ANTAM STANDARD CODE

FOR TESTING OF PADDY TRANSPLANTER

Rice Transplanters are to be considered the same machines as Paddy Transplanters for the purpose of this Code

UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific
CSAM

003-2022*

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Centre for Sustainable Agricultural Mechanization

United Nations Economic and Social Commission for Asia and the Pacific

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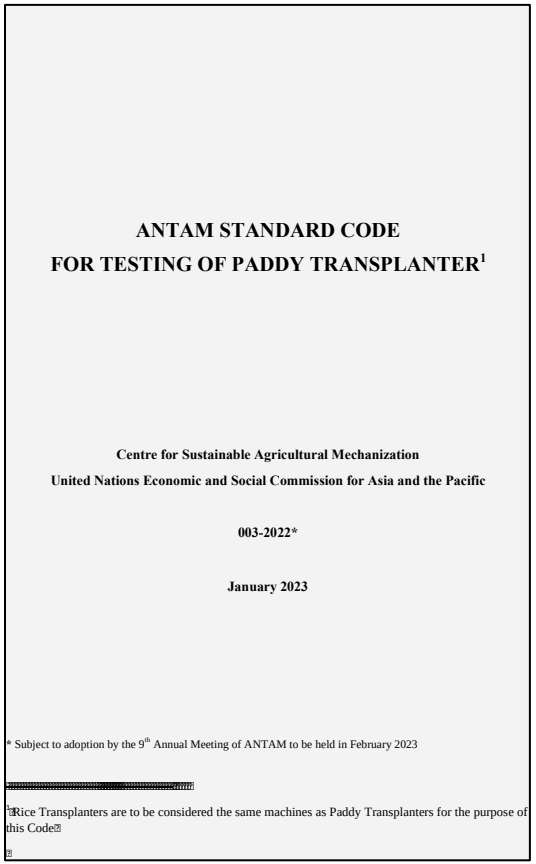
Indonesia Center For Agricultural Engineering Research and Development

Ministry Agriculture of Indonesia

It cover 13 chapter start from 1. Scope - 13. Waterprof test

It revised of ANTAM STANDAR CODE For Testing of Paddy Transplanters 003-2017



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FOR TESTING OF PADDY TRANSPLANTER[1]

Centre for Sustainable Agricultural Mechanization
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* Subject to adoption by the 9th Annual Meeting of ANTAM to be held in February 2023

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Microsoft Word Document

scope of transplanter. walking and riding

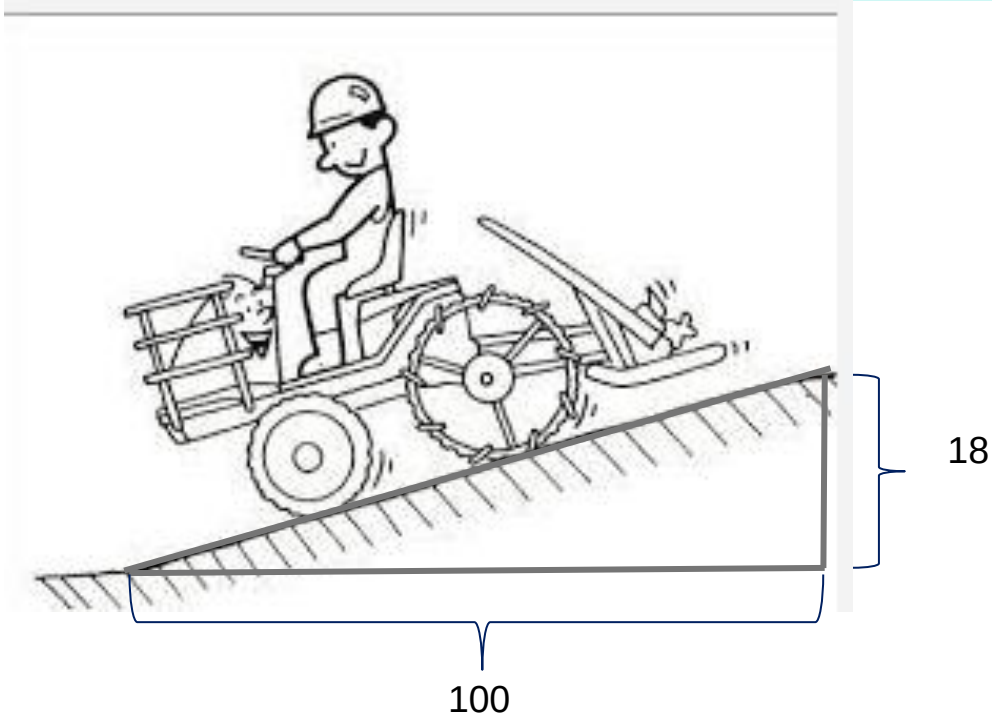
6.1 Tests to be conducted on paddy transplanter are given below:

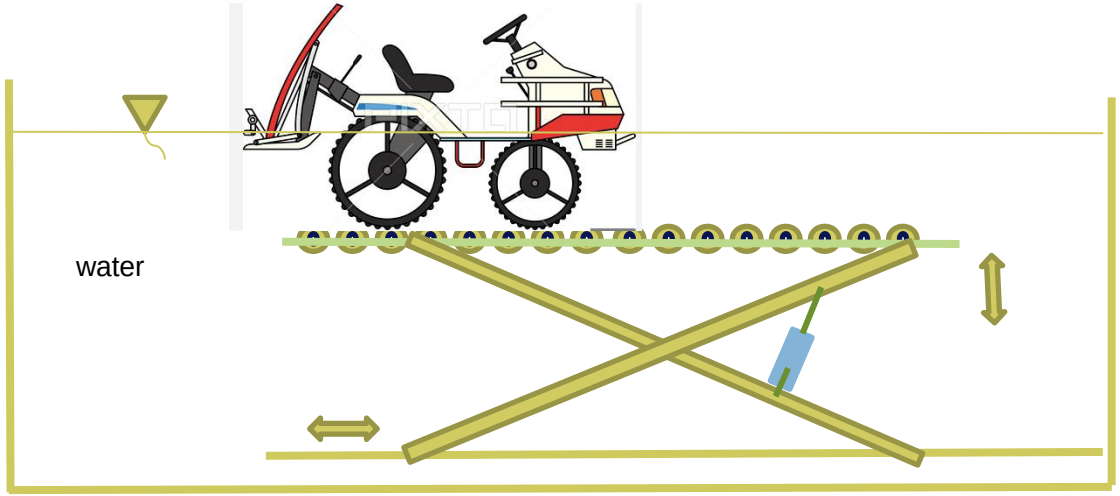
1. Checking of specifications
2. Basic safety requirements
3. Parking brake test (if applicable)
4. Noise test
5. Water proof test
6. Field performance test (machine performance and transplanting performance)

Safety test and requirement of transplanter

No	Parameter	Requirement
1	The exposed transmission and rotating part device	Covered and protected
2	Position of exhaust port	Do not facing to the operator
3	The operator work floor (riding type)	Should not slip and flat
4	The row marker (if applicable)	Should have locking mechanism
5	The operator symbol	Should be visibly near the key control
6	The gap distance between control level	Min 25 mm
7	The surface of pedal	Should non lip and easy to clean
8	The positive pole of battery	Should have protective cover
9	The foot step on riding transplanter	Should put on left and right, with max height 55 cm
10	All exposed sharp edges	Should have smooth finish
11	The head lights	Should have on front and rear side (optional)
12	Reverse horn (Riding type)	Should be equipped
13	Protective device for operator include earmuffs	Should be equipped
14	Dangerous moving parts	Should be indicated by safety signs, and illustrated on operating manual

Parking brake test




water

Field test

Seedlings Conditions shall be recorded as follows:

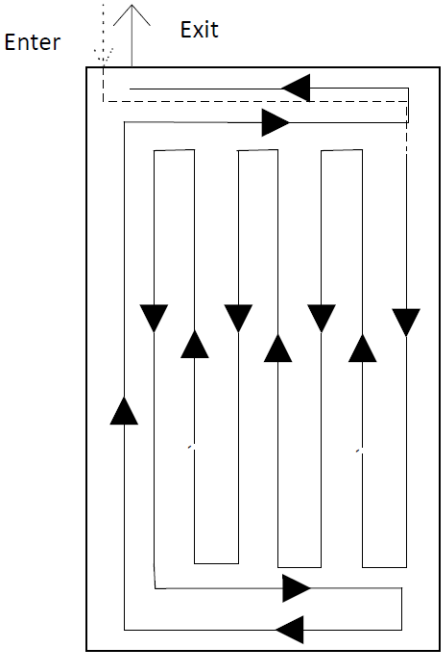
- Age of seedlings (Days)
- Variety
- Plant density (No. of plants per cm^2)
- Leaf stage (No. of leaves)
- Height of seedlings (mm)
- Thickness of seedling mat (mm)

Please randomly sample 3 seedling mats and take 5 measurements of seedling number per cm^2 for each seedling mat. Report the average number of seedlings per cm^2 in **ANNEX F**.

The actual field condition shall be recorded as follows:

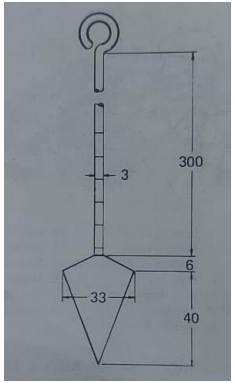
- Area (L x W) (m^2)
- Soil Type
- Soil hardness/Drop cone test (Cone depth (mm))
- Depth of hard pan/Foot zinkage (mm)
- Depth of water (mm)
- Qualitative assessment (leveling, stubble)
- Method of tillage
- Method of puddling

Please provide specific soil physical properties including bulk density, clay percentage in addition to the soil type **ANNEX F**.
To be collected after cone depth data measurement is completed.
A brief description of the measurement method of field levelness and stubble shall be provided in the test report **ANNEX F**.



The following transplanter settings shall be recorded before the test:

- Distance between hills (mm)
- Depth of planting (mm)
- Number of seedlings per hill



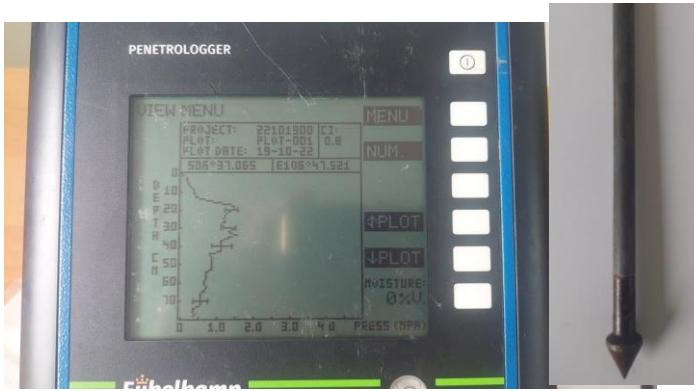
Soil hardness

The soil hardness at transplanting operation is expressed with the depth of penetration of a drop type cone penetrometer and called “cone depth”. The apex angle of the cone should be 45 degrees and weight is about 135 grams. Cone penetrometer should drop from a height of 1.0 meter from the soil surface, without standing water to the tip of the cone. After penetrating, the depth should be measured from the tip of the cone to the soil surface in centimeters (RNAM 1983).

Soil hardness refers to the top soil surface layer.

The instrumen :

a. Meter
b. Callipers
c. Stop watch
d. Tachometer
e. Sound level meter .
f. The liter
g. Sound level meter
h. Soil penetrollogerr



Soil penetrollogerr

2 cm^2 of circle are, 60^O angle of cone