

Indian Agriculture

EXCITING TIMES AHEAD

We shall see transformational changes over the next few years.

Low dosage and safer crop protection products that degrade faster will replace the old, toxic pesticides. Micro irrigation systems will facilitate fertigation of nutrition products thus minimizing soil damage. There is nothing new in these changes which have been moving at a very slow pace. Now the speed of change will be rapid due to the demands of the situation. Governments will incentivise farmers to use sustainable agricultural practices.

A related change would be the carbon credits system which the farmers who adopt sustainable farming practices will be able to use and achieve financial gains. These markets will be brought closer to the farmers so that they can access them easily and take advantage of them.

Digital Technology

Digital technology which is transforming urban lives will also touch agriculture in a big way during this decade. Some of the agri tech enterprises will make it easier for soil testing, water use monitoring, farm data collection and delivery of farm specific advisory. Some of the digital applications will provide the farmer access to input and output markets, provide warehousing and warehouse receipt based credit facilities, facilitate easier lending and insurance offerings to farmers.

Satellite based imagery will help in more accurate crop estimates, pest and disease assessments and other data based services. Open access Digital Public Goods will be providing platforms for seamless offering of digital services to farmers. These DPGs will be developed under PPP projects keeping the farmer as the centre of the model.

Biotechnology, through both GM and Non-GM tools, will make a huge difference to the development of seed varieties that can withstand even pests and diseases and high temperatures, reduce the use of chemical inputs and produce nutrition enhanced food and feed that suit changing food basket of consumers. These changes can enhance the quality of agriculture, reduce the impact on environment and improve consumer experience.

Local trends

India's population will cross 150cr during this decade and the demand for non-cereal foods, chemical free safe food, organic food, traceability of food, plant based foods, etc will grow multi fold. Conserving natural resources like water and soil will play a major role in agriculture in this decade and beyond.

India will see a major shift in the crop portfolio with the need to increase edible oil production. Emphasis will be more on increasing yields and acreages in crops like Mustard, Soybean, Sunflower, Pulses, Cotton, Maize, Forages and Vegetables in order to meet the growing demand for these products.

While rice and wheat acreages may not come down dramatically, the emphasis on increasing the yields of these crops along with reducing the use of water in the cultivation of rice will come to the centre stage. Emphasis on new agronomic practices like Direct Sown Rice (DSR) will gain traction in order to reduce water consumption.

In Cotton too, India will step up deployment of science and technology to boost yields and meet the growing demand for the fibre from domestic textile industry. Increased production will also help the country to meet the growing demand in the International markets. High Density Planting System (HDPS) system of cultivating Cotton will be scaled up aided by the enabling technologies including seed varieties.

Mechanization And Digitization

Use of drones and tractor mounted boom sprayers for application of Crop Protection chemicals will be a huge change that we will see on a big scale in this decade. But the key is to create business models through which these machines will be made available to farmers when they need and at a reasonable cost.

We should see a scale up of custom service business models to meet this demand. Farmers will have access to a multitude of digital applications which they can use to reduce their drudgery and to improve the efficiency of their work. This would be similar to the details mentioned above under the global trends. But one of the major benefits for farmers would be in the seamless flow of financial services like credit and insurance. This should reduce the grip of private money lenders on the farmers and also mitigate many of the risks that he faces. This is a transformational change for the Indian farmer.



Clusters of production areas in horticultural crops and other crops will come up in a big way as a part of the value chain development efforts. This will help in adding value to farm produce and connect them to both domestic and export markets in a significant way

Structurally Important Game Changers

Farmers will get connected to markets, both physically and digitally. This is inevitable. This will play a key role in increasing the efficiencies of the entire supply chain system and help the farmer in discovering better prices. Rural aggregation centres will come up in a big way to cut down the length of supply chains.

Clusters of production areas in horticultural crops and other crops will come up in a big way as a part of the value chain development efforts. This will help in adding value to farm produce and connect them to both domestic and export markets in a significant way. Contract farming will be the way to capture such value chains. Each state will try to become a centres of excellence for specific crops. Organic and chemical free production will be developed as one such centre of excellence.

FPOs will scale up in number and will become stronger with robust systems and commercial operations. Such collectivization will help in increasing the bargaining power of the farmers and improve their economic benefit.

All the above three game changers will help in improving farmers price realization and consequently the profitability of farming operations. This would be good for the farming community.



Mr Ram Kaundinya

Director General

Federation of Seed Industry of India (FSII)