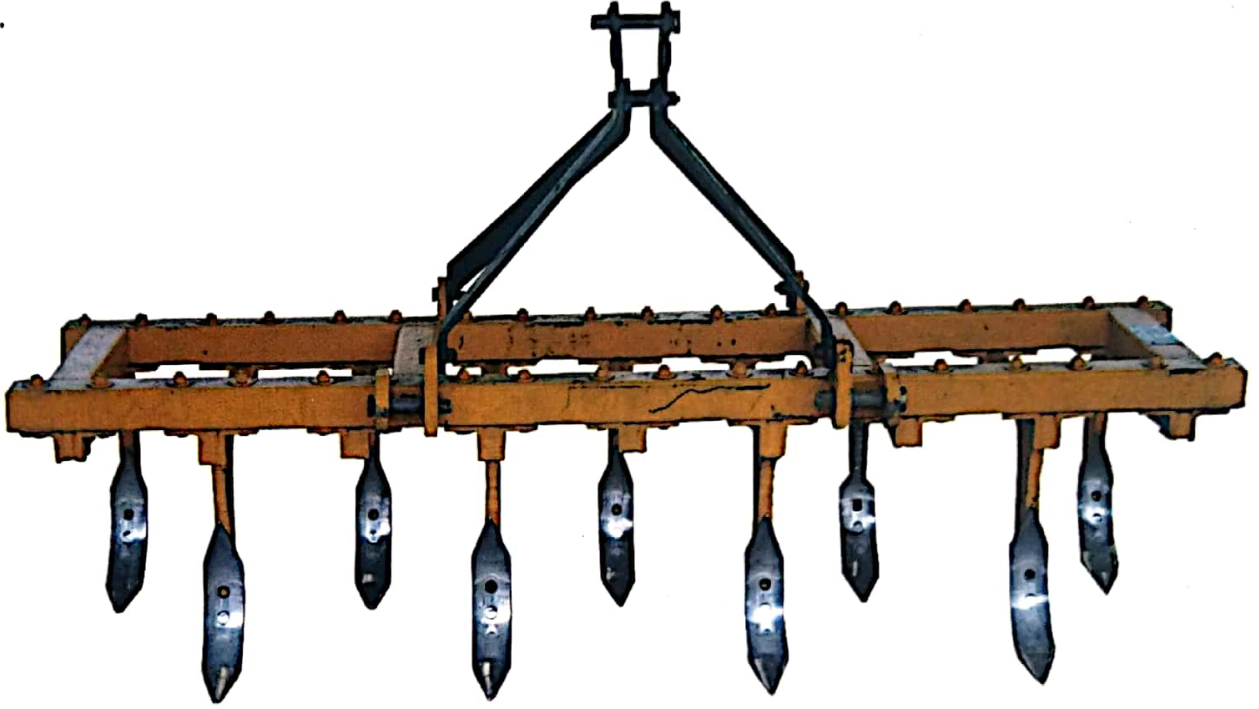


व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT



संख्या / No.: Imp. 210/282
माह / Month: May, 2017



**NEW SWAN NSML RTT 9 TINE RIGID TYPE CULTIVATOR
(Tractor Mounted)**



NERFMTTI, LIBRARY

T.R.No. 3047

Date- 21-06-2017

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

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NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE

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1	2	3	4	5	6	7
9	A	325	305	20	6.15	0.23
	B	67.74	67.11	0.63	0.93	0.04
	C	58.10	54.21	3.89	6.70	0.25

Remarks: The hourly wear percentage of reversible shovel on dimensional basis was recorded as 0.01 to 0.60.

Note: Shovel number 8 (marked with * on table-II) was broken while performing field test. Hence wear analysis on dimension basis was unable to be carried out after completing its field test.

8. EASE OF OPERATION & ADJUSTMENTS

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

9. DEFECTS, BREAKDOWNS AND REPAIRS

During field performance test of the implement RTT 9 TYNE, it has been observed that one reversible shovel was broken after operating for 5.6 progressive h. However the broken shovel has been inverted and continued for assessing its field performance test. The broken shovel was marked with * on both table I and II.

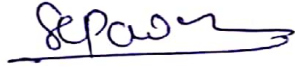

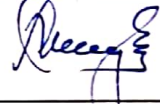
10. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

- 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 point 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 hardness of the shovel does not conform to IS: 3342-1998. This should be looked into for corrective action.
- 10.4 The chemical contents 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.
- 10.5 **Performance of the cultivator:**
- 10.5.1 a) The area cover was recorded as 0.640 to 0.836 ha/h at the speed of operation from 4.35 to 5.38 km/h.
b) The time required to cover one hectare area was recorded as 1.20 to 1.56 h.
- 10.5.2 **Quality of work:**
- a) The depth of cut was recorded as 11 to 13 cm.
b) Average working width was observed as 183 to 206 cm.
c) Field efficiency was observed as 70.1 to 82.9 %.
- 10.5.3 **Power requirement:**
The draft of implement was recorded from 786 to 1070 kg and power requirement was calculated as 10.47 to 14.37 kW.
- 10.5.4 **Labour requirement:**
One skilled operator was needed to operate the tractor with the implement.



- 10.6 Wear Assessment:**
The hourly rate of wear of the reversible shovel on mass and dimensional basis was recorded as 0.19 to 0.26 % and 0.01 to 0.60 % respectively. The wear analysis of the broken shovel was unable to carried out.
- 10.7** The quality of protective coating applied on the implement was found inadequate. It is therefore recommended to provide paint coating all over the implement satisfactorily so as to prevent the surface against corrosion.
- 10.8** As the implement is rigid tine type, it is not suitable for root & stone infested lands.
- 10.9 Labelling plate:**
Manufacturer's name, address, type, model, serial no. and year of manufacture was indicated on the labeling plate. However, it is recommended to specify size of implement and power requirement on the labelling plate.
- 10.11 Technical literature:**
No technical literature was submitted during the course of testing.

TESTING AUTHORITY

S. G. PAWAR AGRICULTURAL ENGINEER	
A.K. UPADHYAY SENOIR AGRICULTURAL ENGINEER	
K.K. NAGLE DIRECTOR	

Test conducted & Report compiled by -

Sh. Rahul Prajapathi & Sh. Vithato Keyho

11. APPLICANT'S COMMENTS

Para No.	Our reference	Applicant's Comments
11.1	10.1	For further production we shall take appropriate action to improve the same as per IS: 7565-(Part I) – 1975 and IS: 3342 – 1998 in future.
11.2	10.2	For further production we shall take appropriate action to improve the same as per IS: 4468-1997(Part-1) in future.
11.3	10.3	Review the same ensure to comply the requirement of shovel as per IS: 3342-1998 in future.
11.4	10.4	Review the same ensure to comply the requirement of shovel as per: 3342-1998.
11.5	10.6	We shall take immediate corrective action & change the supplier of shovels.
11.6	10.11	Same is in process & we shall ensure to provide the same for further supplies both technical literature.