

Reduction of Wear via Hardfacing of Rotavator Blades

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Abstract : A major problem related to the use of rotavator is wear of rotavator blades due to abrasion by soil hard particles, as it seriously affects tillage quality and agricultural production economy. The objective of this study was to increase the wear resistance by covering the rotavator blades with two different hard facing electrodes. These blades are generally produced from low carbon or low alloy steel. During the field work i.e. preparing land for the cultivation these blades are subjected to severe wear conditions. Comparative wear tests on a regular rotavator blade and two kinds of hardfacing with electrodes were conducted in the field. These two different hardfacing electrodes, which are designated HARD ALLOY-400 and HARD ALLOY-650, were used for hardfacing. The wear rate in the field tests was found to be significantly different statistically. When the cost is taken into consideration; HARD ALLOY-650 and HARD ALLOY-400 have been found to be the best hardfacing electrodes.

Keywords : hardfacing, rotavator blades, hard alloy-400, abrasive wear

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