

**GOVERNMENT OF INDIA  
AGRICULTURE  
LOK SABHA**

UNSTARRED QUESTION NO:3408

ANSWERED ON:17.03.2015

AGRICULTURAL RESEARCH

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**Will the Minister of AGRICULTURE be pleased to state:**

- (a) whether the Government has taken new initiatives to catch up with other advanced countries in the field of farm mechanisation, transfer of technology from lab to farm, per drop more crop etc.;
- (b) if so, the details thereof vis-à-vis other foreign countries;
- (c) whether the Government proposes to use information technology for advancement of agriculture;
- (d) if so, the details thereof; and
- (e) the incentives provided by the Government to research institutes/ agricultural universities to bring latest technology for advancement of agriculture in the country?

**Answer**

MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI MOHANBHAI KUNDARIA)

(a) & (b): Agriculture in general is location and agro-climatic zone specific. Technologies used in other countries are quite often required to be tailored to our needs for sometimes even new developments are needed. The institutes and centres of All India Coordinated Research Projects (AICRP) on "Farm Implements & Machinery" are putting concerted efforts to increase the level of mechanization in the country. A new consortia research platform on "Farm Mechanization and Precision Farming" has been initiated in 12th Plan to fast-track level of mechanization. Some R&D achievements during the past five years are listed in Annexure – I.

The ICAR has taken initiative to adopt sophisticated farm equipment developed in other countries, to evaluate them under Indian conditions and to commercialize them by local manufactures for popularization under Indian conditions. Some of the examples of adoption of modern farm equipment are listed in Annexure – II.

(c) & (d): For the advancement of agriculture, Government uses information technology through Centrally sponsored scheme National e Governance Plan in Agriculture (NegP-A) and (ii) Central Sector Scheme – Strengthening/Promoting Agricultural Informatics Systems. Under both these Schemes, the funds are released to the State Governments or its designated implementing agency for implementation of the Schemes. The schemes aim to effect computerization upto the Block level for dissemination of agriculture related information to the farming community through various ICT enabled delivery channels including SMSs, IVRs, Internet Kiosks, Farmer's Portal etc.

(e): Indian Council of Agricultural Research (ICAR) has instituted a number of awards for various stakeholders like individual scientists/institutions/State Agriculture Universities (SAUs)/Krishi Vikas Kendras (KVKs)/farmers etc. for their outstanding achievements.

Annexure – I

Annexure referred to in reply to parts (a) and (b) of the Lok Sabha Unstarred Question No. 3408 due for answer on 17.03.2015 regarding Agricultural Research asked by Shri Faggan Singh Kulaste and ors.

R&D achievements made on "Farm Mechanization and Precision Farming" during the past five years.

# An android app (version 1.02) and an online web app has been developed to estimate top dressing dose of nitrogen fertilizer based on normalized difference index (NDVI) values obtained through green seeker sensor for rice and wheat crop.

# Electromagnetic radiation profiles of mango have been studied to determine the most convenient methods of non-destructive defect detection. The information has been synthesized in the form of software for use in the non-destructive quality determination of mangoes.

# Anthropometric data on Indian agricultural workers have been taken and relationships developed for design of appropriate tools for reduced drudgery in man-machine system and gender specific situations.

# Rainfall patterns for Madhya Pradesh have been combined with soil characteristics to determine the rain harvesting options for different locations in the State.

# Soil tool interactions have been studied in fully instrumented soil bins to study the tool wear and power requirements for efficient tool design.

- # Soyabean and its products have been characterized for their nutrition and consumption safety.
- # Cashew shells have been studied for their biochemical composition and combustion behaviour with a view to design efficient energy generation system.
- # Vibrations transmitted from prime movers to operators have been characterized with a view to determine the methods of reducing vibration stresses on operators.
- # Physiology of fruits and vegetables under modified atmospheric conditions has been studied for selecting/designing suitable packaging systems.
- # Imaging techniques are being studied for precision application of inputs.
- # Animals physiology has been studied for enhancing the output of draught animals in agricultural operations.
- # Development of decision support softwares for tractor/machinery selection, design of irrigation system, etc.

#### Annexure – II

Annexure referred to in reply to parts (a) and (b) of the Lok Sabha Unstarred Question No. 3408 due for answer on 17.03.2015 regarding Agricultural Research asked by Shri Faggan Singh Kulaste and ors.

List of Practices/Equipment being propagated for modern farm equipment at par with advanced countries:

- 1.Laser guided land leveler
- 2.Pneumatic planters
- 3.Riding type rice transplanters
- 4.Sugarcane harvester
- 5.Multi-purpose hydraulic platform (developed by CIAE)
- 6Automatic Litchi peeler
- 7Cryogenic spice grinding system
- 8.Pomegranatae Aril extractor
- 9.Mechanized system for popping and decortications of Makhana seeds
- 10Automatic Custard Apple pulper
- 11.Autoclavable microencapsulator