

व्यावसायिक परीक्षण रिपोर्ट  
COMMERCIAL TEST REPORT

संख्या/ No.: IMP-991/2287/2019  
माह/Month : March, 2019

**THIS TEST REPORT VALID UP TO : 31<sup>st</sup> MARCH, 2026**



**KHANDERWAL, KCRT-11 RIGID TYNE  
CULTIVATOR (TRACTOR MOUNTED)**



सत्यमेव जयते

भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि, सहकारिता एवं किसान कल्याण विभाग

Department of Agriculture, Cooperation and Farmers Welfare

उत्तरी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Northern Region Farm Machinery Training and Testing Institute

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**6.1 Rate of work**

- Average rate of work in sandy loam was recorded as 0.997 to 1.256 ha/h at the forward speed of 6.20 to 6.55 kmph.
- Average time required to cover one hectare area was recorded as 0.80 to 1.00 h.

**6.2 Quality of work**

- Average depth of operation was recorded as 7.5 to 8.2 cm.
- Average field efficiency was recorded as 63.1 to 72.8 %.

**6.3 Draft requirement**

The average draft requirement was ranged from 290 to 428 kgf.

**6.4 Wear analysis of shovel****6.4.1 On mass basis**

S. No.	Initial mass (g)	Final mass (g)	Percentage of wear	
			After 25.96 hr	Per hour
<b>Front</b>				
1.	851.9	720.0	15.48	0.60
2.	859.3	740.1	13.87	0.53
3.	850.8	740.0	13.02	0.50
4.	829.3	720.2	13.16	0.51
5.	855.3	800.1	6.45	0.25
6.	856.3	780.3	8.88	0.34
7.	842.3	760.2	9.75	0.38

**7. EASE OF OPERATION AND ADJUSTMENT**

No noticeable difficulty was observed during the operation and adjustment of cultivator.

**8. DEFECTS, BREAKDOWN AND REPAIRS**

No noticeable defect occurred in the cultivator during the test.

**9. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS**

- 9.1** The specification of implement hitch does not conform fully to the IS: 4468 (Part 1)-1997. It is recommended that the same should be provided conforming to the relevant Indian Standard.
- 9.2** The specification of reversible shovel does not conform fully to the IS: 6813-2000. It is recommended that the same should be provided conforming to the relevant Indian Standard.



9.3 Chemical composition of shovel does not conform to IS : 6690-1981. It **MUST** be looked into.

9.4 Hardness of the shovel does not conform to IS: 6813-2000. It should be looked into.

9.5 **Adequacy of literature:**

The following literature was supplied during test.

i) Operator's cum service manual cum parts catalogue

The operator's manual should be updated as per IS: 8132-1999.

**TESTING AUTHORITY**

R.K. NEMA SENIOR AGRICULTURAL ENGINEER	<i>Rema</i>
P.K. PANDEY DIRECTOR	<i>Y. S. - M. S. G.</i>

10. **APPLICANT'S COMMENTS**

We will make improvement in the machine as per the recommendations

