

Testing of Farm Machinery in India and the role of ANTAM

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Testing network in India

1. CRFMT&TI, Budni, M.P
2. NRFMT&TI, Hissar, Haryana
3. SRFMT&TI, Garladinne, AP
4. NERFMT&TI, Biswanath Chariali, Assam

Other Institutions for Testing Agricultural
Machinery in India

SAUs - 17

ICAR Institutes - 2

Central University - 1

National Institute - 1

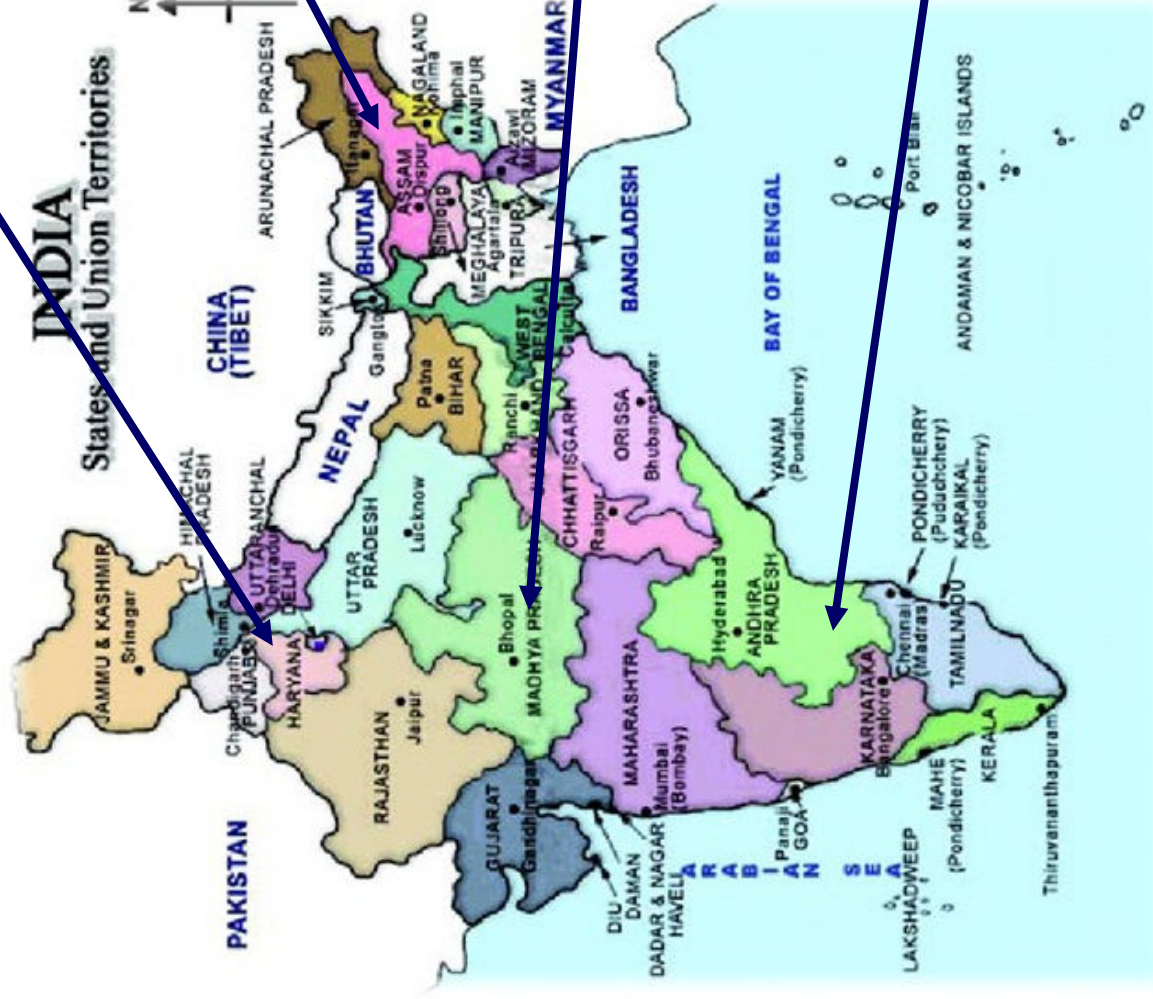
Location of FMTTI'S

Northern Region Farm Machinery Training and Testing Institute, Hissar, (1963)

North-Eastern Region Farm Machinery Training and Testing Institute, Biswanath-Chariali (1990)

Central Farm Machinery Training and Testing Institute, Budni (1956)

Southern Region Farm Machinery Training and Testing Institute, Garladinne, Anantpur (1983)



Objectives of Testing in India

1. Assessing functional suitability and performance
2. Deciding the suitability of machine for Indian conditions for import, production and popularization
3. Information to farmers and users to compare performance
4. Recommendations to financial institutions for assistance to farmers and manufacturers

Objectives of Testing in India

5. Feedback to manufacturers on design deficiencies, field complaints and after sales service
6. Promoting mechanization in accordance with international standards
7. Assisting Bureau of Indian Standards (BIS) in formulation of standards
8. Input for R&D organizations in agricultural machinery and equipment

Purpose of Testing

- i. Maintaining proper standards in quality
- ii. Adherence to safety aspects
- iii. Certification for financial assistance
- iv. Protection of interests of farmers

Types of tests carried out

Commercial Tests

- i. Initial test on machines ready for commercialization
- ii. Batch test on commercial machines in regular manufacture
- iii. Series test of large number of machines simultaneously under same conditions for comparative evaluation
- iv. Survey for assessing general performance to get feedback

Types of tests carried out

Confidential Tests

Tests carried out for providing confidential information on the performance of the machine to manufacturer before commercialization

Test Codes for Machinery

For BLS certification, two test codes are followed

- i. Specifications of machinery and materials used
- ii. Elaborate testing requiring laboratory, field and endurance test

BIS Codes for Machinery

1. Specifications of equipment
2. Test codes for various machinery
3. Safety and operational requirements
4. Standards for raw materials used in the fabrication of agricultural machinery
5. Code of practices for installation, operation and maintenance
6. Nomenclature of equipment and glossary of terms

Total No of Standards: 71; Primary Tillage: 13; Secondary Tillage: 17;
Sowing and Planting: 7; Interculture and Weeding: 7; Harvesting: 21;
Threshing: 13

Requirements of ANTAM

1. Responsibilities of member countries
2. Liabilities
3. Benefits
4. Present level of farm mechanization

Outline of ANTAM

- ❑ ANTAM will comprise of authorized testing centres in the member countries
- ❑ The test centres could be Governmental or private but recognized by the respective Governments
- ❑ ANTAM to ensure adoption of uniform testing standards for acceptance by all member countries

Prospects of ANTAM-I

- Harmonization of testing protocols and standards among member countries
- Capacity building of test engineers
- Standardisation of methods and procedures for testing
- Sustainability of ANTAM through testing fee for agricultural machinery

Prospects of ANTAM-II

- ANTAM to be financed, run, and managed by manufacturers associations
- ANTAM to emerge as a network of testing facilities in the member countries
- Formulation of uniform test procedures
- Test certificate of a machine tested in one country to be honoured by all member countries
- Testing centres in different countries to be members of ANTAM

Benefits of ANTAM

- Ensuring prescribed quality standards of the agricultural machinery being imported/exported.
- **Benefit to farmer in the selection and procurement of quality machinery**
- Also facilitates government assistance if the machinery qualifies the prescribed test standards.

Modality of ANTAM-I

- a) Prepare a report on test facilities and protocols available in member countries;
- b) Preparation of check-list to satisfy a set of criteria for export of machinery to different countries
- c) Harmonisation of successful test methodologies to member countries;

Modality of ANTAM-II

- d) Publication of a handbook of test codes for ANTAM;
- e) Working out the modalities of financial assistance for operationalising ANTAM
- f) Identification of manufacturers and forming a consortium for prototype exchange and design drawings;

Modality of ANTAM-III

- g) Local manufacture of machinery in respective countries through sharing of technologies;
- h) Strategies for appropriate agricultural mechanization and agri-business development
- i) Strategies for skills development through exchange of man-power and training;

Modality of ANTAM-IV

- Each member-country to have testing facilities for agricultural machinery
- Countries not having test facilities can collaborate with others through an MoU.
- Test standards developed by erstwhile RNAM could be adopted as base reference material.

Funding of ANTAM

- Governments of respective member-countries should provide funds for the establishment of test facilities
- It may be own funds or in collaboration with other countries
- Operational expenses may be met from the testing fee
- UNAPCAEM should explore providing some seed money for establishing testing centres