

व्यावसायिक परीक्षण रिपोर्ट  
COMMERCIAL TEST REPORT



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**GREENSYSTEM RC1209, 9 TINE RIGID TYPE CULTIVATOR  
(Tractor Mounted)**



सत्यमेव जयते

भारत सरकार

GOVT OF INDIA

कृषि एवं किसान कल्याण मन्त्रालय

MINISTRY OF AGRICULTURE & FARMERS WELFARE

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## 7.6.2 On dimension basis (Refer Fig. 3):

Table-II

S. No	Notation	Dimension (mm)		Difference (mm)	Wear (%)	
		Initial	Final		After 26.4h	Per h
1	A	287	275	12	4.18	0.16
	B	67.74	65.82	1.92	2.83	0.11
	C	55.39	52.67	2.72	4.91	0.19
2	A	285	272	13	4.56	0.17
	B	67.04	65.13	1.91	2.85	0.11
	C	53.46	49.61	3.85	7.20	0.27
3	A	288	273	12	4.21	0.16
	B	66.35	64.73	1.62	2.44	0.09
	C	54.59	50.58	4.01	7.35	0.28
4	A	287	274	13	4.53	0.17
	B	67.17	65.61	1.56	2.32	0.09
	C	55.72	51.78	3.94	7.07	0.27
5	A	288	273	15	5.21	0.20
	B	67.08	65.24	1.84	2.74	0.10
	C	53.15	48.9	4.25	8.00	0.30
6	A	287	275	12	4.18	0.16
	B	65.88	63.94	1.94	2.94	0.11
	C	53.74	50.2	3.54	6.59	0.25
7	A	285	274	11	3.86	0.15
	B	66.16	64.51	1.65	2.49	0.09
	C	53.36	49.74	3.62	6.78	0.26
8	A	283	269	14	4.95	0.19
	B	66.59	65.26	1.33	2.00	0.08
	C	54.6	51.06	3.54	6.48	0.25
9	A	287	274	13	4.53	0.17
	B	66.35	64.79	1.56	2.35	0.09
	C	52.83	49.5	3.33	6.30	0.24

**Remarks:** The hourly wear percentage of reversible shovel on dimensional basis was recorded as 0.08 to 0.30.

### 8. EASE OF OPERATION & ADJUSTMENTS

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

### 9. DEFECTS, BREAKDOWNS AND REPAIRS

No break down was occurred at 26.4 h of field test.

### 10. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

- 10.1 The dimension of tine and the reversible shovel does not conform to IS: 7565 (PART I) – 1975 and IS:3342-1998 respectively. This should be looked into for corrective action for standardization.
- 10.2 The dimension of hitch pyramid of the implement does not conform to IS: 4468-1997 (Part-1). This should be looked into for corrective action for standardization.
- 10.3 The chemical content of carbon (C) and manganese (Mn) of shovel was not within its range as per IS: 3342-1998. This should be looked into for corrective action for standardization.

**10.4 Performance of the cultivator:**

- 10.4.1 a) The area cover was recorded as 0.835 to 0.972 ha/h at the speed of operation from 5.73 to 6.12 km/h.  
b) The time required to cover one hectare area was recorded as 1.03 to 1.20 h

**10.4.2 Quality of work:**

- a) The depth of cut was recorded as 9 to 12 cm  
b) Average working width was observed as 196 to 203 cm.  
c) Field efficiency was observed as 71.80 to 81.20 %.

**10.4.3 Power requirement:**

The draft of implement was recorded from 453 to 644 kgf and power requirement was calculated as 7.42 to 10.04 kW.

**10.4.4 Labour requirement:**

One skilled operator was needed to operate the tractor with the implement.

**10.5 Wear Assessment:**

The hourly rate of wear of the reversible shovel on mass and dimensional basis was recorded as 0.36 to 0.55% and 0.08 to 0.30% respectively.

10.6 As the implement is rigid tine type, it is not suitable for root & stone infested lands.

10.7 The contact angle of the shovel with tine was not declared as per the recommendation of IS 6638-1972.

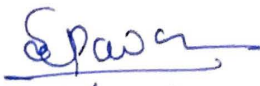

**10.8 Labelling plate:**

Manufacturer's name and serial no. were indicated on the labeling plate. However, it is recommended to specify make, model, address of manufacturer, size, batch or code number, number of tines and year of manufacture as per Indian Standard.

**10.9 Technical literature:**

Parts Catalogue was provided along with the machine during the course of testing. It is further recommended to bring out these manual and Operator cum Service Manual in Hindi and other vernacular languages as per IS: 8132-1999.

**TESTING AUTHORITY**

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K.K. NAGLE DIRECTOR	

Test Report compiled by -

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