

Set-up and Evaluation of a New Unit for Measuring Ground Speed for an Agriculture Tractor

A.A. Al-janobi

Poster

CSBE08317

A new unit for measuring ground speed for agriculture tractor was developed and evaluated. This unit consisted of iron frame, shaft encoder, wiring and a pneumatic tire with 145/70-6. The rolling radius of the tire was approximately 0.1814 m. A hinge of the unit allowed the wheel to track when the tractor was operated along a curved path. Performance of the unit was performed and evaluated at different tractor speed and different surface soil condition (moisture content, hardness and roughness). The results showed that the new unit gave accurate reading compared to the nominal reading of adjusting tractor settings speed and front wheel forward speed. All tests were run with no drawbar pull.