

GOVERNMENT OF INDIA  
MINISTRY OF AGRICULTURE AND FARMERS WELFARE  
DEPARTMENT OF AGRICULTURE, COOPERATION AND FARMERS WELFARE

**LOK SABHA**  
**UNSTARRED QUESTION NO. 3473**  
TO BE ANSWERED ON THE 10<sup>TH</sup> DECEMBER, 2019

**SUPPLY OF FARM MACHINERY**

3473. SHRI A.K.P. CHINRAJ:  
SHRI HEMANT SRIRAM PATIL:  
DR. HEENA GAVIT:  
SHRI VINAYAK RAUT:  
SHRI SHRIRANG APPA BARNE:

Will the Minister of AGRICULTURE AND FARMERS WELFARE कृषि एवं किसान कल्याण मंत्री be pleased to state:

- (a) whether the Government is aware that marginal farmers who holds lands less than two hectares are unable to own farm machinery on their own or through institutional credit and they still use manual labour, if so, the details thereof and the reasons for not providing them with farm equipment;
- (b) the details of farm equipment, implements and tools developed in the recent past to reduce the manual labour of the farmers and the details of Central institutions involved in developing the above equipment;
- (c) the programmes/workshops organised/being organised to encourage farmers for using farm machinery and equipment for agricultural activities and the agencies involved for the purpose;
- (d) whether the Government advances loans at low interests to purchase these equipments, if so, the details thereof; and
- (e) the steps taken/proposed to be taken to provide incentives to agricultural scientists to develop farm machinery and equipment for the farmers at affordable cost?

**ANSWER**

MINISTER OF AGRICULTURE AND FARMERS WELFARE

कृषि एवं किसान कल्याण मंत्री (SHRI NARENDRA SINGH TOMAR)

(a): To make available costly and bigger advance farm machinery at the door steps of the farmers on rent basis, Custom Hiring Centres (CHC) are promoted through a dedicated scheme Sub Mission on Agricultural Mechanization (SMAM); under which subsidy is provided @ of 40% of the project cost to individual farmer upto a project cost of Rs.60 lakh and 80% to the group of farmers upto a project cost of Rs. 10 lakh. A special consideration for the farmers of North Eastern Region (NER) is available, 95% subsidy upto a project cost of Rs. 10 lakh is provided to group of NER farmers for establishment of Custom Hiring Centres. For establishment of Hi-tech and Hi-value agricultural machinery CHC, assistance @ of 40% of the project cost to individual farmer upto a project cost of Rs.250 lakh is provided.

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To address air pollution due to crop burning, a new Central Sector Scheme on 'Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi' (CRM) for the period from 2018-19 to 2019-20 has been launched. Under the scheme to establish Custom Hiring of in-situ crop residue management machinery a financial assistance @ 80% of the project cost is provided to the farmers.

Sub Mission on Agricultural Mechanization (SMAM), the small manual as well as bullock drawn agricultural equipments and tools are promoted with a higher subsidy @ 50% to small & marginal, SC/ST and women farmers than other farmers which is 40%.

The Government has developed and launched Multi lingual Mobile App "CHC- Farm Machinery" which helps the farmers for getting rented farm machinery and implements through Custom Hiring Service Centers (CHC) in their area. As on date, 41,992 CHCs with 1,33,723 Agricultural machinery for renting out are registered on this Mobile app. Total 1,12,505 farmers as users are registered on this Mobile App.

The details of the custom hiring centres established, State/UT-wise, year-wise under SMAM and CRM is enclosed as Annexure-I and II respectively.

(b): The details of farm equipment, implements and tools developed in the recent past to reduce the manual labour of the farmers are given in Annexure-III.

Central Institute of Agricultural Engineering (CIAE), Bhopal (Madhya Pradesh) and other four Institutes of ICAR and their Centres of All India Coordinated Research Project (AICRP) on Farm Mechanization (25 Centres), Utilization of Animal Energy (9 Centres), Energy in Agriculture and Agro-Industries (16 Centres), Ergonomics and Safety in Agriculture (12 Centres), Post harvest Engineering and Technology (30 Centres), Centres of Consortia Research Project on Farm Mechanization and Precision Farming (8 Centres) and Energy from Agriculture (09 Centres) are involved in developing the various agricultural equipments.

(c): Government has established four number of Farm Machinery Training & Testing Institutes ( FMTTIs) which are located at Budni (Madhya Pradesh), Hissar (Haryana), Anantapur (Andhra Pradesh) and Bishwanath Chariali (Assam). These FMTTIs are engaged in imparting training to various categories of trainees including farmers in the field of farm mechanization. During 2014-15 to 2019-20 (till date), these FMTTIs have trained 50112 trainees. Year wise trainees trained by FMTTIs is enclosed as Annexure-IV.

To create awareness among farmers on farm machinery and other modern agricultural technologies, ICAR Institutes are also regularly conducts training programmes for extension functionaries/farmers / entrepreneurs and participates in number of Kisan mela and agri-fairs to update them on available new agricultural machinery. Under the scheme of Mera Gaon Mera Desh, Institutes have adopted 140 villages in different districts of the country. The institute scientists is organizing Interface meetings with farmers of these adopted villages, several demonstrations of Institute technologies and short duration training programmes of 1 to 5 day duration are being organized.

(d): The Government has introduced the Kisan Credit Card (KCC) Scheme, which enables farmers to purchase agricultural inputs and draw cash to satisfy their agricultural and consumption needs. The KCC Scheme has since been simplified and converted into ATM enabled RuPay debit card with, inter alia, facilities of one-time documentation, built-in cost escalation in the limit, any number of drawals within the limit, etc.

With a view to ensure availability of agriculture credit at a reduced interest rate of 7% p.a. to the farmers an interest subvention scheme for short term crop loans upto Rs.3.00 lakh is implemented. The scheme provides interest subvention of 2% per annum to Banks on use of their own resources. Besides, additional 3% incentive is given to the farmers for prompt repayment of the loan, thereby reducing the effective rate of interest to 4%.

(e): The scientist of the Institutes and Centres of All India Coordinated Research Projects (AICRPs) are encouraged for development of the affordable technologies to the farmers on individual/custom hiring basis.

## Year wise Nos. Of Custom Hiring Centres Established under SUBMISSION ON AGRICULTURAL MECHANIZATION (SMAM)

	Nos. Of Custom Hiring Centres Established	Nos. Of Custom Hiring Centres Established	Nos. Of Custom Hiring Centres Established	Nos. Of Custom Hiring Centres Established	Nos. Of Custom Hiring Centres Established	Nos. Of Custom Hiring Centres Established	Nos. Of Custom Hiring Centres Established
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Grand Total as on date
Andhra Pradesh	0	20	100	875	750	68	1813
Arunachal	0	0	0	6	1	0	7
Assam	86	0	12	50	0	0	148
Bihar	126	0	271	0	0	0	397
Chhattisgarh	25	0	87	137	523	265	1037
Gujarat	17	8	0	0	0	0	25
Haryana	30	0	0	0	752	225	1007
HP	3	1	2	3	5	25	39
J&K	0	0	0	4	17	216	237
Jharkhand	53	45	50	34	100	0	282
Karnataka	2	0	6	35	100	35	178
Kerala	29	0	7	72	129	129	366
MP	18	22	0	100	85	110	335
Maharashtra	67	38	57	63	97	95	417
Manipur	10	0	0	5	315	0	330
Meghalaya	0	0	0	0	0	0	0
Mizoram	4	10	10	30	27	85	166
Nagaland	13	4	12	30	42	40	141
Orissa	31	0	720	400	450	10	1611
Punjab	34	0	1009	166	0	0	1209
Rajasthan	65	0	0	238	0	0	303
Sikkim	1	0	6	3	0	4	14
Tamil Nadu	85	99	250	540	1120	435	2529
Telengana	9	0	10	30	0	0	49
Tripura	4	4	0	83	100	100	291
UP	360	175	706	361	437	0	2039
Uttarakhand	13	13	26	369	60	400	881
West Bengal	28	60	7	118	79	58	350
<b>TOTAL</b>	<b>1113</b>	<b>499</b>	<b>3348</b>	<b>3752</b>	<b>5189</b>	<b>2300</b>	<b>16201</b>

**No of Custom Hiring Centers (CHC) Established under a new Central Sector Scheme on “Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi” (CRM)**

<b>State</b>	<b>2018-19</b>	<b>2019-20</b>
	<b>CHC Established</b>	<b>CHC Established</b>
<b>Punjab</b>	4466	5505
<b>Haryana</b>	1194	1300
<b>UP</b>	2300	1817
<b>Total</b>	<b>7960</b>	<b>8622</b>

**Technologies/machines developed by ICAR in the recent past to reduce the manual labour of the farmers**

- Aloe vera whole gel extraction equipment
- Animal lifting device
- Automated packing line for spherical horticultural produce
- Binder less briquettes from crop residues
- Biochar production technology
- CIAE Banana Chipper Shredder
- CIAE Millet mill
- CIAE-SPAD meter
- Colour sensor based herbicide applicator
- Coloured Shade Nets a boon for Vegetable Production
- Controller based five-row seed-cum-fertilizer drill
- Drip irrigation in rice and wheat cultivation
- Herbicide strip applicator-cum-planter
- High clearance multipurpose vehicle
- Manual stalk uprooter
- Mechanical intra and inter row weeder for wide spaced field crops
- Mechanization Packages for Garcinia juice
- Mechanization Packages for Rope making from Outer sheath of Banana pseudo stem
- Mechanization Packages minimal processing of banana central core
- Mechanized package of sugarcane bud chip technology
- Millet flaking machine
- Mulcher-cum-bed-planter
- Multi-millet thresher
- On-the-go variable rate urea application system
- Pilot scale modified atmosphere storage (MAS) system
- Pilot unit for production of Minimally Processed fresh cut vegetables
- PLA based biodegradable films
- Plug type automatic vegetable transplanter
- Portable paddy straw briquetting machine
- Real time uniform spraying system for field crops
- Ripening chamber
- Semi-automatic vegetable transplanters
- Site-specific fertilizer applicator for wide spaced crops
- Small seed planters
- Solar PV based refrigeration system
- Subsurface drip lateral laying machine
- Sugarcane rind removing equipment for juice making
- Tractor drawn plastic mulch laying machine
- Tractor Drawn Rotary Assisted Broad bed Former-cum-Seeder
- Tractor mounted ginger planter
- Tractor operated cassava stake cutter planter
- Tractor operated vegetable transplanters
- Two stage seed-cum-fertilizer drill
- Air pressure brake system for tractor-trailer
- Animal drawn caepht multipurpose tool frame
- Animal drawn improved wedge plough
- Animal drawn inclined plate planter for hybrid rice
- Animal drawn maize planter
- Animal drawn plastic mulch laying machine
- Animal drawn rotary mode gear operated grinder for bay leaf

- Animal drawn seed drill for intercropping
- Animal drawn single row multi crop zero- till seed drill for sowing mustard and buck wheat
- Axial flow multi-crop thresher for hilly region
- Brush cutter with fruit holding attachment for pineapple harvesting
- Bullock carts having break system
- Bullock drawn air mist canopy sprayer
- Bullock drawn cotton planter cum fertilizer drill
- Bullock drawn cotton planter fertilizer drill
- Bullock drawn equipment for conservation tillage and residue management
- Bullock drawn multi-purpose tool
- Bullock drawn ridge type drum seeder
- Bullock drawn solar powered high clearance sprayer
- Bullock drawn sorghum harvester
- Bullock drawn turmeric and ginger digger for raised bed planting
- Bullock drawn vegetable transplanter
- Bullock drawn earthing-up cum interculturing implement for sugarcane and turmeric crop
- Bullock-drawn fertilizer applicator-cum-ridger
- Cashewnutdesheller
- Check basin former
- Controlled power tiller turning mechanism
- Economical animal housing structure using locally available raw materials for stress control on animals leading to improved animal health
- Efficient hydraulic braking system for two wheel tractor trailer
- Feed-in type ragi thresher cum pearler
- Fertilizer band placement cum earthing up machine
- Fertilizer dibbler for ratoon sugarcane
- Garlic planter
- Gps based variable rate granular fertilizer applicator
- Harvester cum collector for cluster onion
- Improved basket holder to carry headload in sherpa mode in hills
- Improved ladder for fruit harvesting
- Improved large-cardamom harvesting knife
- Improved yoke/harness
- Indigenous cabin for tractors
- Knapsack type pneumatic cotton picker
- Light weight powered paddy thresher cum cleaner
- Loose straw chopper for paddy straw management for wheat sowing
- Low cost animal drawn multi-crop seed drill
- Low cost bamboo ladder for apple harvesting
- Low cost gravity based ropeway
- Low heat grinding machine for rotary transmission system
- Low pressure air driven power generation through rotary mode
- Manually operated gladiolus planter
- Manually operated jamun (black berry) harvesting device
- Mechanical feeding system of axial flow paddy thresher
- Mechanized unit operations of root crops (potato and ginger) cultivation on terraces for animal based farming system
- Modified muffler to reduce noise level for operators
- Multi-crop planter for seed spices
- Multi-crop thresher for seed spices
- Onion transplanter

- Package of animal drawn implements for he-buffaloes of chhattisgarh
- Package of animal drawn implements for turmeric and ginger crops
- Package of bullock drawn equipment for groundnut and cotton crop
- Package of bullock drawn implements for groundnut and green gram crops
- Package of improved animal drawn implements for paddy cultivation
- Package of suitable implements for mustard cultivation
- Package of tools and equipment for paddy cultivation
- Paddy transplanter as an attachment to four wheel drive tractor
- Paddy weeder
- Paddy weeder as an attachment to existing six-row self-propelled paddy transplanter
- Pedal cum power operated arecanut dehusker
- Planter cum herbicide applicator for direct sowing of paddy
- Pneumatic nursery seeder
- Pneumatic wheel steel bullock cart
- Pomegranate spraying system based on ultrasonic sensors
- Power operated garlic stem and root cutter
- Power operated onion de-topper cum grader
- Power operated sugarcane sett cutter
- Power tiller operated inclined plate planter
- Power tiller operated multi-purpose seed drill cum planter
- Power tiller operated potato and ginger planter
- Red gram protray seeder
- Self-propelled 8 row pre-germinated rice seeder, three row rice transplanter
- Self-propelled fodder harvester
- Self-propelled groundnut combine
- Small seed planter
- Small tractor drawn crop residue disintegrator
- Small tractor drawn inter row cultivator
- Spraying safety kit
- Stem applicator as an attachment to power weeder for cotton crop
- Sugarcane transplanter
- Suitable isolators to reduce vibration in vertical conveyor reaper
- Tapioca detopper
- Tractor drawn planter cum boom sprayer for sowing and herbicide application in groundnut
- Tractor drawn turmeric digger
- Tractor front mounted hydraulically operated 3-row sorghum harvester
- Tractor mounted fodder harvester
- Tractor mounted root crop harvester-cum-elevator
- Tractor operated cassava digger harvester
- Tractor operated garlic harvester
- Tractor operated mulch laying machine
- Tractor operated multi-crop planter for sowing on beds
- Tractor operated potato cum sugarcane bud planter
- Tractor operated sorghum and pearl millet earhead separator
- Tractor operated sugarcane harvester
- Tractor operated system for controlled levelling puddling
- Tranplanter for ssi sugarcane seedlings
- Turmeric polisher
- Turmeric rhizome planter
- Variable rate vertical boom type air-assisted sprayer
- Wheat straw combine



## Annexure-IV

## Year wise trainees trained by FMTTIs

Year	CFMTTI, Budni (,M.P.)	NRFMTTI, Hisar,Haryana	SRFMTTI, Anantapur(A.P.)	NERFMTTI, Biswanth Charali, Assam	Total
2014-15	2226	1917	1707	823	6673
2015-16	2089	2183	2414	934	7620
2016-17	3052	2725	2619	1027	9423
2017-18	3004	2933	2736	1016	9689
2018-19	3042	3105	3105	1004	10256
2019-20 (till date)	1914	1765	2064	708	6451
<b>Grand Total</b>	<b>15327</b>	<b>14628</b>	<b>14645</b>	<b>5512</b>	<b>50112</b>

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