

Home » Economy » Agri Business

## Reclaiming the role of agriculture in nation building

December 11, 2022 - Updated 01:00 pm IST

Adoption of technologies such as artificial intelligence, machine learning and internet of things will drive growth



Agriculture is the livelihood for a majority of India's population (58 per cent), and thus, undoubtedly the largest employment generator in the country. Though its share in the country's GDP has come down to below 20 per cent, the aggregate agricultural production has increased.

It is good news? 'Yes', because it has made the country self-sufficient to the extent that India is now a net exporter of agriculture and allied products. 'No' because as per estimates of ICAR, the demand for foodgrains would increase to 345 million tonnes by 2030 driven largely by an increasing population, increasing average income and globalisation effects driving demand for quantity, quality and nutritious food, and variety of food.

**Average productivity**

Despite ideal conditions for agriculture, the average productivity of many crops in India is quite low. Other major challenges include

- Small land holdings with 85% being marginal and small farm categories of less than 2 hectares; low access to credit affecting the decisions of farmers in the purchase of inputs and selling of outputs.

Subscribe

EconomyAgri Business

Reclaiming the role of agriculture in nation building

Sandeep Sabharwal December 11, 2022 - Updated 01:00 pm IST

Adoption of technologies such as artificial intelligence, machine learning and internet of things will drive growth

Agriculture is the livelihood for a majority of Indian population (58 per cent), and thus, undoubtedly the largest employment generator in the country. Though its share in the country's GDP has come down to below 20 per cent, the aggregate agricultural production has increased.

It is good news? 'Yes', because it has made the country self-sufficient to the extent that India is now a net exporter of agriculture and allied products. 'No' because as per estimates of ICAR, the demand for foodgrains would increase to 345 million tonnes by 2030 driven largely by an increasing population, increasing average income and globalisation effects driving demand for quantity, quality and nutritious food, and variety of food.

#### Average productivity

Despite ideal conditions for agriculture, the average productivity of many crops in India is quite low. Other major challenges include

- Small land holdings with 85% being marginal and small farm categories of less than 2 hectares; low access to credit affecting the decisions of farmers in the purchase of inputs and selling of outputs.
  - Poor infrastructure for farming with high dependence on weather, marketing and supply chain for high-value crops.
  - Less use of technology and mechanisation
-

#### TODAY

-Very less value addition vis-à-vis developed countries and negligible primary-level processing at farmers' level

Reducing losses, realizing better value for agricultural produce and last but not least a seamless financing platform for farmers, among others can drive economic growth for the sector and community. Improving Artificial Intelligence (AI), Machine Learning (ML) and Internet of Things (IoT) technologies and adoption of the same will also drive growth in the sector going forward. All these platforms and tools are bringing transparency, consistency and sustainability to agriculture.

#### Tackling supply chain issues

Incidence of post-harvest losses is a thing of the past with the increasing number of modern warehouses in the private sector, which are using technology to link with related government and other private establishments thus providing a seamless supply chain.

Digitisation of warehouses is helping food grain suppliers make appropriate decisions with regards to storage while optimising other parameters like distance from 'mandis', nearest processor, types of service like fumigation and financing availability, etc. all available at the click of a button.

Digitisation of commodities to build e-receipts, AI, ML and IoT-based quality assessments, and the implementation of agri technology integrated into physical presence will further enhance competencies for the flow of institutional credit while enabling financial inclusion of smallholder farmers.

---

Considering the increasing pace of technology penetration, agri-businesses involved in the post-harvest segment, primarily warehousing are deploying patented technology-based applications with the sole purpose of 'physicalising' (physical + digital infrastructure) the entire warehouse management system. Such tech-enabled 'phygital' infrastructures are proprietary and patented applications that are enabling effective warehousing solutions agnostic of infrastructure, geography and crops while allowing real-time monitoring and management of crops. These technology-based applications are providing various post-harvest agriculture stakeholders (Farmers, Agri Traders, and Arthiyas) with a diverse range of services like spot audit receipts, quality control, and surveillance along with geotagging of warehouses.

In a country like India where the average post-harvest losses are said to be pegged at 10 per cent, with the deployment of such tech-enabled proprietary and patented applications agribusiness in the warehousing segment has been able to reduce the post-harvest losses to a mere 0.5 per cent. Some of the case studies have been well documented and validated by leading industry chambers like FICCI.

Agritech start-ups of late have been at the forefront with the deployment of new-age technology applications paving the way for new service models like 'Farm-To-Fork', 'Farming-as-a-Service (FaaS)', etc. The rapid growth of Agritech recently has been made possible due to a conducive policy environment, rural internet and smartphone penetration, affordability of digital technologies coupled with positive investor sentiment. Going forward, it will be interesting to review and monitor the contribution of agritech in driving the ' Next Green Revolution' creating agriculture as a comprehensive, value-added and knowledge intensive sector.

Encouraging 'agripreneurship' in alignment with the government mandates like 'Atmanirbhar Bharat', 'Make in India', etc. will provide further impetus to the growth and adoption of AgriTech while impacting the entire agri value chain in the larger sense of the term.

(The author is CEO, SLCM Group)

11:25 an