



AMTEC
Agricultural Machinery Testing and Evaluation Center
1977

**ACR 075:2024 CHECKLIST AND REMINDERS FOR THE AMTEC TEST CONDITIONS AND REQUIREMENTS FOR
WEEDER**

■ Application for AMTEC Test

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

- AMTEC-OP-F16 (Waiver for Machine Specifications)
- AMTEC-OP-F18 (Data Privacy Consent Form)

■ Technical Specifications of the Machine

The test applicant shall submit any document/s indicating the specifications of the machine upon application for testing. In case the said document/s are not available, the applicant shall fill out the Machine Specifications Sheet provided by AMTEC upon request.

- Operator's manual with complete machine specifications as indicated in Annex B of PAES 142:2005
- Machine specifications sheet (shall be filled out upon request and receipt of copy from AMTEC in case the manual or brochure is not available)
- Brochure

■ Preparation and Operation of the Machine

The weeder shall be ready for testing. The officially designated operator of the test applicant shall operate, demonstrate, adjust, and repair. Meanwhile, the officially designated representative shall decide on matters related to the operation of the machine.

■ Running-in of the Machine

A test run shall be conducted prior the official test as to check its condition and make necessary adjustments to the machine.

■ Test Plot

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

- Rectangular with sides in the ratio of 2:1 as much as possible;
- Size of the test area should be at least 20 m² (hand-held), 100 m² (push-type), 250 m² (animal-drawn), 500 m² (two-wheel tractor-drawn), and 1000 m² (4W tractor-drawn).
- The headland shall be at least 3 m in length (depending on tractor size).
- The test shall be carried out on a dry or wet field depending on the manufacturer.

■ Test Material

- The tractor to be used shall be compatible with the plow in accordance with the manufacturer's specification of required power.
- Draft animals shall be in good physical condition during the test. The implement's draft shall be approximately 15% of the animal's body weight.
- Human operator shall be in good health, experienced in the use of weeder and be familiar with the operation and requirements of the test method (manual weeding).

■ Other Test Necessities

The following shall also be adequately supplied during the conduct of testing:

- Fuel sufficient for the entire duration of test trials;
- Tools for machine repair and adjustments

■ Machine Setting

- For four-wheel tractor-mounted plow, the gear setting of the tractor shall be recorded.
- If possible, for animal-drawn weeder, the weight of the animal shall be recorded.
- Traveling speed guidelines for different types of weeder:
 - For animal-drawn, 2-4 kph shall be maintained during the operation.
 - For two-wheel tractor-drawn, 3-4 kph shall be maintained during the operation.
 - For four-wheel tractor drawn, 5-6 kph shall be maintained during the operation.

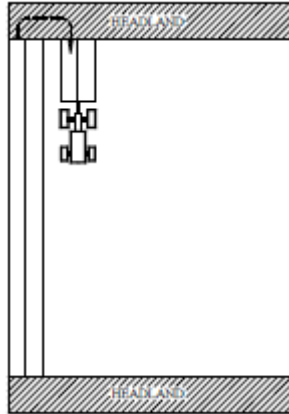


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■ Recommended Tilling Pattern

For tractor-drawn weeders, the recommended field operational pattern is shown below:



■ Performance and/or Fabrication Test Requirements

AMTEC shall conduct various tests and verification on different performance parameters of the machine including the following requirements as per PNS/PAES 141:2004:

■ Fabrication Requirements

Criteria	Requirement as per PNS/PAES 141:2004
Hand-held Weeders	<input type="checkbox"/> The soil-working part shall be made with carbon steel with at least 50% carbon content and 0.05% sulphur and phosphorus content (e.g. AISI 1055). <input type="checkbox"/> The handle shall be made with hard wood, hard plastic, and/or steel tube.
Push-type and Power Weeders	<input type="checkbox"/> The soil-working part shall be made with carbon steel with at least 50% carbon content and 0.05% sulphur and phosphorus content (e.g. AISI 1055). <input type="checkbox"/> Cast iron shall be used for wheel hub and bushing. <input type="checkbox"/> Mild steel shall be used in the manufacture of frame, axle, floats, and handle.
Animal-drawn Weeders	<input type="checkbox"/> The soil-working part shall be made with carbon steel with at least 50% carbon content and 0.05% sulphur and phosphorus content (e.g. AISI 1055). <input type="checkbox"/> Hard wood or mild steel shall be used in the manufacture of frame.
Two-wheel Tractor Weeders	<input type="checkbox"/> The soil-working part shall be made of carbon steel with at least 80% carbon content (e.g. AISI 1080). <input type="checkbox"/> Mild steel shall be used in the manufacture of the toolbar. <input type="checkbox"/> Steel spring shall be used for spring-loaded tines.
Four-wheel Tractor Weeders	<input type="checkbox"/> Carbon steel with at least 80% carbon content (e.g. AISI 1080) or alloy steel with at least 0.0005% boron content shall be used in the manufacture of the soil-working part. <input type="checkbox"/> Mild steel shall be used in the manufacture of the toolbar. <input type="checkbox"/> Steel spring shall be used for spring-loaded tines.
Others	<input type="checkbox"/> The weeder shall be easy to hitch and unhitch from the animal harness or tractor linkage. <input type="checkbox"/> The hitch shall be compatible with the two- and four-wheel tractor linkages (see PAES 107 and 118, respectively). <input type="checkbox"/> The weeder shall be free from manufacturing defects such as sharp edges and surfaces that may be detrimental to the operator. <input type="checkbox"/> The weeder shall be free from rust and shall be painted properly.

■ Performance Requirements

Criteria	Requirement as per PNS/PAES 141:2004
Weeding Efficiency, %, minimum	80
Percent Plant Damage, %, maximum	6



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■ 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)

On the other hand, 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.

■ Testing Fee

1. The testing fee for weeder is Php 8,000.
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