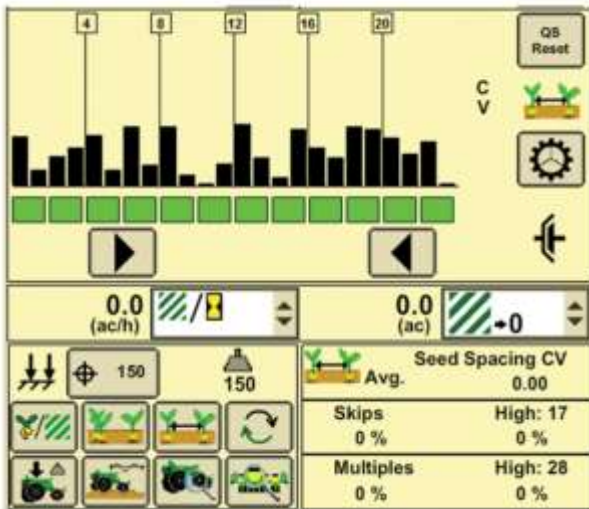


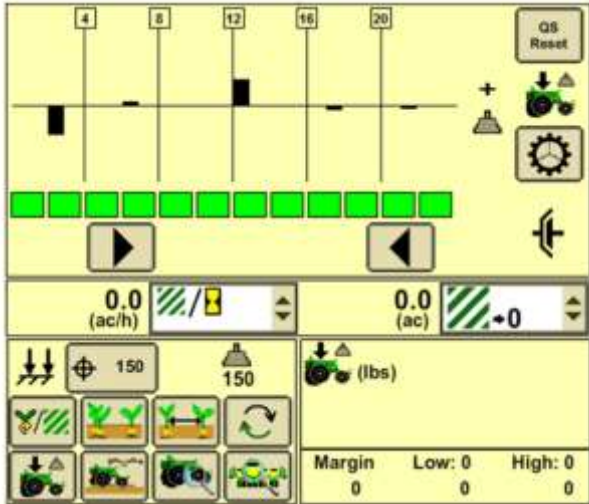
Singulation

- Measure of internal meter performance
- Measured by seed tube sensor
- How well does the meter pick up seeds from the seed pool?
- How well does the meter put one seed on each hole?
- Software calculates timing of seeds dropped past the sensor
- Measured as % with 100% being perfect
- % skips/% doubles
- Like to see 98-100% in "normal" planting conditions
- Any number lower than this, inspect internal meter components and seed tube sensor



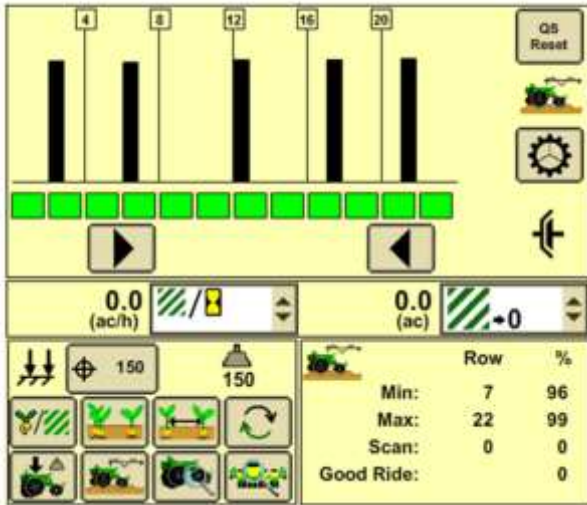
Seed Spacing

- Measure of internal meter performance and seed tube performance
- Measured by seed tube sensor
- How well does the meter and seed tube place the seed compared to the "perfect" spacing for that population?
- Software calculates timing of seeds dropped past the sensor and compares the timing to the "perfect" spacing timing
- Measured as COV (coefficient of variation) with 0 being perfect
- The higher the coefficient, the worse the spacing
- 0.15 – 0.2 or less in "normal" planting conditions
- Any number higher than this, inspect internal meter components and seed tube sensor



Down Force

- Measure of load pushing down on gauge wheels
- Measured by load cell on T handle linkage
- How much weight is pushing down on the ground?
- Software calculates leverage on gauge wheel arms
- Measured as force (lbs). Just like stacking weights out on the row unit
- Remember, the row unit already weighs 100-300 pounds without any extra force from the air spring
- Margin = extra weight added to the row unit to maintain consistent depth at planting speed in all ground conditions
- Margin also manages consistency of the trench side wall
- Down force and margin are purely a “customer decision”



Ride Quality

- Measure of row unit vibration
- Measured by ride quality node
- How much is the row unit bouncing?
- Bounce has an effect on singulation and seed spacing
- Measured as %
- 100% = perfect ride (no bounce)
- 95-100% in “normal” planting conditions
- Anything lower than this, slow down and number will improve