



AMTEC
Agricultural Machinery Testing and Evaluation Center
1977

ACR 016:2023 CHECKLIST AND REMINDERS FOR THE AMTEC TEST CONDITIONS AND REQUIREMENTS FOR CORN MILL

■ 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 and other relevant information of the machine upon application for testing.

- Operator's manual with complete specifications as indicated in Annex B of PNS/BAFS PAES 252:2021
- Brochure with complete specifications
- 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 corn mill shall be ready for performance test by ensuring that it has been assembled and installed in accordance with the instruction of the manufacturer. 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 corn mill.

■ 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 Site

The test applicant shall install the corn mill on a stable level ground on a site with:

- Ample provisions for material handling, temporary storage, and workspace;
- Suitable for normal working condition; and
- Adequate ventilation and lighting.

■ Test Material

The test applicant shall prepare corn kernels samples that are sufficient for at least one hour of continuous milling operation. The test comprises of three (3) trials wherein excess samples shall be used for the running-in of the machine and laboratory tests prior to the actual conduct of test. Specifically, they should be prepared according to the following characteristics:

- Variety: commonly or locally grown white corn flint variety
- Moisture content, wet basis: at most 14%
- Purity: at least 95%

The sample shall be prepared in such a way that the test sample to be used in each test trial have identical characteristics in terms of source, variety, moisture content, and purity.

■ Other Test Necessities

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

- Fuel tank filled to full capacity;
- 10 L or sufficient fuel for refilling after each test trial (for engine-operated machine); and
- Tools for machine repair and adjustments.
- Weighing scale with at least 100 kg capacity; and
- Sacks and any available containers.



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Machine Setting

The corn mill shall be operated for sufficient duration with load at the test site by the official representative of the test applicant using the manufacturer's recommended setting. The testing agency shall make all measurements, which form part of the test and take prescribed samples. After the test run, the area shall be cleaned and then prepared for the next trial. This procedure shall be repeated for the succeeding test trials. No other adjustments shall be permitted during the test.

Requirements

AMTEC shall conduct various tests and verification on different parameters of the machine including the following requirements as per PNS/BAFS PAES 251:2021:

Fabrication Requirements

Item	Requirement as per PNS/BAFS PAES 251:2021
General	<input type="checkbox"/> Steel bars, metal sheet or plate, or any appropriate materials should be used in the manufacture of the different components of corn mill. <input type="checkbox"/> Materials that are directly in contact with the product shall be food grade.

Safety, Workmanship and Finish

Item	Requirement as per PNS/BAFS PAES 251:2021
General	<input type="checkbox"/> Shall be free from any manufacturing defects that may be detrimental to its operation. <input type="checkbox"/> All metal surfaces shall be free from rust and painted properly, if applicable. <input type="checkbox"/> Parts exposed to the operator shall be free from sharp edges and rough surfaces. <input type="checkbox"/> All welded parts shall be in accordance with relevant criteria specified in American Welding Society (AWS) D1.1:2000 (Structural Welding Code – Steel) which specifically include the following: <ul style="list-style-type: none"> <input type="checkbox"/> There shall be no crack on the welded area. <input type="checkbox"/> There shall be fusion between adjacent layers of weld metal and base metal.
Noise	<input type="checkbox"/> Maximum allowable noise level shall be 100 dB(A). <input type="checkbox"/> Provisions for ear protection shall be provided.
Base	<input type="checkbox"/> Shall be rigid and durable without any noticeable cracks and weak joints.
Rotating components	<input type="checkbox"/> Should be statically and dynamically balanced and shall have safety guards.
Emergency stop	<input type="checkbox"/> Mechanism for emergency stop or immediate load disengagement of power shall be provided.
Warning notices	<input type="checkbox"/> Shall be provided in accordance with PAES 101:2000.
Dust collector	<input type="checkbox"/> Should be provided.
Hopper Inlet	<input type="checkbox"/> Safety of the operators from the hopper inlet shall be provided.

Performance Requirements

Criteria	Requirement as per PNS/BAFS PAES 251:2021
Milling capacity, kg/h	As specified by the manufacturer
Main Product Recovery, percent, minimum	55
Losses, percent, maximum	5
Degermer Efficiency, percent, minimum	80



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■ Warranty for Fabrication and Services

General

- Warranty shall be provided for parts and services except for normal wear and tear of expendable or consumable maintenance parts for at least one year upon the acceptance of procuring entity of the corn mill.
- General requirements of the warranty shall conform to PNS/BAFS/PAES 192:2016 (Agricultural machinery – Guidelines on after-sales service).

■ Maintenance and Operation

General

- Shall be provided with a set of manufacturer's standard tools required for maintenance.
- Each basic component of the corn mill shall have provision for regular and ease of cleaning.
- Shall be easy to operate, maintain, and repair.

Operator's Manual

- Shall be based on PAES 102:2000 (Agricultural machinery – Operator's manual – Content and presentation).
- Maintenance schedule and list of the non-warrantable parts of the corn mill shall be provided.

■ Suspension and Termination of Test

If the test material 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.

■ Testing Fee

1. The testing fee for corn mill is PhP 13,000.
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 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



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■ **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