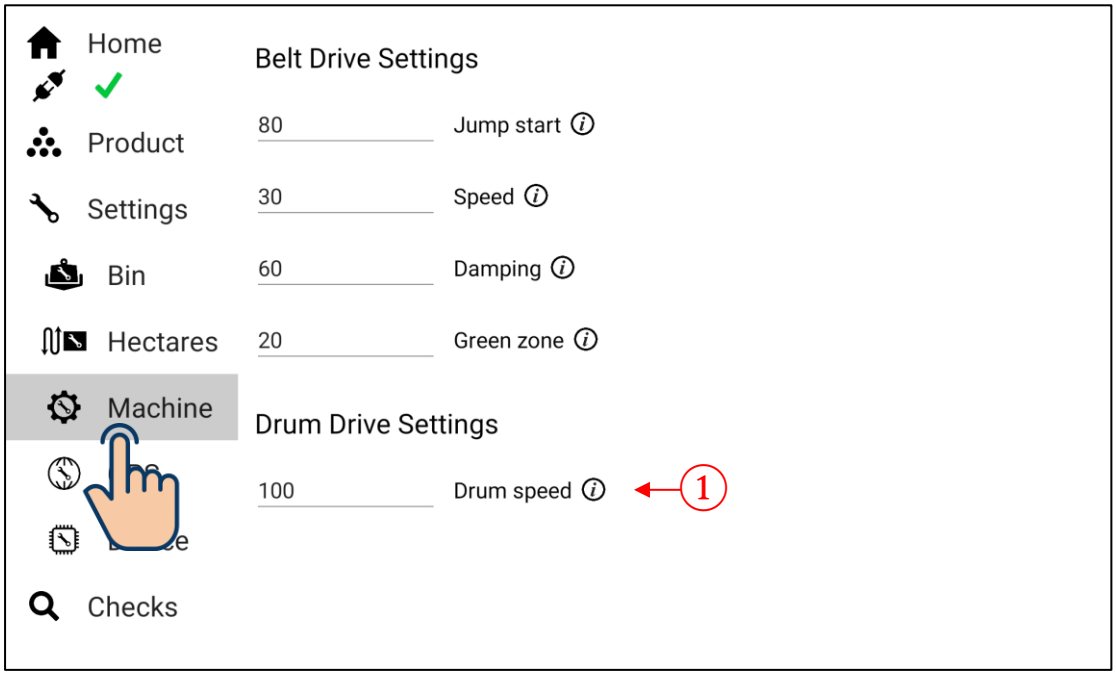
- Navigate to Settings > Machine and scroll down to reveal Drum Drive Settings

① The drum motor runs at a fixed ratio of the belt motor. The value for Drum speed represents the percent of the Belt motor command sent to the Drum motor *e.g.* a value of 200 means the Drum command will be double the Belt command.

Based on the testing done at Piacentini & Son in Picton, a Drum command value of 25% was found to be suitable for outputting the Drum seed. Use the equation below to calculate the drum speed

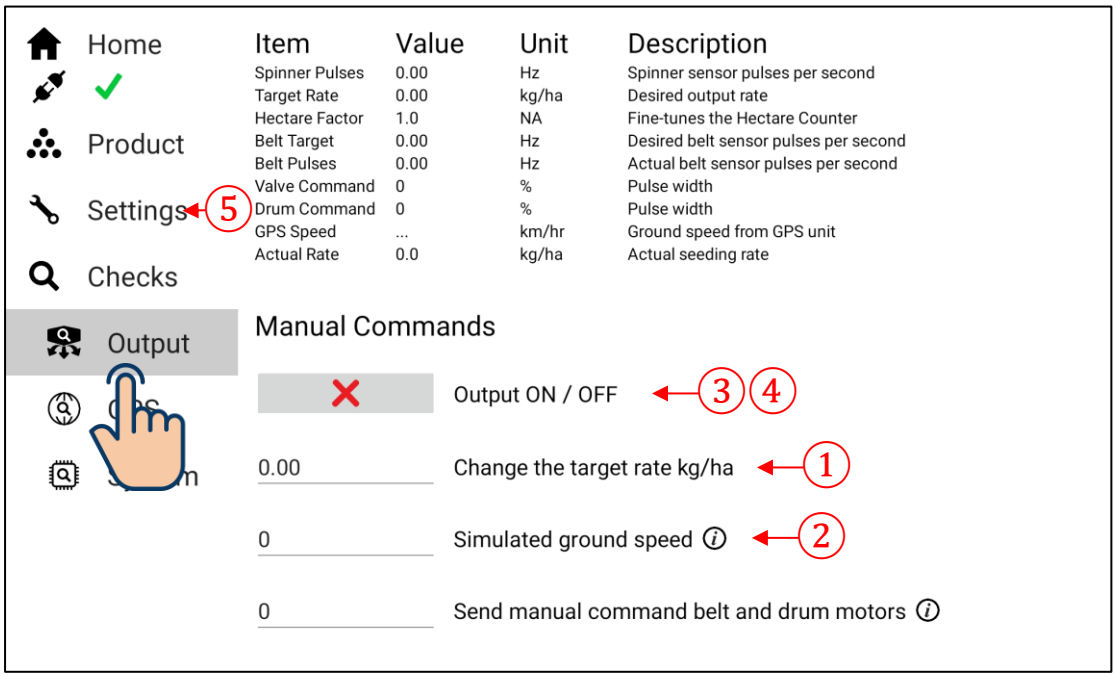
$$drum\ speed = \frac{drum\ command}{belt\ command} \times 100$$

where *drum command* = 25 and *belt command* is equal to the value noted in step 6 of the belt calibration.
Enter the calculated value into Drum speed.



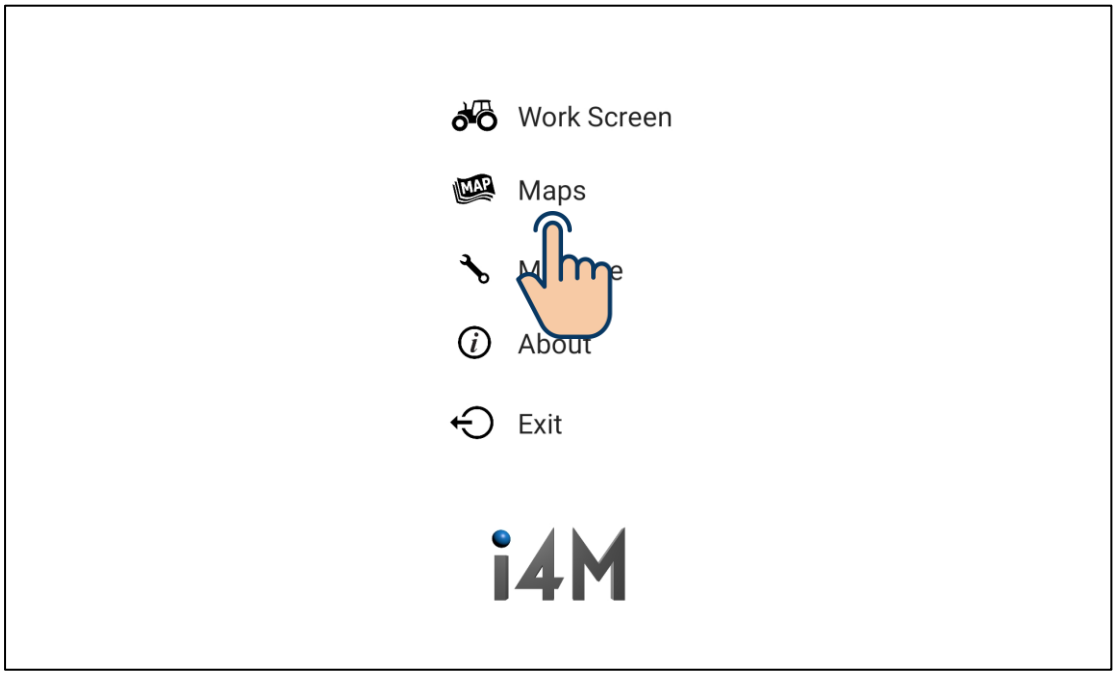
- Navigate to Checks > Output.
- This will allow us to simulate seeding operation while the seeder remains stationary.

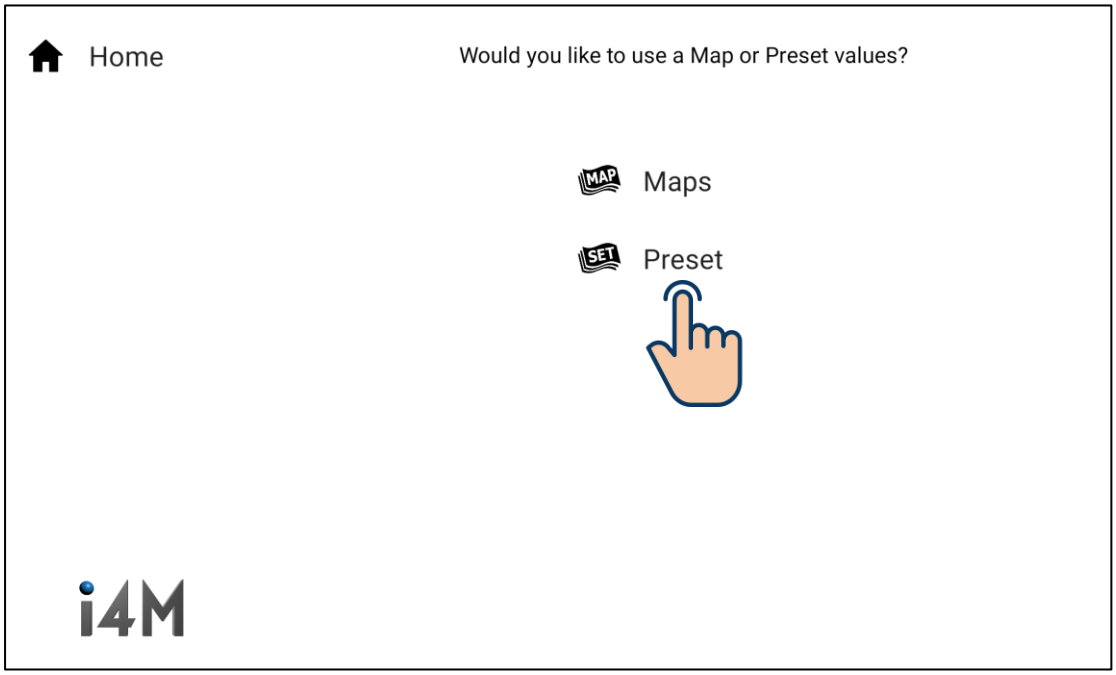
① Enter “100” for target rate. (Normally this would correspond to a rate in kg/ha, but since rehabilitation seeding involves multiple types of seed being spread at different rates, we will calibrate using an arbitrary value of 100).
② Enter “3” km/hr for simulated ground speed.
③ Tap the Output ON / OFF button. The button will display a green tick when the output is ON.
WARNING: This will run the belt and the drum!
④ When finished running the drum, tap the Output ON / OFF button. It will display a red cross when the output is OFF.
⑤ Based on the results of the test, return to the Settings > Machine screen to adjust the drum speed accordingly (*i.e.* increase the drum speed if not enough seed was output. Decrease the drum speed if too much seed was output). Repeat this process until the desired amount of seed is output.



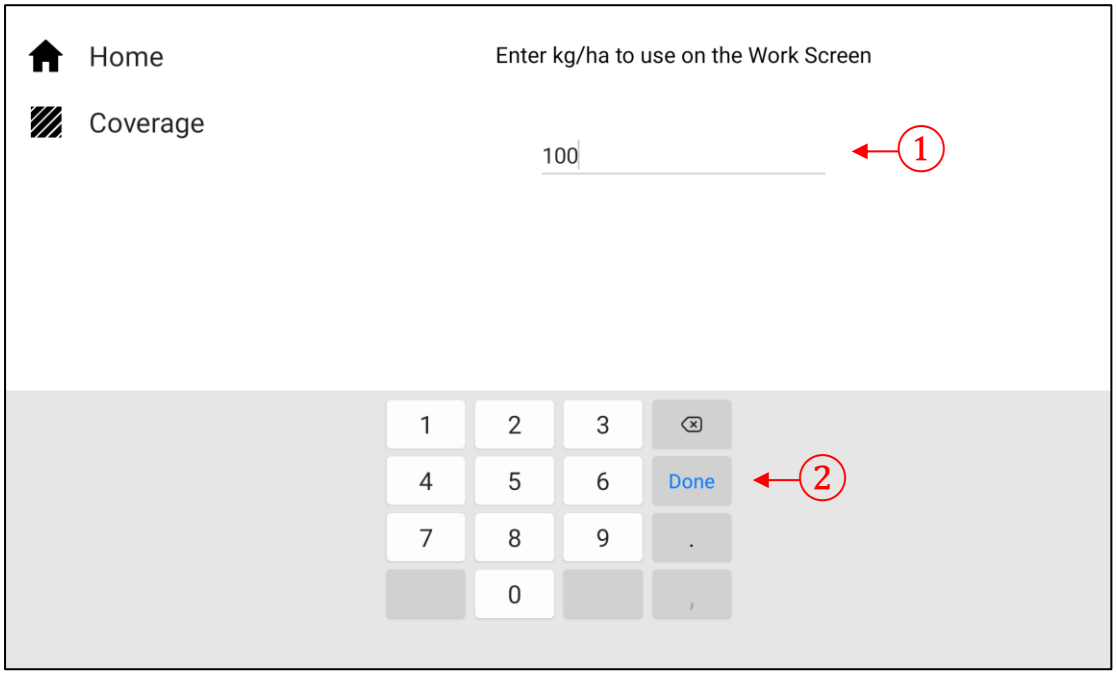
Seeder Operation

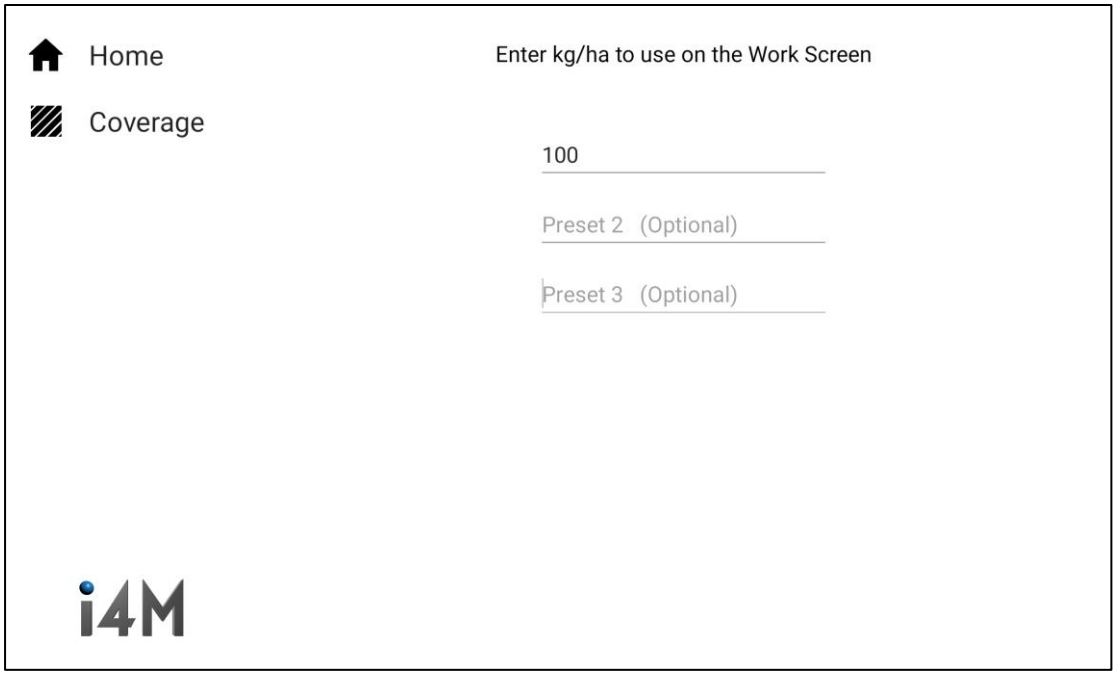
- Navigate to Maps > Preset.



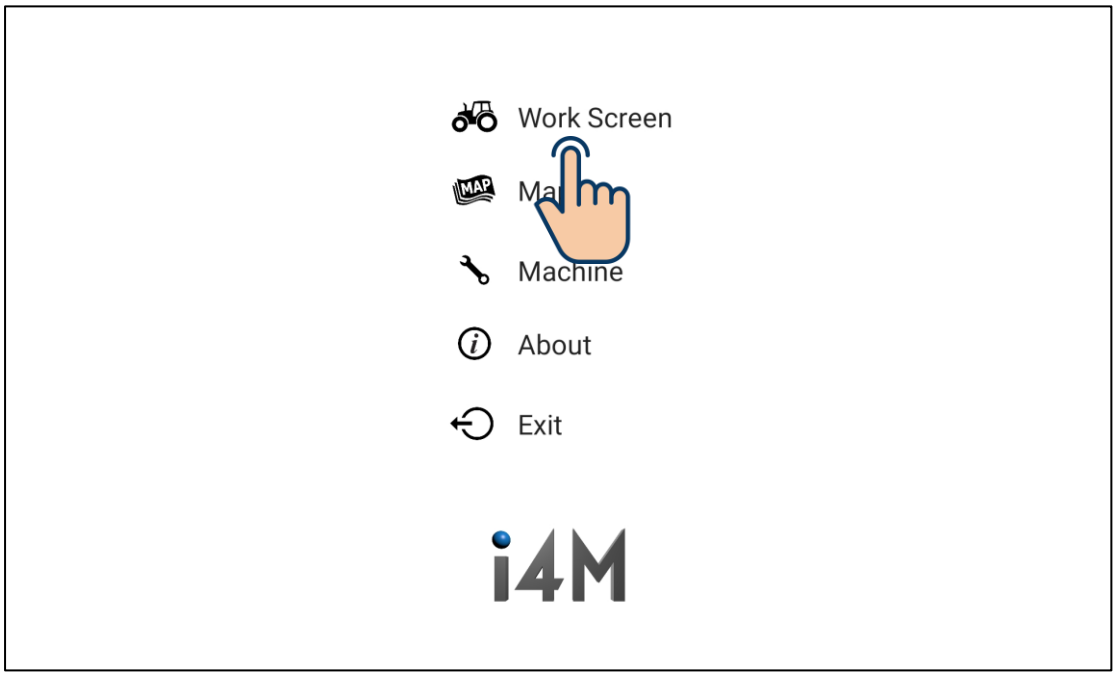


① Enter “100” for target rate. (Normally this would correspond to a rate in kg/ha, but since rehabilitation seeding involves multiple types of seed being spread at different rates, we calibrated using an arbitrary value of 100).
② Tap done 3 times until the keyboard closes.

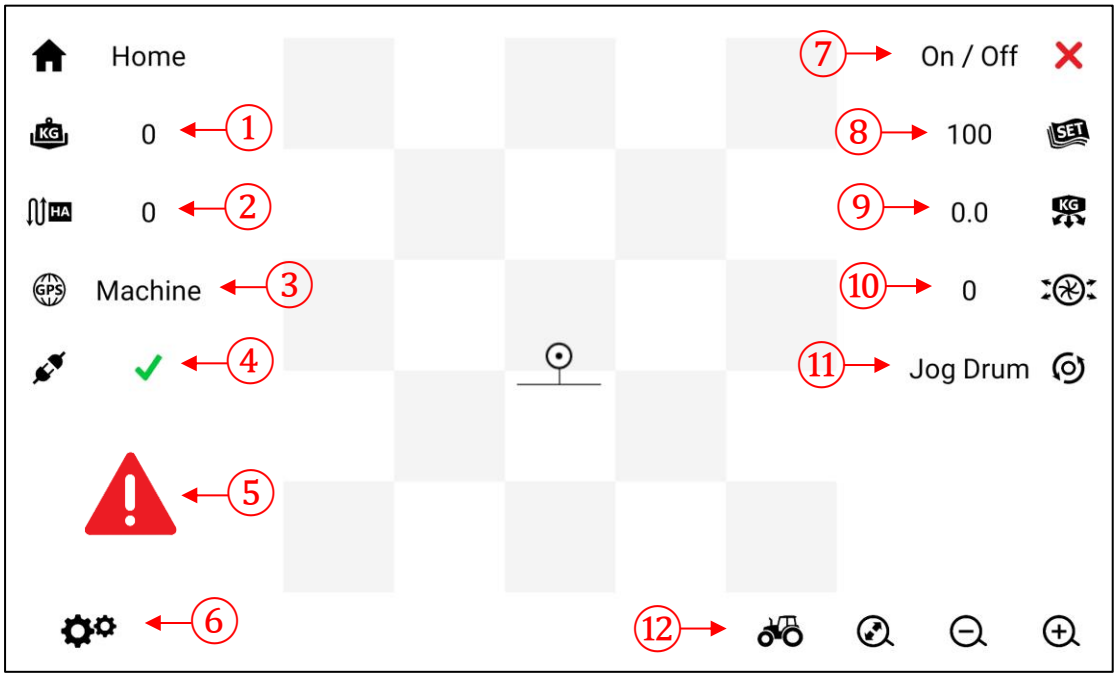




- Navigate to Work Screen.



① Hopper Kilograms.
② Displays the number of hectares seeded. To zero this value, tap this button while seeding operation is OFF to navigate to the Hectares Settings screen and tap the Zero button.
③ GPS status. Displays “Machine” when connected to i4M GPS Receiver. Otherwise displays “Tablet”.
④ Wi-Fi connection status. Displays a green tick when connected to controller Wi-Fi. Otherwise displays a red cross.
⑤ Tap to see alerts.
⑥ Tap for coverage settings.
⑦ Tap to turn seeding operation ON / OFF. Will display a green tick when seeding is ON and a red cross when seeding is OFF.
WARNING: This will run the belt and the drum!
⑧ Target seeding rate.
⑨ Actual live seeding rate.
⑩ Spinner RPM.
⑪ Press and hold to jog the drum.
⑫ View controls. From left to right, focus on machine, zoom out to maximum distance, zoom out, zoom in.



- Navigate to Work Screen > Settings (⑥ on the previous page).

① Set Overlap Auto Shutoff to be disabled.
Tap to enable / disable. When enabled, the button will display a green tick.
When disabled, the button will display a red cross.
When enabled, the belt and drum motor will automatically be turned off when driving over an area that has already been covered.
② Tap to delete the current coverage map.