

Present state of research on development of a high clearance vehicle for paddy fields

ABSTRACT

The concepts of developing a high clearance vehicle for paddy field have been investigated. The vehicle can be used and maintained by small size farm for paddy fields. The in-field performance of the vehicle and vehicle's wheels in terms of static and dynamic masses distribution, mobility numbers, rolling resistance, wheel slippage and the gross traction force in relation to vehicle tractive efficiency are discussed. Factors that affect the vehicle performance in paddy field such as soil moisture content, ground pressure, power to weight ratio, wheel type, wheel diameter, wheel contact area, front or rear drive, axle load and the operation speed are also highlighted.

Keyword: High clearance; Vehicle; Paddy field; Mobility number; Rolling resistance; Tractive performance