

GOVERNMENT OF INDIA  
MINISTRY OF AGRICULTURE AND FARMERS WELFARE  
DEPARTMENT OF AGRICULTURAL RESEARCH & EDUCATION

**LOK SABHA**  
**STARRED QUESTION NO. 282**  
TO BE ANSWERED ON 01/01/2019

**ADOPTION OF MODERN TECHNIQUES IN AGRICULTURE**

**\*282. SHRI GAJANAN KIRTIKAR:**  
**ADV. NARENDRA KESHAV SAWAIKAR:**

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

- (a) whether agriculture is the main source of livelihood for rural people and most of the farmers are still following the age old agriculture methodology and if so, the details thereof;
- (b) whether Indian agriculture needs a technology-driven revolution, especially given the extant challenges of fragmented landholding, low level of input usage, limited access to irrigation, absence of extension services and inadequate linkage to markets and if so, the step taken by the Government to educate the farmers to adopt modern techniques for better yield at less expenditure and also to infuse multiple technologies in farming to transform agriculture from being a matter of livelihood to one of agri-business where every farmer becomes an entrepreneur;
- (c) whether the Government has taken any steps to bring latest innovative methods and technologies to the ground level *i.e.* to the farmers, if so, the details thereof and if not, the reasons therefor;
- (d) whether the Government has a scheme to provide tractor and other mechanized equipment free of cost or at subsidised cost to the farmers and if so, the details thereof; and
- (e) whether there is any eligibility criteria including preference given to small and medium farmers and if so, the details thereof including the support available at district level to facilitate the farmers for successful implementation of the scheme?

**ANSWER**

THE MINISTER OF AGRICULTURE AND FARMERS WELFARE  
कृषि और किसान कल्याण मंत्री (SHRI RADHA MOHAN SINGH)

**(a) to (e):** A Statement is laid on the Table of the House.

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**STATEMENT IN RESPECT OF PARTS (a) to (e) OF LOK SABHA STARRED  
QUESTION NO. 282 TO BE ANSWERED ON 01/01/2019 REGARDING  
“ADOPTION OF MODERN TECHNIQUES IN AGRICULTURE”**

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(a) Yes, Madam. As per the results of ‘Situation Assessment Survey of Agricultural Households’ conducted by National Sample Survey Office (NSSO) in 2013, about 63.5 percent of the agricultural households in the rural areas of the country reported cultivation as their principal source of income. Details of the number of farmers still following age old agriculture methodology are not available in the Survey.

(b) Due to fragmentation, the size of landholding in India has fallen to average size of 1.1 hectare (ha) in 2015-16 from 1.6 ha in 2011-12, according to a rural survey carried out by the National Bank for Agriculture and Rural Development. Nearly 87% farm holdings are less than 2 ha falling under small and marginal category. Agriculture sector (i.e. crop sector) in India is technology driven since mid-1960s. Other allied sectors of agriculture are also making use of technology in a big way. Technology driven agriculture has been input responsive and input use in agriculture increased constantly. Technology-led growth has helped in yield gain by several times. Selective mechanization of Indian farms is essential to increase agricultural productivity, to achieve timeliness in farm operations, to enhance input use efficiency and to reduce drudgery of agricultural workers. In the field of agricultural mechanization, some of the major challenges are due to variations on account of geography, climate, soil-type, crop and crop varieties, farm holding size, power availability, drudgery involved in farm operations etc. In situation of limited resources, the importance of increased use of technology in agriculture assumed much significance. Research system is trying to develop technology requiring low quantity of input need and their efficient utilization.

The Government is making efforts to use a number of available technologies to improve irrigation reach and efficiency, extension services and market access to farmers. To provide irrigation to every field, micro-irrigation systems are being encouraged in a big way under Pradhan Mantri Krishi Sichai Yojana (PMKSY). To meet knowledge demand and fill gap, use of information and communication technology are being utilized extensively to reach out to farmers through m-Kisan portal and for meeting market access, markets are being linked with national grid under the ambit of e-NAM. Also Indian Council of Agricultural Research (ICAR) started a project ‘Attracting & Retaining Youth in Agriculture’ (ARYA) which is being implemented in 25 States through KVKs, one district from each State. In each district, approximately 4-5 clusters of contiguous villages has been identified. Depending upon the type of enterprise, individual or group-based activities/enterprises are being encouraged. In one district, about 100-200 rural youths were identified for their skill development in entrepreneurial activities and establishment of related micro-enterprise units in the area of Apiary, Mushroom, Seed Processing, Soil testing, Poultry, Dairy, Goatry, Carp-hatchery, Vermi-compost etc. Under this project, operational costs to support critical inputs like seeds, fertilizers, small equipment are being provided to farm youth. This provides additional opportunities to the unemployed rural youth in primary and secondary agriculture and related enterprises. Moreover, ICAR has established a network of 25 Agri-business Incubation (ABI) Centers. These ABIs act as an effective platform for fostering the growth of sustainable

business endeavor to nurture the techno-entrepreneurs by providing a wide range of services such as research support, business planning, office space, access to information and communication technologies, and advice on management, marketing, technical, legal and financial issues. These measures have infused multiple technologies in farming to transform agriculture from being a matter of livelihood to one of agri-business where every farmer can become an entrepreneur.

(c) The steps taken by the Government to bring latest innovative methods and technologies to the ground level i.e. to farmers are as follows:-

- The ICAR has established 704 Krishi Vigyan Kendras (KVKs) in the country with an aim of technology assessment and demonstration for its application and capacity development of farmers.
- For large scale technology dissemination among farmers 676 Agricultural Technology Management Agencies (ATMAs) have been set-up in 29 States and 3 UTs with funding from Centrally sponsored scheme on Support to State Extension Programme for Extension Reforms.
- Facilitated establishment of 1205 Agri-clinic and Agri-business centres for providing input delivery and farm advisory services to farmers.
- Established Kisan Call Centre at 21 locations for providing farm advisory to farmers.
- mKisan portal developed for providing information/services/advisories to farmers by SMSs in their language and preference of agricultural practices.

These KVKs and ATMAs are motivating and encouraging farmers to adopt improved crop production technologies by organizing various programmes and activities including testing and demonstration of technologies in farmer's field; training of farmers; conducting farm schools and exposure visits of farmers. Apart from imparting regularly training to farmers, the Agricultural Universities, KVKs and ATMAs in the State are organizing exhibitions and various other extension activities like farmers fair, kisan ghosthis, field days, technology weeks, ex-trainees sammelans, celebration of important days, diagnostic visits, soil health camps and pre-Rabi & pre-Kharif campaigns for creating awareness on improved agricultural technologies.

**(d) & (e):** Mechanization and Technology Division of Department of Agriculture Cooperation & Farmers Welfare is implementing a Sub Mission on Agricultural Mechanization (SMAM). The SMAM is providing a suitable platform for converging all activities for inclusive growth of agricultural mechanization by providing a 'single window' approach for implementation with a special focus on Small & Marginal farmers.

Under SMAM scheme, Financial Assistance for procurement of Agriculture Machinery and Equipment including tractors for SC, ST, Small & Marginal Farmers, Women & NE State beneficiaries is provided upto 50% of the cost of machinery limited to ceiling limit and for other beneficiaries it is upto 40% of the cost of machinery limited to ceiling limit. The pattern of assistance provided to farmers for procurement of Tractors under SMAM is given in **Annexure**.

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**Pattern of Assistance Provided to Farmers for Procurement of Tractors Under SMAM**

Type of Agricultural Machinery	For SC, ST, Small & Marginal farmers		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 2WD(08-20 PTO HP)	Rs. 2.00 lakh	50%	Rs. 1.60 lakh	40%
Tractor 4WD (08-20 PTO HP)	Rs. 2.25 lakh	50 %	Rs. 1.80 lakh	40%
Tractor 2WD (above 20-40 PTO HP)	Rs. 2.50 lakh	50%	Rs. 1.60 lakh	40%
Tractor 4WD (above 20-40PTO HP)	Rs. 3.00 lakh	50%	Rs. 2.40 lakh	40%
Tractor 2WD (above 40-70 PTO HP)	Rs. 4.25 lakh	50%	Rs. 3.40 lakh	40%
Tractor 4WD (above 40-70 PTO HP)	Rs. 5.00 lakh	50%	Rs. 4.00 lakh	40%

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