



AMTEC
Agricultural Machinery Testing and Evaluation Center
1977

ACR 006:2022 CHECKLIST AND REMINDERS FOR THE AMTEC TEST CONDITIONS AND REQUIREMENTS FOR SEEDER AND PLANTER

■ 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 A of PAES 123:2001
- 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

During laboratory performance test, the metering mechanism and pattern of deposition of the seeder and planter shall be examined. AMTEC shall handle and operate the machine during the laboratory testing proper.

During field performance test, the seeder and planter shall be operated using the basic data gathered from and seeds used for the laboratory 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 seeder and planter.

■ 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 according to the recommendation of the test applicant and/or manufacturer. 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 500 m² for manually-operated seeder;
- At least 1000 m² for power-operated seeder;
- Rectangular with sides in the ratio of 2:1 as much as possible; and
- Well-prepared or tilled.

■ Test Material

The test applicant shall prepare the following materials which are sufficient for filling up their respective hoppers during laboratory performance test and for seeding or planting in the three (3) test plots during field performance test.

- Seeds of their choice which shall be of variety presently grown in the Philippines; and
- Granular fertilizer of their choice if seeding or planting is done with fertilizer application.

■ Other Test Necessities

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

- Fuel tank filled to full capacity;
- At least 4 L or sufficient fuel for refilling after each test trial for two-wheel tractor-drawn seeders;
- At least 20 L or sufficient fuel for refilling after each test trial for four-wheel tractor-drawn and self-propelled seeders; and
- Tools for machine repair and adjustments.



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Machine Setting

The seeder and planter shall be tested at the manufacturer's recommended setting for the following:

- | | |
|---|--|
| <input type="checkbox"/> Gear shift: _____ | <input type="checkbox"/> Seed delivery rate, kg/ha: _____ |
| <input type="checkbox"/> PTO speed, rpm: _____ | <input type="checkbox"/> Hill spacing, mm: _____ |
| <input type="checkbox"/> Working width, mm: _____ | <input type="checkbox"/> Number of seeds per hill: _____ |
| <input type="checkbox"/> Row spacing, mm: _____ | <input type="checkbox"/> Missing hill, %: _____ |
| <input type="checkbox"/> Depth of seeding, mm: _____ | <input type="checkbox"/> Fertilizer application rate, kg/ha: _____ |
| <input type="checkbox"/> Actual field capacity, ha/h: _____ | |

Recommended Field Operational Pattern

The PAES 123:2001 does not indicate any recommended pattern for seeding or planting. Therefore, the test applicant can decide what pattern they intend to use.

Requirements

AMTEC shall conduct various tests and verification on different parameters of the machine including the following requirements as per PAES 122:2001:

Fabrication Requirements

Item	Requirement as per PAES 122:2001
General	<input type="checkbox"/> The seeder shall be generally made of steel and/or plastic. <input type="checkbox"/> The seeder shall be provided with control to adjust seed depth.
Seed Plate	<input type="checkbox"/> It shall be replaceable.
Hopper	<input type="checkbox"/> It shall be designed to contain seed/ fertilizer with minimum frequency of refilling during operation.
Multi-Row Seeder	<input type="checkbox"/> It shall have adjustable row spacing. <input type="checkbox"/> It shall have an independent suspension for each row planter.
Four-Wheel Tractor-Mounted/ Trailed Seeder	<input type="checkbox"/> It may be provided with seed drop sensors and monitor.
Seeder with Fertilizer Applicator	<input type="checkbox"/> It shall be provided with adjustable fertilizer metering and delivery depth control. <input type="checkbox"/> It shall be designed to place the seed and fertilizer so that they will not be in contact with each other.

Performance Requirements

Criteria	Requirement as per PAES 122:2001
Seed Delivery Rate, kg/ha	As per manufacturer's recommended or desired setting
Actual Field Capacity, ha/h	As per manufacturer's recommended or desired setting
Uniformity of Work a. Row Spacing b. Depth of Seeding, mm c. Distance Between Hill, mm d. Number of Seeds per Hill e. Missing Hill, %	As per manufacturer's recommended or desired setting
Operation	Good quality of work shall be produced such as: (a) Accuracy and uniformity of seed and/ or fertilizer placement, (b) Ease of operation, (c) Evenness of spacing, and (d) Minimum seed damage.
Field efficiency, %	60 (Row-crop planter, without fertilizer applicator) 55 (Row-crop planter, with fertilizer applicator) 65 (Seed drill)



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■ **Other Requirements**

The seeder shall be easy to operate such as: (a) Hitching and unhitching from the tractor, (b) Adjusting the depth of planting, (c) Ease of handling operation; and (d) Clearing blockages.

■ **Standard Tools**

Basic tools shall be provided for the seeder and planter. These tools shall be suitable to the necessary adjustment operations during maintenance and operation.

■ **Workmanship and Finish**

- The seeder shall be free from manufacturing defects that may be detrimental to its operation.
- Any uncoated metallic surface shall be free from rust and shall be painted properly.
- The seeder shall be free from sharp edges and surfaces that may injure the operator.

■ **Suspension and Termination of Test**

If the test plot does 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 seeder and planter is PhP 16,000.
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 pass 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 12PM): 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