

Modernization of Technology to Double the Income of Farmers

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The Government has set a target of doubling of farmers' income by the year 2022. The Government has constituted an Inter-Ministerial Committee to examine issues relating to doubling of farmers' income and recommend a strategy to achieve doubling of farmers' income in real terms by the year 2022. The committee has, inter-alia, appreciated the role of Digital Technology, which can play a transformational role in modernizing and organizing how rural India performs its agricultural activities. The technologies include Artificial Intelligence, Big Data Analytics, Block chain Technology, Internet of Things etc. The deployment of technology is very important to make schemes of the Ministry successful.

Major technology interventions and how they help to farmers

- Development of **Kisan Suvidha mobile application** to facilitate dissemination of information to farmers on the critical parameters viz., Weather; Market Prices; Plant Protection; input Dealers (Seed, Pesticide, Fertilizer) Farm Machinery; Soil Health Card; Cold Storages & Godowns, Veterinary Centres and Diagnostic Labs. With market information, Farmers are better informed about markets to sell produce, prevailing market prices and quantity demanded in the market. Thus, they can make informed decisions to sell produce at the right price and right time.
- **The Indian Council of Agriculture Research (ICAR) has also compiled more than 100 mobile apps developed by ICAR**, State Agricultural Universities and Krishi Vigyan Kendras and uploaded on its website. These **mobile apps**

developed in the areas of crops, horticulture, veterinary, dairy, poultry, fisheries, natural resources management and integrated subjects, offer valuable information to the farmers, including package of practices, market prices of various commodities, weather related information, advisory services, etc.

- Development of **mKisan Portal** (www.mkisan.gov.in) for sending advisories on various crop related matter to the registered farmers through SMSs.
- Launching of **e-National Agriculture Market initiative** to provide farmers an electronic online trading platform.
- Implementation of **Agricultural Marketing Infrastructure, sub-scheme of Integrated Scheme of Agricultural Marketing,** in order to improve/create scientific storage capacity for storing farm produce, processed farm produce and to reduce post-harvest storage loss.
- Introduction of **Soil Health Card Scheme** to assist State Governments in providing Soil Health Cards to all farmers across the country once in a cycle of 2 years. Soil health card provides information to the farmers on nutrient status of their soil along with recommendations on appropriate dosage of nutrients to be applied for improving crop productivity and soil fertility.
- **Providing subsidies under National Food Security Mission** (Oil Seeds and Oil Palm) to farmers on seed components, transfer of technologies, production inputs and water carrying devices. Financial assistance is also being provided under this scheme for block demonstration, frontline demonstration, farmers training to educate farmers to adopt modern techniques of farming to yield good crop economically.
- **Use of space technology for various programmes/ areas such as Forecasting Agricultural Output using Space,** Agro-meteorology and Land-based Observations project, Coordinated programme on Horticulture Assessment and Management using geo-informatics project, National

Agricultural Drought Assessment and Monitoring System, Rice-Fallow Area Mapping and intensification, geo tagging of infrastructure and assets created under Rashtriya Krishi Vikas Yojana, and Crop Insurance.

- Using **machine learning process** along with different computer algorithm for crop classification and area estimation.

In addition, farmers are provided information through Focused Publicity Campaigns, Kisan Call Centres, Agri-Clinics and Agri-Business Centres of entrepreneurs, Agri Fairs and exhibitions, Kisan SMS Portal, etc