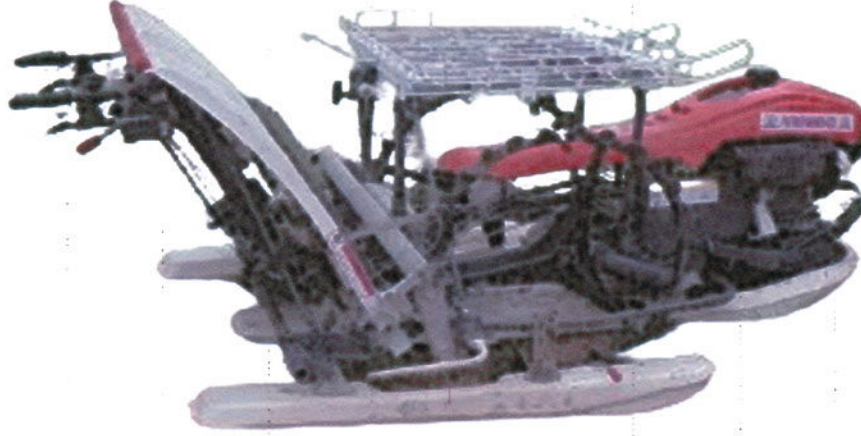


व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक)
COMMERCIAL TEST REPORT (INITIAL)

संख्या/No: Machine-593/1650
माह/Month: June, 2024

THIS TEST REPORT IS VALID UPTO 31.05.2031



**SHREE SHIVAM AGRO INDUSTRIES, FLYING FARMERS-4ZS
PADDY TRANSPLANTER**



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.)

[An ISO 9001:2015 CERTIFIED INSTITUTE]

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Tele.: 08551-286441

Machine- 593/1650	SHREE SHIVAM AGRO INDUSTRIES, FLYING FARMERS-4ZS, PADDY TRANSPLANTER	COMMERCIAL (ICT)
	THIS TEST REPORT IS VALID UPTO 31.05.2031	



Manufacturer, (apa) : M/s. Yancheng Maintaining Agriculture Equipment co Ltd. Chengzhuang Village, One Group(G) Zhanghuang Town, Yandu District, Yancheng City, Jiangsu, **China**.

Applicant : M/s. Shree Shivam Agro Industries Near Punjab National Bank Jaipatna, Kalahandi, Odisha-766018

**SHREE SHIVAM AGRO INDUSTRIES, FLYING FARMERS-4ZS
PADDY TRANSPLANTER**

Report No. : Machine-593/1650

Month: **June**

Year: **2024**



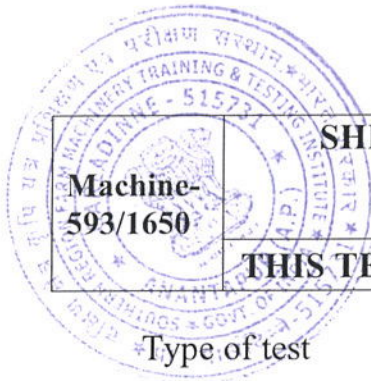
सत्यमेव जयते

**Government of India
Ministry of Agriculture and Farmers Welfare
Department of Agriculture and Farmers Welfare
Southern Region Farm Machinery Training and Testing Institute
Tractor Nagar, Garladinne - 515 731, District: Anantapur (A.P.)
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Machine-593/1650	SHREE SHIVAM AGRO INDUSTRIES, FLYING FARMERS-4ZS, PADDY TRANSPLANTER	COMMERCIAL (ICT)
THIS TEST REPORT IS VALID UPTO 31.05.2031		

Type of test : Commercial (ICT)

Period of test : January, 2024 to June, 2024

Test Report No. : **Machine-593/1650**

Month / Year of release : June, 2024

- i) The results reported in this report are observed values and no corrections have been applied for atmospheric and site conditions.
- ii) The data given in this report pertain to the particular machine randomly selected by testing authority.
- iii) The results presented in this report do not, in any way, attribute to the durability of the machine.
- iv) This report should not be reproduced in part or full without prior permission of the Director, Southern Region Farm Machinery Training and Testing Institute, Garladinne, Anantapur (A.P.).
- v) This is a report on Commercial Test of Rice Transplanter named “**SHREE SHIVAM AGRO INDUSTRIES, FLYING FARMERS-4ZS PADDY TRANSPLANTER**”. This report is valid up to **31.05.2031**, 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	Force	
	1 kgf	9.80665 N
		2.20462 lbf
2	Power	
	1 hp	1.01387 metric hp (Ps)
		745.7 W
	1 Ps	735.5 W
	1 kW	1.35962 Ps
3	Pressure	
	1 psi	6.895 kPa
	1 kgf/cm ²	98.067 kPa = 735.56 mm of Hg
	1 bar	100 kPa = 10 N/cm ²
	1 mm of Hg	1.3332 m-bar



Machine-
593/1650

**SHREE SHIVAM AGRO INDUSTRIES,
FLYING FARMERS-4ZS,
PADDY TRANSPLANTER**

**COMMERCIAL
(ICT)**

THIS TEST REPORT IS VALID UPTO 31.05.2031

16. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

16.1 Engine Performance:

- 16.1.1 The maximum power was observed as 3.17 KW under natural ambient condition against the declared value of 3.5 kW.
- 16.1.2 Specific fuel consumption of engine corresponding to maximum power recorded as 465 g/kWh against the declared value of 543 g/kWh.
- 16.1.3 Max. torque was observed as 9.34 Nm against the declared value of 8.3 Nm.
- 16.1.4 Back up torque of engine was observed as 4.83 %.

16.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the transplanter was observed to the extent of 1500 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.

16.3 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. Address of manufacturer
- ii. Make
- iii. Country of origin
- iv. Specific fuel consumption (g/kWh)

16.4 Field Test:

The transplanter was operated in varying field conditions for a total period of 26.0 hours for transplanting BALWAN PAN 842 variety of paddy seedlings. The results are summarized as under: -

- Av. forward speed of operation was observed as 3.12 to 3.19 kmph.
- Av. area covered was recorded as 0.237 to 0.252 ha/h.
- Av. depth of transplanting was recorded as 4.50 to 4.70 cm.
- The spacing between rows was recorded as 30 cm.
- Av. number of plants per hill was recorded as 11 to 11.20.
- Av. spacing between hills was recorded as 13.6 to 15.7cm.
- Av. total number of hills in 5 m row length was recorded as 30 to 37.
- Av. number of hills per sq. m. was recorded as 30.
- Av. percentage of missed hills was recorded as 0.62 to 1.42.
- Av. percentage of floating seedlings was recorded as 1.25 to 1.42.
- Av. percentage of buried seedlings was recorded as 0.62 to 0.71.
- Av. percentages of damaged seedling were recorded as Nil to 0.62.
- The total percentage of transplanting faults was recorded as Nil to 1.42.

Machine-593/1650	SHREE SHIVAM AGRO INDUSTRIES, FLYING FARMERS-4ZS, PADDY TRANSPLANTER	COMMERCIAL (ICT)
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- The consumption of nursery trays was recorded as 242 to 284 numbers per hectare.
- The hourly fuel consumption was recorded as 1.05 to 1.15 l and fuel required for planting of one hectare area was recorded as 4.31 to 4.60.

16.4.1 The quality of work was observed as smooth during entire transplanting operation. The overall performance of the machine was found satisfactory.

16.5 Components/assembly inspection:

16.5.1 The transplanter and engine were dismantled after 37.33 hours of operation and wear of critical components were observed within the limits.

16.5.2 The main gear box, planting box, planting arm drive mechanism and bearings were dismantled after completion of field operation and found in satisfactory working condition.

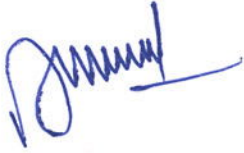


16.6 Safety provisions:

The machine is provided with various safety provisions while working in the field or moving on the road as mentioned in the **clause 5.10** of this test report.

16.7 Technical literature:

Operator's manual, service manual and parts catalogue of Rice Transplanter and engine in separate booklet were supplied with the Rice Transplanter for reference during the test. It is however, recommended that same may be revised in Hindi and other regional languages as per IS 8132: 1999 (Reaffirmed 2004) for the sake of user & technical personnel.

TESTING AUTHORITY

 Er. PRAMOD YADAV AGRICULTURAL ENGINEER	 Er. P.KAMALABAI SENIOR AGRICULTURAL ENGINEER
 Dr. B.M. NANDEDE DIRECTOR	



17. APPLICANT COMMENTS

We have gone through your comments and recommendations we will do corrective action on particular comments in our future products.