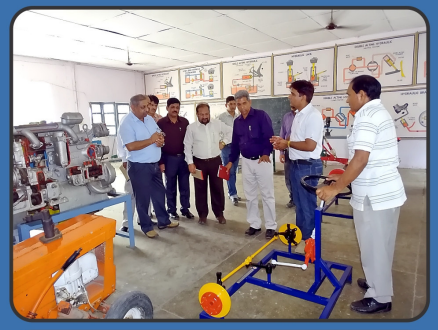

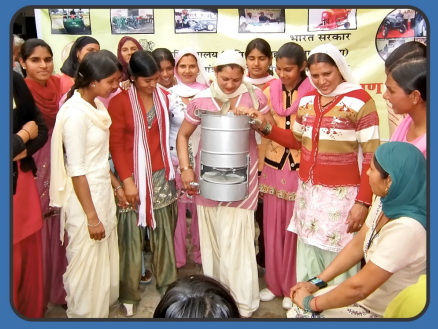

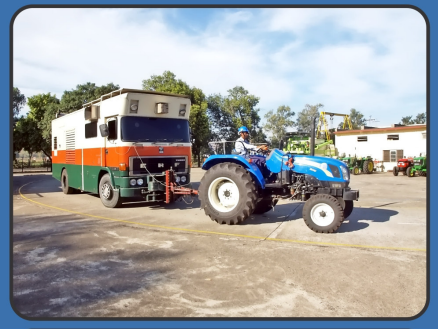


Revised in 2016-17

SUB-MISSION ON AGRICULTURAL MECHANIZATION

OPERATIONAL GUIDELINES

(Twelfth Five Year Plan)

Government of India

Ministry of Agriculture and Farmers Welfare

Department of Agriculture, Cooperation & Farmers Welfare
(Mechanization & Technology Division)
Krishi Bhavan, New Delhi-110001
2014 (Revised in 2016-17)

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ABBREVIATIONS

AAP	Annual Action Plan
A&C	Agriculture & Cooperation
ADC	Additional Commissioner
ADG	Assistant Director General
ADM	Additional District Magistrate
AICRP	All India Coordinated Research Project
ATMA	Agricultural Technology Management Agency
BIS	Bureau of Indian Standards
CCEA	Cabinet Committee on Economic Affairs
CFMTTI	Central Farm Machinery Training & Testing Institute
CHC	Custom Hiring Centers
CIPHET	Central Institute of Post Harvest Engineering & Technology
CMVR	Central Motor Vehicle Rules
CSAM	Centre for Sustainable Agricultural Mechanization
CSIR	Council of Scientific and Industrial Research
DAC&FW	Department of Agriculture, Cooperation & Farmers Welfare
DC	Deputy Commissioner
DD(A)	Deputy Director (Agriculture)
DDG	Deputy Director General
DLEC	District Level Executive Committee
EC	Executive Committee
EE(A)	Executive Engineer (Agriculture)
EFC	Expenditure Finance Committee
FMTTI	Farm Machinery Training & Testing Institute
FPO	Farmer Producer Organization
GFR	General Financial Rules
GOI	Government of India
ha	Hectare
HP	Horse Power
ICAR	Indian Council of Agricultural Research
ICRISAT	International Crop Research Institute for Semi-Arid Tropics
ICT	Information Communication Technology
IRRI	International Rice Research Institute
JD(A)	Joint Director (Agriculture)

JICA	Japan International Cooperation Agency
KVK	Krishi Vigyan Kendra
kW	Kilo-Watt
M&T	Mechanization & Technology
MIDH	Mission for Integrated Development of Horticulture
MIP	Mission Integration Planning
MIS	Management Information System
NABARD	National Bank for Agriculture & Rural Development
NERFMTTI	North Eastern Region Farm Machinery Training & Testing Institute
NFSM	National Food Security Mission
NIAE	National Institute of Agricultural Engineering
NMOOP	National Mission on Oil Seeds & Oil Palms
NRFMTTI	Northern Region Farm Machinery Training & Testing Institute
NSC	National Steering Committee
NSQF	National Skill Qualification Framework
PHT	Post Harvest Technology
PHTM	Post Harvest Technology & Management
PPP	Public Private Partnership
PRI	Panchayati Raj Institutions
PSU	Public Sector Undertaking
PTO	Power Take Off
QPR	Quarterly Progress Report
R&D	Research & Development
RKVY	Rashtriya Krishi Vikas Yojana
SAU	State Agricultural University
SC	Scheduled Caste
SFAC	Small Farmers Agri-Business Consortium
SHG	Self Help Groups
SLEC	State Level Executive Committee
SMAM	Sub-Mission on Agricultural Mechanization
SRFMTTI	Southern Region Farm Machinery Training & Testing Institute
ST	Schedule Tribes
TSP	Tribal Sub Plan
UG	User Groups
UT	Union Territory

SUB-MISSION ON AGRICULTURAL MECHANIZATION

OPERATIONAL GUIDELINES

1.0 Introduction

(i) Agricultural land area in the world has limit, but the demand for food is ever increasing due to population growth. To increase productivity in the limited land so as to meet the expanding demand arising from population growth as well as higher income is very important mission.

(ii) The task assumes greater importance to India, than the rest of the world considering that India accounts for 2.4% of the world's geographical area and 4% of its water resources, but has to support 17% of the world's human population and 15% of the livestock.

(iii) To increase productivity, timely and precise field work is necessary. To make it possible, agricultural machines take an important role.

(iv) Among the states, farm power availability in Punjab, Haryana, Western Uttar Pradesh and western part of Rajasthan is higher than the National average of 1.84kW/ha. In rest of the country, especially in Eastern and North-East Regions, it is significantly lower which necessities promotion of farm mechanization as a special Mission.

(v) Sub Mission on Agricultural Mechanization (SMAM) will be implemented in accordance with guidelines described hereunder.

(vi) The scheme will be implemented in all the states, to promote the usage of farm mechanization and increase the ratio of farm power to cultivable unit area up to 2 kW/ha.

(vii) SMAM will have Central Sector Schemes under component No.1 & 2. Centrally Sponsored Schemes are covered under component No. 3 to 8 in which Government of India contributes 60% and states contribute 40%. Funding pattern for states of Northern-Estern and Himalayan region, the share of Govt. of India & State Govt. is 90:10.

2.0 Mission Objectives

The Mission objectives are as follows:

(i) Increasing the reach of farm mechanization to small and marginal farmers and to the regions where availability of farm power is low;

(ii) Promoting 'Custom Hiring Centres' to offset the adverse economies of scale arising due to small landholding and high cost of individual ownership;

(iii) Creating hubs for hi-tech & high value farm equipments;

(iv) Creating awareness among stakeholders through demonstration and capacity building activities;

(v) Ensuring performance testing and certification at designated testing centers located all over the country.

3.0 Mission Strategy

To achieve the above objectives, the Mission will adopt the following strategies:

(i) Conduct performance testing for various farm machineries and equipments at the four Farm

Machinery Training and Testing Institutes (FMTTIs), designated State Agricultural Universities (SAUs) and ICAR institutions;

(ii) Promote farm mechanization among stakeholders by way of on-field and off-field training and demonstrations.

(iii) Provide financial assistance to farmers for procurement of farm machinery and implements

(iv) Establish custom hiring centres location and crop specific farm machinery and implements

(v) Provide financial assistance to small and marginal farmers for hiring machinery and implements in low mechanized regions.

4.0 Mission Components

4.1 Promotion and Strengthening of Agricultural Mechanization through Training, Testing and Demonstration: Aims to ensure performance testing of agricultural machinery and equipment, capacity building of farmers and end users and promoting farm mechanization through demonstrations.

4.2 Demonstration, Training and Distribution of Post Harvest Technology and Management (PHTM): Aims at popularizing technology for primary processing, value addition, low cost scientific storage/transport and the crop by-product management through demonstrations, capacity building of farmers and end users. Provides financial assistance for establishing PHT units.

4.3 Financial Assistance for Procurement of Agricultural Machinery and Equipment: Promotes ownership of various agricultural machinery & equipments as per norms of assistance.

4.4 Establish Farm Machinery Banks for Custom Hiring: Provides suitable financial assistance to establish Farm Machinery Banks for Custom Hiring for appropriate locations and crops.

4.5 Establish Hi-Tech, High Productive Equipment Hub for Custom Hiring: Provides financial assistance to set up hi-tech machinery hubs for high value crops like sugarcane, cotton etc.

4.6 Promotion of Farm Mechanization in Selected Villages: Provides financial assistance to promote appropriate technologies and to set up Farm Machinery Banks in identified villages in low mechanised states.

4.7 Financial Assistance for Promotion of Mechanized Operations/hectare Carried out Through Custom Hiring Centres: Provides financial assistance on per hectare basis to the beneficiaries hiring machinery/equipments from custom hiring centres in low mechanized areas.

4.8 Promotion of Farm Machinery and Equipment in North-Eastern Region: Extends financial assistance to beneficiaries in high-potential but low mechanised states of North-East.

5.0 Position of Ongoing Schemes

Farm Mechanization programmes are also being implemented through other missions/schemes such as RKVY, MIDH, NMOOP & NFSM, which would continue to be implemented subject to these guidelines. The Central Sector schemes 'Promotion and Strengthening of Agricultural Mechanization through Training, Testing and Demonstration' and 'Post Harvest Technology & Management' stand merged with this Sub-Mission.

6.0 Mission Structure

6.1 National Level

The Mission will have a National Steering Committee (NSC) under Chairmanship of Secretary (AC&FW), with following composition:

Secretary, Department of Agriculture, Cooperation & Farmers Welfare	Chairman
Additional Secretary & Financial Advisor, DAC&FW	Member
Additional Secretary (M&T) , DAC&FW	Member
Joint Secretary (RKVY) , DAC&FW	Member
Joint Secretary (MIDH), DAC&FW	Member
Joint Secretary (Crops), DAC&FW	Member
Joint Secretary (M&T),DAC&FW & Mission Director	Member Secretary
DDG (Engg.) ICAR, Agriculture Commissioner, Horticulture Commissioner, ADC(M&T), DC (M&T), Directors FMTTIs	Experts Members

NSC will be the policy formulating body giving overall direction and guidance to the Mission, and will monitor and review its progress and performance. It will be empowered to lay down and amend operational guidelines, other than those affecting financing pattern. NSC shall meet at least two times in a year.

6.2 Executive Committee

The Executive Committee (EC) will comprise of the following members:

Additional Secretary (M&T)	Chairman
Joint Secretary (M&T), DAC&FW	Member Secretary
ADG (Engg), ADG (P.Engg.) ICAR, ADC (M&T), ADC (Crops), ADC (Horticulture), DC (M&T) and Director, CFMTTI Budni	Experts Members

(i) EC will oversee activities of the Mission and approve Action Plans of various states in accordance with the prescribed norms.

(ii) EC is empowered to reallocate resources across States/Uts from available saving (unutilized funds) out of annual action plan allocation and components and approve projects on the basis of approved financial assistance norms. EC will use its discretion in approving only those components of a project, for which cost norms/pattern of financial assistance have been approved by the EFC/CCEA.

(iii) EC is also empowered to approve special interventions under flexi funds but within the approved components of SMAM and subject to ratification by National Steering Committee. EC will ensure smooth functional linkages among different agencies. EC shall meet as frequently, as required.

(iv) M&T Division in DAC&FW will provide necessary technical support to EC to administer the scheme as under:

a) Indicate tentative provisions for each component at the beginning of Financial Year (March-

April) to facilitate the States in preparing Annual Action Plan (AAP) as per format at Annexure -VII.

b) Visit the states regularly and frequently to provide guidance in organizational and technical matters.

c) Help in the implementation, monitoring and evaluation of various interventions in the mission and provide feedback reports to the Mission Director

d) Compile materials for capacity building, conduct and participate in the promotional events such as, workshops/seminars/exhibitions on different subjects in different regions of the country.

e) Undertake publicity/information campaign to create awareness on farm mechanization, document and disseminate the success stories.

f) Assist the State Agencies in concurrent evaluation based on performance indicators

g) Assess state-wise farm power status, availability and existing gap and identify the future requirements

h) Prepare the agenda for the EC and NSC meetings

i) 1% of annual outlay of the Sub-Mission will be earmarked for incurring administrative and other contingent expenses towards the above.

6.3 State Level

6.3.1 The State Level Executive Committee (SLEC) will comprise of the following:

Agricultural Production Commissioner/ Principal Secretary	Chairman
Director (Agriculture)/Director (Agricultural Engineering)	Member Secretary
Director (Horticulture)	Co-Member Secretary
Representatives of SAUs/ICAR/Other line Departments	Experts Members

The Committee's main function will be to vet the Annual Action Plan prepared by the State nodal department for implementation of the Sub-Mission. The SLEC will oversee the implementation of mission Components of the respective States through regular meetings with the nodal and other line department. It will also provide inputs to the Executive Committee for appropriate policy formulation.

6.3.2 Department of Agriculture or Dept. of Agricultural Engineering, wherever available, shall be the nodal department at the State level for implementation of this Mission. It will provide necessary support to SLEC and will have the following functions:

(i) Prepare Mission Implementation Plan (MIP) for entire plan period for achieving the farm power availability to 2 kW/ha, primarily focusing on increasing farm mechanization with location specific advantages and easier adaptability for improved production and productivity.

(ii) List districts as per the farm power availability as per formula at Annexure-III. Select the districts under AAP as per objective criteria

(iii) Prepare indicative list of machines & equipment which should not be eligible for subsidy under

the Mission. While preparing the negative list, State should consider various aspects including fact whether an equipment/machinery can be run commercially without subsidy.

(iv) Utilize, to the extent possible, services of Subject Matter Specialist (Agricultural Engineering) available with State Government, KVKs, SAUs and ICAR institutes functioning in the State in the mission programmes.

(v) Prepare annual State Level Action Plan in consonance with Mission's goals and objectives as per the format at Annexure-VII taking into account tentative outlay of State as communicated by DAC at the beginning of Financial Year (March- April).

(vi) 16% of the total allocation for SCP and 8% for TSP will be earmarked. The allocation to SC/ST farmers will be made proportionate to their population in the district. 30% of allocation will be earmarked to the woman beneficiary. Utilize at least 50% of the allocation for small and marginal farmers.

(vii) 10% of the AAP allocation would be earmarked as flexi-fund to meet the following objective:

a) To provide flexibility to States to meet local needs and requirement within the overall objective of SMAM;

b) To pilot innovations and improved efficiency within the overall objective of the Scheme and its expected outcomes;

c) To undertake mitigation/restoration activities in case of natural calamities in the farm mechanization sector.

(viii) Enlist manufacturers/suppliers who have tested their products either from FMTTIs or any identified institute by DAC&FW and fix the cost of agricultural machinery and equipment on the basis of quality inspection and field performance evaluation for supply under various components of SMAM

(ix) Ensure suitable integration of AAP with other schemes like Rashtriya Krishi Vikas Yojna (RKVY), National Food Security Mission (NFSM) and Mission for Integrated Development of Horticulture (MIDH) etc.

(x) Compile District wise Action plan into State Action Plan and submit to the State level committee for approval and thereafter forward the same to EC.

(xi) Receive funds from DAC&FW for implementing organizations and oversee, monitor & review implementation of the programmes

(xii) Organize workshops, seminars and training programmes for all interest groups/associations at State level.

(xiii) Operationalize Information Communication Technology (ICT) enabled management system upto grassroot level

(xiv) Conduct independent evaluation to assess the performance of the Mission in their States.

(xv) 1% of total allocation to the State may be earmarked for administrative and other contingent expenses. Expenditure in excess of 1% limit will be met by the States from their own resources.

6.4 District Level

6.4.1 The District Level Executive Committee (DLEC) will comprise of the following:

Collector	Chairman
Dy. Director (Agriculture)/Executive Engineer/Assistant Engineer (Agricultural Engineering)	Member Secretary
District Agriculture/Horticulture Officer	Co-Member Secretary
Representatives of line Departments, SAUs/ICAR, nominated progressive farmers, representatives from SHG, Project Director ATMA, representatives from lead banks/NABARD	Experts Members

6.4.2 DLEC will be responsible for carrying forward the objectives of the Mission for project formulation, implementation and monitoring. The office of DD (A)/JD (A) / EE (A) shall be the district nodal agency with following functions:

(i) Identify the areas of low ratio of farm power availability /areas with large number of small and marginal holdings for implementation of farm mechanization components.

(ii) Identify beneficiaries (Farmers, Self Help Groups (SHGs), User Groups, Cooperative Societies, Farmer Producer Organizations (FPOs) and Entrepreneurs) to avail the benefits of SMAM in transparent and time bound manner. Identify entrepreneurs/SHGs to establish custom hiring centres.

(iii) Tie up with the Banks for credit requirements of the beneficiaries

(iv) Ensure that the benefits under various schemes of DAC & FW such as RKVY, MIDH, NMOOP, NFSM etc. are not extended repeatedly to the same beneficiary.

(v) Prepare district AAP with physical and financial targets under each component.

(vi) Utilize online application software for the entire process of identification and selection of beneficiary, processing of applications and disbursement of financial assistance to the beneficiary after ensuring the proof of procurement of equipment/inputs as per provisions and norms.

(vii) Receive funds from State Nodal Department for implementing the programmes.

(viii) Make efforts for direct transfer of financial assistance to the farmers/beneficiary on the basis of ADHAR No. wherever infrastructure is functional in the district.

(ix) Monitor & display details of approved programme, all activities undertaken and name of beneficiaries, expenditure incurred etc. at the Panchayat Bhavan/prominent public place in the cluster/village level and get it placed before the concerned Gram Sabha annually from the point of social audit.

(x) Study the impact on production and productivity after the implementation of the programmes and forward the reports to the State Nodal Department.

6.4.3 ICAR institutes /SAUs and KVKs functioning in the district will provide technical support in formulation of the district action plan, its implementation and monitoring. The technical staff will

be sourced from these organizations for imparting training to the farmers and extension personnel.

6.5 Role of Panchayati Raj Institutions (PRIs)

(i) The State Government and other designated implementing agencies, to the extent possible, will ensure active participation of the Panchayati Raj Institutions (PRIs) in the implementation of this Mission.

(ii) PRIs may also be involved in publicizing the demonstrations and training of farm equipment and in ensuring participation of farmers from nearby areas for widespread dissemination of technology.

7.0 Procedure for Approval & Fund Flow Mechanism

7.1 AAP submission: AAP duly approved by SLEC along with the minutes of SLEC, shall reach DAC & FW for examination, deliberation and final approval. M&T Division in DAC & FW will examine AAP before it is placed before the EC for consideration, sanction and approving allocation of funds to States.

7.2 DAC & FW will allocate the funds to the State and Implementing Agencies based on the following parameters:

a) 50% weightage to the proportion of states cultivable area to total cultivable area of the country; and

b) 50% weightage to the proportion of state area under small and marginal holdings to total area under small and marginal farmers in the country.

c) Release of flexi-funds would be made on a pro-rata basis along with normal releases of SMAM. In other words, no separate system for release or for utilization certificate for flexi-funds would be required.

(i) Funds would be released to the States /Implementing Agencies in two Installments.

(ii) The release of the first installment will be upon the approval of AAP and release of 2nd installment on submission of Utilization Certificate for at least 50% of the funds released as first installment, detailed Physical and Financial Report etc., as per relevant provisions of GFRs.

(iii) Only 10% of the total unspent balance will be allowed to be carried over to the next financial year. The remaining unspent balance will be adjusted in the amount to be released as 2nd installment.

(iv) In case a State Government /Implementing agency does not seek release of the 2nd installment, the unspent balance over and above 10% will be deducted from the release of 1st installments during the next fiscal.

(v) No release of 2nd installments would be made after January, only the re-allocated funds will be released to the better performing States. These measures would help in timely and optimum utilization of resources.

7.3 (a) From April, 2015, DAC&FW will only transfer funds electronically to the State Governments and Institutions. The department will prepare a digitized list of all implementing agencies for the same and for this purpose PFMS of CGA will be used.

(b) Respective State Governments and Institutions shall ensure that cash component under this Sub Mission is transferred electronically to each beneficiary (Individual or Institutions). The list shall be provided to the DAC&FW after transfer of benefit directly to the beneficiaries accounts.

(c) It would be ensured by the State Government that no eligible beneficiary suffers for want to Aadhar and it would be with the State Governments responsibility to ensure that Aadhar and it would be with the State Governments responsibility to ensure that Aadhar enrolment of such beneficiaries is carried out on priority at the permanent enrolment centres set up for the purpose .However, the benefits will not be denied for not having the Aadhar number by the eligible beneficiary.

8.0 Monitoring

(i) The Mission envisages a coordinated approach for monitoring and evaluation with active involvement of implementing agencies, beneficiaries and other stakeholders.

(ii) A combination of periodic desk review, field visits and web-based mechanism will be adopted for releasing funds, monitoring physical and financial progress and monitoring the progress of other Mission interventions at National level by Mechanization and Technology Division (M&T) in the DAC&FW.

(iii) All implementing agencies will ensure that a report regarding utilization of funds released to them and the physical and financial progress of the SMAM are submitted to DAC&FW regularly, as per prescribed proforma at Annexure VIII and IX respectively.

9.0 Impact Assessment, Periodic Evaluation and Reporting

(i) DAC&FW will evaluate efficacy of this Mission on a 'Two or Three yearly' basis through a 'third party'. The agency will assess the efficacy, performance, outcome and shortcomings of the Mission and recommend suitable corrective measures.

(ii) Information and communication technology will be deployed extensively for ensuring transparency in the implementation process and effective monitoring of the Mission programme.

10.0 Expected Outcome

The Mission envisages inclusive growth of farm mechanization in the country in the next five years in terms of farm power availability, human resource development, and productivity and quality assurance of agricultural machinery.

11.0 Interventions

Interventions proposed under the eight components under SMAM are given below whereas norms of financial assistance are summarized in Annexure-II.

11.1 Central Sector components namely,

(a) Promotion and Strengthening of Agricultural Mechanization through Training, Testing and Demonstration; and

(b) Demonstration, Training and Distribution of Post Harvest Technology and Management (PHTM)

Will have the following interventions:

(i) Training in field of farm mechanization & post harvest management

(ii) Testing of agricultural machines and equipments for performance evaluation

(iii) Demonstration of newly developed agricultural/horticultural equipments and post harvest technologies at farmers' fields.

(iv) Establishment of post harvest technology for primary processing in the production catchments

11.1.1 Implementing Agencies for Central Sector Components

Training	1) FMTTIs 2) State identified institutions 3) ICAR institutions 4) ATMA institutions 5) National Innovation Foundation (NIF)
Testing	1) FMTTIs 2) Identified State Testing Centres 3) Other Government/ICAR institutions
Demonstration	1) FMTTIs 2) State Governments 3) ICAR 4) ATMA 5) PSUs of GOI 6) National Innovation Foundation (NIF)
Establishment of PHT	1) State Governments

The implementing agencies will have the following functions:

(i) Annual Action Plans of components 'Training', 'Testing' & 'Demonstration' will be prepared by FMTTIs and ICAR as per Annexure-VII and submit the same to the M&T Division of DAC&FW for approval of EC

(ii) Identified State Testing Centres will submit their action plans with regard to 'Testing' component to the state nodal agency for incorporating in State AAP as per Annexure-VII

(iii) State identified institutions & ATMA institutions will submit their action plans with regard to 'Training' & 'Demonstration' components to the state nodal agency for incorporating in State AAP as per Annexure-VII.

(iv) For the component of 'Establishment of Post Harvest Technology', State Governments will incorporate the requirements in AAP as per Annexure-VII

(v) All the implementing agencies will operationalize ICT enabled MIS for effective and transparent implementation/monitoring of the components being implemented by them.

11.1.2 Training:

(a) Implementing Agencies: FMTTIs, State identified institutions, ICAR & ATMA institutions, National Innovation Foundation (NIF)

(b) Training Calendar: FMTTIs and identified institutions for outsourcing of training will publish annual training calendar on their websites and communicate to all the State Governments, ATMA agencies and implementing agencies. Publicity of the training programmes will also be made through the print and other electronic media on quarterly basis. The training component in the AAP will be integrated with ATMA programmes.

(c) Beneficiaries: For user level courses (U1 – U13) and other skill development programmes aligned to NSQF District nodal agencies will identify and sponsor beneficiaries such as Farmers, Members of SHGs, FPOs, rural youth and other entities on receipt of training calendar. If required, the training institutions will also invite applications for specific courses from the targeted district under the State AAP.

Trainers, Officials of State Governments, Technicians, Entrepreneurs and Manufacturers etc. will apply to the respective FMTTIs for appropriate courses.

(d) Training Courses: FMTTIs will conduct training programmes as per Annexure-IV

The State identified institutions will conduct user level training programmes (U1 to U13) and Technician level courses (T1-T9) and as given in Annexure IV.

Training in post-harvest management will also be a part of training calendar. The training courses will be designed by the implementing agencies in consultation with CIPHET Ludhiana and AICRP Centres in the region.

(e) Financial Assistance: Under all user level and other training programmes aligned to NSQF organised at FMTTIs will be applicable as per Gazette Notification dated 8- 14 August, 2015 of Ministry of Skill Development and Entrepreneurship as per details given below.

i. Boarding and Lodging Charges (For all implementing Agencies: FMTTIs, State identified institutions, ICAR institutions, ATMA institutions, National Innovation Foundation (NIF)

Trainees admitted/Sponsored by State Nodal agencies will reimburse Boarding and Lodging Costs as per the table below:

X categories Cities/ Town per day per Trainee	Rs. 300
Y categories Cities/ Town per day per Trainee	Rs. 250
categories Cities/ Town per day per Trainee	Rs. 200
Rural areas and any area not notified as a Municipal / town Area	Rs. 175

ii. Travelling Expanses

(a) Trainees from an area other than Special Area:

For FMTTIs:

Travel expenses to the trainees admitted in these courses will be paid on actual basis by ordinary mode of transport from their place of residence to the training institute and back.

₹ **For State identified institutions, ICAR institutions, ATMA institutions , National Innovation Foundation (NIF):**

Actual to and fro travel expenses by ordinary mode of transport in ordinary class, up to maximum of Rs. 500/- per trainee for other Institutions

(b) Trainees Special Area (for all implementing Agencies) : (as defined in gazette notification of dated 8-14 Aug. 2015 under schedule-1)

For candidates from special area undergoing training outside such special area, to and fro cost as per actual subject to a maximum of Rs 5000 per trainee shall be payable for:

- Residential Training, and/or
- In respect of Skill Development programmes where trainees from special areas(as defined herein)are trained outside these special areas, and/or
- Training Programmes anywhere in the country where women trainees have to travel more than 80 kms from their homes to reach the nearest training centre and who are availing of boarding and lodging arrangements made for them.
- Upon successful completion of non-residential skill training programmes, and after certification, all women candidates as well as persons with disability will be reimbursed the cost incurred in traveling to and from the training centre at the following rates.

Reimbursement of Conveyance Costs per month.	Amount (in Rs.)
1) Training Centre within District of domicile	1000/-
2) Training Centre outside District of domicile	1500/-

iii. Institutional Charges:

A. Base Cost

For State identified institutions, ICAR institutions, ATMA institutions

The Base Cost for the different Sectors will be as under:

(i) Rs,38.50 per hour of training for trades/sectors listed in Category1 of SCHEDULE-II

(ii) Rs.33/- per hour of training trades/sectors listed in Category II of SCHEDULE-II

(iii) Rs.27.50 per hour of training trades/sectors listed in Category III of SCHEDULE-II

Cost would be subject to periodic enhancement of 10 % annually or as decided by Common Norms Committee provided minimum duration between any 2 revisions would be at least 6 months

B. Third Party Certification & Assessment Cost

For FMTTIs, State identified institutions, ICAR institutions, ATMA institutions

To ensure independent and unbiased assessment and certification of trained candidates, cost for certification and assessment would be payable to an independent third party authorized for conducting assessments and certifications. The amount shall be over and above the Base cost and shall range from Rs 600 to Rs 1500 per candidate as decided by individual

Ministries/Departments.

C. Post Placement Support

For FMTTIs, State identified institutions, ICAR institutions, ATMA institutions

In order to enable the newly skilled persons to settle into their new job/vocations, Post placement support would be provided directly to the candidate at the rate of Rs 1500 per month for the flowing durations;

Post placement Support @ Rs 1500 per month	Men	Women
Placement within district of domicile	01 months	02 months
Placement outside district of domicile	02 months	03 months

(f) Monitoring and evaluation

All implementing agencies will monitor the outcome of training in terms of employment generation, self-employment, improvement in productivity/skills etc.

11.1.3 Testing:

(a) Implementing Agencies: FMTTIs, Identified State Testing Centres, Other Government/ICAR institutions

(b) Beneficiaries: Manufacturers of agricultural machines, R&D institutions engaged in development of farm machinery.

(c) Standards: Testing will be carried out as per relevant Indian Standards of BIS. If, the Indian Standard for any machine is not available, the testing may be carried out as per any other relevant International standard. Based on these standards test codes will be applied for various categories of agricultural machinery and implements. If no BIS or international test code is not available then a test procedure mutually agreed by testing authority and manufacturer/applicant duly approved by concerned authority of FMTTI or M&T, DAC&FW. All such test codes will be communicated by the M&T Division of DAC&FW to all the centres for uniform procedures of testing.

(d) Implementation:

(i) The State Government shall evolve their own system/test centres to ensure the quality of the agricultural implements and tool costing less than Rs. 25,000 (Rupees Twenty thousand) before they are supplied under Government assistance programmes.

(ii) If consider appropriate , the State Government insist the test report of any FMTTI or designated testing of DAC&FW from manufacturer/supplier of the agricultural implements and tools costing less than Rs. 25000(Rs. Twenty Five Thousand)or a system of self certification for the desired specification/ quality/ performance of agricultural implements and tools may be accepted from manufacturers or supplier.

(iii) The agricultural implements and tools costing less than Rs. 25000 (Twenty five thousands) as at Sl.No (i) above covers only hand tools, garden tools, animal drawn/manually / tractor drawn implements required for land preparation/ sowing and planting/ intercultivation/ harvesting and threshing/ transportation operations.

(iv) All types of self propelled agricultural implements/ equipments/ machinery and all types of plant protection equipments are not covered in clause no.(i) and (iii) above.

(v) A system of random pre/post dispatch checks of above agricultural implements and tools being promoted through Government programme shall be evolved by the State Government. If the situation warrants randomly picked up agricultural implements and tools shall be tested/ retested from any FMTTI or any designated testing center of DAC&FW for asserting their specifications, performance and quality.

(vi) The testing of agricultural implements, tools and machinery costing more than Rs. 25000 (Rs. Twenty five thousands) from the FMTTIs or designated testing centres of DAC&FW as specified in Annexure-V, is mandatory, before they are supplied under Government assisted programmes.

(vii) CFMTTI, Budni will test tractors, power tillers, combine harvesters, and other self-propelled machines. It will also test tractors, power tillers, combine harvesters, agricultural trailers, engines for mass emission of exhaust gasses and other machines for compliance under CMVR,

(viii) NRFMTTI, Hissar will test Combine harvesters, plant protection equipments, irrigation pumps, diesel engines and other self propelled crop production equipments and machines. It will also test combine harvesters for compliance under CMVR.

(ix) SRFMTTI, Garladinne will test power tillers, self-propelled crop production machines/equipments, including power drawn agricultural machines and equipments.

(x) NERFMTTI, Biswanath Chariali (Assam) will test power drawn agricultural machines and equipments including non-self-propelled agricultural equipments in order to meet requirements of manufacturers of Eastern and North Eastern Region.

(xi) The identified institutions as per Annexure –V or the institutions as may be recognized in future shall test all non-self-propelled agricultural machines/equipments.

(e) Testing charges: All the testing institutions will follow the testing charges fixed by DAC&FW as per Annexure VI (as revised from time to time). Service Tax on the testing charges will be as per the applicable rates. The testing charges received will be deposited in the revenue account of Government.

(f) Monitoring:

(i) Machines will be tested at the request in writing of the manufacturer/accredited importers referred to as "Applicant" herein-after. Online application software will be developed for receiving applications and processing the same.

(ii) The application should be accompanied with all relevant technical specification, operator manual, workshop manual etc. of the machine as well as detailed postal address, email id and phone number of the applicant.

(iii) The application will be scrutinized by the testing institutions and the shortcomings if

any will be communicated to the applicant within a week.

(iv) The applications fulfilling requirements will be accepted by the testing institute and the date for starting the test will be informed to the applicant within a week.

(v) Testing of the machine will be taken up as per the relevant standard within 15 days from the date of accepting the application.

(vi) After completion of all tests, a draft report in the standard format will be released to the applicant for comments and the applicant should submit his comments within 15 days.

(vii) After receipt of comments, necessary changes in the draft report as per agreed comments may be made in the report and the final report may be released. The testing institutions will also bring out one page salient features of the machine which could be easily understood by the users of the machine.

(viii) Test reports released by the designated institutions will have validity across the country and accepted by all the States and UTs for financial assistance and implementation of other Government Schemes where test reports are required.

(ix) The testing institutions will publish the list of test reports quarterly and forward the same to the DAC&FW for uploading it on the website of the Department. The institutions which do not carry out testing as per the guidelines of the Department and as per relevant test codes and upload the test reports on the website will be liable for cancellation of recognition.

(x) All the testing institutes will ensure that the testing is completed within the stipulated time frame and there is no waiting list for testing.

(g) Financial Assistance:

(i) Proposals for augmenting the facilities and infrastructure for testing shall be included in the AAP. The identified institutions for testing will be provided one time grant of Rs. 1.5 crores each as per their proposals in this regard. In a financial year 10 such identified institutions will be considered for providing grants. The grants provided will not be utilized to meet the recurring expenditure on testing activities and purchase of vehicles etc.

11.1.4 Demonstration

Field demonstrations of package of machines/equipments will be conducted in the districts identified for AAP

(a) Implementing Agencies: FMTTIs, State Governments, ICAR, ATMA, PSUs of GOI , National Innovation Foundation (NIF)

(b) Objectives: (i) To conduct large scale demonstrations on cropping system based approach to promote mechanization in districts with low farm power availability (ii) To Introduce improved/newly developed agricultural implements and machines and post harvest technology in crop production/post harvest management system (iii) All demonstrations

will be conducted with participation of custom hiring centres established in the districts. Also, manufacturers may be engaged as partners for demonstration.

(c) Identification of Beneficiaries: Farmers, SHG of farmers, Users Groups, Cooperative Societies, entrepreneurs etc will be identified by the District Nodal Agencies as per the broad criteria given under 6.4.2.

(d) Area of operation:

(i) In case of State level agencies, demonstrations will be conducted in villages selected in the AAP districts.

(ii) Central implementing agencies will also select districts/ villages in the concerned State AAP

(iii) Demonstrations will be conducted in a contiguous block of 100 ha or more. Size of block for hill and North-Eastern States will be 10 ha. Demonstrations should be evenly distributed in the selected blocks.

(iv) At least 50% of the total demonstrations will be conducted on cropping patterns of selected villages. These will be done by CHCs in those districts. Remaining 50% demonstrations will be carried out on new technology machines/equipments with the engagement of manufacturers/Hi-tech equipment hubs

(v) All farmers in a block would be included in demonstration. For each farmer, at least 0.4 ha area will be included.

(f) Identification of powered machines/equipments to be demonstrated: Type of equipment/machine to be demonstrated will be based on requirements of operations in a cropping season. This will be decided by implementing agencies in consultation with State Agricultural functionaries/State Agricultural Universities, ICAR Centres through their Regional Research Stations/KVKs located in the area while preparing the AAP.

(g) Financial Assistance: Implementing agencies will hire the machines to be demonstrated from the Custom Hiring Centres/manufacturers. Government of India will provide 100% assistance @ Rs. 4000 per hectare upto 100 ha per season. This includes:

(i) Charges towards hiring of machines alongwith implements/ self propelled machines– Rs. 2000 per ha per operation.

(ii) Expenditure towards hands on training – Rs. 1500 per ha per operation.

(iii) Miscellaneous expenditure such as expenditure towards transport, labour, publicity and printing of technical literature etc – Rs. 500 per ha per operation.

Expenditure over and above specified limits will be borne by respective implementing agencies

No expenditure will be met from the scheme for recruitment of staff, TA/DA of staff, purchase of tractor/power tiller, computer, video camera, etc. or for any infrastructural development.

(h) Monitoring:

(i) All demonstrations will be carried out under close supervision of Implementing Agency which will record and document observations. Analysis shall be made to bring out cost effectiveness and benefits of technology. Success story of demonstrations will be documented and disseminated for the benefits of other farmers in the State and also for farmers of other States.

(ii) State Department of Agriculture/ Other Implementing Agency concerned will ensure effective implementation and supervision of Scheme.

(iii) Officers from Farm Machinery Training and Testing Institute at Budni (M.P.), Hissar (Haryana), Garladinne (A.P.), Biswanath Chariali (Assam) and officers from the Ministry of Agriculture & Farmers Welfare shall be undertaking random visits to see actual demonstration and assess performance of equipment demonstrated and their acceptability among farmers.

11.1.5 Establishment of Post Harvest Technology

(a) Implementing Agencies: State Governments

(b) Identification of Technologies: Technical guidance on the available post harvest technologies will be provided by CIPHET Ludhiana and also by other ICAR/CSIR/SAU centers. These may relate to

(i) Primary processing & value addition

(ii) Bi-product management

(iii) Low cost scientific storage

(iv) Transit storage

(v) Transport of perishable farm produce

(c) Identification of Beneficiaries: Individual farmer, SHG/UG of farmers/ Cooperative Societies of Farmers/FPOs/Entrepreneurs will be identified by the district nodal agencies as per the broad criteria given under 6.4.2

(d) Financial assistance: PHT units shall be established in the production catchments with 50% assistance from the Government of India limited to Rs. 1.25 lakhs per machine/technology. (Additional 10 % assistance limited to Rs. 1.50 lakhs will be available for SC, ST, small & marginal farmers, women, and NE States beneficiary). Remaining cost will be borne by beneficiary.

(e) Implementation & Monitoring: State Department of Agriculture will ensure effective implementation and supervision of Scheme by officers specially designated for the purpose.

11.2 Interventions under Centrally Sponsored Scheme

11.2.1 Financial Assistance for Procurement of Agriculture Machinery and Equipment

(a) Implementing Agencies: State Governments

(b) Implementation & Monitoring:

(i) State Department of Agriculture will ensure effective implementation and supervision of

Scheme by officers specially designated for the purpose.

(ii) It will be ensured that the benefits under various other schemes of DAC&FW are not extended to the same beneficiary twice.

(iii) Manufacturers/suppliers that have tested their products either from FMTTIs or any identified institute by DAC&FW will be enlisted.

(iv) Crop specific agricultural equipment /machinery tested and available with the enlisted manufacturers will be offered to the beneficiaries.

(v) Complete freedom to beneficiary will be available for selection of agricultural machinery and equipment as per his/her choice.

(vi) SLEC will approve cost of agricultural machinery and equipment on the basis of quality inspection and performance evaluation reports for supply in the financial year.

(c) Identification of Beneficiary: Beneficiaries will be identified by the district nodal agencies as per the broad criteria given under 6.4.2

(d) Financial Assistance: will be available to the selected beneficiaries as per approved pattern of assistance given at Annexure II (c)

11.2.2 Farm Machinery Banks for Custom Hiring

(a) Implementing Agencies: State Governments, NCDC ,PSUs of Government of India, Organization of Government of India

(b) Objectives of custom hiring enterprises

(i) To promote mechanization in districts with low farm power availability

(ii) To provide hiring services for various agricultural machinery/implements applied for different operations.

(iii) To expand mechanized activities during cropping seasons in large areas especially in small and marginal holdings.

(iv) To involve manufacturers/KVKs in operation and maintenance of machines in the hiring centres

(v) To Introduce improved/newly developed agricultural implements and machines in crop production

(c) Area of Operation & Composition of Custom Hiring Centre

(i) Custom hiring centres will be established in the districts identified for implementation in the State AAP.

(ii) The districts in State AAP will include villages having low farm power availability and large area under small and marginal holdings.

(iii) Each CHC will have the capacity to cover minimum area of 10 ha/day and at least 300 ha in a cropping season. Machines can be hired for entire operations from land development to residue management

(iv) Each CHC will be set up on specific crop based, cost based and cluster based approach. Each

custom hiring centre will have small crop specific machinery suitable for local requirement for mechanized farming under small and marginal holdings.

(v) The following parameters may be chosen for selection of village/Town for setting up of custom hiring centers:

(a) Low ratio of farm power availability.

(b) Low number of tractor population

(c) Small & marginal operational Holdings

(d) Less productivity of food grains but potential to enhance productivity.

(vi) District level agencies will identify/invite application of entrepreneurs including manufacturers to set up CHCs

(vii) Any business model can be adopted for expanding the reach of mechanization through custom hiring centres. It will be necessary to maintain, upgrade the CHCs from time to time.

(d) Identification of machines/Implements:

(i) Entrepreneurs will select such machinery/implements appropriate for the crops grown in the identified districts

(ii) Entrepreneurs will select machinery/implements for entire operations of a particular crop grown in that area

(iii) The capacity of the machines will be selected on the basis of area to be covered in a cropping season.

(iv) Machines/equipments will be selected from the list at Annexure II(c)

(e) Procurement of Machinery: Procurement would be from the approved suppliers/ manufacturers. The beneficiary is free to procure any brand as per his choice from the approved list. However, only tested equipments from either FMTTIs or designated Institutes from DAC&FW are eligible for financial assistance for establishing the custom hiring centres.

(f) Financial Assistance:

(i) Financial assistance for setting up of custom hiring centres will be available to rural entrepreneurs, progressive farmer and SHGs as per pattern of assistance as indicated in Annexure II (d)

(ii) The custom hiring centres having the project cost more than Rs. 25 lakh will be established under the model of credit linked back ended financial assistance.

(iii) The bank will lock the financial assistance released to them for a period of 4 years. The beneficiary will repay the complete bank loan within the period of not less than 4 years. The Beneficiary will not be allowed to transfer/ sell/ mortgage the CHC to any one before the completion of 6 years.

(g) Monitoring:

(i) The established CHCs will be provided technical assistance from KVKs/enlisted manufacturers/Approved Testing Centres, FMTTIs and ICAR centres to maintain and train CHC entrepreneurs.

(ii) The custom hiring centres established under the mission will be supervised by the District Agriculture Officer for its operation so that custom hiring charges are reasonable and affordable to small and marginal farmers

(h) Partnerships: The CHCs can be established by the manufacturers in PPP mode. They may also be encouraged to undertake maintenance of the machinery for a given number of CHCs. They may undertake exposure visits of the beneficiaries in other districts/states. They may enter into annual maintenance contracts for supply of spare parts

11.2.3 Hi-Tech, High Productive Equipment Hub for Custom Hiring:

Implementing Agency - State Govt./NCDC/PSUs of Govt. of India/Organizations of Govt. of India.

(a) Objectives

(i) To promote utilization of hi-tech, high value machines for higher productivity

(ii) To provide hiring services for various high value crop specific machines applied for different operations.

(iii) To expand mechanized activities during cropping seasons to cover large areas

(iv) To involve manufacturers for setting up of such centres

(b) Area of Operation & Composition of Hi-tech Hub

(i) Hubs will be established in the districts identified for implementation in the State AAP having larger area under cash and other value crops.

(ii) Each hub will have the capacity to cover at least 500 ha in a cropping season. Machines can be hired for crop specific operations

(iii) The following parameters may be chosen for selection of village/Town for setting up of custom hiring centers:

a) Large area under cash crops/high value crops

b) High potential areas

(iv) District level agencies will identify/invite application of entrepreneurs including manufacturers to set up hubs

(v) It will be necessary to maintain and upgrade the hubs from time to time.

(c) Identification of machines:

(i) Entrepreneurs/manufacturers will select such machinery appropriate for the cash and other high value crops grown in the identified districts

(ii) The type and capacity of the machines will be selected on the basis of area to be covered in a cropping season.

(d) Financial Assistance:

(i) Financial assistance for setting up of hubs will be available to entrepreneurs/ manufacturers as per pattern of assistance as indicated in Annexure II (e)

(ii) Hubs will be established under the model of credit linked back ended financial assistance.

(iii) Bank will lock the financial assistance, released to them as per the terms of repayment of

loan. The Beneficiary will not be allowed to transfer/ sell/ mortgage the hubs to any one.

(e) Monitoring:

(i) The established machinery hubs will be provided technical assistance from KVKs/ manufacturers/Approved Testing Centres, FMTTIs and ICAR centres for maintenance and training

(ii) The hubs established under the mission will be supervised by the District Agriculture Officer for its operation so that hiring charges are reasonable and affordable to farmers.

11.2.4 Promotion of Farm Mechanization in Selected Villages

(a) Objectives:

(i) To establish farm machinery banks by the Cooperative Societies of farmers, Self Help Group of Farmer, FPOs etc. in the selected villages of low mechanized states so as to encourage members to take up appropriate mechanized operations

(ii) To conduct demonstrations in large areas with the assistance of Custom Hiring Centres set up under component (4).

(b) Area of Operation:

(i) Districts with low farm power availability will be selected in each state

(ii) Villages will be selected from these districts

(iii) SHGs, Cooperative Societies, FPOs and any such other entities in these villages will be eligible for financial assistance for setting up of farm machinery banks for operating machines and equipments by the member beneficiaries

(iv) Custom Hiring Centres set up under component (4) shall be involved in conducting demonstration of the machines and equipments as per the guidelines indicated in para 11.1.4

(c) Financial Assistance: Each village will be eligible for setting up of farm machinery banks upto a maximum project cost of Rs. 10 lakhs. Financial assistance @ 80% of the project cost will be provided for such machinery banks. For demonstration, financial assistance will be provided as per the guidelines given in 11.1.4

(d) Monitoring: Supervised by the District Agriculture Officer for operating cost of Farm Machinery Banks and demonstrations to be conducted by CHCs.

11.2.5 Financial Assistance for Promotion of Mechanized operations/Hactare carried out through custom hiring centers :

(a) Objective: To provide per hectare assistance to the beneficiaries in the villages identified under 11.2.4. Beneficiaries will utilize services of farm machinery banks set up by group of farmers, cooperative societies and any such other entities, for various farm operations.

(b) Financial Assistance: Financial assistance will be available to the beneficiaries upto a maximum of 1 ha area as per following norms:

(i) For tractor/power operated operations – Rs. 2000/ha per farmer per year

(ii) For animal drawn mechanized operations- Rs. 1000/ha per farmer per year

(iii) For manual operations – Rs. 750/ha per farmer per year

(c) Monitoring: Supervised by the District Agriculture Officer for selection of operation and area to be covered under each operation

11.2.6 Promotion of Farm Machinery and Equipment in North-Eastern Region

(a) Objectives:

(i) To increase pace of mechanization adoption in North-Eastern States. Some of the regions in these States are not able to leverage the advantages of farm mechanization due to constraints like hilly topography, socio-economic conditions, high cost of transport, lack of institutional financing and lack of farm machinery manufacturing industries. Therefore, these states require light weight machines and equipments suitable for these regions.

(ii) To encourage the farmers for adopting good agricultural practices in specific crops/areas.

(b) Implementation & Monitoring:

(i) In order to provide suitable mechanized solutions in the identified areas of these States, separate allocation over and above the allocation in different components of the sub-mission will be made.

(ii) The States will identify such areas and prepare project proposals as per the pattern of assistance as indicated in Annexure –II (h)

(iii) Project proposals submitted by the States will be examined in DAC&FW and approved by EC for financial assistance.

(iv) State Department of Agriculture/ Other Implementing Agency concerned will ensure effective implementation and supervision of Scheme by officers specially designated for the purpose.

(c) Financial Assistance: Financial assistance will be available to the beneficiaries as per the pattern of assistance indicated in Annexure-II (h)

11.2.7 Exposure visits:

(a) In order to enrich the knowledge base of the technical personnel/progressive farmers involved in the mission, exposure visit/training of technical staff /officers at International organizations like IRRI, ICRISAT, CSAM China, NIAE Korea, JICA Japan etc. or any other research organization in farm mechanization within the country and abroad would be organized.

(b) A sum of Rs. 2.0 Crore will be earmarked for the entire plan period.

(c) EC would approve the proposal of exposure visit/ training.

12.0 Activity Mapping :

Annexure-I

A. Activity mapping for effective devolution of funds, functions and functionaries under Sub-Mission on Agricultural Mechanization

S.N	Components	Allocation (Rs. Cr.)	Percentage Allocation based on function(s)		Implementing Agencies	Remarks
			Centre	State		
1	Component No.1 (Existing)	As per Annual Budget	100	0	FMTTIs, State identified institutions, ICAR institutions, ATMA institutions, PSUs of GOI, State Governments	1) Implementing agencies will be responsible for coordination with local and State Governments. 2) Annual Action Plan will build on the activities at the village level in district with low farm power availability
2	Component No.2 (Existing)		100	0		
3	Component No.3 (New)		60 90	40 10	State Governments States of North-Estern & Himalayan Region*	
4	Component No.4 (New)		60 90	40 10	State Governments States of North-Estern & Himalayan Region*	
5	Component No.5 (New)		60 90	40 10	State Governments States of North-Estern & Himalayan Region*	
6	Component No.6 (New)		60 90	40 10	State Governments States of North-Estern & Himalayan Region*	
7	Component No.7 (New)		60 90	40 10	State Governments States of North-Estern & Himalayan Region*	
8	Component No.8 (New)		90	10	State Governments of 8 North-Eastern States	

1. Promotion and Strengthening of Agricultural Mechanization through Training, Testing and Demonstration
2. Demonstration, Training and Distribution of Post Harvest Technology and Management (PHTM)
3. Financial Assistance for Procurement of Agriculture Machinery and Equipment
4. Establish Farm Machinery Banks for Custom Hiring
5. Establish Hi-Tech, High Productive Equipment Hub for Custom Hiring
6. Promotion of Farm Mechanisation in Selected Villages
7. Financial Assistance for Promotion of Mechanized Operations/hectare Carried out Through Custom Hiring Centres
8. Promotion of Farm Machinery and Equipment in North-Eastern Region

* State of Himalayan Region will include Uttrakhand, Himachal Pradesh and Jammu & Kashmir.

B. Functions:

S No	Activity Description	Union Government	State Government	District Administration	Local Government Panchayati Raj System			Implementing Agency
					Zilla Parishad	Intermediate Panchayat	Village Panchayat	
1	Setting Standards	Formulate guidelines and cost norms for SMAM	Disseminate guidelines and norms at District Level, preferably in local language	Implement guidelines	Disseminate guidelines at the block level and below	--	--	Maintain the physical and financial progress
2	Planning	Provide the tentative outlays for preparing the State Annual Action Plan	1.Prepare strategic plan 2. Prepare State Annual Action Plan	Formulate District Action Plan	Contribute in preparing District Annual Action Plan	--	Contribute in selection of equipments for demonstration, beneficiaries in capacity building and availing the assistance	--
3	Implementation of Mission	--	Release of funds to States by DAC&FW	Release of funds to District level	--	Prioritize projects as per requirement of the Districts.	Select location of activity within the district, select beneficiaries	Contribute in selection of equipments for demonstration, beneficiaries in capacity building availing the assistance
4	Monitoring and Evaluation of Projects	1.Review quarterly progress 2.Conduct midterm and impact evaluation	Furnish the physical and financial progress quarterly	--	Review progress at panchayat level and provide feedback to State Governments	--	Provide feedback to District Panchayat	

C. Functionaries:

S.	Union Government	State Government	District Administration	Local Government Panchayati Raj		
				Zilla Parishad	Intermediate Panchatyat	Village Panchayat
1	M&T Division of DAC&FW	Agriculture Department of State Government	Agencies implementing Action Plan	State Government to devolve functionaries as per activities to be implemented under SMAM	--	State Government to devolve functionaries as per activities to be implemented under SMAM

Annexure-II

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (a)

Component No. 1: Promotion and Strengthening of Agricultural Mechanization through Training, Testing and Demonstration

A.Demonstration:

S.N	ITEM	PATTERN OF ASSISTANCE
I	Demonstration of agricultural / horticultural equipments at farmers' fields.	100% assistance @ Rs. 4000 per hectare upto 100 ha per season. This includes: (i) Charges towards hiring of machines alongwith implements/ self propelled machines – Rs. 2000 per ha per operation. (ii) Expenditure towards hands on training – Rs. 1500 per ha per operation. (iii) Miscellaneous expenditure such as expenditure towards transport, labour, publicity and printing of technical literature etc – Rs. 500 per ha per operation

B. Training:

S.N	ITEM	MAXIMUM PERMISSIBLE PROJECT COST	PATTERN OF ASSISTANCE
I	Training of farmers/users/stakeholders by Institutions identified by State Govt./ICAR	Rs.25.0 lakh per State per year.	**As per item 11.1.2 of Guidelines**

C. Testing

S.N	ITEM	MAXIMUM PERMISSIBLE PROJECT COST	PATTERN OF ASSISTANCE
I	Strengthening of designated SAU's/ICAR Institutions/ Govt. Agencies for undertaking testing of agricultural equipment	Rs. 1.5 crore per centre.	**One time grant upto Rs.1.5 crore.**

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (b)

Component No. 2: Demonstration, Training and Distribution of Post Harvest Technology and Management (PHTM)

A . Financial Assistance for Post Harvest Equipment.

ITEM	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/Equipment	Pattern of Assistance
Establishment of PHT units for transfer of primary processing technology, value addition, low cost scientific storage, packaging units and technologies for by-product management in the production catchments.	**1.50 lakh**	**60% of cost of unit**	**1.25 lakh**	**50%**

B. Demonstration:

S.N.	ITEM	Pattern of Assistance
I	Demonstration of developed/appropriate Post Harvest Technologies.	100% assistance @ Rs. 4000 per technology upto 100 demo per season. This includes: (i) Charges towards hiring of machines alongwith implements/ self propelled machines – Rs. 2000 per technology. (ii) Expenditure towards hands on training – Rs. 1500 per technology. (iii) Miscellaneous expenditure such as expenditure towards transport, labour, publicity and printing of technical literature etc – Rs. 500 per technology.

C. Training:

S.N.	ITEM	Maximum Permissible Project Cost	Pattern of Assistance
I	Training of Farmers, Entrepreneurs and Scientists in areas related to Post Harvest Technology.	**Rs. 25.0 lakh per State.**	**As per item 11.1.2 of Guidelines**

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c)

Component No. 3: Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Machinery * , $	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
Tractors				
(i) Tractor (08-15 PTO HP)	Rs. 1.00 lakh	35%	Rs. 0.75 lakh	25%
(ii) Tractor (15 -20 PTO HP)	Rs. 1.00 lakh	35%	Rs. 0.75 lakh	25%
(iii) Tractor (Above 20-40 PTO HP)	Rs. 1.25 lakh	35%	Rs. 1.00 lakh	25%
(iv) Tractor (40-70 PTO HP)	Rs. 1.25 lakh	35%	Rs. 1.00 lakh	25%
Power Tillers				
(i) Power Tiller (below 8 BHP)	Rs. 0.50 lakh	50%	Rs. 0.40 lakh.	40%
(ii) Power Tiller (8 BHP & above)	Rs. 0.75 lakh	50%	Rs. 0.60 lakh.	40%
Rice Transplanter				
Self Propelled Rice Transplanter(4 rows)	Rs.0.94 lakh	50%	Rs. 0.75 lakh	40%
Self Propelled Rice Transplanter (i) above 4-8 rows (ii) above 8-16 rows	Rs. 2.0 lakh.	40%	Rs. 2.0 lakh.	40%
Self Propelled Machinery				
Self Propelled Machinery (i) Reaper cum Binder	Rs. 1.25 lakh	50%	Rs. 1.00 lakh	40%
Specialized Self Propelled Machinery (i) Reaper (ii) Post Hole Digger/Augur (iii) Pneumatic/ other Planter	Rs. 0.63 lakh	50%	Rs. 0.50 lakh	40%
Self Propelled Horticultural Machinery				
(i) Fruit Plucker (ii) Tree pruners (iii) Fruit Harvesters (iv) Fruit Graders (v) Track Trolley (vi) Nursery Media Filling Machine (vii) Multipurpose Hydraulic System (viii) Power operated horticulture tools for pruning, budding, grating, shearing etc.	Rs. 1.25 lakh	50%	Rs. 1.00 lakh	40%

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c) Contd.

Component No. 3: Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , #	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
Tractor/Power Tiller (below 20 BHP) driven equipments.				
A. Land Development, tillage and seed bed preparation equipments: (i) MB Plow (ii) Disc Plow (iii) Cultivator (iv) Harrow (v) leveler Blade (vi) Cage wheel (vii) Furrow opener (viii) Ridger (ix) Weed slasher (x) Laser Land Leveller (xi) Reversible Mechanical plough	Rs. 0.15 lakh	50%	Rs. 0.12 lakh	40%
(xii) Rotavator (xiii) Rotopuddler (xiv) Reversible Hydraulic plough (xv) Furrow opener (xvi) Bund former (xvii) Crust breaker (xviii)Rotocultivator (xix) Power Harrow	Rs.0.35 lakh	50%	Rs. 0.28 lakh	40%
(xx) Chisel Plough	Rs. 0.08 lakh	50%	Rs. 0.06 lakh	40%

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c) Contd.

Component No.3 : Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , #	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
B. Sowing, Planting, Reaping and Digging Equipments: (i) Post Hole digger (ii) Potato Planter (iii) Potato Digger (iv) Ground nut digger (v) Strip till drill (vi) tractor drawn reaper (vii) onion harvester (viii) Rice straw Chopper, (ix) Zero till seed cum fertilizer drill (x) Raised Bed Planter (xi) Sugar cane cutter/Stripper (xii) planter, (xiii) seed drill (xiv) multi crop planter (xv) zero –till multi crop planter (xvi) Ridge furrow planter	Rs 0.15 lakh	50%	Rs. 0.12 lakh	40%
(i) Turbo Seeder (ii) Pneumatic Planter (iii) Pneumatic vegetable transplanter, (iv) Pneumatic vegetable seeder (v) Happy seeder (vi) Plastic Mulch Laying Machine (vii) Seed cum fertilizer drill (viii) Aqua ferti seed drill (ix) Raised Bed Planter with inclined plate planter and shaper attachment. (x) Mulcher (xi) Seed treating drum	Rs. 0.35 lakh	50%	Rs. 0.28 lakh	40%

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c) Contd.

Component No.3 : Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , # Tractor/Power Tiller (below 20 BHP) driven equipments .	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
C.Inter Cultivation Equipments: (i) Grass Weed Slasher (ii) Rice straw Chopper (iii) Power Weeder (engine operated below 2 bhp)	Rs. 0.15 lakh	50%	Rs. 0.12 lakh	40%
D. Equipments for Residue management/ Hay and Forage Equipments: (i) Sugarcane thrash Cutter (ii) Coconut Frond Chopper, (iii) Rake (iv) Balers. (v) Straw reaper (vi) Feed block machine (vii) Stubble shaver	Rs. 0.15 lakh	50%	Rs. 0.12 lakh	40%
E. Harvesting & Threshing Equipments (Operated by engine/electric motor below 3 hp and by power tiller , and tractor of below 20 BHP tractor): (i) Ground Nut Pod Stripper (ii) Thresher (iii) Multi crop Threshers (iv) Paddy Thresher (v) Brush Cutter (vi) Winnowing fan (vii) Maize sheller (viii) Spiral grader (ix) Reaper (x) Mower (xi) Flail Harvester (xii) Infielder (xiii) Mower Shredder (ALL PURPOSE/All crops)	Rs. 0.2 lakh	50%	Rs. 0.16 lakh	40%
F. Chaff Cutter (Operated by engine/electric motor below 3 hp and by power tiller and tractor of below 20 BHP tractor)	Rs. 0.2 lakh	50%	Rs. 0.16 lakh	40%

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c) Contd.

Component No. 3: Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , # Tractor (above20- 35 BHP) driven equipments	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
A. Land Development ,tillage and seed bed preparation equipments: (i) MB Plow (ii) Disc Plow (iii) Cultivator (iv) Harrow (v) leveler Blade (vi) cage wheel (vii) Furrow opener (viii) Ridger (ix) Weed slasher (x) Laser Land Leveller (xi) Reversible Mechanical plough	Rs. 0.19 lakh	50%	Rs. 0.15 lakh	40%
(xii) Rotavator (xiii) Rotopuddler (xvi) Reversible Hydraulic plough (xxi) Furrow opener (xxii) Bund former (xxiii)Crust breaker (xxiv)Rotocultivator (xxv) Power Harrow	Rs.0.44 lakh	50%	Rs. 0.35 lakh	40%
(xvii) Chisel Plough	Rs. 0.10 lakh	50%	Rs. 0.08 lakh	40%

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c) Contd.

Component No. 3 : Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , # Tractor (above20- 35 BHP) driven equipments.	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
B. Sowing , Planting ,Reaping and Digging Equipments: (i) Post Hole digger (ii) Potato Planter (iii) Potato Digger (iv) Ground nut digger (v) Strip till drill (vi) tractor drawn reaper (vii) onion harvester (viii) Rice straw Chopper, (ix) Zero till seed cum fertilizer drill (x) Raised Bed Planter (xi) Sugar cane cutter/Stripper (xii) Multi crop planter, (xiii) seed drill (xiv) multi crop planter (xv) zero –till multi crop planter (xvi) Ridge furrow planter (xvii) Seed treating drum (xviii)Seed cum fertilizer drill	Rs. 0.19 lakh	50%	Rs. 0.15 lakh	40%
(xix) Turbo Seeder (xx) Pneumatic Planter (xxi) Pneumatic vegetable transplanter (xxii) Pneumatic vegetable seeder (xxiii)Happy seeder (xxiv)Plastic Mulch Laying Machine (xxv) Aqua ferti seed drill (xxvi)Raised Bed Planter with inclined plate planter and shaper attachment. (xxvii) Mulcher	Rs.0.44 lakh	50%	Rs. 0.35 lakh	40%

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c) Contd.

Component No. 3: Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , # Tractor (above20- 35 BHP) driven equipments.	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
C.Inter Cultivation Equipments: (i) Grass Weed Slasher (ii) Rice straw Chopper (iii) Power Weeder (engine operated above 2 bhp)	Rs. 0.19 lakh	50%	Rs. 0.15 lakh	40%
D. Equipments for Residue management/ Hay and Forage Equipments: (i) Sugarcane thrash Cutter (ii) Coconut Frond Chopper, (iii) Rake (iv) Balers (v) Straw reaper (vi) Feed block machine (vii) Stubble shaver	Rs. 0.19 lakh	50%	Rs. 0.15 lakh	40%
E. Harvesting & Threshing Equipments (Operated by engine/electric motor below 5 bhp and by power tiller , and tractor of below 35 BHP tractor): (i) Ground Nut Pod Stripper (ii) Thresher (iii) Multi crop Threshers (iv) Paddy Thresher (v) Brush Cutter (vi) Maize sheller (vii) Spiral grader (xiv) Reaper (xv) Mower (xvi) Flail Harvester (xvii) Infielder (xviii)Mower Shredder (ALL PURPOSE/All crops)	Rs. 0.25 lakh	50%	Rs. 0.2 lakh	40%
F. Chaff Cutter (Operated by engine/electric motor above 3- 5 hp and by power tiller and tractor of below 35 BHP tractor)	Rs. 0.25 lakh	50%	Rs. 0.2 lakh	40%

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c) Contd.

Component No.3 : Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , # Tractor (above 35 BHP) driven equipments.	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
A. Land Development ,tillage and seed bed preparation equipments: (xxvi) MB Plow (xxvii) Disc Plow (xxviii) Cultivator (xxix) Harrow (xxx) Leveler Blade (xxxi) Cage wheel (xxxii) Furrow opener (xxxiii) Ridger (xxxiv) Reversible Mechanical plough	Rs. 0.44 lakh	50%	Rs. 0.35 lakh	40%
(xxxv) Weed slasher (xxxvi) Laser Land Leveller (xxxvii) Rotavator (xxxviii) Roto-puddler (xxxix) Reversible Hydraulic plough (xl) Sub – soiler (xli) Trench makers (PTO operated) (xlii) Bund former (PTO operated) (xliii) Power Harrow (PTO operated) (xliv) Backhoe Loader Dozer (Tractor operated) (xlv) Furrow opener (xlvi) Bund former (xlvii) Crust breaker (xlviii) Rotocultivator (xlix) Power Harrow	Rs. 0.63 lakh	50%	Rs. 0.50 lakh	40%

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c) Contd.

Component No.3 : Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , # Tractor (above 35 BHP) Drivene quipments.	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
B. Sowing , Planting , Reaping and Digging Equipments: (i) Zero till seed cum fertilizer drill (ii) Raised Bed Planter (iii) seed drill (iv) Potato Digger (v) tractor drawn reaper (vi) onion harvester (vii) Seed cum fertilizer drill (viii) Seed treating drum	Rs. 0.44 lakh	50%	Rs. 0.35 lakh	40%
(i) Post Hole digger (ii) Potato Planter (iii) Ground nut digger (iv) Strip till drill (v) Rice straw Chopper, (vi) Sugar cane cutter/Stripper/planter, (vii) multi crop planter (viii) zero –till multi crop planter (ix) Ridge furrow planter (x) Turbo Seeder (xi) Pneumatic Planter (xii) Pneumatic vegetable transplanter, (xiii) Pneumatic vegetable seeder (xiv) Happy seeder (xv) Cassava Planter (xvi) Manure spreader (xvii) Fertilizer Spreader – PTO operated (xviii)Plastic Mulch Laying Machine (xix) Automatic rice nursery sowing machinery (xx) Aqua ferti seed drill (xxi) Raised Bed Planter with inclined plate planter and shaper attachment. (xxii) Mulcher	Rs. 0.63 lakh	50%	Rs. 0.50 lakh	40%

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c) Contd.

Component No.3 : Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , # Tractor (above 35 BHP) driven equipments.	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
C.Inter Cultivation Equipments: (i) Grass/ Weed Slasher, (ii) Rice straw Chopper, (iii) Weeder (PTO operated)	Rs.0.63 Lakh	50%	Rs. 0.50 lakh	40%
D. Harvesting & Threshing Equipments (Operated by engine/electric motor above 5 hp and tractor of above 35 BHP tractor) (xix) Ground Nut Pod Stripper (xx) Thresher/Multi crop Threshers (xxi) Paddy Thresher (xxii) Chaff Cutter (xxiii) Forage Harvester (xxiv) Birds Scarer / (xxv) Maize sheller (xxvi) Spiral grader (xxvii) Reaper (xxviii) Mower (xxix) Flail Harvester (xxx) Infielder (xxxi) Mower Shredder (ALL PURPOSE/All crops)	Rs.0.63 Lakh	50%	Rs. 0.50 lakh	40%
E. Equipments for Residue management/ Hay and Forage Equipments: (i) Sugarcane thrash Cutter, (ii) Coconut Frond Chopper, (iii) Hay Rake (iv) Balers (Round) (v) Baler (Rectangular) (vi) Wood chippers (vii) Sugarcane ratoon manager (viii) cotton stalk uprooter (ix) Straw reaper (x) Feed block machine (xi) Stubble shaver	Rs.0.63 Lakh	50%	Rs. 0.50 lakh	40%

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c) Contd.

Component No.3 : Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , #	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
All manual /animal drawn equipment/ implements/Tools	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
A. Land Development , tillage and seed bed preparation equipments: (i) MB Plow (ii) Disc Plow (iii) Cultivator (iv) Harrow (v) leveler Blade (vi) Furrow opener (vii) Ridger (viii) Puddler	Rs. 0.10 lakh	50%	Rs. 0.08 lakh	40%
B. Sowing and Planting Equipments: (i) Paddy planter, (ii) seed cum fertilizer drill, (iii) Raised Bed Planter, (iv) planter, (v) Dibbler (vi) Equipments for raising paddy nursery (vii) Marker for SRI (viii) Seed treating drum	Rs. 0.10 lakh	50%	Rs. 0.08 lakh	40%
(ix) Drum Seeder (Below 4 Row)	Rs. 0.015 lakh	50%	Rs. 0.012 lakh.	40%
(x) Drum Seeder (Above 4 Row)	Rs.0.019 lakh	50%	Rs. 0.015 lakh	40%
C. Harvesting & Threshing Equipments: (i) Ground Nut Pod Stripper (ii) Thresher (iii) Winnowing fan (iv) Tree climber (v) Horticulture Hand tools (vi) Maize sheller (vii) Feed block machine (viii) Spiral grader	Rs.0.10 lakh	50%	Rs. 0.08 lakh	40%
(vi) Chaff Cutter (upto 3')	Rs. 0.05lakh	50%	Rs. 0.04 lakh	40%
(vii) Chaff Cutter (above 3')	Rs.0.063 lakh	50%	Rs. 0.05 lakh	40%
D. Inter Cultivation Equipments: (i) Grass Weed Slasher, (ii) Weeder, (iii) Conoweeder (iv) Garden Hand Tools	Rs. 0.006 lakh	50%	Rs. 0.005 lakh	40%

Component No. 3 : Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , $ Horticultural/Post Harvest Technology Equipments	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
Self Propelled/Other Power Driven Horticultural Machinery				
i. Chain Saw /Wheel Barrow /Mango Grader/ Planter and other suitable self propelled machineries and equipments for horticulture crops.	Rs.0.63lakh	50%	Rs.0.50lakh	40%
Manual Horticultural equipments				
i. Aluminium Ladder/Ladder ii. Aluminium Pole iii. Plucker	Rs.0.10lakh	50%	Rs.0.08lakh	40%
Post Harvest Equipments for food grains ,oil Seeds and Horticultural Equipments				
Establishment of PHT units for transfer of primary processing technology, value addition, low cost scientific storage, packaging units and technologies for by-product management in the production catchments.	Rs.1.60lakh	60%	Rs.1.50lakh	50%
i. Mini Rice Mill i. Mini Dal Mill ii. Millet Mill iii. Oil Mill with filter press(for all types of Horticulture/Food grain/oilseed crop) iv. Extractor (for all types of Horticulture/Food grain/oilseed crop) v. Pomegranate Aril Extractor vi. Custard Apple Pulper (for all types of Horticulture/Food grain/oilseed crop) vii. Dehydration unit/Pricking Machine/ Humidifier (for all types of Horticulture/ Food grain/oilseed crop) viii. Packing Machines(for all types of Horticulture/Food grain/oilseed crop	Rs.1.50lakh	60%	Rs.1.25lakh	50%
xi. All types of Power driven Dehuskar /sheller/ Threshers /Harvesters / De-spiking/Deconing Machine/Peeler/Spliter/Stripper(for all type of Horticulture / food grain/oil seeds Crops)	Rs.0.63lakh	50%	Rs.0.50lakh	40%
x. All types of Boiler/Steamer/Dryer solar (for all types of Horticulture/Food grain/oilseed crop)	Rs.0.63lakh	50%	Rs.0.50lakh	40%
xi. All types of Washing Machines(for all types of Horticulture/Food grain/oilseed crop) xii. All types of Grinder/Pulveriser/Polisher (for all types of Horticulture/Food grain/ oilseed crop) xiii. All types of Cleaner cum Grader/ Gradient separator /specific gravity separator (for all types of horticulture/Food grain/oilseed crop)	Rs.0.44lakh	50%	Rs.0.35lakh	40%

Annexure-II (C) contd...
Addenda

Component 3: Financial Assistance for procurement of Agril. Machinery & Equipments

Type of Agriculture Equipment	For SC,ST,Small & marginal Farmers, women and NE states beneficiaries	For other Beneficiaries
Solar photovoltaic (SPV) Water pumping systems @	Maximum permissible subsidy*	Maximum permissible subsidy*
Deep well **(Submersible)** Solar photovoltaic (SPV) Water pumping systems with A.C Induction Motor pum p Set and a suitable inverter **Model I** 1. PV Array 1200 Wp 2. Dynamic Head 45 meter 3. Water output 38000l/ day 4. MS hot dipped galvanized, three times manual tracking facilities 5. Motor 1.3 hp (approx) **Model II** 1. PV Array 1800 Wp 2. Dynamic Head 45 meter 3. Water output 57000l/ day 4. MS hot dipped glvanised, three times manual tracking facilities 5. Motor 2 hp **Model III** 1. PV Array 3000 Wp 2. Dynamic Head 70 meter 3. Water output 57000l/ day 4. MS hot dipped galvanized, three times manual tracking facilities 5. Motor 3.3 hp **Model IV** 1. PV Array 4800 Wp 2. Dynamic Head 70 meter 3. Water output 91000l/ day 4. MS hot dipped glvanised, three times manual tracking facilities 5. Motor 5 hp	**AC Pumps** Up to 2 hp : Rs 55,440 per hp >2 to 5 hp: Rs 47,520 per hp	**AC Pumps** Up to 2 hp : Rs 50,400per hp >2 to 5 hp: Rs 43200 per hp

Shallow well Solar photovoltaic (SPV) Water pumping systems with A.C Induction Motor pump Set and a suitable inverter **Model I** 1. PV Array 900 Wp 2. Dynamic Head 12meter 3. Water output 81000l/ day 4. Motor capacity 1 hp **Model II** 1. PV Array 1800 Wp 2. Dynamic Head 15 meter 3. Wateroutput 1,62000l/day 4. Motor capacity 2 hp **Model III** 1. PV Array 2700 Wp 2. Dynamic Head 25 meter 3. Wateroutput 1,35000l/day 4. Motor capacity 3 hp	**AC Pumps** Up to 2 hp : Rs 55,440 per hp >2 to 5 hp: Rs 47,520 per hp	**AC Pumps** Up to 2 hp : Rs 50,400per hp >2 to 5 hp: Rs 43,200 per hp
Deep well (Submersible) Solar photovoltaic (SPV) Water pumping systems with D.C Motor pump Set with Brushes or Brush less DC **Model I** 1. PV Array 1200 Wp 2. Dynamic Head 45 meter 3. Water output 42000l/ day 4. MS hot dipped galvanized, three times manual tracking facilities 5. Motor capacity 1.3 hp **Model II** 1. PV Array 1800 Wp 2. Dynamic Head 45 meter 3. Water output 63000l/ day 4. MS hot dipped glvanised, three times manual tracking facilities 5. Motor capacity 2 hp **Model III** 1. PV Array 3000 Wp 2. Dynamic Head 70 meter 3. Water output 63000l/ day 4. MS hot dipped galvanized, three times manual tracking facilities 5. Motor capacity 3hp	**DC Pump** Up to 2 hp : Rs 63,360 per hp >2hpto 5 hp: Rs59,400per hp	**DC Pump** Up to 2 hp : Rs 57,600 per hp >2hpto 5 hp: Rs 54,000 per hp

Model IV 1. PV Array 4800 Wp 2. Dynamic Head 70 meter 3. Water output 100000l/ day 4. MS hot dipped galvanized, three times manual tracking facilities 5. Motor capacity 5hp		
Shallow well Solar photovoltaic (SPV) Water pumping systems with D.C Motor pump Set with Brushes or Brush less DC **Model I** 1. PV Array 900 Wp 2. Dynamic Head 12meter 3. Water output 90000l/ day 4. Motor 1 hp **Model II** 1. PV Array 1800 Wp 2. Dynamic Head 15 meter 3. Water output 1,80,000l/ day 4. Motor Capacity 2 hp **Model III** 1. PV Array 2700 Wp 2. Dynamic Head 25 meter 3. Water output 1,48000l/day 4. Motor Capacity 3 hp	**DC Pump** Up to 2 hp : Rs 63,360 per hp >2hpto 5 hp: Rs59,400per hp	**DC Pump** Up to 2 hp : Rs 57,600 per hp >2hpto 5 hp: Rs 54,000 per hp

*Capital subsidy is applicable on the system cost inclusive of installation, commissioning, transportation, insurance 5 years maintenance and taxes wherever applicable.

Beneficiaries: Individual farmer, SHG/UC of farmers/co-operative societies of farmers/FPO's/entrepreneurs

@The pumps which will be supplied under Subsidy programmes must qualify as per IEC standard and performance as per the conditions laid down in the enclosed Annexure-X and tested and approved by one of IEC/NABL/MNRE accredited test labs

(i) National Institute of Solar Energy, Gurgaon.

(ii)Electronic Quality and Development Center, Ahmedabad

The similar Programme of Ministry of New and Renewable Energy, Government of India, is also implemented by the State Renewable Agency of respective States. To avoid the duplicity Agricultural Department of State Government may also consult to the State Renewable Agencies while selecting the beneficiary. The list of the beneficiary may be exchanged time to time within both the departments.

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (c) Contd.

Component No. 3 : Financial Assistance for Procurement of Agriculture Machinery and Equipment

Type of Agricultural Equipments ** , $ All manual /animal drawn equipment/ implements/Tools	For SC, ST, Small & Marginal farmers, Women and NE States beneficiary		For other beneficiary	
	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance	Maximum Permissible subsidy per Machine/ Equipment per beneficiary	Pattern of Assistance
Plant protection equipments				
(a) Manual sprayer: (i) Knapsack/foot operated sprayer.	Rs.0.006 lakh	50%	Rs. 0.005 lakh.	40%
(b) Powered Knapsack sprayer/Power Operated Taiwan sprayer (capacity 8 - 12 lts):	Rs. 0.031 lakh	50%	Rs. 0.025 lakh	40%
(b) Powered Knapsack sprayer/Power Operated Taiwan sprayer (capacity above 12- 16 lts):	Rs.0.038 lakh	50%	Rs. 0.03 lakh	40%
(c) Powered Knapsack sprayer/Power Operated Taiwan sprayer (capacity above 16lts	Rs.0.10 lakh	50%	Rs. 0.08 lakh	40%
(d) Tractor mounted /Operated Sprayer (below 20 BHP):	Rs.0.10 lakh	50%	Rs. 0.08 lakh	40%
(e) Tractor mounted /Operated Sprayer (below 35 BHP):	Rs.0.13 lakh	50%	Rs. 0.10 lakh	40%
(f) Eco Friendly Light Trap	Rs.0.014 lakh	50%	Rs. 0.012 lakh	40%
(g) Tractor mounted / Operated Sprayer (above 35 BHP):	Rs.0.63 lakh	50%	Rs. 0.50 lakh	40%
(h) Electrostatic Sprayer	Rs.0.63 lakh	50%	Rs. 0.50 lakh	40%
Post Harvest Technology				
Establishment of PHT units for transfer of primary processing technology, value addition, low cost scientific storage, packaging units and technologies for by-product management in the production catchments.	Rs. 1.50 lakh/unit	60%	Rs.1.25 lakh/unit	50%

PTO – Power Take Off

*Illustrative list of the equipments tested from FMTTIs & other designated Institutes may be referred at www.farmech.gov.in

**All tested equipments from either FMTTIs or designated Institute from DAC are only eligible for subsidy in all states under Government assisted programme

These Agricultural Implements authorized to test at designated Institute from DAC&FW.

$ These Agricultural machinery authorized to test at FMTTIs and selected designated testing institutes of DAC&FW.

Please also refer para 11.1.3 for details on guidelines of testing.

- Any extra equipment proposed by States would be considered by DAC under the appropriate category of assistance

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (d)

Component No. 4: Establishment of Farm Machinery Banks for Custom Hiring:

I	Establishment of Farm Machinery Banks for Custom Hiring		
S.N	**Item**	**Maximum Permissible Project Cost**	**Pattern of Assistance**
A	Procurement subsidy for establishment of Custom Hiring Centre upto 10 lakh	**Project based** Rs. 4.0 lakh	40%
B	Procurement subsidy for establishment of Custom Hiring Centre upto 25 lakh	**Project based** Rs. 10.0 lakh	40%
C	Procurement subsidy for establishment of Custom Hiring Centre upto 40 lakh	**Project based** Rs. 16.0 lakh	40%
D	Procurement subsidy for establishment of Custom Hiring Centre upto 60 lakh	**Project based** Rs. 24.0 lakh	40%

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (e)

Component No. 5: Establishment of Hi-Tech, High Productive Equipment Hub for Custom Hiring

S.N	Item	Maximum Permissible Project Cost	Pattern of Assistance
A	Procurement subsidy for establishment of Custom Hiring Centre upto 100 lakh	**Project based** Rs. 40.0 lakh	40%
B	Procurement subsidy for establishment of Custom Hiring Centre upto 150 lakh	**Project based** Rs. 60.0 lakh	40%
C	Procurement subsidy for establishment of Custom Hiring Centre upto 200 lakh	**Project based** Rs. 80.0 lakh	40%
D	Procurement subsidy for establishment of Custom Hiring Centre upto 250 lakh	**Project based** Rs. 100.0 lakh	40%

Annexure-II (f)

Component No. 6:- Promotion of Farm Mechanisation in Selected Villages

S.N	Item	Maximum Permissible Project Cost	Pattern of Assistance
I	Financial assistance for Farm Machinery Banks with minimum 8 Farmers per Bank	Upto Rs.10 lakhs per Farm Machinery Bank	80% of the cost of Farm Machinery Bank

COST NORMS AND PATTERN OF ASSISTANCE UNDER SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM) DURING 12TH PLAN PERIOD.

Annexure-II (g)

Component No. 7: Financial Assistance for Promotion of Mechanized Operations/hectare Carried out Through Custom Hiring Centres:

S.N	Item	Maximum Permissible Project Cost	Pattern of Assistance	Norms for Intervention
I	(a) Hiring Charges to farmer members of Farm Machinery Banks set up under component (6)	Upto a maximum of 1 ha area as per following norms (i) For tractor/power operated operations – Rs. 2000/ha per farmer per year (ii) For animal drawn mechanized operations- Rs. 1000/ha per farmer per year (iii) For manual operations – Rs. 750/ha per farmer per year	50% of the cost of operation/ha	Selection of villages from districts with low productivity in Cereals, Pulses & Oilseeds identified in other Missions for demonstrations One time hiring assistance to farmer members of the farm machinery banks set up under component (6)
	(b) Field Demo by CHCs	Minimum 120 ha/season per Custom Hiring Centre	Rs. 4000/ha	Demonstration charges to custom hiring centres set up under Component (4). These demonstrations will be limited to 120 ha/village

Annexure-II (h)

Component No. 8: Promotion of Farm Machinery and Equipment in North-Eastern Region

S.N	Item	Maximum Permissible Project Cost	Pattern of Assistance (Project Based)	Norms for Intervention
I	(a) Financial assistance for procurement of machinery/ implements	Upto Rs.1.25 lakhs per beneficiary	100% of cost of machinery/implement /equipment	8 North Eastern States to take up this on project basis with a minimum of 8-10 farmers and maximum 150 farmers in order to encourage good agricultural practices in specific crops/areas.
	(b) Financial assistance for Farm Machinery Banks for group of farmers	Upto Rs.10 lakhs per Farm Machinery Bank	95% of cost of Farm Machinery Banks	

FORMULA TO CALCULATE FARM POWER AVAILABILITY (kW/ha)

kW/ha =	(Number of agricultural Worker x 0.05+Number of draught animal x 0.38 + Number of Tractors x 26.1 + Number of Power tillers x 5.6 + Number of electric motor x 3.7 + Number of diesel engine x 5.6) ÷ Available cultivated land in ha.

LIST OF TRAINING PROGRAMMES CONDUCTED AT THE FARM MACHINERY TRAINING & TESTING INSTITUTES

S.No.	Name of the Course		Duration	Training Charges per person per course
I.	**USER LEVEL COURSES:**			
	U1	Appropriate Mechanization Technology for Energy Management in Agriculture	4 weeks	**FREE**
	U2	Selection, Operation, Safety and Maintenance of Improved Agricultural Machinery	6 weeks	
	U3	Operation, maintenance and Management of power tiller	2 weeks	
	U4	Training Program on Agro Processing & value addition Equipments	2 weeks	
	U5	Gender friendly Equipments for Women farmers	3 days	
	U6	Utilization of Non-conventional Energy Sources in Agriculture.	1 week	
	U7	Water Management Through sprinkler and drip Irrigation & Water saving devices.	1 week	
	U8	Selection, Operation and Maintenance of Plant Protection Equipments	1 week	
	U9	Selection, Operation and Maintenance of improved Harvesting & Threshing machines	2 weeks	
	U10	Selection, Operation, and Maintenance of Hand Pump	1 week	
	U 11	Selection, operation and maintenance of agril. Machinery for dry land agriculture.	2 week	
	U12	**Crop Specific Machines:**		
	a)	Package of Agricultural machinery for Paddy cultivation.	1 week each	**FREE**
	b)	Package of Agricultural machinery for Maize cultivation.		
	c)	Package of Agricultural machinery for Vegetable cultivation.		
	d)	Package of Agricultural machinery for Sugarcane cultivation.		
	e)	Package of Agricultural machinery for Horticulture & Medicinal crops cultivation.		
	f)	Package of Agricultural machines for oil seed and pulse crop		

	g)	Package of Agricultural machinery for forage/ fodder production and fodder management.	1 week each	**FREE**
	U13	Information Technology application in farm mechanization		
II.	**TECHNICIAN LEVEL COURSES:**			
	A. Courses on Repair and Overhauling			
	T1	Repair and overhauling of Stationery engines and tractors	6 weeks	Rs. 300/-
	T2	Repair & overhauling of power tillers	2 weeks	Rs. 100/-
	T3	Establishment and management of agricultural machinery repair and maintenance workshop	4 weeks	Rs. 200/-
	T4	Study & Repair of Hydraulic system in Agriculture Machines.	4 weeks	Rs. 200/-
	T5	Repair and maintenance of Auto Electrical equipments and Battery re-conditioning	3 weeks	Rs. 150/-
	T6	Repair, maintenance & rewinding of Electrical motors, and submersible pumps for agricultural use	3 weeks	Rs.150/-
	T7	Operation & maintenance of Land shaping and Development machinery	4 weeks	Rs. 500/-
	T8	Repair, maintenance & overhauling of diesel pumping sets	2 weeks	Rs. 100/-
	T9	Maintenance, repair and installation of Combine Harvesters and Straw Reaper.	3 weeks	Rs. 150/-
	B. Earning While Learning Courses:			
	TEL-1	Repair and overhauling of Stationery engines, tractors and diesel pumping sets.	6 months	Rs. 200/-
	TEL-2	Repair & overhauling of power tillers	6 months	Rs. 200/-
	TEL-3	Establishment and management of agricultural machinery repair and maintenance workshop	6 months	Rs. 200/-
	TEL-4	Repair and maintenance of Auto Electrical equipments, Battery re-conditioning, Rewinding of electrical motors and submersible pumps.	6 months	Rs. 200/-
	TEL-5	Maintenance, repair and installation of Combine Harvesters and Straw Reaper.	6 months	Rs. 200/-
III.	**MANAGEMENT LEVEL COURSES: (for trainees sponsored by the commercial organizations / Banks/ Manufacturer**			
	M1	Testing and Evaluation of Farm Machinery	1 week	Rs. 2500/
	M2	Agriculture Machinery Management	1 week	Rs. 2500/
	M3	Export Management of Agricultural Machinery.	1 week	Rs. 2500/
	M4	Instrumentation for Farm Machinery Testing and Evaluation	1week	Rs. 2500/

	M5	Entrepreneurship development to establish custom hiring agro-service centre (Except farmers)	8 weeks	Rs. 20000/
	M6	Farm machinery management for dealers / traders / manufacturers, etc.	1 week	Rs. 2500/
IV	**ACADEMIC LEVEL TRAINING PROGRAM**			
	A1	Trg. program on Farm Power & Machinery for Degree/Diploma Engg.Students. (4 weeks)	4 weeks	Rs. 2000/- per course/month
	A2	Practical Training programme on Farm Power and Machinery for ITI & 10 +2 vocational students	4 weeks	
V	**NB**	**Need based Training Programme on Mechanization**	As per requirement of the Sponsoring agency.	Rs. 1000/- per month (Except Farmers)
VI	**FN**	**Training programme for Foreign National as per requirements under Bilateral programme**	10 to 18 weeks (As per requirement of the Sponsoring agency)	As per Govt. policy
VII		**TECHNOLOGY TRANSFER CAMPS – OFF CAMPUS**		
	TT1	Energy conservation & safety in farm machinery	1 – 2 days	Free
	TT2	Familiarization and demonstration of improved/modern agril. Machines.	1 – 2 days	Free
VIII		**SKILL DEVELOPMENT PROGRAMMES ALIGN TO NSQF**		
	QP-1	Harvesting Machine Operator	200 hrs.	
	QP-2	Tractor Operator	200 hrs.	
	QP-3	Agro Service Center/Custom Hiring Center for entrepreneurs	200 hrs.	
	QP-4	Reaper & Thresher Operator	120 hrs.	
	QP-5	Agricultural Machinery Operator	120 hrs.	
	QP-6	Repair & Maintenance Technician (Farm Machinery)	200 hrs.	
	QP-7	Irrigation Pump Technician	80 hrs.	

Annexure-V

List of institutions approved by the Department of Agriculture & Cooperation & Farmers Welfare Ministry of Agriculture & Farmers Welfare Government of India for Testing and Certifying Agricultural Machineries and Equipments

S. No.	Name of the State	Name of the Institute
1	**ANDHRA PRADESH**	Acharya N.G. Ranga Agriculture University (ANGRAU), Rajendra Nagar, **HYDERABAD (ANDHRA PRADESH)**
2	**BIHAR**	Faculty of Agricultural Engineering, Rajendra Agriculture University, **PUSA (BIHAR)**
3	**CHHATTISGARH**	State level Agriculture Implement Testing Centre, Directorate (Agricultural Engineering), Agriculture Department, Govt. of Chhattisgarh, TeliBandha, Gorav Path, **RAIPUR (CHHATTISGARH)**
4	**DELHI**	Division of Agricultural Engineering, Indian Agricultural Research Institute, **NEW DELHI-12.**
5	**GUJARAT**	College of Agricultural Engineering & Technology, Junagarh Agricultural University, **JUNAGARH (GUJARAT)**
6	**HARYANA**	College of Agricultural Engineering & Technology, ChoudharyCharan Singh Agriculture University, **HISSAR**
7	**JAMMU & KASHMIR**	Sher-e-Kashmir University of Agri. Science & Technology, **SRINAGAR REGION (J. & K.) and JAMMU REGION (J. & K.)**
8	**JHARKHAND**	Birsa Agriculture University, Kanke, **RANCHI (JHARKHAND)**
9		Jharkhand Agriculture Machinery Testing and Training Centre (JAM-TTC), Department of Agriculture and Cane Development (Directorate of Soil Conservation), Jharkhand, Agricultural Engineering Section at Extension Training Campus, Govt. of Jharkand, **RANCHI (JHARKHAND)**
10	**KARNATAKA**	University of Agricultural Sciences, Gandhi KrishiVignyan Kendra, **BANGALORE (KARNATAKA.)**
11		College of Agricultural Engineering, UAS, **RAICHUR, KARNATAKA.**
12	**KERALA**	Farm Machinery Testing Centre, Kerala Agricultural University Kelappaji College of Agricultural Engineering & Technology Tavanur, **Malappuram (Dist), Kerala- 679573**
13	**MADHYA PRADESH**	Central Institute of Agricultural Engineering, Berasia Road, **BHOPAL**
14	**MAHARSHTRA**	Dr. A.S. College of Agricultural Engineering Mahatma Phule Krishi Vidyapeeth, Rahuri, Distt. Ahmednagar, Maharashtra **(MPKV)**
15		Farm Machinery Testing, Training and Production Centre, Department of Farm Power and Machinery, Dr. PDKV, **Akola,**

16		College of Agricultural Engineering and Technology, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, **DAPOLI (MAHARSHTRA)**
17	**ORISSA**	College of Agricultural Engineering and Technology, Orissa University of Agriculture and Technology, **BHUBANESWAR**
18		State Level Farm Machinery Training & Testing Centre, Agriculture Department, Government of Odisha, **Bhubaneswar, Odisha.**
19	**PUNJAB**	College of Agricultural Engineering and Technology, Punjab Agriculture University, **LUDHIANA (PUNJAB)**
20		Central Institute of Post Harvest Engineering and Technology **(CIPHET) , Ludhiyana , 141004**
21	**RAJASTHAN**	Farm Implements and Machinery Testing & Training Centre, Central Workshop, Swami Keshwanand Rajasthan Agricultural University, **Bikaner (Rajasthan).**
22		College of Technology and Agricultural Engineering, Maharana Pratap, University of Agriculture and Technology, **UDAIPUR (RAJASTHAN)**
23	**SIKKIM**	College of Agricultural Engineering and Post Harvest Technology, **RANIPOOL, GANGTOK (SIKKIM)**
24	**TAMIL NADU**	Tamil Nadu Agricultural University, **COIMBATORE (TAMIL NADU)**
25	**UTTAR PRADESH**	State Level Farm Machinery Training and Testing Institute, Govt. of U.P., Rehmankhera, **LUCKNOW (U.P.)**
26		Sam Higginbottom Institute of Agriculture, Technology & Science (AAI), Deemed University, **ALLAHABAD (U.P.)**
27	**UTTARANCHAL**	College of Technology, Gobind Ballabh Pant University of Agriculture and Technology, **PANTNAGAR (UTTARANCHAL)**
28	**WEST BENGAL**	Department of Agriculture & Food Engineering, Indian Institute of Technology, **KHARAGPUR (WEST BENGAL.)**
29		State Farm Machinery Training-cum-Testing Institute, Faculty of Agricultural Engineering, Bidhan Chandra KrishiViswavidyalaya (BCKVV), **Mohanpur, DISTT. NADIA (WEST BENGAL)**

TESTING CHARGES 2016-17 (w.e.f. 01.06.2016)

Annexure-VI

S.N.	Items	Testing Fees (₹)	Service Tax15.0% (₹)	Total (₹)
1	Components	9,236	1,385	10,621
2	Hand Tools	9,236	1,385	10,621
3	Power operated thresher, decorticator, Sheller, winnowers etc.	36,916	5,537	42,453
4	Animal drawn equipments	19,693	2,954	22,647
5	Tractor drawn/operated implements/equipments : Rotavator, Cultivator, Harrow, Plough etc.	62,764	9,415	72,179
6	Manually operated equipment	17,842	2,676	20,518
7	Power till driven/Self propelled reaper , power weeder(Walk behind) etc.	36,916	5,537	42,453
8	Tractor drawn/operated seed cum fertilizer drill/planter, straw reaper, Mini Rice Mill, Power seed cleaner/grader , Laser leveler , Potato digger	65,835	9,875	75,710
9	Animal drawn Multi tool bar (Minimum four attachments)	52,295	8,294	60,589
10	Self propelled Paddy Transplanter , vegetable transplanter	89,832	13,475	1,03,307
11	Power operated Multi-crops thresher (Two or more crops)	67,686	10,153	77,839
12	Samples received from Private manufacturers: (Other than the samples under BIS Central Certification marks scheme)			
	a) IC Engines with kerosene/LPG	16,991	2,549	19,540
	b) Pump set (Engine+Pump) with kerosene/LPG	32,366	4,855	37,221
	c) Pump set without engine	15,371	2,306	17,677
	d) Knapsack Sprayer IS:3906 (Private sample) : Manual & Battery operated	21,107	3,166	24,273
	e) Power Sprayer IS:2548 (Private Sample) : Engine operated Knapsack/tractor, engine, motor powered	55,422	8,313	63,735
13	Combine Harvester			
	a) Self Propelled (with engine test)	4,37,400	65,610	5,03,010
	b) Without engine test	3,09,096	46,364	3,55,460
	b) Tractor driven	3,09,096	46,364	3,55,460
	c) Combine harvester engine	1,28,304	19,246	1,47,550
	c) CMVR	93,312	-------	93,312

*Service tax rate applicable as per the rate applicable on date of application.

Testing charges are increased by 8% for combine harvesters and by 15% for other machinery on every 1st day of new financial year.

Testing Charge for the post Harvest Technology Equipments and machinery.

S.No.	Name of the Machine/equipments	Testing Charges (Rs)		
		Operated with Electricity	Operated with Tractor	Operated with fuel
1	Grain Dryer (Stationary/Mobile) (Capacity 1-5 t/h)	202100	234500	208100
2	Seed/Grain Cleaner /Grader/Cleaner cum grader/Destoner, Mobile Grain Cleaner/Grader(Capacity up to 2 t/h)	97700		
3	Mini dhal Mill(Capacity up to 150 kg/h)	97700		
4	Grain cleaner cum Dryer with or without treater (Capacity 1-5 T/h)	202100	234500	208100
5	Pop Corm machine (capacity up to 100 pkt/h)	37000		
6	Potato/Banana Chips Making machine(capacity up to 100 kg/h)	37000		
7	Mini rice mill/ Double Rubber sheller/ Air Cooled polisher cum Broken separator(capacity up to 1t/h)	103700		109700
8	Mini oil expeller/ extraction plant (ie. Oil seed such as soybean, mustered, ground nut , sunflower etc. (capacity up to 500 kg/h)	131000		
9	Areca nut Dehuskar(capacity up to 500 kg/h)	91700		
10	Chilli/ Masala Pounding Machine. (capacity up to 20 kg/h)	43000		
11	Hammer Beater type Pounding machine (capacity up to 100 kg/h)	64000		
12	Flour Mill machine (Attrition/Burr Mill) (capacity up to 50 kg/h)	49700		
13	Grinding Mill(capacity up to 300 kg/h)	97700		
14	Rawa suji Grinding machine Plate type (capacity up to 20 kg/h)	39800		
15	Sugar cane crusher having double roller (capacity up to 200 litre/h)	38000		
16	Sugar cane crusher having triple roller (capacity up to 1000 litre/h)	97700		
17	Papad/ Roti/ Chapti rolling/ making machine or with electricity (capacity up to 300 number /h)	39800 (operated manual also)		
18	Semi Automatic Papad/Roti/ Chapati plant (capacity up to 100 kg/h)	102700		115900 Operated with Gas and electricity
19	Vermicilli Machine (capacity up to 50 kg/h)	48100		

Note

1. To test the machine on Additional Crops, extra @40% test fee over and above the original test fee shall be charged.
2. The Raw material required for test shall be arranged by the applicant at his own cost as per the requirement of the parameters.
3. The above testing charges shall be applicable w.e.f. date of issue of order.
4. The testing charges shall be revised annually. The testing charges shall be enhanced by 10% over the test fee prevailing in the previous year. The enhanced test fee shall be applicable w.e.f 1st day of the fiscal year. The enhanced test fee shall not be made applicable on those machines which have been admitted for test before the 1st day of the fiscal year.
5. The Service Tax and Cess as per the prevailing rates would be extra over and above the above testing fee.
6. Once the machine is submitted for test with all necessary test fees and subsequently if the manufacturer/applicant withdraws the machine from test , there shall be no refund of the test fee deposited.

Sub Mission on Agricultural Mechanization (SMAM)
Format for Annual Action Plan

Name of State:
Financial Year:
Nodal Department:
Background Information:
FARM POWER AVAILIBITY (kW/ha):
Main Crops:
Type of Soil:

Component No.1: Promotion and Strengthening of Agricultural Mechanisation through Training, Testing and Demonstration				
S.N	**Component**	**Approved pattern of assistance**	**Estimated Cost**	**Central Share**
i.	**Demonstrations**			
1 (i) (ii)	Total no. of Demonstrations Cropping pattern based deoms= New technology machines/equipments demos=	Rs. 4000 per Hectare per operation upto 100 ha per season		
ii.	**Training**			
1 (i) (ii)	Total no. of courses to be conducted and No. of trainees to be trained under each course U1-U13= T1-T9=	Rs. 4000 per trainee per week		
iii.	**Augmenting the facilities and infrastructure for testing Centres**			
1	Total No. of Centres to be strengthened	Rs. 150 lakhs max. per institution		
Total Cost (A): i+ii+iii =				
Component No.2: Demonstration, Training and Distribution of Post Harvest Technology and Management (PHTM)				
i.	**Demonstrations**			
1 (i) (ii)	Total Area to be covered under demonstrations Cropping pattern based demos = New technology machines/ equipments demos =	Rs. 4000 per techno-logy upto 100 demo per season		
ii.	**Training**			
1	Total no. of courses to be conducted and No. of trainees to be trained under each course	Rs. 4000 per trainee per week		
iii.	**Establishment of PHT Technology**			
	Total number of PHT Technologies to be established	50% of the cost limited to Rs. 1.25 lakhs (Additional 10% to SC/ST/Small and Marginal/Women and North Eastern States)		
Total Cost (B): i+ii+iii =				

(c) Component No.3: Financial Assistance for Procurement of Agriculture Machinery and Equipment						
S.N	**Component**		**Pattern of Assistance**	**Estimated Cost**	**Central Share**	**State Share**
1	Name of machines to be procured	No. of machines to be procured	As per Annexure-II (c)			
	Tractor					
	Power tiller					
	self propelled machines					
	Tractor driven implements					
	animal/manual drawn					
	machines					
	PP Manual					
	PP Power					
Total Cost (C):						
(D) Component No.4 : Farm Machinery Banks for Custom Hiring						
1	**Total no. of farm machinery Banks**		**Pattern of Assistance**	**Estimated Cost**	**Central Share**	**State Share**
a)	Upto 10 lakh =		40% limited to Rs. 4 lakh			
b)	Upto 25 lakh =		40% limited to Rs. 10 lakh			
c)	Upto 40 lakh =		40% limited to Rs. 16 lakh			
d)	Upto 60 lakh =		40% limited to Rs. 24 lakh			
Total Cost (D):						
(E) Component No. 5 : Hi-Tech, High Productive Equipment Hub for Custom Hiring						
1	**Total no. of Hubs**		**Pattern of Assistance**	**Estimated Cost**	**Central Share**	**State Share**
a)	Upto 100 lakh =		40% limited to Rs. 40 lakh			
b)	Upto 150 lakh =		40% limited to Rs. 60 lakh			
c)	Upto 200 lakh =		40% limited to Rs. 80 lakh			
d)	Upto 250 lakh =		40% limited to Rs. 100 lakh			
Total Cost (E):						
(F) Component No. 6 : Promotion of Farm Mechanisation in Selected Villages						
1	**No. of Farm Machinery Banks**		**Pattern of Assistance**	**Estimated Cost**	**Central Share**	**State Share**
			80% of the project cost limited to Rs. 10 lakhs per village			
Total Cost (F):						
(G) Component No. 7 : Financial Assistance for Promotion of Mechanized Operations/hectare Carried out Through Custom Hiring Centres						
S.N	**Intervention**		**Pattern of Assistance**	**Estimated Cost**	**Central Share**	**State Share**
a)	Operational Charges to farmer members of Farm Machinery Banks set up under component (6) – Type of Operation & Area to be covered under each operation		50% of the cost of operation/ha limited to (i) Rs. 2000/ha per farmer per year for tractor/power operated operations(ii) Rs. 1000/ha per farmer per year for animal drawn mechanized operations and (iii) Rs. 750/ha per farmer per year for manual operations			

b)	No. of Field Demo by CHCs		Rs. 4000/ha with a minimum of 120 ha/ season per CHC			
Total Cost (G):						
(H) Component No. 8 : Promotion of Farm Machinery and Equipment in North-Eastern States						
S.N	**Intervention**		**Pattern of Assistance**	**Estimated Cost**	**Central Share**	**State Share**
a)	Financial assistance for procurement of machinery/ implements		100% of cost of machinery/ implement/ equipment upto Rs.1.25 lakhs per beneficiary			
	Name of machines to be procured	No. of machines to be procured				
	Tractor					
	Power tiller					
	self propelled machines					
	Tractor driven implements					
	animal/manual drawn machines					
	PP Manual					
	PP Power					
b)	Financial assistance for Farm Machinery Banks for group of farmers		95% of cost of Farm Machinery Banks & upto Rs.10 lakhs per Farm Machinery Bank			
Total Cost (H):						
(I) Flexi Funds:						
1	Local Initiatives (10% of the approved outlay)					
Total Cost (I)						
J. Management/Administrative Cost (<5%):						
Total Cost (A+B+C+D+E+F+G+H+I+J)=						
Total Central Share=						
Total State Share=						

FORM GFR 19-A

(See Government of India's Decision (i) below rule 150)

Form of Utilization Certificate

Sl. No	Letter No. & Date	Amount	
			Certified that out of Rs. --------of grants-in –aid sanctioned during the year ----- in favour of ---------- under this Ministry/ Department letter No. given in the margin and Rs. ----------on account of unspent balance of the previous year, a sum of Rs.---------- has been utilized for the purpose of ---------For which it was sanctioned and that the balance of Rs.---------- remaining unutilized at the end of the year has been surrendered to Government (Vide No.---------dated----------) will be adjusted towards the grant –in-aid payable during the next year----------

2. Certified that I have certified myself that the conditions on which the grant-in-aid was sanctioned have been duly fulfilled/are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kind of checks exercised.

1)

2)

3)

4)

5)

Signature: ----------

Name: ----------

Designation: ----------

Sub Mission on Agricultural Mechanization (SMAM)
Format for Quarterly /Annual Progress Report

Name of State:
Financial Year:
Nodal Department:

S.N	Components	Activities	Target Approved by DAC		Quarterly /Annual Progress Report			
					Achievements for quarter I/II/III		Achievements till 31st March	
			Physical	Financial	Physical	Financial	Physical	Financial
1	Promotion and Strengthening of	a) Trainees trained in U1-U13 courses	No. of Trainees					
	Agricultural Mechanization	b) Trainees trained in T1-T9 courses	No. of trainees					
	through Training, Testing and	c) Institution strengthened for testing	Name of the inst.					
	Demonstration	d)Demonstration on cropping system based approach	Area covered (ha), Type of equipments and Type of cropping system					
		e) Demonstration of new technology equipments/ machines	Type of equipments and Area covered (ha)					
2	Demonstration,	a) Name & No. of courses	No. of Trainees trained					
	Training and distribution of Post-	b) Demonstration of PHT	Name of technology & Area in ha					
	Harvest Technology and Management (PHTM)	c) Establishment of Post Harvest Technologies	Name and No. of technologies established					
3	Financial Assistance for Procurement of Agriculture Machinery and Equipment	**Type of machines**	No. of machines procured					
		a) Tractor						
		b) Power tiller						
		c)self propelled machines						
		d) Tractor driven implements						
		e) Animal/manual drawn machines						
		f) PP Manual						
		g) PP Power						

4	Establish Farm Machinery Banks for Custom Hiring	**Size of FM Bank**	No. of Banks established					
		Upto 10 lakh						
		Upto 25 lakh						
		Upto 40 lakh						
		Upto 60 lakh						
5	Establish Hi-Tech, High Productive Equipment Hub for Custom Hiring	**Size of Hi-tech Hub**	No. of Hubs established					
		Upto 100 lakh						
		Upto 150 lakh						
		Upto 200 lakh						
		Upto 250 lakh						
6	Promotion of farm mechanisation in selected villages	Farm Machinery Banks established	No. of Banks					
7	Financial Assistance for promotion of Mechanized operations/hectare carried out through custom hiring Centres	a) Operational Charges to the farmer members of Farm Machinery Banks set up under component (6)	Name of the operation and area covered (ha)					
		b) Demonstrations by CHCs under component (7)	Name of the equipment & No. of Field Demo organized and area covered					
8	Promotion of farm machinery and equipment in North-Eastern States	**Type of machines**	No. of machines procured					
		a) Tractor						
		b) Power tiller						
		c)self propelled machines						
		d) Tractor driven implements						
		e) Animal/manual drawn machines						
		f) PP Manual						
		g) PP Power						
		Farm Machinery Banks for group of farmers	No. of Banks established					
9	Flexi Funds (Local Initiatives)	Type of local initiatives						
10	Management/ Administrative Cost (≤1%):							
	Total:							

Minimum Technical Requirements for Design, Construction, Test Procedure and Safety for Solar PV Modules and Performance Standards for Solar PV Pumping System up to 5 HP.

i. Test codes reference for Solar PV Modules

IEC 61215/IS14286 design qualification and type approval must confirm for crystalline Silicon Terrestrial Modules or

IES 61646/Equivalent IS under Development for thin Film Terrestrial Modules.

IEC 616730 part I &II for construction, testing procedure and safety qualification

Testing of Integrated unit of Solar Array and compatible pumping units for performance Test as given below:

II. PERFORMANCE SPECIFICATIONS AND REQUIREMENTS (DUTY CYCLE) up to 5 HP Solar PV pumping System

Solar PV Water Pumps with PV array capacity in the range of 200 Watt to 5 KWp could be installed on a suitable bore-well, open well, Water Reservoir, Water stream, etc.

Under the "Average Daily Solar Radiation" condition of 7.15 KWh'sq.m. on the surface of PV array (i.e coplanar with the PV Modules), the minimum water output from a Solar PV Water Pumping System at different "Total Dynamic Heads" should be as specified below.

For D.C.Motor Pump Set with Brushes or Brush Less D.C.(B.L.D.C):

(i) 100 liters of water per watt peak of PV array, from a Total Dynamic Head of 10 metres (Suction head, if applicable, minimum of 7 metres) and with the shut off head being at least 12 metres.

(ii) 55 liters of water per watt peak of PV array, from a Total Dynamic Head of 20 metres (Suction head, if applicable, up to a maximum of 7 metres) and with the shut off head being at least 25 metres.

(iii) 35 liters of water per watt peak of PV array, from a Total Dynamic Head of 30 metres and the shut off head being at least 45 metres.

(iv) 21 liters of water per watt peak of PV array, from a Total Dynamic Head of 50 metres and the shut off head being at least 70 metres.

(v) 14 liters of water per watt peak of PV array, from a Total Dynamic Head of 70 metres and the shut off head being at least 100 metres.

For A.C. Induction Motor Pump Set with a suitable Inverter :

(i) 90 liters of water per watt peak of PV array, from a Total Dynamic Head of 10 meters (Suction head, if applicable, minimum of 7 metres) and with the shut off head being at least 12 metres.

(ii) 50 liters of water per watt peak of PV array, from a Total Dynamic Head of 20 metres (Suction head, if applicable, up to a maximum of 7 metres) and with the shut off head being at least 25 metres.

(iii) 32liters of water per watt peak of PV array, from a Total Dynamic Head of 30 metres and the shut off head being at least 45 metres.

(iv) 19 liters of water per watt peak of PV array, from a Total Dynamic. Head of 50 metres and the shut off head being at least 70 metres.

(v) 13 liters of water per watt peak of PV array, from a Total Dynamic Head of 50 mertres and the shut off head

being at least 70 metres.

The actual duration of pumping of water on a particular day and the quantity of water pumped could vary depending on the solar intensity, location, season, etc.

Indicative performance specifications for the Shallow and Deep well SPV Water Pumping Systems are giv en in the Annexure-IIC and IID.

III. PV ARRAY

The SPV water pumping system should be operated with a PV array capacity in the range of 200 Watts peak to 5000 Water peak, measured under Standard Test Conditions (STC).

Sufficient number of modules in series and parallel could be used to obtain the required PV array power output. The power output of individual PV modules used in the PV array, under STC, should be a minimum of 74 Watts peak with adequate provision for measurement tolerances. Use of PV modules with higher power output is preferred.

Indigenously produced PV module(s) containing mono/multi crystalline silicon solar cells should be used in the PV array for the SPV Water Pumping systems.

- Modules supplied with the SPV water pumping systems should have certificate as per IEC 61215 specifications or equivalent National or International Standards.
- Modules must qualify to IEC 61730 Part I and II for safety qualification testing , be more than 70%.
- The terminal box on the module should have a provision for "Opening" for replacing the cable, if required.
- There should be a Name Plate fixed inside the module which will give :
  - C. Name of the Manufacturer or Distinctive Logo.
  - d. Model Number
  - e. Serial Number
  - f. Year of manufacture

IV. MOTOR PUMP-SET

The SPV water pumping systems may use any of the following types of motor pump sets:

1. Surface mounted motor pump-set (Upto 10 m head)
2. Submersible motor pump set
3. Floating motor pump set
4. Any other type of motor pump set after approval from Test Centers of the Ministry.

The "Motor Pump Set" should have a capacity in the range of 0.2 HP to 5 HP and should have the following features"

- The mono block DC /AC centrifugal motor pump set has its driving unit and impeller mounted on a common shaft, thereby giving it a perfect alignment. The pump should be provided with specially developed mechanical seals which ensure zero leakage.
- The motor is of 1.5 HP having spring loaded carbon brushes in case of D.C. Motor Pump Sets. The suction and delivery head will depend on the site specific condition of the field.
- Submersible pumps could also be used according to the technical need of the particular case
- The suction/delivery pipe (GI/HOPE) electric cables, floating assembly, civil work and other fittings required to

install the system.

- The following details should be marked indelibly on the motor pump set:

a) Name of the Manufacturer or Distinctive Logo.

b) Model Number.

c) Serial Number.

V. MOUNTING STRUCTURERS and TRACKING SYSTEM

The PV modules should be mounted on metallic structures of adequate strength and appropriate design, which can withstand load of modules and high wind velocities up to 150 km per hour. The support structure used in the pumping system should be hot dip galvanized iron with minimum 80 micron thickness.

To enhance the performance of SPV water pumping systems, manual or passive or auto tracking system must be used. For manual tracking, arrangement for seasonal tilt angle adjustment and three times manual tracking in a day should be provided.

VI. ELECTRONICS AND PROTECTIONS

- Maximum Power Point Tracker (MPPT) should be included to optimally use the Solar panel and maximize the water discharge.
- Inverter could be used, if required, to operate an A.C. Pump.
- Adequate protections should be incorporated against dry operation of motor Pump set, lightning, halls and storms. Full protection against open circuit, accidental short circuit and reverse polarity should be provided.

VII. PERFORMANCE SPECIFICATIONS AND WARRANTY

Solar PV Water Pumps with PV module capacity in the range of 200 Watt to 5 KWp may Solar PV Water Pumps with PV module capacity in the range of 200 Watt to 5 KWp may be installed on a suitable bore-well/open well/ Water Reservoir/Water stream etc. Indicative Performance Specifications for the Shallow and Deep well SPV Water Pumping Systems are given in the Annexure IIA to IID.

The PV Modules must be warranted for output wattage, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. The whole system including submersible/surface pumps shall be warranted for 5 years. Required Spares for trouble free operation during the Warranty period should be provided along with the system.

VIII. ON/OFF SWITCH

A good reliable switch for DC?AC use is to be provided with the motor pump set. Length of cable should be provided for inter connection between the PV array and motor pump set

IX. OPERATION AND MAINTENANCE MANNUAL

An Operation and Maintenance Mannual, in English and the local language, should be provided with the solar PV pumping system. The Mannual should have information should solar energy, photovoltaic, modules, DC/AC motor pump set, tracking system, monitoring structures, electronics and switches. It should also have clear instructions about mounting of PV module, DO's and DON'T's and on regular maintenance and Trouble Shooting of the pumping system. Name and address of the person or Centre to be contracted in case of failure or complaint should also be provided. A warranty card for the modules and the motor pump set should also be provided to the beneficiary.

X. NOTES

I. Wherever the "water table" or the level of water in reservoir or the water source (e.g. Diggie) from which the water is to be pumped, is within 10 m depth,"Surface motor pump sets" should be proffered.

II. The type of pump sets used must match the total dynamic head requirement of the site (i.e. the location at which it is installed). Moreover, it should be appropriately tested and certified by the authorized testing centers of the Ministry to meet performance and water discharge norms specified in section II above.

III. The beneficiary may select an appropriate model (i.e. capacity of PV array and type pf motor pump set) as per the site requirement.

IV. These are the specifications of the pumps up to 5 hp only, if supplier wants to supply pumps above 5-10 hp, he must get a report from Ministry from Ministry of IEC/NABL/MNRE accredited test labs according to supplier specifications

XI. IDENTIFICATION AND TRACEABILITY

Each PV module must be use RF identification Tag (RFID), which must contain the following information:

i. Name of manufacturer of PV module

ii. Name of the manufacturer of solar cells

iii. Month and year of the manufacturing (Separately for solar cells and modules)

iv. Country of origin (Separately for solar cells and modules)

v. I-V curve for module

vi. Peak wattage, Im, Vm and FF of the module

vii. Unique serial No and Model No of the module

viii. Date and year of obtaining the IEC PV module qualification certificate

ix. Name of the test lab issuing IEC certificate

x. Other relevant information on traceability of solar cells and modules as per ISO 9000 series

XII. VALIDITY

The validity of test report/certificate of solar pump shall be five years from the date of its release.

XIII. While applying for Testing, manufacturer has to give the following details:

- A copy of registration of the company particularly for the relevant product/component/PV system to be tested.
- An adequate proof from the manufacturer, actually showing that they are manufacturing product by the way production, testing and other facilities.
- Certification as per JNNSM standard from the other bought out the items used in the system without above proof test centers are advised not to accept the test samples.

XV. WARRANTY

The mechanical structures, electrical works including power conditioners/Inverters/charge controllers/ maximum power point etc and overall workmanship of the SPV power plants/ systems must be warranted against any manufacturing /design/ installation defects for a minimum period of 5 years.