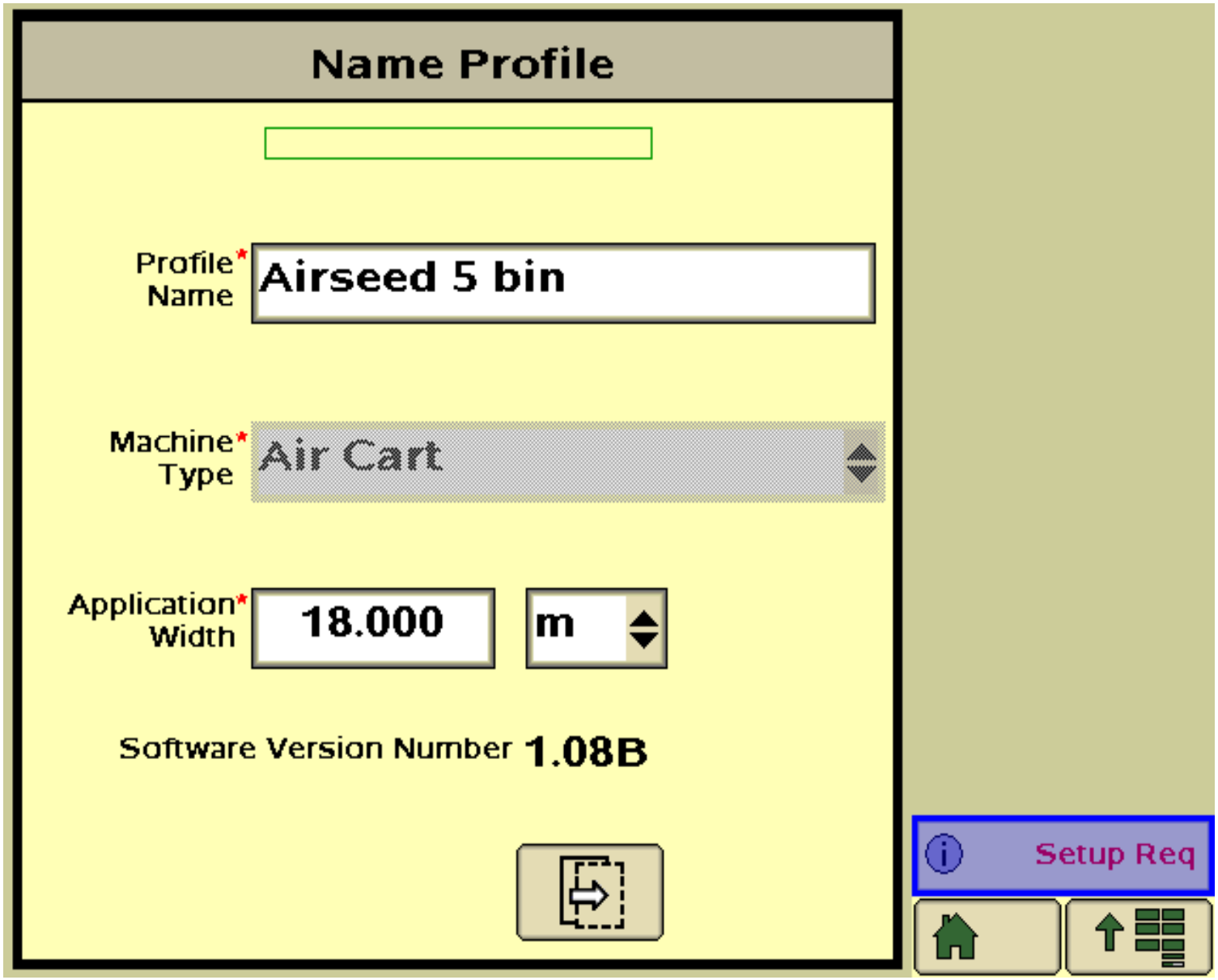
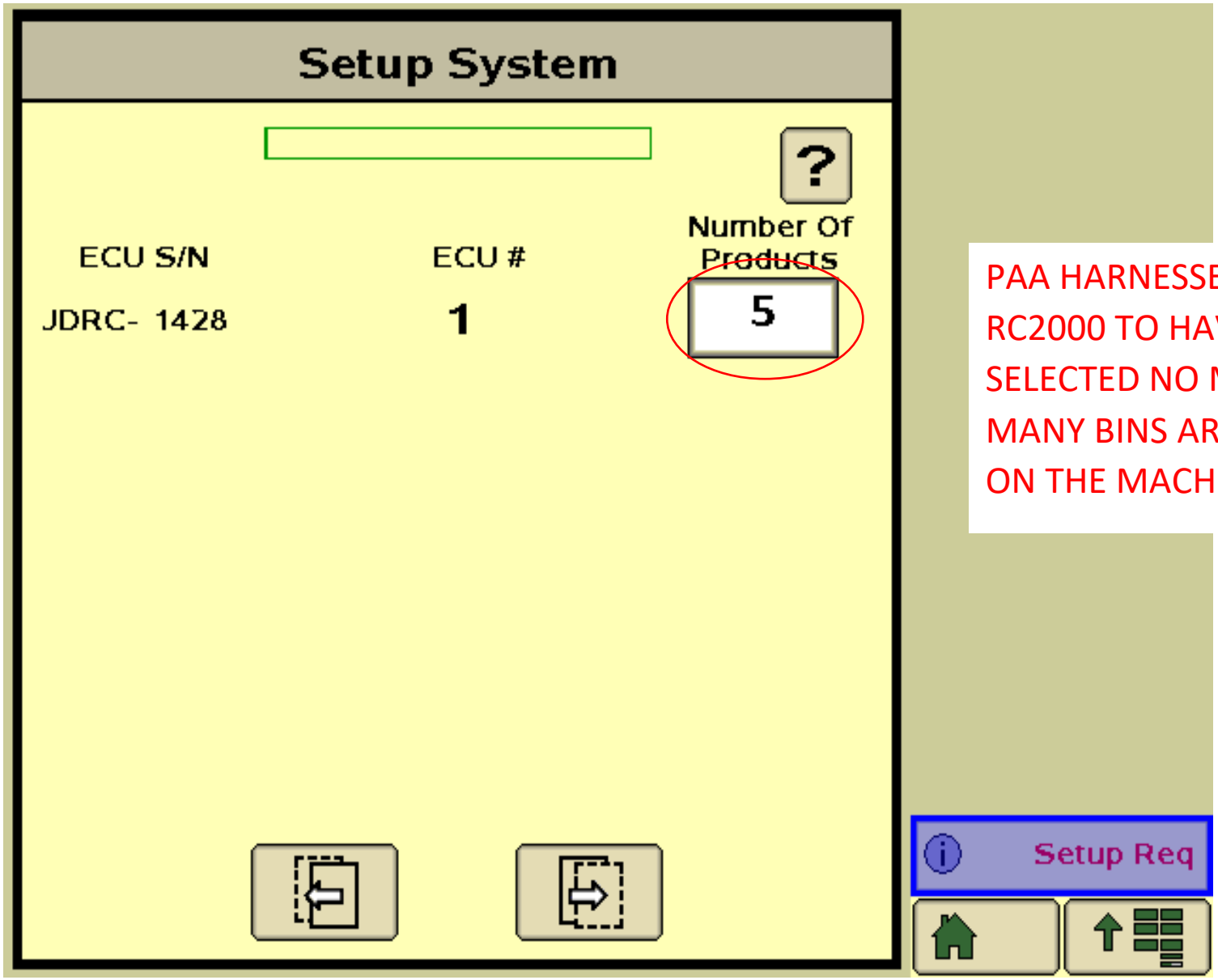
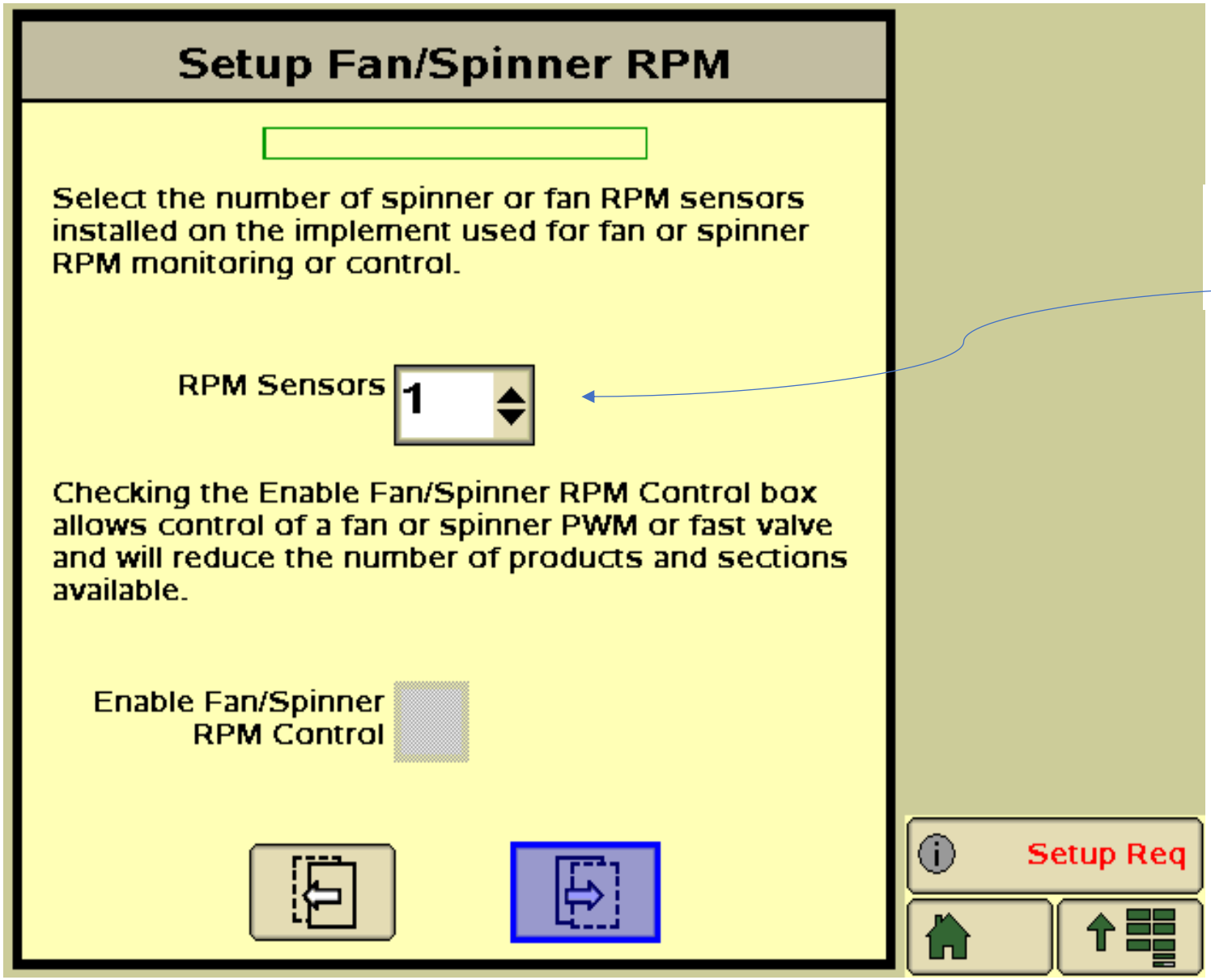
PRECISION
AGRONOMICS AUSTRALIA

RC 2000 WIZARD SETUP GUIDE FOR PAA HARNESSING

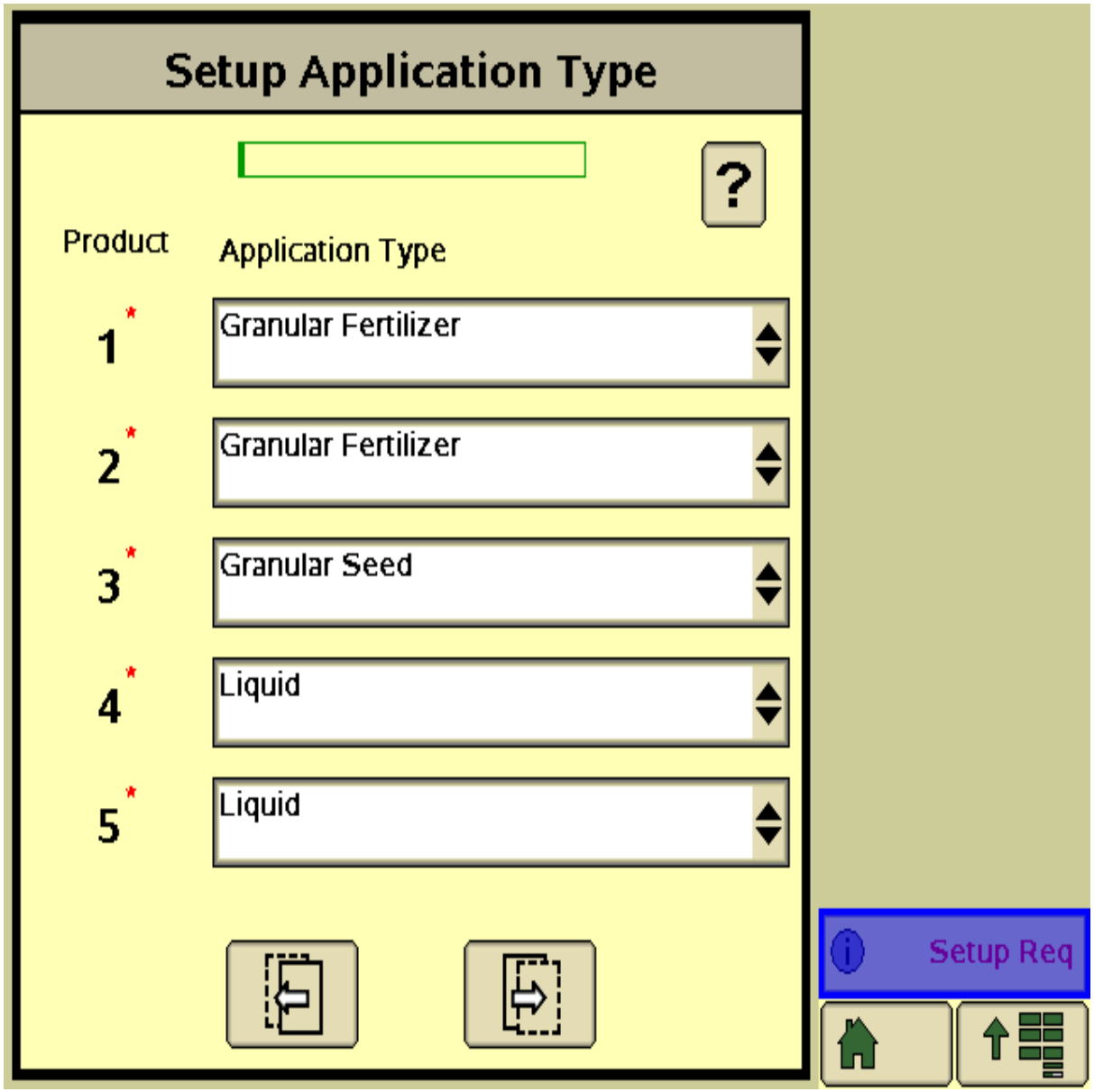

Name Profile
Profile* Name
Airseed 5 bin
Machine* Type
Air Cart
Application* Width
18.000
m
Software Version Number 1.08B
Setup Req



PAA HARNESSES REQUIRE THE RC2000 TO HAVE 5 PRODUCTS SELECTED NO MATTER HOW MANY BINS ARE BEING USED ON THE MACHINE



SELECT THE NUMBER OF FAN SENSORS



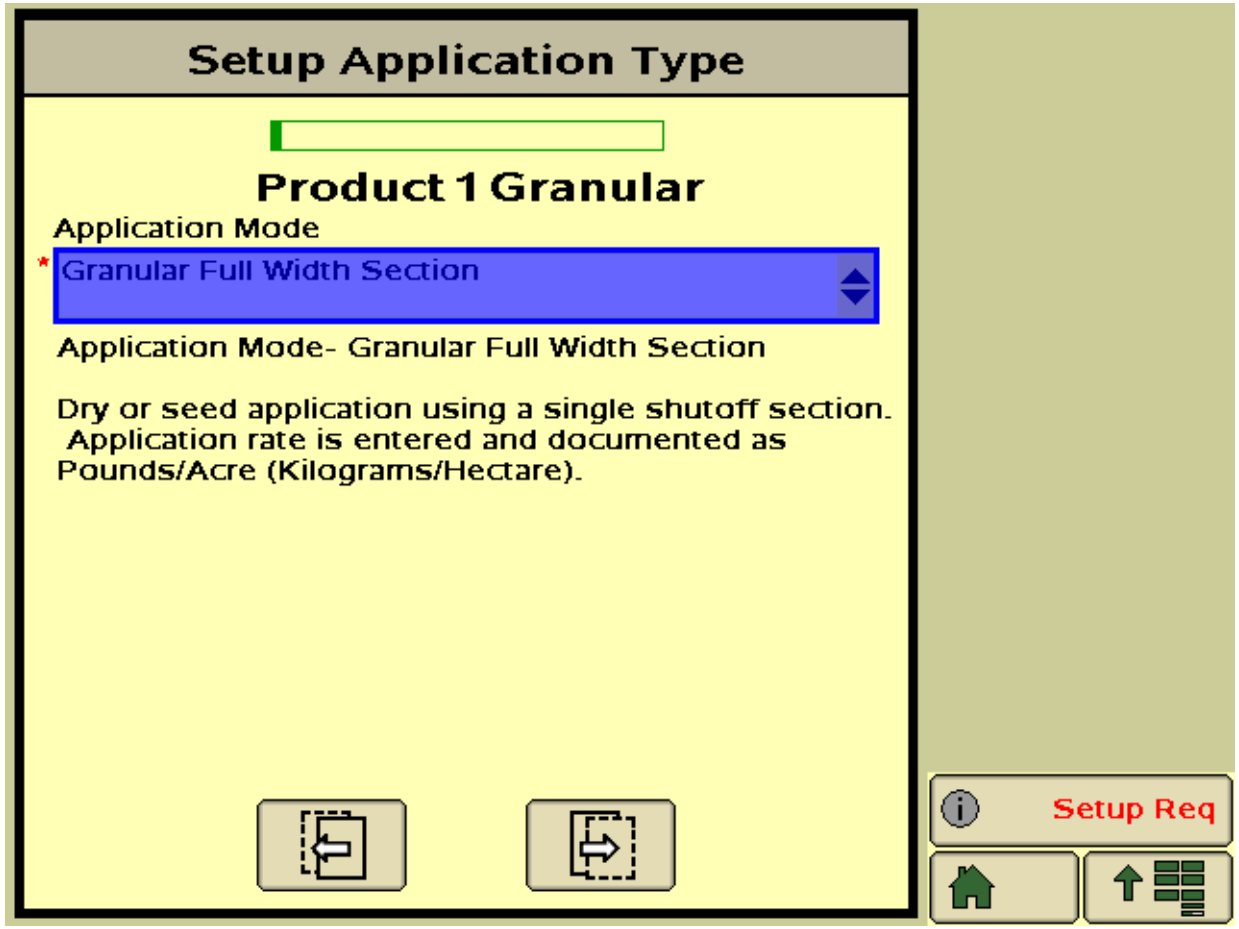
SELECT THE PRODUCTS TO GO IN EACH BIN

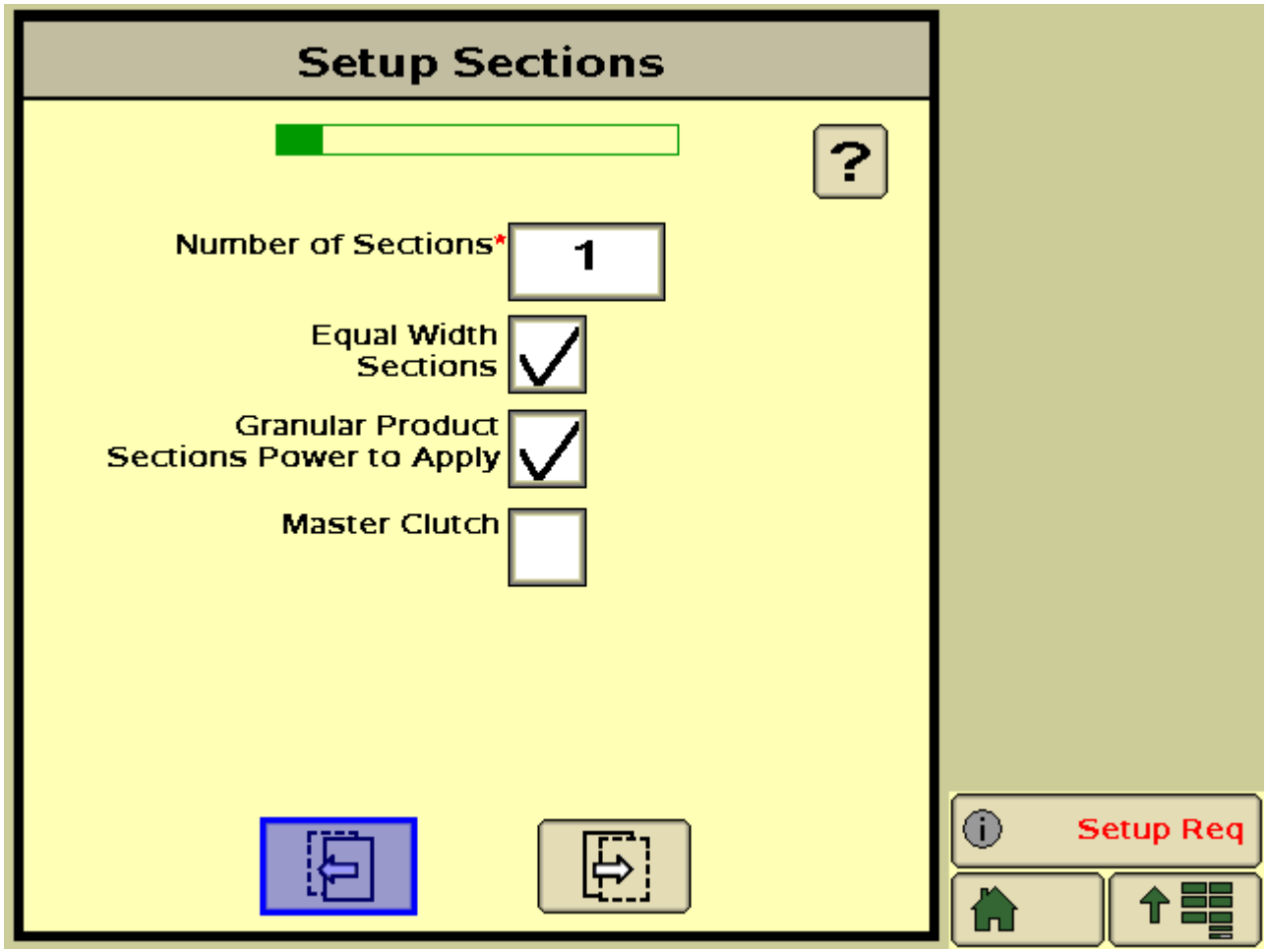
BIN 5 DOES NOT HAVE THE ABILITY TO RUN A VR MAP OR DOCUMENTATION

IF NOT USING A BIN THE APPLICATION TYPE DOES NOT MATTER

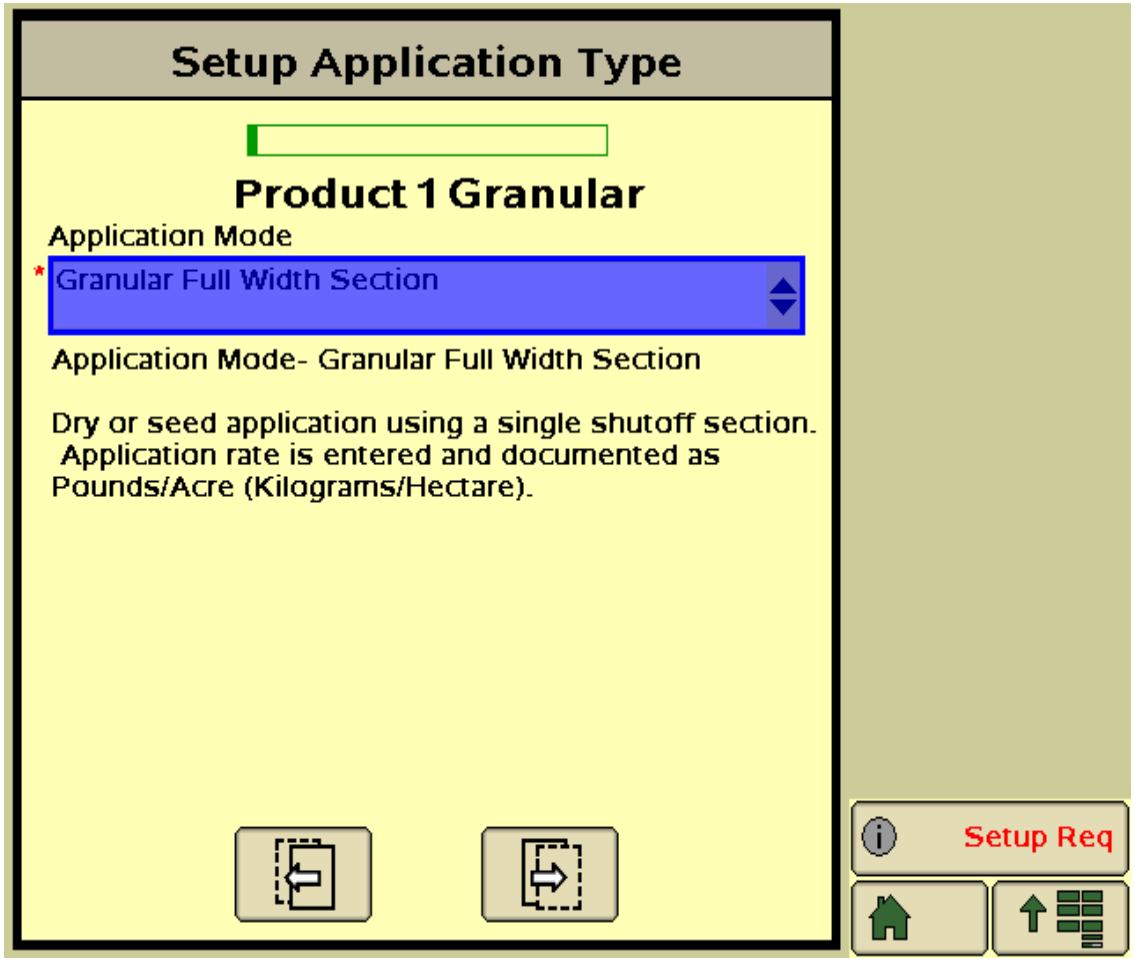
SECTION CONTROL SETUPS

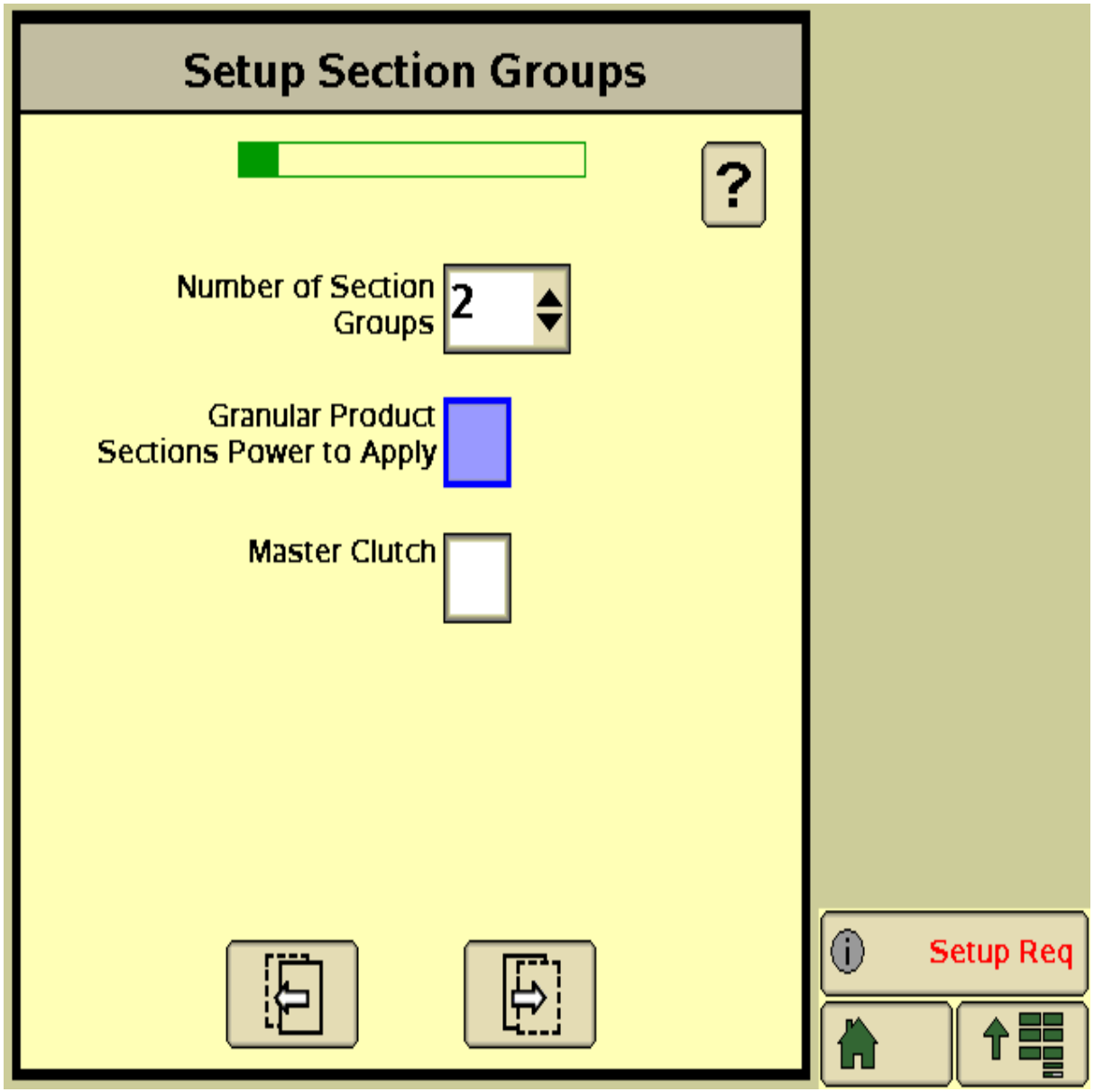
No section Control

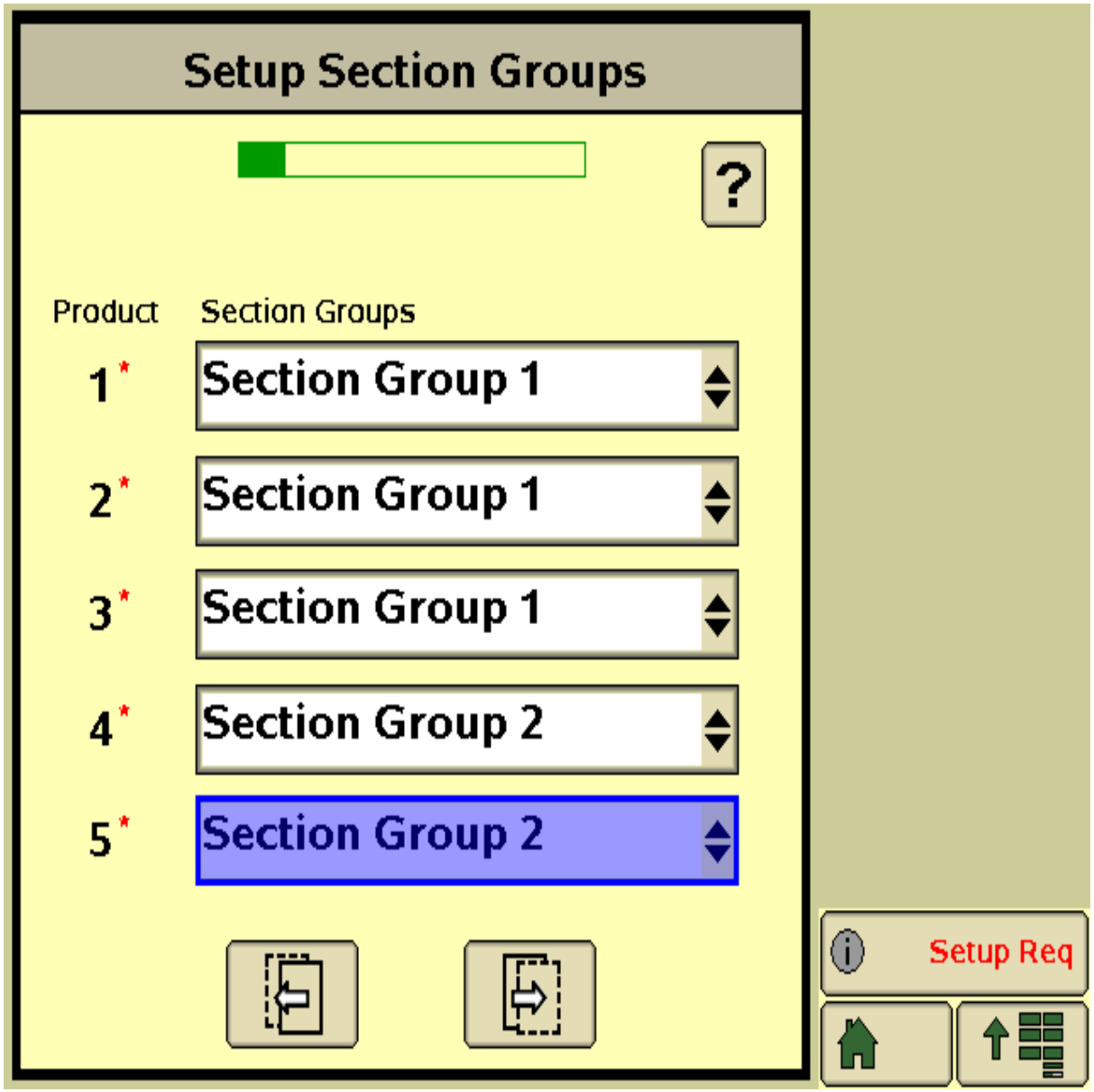


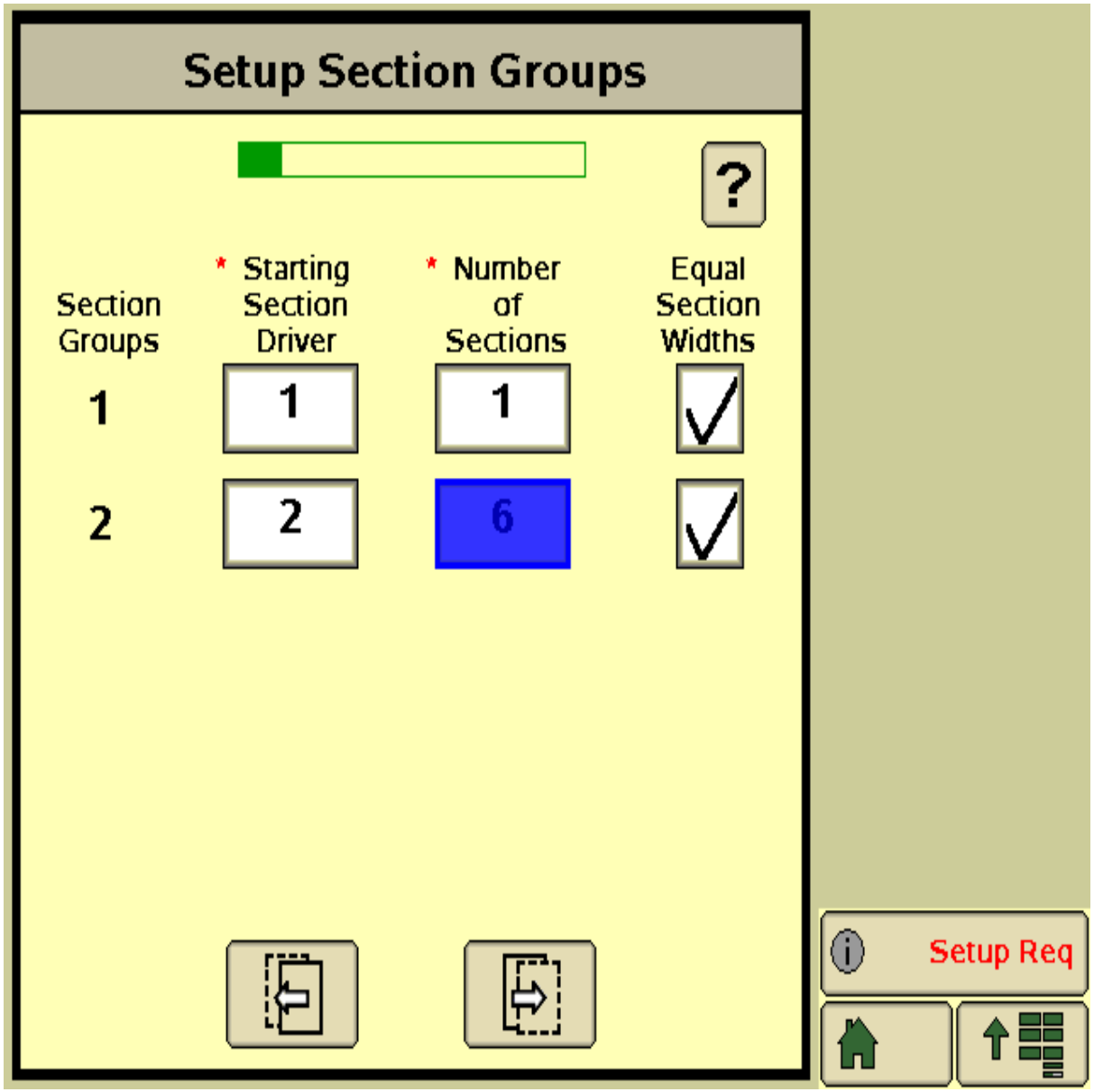

Setup Sections
?
Number of Sections*
1
Equal Width Sections
Granular Product Sections Power to Apply
Master Clutch
Setup Req

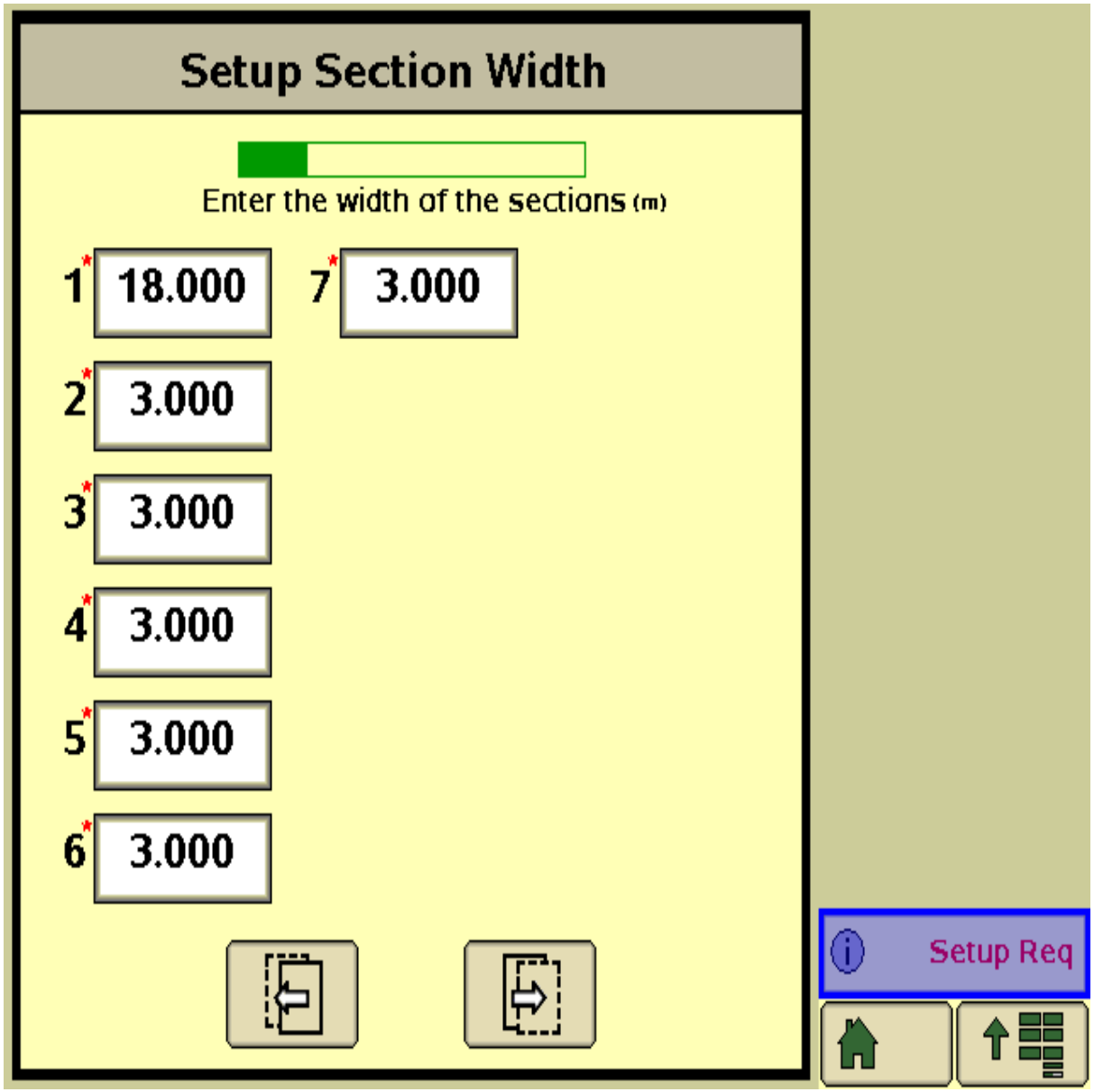
No Section Control dry; Section controlled liquid

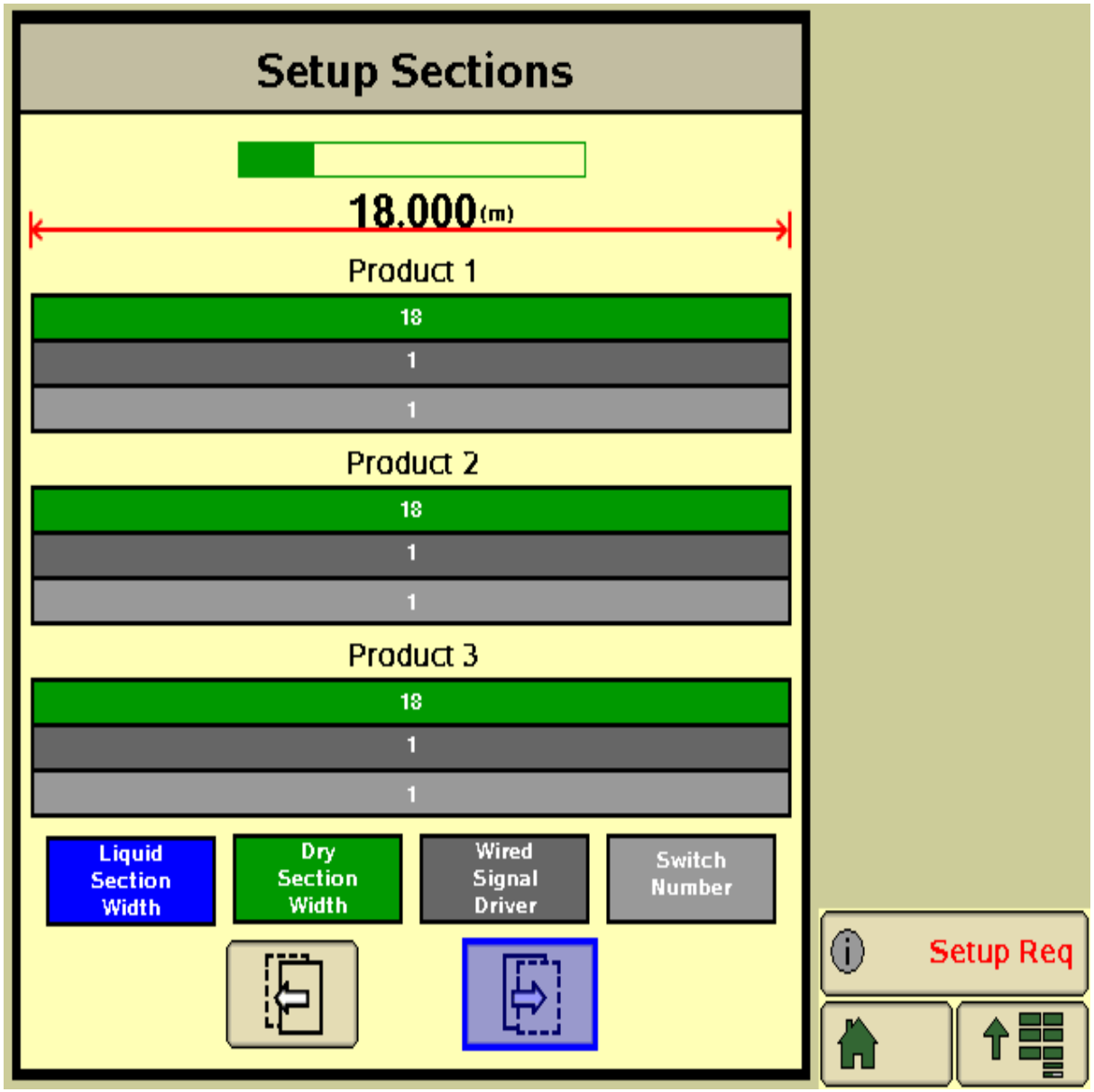


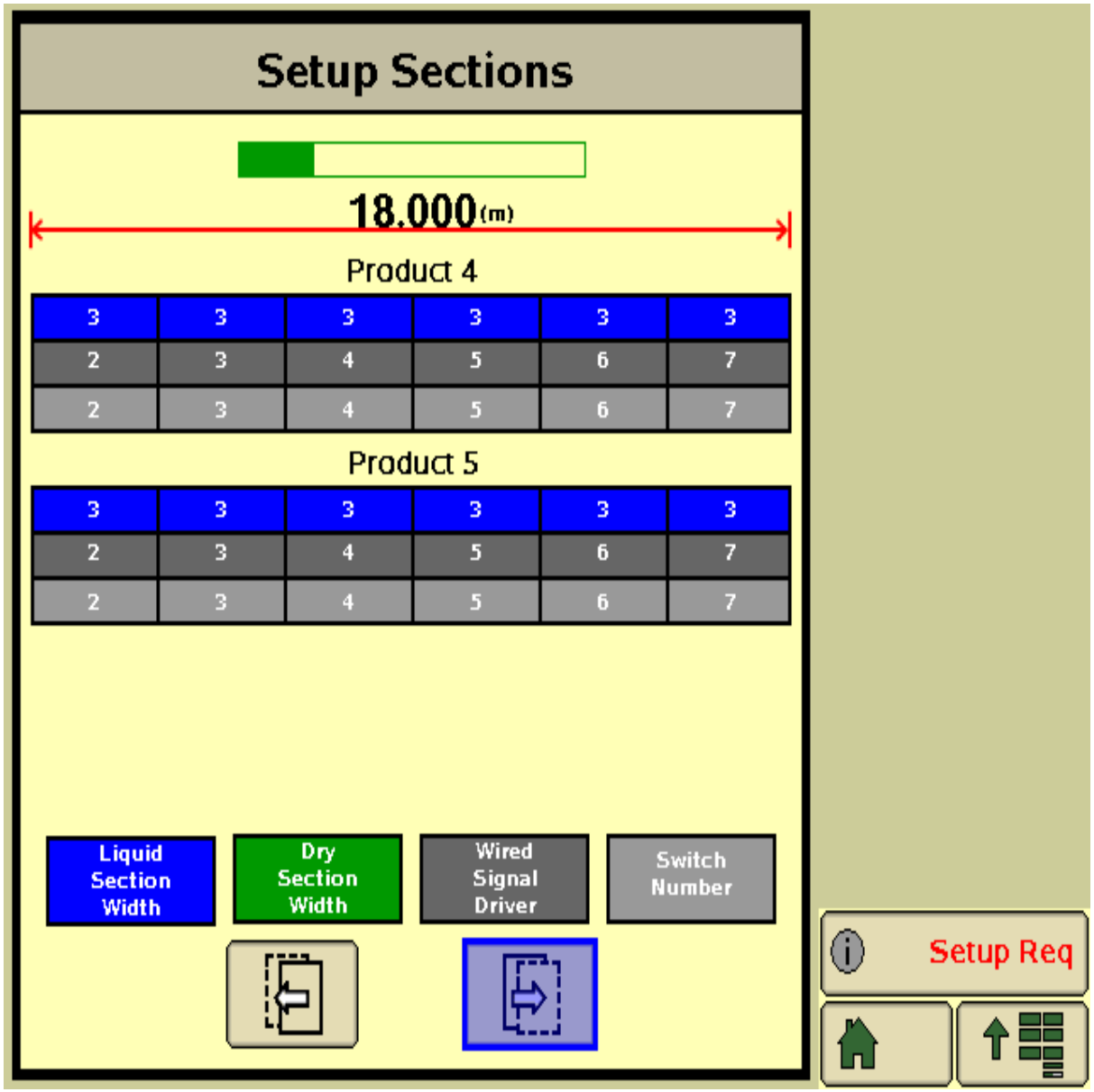

Setup Section Groups
?
Number of Section Groups
2
Granular Product Sections Power to Apply
Master Clutch
Setup Req


Setup Section Groups
?
Product
Section Groups
1 *
Section Group 1
2 *
Section Group 1
3 *
Section Group 1
4 *
Section Group 2
5 *
Section Group 2
Setup Req

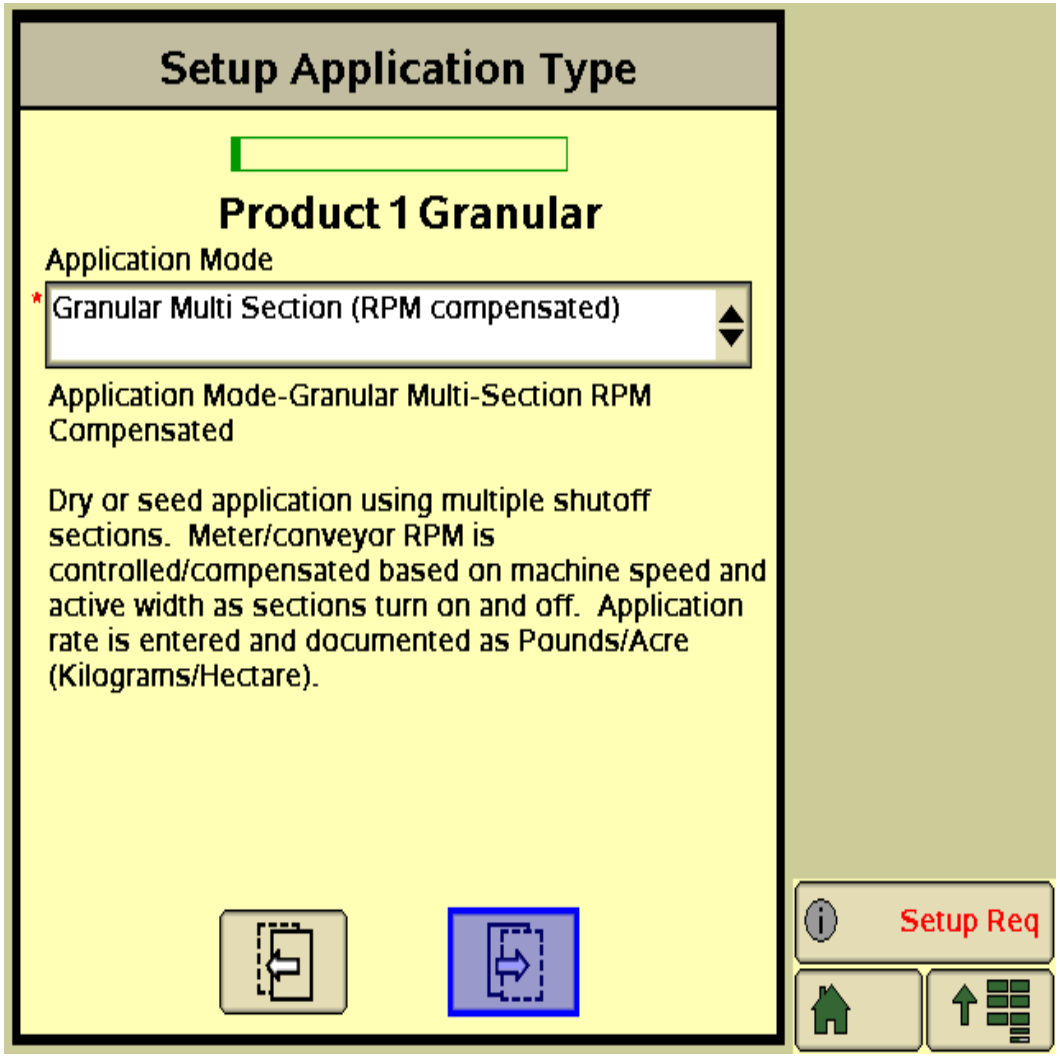

Setup Section Groups
?
Section Groups
* Starting Section Driver
* Number of Sections
Equal Section Widths
1
1
1
2
2
6
Setup Req


Setup Section Width
Enter the width of the sections (m)
1* 18.000
7* 3.000
2* 3.000
3* 3.000
4* 3.000
5* 3.000
6* 3.000
Setup Req

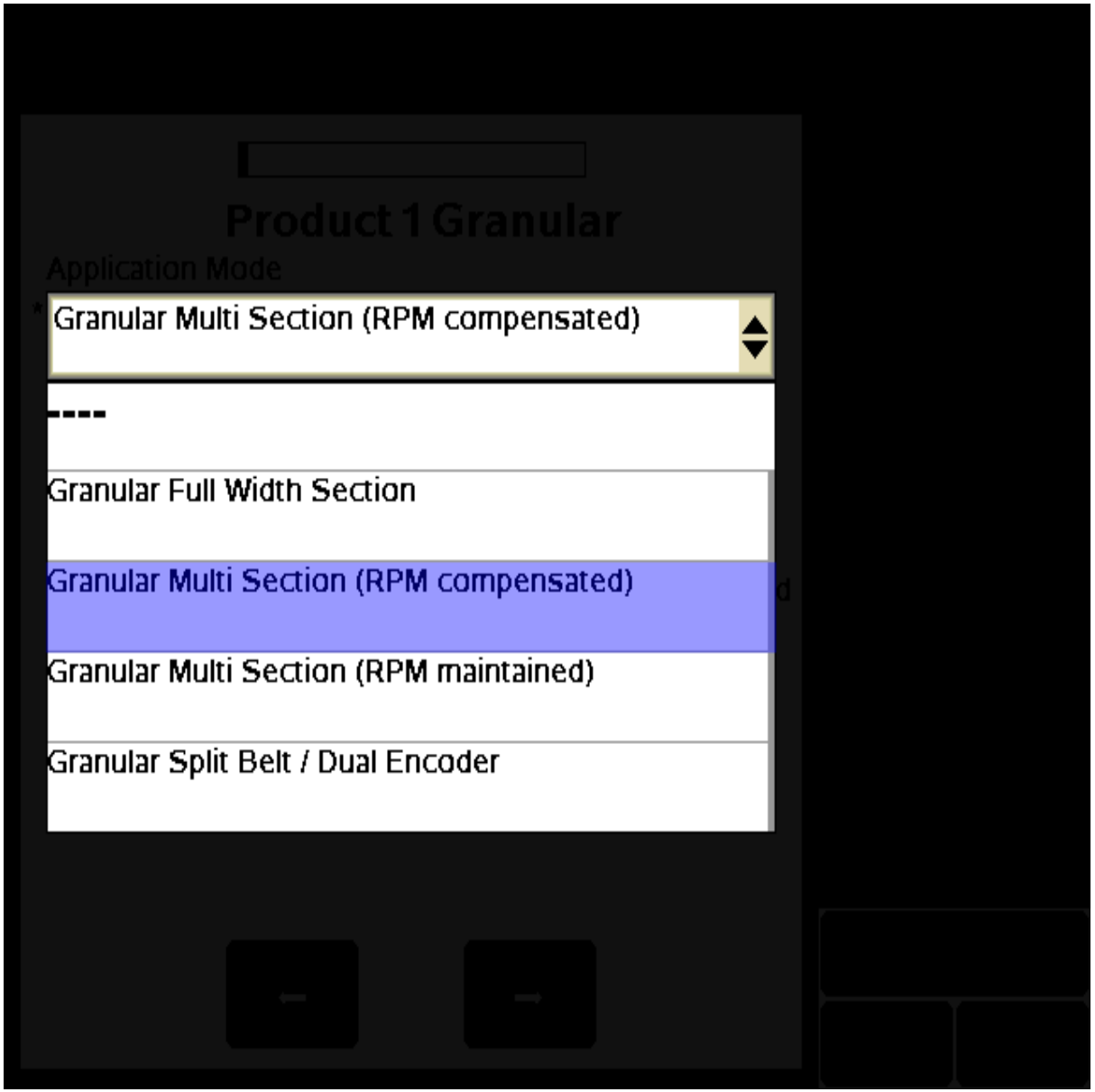

Setup Sections
18.000(m)
Product 1
18
1
1
Product 2
18
1
1
Product 3
18
1
1
Liquid Section Width
Dry Section Width
Wired Signal Driver
Switch Number
Setup Req


Setup Sections
18.000(m)
Product 4
3 3 3 3 3 3
2 3 4 5 6 7
2 3 4 5 6 7
Product 5
3 3 3 3 3 3
2 3 4 5 6 7
2 3 4 5 6 7
Liquid Section Width
Dry Section Width
Wired Signal Driver
Switch Number
Setup Req

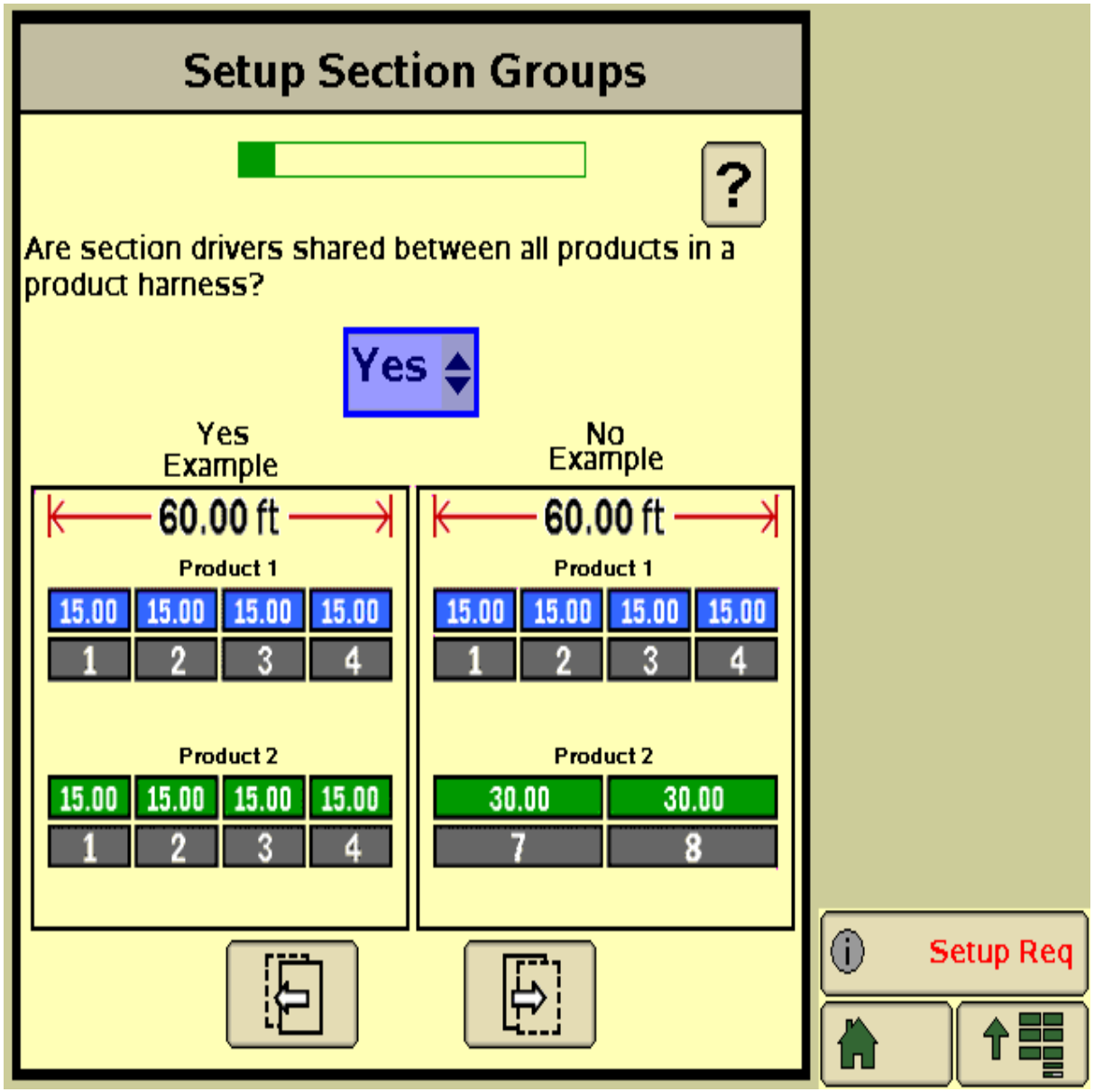
Section control wet and dry



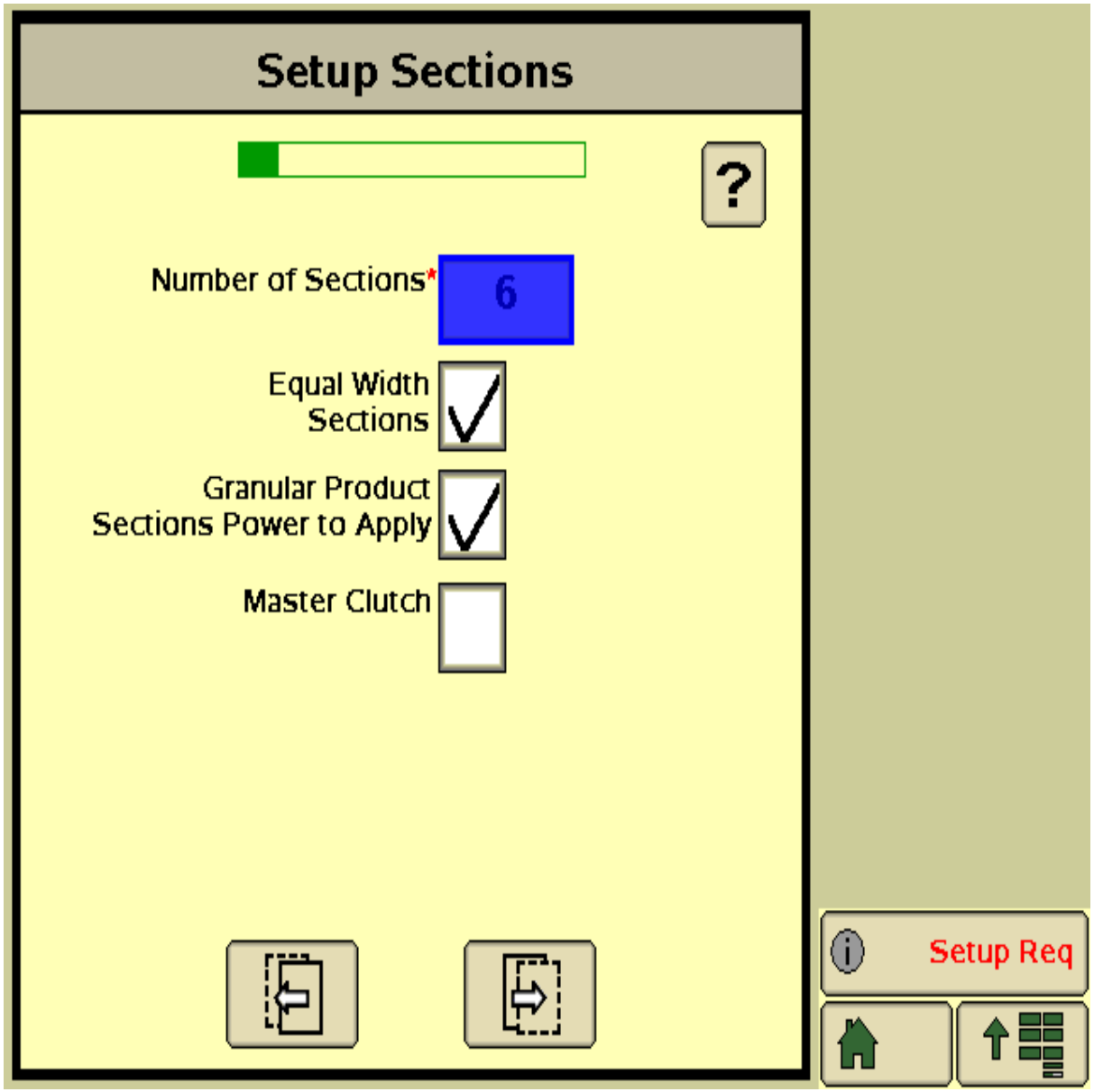
SELECT THE TYPE OF SECTION CONTROL YOUR USING


Product 1 Granular
Application Mode
Granular Multi Section (RPM compensated)

Granular Full Width Section
Granular Multi Section (RPM compensated)
Granular Multi Section (RPM maintained)
Granular Split Belt / Dual Encoder

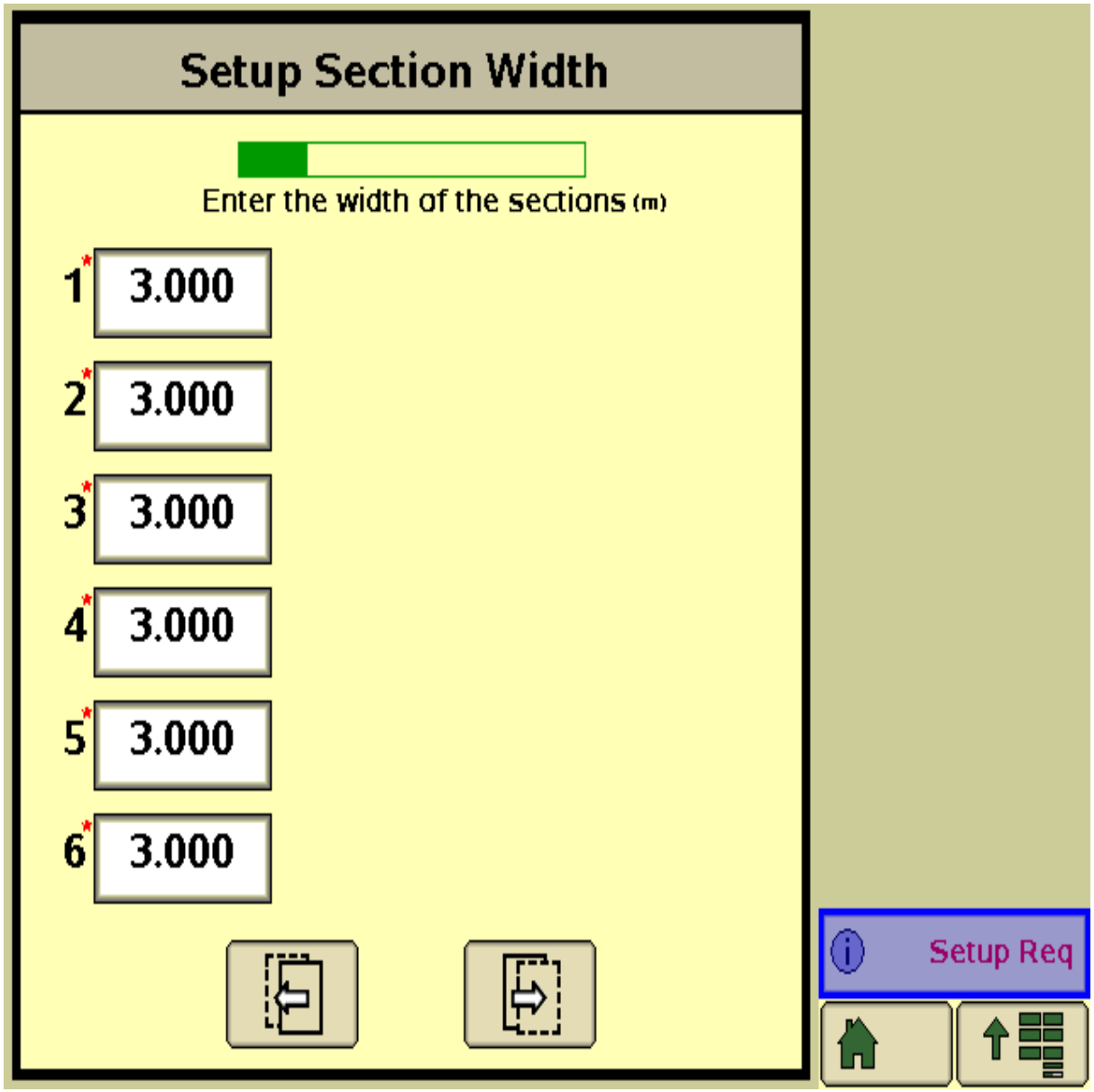


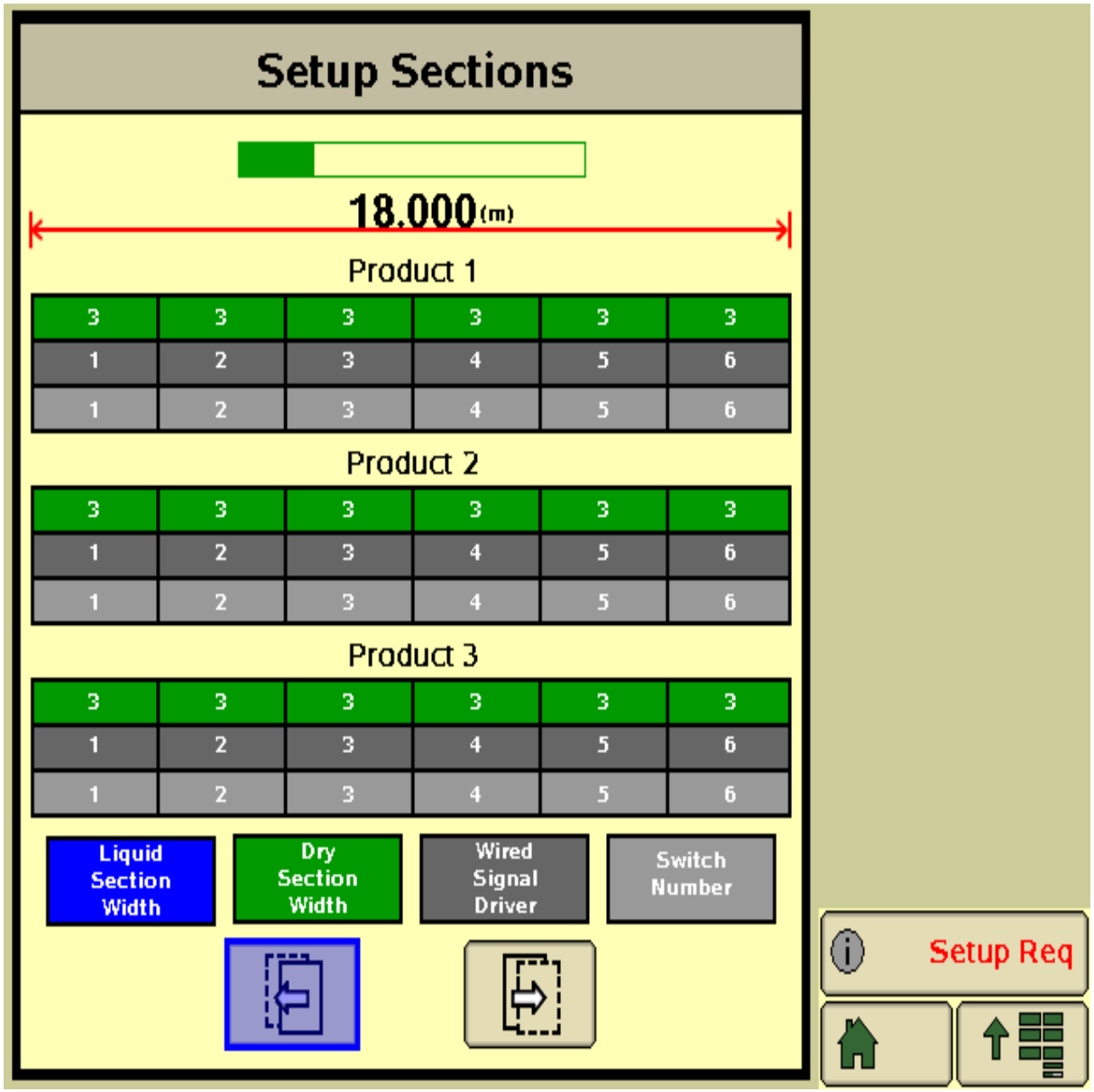
SELECT YES IF YOU ARE SHARING THE SECTION WIRES BETWEEN THE DRY AND LIQUID. (TO DO THIS THE DRY BINS WILL NEED POWER ON WHEN SECTION DRIVERS ARE ON)

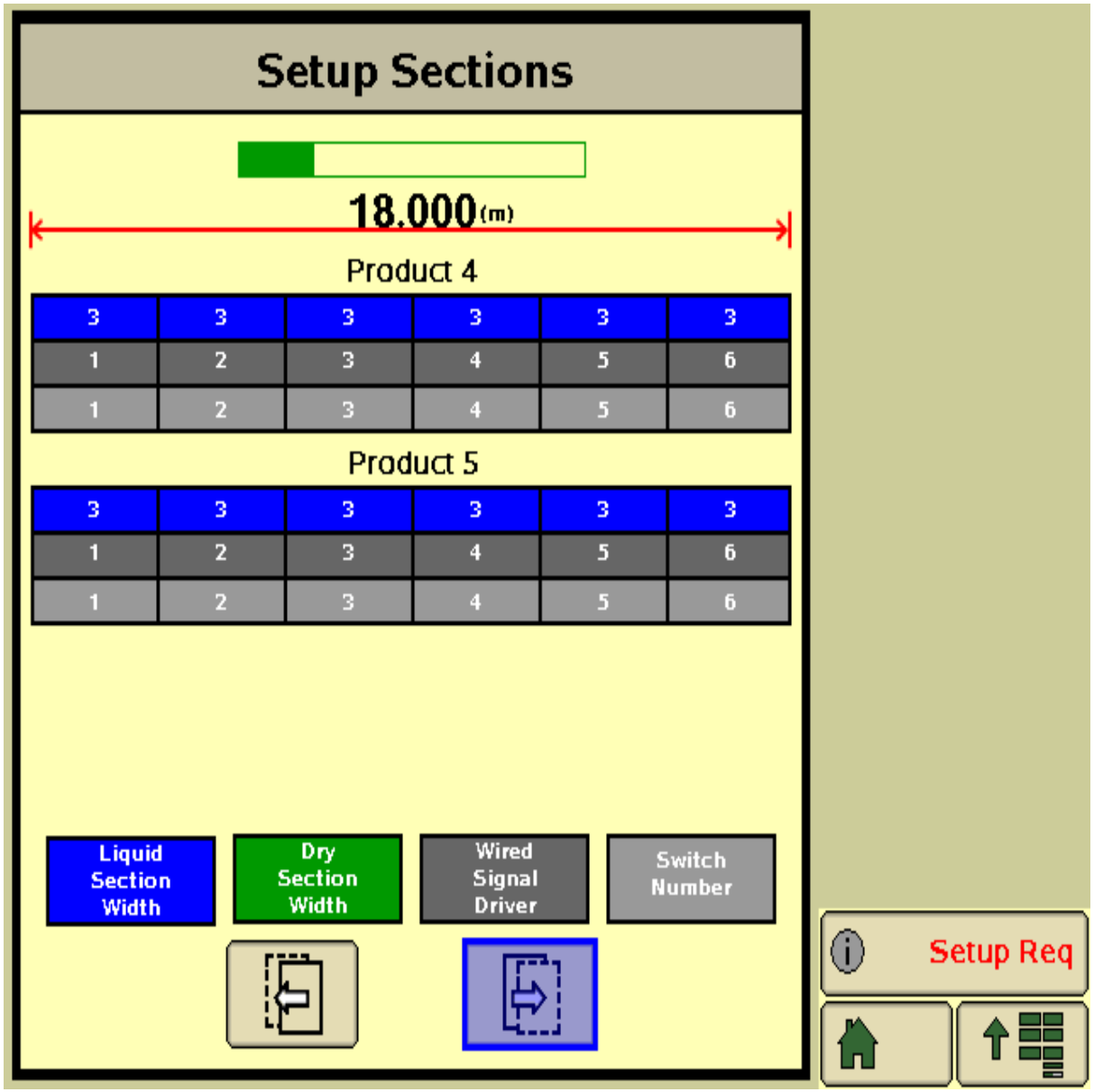


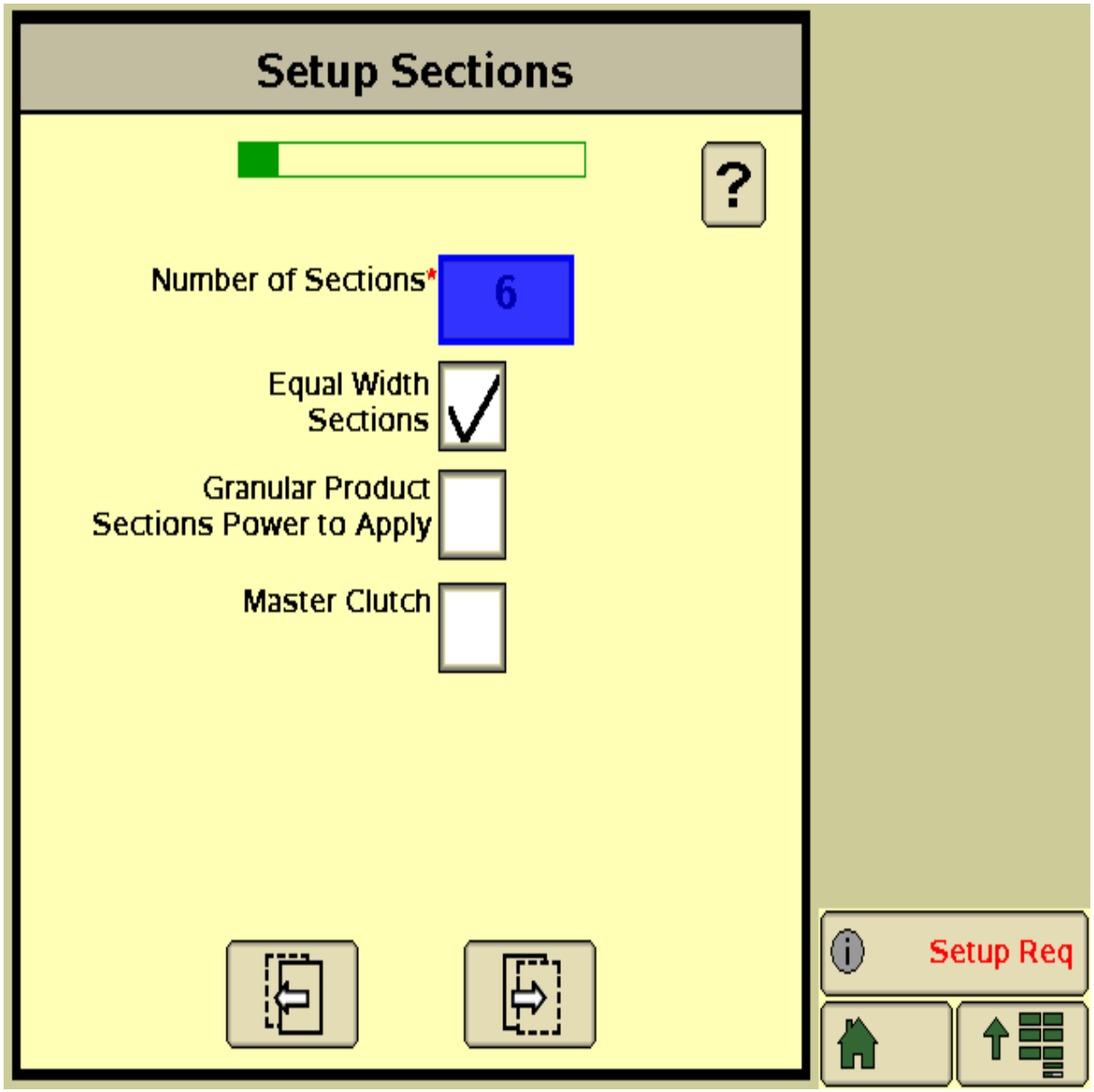
TO SHARE DRIVERS YOU WILL NEED TO TICK GRANULAR PRODUCT SECTIONS POWER TO APPLY

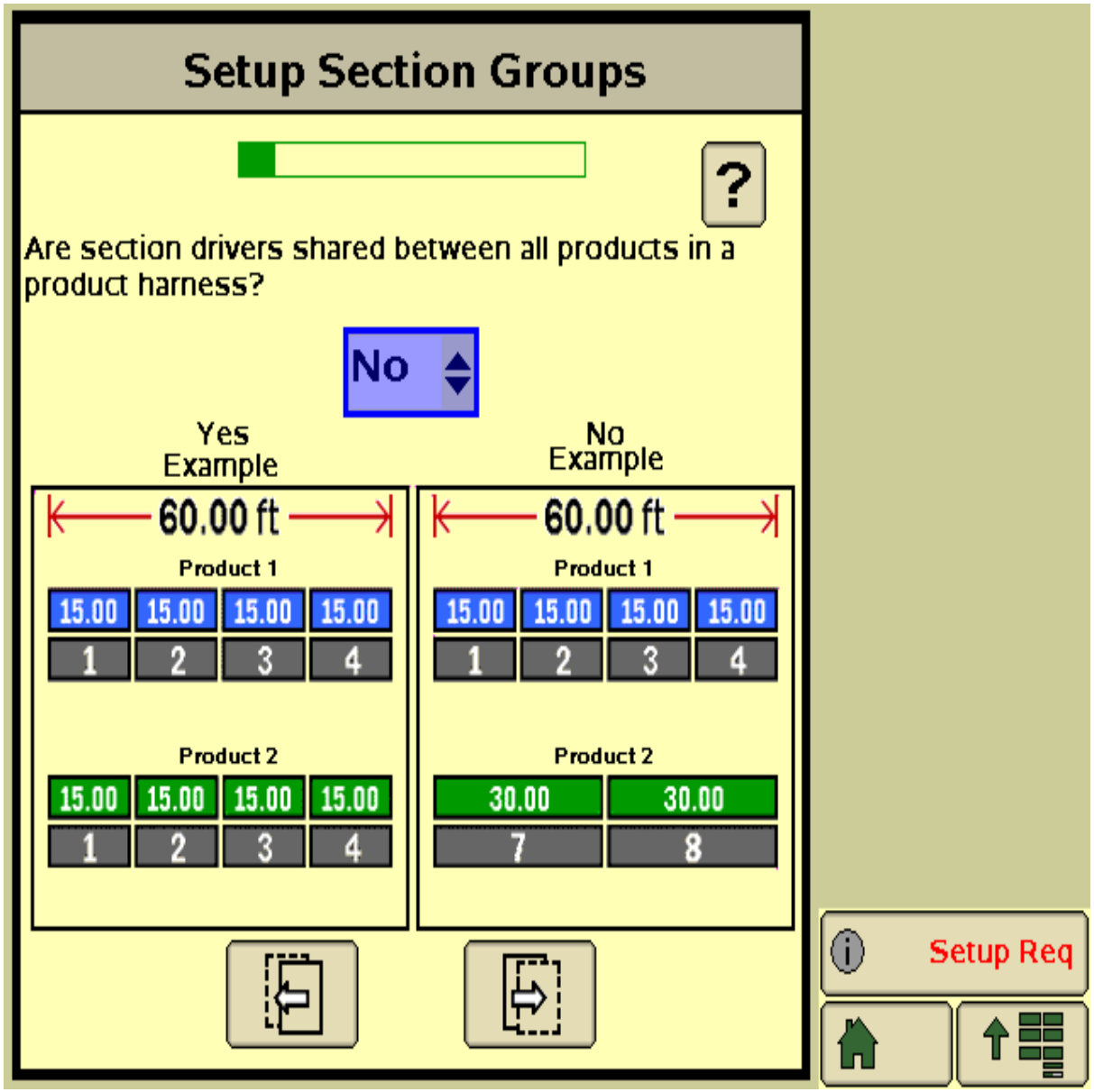
ONLY SELECT CLUTCH IF THE MACHINE IS RUNNING ONE


Setup Section Width
Enter the width of the sections (m)
1
3.000
2
3.000
3
3.000
4
3.000
5
3.000
6
3.000
Setup Req

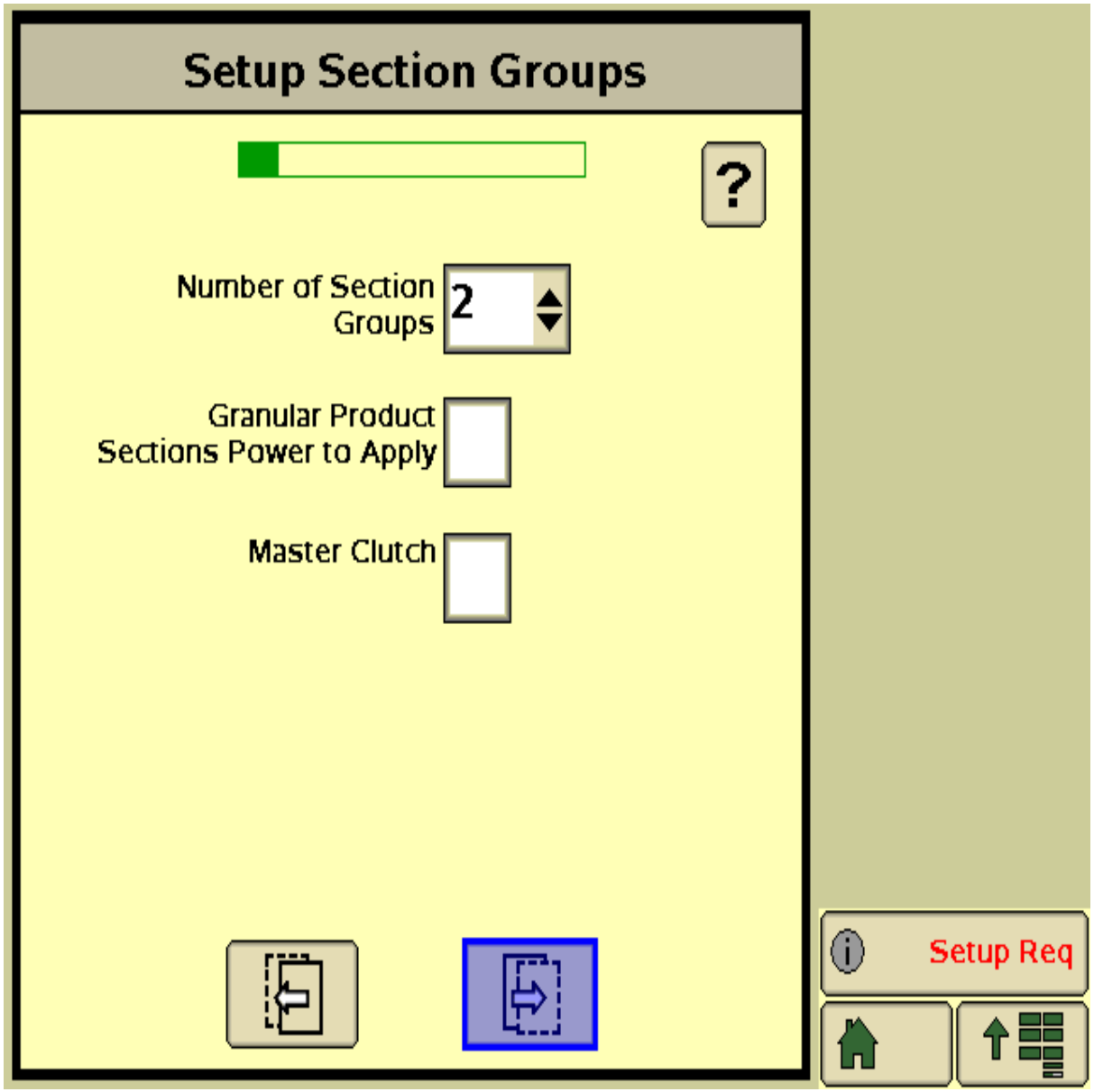

Setup Sections
18.000(m)
Product 1
3 3 3 3 3 3
1 2 3 4 5 6
1 2 3 4 5 6
Product 2
3 3 3 3 3 3
1 2 3 4 5 6
1 2 3 4 5 6
Product 3
3 3 3 3 3 3
1 2 3 4 5 6
1 2 3 4 5 6
Liquid Section Width
Dry Section Width
Wired Signal Driver
Switch Number
Setup Req


Setup Sections
18.000(m)
Product 4
3 3 3 3 3 3
1 2 3 4 5 6
1 2 3 4 5 6
Product 5
3 3 3 3 3 3
1 2 3 4 5 6
1 2 3 4 5 6
Liquid Section Width
Dry Section Width
Wired Signal Driver
Switch Number
Setup Req

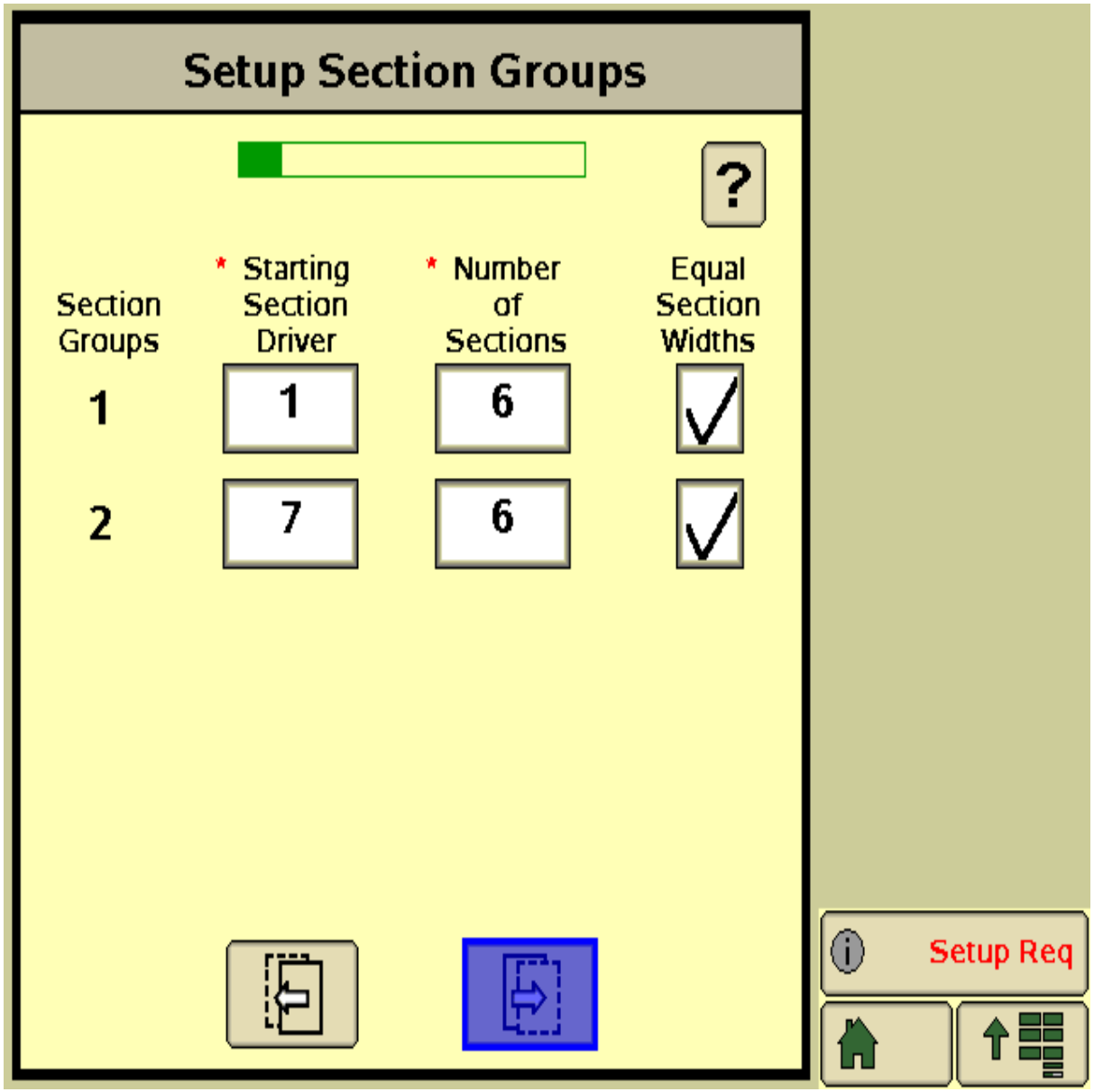

Setup Sections
?
Number of Sections*
6
Equal Width Sections
Granular Product Sections Power to Apply
Master Clutch
Setup Req



SELECT NO IF YOU ARE NOT SHARING THE SECTION WIRES BETWEEN THE DRY AND LIQUID. (TO DO THIS THE DRY BINS WILL NEED POWER OFF WHEN SECTION DRIVERS ARE ON)



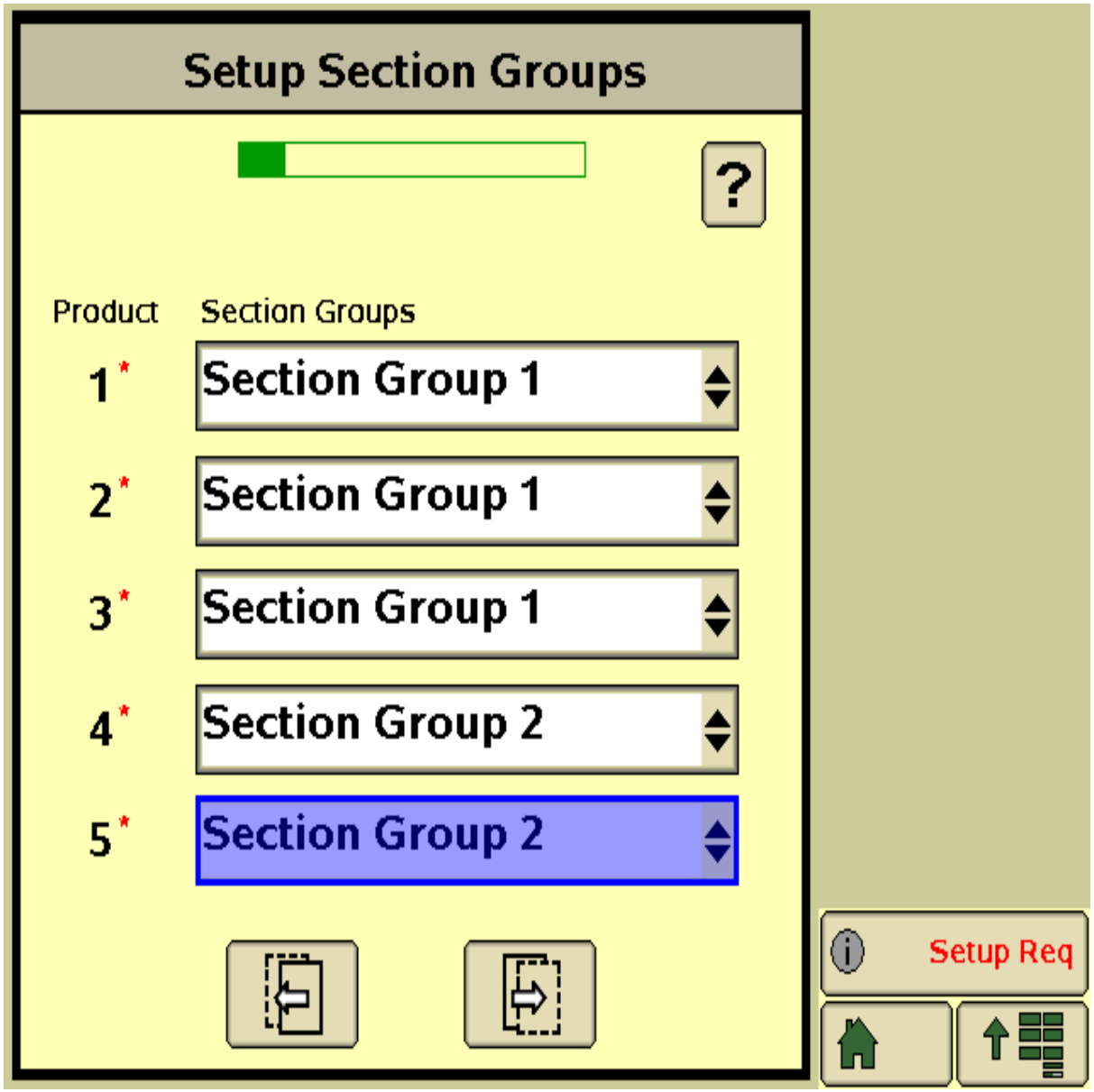
IF YOU ARE WANTING TO SEPARATE THE SECTION DRIVERS BETWEEN BINS SELECT THE NUMBER OF SECTIONS GROUPS



YOU NEED TO ALLOCATE THE TWO GROUPS WITH THE NUMBER OF SECTIONS. THE STARTING SECTION DRIVER IS WHERE THE SECTIONS START.

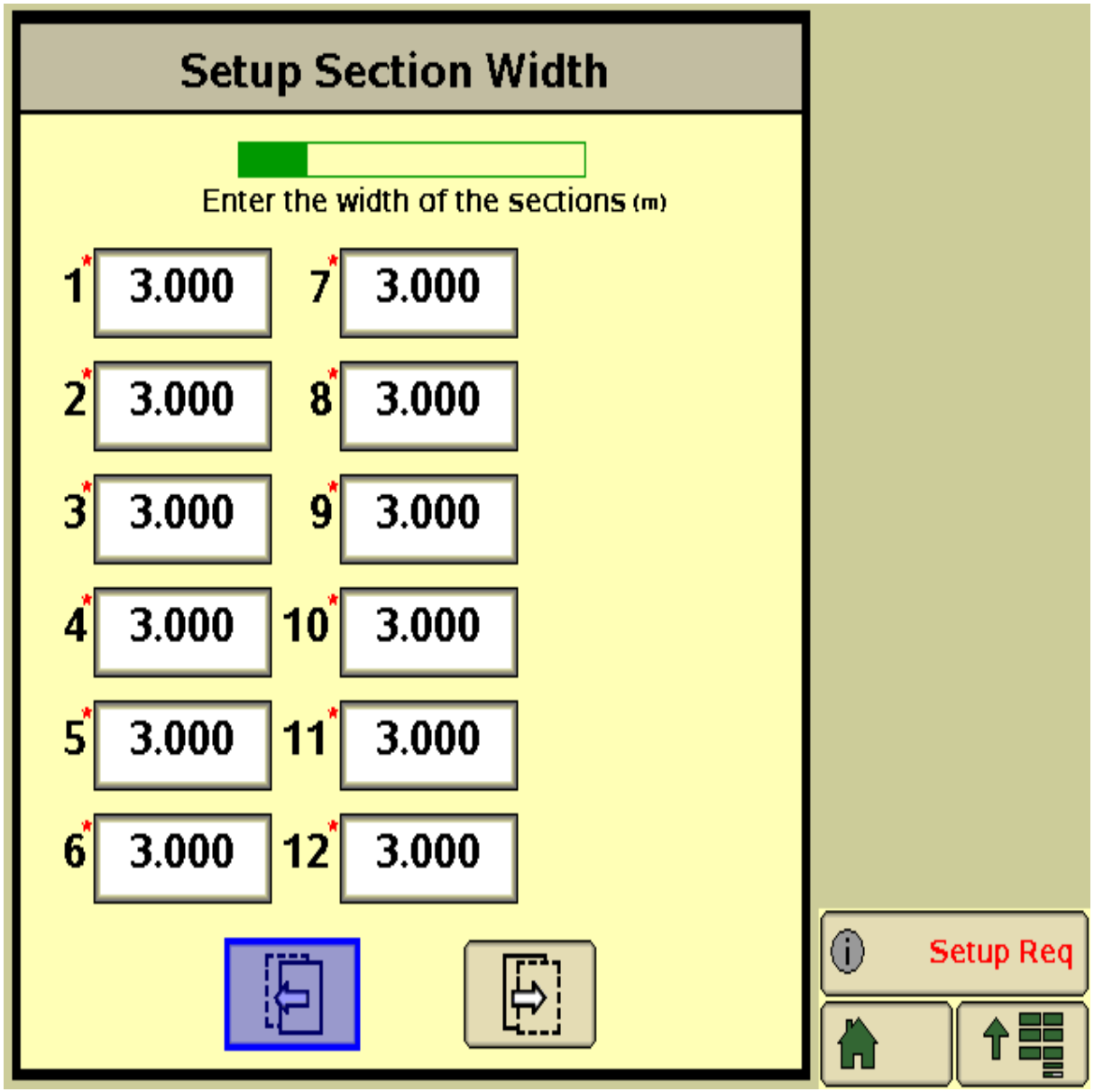
IN THIS EXAMPLE GROUP 1 SSD IS 1 PLUS 6 SECTIONS IS 1-6, GROUP 2 SSD IS 7 PLUS 6 SECTIONS IS SECTIONS 7-12.

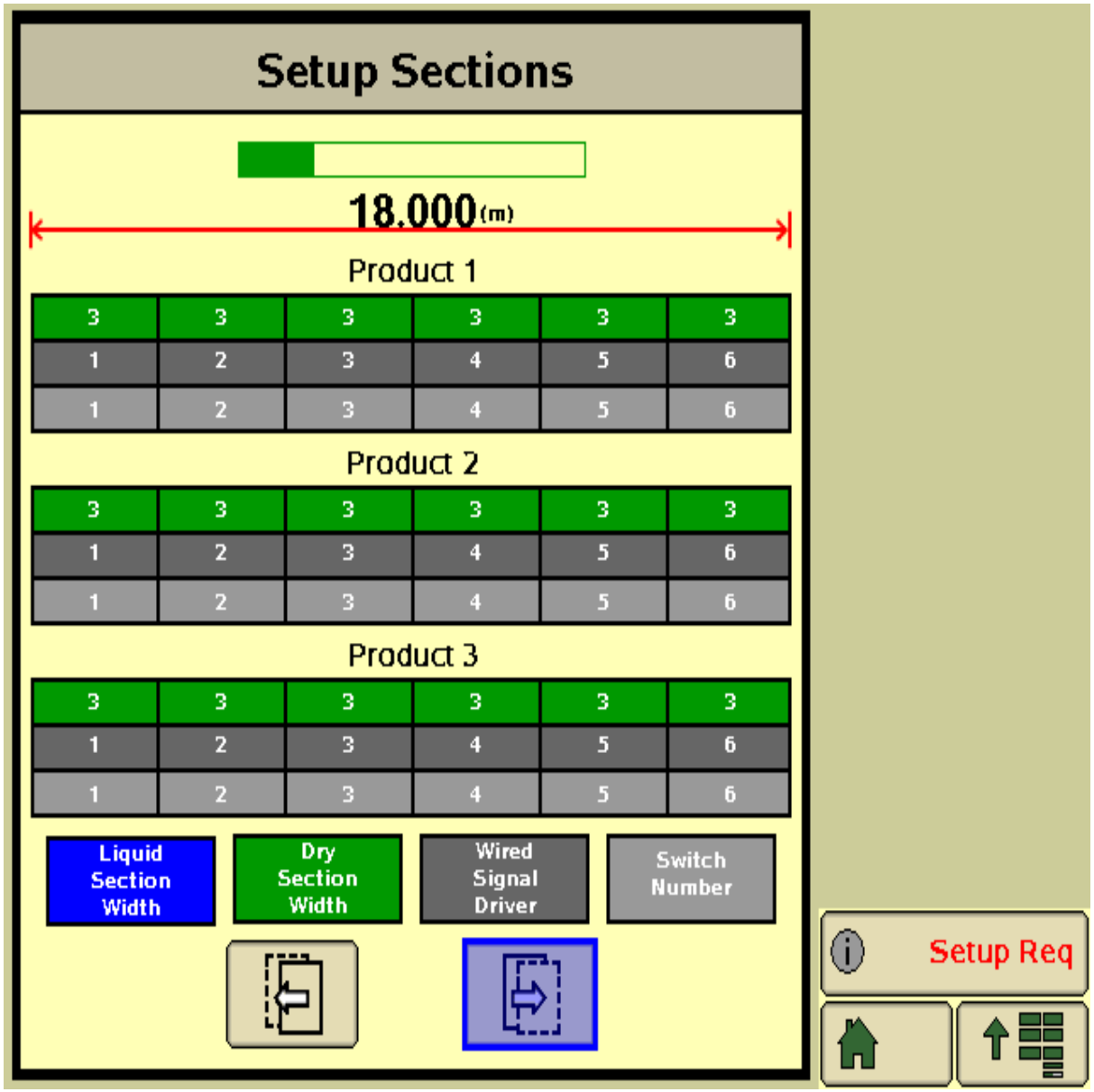
THIS IS DETERMINED BY THE WIRING HARNESS PROVIDED. PLEASE CONSULT THE MANUFACTURER IF COMBINATION IS UNKNOWN

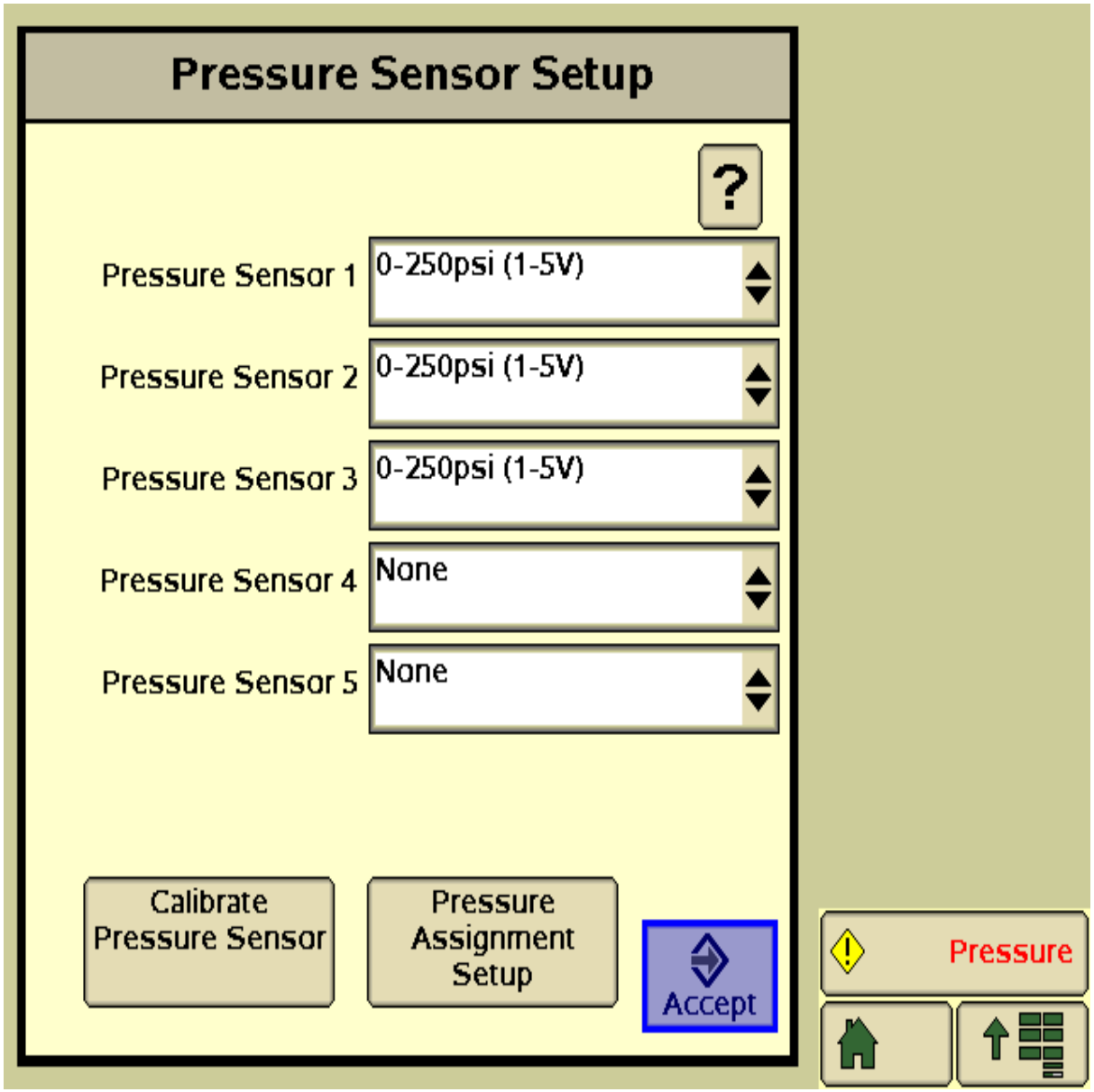


YOU NEED TO ALLOCATE THE TWO GROUPS. IF DOING A WET/DRY SPLIT ALLOCATE THE DRY GROUPS TO ONE SECTION AND THE LIQUID GROUPS TO THE OTHER SECTION

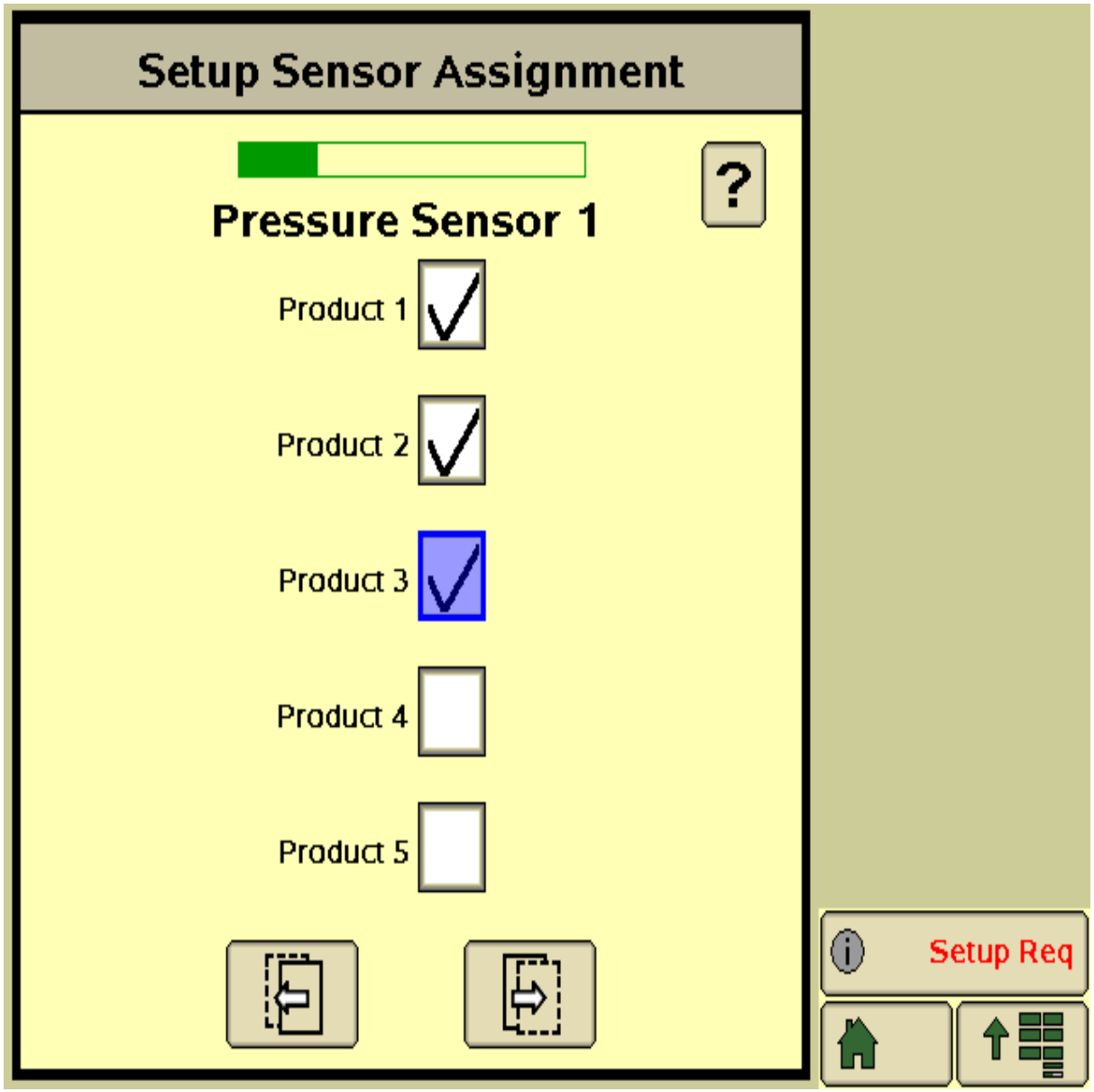
THIS IS DETERMINED BY THE WIRING HARNESS PROVIDED. PLEASE CONSULT THE MANUFACTURER IF COMBINATION IS UNKNOWN

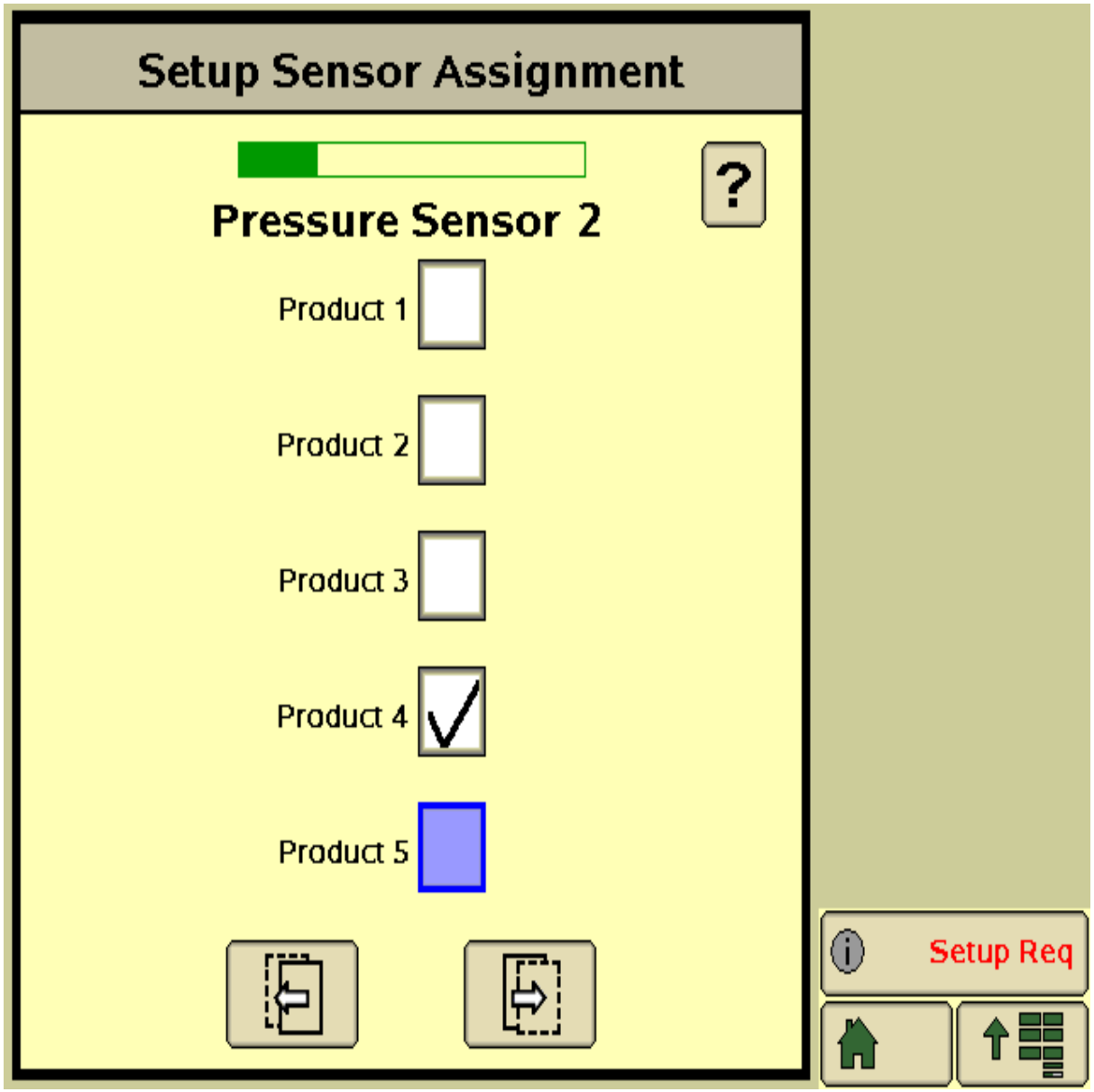

Setup Section Width
Enter the width of the sections (m)
1* 3.000
2* 3.000
3* 3.000
4* 3.000
5* 3.000
6* 3.000
7* 3.000
8* 3.000
9* 3.000
10* 3.000
11* 3.000
12* 3.000
Setup Req

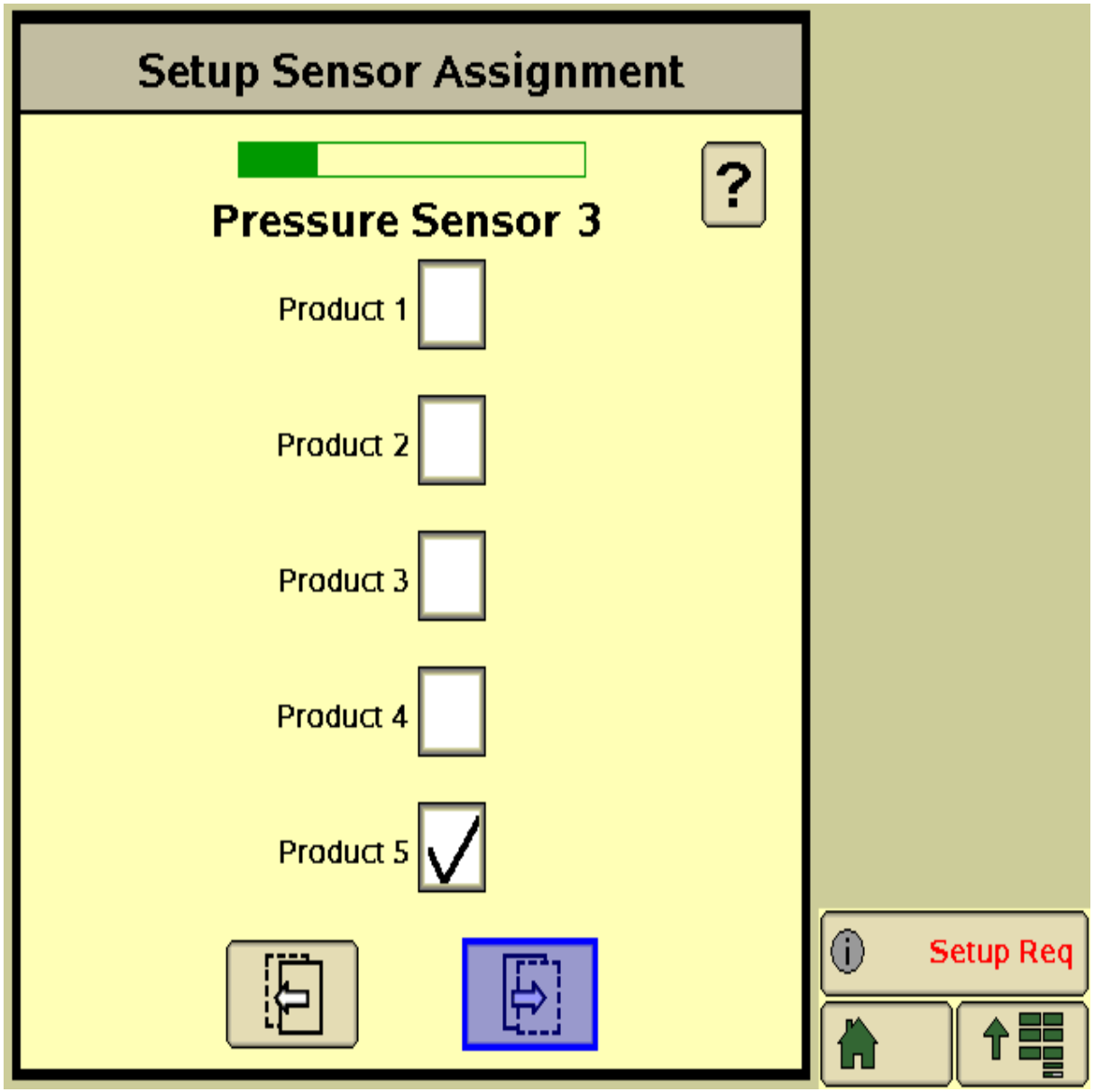

Setup Sections
18.000(m)
Product 1
3 3 3 3 3 3
1 2 3 4 5 6
1 2 3 4 5 6
Product 2
3 3 3 3 3 3
1 2 3 4 5 6
1 2 3 4 5 6
Product 3
3 3 3 3 3 3
1 2 3 4 5 6
1 2 3 4 5 6
Liquid Section Width
Dry Section Width
Wired Signal Driver
Switch Number
Setup Req

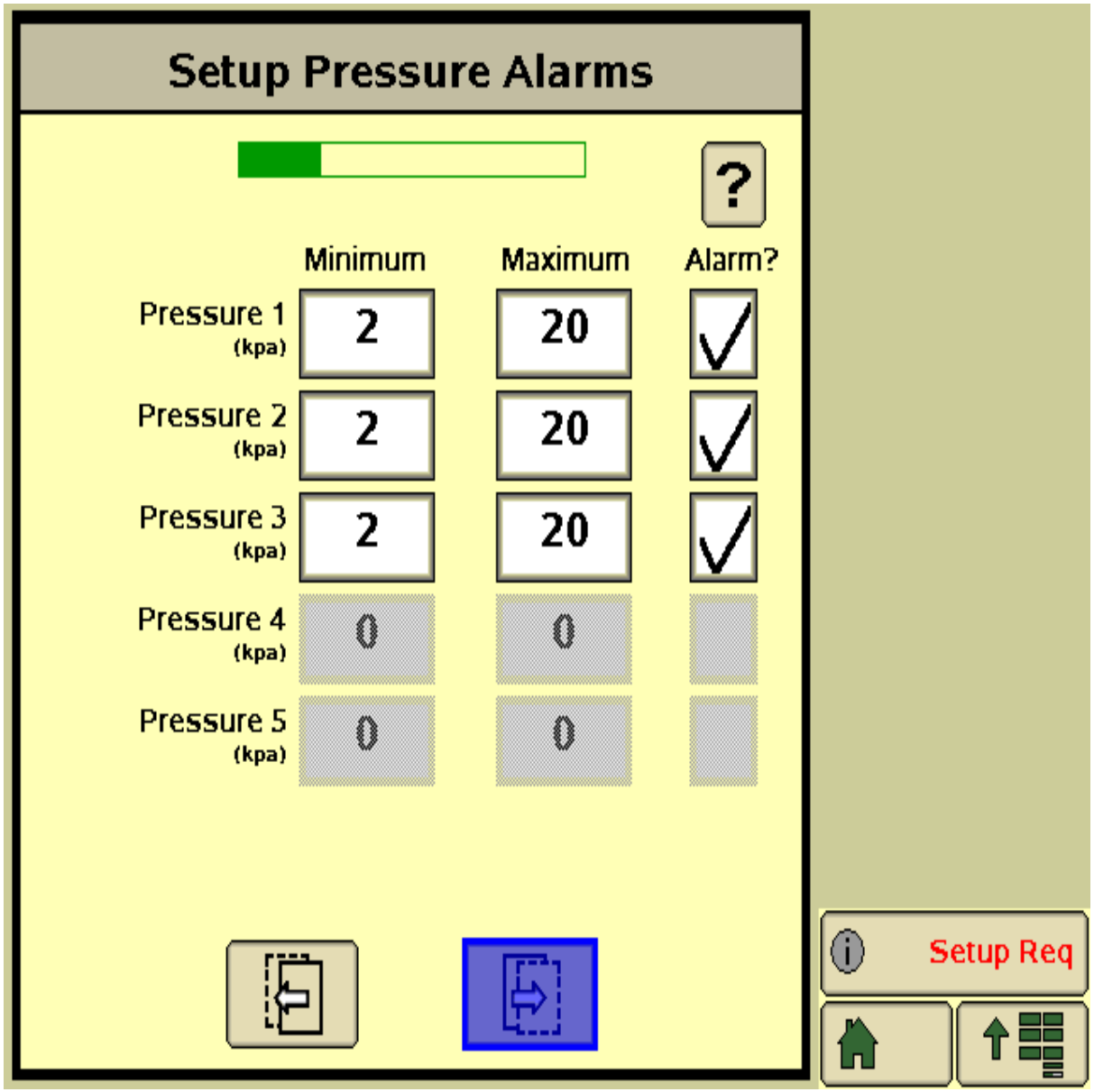


THERE ARE 3 PRESSURE SENSORS PROVIDED THE HARNESS. PRESSURE SENSOR IS FOR BIN AIR PRESSURE. PRESSURE 2 AND 3 ARE LOCATED ON THE 4TH & 5TH BINS RESPECTIVLY AND ARE FOR LIQUID PRESSURE. IF YOU ARENT USING THE PRESSURE SENSOR THEN MAKE SURE IT IS SELCTED TO NONE.

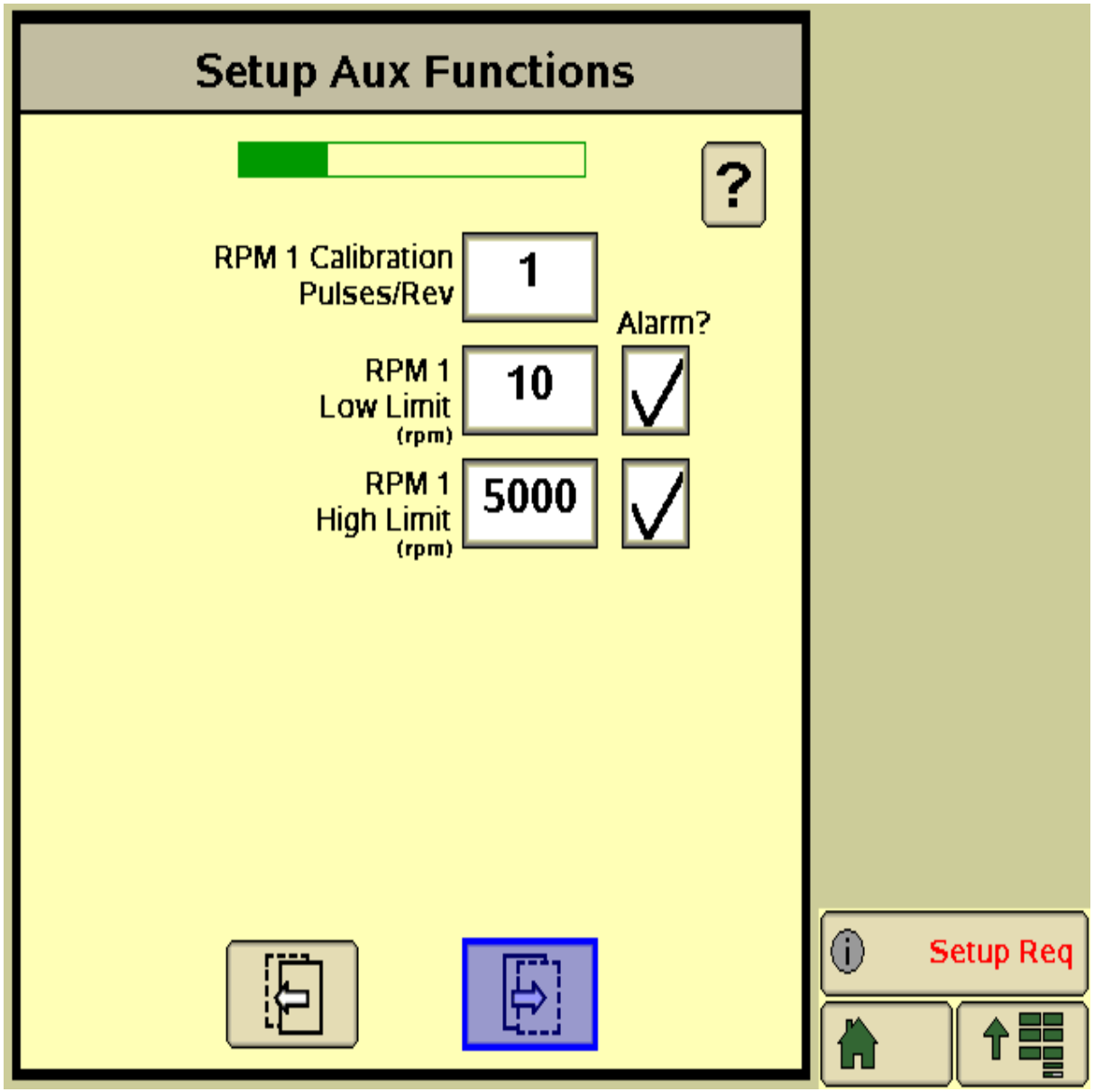

Setup Sensor Assignment
?
Pressure Sensor 1
Product 1
Product 2
Product 3
Product 4
Product 5
Setup Req


Setup Sensor Assignment
?
Pressure Sensor 2
Product 1
Product 2
Product 3
Product 4
Product 5
Setup Req

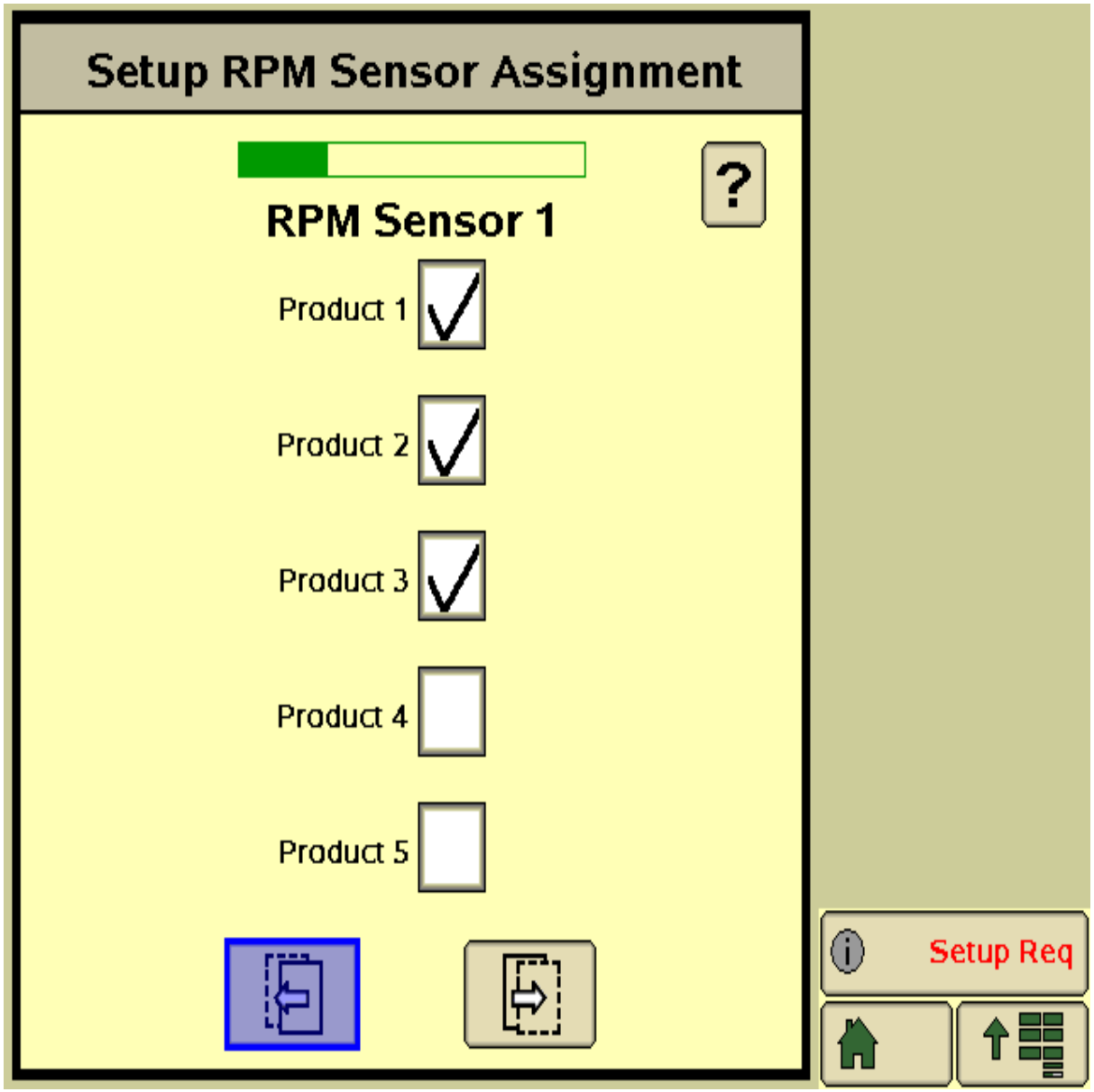

Setup Sensor Assignment
?
Pressure Sensor 3
Product 1
Product 2
Product 3
Product 4
Product 5
Setup Req



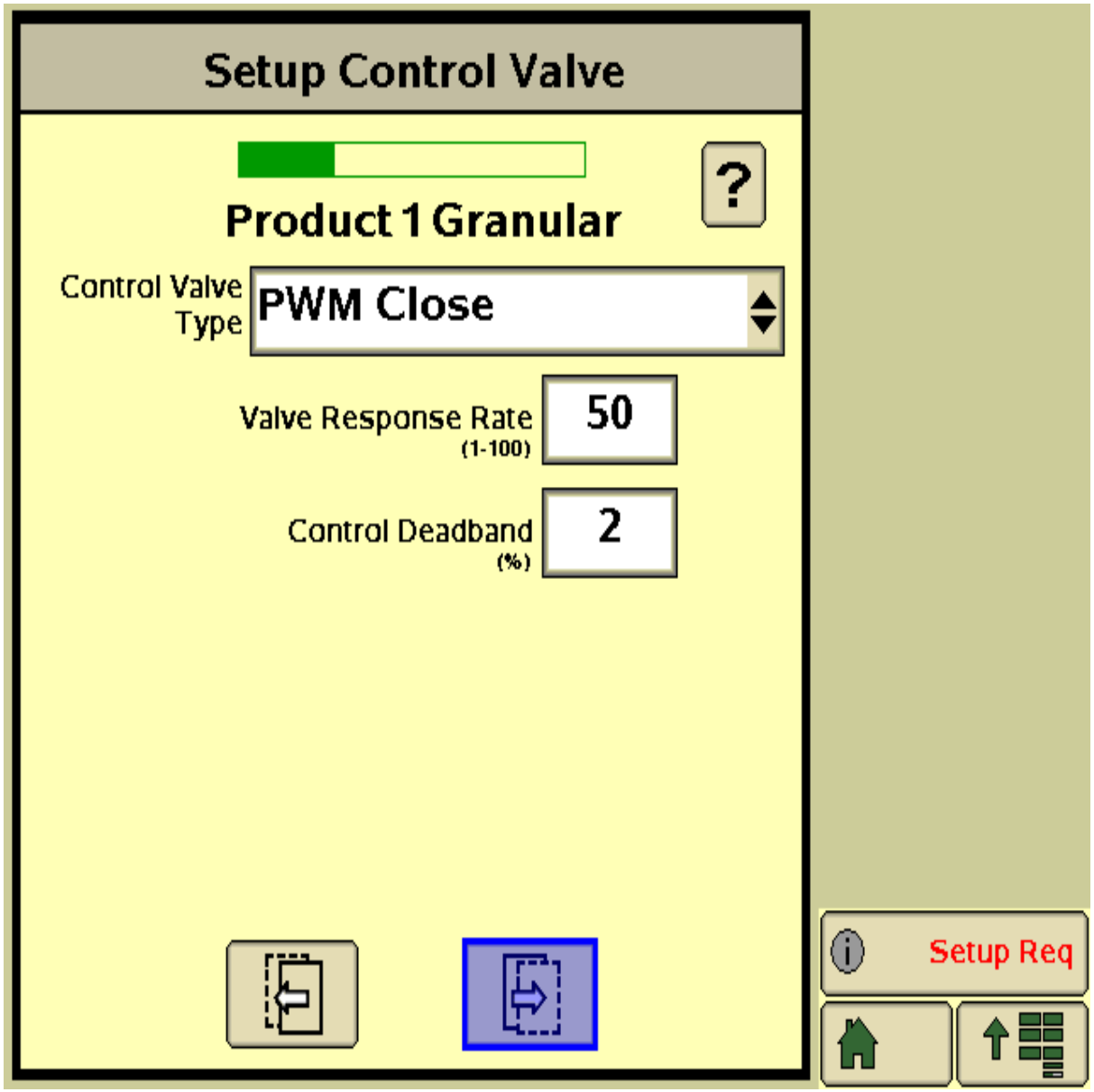
PRESSURE ALARMS SHOULD BE SET ONCE THE PRESSURE SENSOR IS CALIBRATED. THE ALARM MIN AND MAX PRESSURES FOR THE SENSORS ASSIGNED TO LIQUID TANKS WILL HOLD PRESSURE IN LOW SPEED SITUATIONS WHICH MAY ALTER THE TARGET RATE. IF YOU DON'T WANT THIS TURN THE ALARMS OFF OR SET MINIMUM TO 0



SELECT HOW MANY PULSES THE FAN SEE PER REVOLUTION

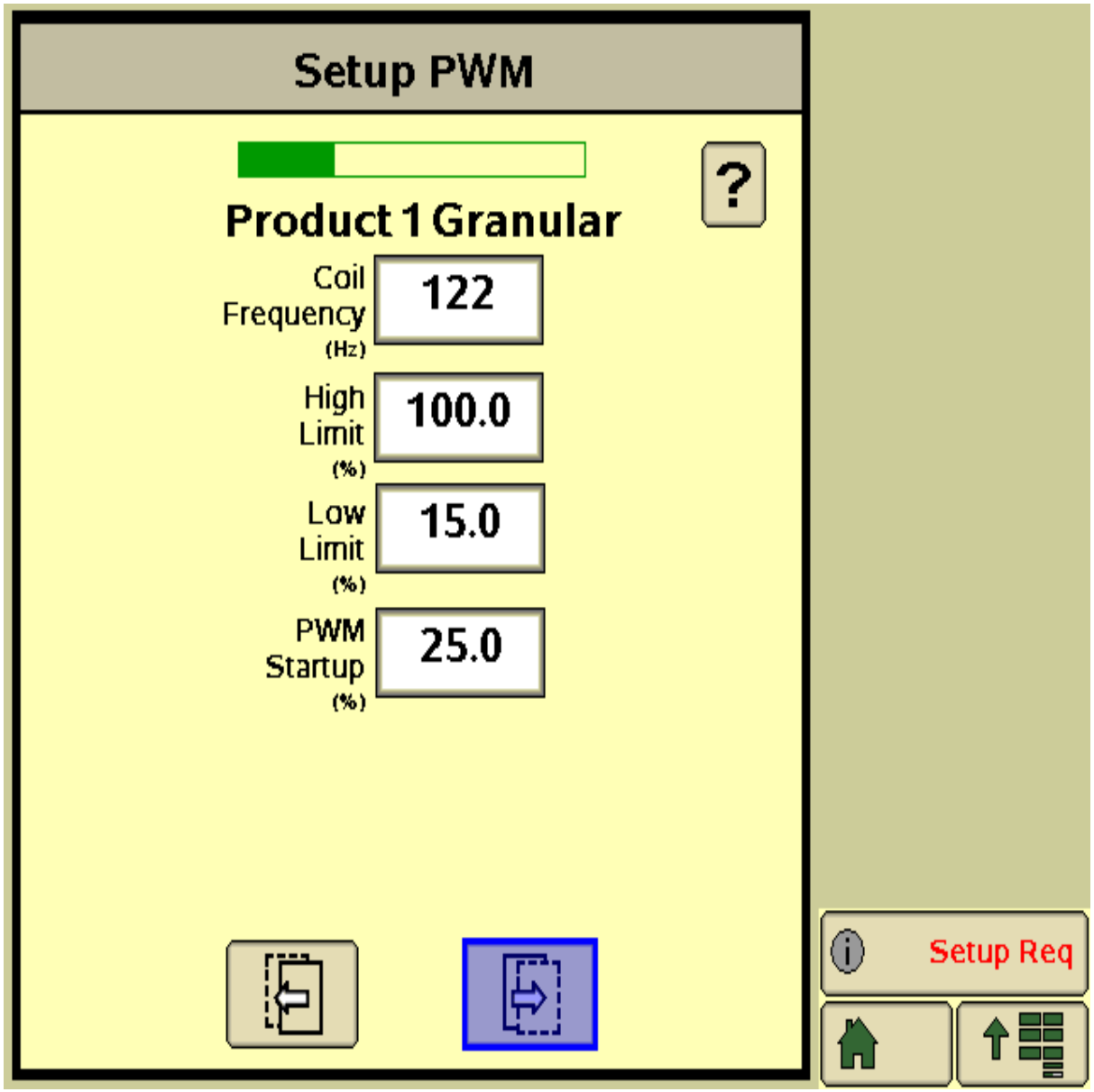


FANS CAN BE ASSIGNED TO BINS. EVERY BIN DOES NOT NEED A FAN ASSIGNED TO IT

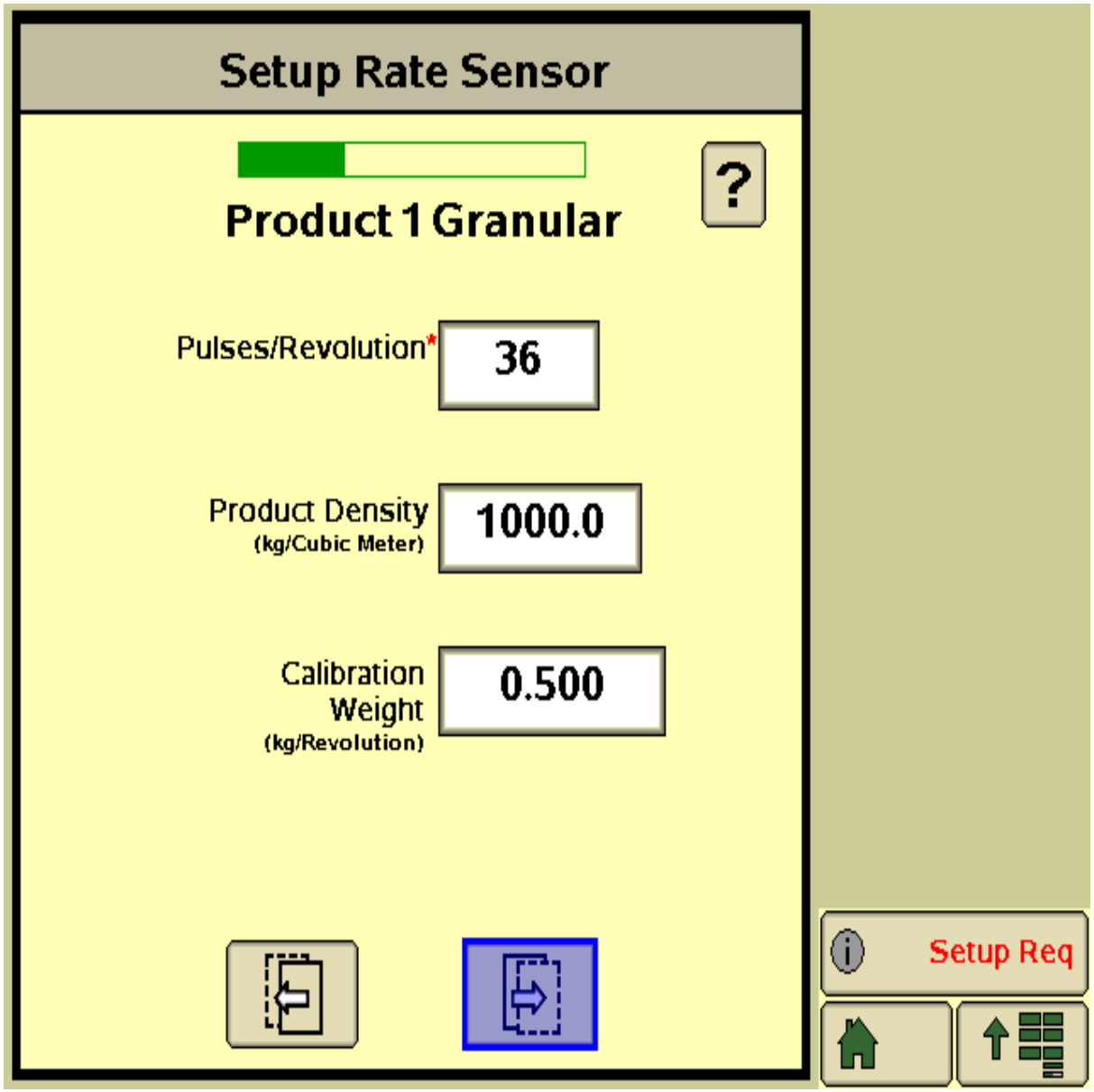


THERE ARE 2 CHOICES FOR CONTROL VALVE TYPES. HYDRAULIC MACHINES TYPICALLY RUN A PWM CLOSE SYSTEM, WHILST A GROUND DRIVE LINEAR ACTUATOR MACHINE WILL USE THE FAST CLOSE OPTION.

THE RESPONSE RATE AND DEADBAND CAN BE FINE TUNED ONCE THE MACHINE IS OPERATIONAL. THE SETTINGS PROVIDED HERE ARE A GOOD BASE



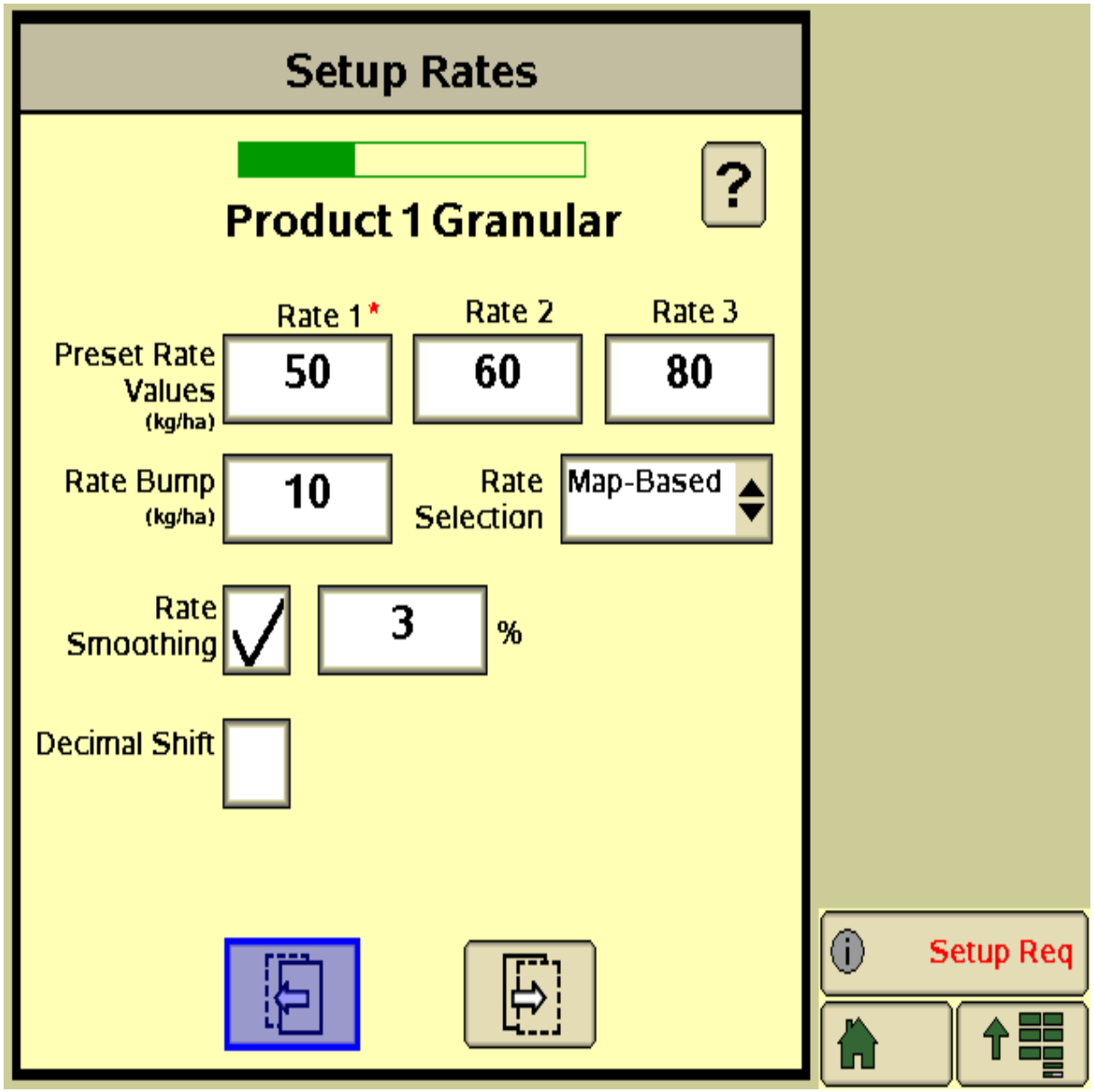
MAKE SURE THE PWM SETTINGS ARE SET TO THIS COIL FREQUENCY. THE HIGH LIMIT CAN BE SET TO 100, UNLESS YOU ARE LOOKING AT LIMITING DRIVE SPEED. START THE LOW AND STARTUP ON THESE NUMBERS. A PWM CALIBRATION FOR EACH BIN IS IMPORTANT ONCE MACHINE IS RUNNING. THIS WILL FINE TUNE THE RESPONSE OF EACH BIN.



COUNT HOW MANY PULSES THE METERING SENSOR WILL SEE PER ROLLER REVOLUTION FOR THE PULSES/REVOLUTION NUMBER

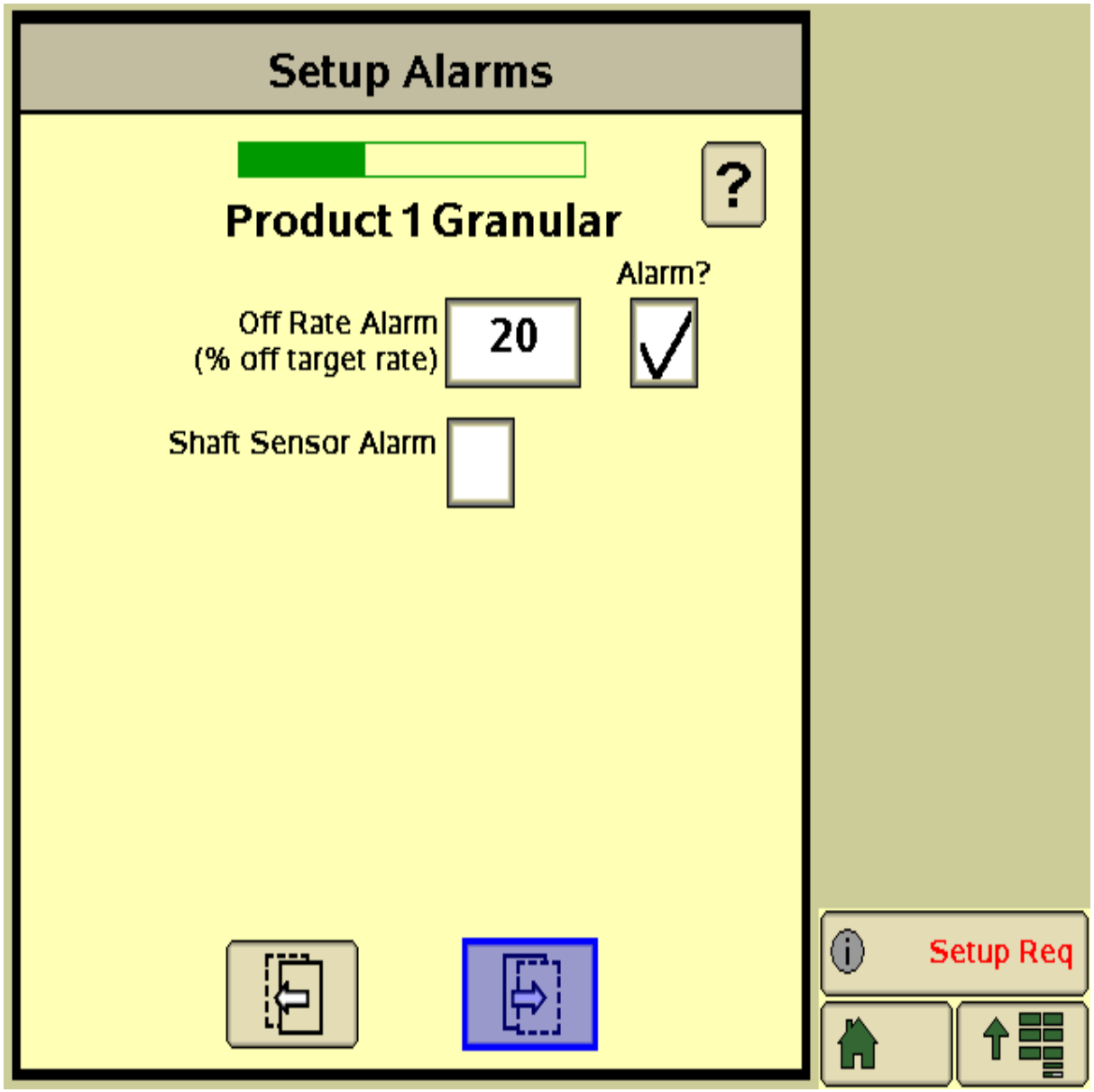
THE DENSITY OF THE PRODUCT CAN BE FOUND IN THE MANUFACTURE SPECS OF THE FERTILISER

ENTER A GENERIC CALIBRATION WEIGHT FOR THE PRODUCT (THIS NUMBER WILL CHANGE PER MACHINE AND PER PRODUCT) THIS WILL BE CALIBRATED PROPERLY AFTER THE WIZARD

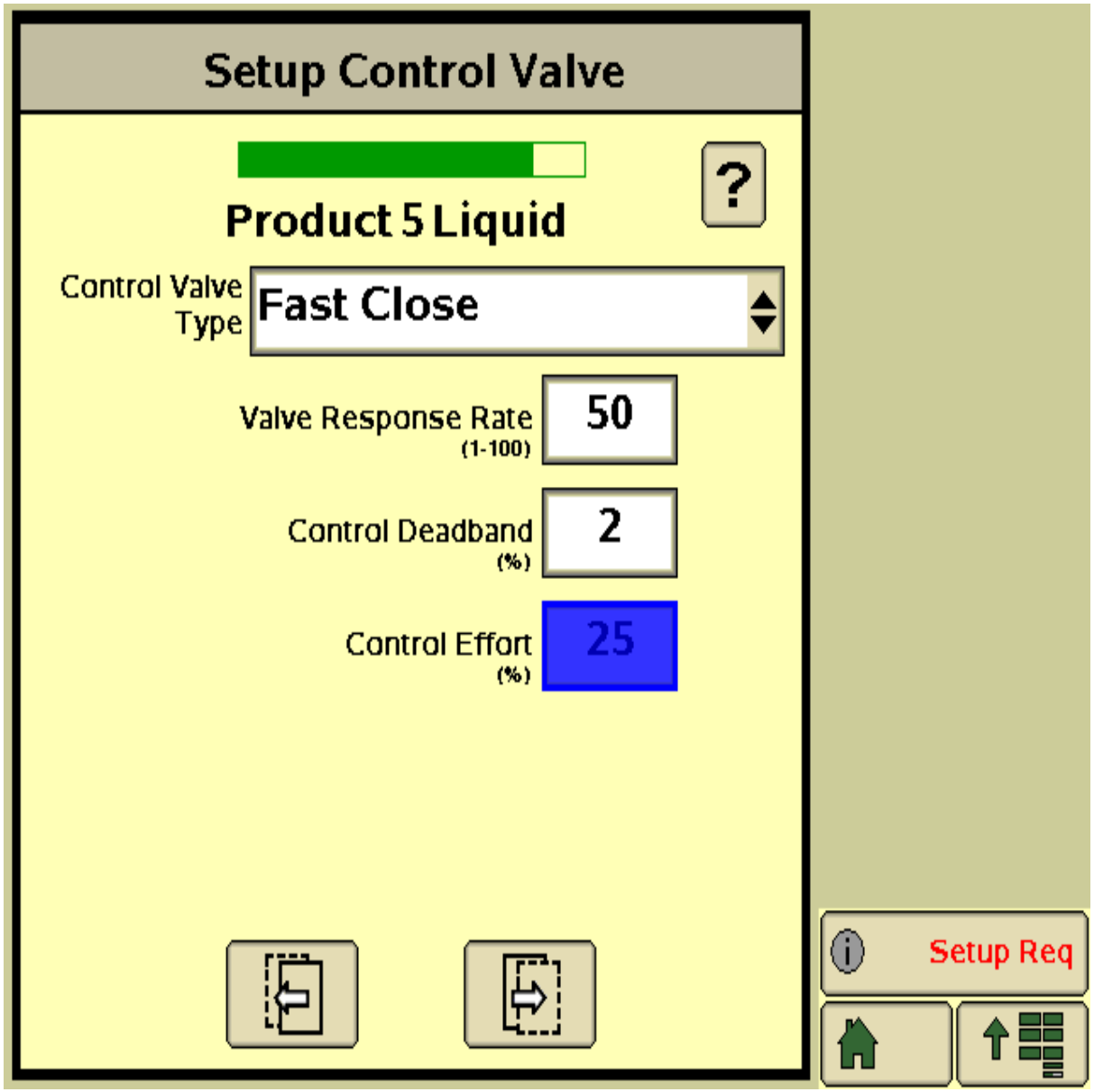


SELECT A PREDEFINE RATE, HOW THE RATE SELECTION WILL BE MADE AND THE AMOUNT OF SMOOTHING YOU WOULD LIKE (3-5% SHOULD BE ENOUGH)

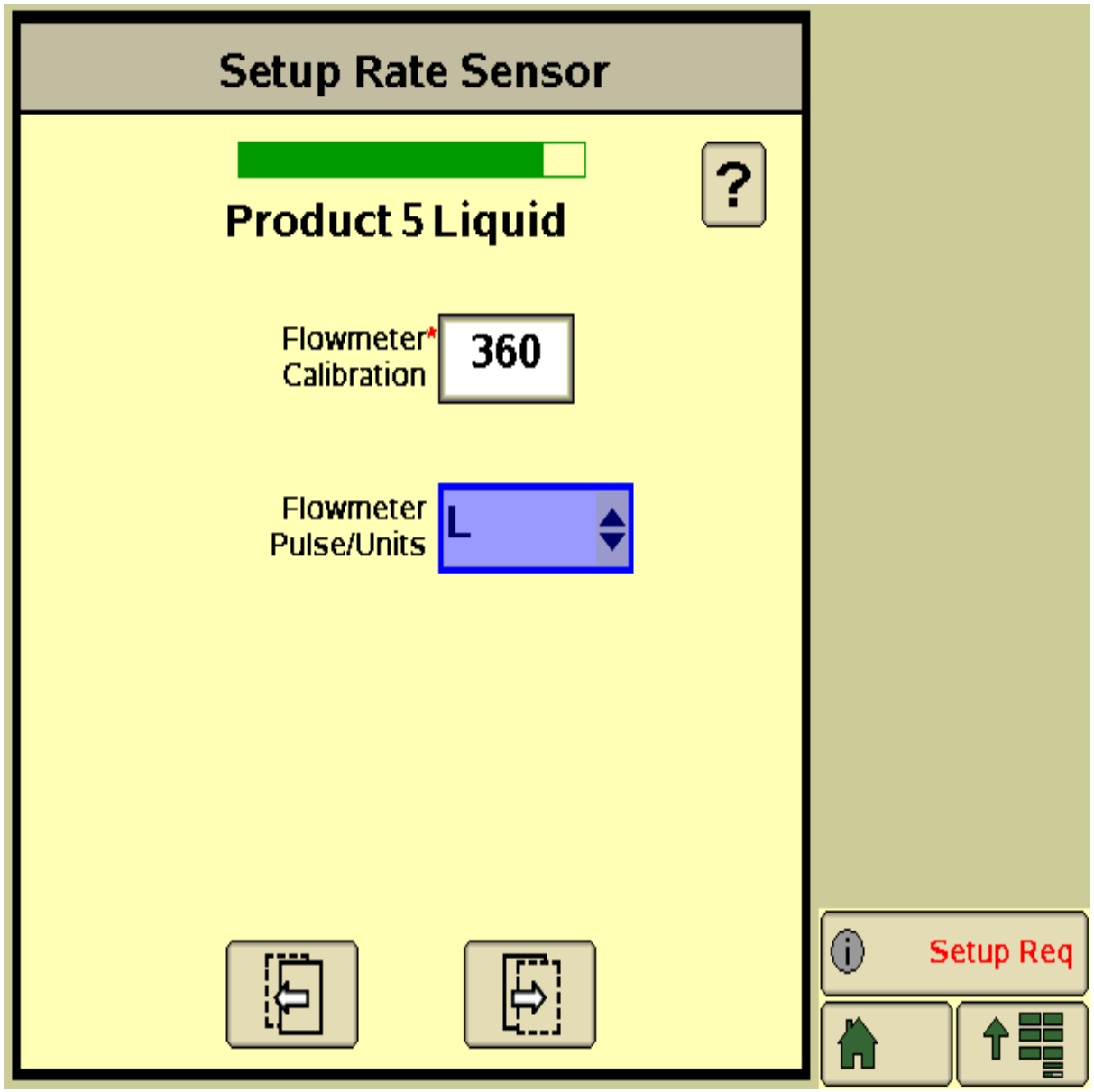
ALL THESE SETTINGS CAN BE CHANGE IN THE CONTROLLER AFTER THE WIZARD



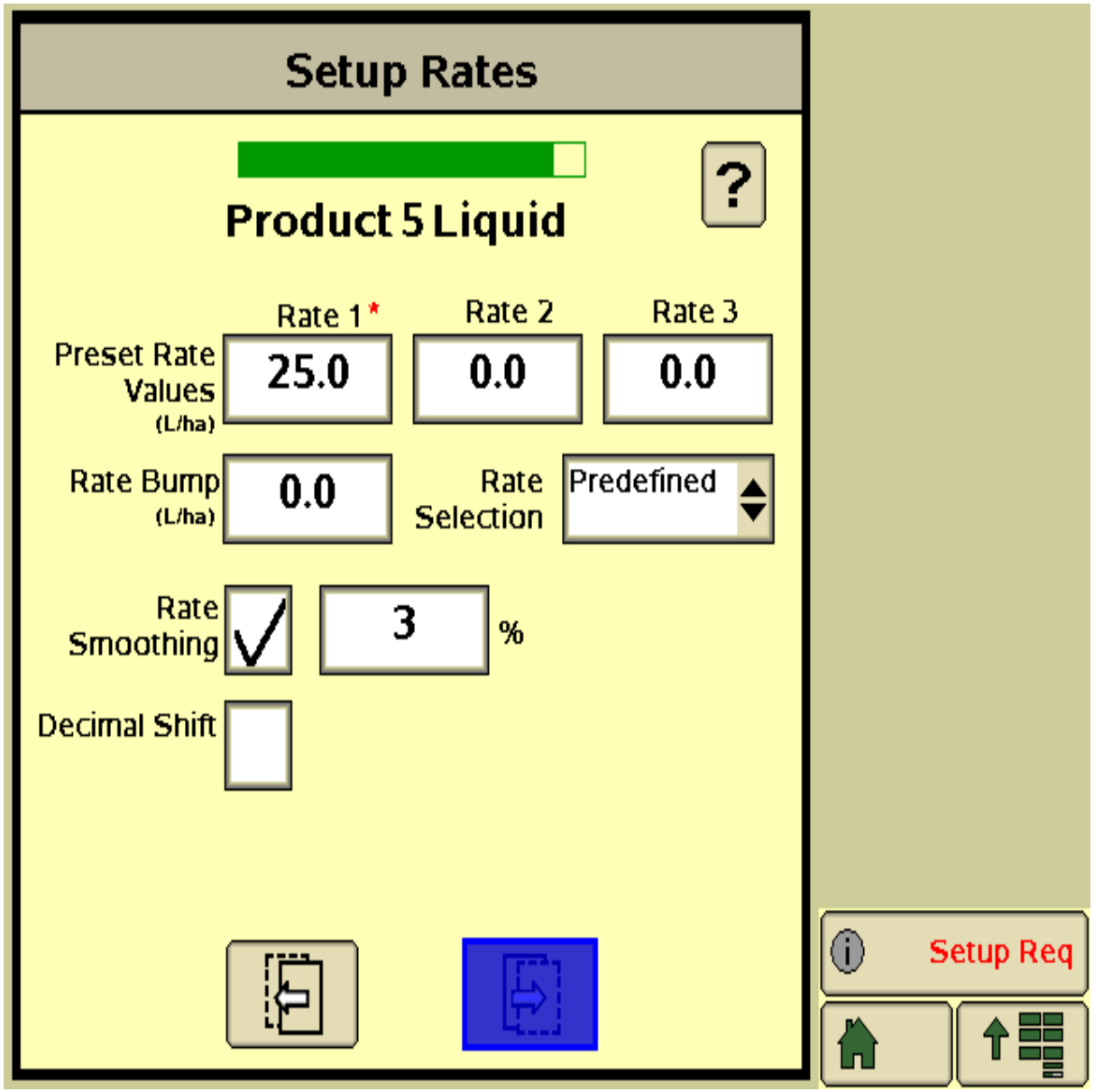
THE OFF-RATE ALARM WILL ALERT IF APPLIED RATE DROPS BELOW TARGET RATE. THIS CONTROLLER CAN MONITOR 2 SHAFT SPEEDS. THE SECONDARY CAN BE USED ON THE METERING WHEEL WHILE THE PRIMARY CAN BE PUT OF A HIGH-SPEED SHAFT FOR SMOOTHER RATES. IF USING THIS OPTION, TICK THE SHAFT SENSOR ALARM



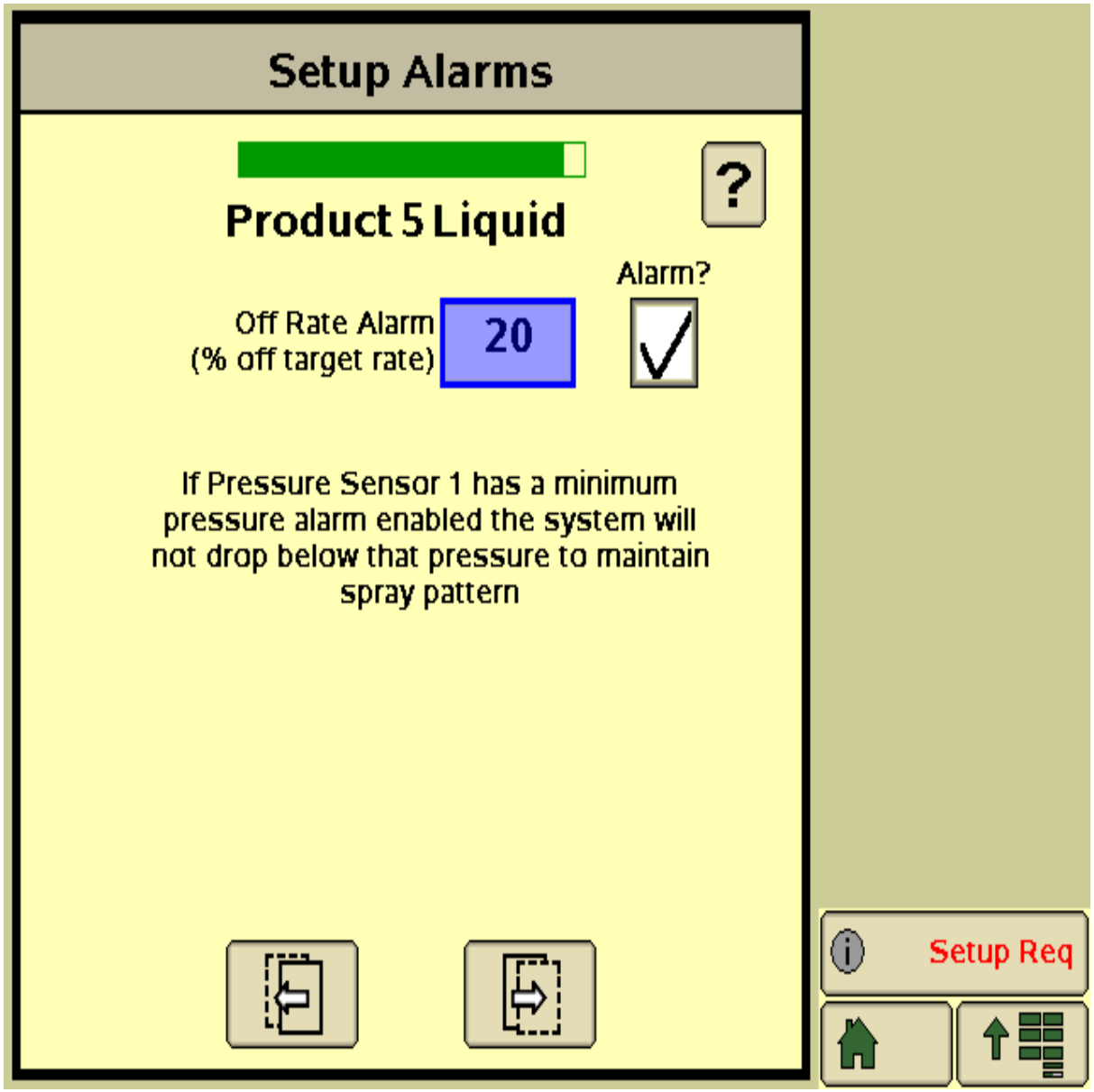
USE THE FAST CLOSE OPTION ON LIQUID REG VALVES AND LINEAR ACTUATORS. USE AROUND 25% FOR LIQUID VALVES AND AROUND 75% FOR LINEAR ACTUATORS. THESE NUMBERS CAN BE FINE TUNED IN THE CONTROLLER BASED ON IN FIELD OPERATIONS

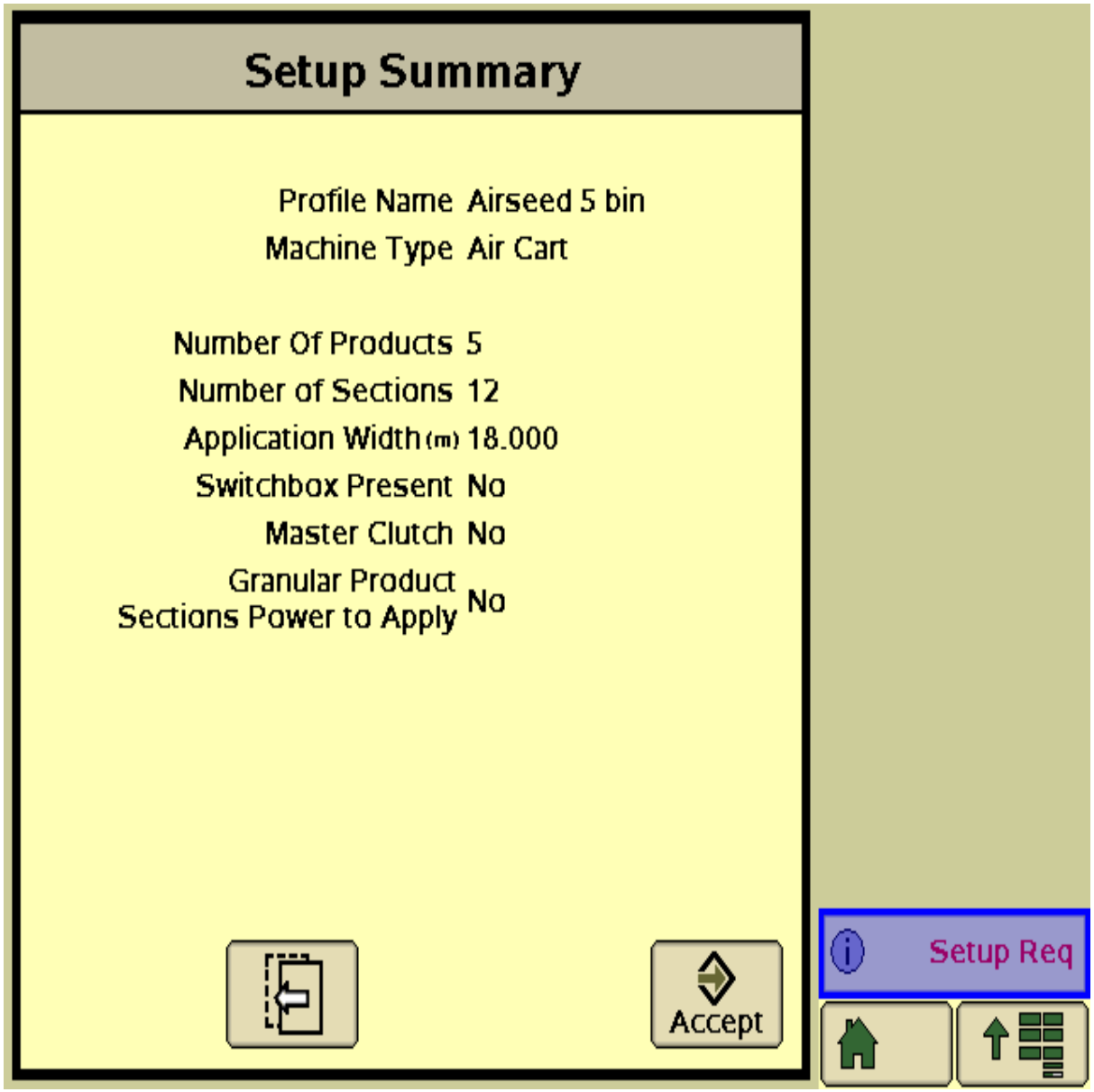


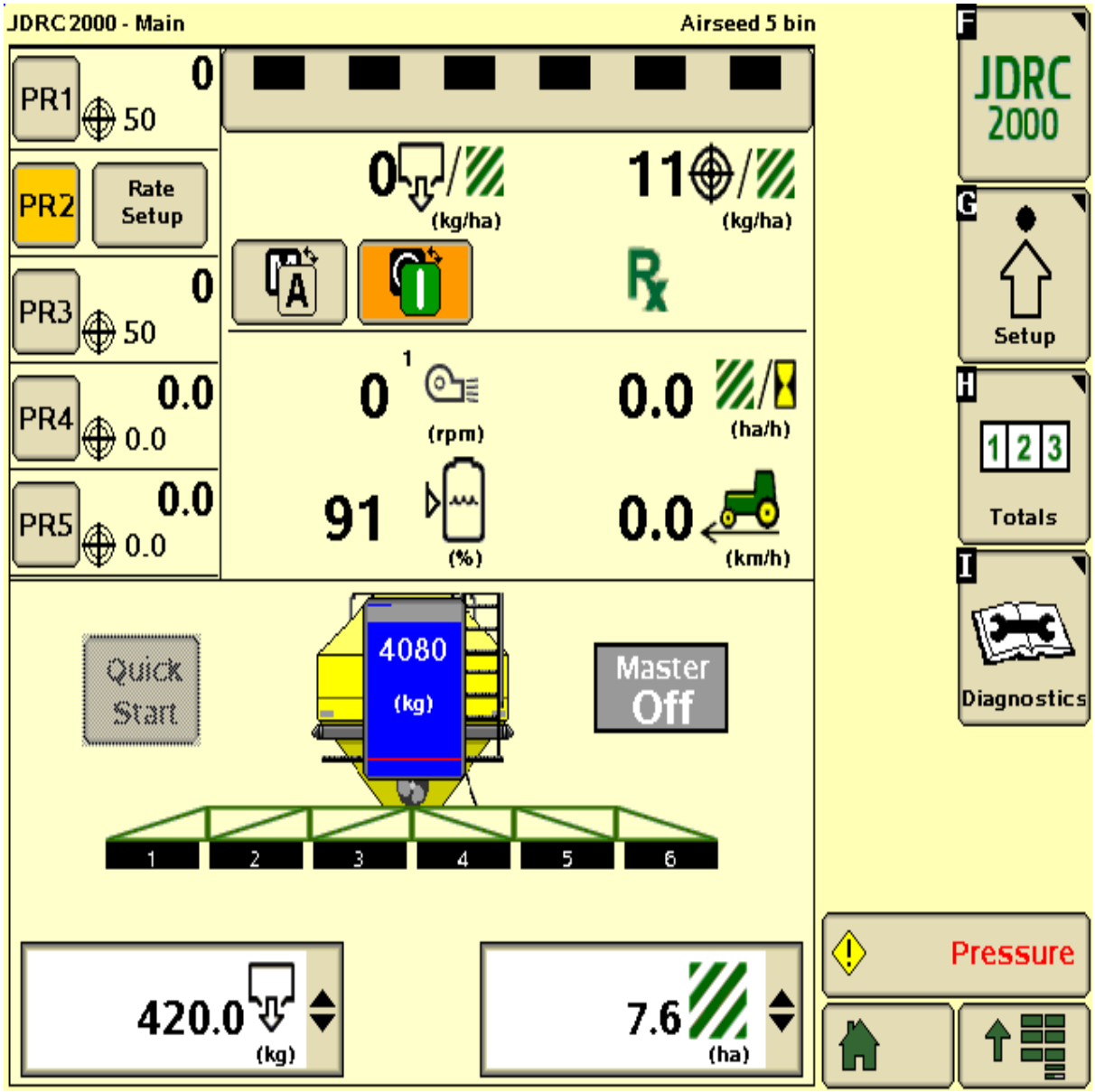
USE THE CALIBRATION PROVIDED ON THE FLOWMETER. IF NOT USE CLOSE ESTIMATE AND CALIBRATE IN THE RATE CONTROLLER. MAKE SURE THE UNITS ARE SELECTED TO L



SETUP PRESET RATES THE SAME AS DRY BINS

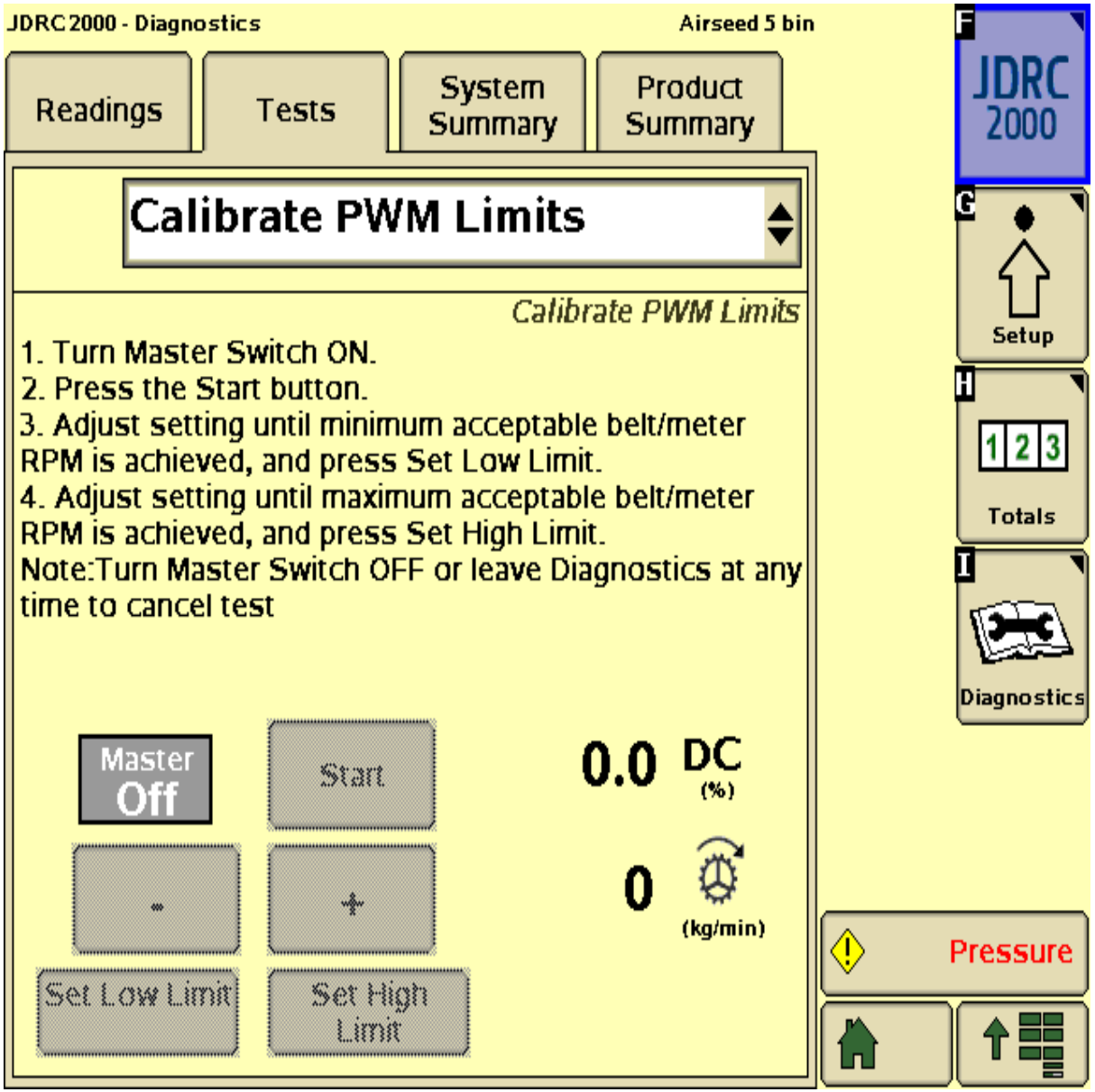

Setup Alarms
?
Product 5 Liquid
Alarm?
Off Rate Alarm
(% off target rate)
20
If Pressure Sensor 1 has a minimum pressure alarm enabled the system will not drop below that pressure to maintain spray pattern
Setup Req


Setup Summary
Profile Name Airseed 5 bin
Machine Type Air Cart
Number Of Products 5
Number of Sections 12
Application Width (m) 18.000
Switchbox Present No
Master Clutch No
Granular Product Sections Power to Apply No
Accept
Setup Req

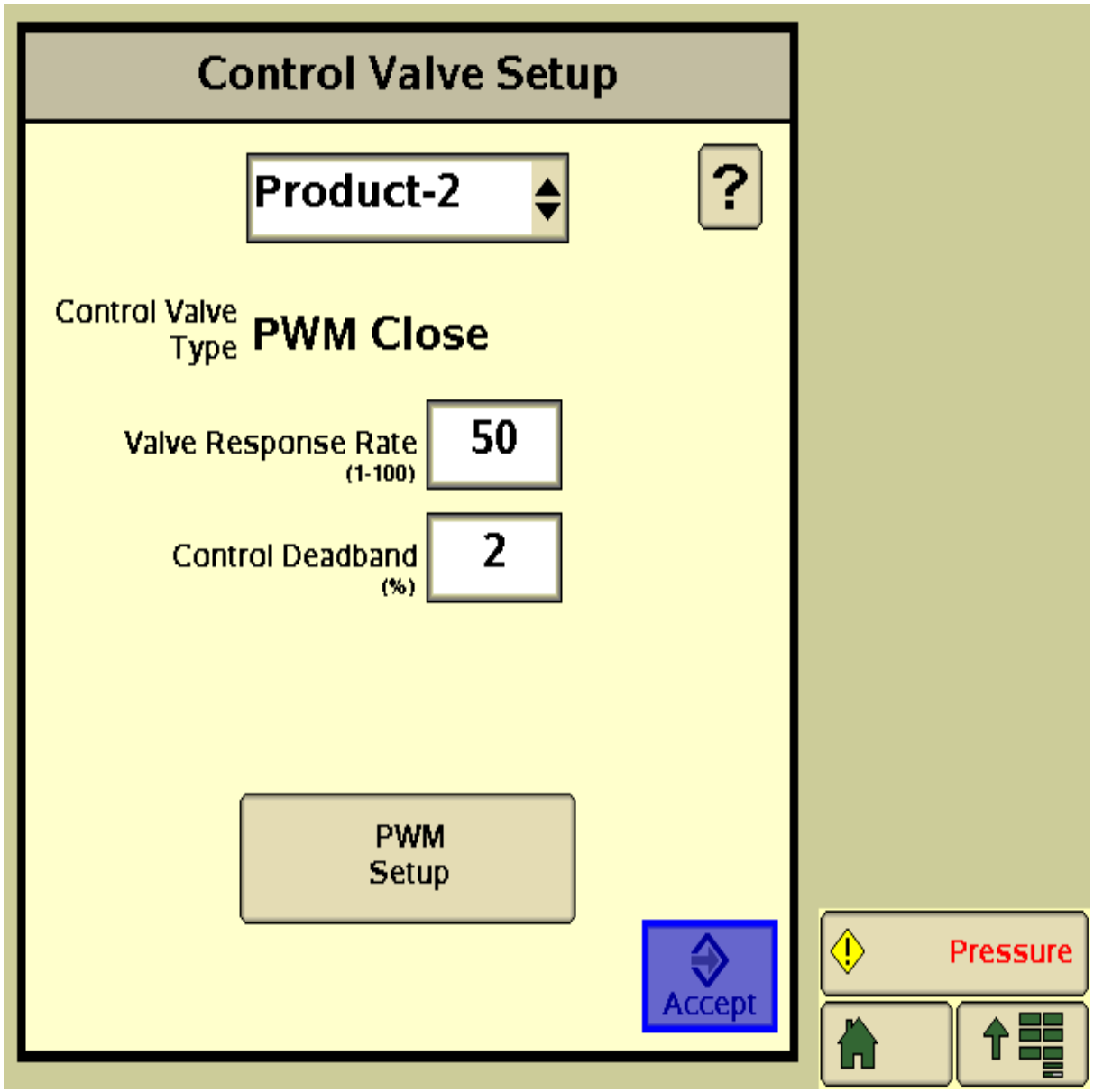


CLICK ON EACH BIN ON THE LEFT HAND SIDE. CLICK THE RED CIRCLE TO TURN ON THE BIN, IT SHOULD GO GREEN AS PICTURED. IF NOT USING ALL 5 BINS ONLY TURN ON THE ONES YOU ARE USING.

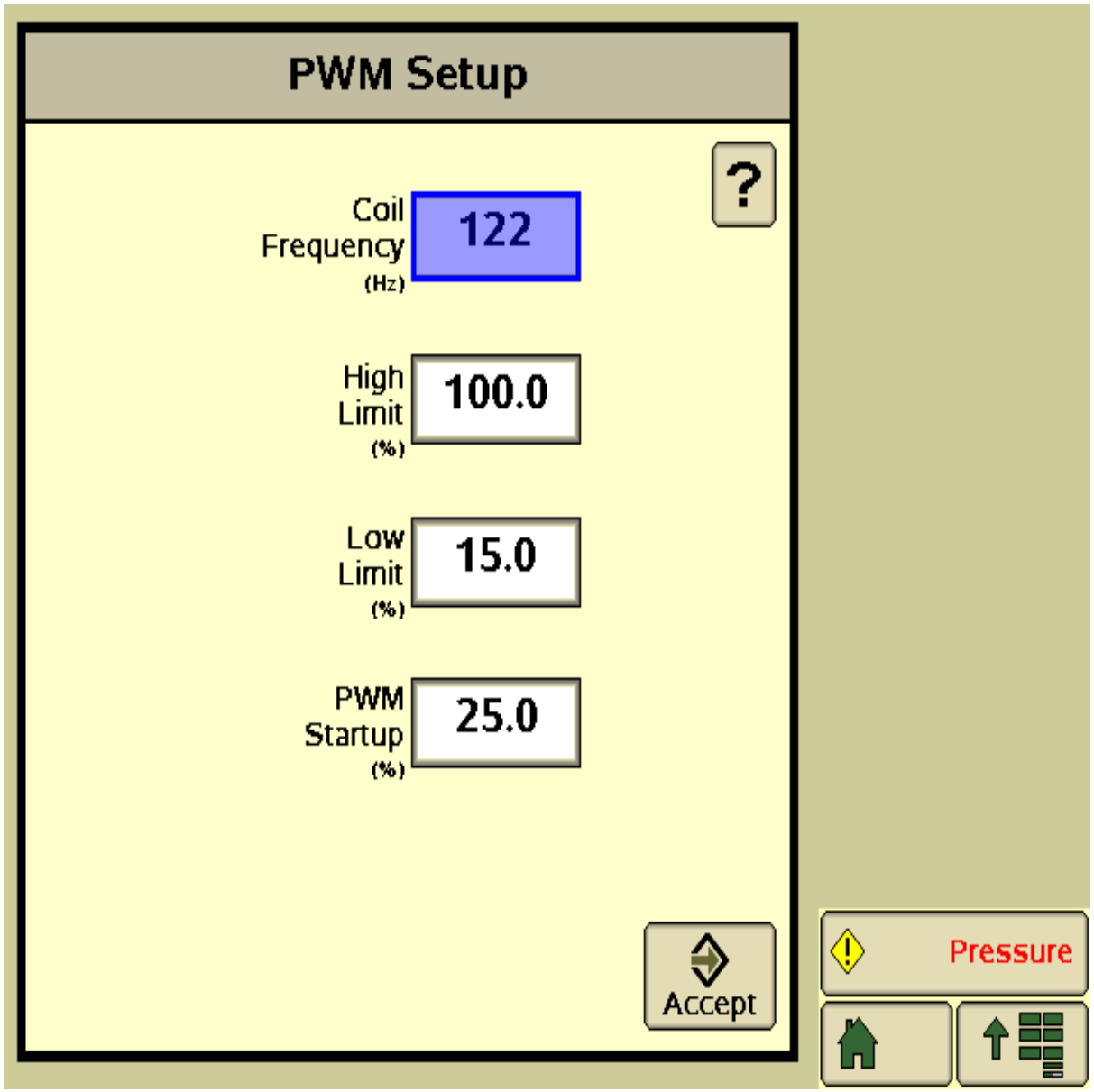
YOU NEED TO HAVE FAN SPEED AND METERING SPEEDS FOR ALL BINS TO RUN. IF THE CONTROLLER DOES NOT SEE A SPEED ON A BIN THE IT WILL SEND A WARNING AND THE MASTER SWITCH WILL TURN ORANGE



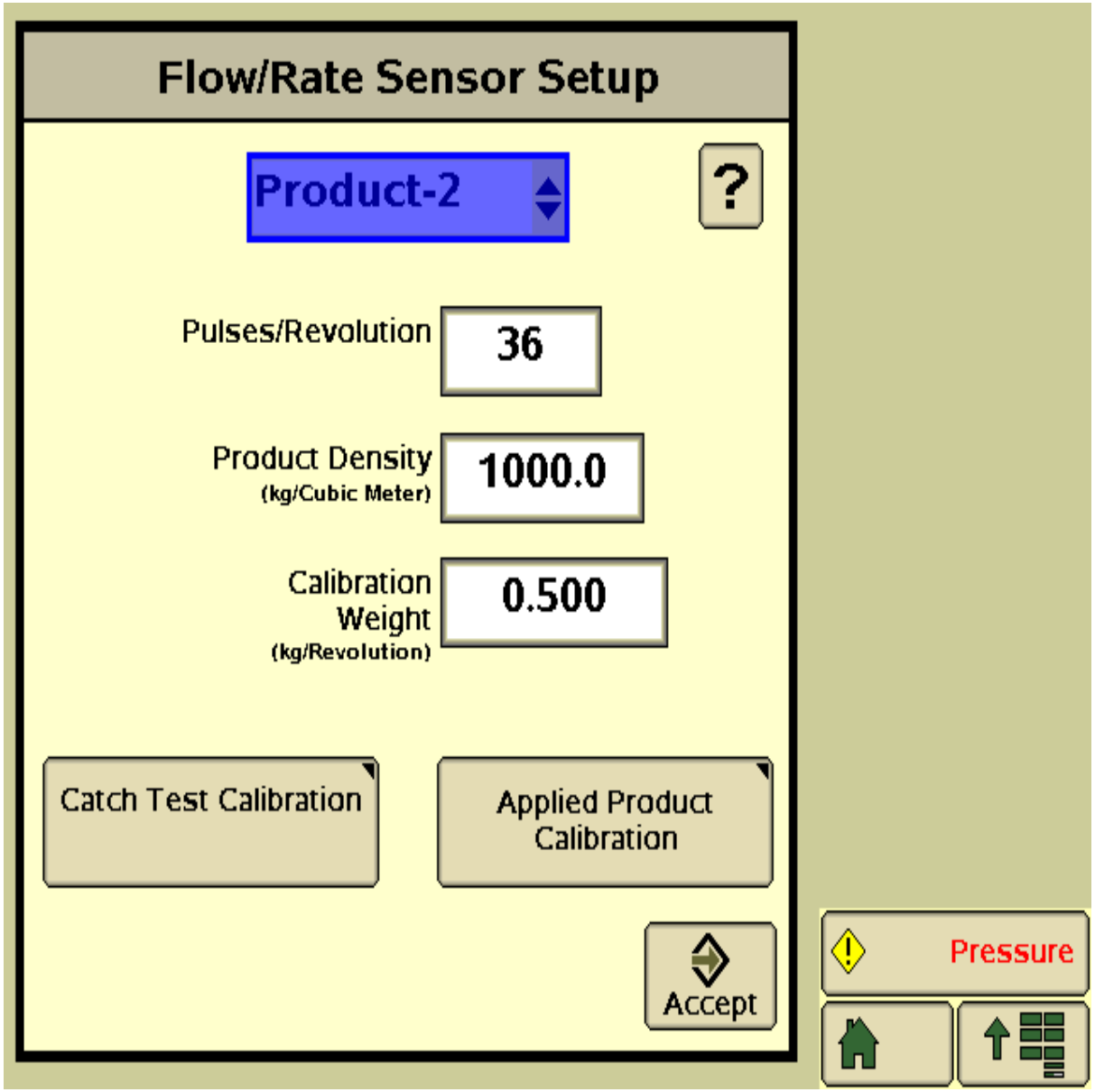
CALIBRATE EACH BINS PWM LIMITS. FOLLOW THE INSTRUCTIONS ON THE TEST.



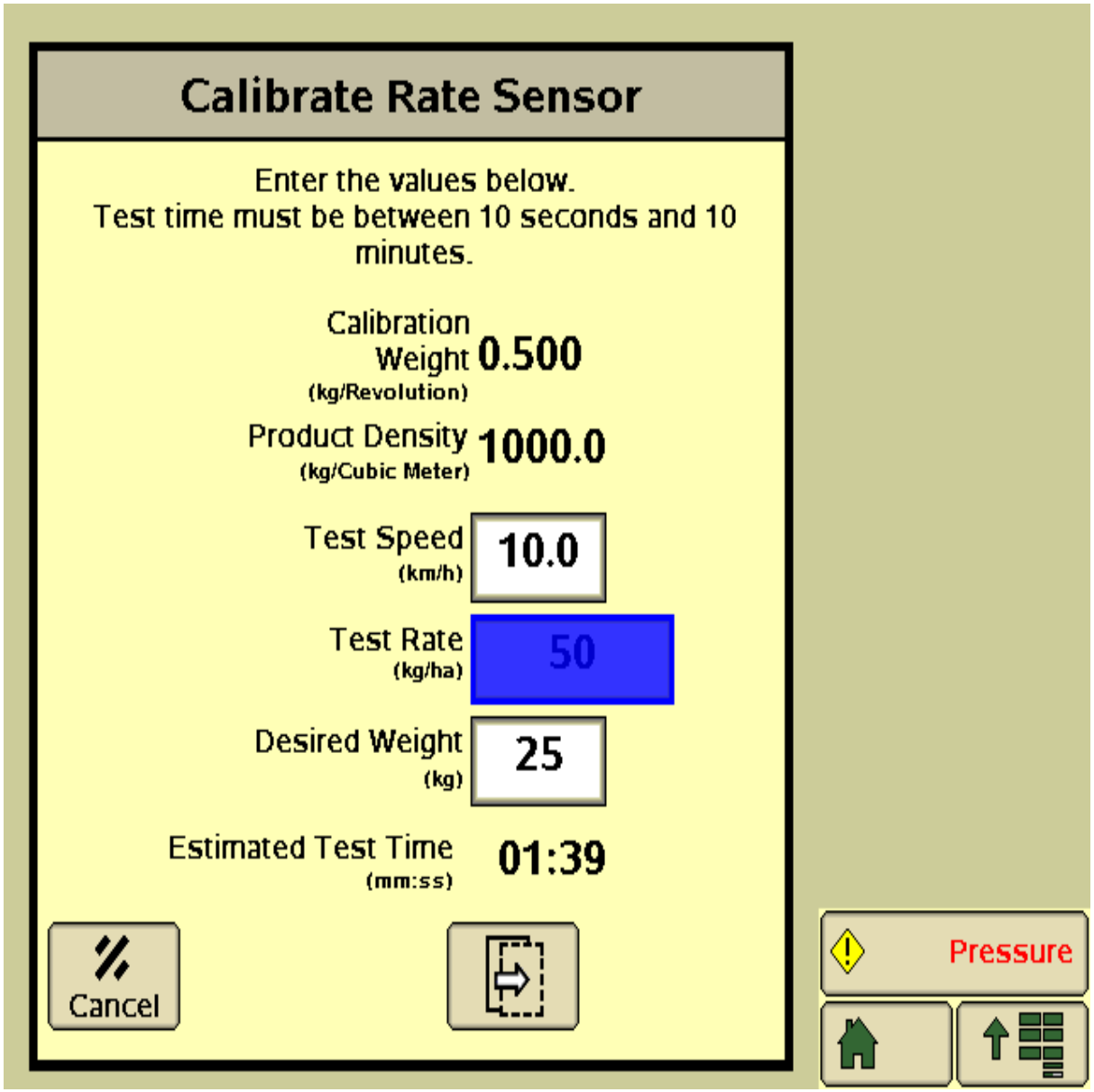
THESE SETTINGS FOR THE VALVE SHOULD WORK WELL. IF THE VALVE IS SLOW TO MOVE BETWEEN RATES YOU MAY WANT TO PLAY WITH THE RESPONSE RATE. FURTHER UNDERSTANDING OF WHAT THIS DOES CAN BE FOUND BY CLICKING ON THE ?



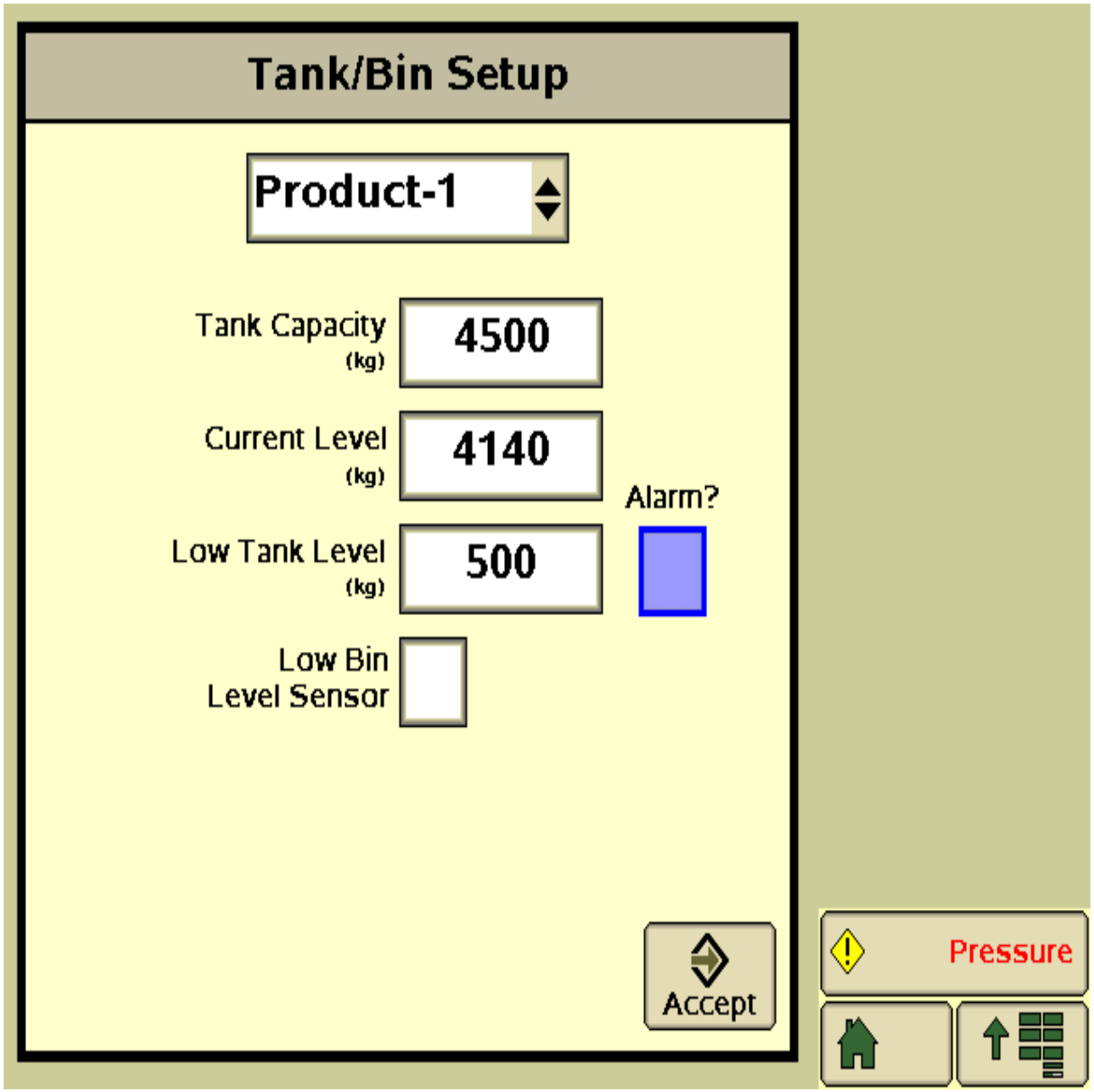
ONCE CALIBRATED YOU CAN PLAY WITH THE START UP PWM. IT IS BEST TO SET IT 10-15% ABOVE THE LOW LIMIT TO KICKSTART THE VALVE



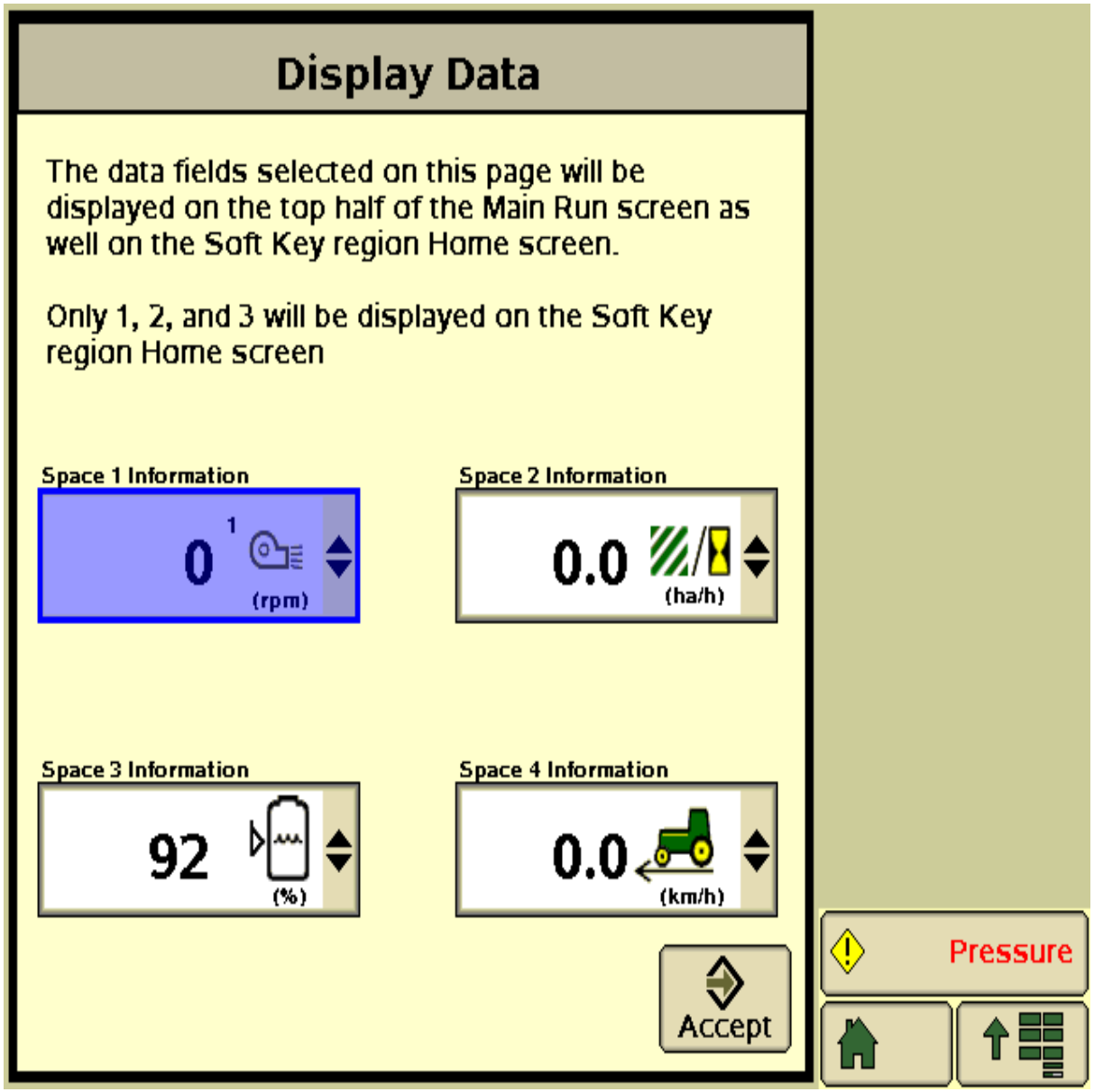
GO TO THE FLOW/RATE SENSOR SETUP TO CALIBRATE THE PRODUCT



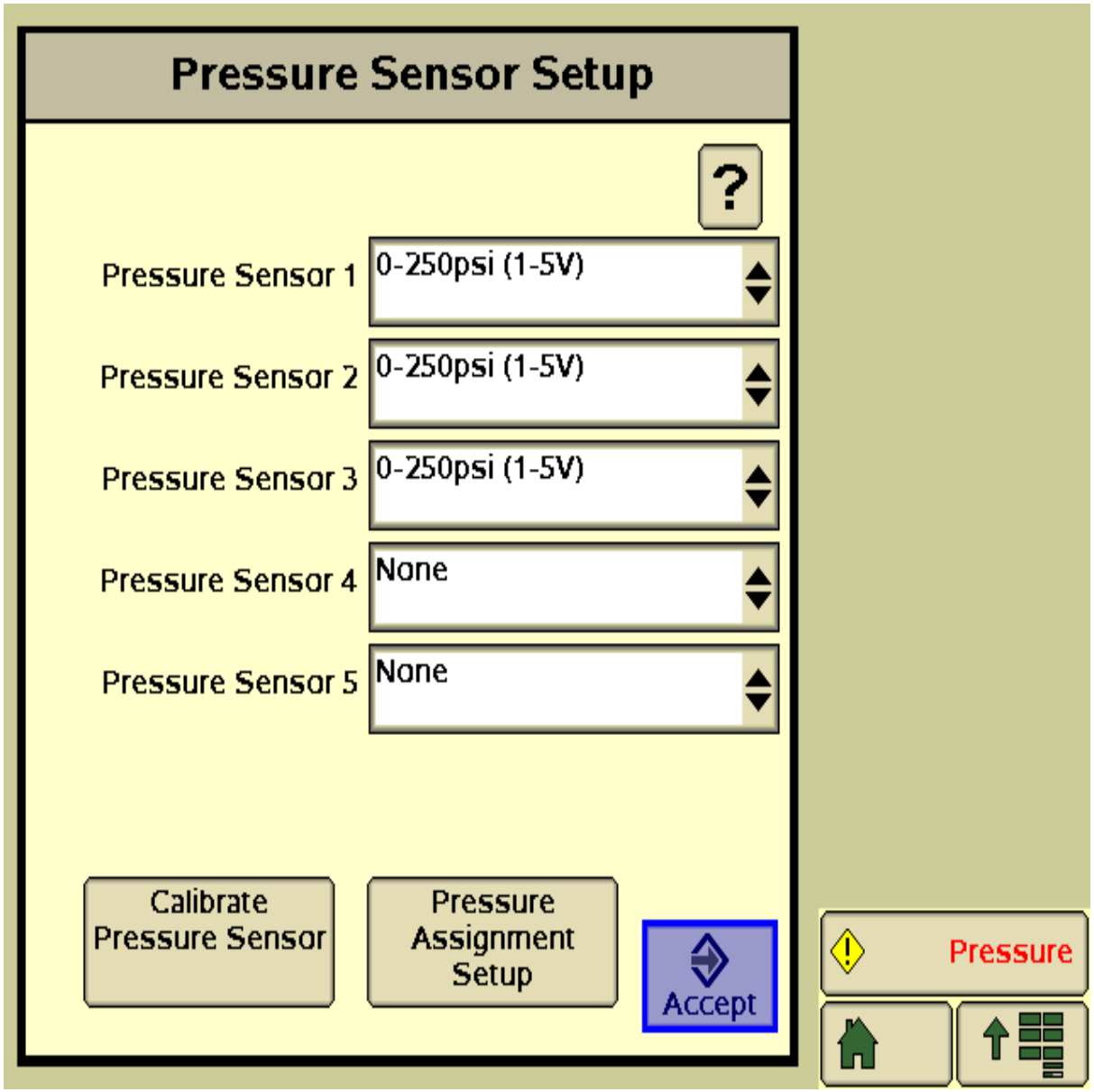
CALIBRATE EACH PRODUCT UNTIL YOU MATCH THE DESIRED WEIGHT. THESE NUMBERS WILL WORK FOR MOST PRODUCTS. THE DESIRED WEIGHT TO MESURE IS UP TO THE OPERATOR. MOST SEED AND FERT PRODUCTS ARE LIMITED BY THE AMOUNT YOU CAN MEASURE. THE MORE THE BETTER IF POSSIBLE



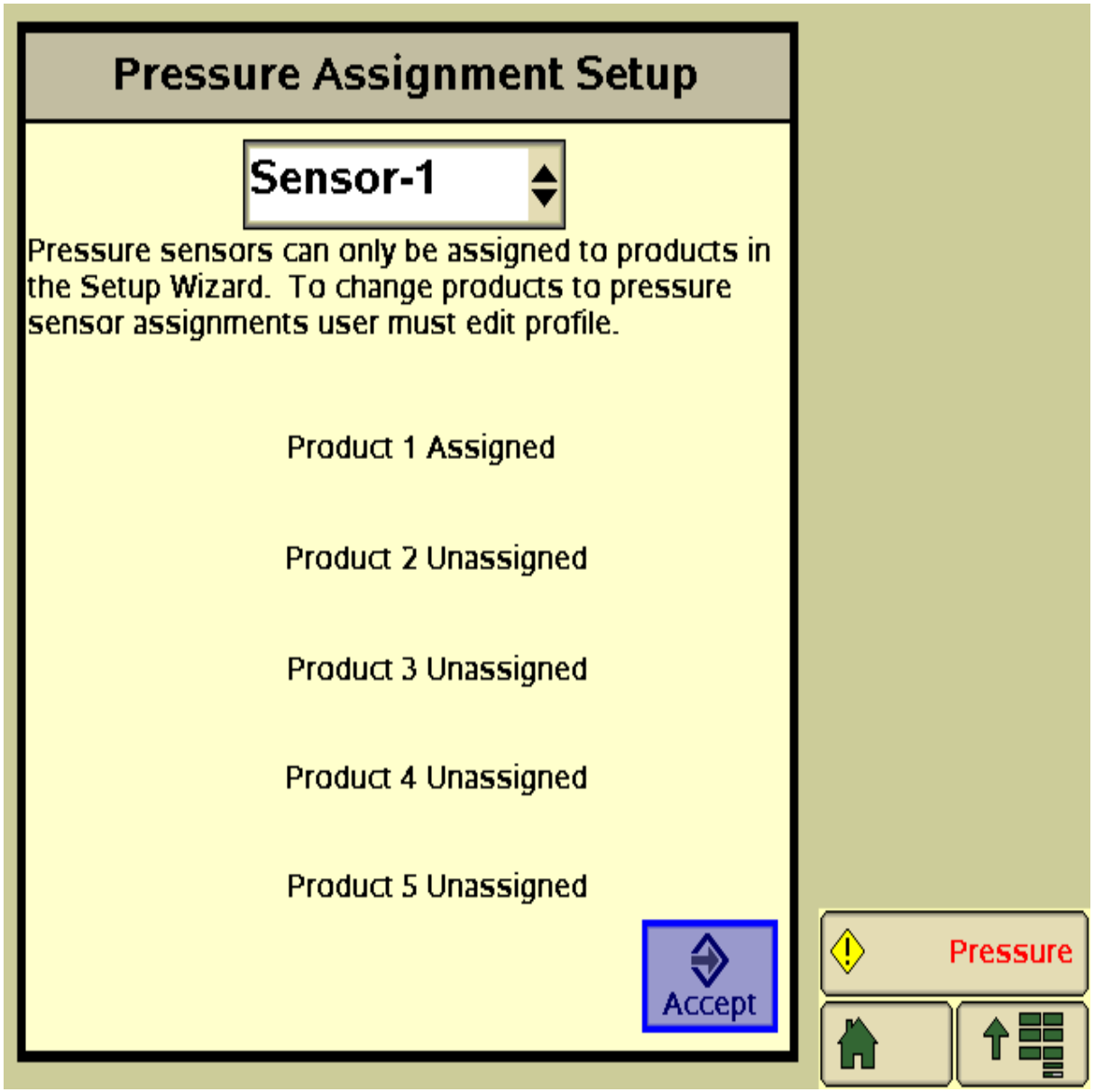
THE BIN/TANK SETUP ALLOWS YOU TO MAKE CHANGES FROM THE WIZARD

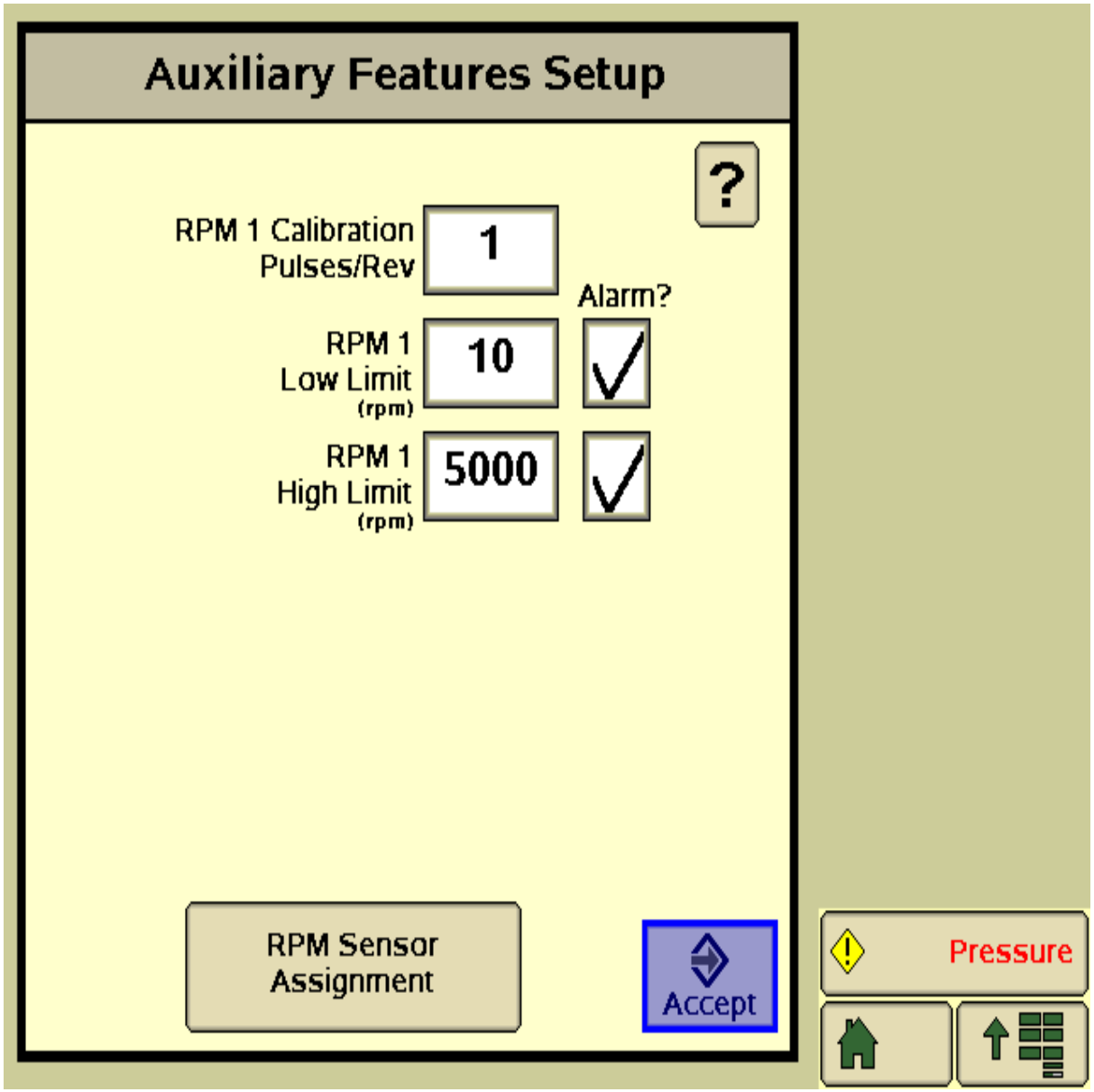


THE DISPLAY DATA IS IMPORTANT. EACH TANK CAN HAVE A DIFFERENT PIECE OF DATA. WE SUGGEST HAVING THE FAN SPEED ON AT LEAST ONE OF THE BINS FOR MONTORING.

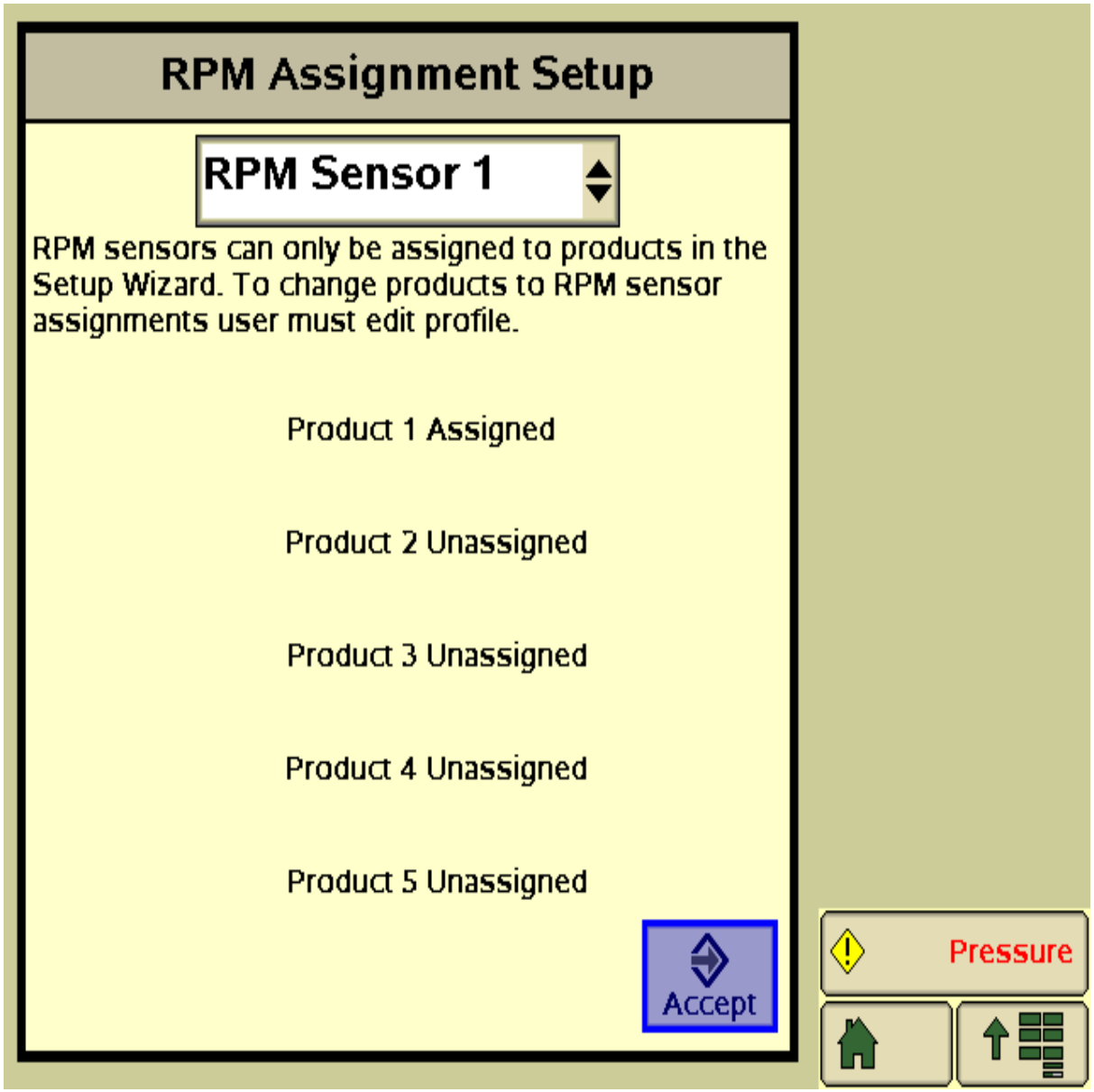


YOU CAN MAKE CHANGES FROM THE WIZARD AS WELL AS CALIBRATING THE SENSORS IF NEED BE

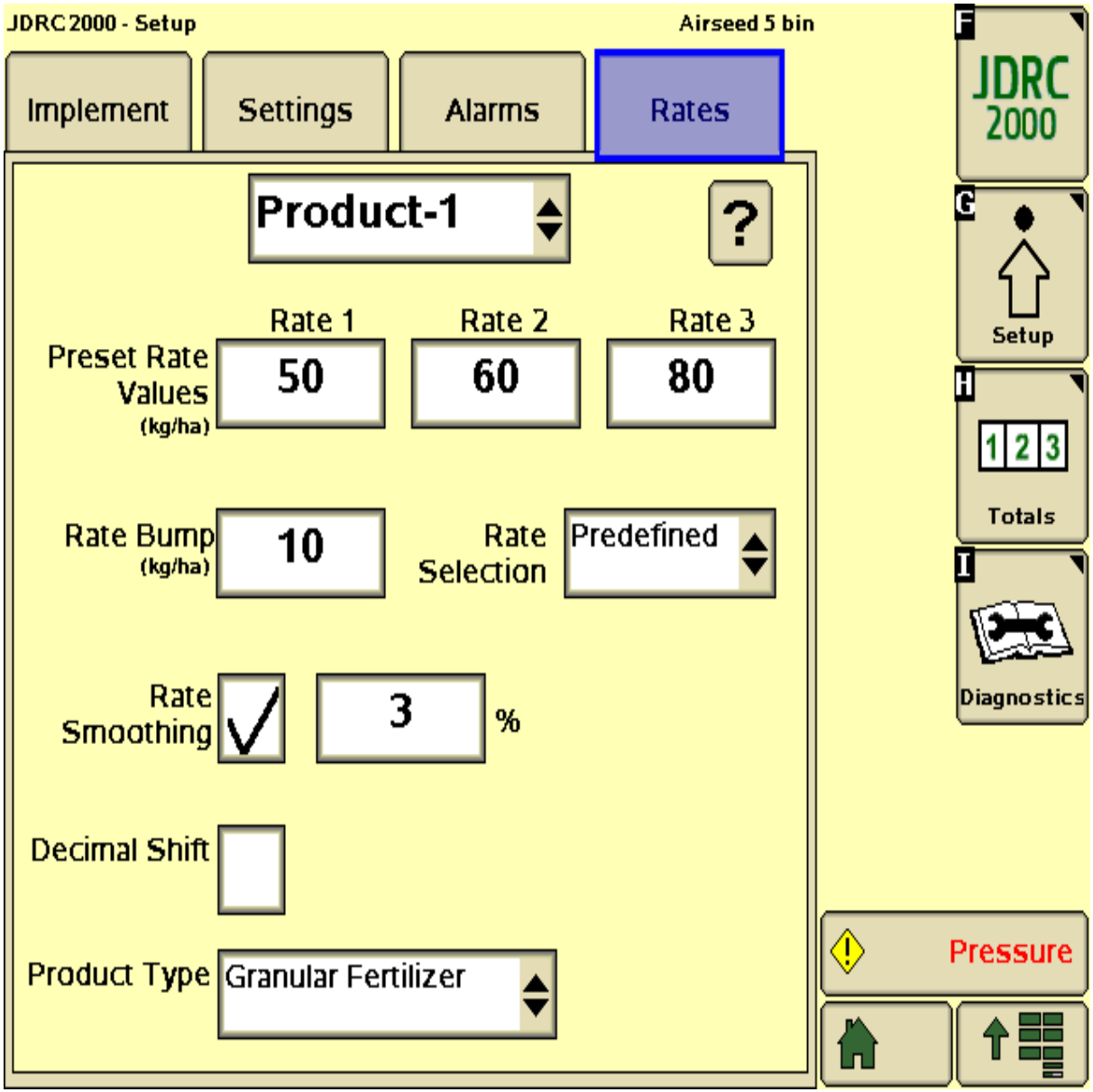

Pressure Assignment Setup
Sensor-1
Pressure sensors can only be assigned to products in the Setup Wizard. To change products to pressure sensor assignments user must edit profile.
Product 1 Assigned
Product 2 Unassigned
Product 3 Unassigned
Product 4 Unassigned
Product 5 Unassigned
Accept
Pressure



THE AUX FEATURES IS WHERE YOU CAN CHANGE FAN ALARM SPEEDS AND THE CAIBRATION. YOU CAN ONLY CHANGE THE NUMBER OF FANS RUNNING IN THE SETUP WIZARD. BY EDITING THE PROFILE



SENSOR ASSINGMENTS CAN BE CHANGED IN THE AUX FEATURES SETUP



RATES AND RATE SELECTION CAN BE CHANGED UNDER THE SETUP MENU. THE RATE SELECTION ALLOWS YOU TO RUN A MAP BASED RATE. THE PRODUCT TYPE WILL AFFECT THE DOCUMENTATION SETUP. IF YOU RUN A SEED TYPE YOU WILL NEED TO SETUP THE CROP IN THE DOCUMENTATION MENU.

ONLY THE FIRST 4 BINS CAN RUN PRESCRIPTION MAPS. DUE TO A DOCUMENTATION LIMIT ON THE GS3 SCREEN. IF YOU WANT A PRODUCT ASSOCIATED WITH EACH BIN IT WILL NEED TO BE SETUP IN DOCUMENT