

PL-OK

MECHANICS OF ANIMAL-DRAWN WHEELED TOOL CARRIER

Harbans Lal¹

The mechanics of animal-drawn wheeled tool carrier has been worked out analysing the forces acting during its field operation. A mathematical model has been developed relating pull required to operate the machine to various operational and design parameters. The analysis shows that the soil resistance force contributes equal to its magnitude and the weight of the chassis plus operator(s) and its changes make little effect on the pull requirement. The effect of other factors such as direction of resultant soil resistance force, the systems of beam connection to the chassis and coefficient of friction between the wheels and the ground surface on the pull requirement have also been studied and reported in the paper.

(1) *Mechanization Specialist, IICA/EMBRAPA/CPATSA, Caixa Postal, 23, Petrolina (PE), Brasil.*