

27/9/19 What are the various measures that government of India must take to promote adoption of technology in farming? Elaborate

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FAO annual report on food production has noted that, adoption of Artificial Intelligence, Data analysis in agriculture can tackle food crisis without negative environmental consequences. But developing countries like India, the cost of adoption has been a major hindrance. Economic Survey 2019 says that 79.1% of farmer's investment has shrunk the profits of farmers, further entrenching the problem.

The need for climate smart agriculture requires technology to play central role. High powered committee on agriculture calls for private sector involvement along with government funds to implement the following steps.

1) Striving Culture among farmers:-

Nearly 50% of farmers practise subsistence agriculture. The income earned is not sufficient for improving practices. Competition based recognition like that of AgriMarket and Farmer friendly Index of Kan MITE Atyox can be adopted to impart banking, saving culture.

2) LAND CONSOLIDATION:-

As According to Agriculture Census of 2015, 69% of community own small marginal farmers where technology adoption is futile. The government can promote 'land bank' by consolidating using Farmer Producer Organisations. This can add export value.

3) CREDIT FLOW:-

Most of the farmers have problem in credit accessibility, due to myriad documentation and time factor. Alliance system of credit can be adopted on the lines of Africa's Alliance for Green Revolution in Africa (AGRA) that provides low cost finance, processing, forward and backward linkage.

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4) Tax incentives to companies:

Corporate private investments can bring about quicker farm sector changes, reducing public expenditure of government. This can be in the form of CSR funds, tax rebates, export incentives. Private companies have better policy research of technology, FDI.

5) Research and Development:-

ICAR resource base must be expanded to have on farm researches cent sharing between government private players. Specialisation of agricultural branches in higher education institutes to generate human resource.

6) Training to farmers:-

Reluctancy among farmers to use technology is often associated with misinformation and unawareness. eg: adopting happy seeder machine for tackling stubble burning had diverse opinion.

Training centres, helpline services, mobile phone penetration can help overcome such aversions.

7) Food processing diversification:-

F Budgetary allocation must take into account, all the allied as well as livestock, horticulture sector modernisation. They directly double farmer income and provide employment.

eg: Cold storage technology for milk industry, gives subsidiary employment.

8) Addressing Gender bias in farming:-

NABARD credit portfolio indicates poor credit culture among women farmers due to absence of land ownership. with rampant migration, feminisation of agriculture is happening. However, such patriarchal set up when broken can improve farm incomes and impart 2% of GDP from women alone. Thus land ownership rights wage and credit access must be regulated.

9) Youth and starting culture:-

It has been reported that nearly 2000 people are quitting agriculture due to low opportunity cost. This impacts 25-35% of production loss. The usage of AI can help this mismatch at a time when hunger reports indicate 815mn people suffering. Retaining youth in agriculture through certification based training can automatically boost entrepreneurship.

Geographical advantage, labour surplus, skill provide inherent advantage to India to grab the markets needs, when calibrated against current geopolitical shifts. Thus, India can partner with countries like Israel which has developed efficient agri-tech systems in harsh environments. Indian farmers can also be allowed to tour such live sites for realizing potential. Thus technology adoption is the corner stone of next evolutionary step in agriculture. Full scale implementation of 'national policy on AI' in agri sector can reap benefits.