

व्यावसायिक परीक्षण रिपोर्ट  
COMMERCIAL TEST REPORT

संख्या/ No.: ROTAVATOR-390/2915/2022

माह/Month: September, 2022

**THIS TEST REPORT VALID UP TO : 30<sup>th</sup> September, 2029**



**SONALIKA, SLPSMSR-6  
ROTARY TILLER, (ROTAVATOR) TRACTOR MOUNTED**



भारत सरकार

**Government of India**

कृषि एवं किसान कल्याण मंत्रालय

**Ministry of Agriculture and Farmers Welfare**

कृषि एवं किसान कल्याण विभाग

**Department of Agriculture and Farmers Welfare**

उत्तरी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

**Northern Region Farm Machinery Training and Testing Institute**

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**[ISO 9001:2015 CERTIFIED]**

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**6. FIELD PERFORMANCE TEST**

The field tests of the rotavator comprising of dry land and wet land operation were conducted for 25.47 and 10.42 hours respectively to assess the performance test which is reported in **Annexure-I & II** for dry land and wet land operation, respectively.

Observations of field performance test is summarized in the ensuing table:-

**Summary of Field Performance Test**

Sr. No.	Parameters/operations	Dry land operation	Wet land operation (Puddling)
I	II	III	IV
1.	Tractor used	Swaraj 744	
2.	Gear used	L-1	L-1
3.	Type of soil	Sandy loam	
4.	Average soil moisture (%)	4.5 to 10.9	--
5.	Average depth of standing water (cm)	--	16.20 to 18.03
6.	Bulk density of soil (g/cc)	1.20 to 1.69	--
7.	Average speed of operation (kmph)	2.25 to 2.39	2.34 to 2.41
8.	Avg. travel reduction (%)	--	-3.49 to -3.68
9.	Avg. wheel slip (%)	-0.50 to -1.84	--
10.	Average depth of puddle (cm)	--	14.87 to 15.57
11.	Average depth of cut (cm)	10.16 to 10.60	--
12.	Avg. effective width (m)	1.87 to 1.90	--
13.	Area covered (ha/h)	0.34 to 0.38	--
14.	Time required for one ha (h)	2.63 to 2.94	--
15.	Field efficiency (%)	76.76 to 84.09	--
16.	Puddling index (%)	--	79.01 to 83.54
17.	Fuel consumption		
		l/h	4.80 to 5.24
		l/ha	13.11 to 14.14
18.	Avg. PTO power consumption (kW)	17.39	--

**6.1 Dry land operation**

**6.1.1 Rate of work**

- i) The rate of work was recorded 0.34 to 0.38 ha/h, and the speed of operation varied from 2.25 to 2.39 kmph.
- ii) The time required to cover one hectare was recorded as 2.63 to 2.94 h.

**6.1.2 Quality of work**

- i) The depth of operation was recorded as 10.16 to 10.60 cm.
- ii) Average effective width was observed as 1.87 to 1.90 m.
- iii) Field efficiency was observed as 76.76 to 84.09 %.

**6.2 Wet Land operation**



**6.2.1 Quality of work**

- i) The depth of puddle was recorded as 14.87 to 15.57 cm.
- ii) The puddling index was recorded as 79.01 to 83.54 %.

**12. COMMENTS AND RECOMMENDATIONS**

- 12.1** The dimension of three point linkage of implement does not conform, in toto, to the requirements of IS:4468(Part-1)-1997 and therefore, it may be looked into for corrective action.
- 12.2** The dimension of PIC of Implement does not conform, in toto, to the requirements of IS: 4931-1995 and therefore, it may be looked into for corrective action.
- 12.3** The grade of grease is not specified. It **MUST** be specified.
- 12.4 Technical Literature:**  
One booklet entitled "Owner's manual" was provided for reference during test. The same, however, needs to be updated as per IS:8132-1999.

**TESTING AUTHORITY**

Er. SANJAY KUMAR AGRICULTURAL ENGINEER	
Dr. MUKESH JAIN DIRECTOR	 16.09.2022

The test report is compiled by Er. Aman Garg

**13. APPLICANT'S COMMENTS**

We will take corrective action as per your suggestion/comments.