



## A REVIEW

# Studies on wear characteristics of surface hardened tractor drawn rotavator blade

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**Abstract :** In agriculture, seed bed preparation is the prime operation in crop production schedule. Tillage operation is performed to acquire a seed bed with improved soil health that is free from weeds and insect pest and for this purpose normally land is ploughed by using plough and cultivators. But these implements invert only the upper layer of soil, without proper mixing of soil. Therefore, additional field operations using rotavator, harrow *etc.* is essential for good soil health. The rotavators do simultaneous ploughing and harrowing. By using rotavator time can be saved upto 30-35% and the cost of operation may reduce by 20-25%. But by having advantages in rotavator their has been emerged as a serious problem of abrasive wear in rotavator blades, because the material used are softer than the natural abrasives in the soil. Due to this wear the operating and maintenance cost of rotavator increased, hence lowers its productivity. So their is a need to give a proper treatment to soil engaging parts which reduce the rate of wear. But the rotavator blades which available in the market are not properly heat treated so the wear rate is considerably more as compare to the heat-treated blades. So, there is a need to study wear characteristics of rotavator blades.

**Key Words :** Wear, Abrasive wear, Rotavator blade, Hardness, Surface hardening

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