



**AMTEC**  
**Agricultural Machinery Testing and Evaluation Center**  
**1977**

**ACR 001:2021 CHECKLIST AND REMINDERS FOR THE AMTEC TEST CONDITIONS AND REQUIREMENTS FOR MECHANICAL RICE TRANSPLANTER**

**■ Application for AMTEC Test**

The test applicant shall submit AMTEC-OP-F01 (Agricultural Machinery Test Application Form) together with the following requirements:

- AMTEC-OP-16 (Waiver for Machine Specifications)
- AMTEC-OP-18 (Data Privacy Consent Form)

**■ Technical Specifications of the Machine**

The test applicant shall submit any document/s indicating the specifications and other relevant information of the machine upon application for testing.

- Operator's manual with complete specifications as indicated in Annex B of PNS/PAES 152:2015
- Brochure
- Machine specifications sheet (shall be filled out upon request and receipt of copy from AMTEC in case the manual or brochure is not available)

**■ Preparation and Operation of the Machine**

The mechanical rice transplanter shall be ready for field performance test. The officially designated representative and/or operator of the test applicant shall operate, demonstrate, adjust, repair, and decide on matters related to the operation of the machine. The operator shall be skilled in operating a mechanical rice transplanter.

**■ Running-in of the Machine**

A test run shall be conducted prior to the official test to check its condition and make necessary adjustments to the machine. No other adjustments shall be permitted while the official test is on-going.

**■ Test Plot**

The test applicant shall prepare at least three (3) test plots. Each test plot shall be:

- At least 1000 m<sup>2</sup> with ample space for headland turns;
- Rectangular with sides in the ratio of 2:1 as much as possible; and
- Puddled and leveled.

**■ Test Material**

The test applicant shall prepare rice seedlings which are sufficient for the three (3) test plots. They should be prepared according to the following manufacturer's recommendations for the seedlings:

- Days of age: \_\_\_\_\_
- Density, number/cm<sup>2</sup>: \_\_\_\_\_
- Mat size, L x W, mm: \_\_\_\_\_

**■ Other Test Necessities**

The following shall also be adequately supplied during the conduct of the field performance test:

- Fuel tank filled to full capacity;
- 5 L or sufficient fuel for refilling after each test trial for walk-behind type;
- 10 L or sufficient fuel for refilling after each test trial for ride-on type; and
- Tools for machine repair and adjustments.

**■ Machine Setting**

The mechanical rice transplanter shall be tested at the manufacturer's recommended setting for the following:

- Gear shift: \_\_\_\_\_
- Hill spacing, mm: \_\_\_\_\_
- Number of seedlings per hill: \_\_\_\_\_
- Planting depth, mm: \_\_\_\_\_

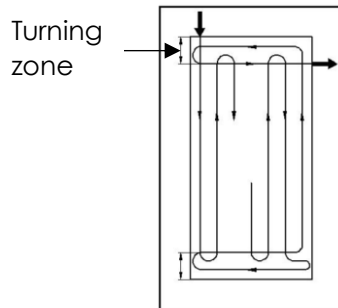


# AMTEC

## Agricultural Machinery Testing and Evaluation Center 1977

### ■ Recommended Planting Pattern

Before the operation, a turning zone shall be established. It shall be about one cycle of departure and return. Seedlings shall be transplanted next to the straight side of the border along the longest side of the field.



### ■ Requirements

AMTEC shall conduct various tests and verification on different parameters of the machine including the following requirements as per PNS/PAES 151:2015:

#### ■ Fabrication Requirements

Item	Requirement as per PNS/PAES 151:2015
Seedling Tray	<input type="checkbox"/> It shall be made of non-corrosive material.
Float	<input type="checkbox"/> It shall be made of non-corrosive material with a minimum thickness of 13 mm thickness and minimum width of 152 mm.
Transplanting Arm	<input type="checkbox"/> It shall be made of G.I. steel or better material with a minimum diameter of 10 mm. <input type="checkbox"/> It shall have a uniform spacing of at least 200 mm.
Grasping Fork	<input type="checkbox"/> It shall be made of gauge #24 G.I. plain sheet or better material.
Handle	<input type="checkbox"/> It shall be covered with a non-slip material.
Paddle Wheel	<input type="checkbox"/> It shall be made of G.I. steel or better material. <input type="checkbox"/> Wheel depth shall be adjustable.
Guide Wheels	<input type="checkbox"/> It shall be made of G.I. steel or better material.
Others	<input type="checkbox"/> All bearings shall be sealed. <input type="checkbox"/> All welded parts shall be in accordance with the criteria set in AWS D1.1:2000. <input type="checkbox"/> There shall be no crack on the welded area. <input type="checkbox"/> There shall be fusion between the adjacent layers of weld metal and between the weld metal and base metal. <input type="checkbox"/> All craters shall be filled to provide the specified weld size, except for the end of intermittent fillet welds outside of their effective length. <input type="checkbox"/> Weld profiles shall be in its acceptable form. <input type="checkbox"/> Welded joints shall not be less than 4 mm site fillet weld. <input type="checkbox"/> Undercut shall not exceed 2 mm for any length of weld.

#### ■ Standard Tools

Basic tools shall be provided for the mechanical rice transplanter. These tools shall be suitable to the necessary adjustment operations during maintenance and operation.



# AMTEC

## Agricultural Machinery Testing and Evaluation Center 1977

### ■ Safety, Workmanship and Finish

Item	Requirement as per PNS/PAES 151:2015
General	<input type="checkbox"/> The mechanical rice transplanter shall be painted and shall have a rust-free finish. <input type="checkbox"/> The mechanical rice transplanter shall be free from sharp edges.
Transmission system	<input type="checkbox"/> Chain and sprocket or belt and pulley assembly shall be covered.
Bolts	<input type="checkbox"/> All bolts shall conform to standards for strength application and shall be made of hot galvanized steel for corrosion resistance.

### ■ Performance Requirements

Criteria	Requirement as per PNS/PAES 151:2015
Field Efficiency, %, minimum	80
Damaged Hills, %, maximum	10
Missing Hill, %, maximum	10
Depth of Planting, mm	As per manufacturer's or desired setting
Distance Between Rows, mm	As per manufacturer's or desired setting
Distance Between Hills, mm	As per manufacturer's or desired setting
Power Requirement, kW	1.9 (walk-behind type) 3 (ride-on type)

### ■ Suspension and Termination of Test

If the test material and test plot do not conform with the recommended quantity and characteristics, AMTEC shall not proceed with the test. Should the test applicant request the conduct of the test despite the non-conformity to the test requirements identified by AMTEC, the applicant shall sign the AMTEC Waiver for Nonconformity to Test Requirements.

- AMTEC-OP-F24 (Waiver for Nonconformity to Test Requirements)

If the machine stops due to breakdown or malfunction during the test run affecting the machine's performance, the test may be suspended. If the machine cannot continue the operation, the test shall be consequently terminated.

### ■ Other Assistance During Test

1. For field and laboratory tests outside the AMTEC premises, the applicant shall shoulder the transportation expenses (i.e. fuel, toll fees, vehicle rental, plane fare, sea fare, etc.) of the AMTEC Staff assigned for the testing activity.
2. The applicant is requested to assist the AMTEC Staff in looking and/or making arrangements for hotel accommodation and food near the test site.
3. The applicant shall provide drinking water to the AMTEC Staff during the testing activity.
4. The applicant shall provide any form of shed or sunshade (e.g. tent, umbrella, etc.) for the test equipment, samples (if applicable) and AMTEC Staff during the testing activity in the field.
5. The applicant is requested to assist the AMTEC Staff in finding any means to access a safe and convenient restroom near the test site during the testing activity.



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■ **Testing Fee**

1. The testing fee for walk-behind type or ride-on type mechanical rice transplanter is PhP 10,000.
2. To proceed through AMTEC test, the test applicant shall settle at least 50 % of the testing fee which is non-refundable but transferrable.
3. In cases of additional testing during the field, the test applicant shall immediately submit the required documents and settle at least 50% of the testing fee within 5 working days after the testing proper.  
 Additional testing, number of machines: \_\_\_\_\_
4. Payment/s shall be directed to the following:  
 Through UPLB Cashier's Office (8Am to 3PM): AMTEC Trust Fund Code No. 8271632-40A2040101000  
 Through Landbank (8:30AM to 3PM): UPLB Trust Fund Account No. 1892100507 or UPLB FI Account No. 1892-1003-29

■ **Other Reminders**

1. All manufacturers, fabricators, assemblers, and importers (MFAI) shall secure a Certificate of Conformity (CC) from the Bureau of Agricultural and Fisheries Engineering (BAFE) which guarantees that their agricultural and fisheries machinery conforms with PNS/BAFS PABES or other relevant standards identified by BAFE. More information about the application for CC can be found at <http://bafe.da.gov.ph/index.php/certificate-of-conformity-of-manufacturers-fabricators-assemblers-distributors-dealers-importers-and-exporters/>.
2. All MFAI shall employ an Agricultural and Biosystems Engineer (ABE), as mandated by RA 10915 (ABE Law), who shall facilitate all activities and concerns pertinent to AMTEC testing and BAFE requirements. Do you currently have an ABE in your roster of employees?  Yes  No