

Effect of ballast and tire inflation pressure on wheel slip

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■ **ABSTRACT** : The experiments were conducted in sandy loam soil in stubble field. Tillage operations were performed using 55 hp tractor with two bottom mouldboard plough and disc plough for four combinations of rear and front ballast (*i.e.* no ballast, 90 daN front, 90 daN front and 200 daN rear, 200 daN rear) and four combinations of inflation pressure in front and rear tires (*i.e.* 90 kPa rear and 140 kPa front, 90 kPa rear and 200 kPa front, 130 kPa rear and 140 kPa front and 130 kPa rear and 200 kPa front tire) to study their effects on wheel slip of tractor for primary tillage operations. The test was conducted at recommended speed of operation 2.7 - 4 km/h. It was found that slip was decreased about 37.76 per cent with increase in ballast from no ballast to 200daN rear ballast condition for primary tillage operations at all inflation pressure.

■ **KEY WORDS** : Tractor, Ballast, Inflation pressure, Plough, Tractive efficiency, Sandy loam, Primary tillage

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