

Draft requirement of reversible shovel for tractor drawn cultivator in sandy loam soil

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Received April 13, 2013 and July 3, 2013

ABSTRACT : A reversible shovel was selected for optimization of its system parameters. Four nose angles (40°, 65°, 75° and 90°) and four rake angles (15°, 25°, 35° and 45°) of the shovel were investigated at four operating depths (60, 90, 120, and 150 mm). The test were conducted in a factorial randomized block design with two replication under sandy loam soil in an indoor soil bin for optimizing the system parameters of the reversible shovel in order to minimize the draft requirement. Nose angle 40° as well as 15° rake angle was found the minimum draft under sandy loam soil.

Key Words: Reversible shovel; Draft and Nose angle.