Effect of speed of operation on performance of tractor drawn rotary spider weeder

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ABSTRACT

Weeding is an important, but, equally labour intensive agricultural operation. Mechanical weed control is very effective as it helps to reduce drudgery involved in manual weeding, it kills the weeds and also keeps the soil surface loose ensuring soil aeration and water intake capacity. Rotary type weeder stirs the soil more accurately, disturb the weed root and remove them from the soil and pulverize the soil effectively. Hence, a tractor drawn rotary spider weeder was developed and evaluated its performance under different moisture levels and different speeds for Cotton, Chillies and Maize. The rate of increase in weeding efficiency was increased with the increase of moisture content and also with the increase of forward speeds. At all the moisture levels and at all forward speeds, the plant damage was higher at 45 DAS when compared to 30 DAS in all the crops. Performance index increased with the increase of forward speed at all levels of soil moisture content both at 30 and 45 DAS in all the crops.

Key words: *performance, rotary spider weeder, soil moisture, tractor speed, Weed.*