

EFFECT OF USING 2WD AND 4WD MODES BY DIFFERENT SPEED ON NEW HOLLAND TT 75 FWA TRACTOR PERFORMANCE

Amer K.A. AL- Neama
College of Agriculture / Diyala University

ABSTRACT

The objective of this research was to study the effect of using 2WD and 4WD modes by different speed on a front wheel assist tractor performance. A field experiment conducted in the college of agriculture Diyala University. A New Holland TT75 front wheel assist (FWA) tractor was used as a machine unite with moldboard plow triple body type Aydin Pulluk, in clay loam soil .A Randomize Complete Block Design (RCBD) by three replicates according to the Split – Plot was used, a (2WD and 4WD) modes was represent the Main Plot mean while a four front travel speed level (2.51 – 3.73 – 5.44 and 6.89) Km / hr represent the Sub Plot. The (L.S.D) test under 0.05 levels was used to compare the treatment means. Where study parameter are Slippage percentage (%) and Effect Field Capacity (donum / hr).

The results showed that FWA tractor operated in the 4WD mode gave the best performance than the 2WD mode. The 4WD mode is superior in different effect to the 2WD mode on effect field capacity by increased percentage 2.27 % at the rang of used front speed (2.51 to 6.89) Km /hr. and also the 4WD mode is superior in different effect to the 2WD mode recording less value of wheel slippage percentage 8.64 % include allow permeation.