

व्यावसायिक परीक्षण रिपोर्ट  
COMMERCIAL TEST REPORT

संख्या/ No.: IMP-1034/2622/2020  
माह/Month : December, 2020

**THIS TEST REPORT VALID UP TO : 31<sup>st</sup> DECEMBER, 2027**



**JWW, ROTARY SLASHER  
(TRACTOR MOUNTED)**



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

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**9. FIELD PERFORMANCE TEST**

The field tests was conducted for 20.23 hours for harvesting of paddy stubble to assess the performance of the implement with Farmtrac 60 FT Tractor.

The no load engine speed of tractor was speed adjusted to 1569 rpm and observations are summarized in Table-2 & Table-3.

**Table -2****SUMMARY OF CROP PARAMETERS**

S.No	Parameters	Range
1	Variety of crop of paddy stubble	PR 27 P31 and NDR-359
2	Period between harvesting and slashing	2 to 4 days
3	Moisture content of stubble (Wb) (%)	66.2 to 69.3
4	Avg. height of stubble (before operation), mm	237.0 to 297.3
5	Number of tillers per hill sq/m	186.6 to 263.8

**9.1 The slasher was operated under dry field conditions the results are reported in Table-3.**

**SUMMARY OF CROP PARAMETERS****Table-3**

S.No	Parameters	Range
1	Tractor used	Farmtrac 60 FT
2	Gear used	L-3
3	Engine speed (rpm)	No load On load 1569 NR
4	Avg. Forward speed (kmph)	4.71 to 4.82
5	Avg. Width of cut (m)	1.44 to 1.47
6	Avg. Stubble height (mm)	Before operation After operation 237.0 to 297.3 45.3 to 52.0
7	Avg. Mass Of Stubble (g/m <sup>2</sup> )	Before operation After operation 787.0 to 839.0 64.0 to 76.0
8	Avg. area covered (ha/h)	0.587 to 0.621
9	Avg. time required for one ha (h)	1.61 to 1.70
10	Avg. loose straw length before operation (mm)	426.0 to 500.7
11	Avg. straw length after operation (mm)	206.0 to 293.0
12	Avg. fuel consumption :-	-l/h -1/ha 3.80 to 3.94 6.12 to 6.70
13	Avg. field efficiency , %	85.32 to 89.48



**9.1.1 Rate of work**

- i) The average speed of Rotary Slasher was recorded as 4.71 to 4.82 kmph
- ii) The average area slashing by the machine was recorded as 0.587 to 0.621 ha/h area time required to cover one hectare was recorded as 1.61 to 1.70 h.

**9.1.2 Quality of work**

- i) The average stubble height after operation was recorded as 45.3 to 52.0 mm.
- ii) The average mass of stubble after operation was recorded as 64 to 76 g/m<sup>2</sup>.

**9.1.3 Labour requirement**

Two skilled labours are required for operating the machine continuously.

**9.2 WEAR OF BLADES**

S.No.	Initial Mass (g)	Final Mass (g)	Percentage of Wear	
			After 23.36 h	Per hour
i)	656.7	646.1	1.61	0.07
ii)	670.7	661.6	1.36	0.06

The hourly percentage wear of blades on mass basis was recorded as 0.06 to 0.07 %.

**10. EASE OF OPERATION & ADJUSTMENTS**

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

**11. DEFECTS, BREAKDOWN AND REPAIRS**

Hair crack observed in gear box housing after field test.

**12. CRITICAL TECHNICAL SPECIFICATION**

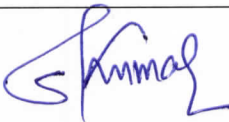

Deferred till 31.03.2021 vide Ministry O.M. No 13-13/2020 M&T, (I&P) dated 22.12.2020

**13. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATION**

- 13.1 The dimension of three point linkage of implement does not conform, in toto, to the requirement of IS: 4468 (Part-1)-1997 and therefore, It may be looked into for corrective action.
- 13.2 The Dimension of PIC does not conform, to the requirement of IS: 4931-1995 and therefore, it may be looked in to for corrective action.
- 13.3 The Dimension of PIC yoke bore does not conform in toto, to the requirement of IS: 4931-1995 and therefore, it may be looked in to for corrective action.
- 13.4 Provision against overload on PTO drive shaft is not provided. It **MUST** be provided.
- 13.5 Hair crack observed in gear box housing after field test. It must be looked into for corrective action.
- 13.6 The guard over propeller shaft is not provided. It **MUST** be provided.
- 13.7 The oil change period in primary reduction is not specified. It **MUST** be specified.

- 13.8 The grade of oil is not specified. It **MUST** be specified.
- 13.9 The grade of grease is not specified. It **MUST** be specified.
- 13.10 The chemical composition of blades does not conform in toto, to the requirement of IS:1511-1979. This needs to be locked in to for corrective action.
- 13.11 The marking and packing of blade does not conform, in toto, to the requirement of IS: 1511-1979 and therefore, It may be looked into corrective action.
- 13.12 The labeling plate should be riveted provided on the machine with the following information.
- i) Name and Address of manufacturer
  - ii) Country of origin
  - iii) Make
  - iv) Model
  - v) Year of manufacturer
  - vi) Serial Number
  - vii) Type
  - viii) Size
  - ix) Required size of prime mover (kw)
- 13.13 **Technical literature:-**  
The "Operator cum service manual and parts catalogue" was not provided with the Rotary Slasher for reference during test. However, It **MUST** be provided and updated as per IS: 8132-1999.

**TESTING AUTHORITY**

SANJAY KUMAR AGRICULTURAL ENGINEER	
P. K. PANDEY DIRECTOR	

Draft test report compiled by Sh. Deny Hasnu, Senior Technician

**14. APPLICANT'S COMMENTS**

No comments received from the applicant.