

व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक)

COMMERCIAL TEST REPORT(INITIAL)

संख्या/No:Machine-722/1824

माह/Month:February, 2025

THIS TEST REPORT IS VALID UP TO 31.01.2032



**SURYA AGRO, SURYA 7 PW POWER WEEDER**



सत्यमेव जयते

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

दक्षिणी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Southern Region Farm Machinery Training and Testing Institute

ट्रैक्टर नगर, गार्लदिन्ने-515 731, जिला: अनंतपुर (आं. प्र.)

Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)

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Machine-  
722/1824

**SURYA AGRO, SURYA 7 PW POWER WEEDER**

**COMMERCIAL  
(ICT)**

**THIS TEST REPORT IS VALID UP TO 31.01.2032**

Manufacturer, (apa)

: M/s Surya Agro Industries, Jaya Nagar,  
Hosa Holalu Road, K.R. Pet Tq. –  
571425, Mandya District, Karnataka.

Applicant

: The manufacturer

**SURYA AGRO, SURYA 7 PW POWER WEEDER**

Report no.: Machine-722/1824

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Machine- 722/1824	SURYA AGRO, SURYA 7 PW POWER WEEDER	COMMERCIAL (ICT)
	THIS TEST REPORT IS VALID UP TO 31.01.2032	

Type of test : COMMERCIAL (ICT)

Period of test : December, 2024 to January, 2025

Test Report No. : Machine-722/1824

Month / Year of release : February, 2025

- The results reported in this report are observed values and no corrections have been applied for atmospheric and site conditions.
- The data given in this report pertain to the particular machine randomly selected by testing authority through virtual mode.
- The results presented in this report do not, in any way, attribute to the durability of the machine.
- This Test Report should not be reproduced in part or full without prior permission of the Director, Southern Region Farm Machinery Training & Testing Institute, Garladinne, Anantapur (A.P.).
- This is a report on Commercial Test of Power Weeder named "SURYA AGRO, SURYA 7 PW POWER WEEDER". This report is valid up to 31.01.2032, Vide Ministry's O.M. No. 13-22/2020-M&T (I&P) dated 12.12.2023.

#### SELECTED CONVERSIONS

S. No.	Units	Conversion Factor
1	<b>Force</b>	
	1 kgf	9.80665 N
		2.20462 lbf
2	<b>Power</b>	
	1 hp	1.01387 metric hp (Ps)
		745.7 W
	1 Ps	735.5 W
	1 kW	1.35962 Ps
3	<b>Pressure</b>	
	1 psi	6.895 kPa
	1 kgf/cm <sup>2</sup>	98.067 kPa = 735.56 mm of Hg
	1 bar	100 kPa = 10 N/cm <sup>2</sup>
	1 mm of Hg	1.3332 m-bar

**18: COMMENTS & RECOMMENDATIONS****18.1 Engine Performance:**

- 18.1.1 The maximum power was observed as 4.50 kW under natural ambient condition against the declared value of 4.50 kW.
- 18.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 450 g/kWh against the declared value of 320 g/kWh.
- 18.1.3 Back up torque of engine was observed as 9.83 % against declared value of 10%.
- 18.1.4 Max. torque was observed as 13.07 Nm against the declared value of 15.0 Nm.

**18.2 Mechanical vibration:**

The amplitude of mechanical vibration on various assemblies of the Power weeder was observed to the extent of 300 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.

**18.3 Air cleaner oil pullover:**

The percentage of air cleaner oil pull over was recorded as 0.00 to 0.31 % against the declaration of 0.20%. The percentage of air cleaner oil pull over was considered very high and this should be looked into for corrective action.

**18.4 Hardness & Chemical analysis:**

The hardness & chemical analysis of rotary blades does not conform to the requirement of IS 6690:1981 (Reaffirmed 2022) does not conforms. This should be looked into corrective action.

**18.5 Marking /labeling:**

The labeling plate does not reveal all the required information. it is therefore recommended that a suitable labeling plate covering all essential components, inter alia, the following must be provided:

- i) Make
- ii) Country of origin
- iii) Year of manufacturer
- iv) Specific fuel consumption (g/kWh)

**18.6 Technical literature:**

User's manual is provided during the test. However, the same must be brought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the guidance of users.




The following literature should be provided.

- i) Service manual
- ii) Parts catalogue



Machine- 722/1824	SURYA AGRO, SURYA 7 PW POWER WEEDER	COMMERCIAL (ICT)
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### TESTING AUTHORITY

 Er. PRAMOD YADAV AGRICULTURAL ENGINEER	 Er. VIJAY KUMAR BADAYA SENIOR AGRICULTURAL ENGINEER
 Dr. B.M. NANDEDE DIRECTOR	



### 19. APPLICANT'S COMMENTS

Sl. No.	Para No.	Comments
1	18.1.2 & 18.1.4	We will inform it to our manufacturer for making necessary possible changes in the machine.
2	18.2	We will insist strongly to the manufacturer to put some vibration dampeners.
3	18.3	We will inform it to our manufacturer for making necessary possible changes in the machine.
4	18.4	We will make some changes in blade material to meet the hardness and chemical requirements of IS 6690:1981 (Reaffirmed 2022) (Reaffirmed 2004).
5	18.5	Your suggestion is noted, we will modify the labeling plate of machine as per your recommendations.
6	18.6	We will be brought out the literature as per IS 8132:1999 (Reaffirmed 2004).