

THIS TEST REPORT VALID UPTO 15/10/2025



**GREENSYSTEM SC1211, 11 TINE SPRING LOADED CULTIVATOR
(Tractor Mounted)**



सत्यमेव जयते

भारत सरकार
GOVT OF INDIA

कृषि एवं किसान कल्याण मन्त्रालय

MINISTRY OF AGRICULTURE & FARMERS WELFARE

कृषि, सहकारिता एवं किसान कल्याण विभाग

DEPARTMENT OF AGRICULTURE, COOPERATION & FARMERS WELFARE

उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान

NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE

विश्वनाथ चारिआलि, जिला- विश्वनाथ (असम)

BISWANATH CHARIALI: BISWANATH: ASSAM, PIN - 784 176

Ph. No. 03715-222094

Website: <http://nerfntti.nic.in>

Fax No: 03715-230358

E-Mail: fnti-ner@nic.in



1	2	3	4	5	6	7
4	A	287	274	13	4.53	0.17
	B	64.48	52.3	12.18	18.89	0.72
	C	56.87	53.61	3.26	5.73	0.22
5	A	288	276	12	4.17	0.16
	B	65.5	51.92	13.58	20.73	0.79
	C	56.48	51.12	5.36	9.49	0.36
6	A	287	275	12	4.18	0.16
	B	65.88	52.46	13.42	20.37	0.78
	C	58.09	54.32	3.77	6.49	0.25
7	A	288	276	12	4.17	0.16
	B	65.08	59.23	5.85	8.99	0.34
	C	60.03	56.92	3.11	5.18	0.20
8	A	289	278	11	3.81	0.15
	B	65.82	56.31	9.51	14.45	0.55
	C	56.98	52.38	4.6	8.07	0.31
9	A	287	271	16	5.57	0.21
	B	65.15	57.13	8.02	12.31	0.47
	C	57.05	50.16	6.89	12.08	0.46
10	A	290	279	11	3.79	0.14
	B	65.61	57.06	8.55	13.03	0.50
	C	57.88	52.92	4.96	8.57	0.33
11	A	287	272	15	5.23	0.20
	B	65.11	58.65	6.46	9.92	0.38
	C	57.45	55.29	2.16	3.76	0.14

Remarks: The hourly wear percentage of reversible shovel on dimensional basis was recorded as 0.14 to 0.79.

8. EASE OF OPERATION & ADJUSTMENTS

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

9. DEFECTS, BREAKDOWNS AND REPAIRS



No breakdown was occurred during 26.2 h of field test of the cultivator.

10. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

- 10.1 The specifications of spring for tractor mounted Spring loaded Cultivator, does not conform to IS: 6638 – 1972. This should be improved and provided as per the requirement of Indian Standard.
- 10.2 The specification of tine does not conform to IS: 7565 (PART I) – 1975. This should be improved and provided as per the requirement of Indian Standard.
- 10.3 The dimension of reversible shovel does not conform to IS: 3342-1998. This should be looked into for corrective action for standardization.
- 10.4 The dimension of hitch point of the implement does not conform to IS: 4468-1997 (Part-1). This should be looked into for corrective action for standardization.
- 10.5 The percentage of carbon and manganese in the shovel are not within its required range as per IS: 3342:1998. Therefore it is recommended to looked into for corrective action.

- 10.6 Performance of the cultivator:
- 10.6.1 Rate of work:
- The area cover was recorded as 0.932 to 1.122 ha/h at the speed of operation from 5.79 to 6.38 km/h.
 - The time required to cover one hectare area was recorded as 0.89 to 1.07 h.
- 10.6.2 Quality of work:
- The depth of cut was recorded as 9 to 10 cm.
 - Average working width was observed as 222 to 232 cm.
 - Field efficiency was observed as 70.99 to 79.30 %.
- 10.6.3 Power requirement:
The draft of implement was recorded from 457 to 646 kgf and power requirement was calculated as 7.80 to 10.71 kW.
- 10.6.4 Labour requirement:
One skilled operator was needed to operate the tractor with the implement.
- 10.7 Wear Assessment:
The hourly rate of wear of the reversible shovel on mass and dimensional basis was recorded as 0.17 to 0.66 % and 0.14 to 0.79 % respectively.
- 10.8 The contact angle of the shovel with tine was not declared as per the recommendation if IS: 6638-1972.
- 10.9 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.
- 10.10 Technical literature:
Operator cum Service Manual & Parts Catalogue was not provided along with the machine during the course of testing. It is recommended to bring out these manuals in English, Hindi and other vernacular languages as per IS: 8132-1999.

TESTING AUTHORITY

S. G. PAWAR AGRICULTURAL ENGINEER	
K.K. NAGLE DIRECTOR	

Test Report compiled by -

Sh. Rahul Prajapati, Sh. Abhishek Tiwari