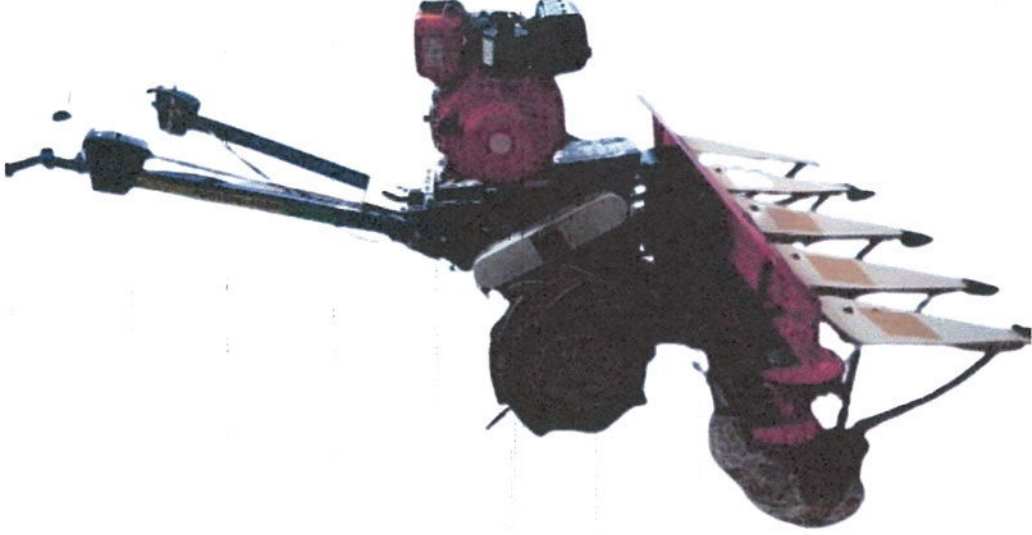


THIS TEST REPORT IS VALID UP TO 31.05.2031



FORTUNEAGRO, FAI-4G-120A SELF PROPRLED PADDY REAPER



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]

Website: <http://srfmtti.dacnet.nic.in/>

Machine-596/1653	FORTUNEAGRO, FAI-4G-120A SELF PROPELLED PADDY REAPER	COMMERCIAL (ICT)
	THIS TEST REPORT IS VALID UP TO 31.05.2031	



Assembler, (apa) : M/s FORTUNE AGRO IMPEX, Fortune House, #343, 9th block, Sir M. Visvesvaraya layout, Kengunte 1st Main road, Mallathahalli, Bangalore-560056, Karnataka.

Applicant : The assembler

FORTUNEAGRO, FAI-4G-120A SELF PROPELLED PADDY REAPER

Report No.: **Machine-596/1653**

Month: **June**

Year: **2024**



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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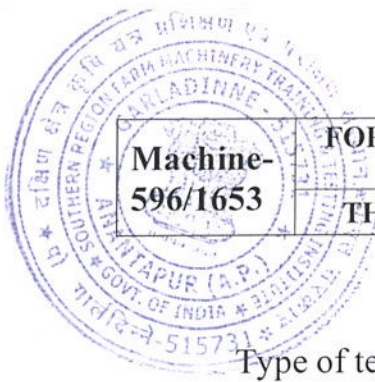
Telephone No. 08551-286441

Website: <http://srfmtti.dacnet.nic.in/>

E-mail: fmti-sr@nic.in

SOUTHERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE,
ANANTAPUR, (A.P.)

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Machine-596/1653

FORTUNEAGRO, FAI-4G-120A SELF PROPELLED PADDY REAPER

THIS TEST REPORT IS VALID UP TO 31.05.2031

COMMERCIAL (ICT)

Type of test : COMMERCIAL (ICT)

Period of test : 19.06.2023 to 01.06.2024

Test Report No. : **Machine-596/1653**

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 test sample was selected through random selection by virtual mode.
- 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 power reaper named "**FORTUNE AGRO, FAI-4G-120A SELF PROPELLED PADDY REAPER**". **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

Sl. 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
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- 596/1653	FORTUNEAGRO, FAI-4G-120A SELF PROPELLED PADDY REAPER	COMMERCIAL (ICT)
	THIS TEST REPORT IS VALID UP TO 31.05.2031	



18. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

18.1 Engine performance:

18.1.1 Engine maximum power was observed as 4.50 kW against the declared value of 4.0 kW.

18.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 412 g/kWh against the declaration value of 330g/kWh

18.1.3 Max. Torque was observed as 13.59 Nm. Against declaration value of 12.0 Nm.

18.1.4 Back up torque of engine was observed as 7.43 % against the declared values of 10%.

18.2 Noise measurement:

Max. Noise at operator's ear level was observed as 98 dB (A). This calls for reduction in noise to improve operator's comfort and safety.

18.3 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power Reaper was observed to the extent of 400 micron, which is on higher side. Therefore, necessary action to reduce the vibration should be taken in future.

18.4 The dimension of Knife does not conform, in full, to IS: 6025-1982. This should be looked into for necessary 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) Country of origin
- ii) Engine no.
- iii) Rated rpm
- iv) Specific fuel consumption (g/kWh)

18.6 Ease of operation & adjustment:

Safety guard **MUST** be provided for drive pulley & belt.

The exhaust **MUST** be provided with spark arresting device.

Safety notice & hazard warnings labels **MUST** be provided on machine.

18.7 Field performance Test:

18.7.1 Rate of work and fuel consumption:

- The speed of harvesting 2.63 to 2.99 kmph for paddy.
- The area harvested by the machine was recorded 0.216 to 0.254 ha/h.
- The average hourly fuel consumption varied 1.15 to 1.25 l/h
- The fuel consumption varied 4.42 to 5.18 l/ha

Machine- 596/1653	FORTUNEAGRO, FAI-4G-120A SELF PROPELLED PADDY REAPER	COMMERCIAL (ICT)
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18.7.2 Quality of Work:

- i) The post-harvest loss was observed 0.01 to 0.02%
- ii) The stubble weight was recorded as 43.0 mm to 57.8mm.

18.8 Wear of critical components:

- i) The wear rate of cutter bar on mass basis was recorded as 0.154% per hour.
- ii) The chemical composition of cutting (movable) blade and stationery blades are not conforming to the requirement of relevant IS (IS 6025:1982 (Reaffirmed: 1999)). Therefore, this should be taken care for corrective action.




18.9 Provision for safety:

A safety pin at driven sprocket of conveyor chain is not provided to take of overloading of cutter bar.

18.10 Technical literature:

The operation manual cum parts catalogue of reaper and engine in single booklet was supplied with the reaper for reference during the test. The manuals are not adequate. The initial setting and discard limit of critical components may be added in manuals and leaflets etc. It is however, recommended that same may be revised and brought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed: 2019) 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	

19. APPLICANTS COMMENTS

Nil

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